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02-9010-16-PA
REV. NO. 0

FINAL DRAFT
PRELIMINARY ASSESSMENT REPORT
REVERE COPPER PRODUCTS, INC.
ROME, ONEIDA COUNTY, NEW YORK

PREPARED UNDER

TECHNICAL DIRECTIVE DOCUMENT NO. 02-9010-16
CONTRACT NO. 68-01-7346

FOR THE

ENVIRONMENTAL SERVICES DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY

APRIL 9, 1991

NUS CORPORATION
SUPERFUND DIVISION

SUBMITTED BY:

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SITE SUMMARY AND RECOMMENDATION

Revere Copper Products Inc. is a privately owned active site located in a commercial, industrial, and residential section of Rome, Oneida County, New York. The property was originally 115 acres in size and currently encompasses approximately 80 acres. The site is bordered by Harr-Pinti Field to the northwest, by Bell Isle Park and commercial/residential property to the north and northeast, by residential property to the southeast, and by industrial, commercial, and residential property to south and southwest. The nearest downslope surface water is the Mohawk River, which is contiguous with the property's northwestern corner boundary. The Mohawk River flows toward the southwest approximately 4,500 feet before discharging to the Erie (Barge) Canal located about 1,400 feet south of the site.

Hazardous waste generation at the site reportedly commenced when Brown's Soap Factory owned and operated a facility (1930-1949) currently owned by Revere Copper Products, Inc. According to a citizen's complaint, acids and solvent wastes were allegedly dumped by Brown's Soap Factory and possibly Revere Copper Products, Inc. along Sixth Street near the Mohawk River from 1930 until the early 1950s. There is no record of investigation of this complaint by authorities.

Revere Copper Products, Inc. began operations at the site around 1949. The company manufactures copper and copper alloy sheets, rods, tubing, and strips. The forging operation melts copper and forms it into usable shapes, which results in the generation of baghouse dust. Copper products are run through a pickling operation which generates pickling acid contaminated with copper and copper alloys. Process wastewaters from pickling operations in the rod and bar and tube mills are pumped to basins for neutralization and to the wastewater treatment plant prior to discharge per SPDES permit via six outfalls to the City of Rome's Sanitary Sewer System. Accumulated sludges are cleaned from settling tanks bi-annually, drummed, and sent for reclaiming. Although this sludge is designated as non-hazardous by the Resource Conservation and Recovery Act (RCRA), analysis indicates the presence of Comprehensive Environmental Response, Cleanup, and Liability Act (CERCLA) hazardous substances.

Degreasing operations at the facility generate used Stoddard solvent waste. These were previously blended with various waste oils including rolling lubricants potentially contaminated with process metals in a 10,000-gallon underground storage tank located at the plant's waste oil management facility before subsequent removal off site by a licensed scavenger. It is assumed that these wastes oils are potentially contaminated with CERCLA hazardous substances such as heavy metals suspected to be present in various oils blended from plant processes such as rolling, cutting, and milling lubricants.

SITE SUMMARY AND RECOMMENDATION (CONT'D)

During a plant expansion project which occurred from 1966 to 1967, demolition debris were placed in a 9-acre, unlined, open landfill bordered by Culverton, Mayberry, and Millbrook Roads. A small quantity of household refuse was also reportedly discarded at the landfill by nearby residents. A Phase I Investigation and report on the landfill, NYSDEC Site Number 633008, was prepared by Recra Research for the New York State Department of Environmental Conservation (NYSDEC) in 1985. It was reported that no information or documentation at that time indicated that hazardous waste was disposed on landfill property. This state funded Preliminary Assessment recommended no further action, as recorded in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Information System (CERCLIS) site event listing under U.S. EPA Identifiation Number NYD980507560. However, NYSDEC Region 6 later conducted on-site sampling which indicated the presence of various contaminants, including heavy metals.

During the late 1970s, acid wastes generated from pickling operations at the plant were batch removed to a lined open 125,000-gallon acid-collection pit prior to removal by a licensed scavenger. The NYSDEC conducted a site inspection of the acid lagoon as well as the Culverton Street landfill on August 20, 1979. The lagoon was drained, backfilled, and capped in 1980. This lagoon is designated as state Superfund Site No. 633007 by the NYSDEC and by U.S. Environmental Protection Agency (EPA) Identification Number NYD980507578 in the CERCLIS site/event listing. CERCLIS makes record that a Preliminary Assessment completed in March 1987 recommended no further action at the lagoon; however, no formal report was located. Subsequently, the company treated acid wastes on site and discharged per SPDES permit; currently, the company utilizes an acid recovery unit.

On August 18, 1980, Revere Copper Products, Inc. filed a Part "A" RCRA permit application as a treatment storage, and/or disposal facility (TSDF) to the U.S. EPA. The resulting U.S. EPA Identification Number for this TSDF was NYD071586127. The NYSDEC performed site inspections of the TSDF on August 2, 1983 and March 28, 1984. No operational violations were noted. On August 13, 1984, the company withdrew its Part "A" application for interim status as a TSDF and claimed status as a small quantity generator of hazardous wastes since generated hazardous wastes were now mostly recycled into the manufacturing process. In 1986, the company submitted a closure plan for the Rome Division TSDF operations. Available information does not specify whether the company obtained closure certification. However, the NYSDEC did conduct an inspection on February 22, 1989 which identified RCRA status for Revere Copper as a generator of hazardous wastes.

SITE SUMMARY AND RECOMMENDATION (CONT'D)

In December 1990, Revere Copper Products, Inc. sold its former waste oil management and designated hazardous waste storage facility property to Rome Realty, Inc.

Based on a review of available background information, the Revere Copper Products, Inc. Site is recommended for a **SITE INSPECTION** as there is indication of prior releases of contaminants potentially affecting groundwater and surface water. A former acid collection pit, unlined landfill, and underground storage tanks are located on site and may have contaminated the surficial aquifer. Groundwater within a 4-mile radius of the site may be used for drinking purposes by approximately 95 people. Additionally, numerous reported spills have occurred at the plant involving waste petroleum products possibly contaminated with heavy metals from the manufacturing process, PCB-contaminated waste oils, and Stoddard solvent product. Surface runoff carrying potentially hazardous waste contaminants from the site can be expected to migrate overland to the Mohawk River and Erie (Barge) Canal. The Mohawk River is contiguous with the property's northwestern boundary. Although there are no surface water intakes for potable water purposes located within 15 miles downstream of the site, recreational fishing takes place downstream from the facility off of the Whitesboro Street Bridge and along the river's edges. Additionally, approximately 400 students attend an elementary school located within 200 feet of the site's waste oil management facility and designated hazardous waste drum storage area. Numerous spills of contaminated waste oil have occurred at this location. Sampling should be performed to determine if there has been a release to groundwater, surface water/sediment, and soil on site and on nearby properties. Sampling locations should include the region surrounding the former lagoon, the waste oil management facility and designated hazardous waste drum storage area, the Stoddard solvent product spill region, and the area of the alleged dumping along Sixth Street. Finally, additional subsurface soil samples should be collected from the site's landfill to verify and further delineate those contaminants detected in the composite surficial soil sample collected by the NYSDEC in 1987.

SITE ASSESSMENT REPORT: PRELIMINARY ASSESSMENT

PART I: SITE INFORMATION

1. **Site Name** Revere Copper Products, Inc. **Alias** Revere Copper and Brass, Inc., Rome Soap, Brown's Soap Factory, Revere Copper Products-Riverdale, Rome Realty Corporation.

   Street Seneca Street

   City Rome **State** New York **Zip** 13440

2. **County** Oneida **County Code** 065 **Cong. Dist.** 025

3 **CERCLIS ID No.** NYD071586127*

* CERCLIS Identification Number NYD071586127 identifies the Revere Copper Products Site and all associated waste units at the facility under CERCLA evaluation. Resource Conservation and Recovery Act (RCRA) EPA Identification Numbers associated with the site include: NYD980507578, which addresses the site's lagoon, and NYD980507560, which addresses the site's landfills, and NYD071586127 which addresses the site's TSDF.

4. **Block No.** 243.013 **Lot Nos.** 1.1, 1.4

5. **Latitude** 43° 12' 26"N **Longitude** 75° 26' 28"W

   USGS Quad. Rome, New York

6. **Approximate size of site** 115 acres

7. **Owner** Revere Copper Products, Inc. **Tel. No.** (315) 338-2022

   Street P.O. Box 151

   City Rome **State** New York **Zip** 13440-9989

8. **Operator** Revere Copper Products, Inc. **Tel. No.** (315) 338-2022

   Street P.O. Box 151

   City Rome **State** New York **Zip** 13440-9989

9. Type of Ownership

   ☒ Private ☐ Federal ☐ State
   ☐ County ☐ Municipal ☐ Unknown ☐ Other _____

10. Owner/Operator Notification on File

    ☒ RCRA 3001 Date 8/18/80 ☐ CERCLA 103C Date _____
    ☐ None ☐ Unknown

11. **Permit Information**

Permit	Permit No.	Date Issued	Expiration Date	Comments
NYS Air Emissions	Refer to Reference No. 8	Unknown	Unknown	Stack Air Emissions
SPDES	NY0005665	Unknown	Unknown	Surface water discharge permit

12. **Site Status**

☒ **Active** ☐ **Inactive** ☐ **Unknown**

13. **Years of Operation** 1930 to Present

14. **Identify the types of waste sources (e.g., landfill, surface impoundment, piles, stained soil, above- or below-ground tanks or containers, land treatment, etc.) on site. Initiate as many waste unit numbers as needed to identify all waste sources on site.**

(a) Waste Sources

Waste Unit No.	Waste Source Type	Facility Name for Unit
1	Drums	Drums/containers
2	Underground Tanks	Tank/Containers
3	Landfill	Landfill/Open Pit
4	Lagoon	Collection Pit/Lagoon

(b) Other Areas of Concern

Identify any miscellaneous spills, dumping, etc. on site; describe the materials and identify their locations on site.

The New York State Department of Environmental Conservation (NYSDEC) Region 6 has documented the occurrence of numerous spills on site which include the following substances: Stoddard solvent product, No. 2 fuel oil, No. 6 fuel oil, polychlorinated biphenyl (PCB)-contaminated waste oil, and used Stoddard solvent blended with waste oil.

On May 14, 1987, a loss of non-CERCLA eligible mineral spirits (Stoddard solvent) in an underground solvent return line was discovered at the facility which contributed to a release of contaminants to the groundwater and indoor air of nearby homes that was attributed to the leak. Laboratory results of groundwater samples collected from the spill location detected mineral spirits (nondetectable (ND) to 500 ppm), No. 2 fuel oil (ND to 14.0 ppm), No. 6 fuel oil (ND to 1,200 ppm), gasoline (ND to 1,070 ppb) and hazardous constituents of petroleum products (0.80 ppm xylene and 1.30 ppm toluene). Subsequently, Revere Copper Products, Inc. was penalized by the NYSDEC for associated violations relating to NYSDEC Spill No. 8701259.

On July 3, 1990, a leaking transformer caused a spill of approximately 100 gallons of PCB contaminated oil, which resulted in the excavation and removal of 21 barrels of PCB-contaminated soil from around the transformer pad and the west wall of the Cast Shop. NYSDEC Spill No. 9003743 was administratively closed after cleanup, however the results of a PCB soil followup were not available.

Spills have occured in 1990 on site near Locomotive Avenue (NYSDEC Spill No. 9003912) and Seneca Street (NYSDEC Spill Nos. 9002016 and 9002750) of unspecified amounts of waste oil, potentially contaminated with heavy metals associated with the manufacturing process. Waste oil spills have also contaminated a 50 by 200 foot area of soil near the site's waste oil management facility and surrounding an underground waste oil tank fill location. Available information does not indicate whether soil was excavated and removed from these spill sites.
Dumping reportedly occurred at Revere Copper Products, Inc. near the site's former acid collection pit and along the length of Sixth Street toward the Mohawk River. According to a citizen's complaint, various types of acid and solvent aqueous wastes were allegedly dumped at the Sixth Street location from 1930 until the late 1940s, when Brown's Soap Factory owned and operated the approximately 8-acre size property. The complaintant stated that vegetation does not grow at this location and fugitive dust from the dump site has corroded aluminum siding of nearby residences.

Ref Nos. 15, 17, 36, 37, 39 through 43, 45

15. Information available from

Contact Amy Brochu **Agency** U.S. EPA Region 2 **Tel. No.** (908) 906-6802

Preparer Dorothy M. Ponte **Agency** NUS Corp. Region 2 FIT **Date** April 9, 1991

Ref. Nos. 3, 4, 5, 6, 8, 15, 16, 36, 37 through 43, 45

PART II: WASTE SOURCE INFORMATION

For each of the waste units identified in Part I, complete the following items.

Waste Unit 1 - Drums/ Containers

Source Type

_____	Landfill	_____	Land Treatment
_____	Surface Impoundment	_____	Chemical Waste Pile
X	Drums	_____	Scrap Metal or Junk Pile
_____	Tanks/Containers	_____	Tailings Pile
_____	Contaminated Soil	_____	Trash Pile
_____	Pile	_____	Other

Description:

Resource Conservation and Recovery Act (RCRA) hazardous wastes generated at the facility under EPA Identification No. NYD071586127 and stored in 55-gallon drums include: baghouse dust from electric furnace melting of copper alloys, spent mercurous nitrate used in laboratory analysis, 1,1,1-trichloroethane still bottoms recovered in the Rod Mill, spent toluene, chrome plating exhaust condensate, and pumice waste generated from finishing of lead-coated copper sheets. The designated storage area for chromic acid, toluene, and still bottoms was inside a storage building adjacent to the waste oil management facility. Baghouse dust was stored outside next to the baghouse facility.

Drummed waste treatment plant sludge has been stored outdoors along the western gate of the facility bordering Sixth Street and across from a nearby school. Although recycled and designated as non-hazardous by RCRA, analysis of the aqueous metal hydroxide sludge indicates the presence of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) hazardous substances in the sludge.

Hazardous Waste Quantity

A total waste quantity of 5,183 drums on site is based on a worst case scenario of the total quantity of all wastes reported in generator annual hazardous waste reports and NYSDEC Site Inspections reports.

Revere Copper's Generator Annual Hazardous Waste Report for 1981 reported 100 tons of spent pickle solution and 10 tons of baghouse dust. During an inspection of the site conducted by the NYSDEC on April 29, 1982, approximately 3,000 drums of 10 percent solid waste treatment plant sludge was observed on site along the western gate bordering Sixth Street and across from a school. In 1982, Revere Copper Products, Inc. reported to the Environmental Protection Agency in an Annual Hazardous Waste Report the generation of: 17 tons of baghouse dust, 7 pounds of mercurous nitrate, 500 pounds of trichloroethane, 6 pounds of toluene, 225 pounds of condensate from chrome plating exhaust, and 2 tons of pumice waste. During an inspection of the site conducted by the NYSDEC on August 2, 1983, the hazardous wastes listed were approximately 2,000 drums of waste treatment plant sludge, 16 drums plus three bags of baghouse dust, two drums trichloroethane, and 27 drums of pumice waste. In 1984, Revere Copper Products, Inc. disclosed to the U. S. Environmental Protection Agency (EPA) that it generated the following hazardous wastes: 4,000 pounds of baghouse dust, 1,840 pounds of liquid chromic acid from cleaning and maintenance of plating lines, 1,000 pounds of dry chromic acid, and 10,680 pounds of pumice waste. Finally, an NYSDEC inspection of the site on

PART II: WASTE SOURCE INFORMATION (CONT'D)

March 28, 1984, indicated the presence of less than one drum of baghouse dust, less than one drum of mercuric nitrate, and two drums of PCB waste.

Hazardous Substances/Physical State.

The drums contain hazardous liquid, solid, and sludge waste generated during the manufacture of copper alloy rods, bars, sheets, strips, and tubes. Hazardous substances known or suspected to be present in the wastes include: heavy metals associated with the manufacturing process; acids, solvents, and related hazardous constituents of these waste products; and PCBs.

Ref. Nos. 5, 6, 7, 9, 13, 16, 17

PART II: WASTE SOURCE INFORMATION

For each of the waste units identified in Part I, complete the following items.

Waste Unit 2 - Tanks/ Containers

Source Type

_____	Landfill	_____	Land Treatment
_____	Surface Impoundment	_____	Chemical Waste Pile
_____	Drums	_____	Scrap Metal or Junk Pile
X	Tanks/Containers	_____	Tailings Pile
_____	Contaminated Soil	_____	Trash Pile
_____	Pile	_____	Other

Description:

Three underground waste oil holding tanks are located at the site's waste oil management facility. The tanks may be as old as 40 years and are reported by a NYSDEC investigator to have decayed over time. The waste oil management facility lacks secondary containment. Stained soils have been observed near the ramp to the building and around the tanks.

Waste oils generated at Revere Copper Products, Inc. consist of: hydraulic oils, rolling lubricants, cutting and milling lubricants, gear oils, soaps, and emulsified oils. These wastes are run through an oil/water separator which isolates and stores the non reusable oily waste water in two underground tanks from the reusable waste oil, into which Stoddard solvent has been blended, until subsequent disposal off site by a licensed scavenger.

Hazardous Waste Quantity

Each underground waste oil tank has a storage capacity of 10,000 gallons. The total quantity of hazardous waste associated with the waste unit is 30,000 gallons.

Hazardous Substances/Physical State.

Aqueous hazardous substances known or suspected to be present in the waste unit are hazardous constituents of petroleum products and waste oils, and Stoddard solvent potentially contaminated with heavy metals associated with the manufacturing process.

Ref. Nos. 13, 16, 17, 39

PART II: WASTE SOURCE INFORMATION

For each of the waste units identified in Part I, complete the following items.

Waste Unit 3 - Landfill/Open Pit

Source Type

X	Landfill		Land Treatment
	Surface Impoundment		Chemical Waste Pile
	Drums		Scrap Metal or Junk Pile
	Tanks/Containers		Tailings Pile
	Contaminated Soil		Trash Pile
	Pile		Other

Description:

During a plant expansion project which occurred between 1966 and 1967, a 9-acre unlined landfill, bordered by Culverton, Mayberry,and Millbrook Roads, was used by Revere Copper Products, Inc. for the disposal of demolition debris and waste scrap. Residents of the area also reportedly used the former landfill for the disposal of household refuse.

Hazardous Waste Quantity

The total quantity of hazardous wastes suspected or known to be discarded at the landfill is unknown, as available records indicate only non-hazardous materials were disposed of in the open pit. However, subsequent investigation revealed the presence of hazardous substances in composite soil samples taken at the landfill. Accordingly, the hazardous waste quantity is estimated to be the entire 9 acres of the landfill.

Hazardous Substances/Physical State.

An August 1985 Phase I Investigation of Revere Copper and Brass Landfill, NYSDEC Site Number 633008, indicates that no known hazardous wastes were disposed of at the waste unit. However, NYSDEC Region 6 conducted an on-site sampling investigation of the abandoned landfill and collected a composite surface soil sample which detected concentrations of cadmium (13 mg/kg), copper (3,840 mg/kg), and zinc (5,180 mg/kg). These analytes may be constituents of copper and copper alloy manufacturing wastes possibly discarded at the landfill. The known physical state of wastes disposed of at this location is solid; however, it is possible that aqueous wastes generated at the plant may have potentially been placed in the landfill.

Ref. Nos. 3, 12, 34, 38

PART II: WASTE SOURCE INFORMATION

For each of the waste units identified in Part I, complete the following items.

Waste Unit 4 - Collection Pit/ Lagoon

Source Type

_____	Landfill	_____	Land Treatment
_____	Surface Impoundment	_____	Chemical Waste Pile
_____	Drums	_____	Scrap Metal or Junk Pile
_____	Tanks/Containers	_____	Tailings Pile
_____	Contaminated Soil	_____	Trash Pile
_____	Pile	X	Other

Description:

A former acid-collection pit is located on site adjacent to Sixth Street near the former Rome Soap Factory. The 30-millimeter thick hypalon-lined lagoon was reportedly used from 1971 to at least 1980 by Revere Copper Products, Inc. It was used for the storage of dilute copper contaminated acid wastes prior to periodic removal by a scavenger waste hauler. Subsequently, the lagoon was drained, backfilled, and capped.

Hazardous Waste Quantity

The acid-collection pit is approximately 50 by 135 feet in size. The hazardous waste storage capacity of the former lagoon is assumed to be 125,000 gallons.

Hazardous Substances/Physical State.

The physical state of potentially hazardous substances previously stored in the lagoon were liquid and sludge. Spent pickling acids, sulfuric acid (H_2SO_4), and hydrogen peroxide (H_2O_2), are the copper contaminated acid wastes known to have been stored in the lagoon. Sludges containing copper and copper alloy wastes may have possibly been stored in the former waste unit; however, there is no known document to support this assumption.

Ref. Nos. 12, 38, 41, 47

PART III: EXISTING ANALYTICAL DATA

On July 1, 1987, a composite soil sample was collected by NYSDEC Region 6 from three sampling locations at the Revere Copper and Brass landfill, NYSDEC Identification No. 633008. Notable concentrations of cadmium (13 mg/kg) were detected in addition to significant concentrations of copper (3,840 mg/kg) and zinc (5,180 mg/kg). Polyaromatic hydrocarbons were also detected in the sample. Benzo(a)pyrene was detected at 1,300 ug/kg. These contaminants may potentially be attributed to activities at the site involving the manufacture of copper and copper alloy products.

On April 24, 1990, Empire Soils Investigations, Inc. (ESI) collected groundwater samples from all on-site and off-site monitoring wells (except MW-1) near NYSDEC Region 6 spill No. 87-01259. Laboratory results of the groundwater analyses detected measureable quantities of mineral spirits (500 ppm), gasoline (1,070 ppb) , fuel and/or lubricating oils (14.0 ppm of No. 2 fuel oil and 1,200 ppm No. 6 fuel oil), and hazardous consituents of petroleum products (0.80 ppm xylene and 1.30 ppm toluene). These contaminants may be attributed to site activities at Revere Copper Products, Inc.

It is not known if additional samples have been collected from the Revere Copper Products, Inc. Site.

Ref. Nos. 3, 34, 44, 45

PART IV: HAZARD ASSESSMENT

GROUNDWATER ROUTE

1. **Describe the likelihood of a release of contaminant(s) to the groundwater as follows: observed release, suspected release, or none. Identify contaminants detected or suspected and provide a rationale for attributing them to the site. For observed release, define the supporting analytical evidence.**

   Although there is no known documented observed release of contaminants to groundwater, a release is suspected as there are multiple waste sources with poor, questionable, or unknown containment. Analyses of groundwater samples collected near the waste oil management facility has detected hazardous constituents of petroleum products that may potentially be attributed to the blended waste oil stored in the underground storage tanks. Stained soils have also been observed around these tanks.

   Drums containing aqueous metal hydroxide sludges have been stored outdoors without secondary containment and may have conceivably leaked contaminants onto the soil. A waste dump site alleged in a citizen's complaint and a former acid collection pit may have possibly leaked acids and solvents contaminated with copper and copper alloys associated with the manufacturing process into the site's soil and surfical groundwater. Heavy metal soil contaminants have been detected at an unlined inactive on-site landfill and may have potentially contaminated underlying surficial groundwater. NYSDEC Region 6 has documented the occurrence of numerous spills on site that involve substances potentially contaminated with CERCLA hazardous substances.

   Ref. Nos. 3, 15, 17, 34, 36 through 39, 46, 49

2. **Describe the aquifer of concern; include information such as depth, thickness, geologic composition, areas of karst terrain, permeability, overlying strata, confining layers, interconnections, discontinuities, depth to water table, groundwater flow direction.**

   Revere Copper Products, Inc. is located in the Hudson-Mohowk Lowlands physiographic province of New York State within a designated wellhead protection area. The surficial geology of the region consists of recent glacial-fluvial deposits which range from 3 to 30 feet in thickness and vary in composition from fine sand and silt to coarse gravel. In the vicinity of the site, these unconsolidated lacustrine deposits range in thickness from 16 to approximately 30 feet and have a permeability of 10^{-3} to 10^{-5} cm/sec. The aquifer of concern occurs beneath the site in a surficial layer of unconsolidated deposits which overlies a denser layer of late Pleistocene glacial till. The relatively impermeable till consists of an unstratified and unsorted mixture of silt, gravel, and boulders with moderate to high clay content. Groundwater of the surficial aquifer tends to flow to the south-southwest near the facility with a velocity between 3.6 and 219 ft/yr. The bedrock underlying the site consists of shales of Ordovician age, in addition to members of the Cincinnatian Group, and is approximately 125 feet below ground surface.

   Ref. Nos. 3, 30, 45

3. **What is the depth from the lowest point of waste disposal/storage to the highest seasonal level of the saturated zone of the aquifer of concern?**

   The lowest point of waste disposal/storage is assumed to be in the saturated zone of the aquifer of concern. Depth to groundwater in the region ranges from 2 to 20 feet and the lagoon, landfill, and underground storage tanks are estimated to be approximately 6 feet below ground surface. Therefore, the depth is assumed to be zero feet.

   Ref. Nos. 3, 45

4. **Identify and determine the distance to and depth of the nearest well that is currently used for drinking purposes?**

   Most private and commercial wells within a 4-mile radius of the site are no longer used as a source of potable water. The nearest well that is potentially used for drinking purposes is located approximately 1 mile south of the site on Oriskany Road. The depth of the well is assumed to be approximately 20 feet, based on the drilled depth of nearby wells.

   Ref. Nos. 3, 26, 45, 48

5. **If a release to groundwater is observed or suspected, determine the number of people that obtain drinking water from wells that are documented or suspected to be located within the contamination boundary of the release.**

   There are no known wells drawing from the aquifer of concern documented to be located within the contamination boundary of release of CERCLA hazardous substances attributable to the site. The nearest well is located 1 mile south of the site and beyond any suspected boundary of contamination.

   Ref. Nos. 3, 26, 28, 29, 45

6. **Identify the population served by wells that are not expected to be contaminated located within 4 miles of the site that draw from the aquifer of concern.**

Distance	Population
0 - $\frac{1}{4}$ mi	0
> $\frac{1}{4}$ - $\frac{1}{2}$ mi	0
> $\frac{1}{2}$ - 1 mi	0
>1 - 2 mi	14
>2 - 3 mi	24
>3 - 4 mi	56

   State whether groundwater is blended with surface water, groundwater, or both before distribution.

   Approximately 95 individuals using private domestic wells may obtain drinking water from the aquifer of concern within a 4-mile radius of the site.

   Ref. Nos. 3, 26, 28, 29, 45, 48, 52

7. **Identify uses of groundwater within 4 miles of the site (i.e. private drinking source, municipal source, municipal and private, commercial, irrigation, unuseable).**

   Groundwater within 4 miles of the site is potentially used as a private source of drinking water for 6 to 10 residences located along Lamphear Road in addition to approximately 19 other homes located within a 4-mile radius of the site. Irrigation and commercial industrial use is also reported.

   Ref. Nos. 26, 28, 29, 48

SURFACE WATER ROUTE

8. **Describe the likelihood of a release of contaminant(s) to surface water as follows: observed release, suspected release, or none. Identify contaminants detected or suspected and provide a rationale for attributing them to the site. For observed release, define the supporting analytical evidence.**

There is no known documented observed release of contaminants to surface water from the site. However, there is a suspected release of contaminants to surface water as there are multiple waste sources on site with poor, questionable, or unknown containment. Stained soils have been observed near the waste oil management facilities building ramp and around the tanks. Drummed aqueous metal hydroxide sludge waste, and baghouse dust have been stored outdoors without secondary containment. There is a suspected release of contaminants to surface water from contaminated soils of an unlined landfill and former lagoon. Dumping of solvents, acids, and other liquid wastes, possibly contaminated with copper and copper alloys associated with the manufacturing process at the plant, is alleged in a citizen's complaint to have occurred along the length of Sixth Street toward the Mohawk River. Revere Copper Products, Inc. is located within an area of minimal flooding, however the most probable pathway of contaminant migration to surface water would be overland to the Mohawk River, which borders the site and is located within a 100-year flood zone.

Ref. Nos. 3, 15, 27

9. **Identify the nearest downslope surface water. If possible, include a description of possible surface drainage patterns from the site.**

The nearest downslope surface water is the Mohawk River, which is contiguous to the northwestern boundary of the site. Surface runoff from the site can be expected to migrate overland to the Mohawk River and flow approximately 4,500 feet to the southwest until reaching the confluence of the Erie (Barge) Canal and the Mohawk River, where it subsequently flows to the east in a meandering path toward the eastern edge of Frankfort, New York, where the Mohawk River and the Erie (Barge) Canal separate.

Ref. Nos. 3, 45, 48

10. **What is the distance in feet to the nearest downslope surface water? Measure the distance along a course that runoff can be expected to follow.**

The estimated distance as measured from the various known waste sources at Revere Copper Products, Inc., to the nearest downslope surface water, the Mohawk River, is as follows: 250 feet from the waste oil management facility's underground storage tanks, 300 feet from the outdoors location of drummed aqueous and metal hydroxide sludge waste, 100 feet from drummed baghouse dust, 400 feet from the unlined landfill, and 200 feet from the capped acid-collection pit. Thus, the shortest distance to surface water from a known waste source is 100 feet. Additionally, the Mohawk River is contiguous to the location of the alleged acid dump site. The surficial groundwater aquifer may also potentially carry contaminants from these waste sources to the Mohawk River and Erie (Barge) Canal when it discharges to these water bodies via groundwater flow.

Ref. No. 48, Figure 2 of Attachment No. 2

11. **Determine the type of floodplain that the site is located within.**

The site is located within an area of minimal flooding, however the northeastern boundary is contiguous with the Mohawk River which pertains to an area located within a 100-year flood zone.

Ref. Nos. 27, 48

12. **Identify drinking water intakes in surface waters within 15 miles downstream of the site. For each intake identify: the name of the surface water body in which the intake is located, the distance in miles from the point of surface water entry, population served, and stream flow at the intake location.**

Intake	Distance	Population Served	Flow (cfs)

Water supplies for the city of Rome are obtained from a surface water intake above Taberg in the East Branch of the Fish Creek. The intake is located upstream approximately 11.5 miles northwest of the site. There are no drinking water intakes in surface waters located within 15 miles downstream of the site.

Ref. Nos. 3, 30 through 33, 48

13. **Identify fisheries that exist within 15 miles downstream of the point of surface water entry. For each fishery specify the following information:**

Fishery Name	Water Body Type	Flow (cfs)	Saline/ Fresh/ Brackish
Mohawk River/Erie (Barge) Canal	Large stream	150*	Fresh

* Up to 4,000 cfs during overflow conditions

Ref. Nos. 3, 22, 24, 30 through 33, 48

14. **Identify surface water sensitive environments that exist within 15 miles of the point of surface water entry. For each sensitive environment specify the following:**

Sensitive Environment	Water BodyType	Flow (cfs)	Wetland Frontage (miles)
Mohawk River/Erie (Barge) Canal NYSDEC regulated wetland: RO-9	Large stream	150*	≃ 0.1
Mohawk River/Erie (Barge) Canal wetlands	Large stream	150*	≃ 2

Ref. Nos. 3, 19, 20, 24

* Up to 4,000 cfs during overflow conditions

15. **If a release to surface water is observed or suspected, identify any intakes, fisheries, and sensitive environments from question Nos. 12-14 that are or may be located within the contamination boundary of the release.**

Intakes: None

Fisheries: Mohawk River/Erie (Barge) Canal.

Sensitive Environments: NYSDEC regulated wetland RO-9 and freshwater wetlands

A release to surface water is suspected, as the site's northwestern border is contiguous to the potentially impacted fishery and associated sensitive environments of the Mohawk River/Erie (Barge) Canal. There are no drinking water intakes located within 15 miles downstream of the site.

Ref. Nos. 3, 19, 20, 22, 48

SOIL EXPOSURE PATHWAY

16. **Determine the number of people that occupy residences or attend school or day care on or within 200 feet of the site property.**

Several residences are located within 200 feet of the site property. Based on a population density of 2.4 persons per household, it is estimated that approximately 115 people reside within 200 feet of Revere Copper Products, Inc. A city park, Harr-Pinti Field, is located across Sixth Street within 50 feet of the site's northwestern border, and Bell Isle Park is located northwest of the property approximately 200 feet away.

Approximately 400 students attend Columbus Avenue Elementary School, which is located adjacent to the site's southwestern border and within 200 feet of the designated hazardous waste storage building and waste oil management facility. Approximately 3,000 drums of copper and/or copper alloy contaminated waste treatment plant sludge were stored outside the facility along the western gate bordering Sixth Street and across from the school. There are no known day care facilities within 200 feet of the site property.

Ref. Nos. 1, 3, 47, 48, 51

17. **Determine the number of people that regularly work on or within 200 feet of the site property.**

The number of people that currently work on site or within 200 feet of the site property is unknown. Approximately 1,148 individuals were employed by Revere Copper Products in 1982.

Ref. Nos. 1, 3, 13, 16, 48

18. **Identify terrestrial sensitive environments on or within 200 feet of the site property.**

There are no terrestrial sensitive environments on or within 200 feet of the site property.

Ref. Nos. 3, 20, 24, 32, 33, 48

AIR ROUTE

19. **Describe the likelihood of release of contaminants to air as follows: observed release, suspected release, or none. Identify contaminants detected or suspected and provide a rationale for attributing them to the site. For observed release define the supporting analytical evidence.**

An observed release of hazardous constituents of petroleum products, which are excluded from evaluation under CERCLA/SARA, has been documented for indoor air pertaining to several residences located near Locomotive Avenue affected by a Stoddard solvent product spill attributed to a leak in an underground solvent return line of the site. The aluminum siding of nearby residences is alleged in a citizen's complaint to have been corroded due to a possible release of airborne acid- and solvent-contaminated soil particulates potentially attributed to the facility. The area affected by the latter alleged contaminant release is unknown, therefore the number of people that reside or are suspected to reside within it is unknown. There is no known analytical evidence available to support an observed release to air of CERCLA hazardous substances associated with waste disposal activities at Revere Copper Products, Inc. A release to air is not suspected.

Ref. Nos. 15, 38, 43, 44, 45, 50, 53

20. **Determine populations that reside within 4 miles of the site.**

Distance	Population
0 - $\frac{1}{4}$ mi	192
> $\frac{1}{4}$ - $\frac{1}{2}$ mi	4,447
> $\frac{1}{2}$ - 1 mi	6,193
> 1 - 2 mi	22,983
> 2 - 3 mi	7,614
> 3 - 4 mi	4,840

Ref. No. 2

21. **Identify sensitive environments, including wetlands and associated wetlands acreage, within $\frac{1}{2}$ mile of the site.**

0-$\frac{1}{4}$ Mile Sensitive Environments/Wetland Acreage	$\frac{1}{4}$ - $\frac{1}{2}$ Mile Sensitive Environments/Wetland Acreage
None	NYSDEC regulated wetland RO-9: approximately 50 acres, located 2,000 feet southeast of the site Freshwater coastal wetlands: approximately 30 acres, located 2,000 feet north of the site.

Ref. Nos. 3, 19, 48

22. **If a release to air is observed or suspected, determine the number of people that reside or are suspected to reside within the area of air contamination from the release.**

A release to air is not observed or suspected.

23. **If a release to air is observed or suspected, identify any sensitive environments, listed in question No. 21, that are or may be located within the area of air contamination from the release.**

There are no known sensitive environments in the site's vicinity that may have potentially been affected by a release of air contaminants from Revere Copper Products, Inc.

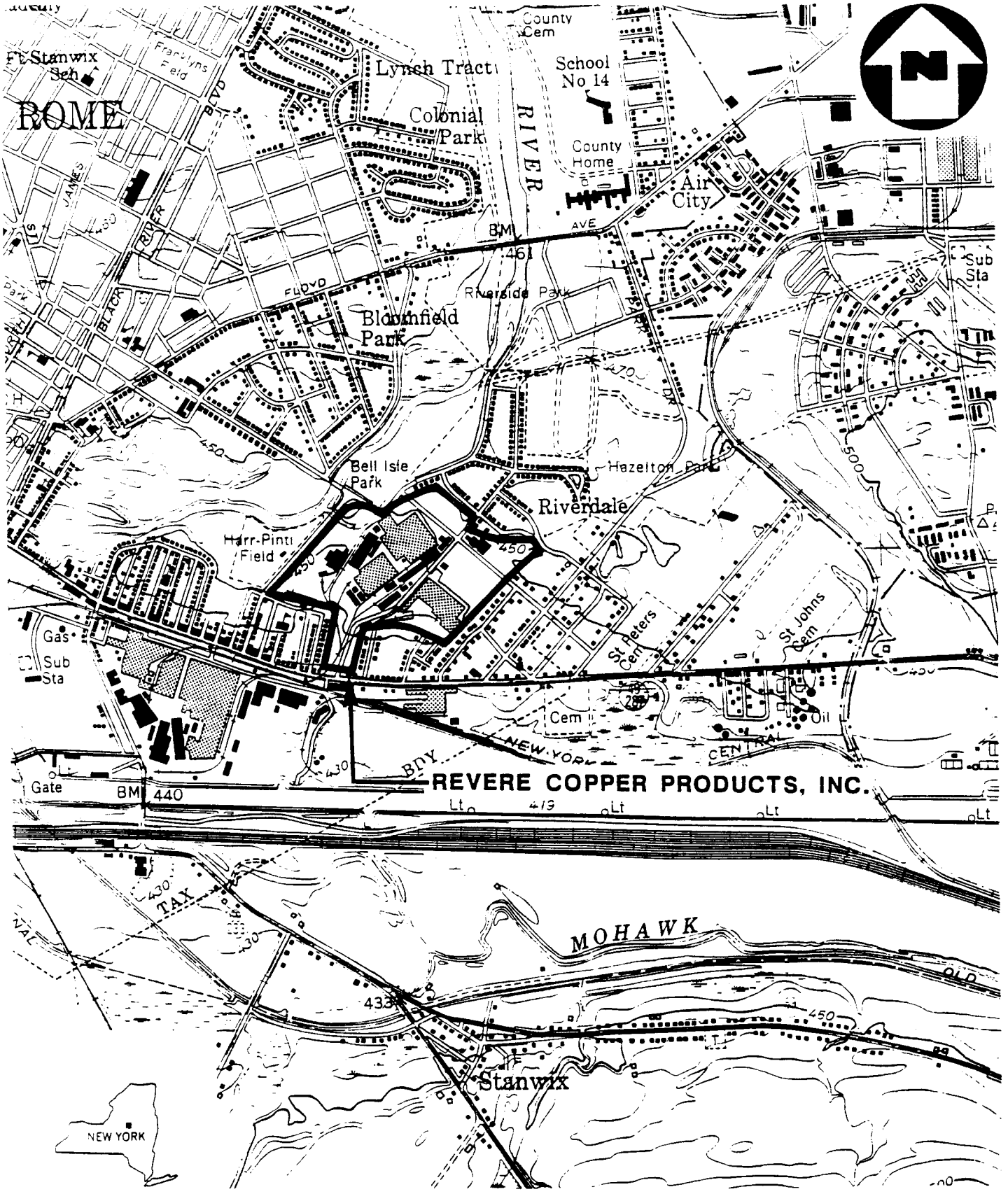
Ref. Nos. 15, 43, 44, 45, 48

ATTACHMENT 1

REVERE COPPER PRODUCTS, INC.

ROME, ONEIDA COUNTY, NEW YORK

CONTENTS



(QUAD) ROME, N.Y.

FIGURE 1

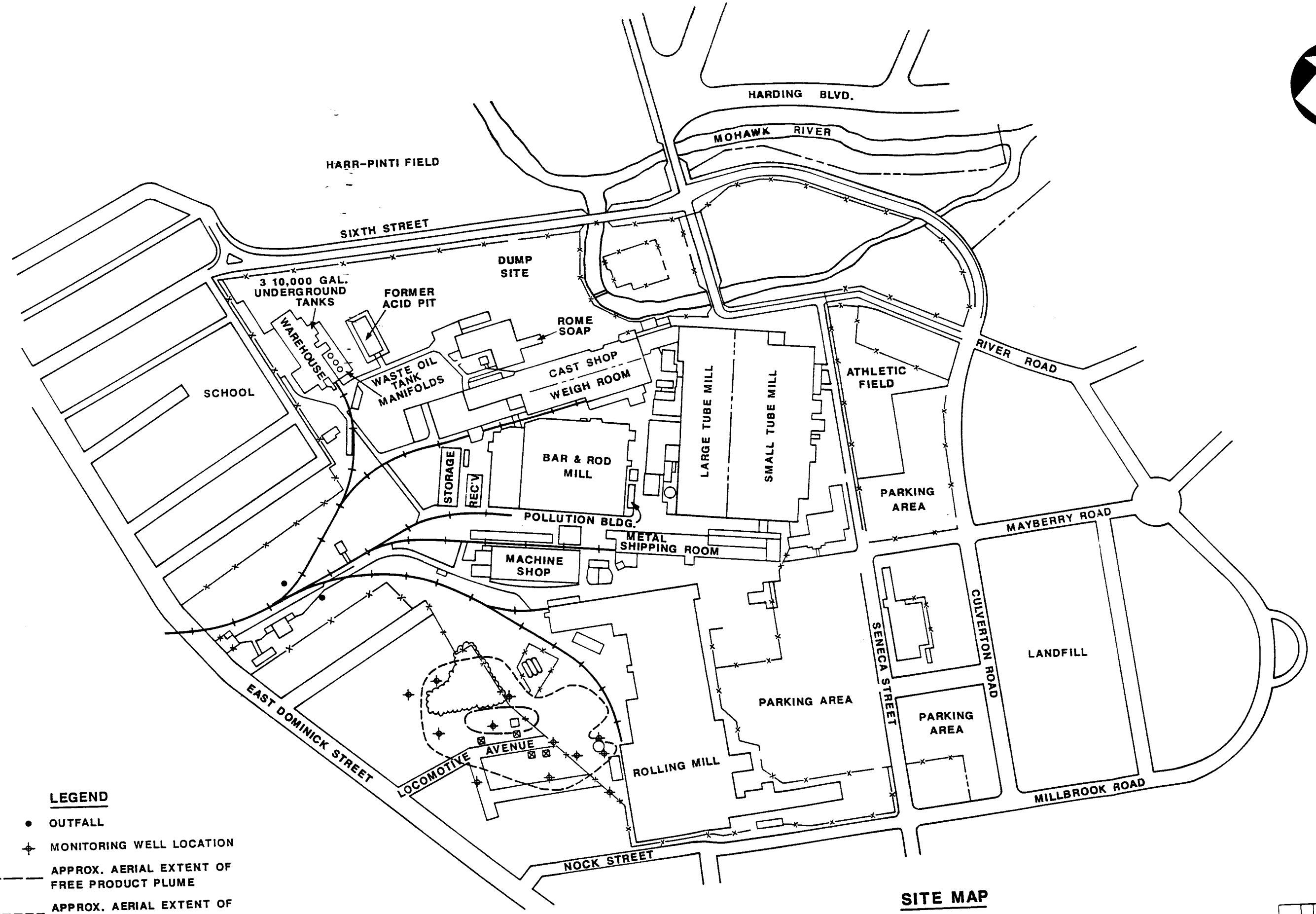
SITE LOCATION MAP

REVERE COPPER PRODUCTS, INC.,

ROME, N.Y.

SCALE : 1 " = 2000'

NUS CORPORATION



LEGEND

- OUTFALL
- MONITORING WELL LOCATION
- APPROX. AERIAL EXTENT OF FREE PRODUCT PLUME
- APPROX. AERIAL EXTENT OF DISSOLVED CONTAMINATION
- HOUSE

SITE MAP

REVERE COPPER PRODUCTS, INC., ROME, N.Y.

SCALE UNKNOWN

FIGURE 2

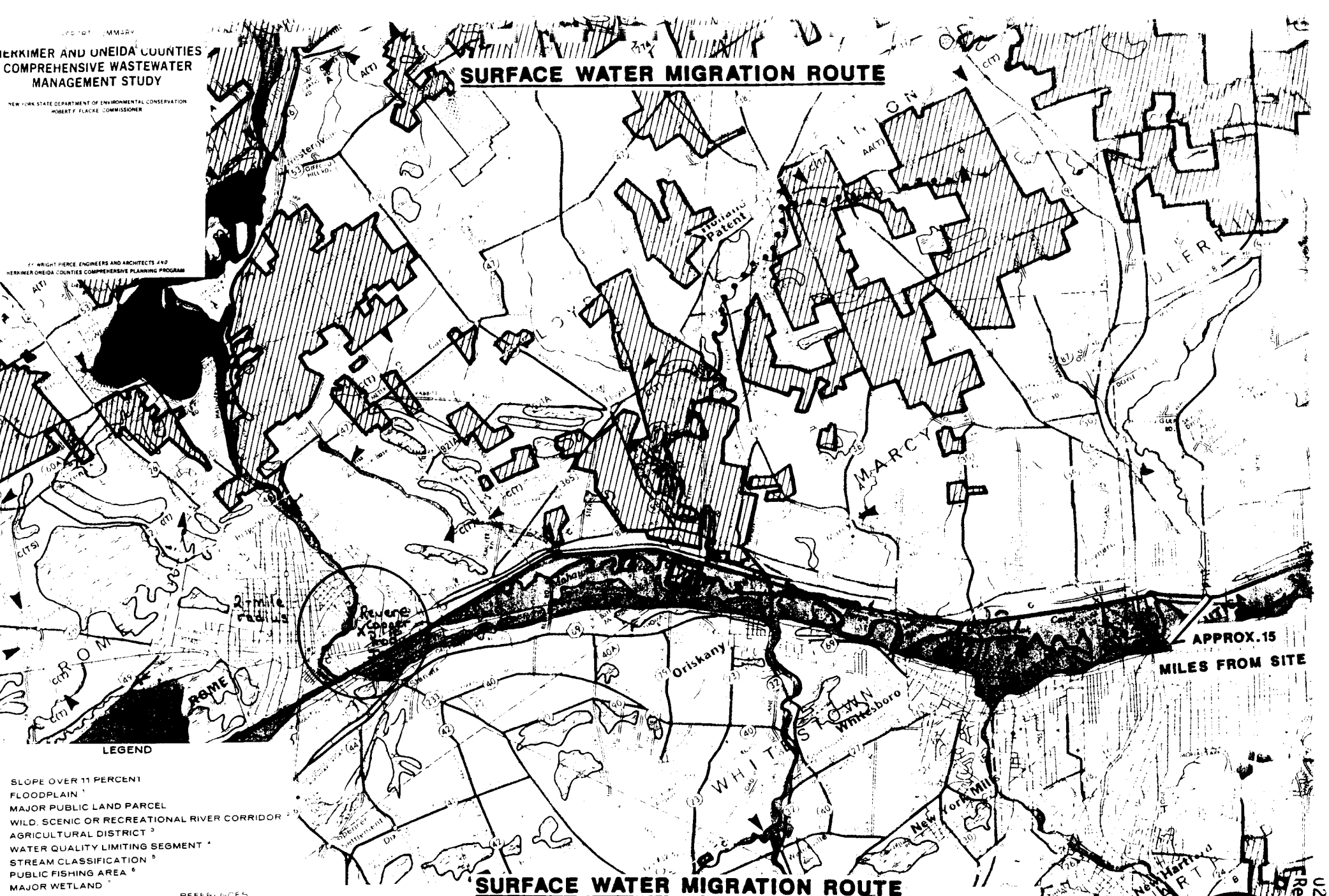
NUS CORPORATION

REPORT SUMMARY

HERKIMER AND ONEIDA COUNTIES COMPREHENSIVE WASTEWATER MANAGEMENT STUDY

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
ROBERT F. FLACKE, COMMISSIONER

BY WRIGHT PIERCE, ENGINEERS AND ARCHITECTS AND
HERKIMER ONEIDA COUNTIES COMPREHENSIVE PLANNING PROGRAM



SURFACE WATER MIGRATION ROUTE
REVERE COPPER PRODUCTS, INC.,
ROME, N.Y.

FIGURE 3

U2-9010-16-PA
Rev. No. 0

EXHIBIT A

PHOTOGRAPH LOG

REVERE COPPER PRODUCTS
ROME, NEW YORK

OFF-SITE RECONNAISSANCE: DECEMBER 5, 1990

REVERE COPPER PRODUCTS
ROME, NEW YORK
DECEMBER 5, 1990

PHOTOGRAPH INDEX

ALL PHOTOGRAPHS TAKEN BY JENNIFER LEAHY

Photo Number	Description	Time
1P-1	Photo of site from the Columbus Elementary School playground facing northeast.	1121
1P-2	Photo of residential home adjacent to site at southern border facing north.	1135
1P-3	Photo of storage tanks facing northeast.	1137
1P-4,5	Panoramic photo of employee parking an facility facing southwest.	1142
1P-7	Photo of stream adjacent to border of site facing south.	1146
1P-8	Photo of transformers on site facing southeast.	1151

REVERE COPPER PRODUCTS, ROME, NEW YORK

1P-1 December 5, 1990 1121
Photo of site from the Columbus Elementary School playground facing northeast.

1P-2 December 5, 1990 1135
Photo of residential home adjacent to site at southern border facing north.

REVERE COPPER PRODUCTS, ROME, NEW YORK

1P-3 December 5, 1990 1137
Photo of storage tanks facing northeast.

REVERE COPPER PRODUCTS, ROME, NEW YORK

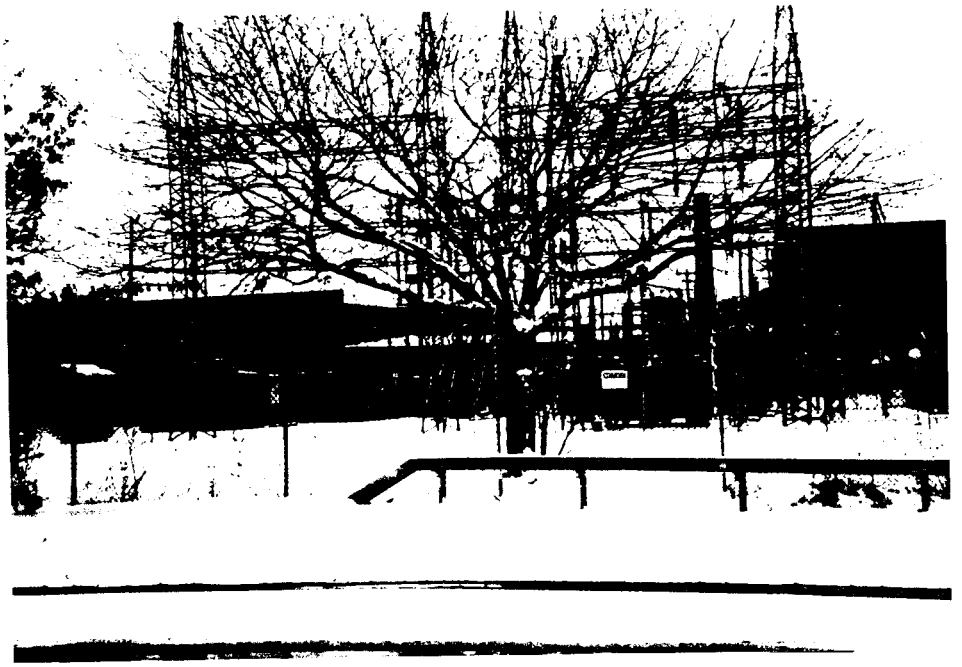
1P-4,5

December 5, 1990
Panoramic photo of employee parking and facility facing southwest.

1142

REVERE COPPER PRODUCTS, ROME, NEW YORK

1P-7 December 5, 1990 1146
Photo of stream adjacent to border of site facing south.



1P-8 December 5, 1990 1151
Photo of transformers on site facing southeast.

ATTACHMENT 2

REFERENCES

1. Preliminary Assessment Off-Site Reconnaissance Information Reporting Form for Revere Copper Products, Inc. Site, TDD No. 02-9010-16, NUS Corporation Region 2 FIT, December 5, 1990.

2. General Sciences Corporation, Graphical Exposure Modeling System (GEMS). Landover, Maryland, 1986.

3. Engineering Investigations at Inactive Hazardous Waste Sites, Phase I Investigation of Revere Copper and Brass Landfill, Site No. 633008, Rome, Oneida County, prepared for the New York State Department of Environmental Conservation (NYSDEC) by Recra Research, Inc., August 1985.

4. U.S. Environmental Protection Agency (U.S. EPA) Superfund Program, Comprehensive Environmental Response, Compensation, and Liability Information System, List-4: Site Alias Location Listing, page 429, January 8, 1991.

5. U.S. EPA Superfund Program, Comprehensive Environmental Response, Compensation, and Liability Information System, List-8: Site/Event Listing, page 370, January 8, 1991.

6. HWDMS Master Facility Listing, Revere Copper Products, Inc., U.S. EPA ID. No. NYD071586127, page 303, May 18, 1983 update.

7. U.S. EPA Facility Annual Hazardous Waste Report, Revere Copper Products, Inc., U.S. EPA ID. No. NYDO71586127, 1982 Annual Report, February 28, 1983.

8. Telecon Note: Conversation between David Prosser and Rand Vaas, (both of NYSDEC, Region 6), and John Copman, NUS Corp., April 5, 1991.

9. Letter from David L. Hunt, Plant Engineer, Engineering Department, Rome Division, Revere Copper Products, Inc., to Ernest A. Regna, Chief, Solid Waste Branch, U.S. Environmental Protection Agency. August 13, 1984.

10. Letter from D. L. Hunt, Plant Engineer, Engineering Department, Rome Division, Revere Copper Products, Inc., to George W. Heitzman, Bureau of Hazardous Waste Technology, Division of Solid and Hazardous Waste, NYSDEC. June 5, 1985.

11. Letter from Salvatore J. Carlomagno, P.E., Chief, Regional Permit Section, Bureau of Hazardous Waste Facility Compliance, Division of Hazardous Substances Regulation, NYSDEC. April 4, 1990.

12. State of New York Department of Health memorandum from J.M. Marsch to Mr. McCarthy (both of the State of New York, Department of Health), Subject: Revere Copper, City of Rome, Oneida County. September 4, 1979.

13. NYSDEC memorandum from Thomas F. Keelty, Sr. Engineering Technician, Region 6 - Utica, to Bob Guiendon (both of the NYSDEC), Subject: Revere Copper Products, Inc. May 4, 1982.

14. NYSDEC memorandum from Tom Morgan, Sr. Sanitary Engineer, Division of Solid and Hazardous Waste, Region 6, to Bruce Knapp, Bureau of Hazardous Waste Operations - Compliance Section (both of the NYSDEC), Subject: Revere Copper Products, Inc., - NYD071586127. March 7, 1985.

REFERENCES (CONT'D)

15. NYSDEC memorandum from David E. Marcisofsky, Environmental Engineering Technician, Region 6 - Utica, to Thomas Morgan and Darrell Sweredoski (all of the NYSDEC), Subject: Revere Copper and Brass, Rome, Oneida County. August 2, 1990.

16. U.S. EPA, RCRA Inspection Form Report of Revere Copper Products, Inc., Rome, New York, U.S. EPA ID. No. NYD071586127, August 2, 1983.

17. U.S. EPA, RCRA Inspection Form Report of Revere Copper Products, Inc., Rome New York, U.S. EPA ID. No. NYD071586127, March 28, 1984.

18. NYSDEC Region 6, Division of Solid and Hazardous Waste, Inspection Form Report of Revere Copper Products, Inc., Rome, New York, U.S. EPA ID. No. NYD071586127, February 27, 1989.

19. Letter from John F. Sandwick, Jr., Environmental Analyst, Region 6 - Utica, Division of Regulatory Affairs, NYSDEC, to Diane M. Werneiwski, Staff Geologist, Recra Research, Inc. May 9, 1985.

20. Letter from John W. Ozard, Significant Habitat Unit, Wildlife Resources Center, NYSDEC, to Ms. Venessa Devillez, RECRA Research, Inc. May 30, 1985.

21. Telecon Note: Conversation between Mark Richardson, Environmental Conservation Office, and Susan Lenczyk, NUS Corporation, February 21, 1991.

22. Telecon Note: Conversation between Jack Hasse, NYSDEC, Fish and Wildlife, and Mike Gallagher, NUS Corporation, March 14, 1991.

23. Letter from Andrew M. Platt, Group Leader, Hazardous Waste Systems, The MITRE Corporation, Civil System Division, and Lucy Sibold, U.S. EPA. May 26, 1988.

24. Telecon Note: Conversation between Jim Kauffman, NYSDOT, Waterways, and Mike Gallagher, NUS Corporation, March 4, 1991.

25. Telecon Note: Conversation between Carl Quance, NYSDEC, Region 6 - Utica, Flood Plains, and Mike Gallagher, NUS Corporation, March 5, 1991.

26. Telecon Note: Conversation between George Sisly, City of Rome Water Shop Superintendent, and Mike Gallagher, NUS Corporation, March 6, 1991.

27. Flood Insurance Rate Map, City of Rome, Oneida County, New York, Community - Panel Number 360542 0021 B, National Flood Insurance Program, Federal Emergency Management Agency, August 30, 1974, revised January 3, 1985.

28. Wells within a 4-mile radius of Revere Copper Products, Inc., Site Water Resources Division, U.S. Geological Survey (U.S.G.S.), Request 8001, January 10, 1991.

29. Project Note: From Dorothy Ponte, to file, Subject: Telecon Notes from Niagara Mohawk/Gas Reg Station File, TDD No. 02-9007-01, concerning wells located within a 4-mile radius of Revere Copper Products, Inc. Site, March 20, 1991.

30. Halberg, H.N., O.P. Hung, and F.H. Pauszek. Water Resources of the Utica-Rome Area New York, Water Resources of Industrial Areas, Geological Survey Water-Supply Paper 1499-C. U.S. Department of the Interior, 1962.

REFERENCES (CONT'D)

31. Official Compilation of Codes, Rules and Regulations, State of New York, Department of State, Albany, New York, January 1983.

32. Herkimer and Oneida Counties Comprehensive Wastewater Management Study Inventory Tables, Project No. WPC-CS-214, NYSDEC, by Wright-Pierce, Engineers and Architects and Herkimer-Oneida Counties Comprehensive Planning Program, August 1981.

33. Herkimer and Oneida Counties Comprehensive Wastewater Management Study Report Summary, Project No. WPC-CS-214, NYSDEC, by Wright-Pierce, Engineers and Architects and Herkimer-Oneida Counties Comprehensive Planning Program, August 1981.

34. Letter from Thomas M. Koch, Solid Waste Management Specialist II, Site Control Section, Bureau of Hazardous Site Control, Division of Hazardous Waste Remediation, NYSDEC, to Dorothy Ponte, NUS Corporation. March 26, 1991.

35. Proposed New York State Wellhead Protection Program, NYSDEC, May 1990.

36. Telecon Note: Conversation between Tom Morgan, NYDEC, Water Division, and Susan S. Hodgkiss, NUS Corporation, October 15, 1990.

37. Telecon Note: Conversation between Jack Marsch, Oil Spills Program, NYDEC Region 6 - Utica, and Dorothy Ponte, NUS Corporation, March 7, 1991.

38. Telecon Note: Conversation between Darrell Sweredowski, NYDEC, Environmental Quality, Watertown, New York, and Dorothy Ponte, NUS Corporation, March 7, 1991.

39. Telecon Note: Conversation between Tom Morgan, NYDEC, Water Division, and Dorothy Ponte, NUS Corporation, March 7, 1991.

40. Telecon Note: Conversation between Jean Mahoney, Tax Assessor's Office, Rome, New York, and Dorothy Ponte, NUS Corporation, March 6, 1991.

41. City of Rome, Office of the Assessor, Tax Map for parcel No. R-94 pertaining to Revere Copper and Brass, Inc., Rome, New York, April 1, 1964.

42. Project Note: From Dorothy Ponte, to File, Subject: NYSDEC Region 6 Oil and Hazardous Material Spill - Fact sheets for Revere Copper Products, Inc. Site, March 19, 1991.

43. Interim Investigation Summary Report of Revere Copper Products, Inc. Spill No. 8701259, NYSDEC Region 6, August 27, 1990.

44. Letter from David L. Hunt, Environmental Supervisor, Revere Copper Products, Inc., to Jack Marsch, NYSDEC. April 18. 1989.

45. Hydrogeologic Investigation of Revere Copper, Rome, New York, Project No. GTA-89-006C, by Empire Soils Investigations Inc., Consulting Geotechnical Engineers and Geologists, February 1990.

46. Letter from Andrew Lockwood, Geologist, and Patrick Mulligan, Manager Environmental Services (both of Empire Soils Investigations, Inc.), to Jack Marsch, NYSDEC. June 19, 1990.

47. NYSDEC Hazardous Waste Disposal Sites Report of Revere Copper and Brass, Inc., Site Code: 633007, Rome, Oneida County, New York, April 18, 1980.

REFERENCES (CONT'D)

48. Four Mile Vicinity Map for Revere Copper Products, Inc., compiled from U.S.Department of the Interior, Geological Survey Topographic Maps, 7.5 minute series, Quadrangles for "Rome, N.Y.", 1955; "Lee Center, N.Y.", 1955; "Verona, N.Y.", 1955; and "Westerville, N.Y.", 1955, photorevised 1978.

49. Telecon Note: Conversation between Tom Koch, NYDEC Hazardous Site Control, Albany, New York, and Dorothy Ponte, NUS Corporation, March 8, 1991.

50. Lucero, G., K. Moertl, R. Holmes and C. Arnstein. Superfund handbook, A guide to managing responses to toxic releases under Superfund. 3rd ed., ENSR Corporation, September 1989.

51. Telecon Note: Conversation between a secretary of Columbus School, Rome City School District, and Dorothy Ponte, NUS Corporation, March 27, 1991.

52. Project Note: From Dorothy Ponte, to file, Subject: Estimated population density within a 4-mile radius of Revere Copper Products, Inc. Site, March 28, 1991.

53. Telecon Note: Conversation between Jack Marsch, NYSDEC, Region 6, and John Copman, NUS Corp., April 9, 1991.

54. Letter from Patricia D. Hastings, NUS Corp., to Amy Brochu, U.S. EPA. February 22, 1991.

REFERENCE NO. 1

PRELIMINARY ASSESSMENT
OFF SITE RECONNAISSANCE
INFORMATION REPORTING FORM

Date: 12/5/90

Site Name: Revere Copper Products TDD: 02-9010-16

Site Address: Seneca St
Street, Box, etc.

Rome
Town

Oneida
County

New York
State

NUS Personnel:

Name	Discipline
Valerie Mathers	Soil Scientist
Jennifer Leahy	Field Tech.

Weather Conditions (clear, cloudy, rain, snow, etc.):
Snowing, moderately and partly cloudy

Estimated wind direction and wind speed: Wind Southeast at 0-5 mph.

Estimated temperature: 30°F

Signature: Valerie Mathers Date: 12-5-90

Countersigned: Jennifer A Leahy Date: 12-6-90

PRELIMINARY ASSESSMENT

INFORMATION REPORTING FORM

Date: 12/5/90

Site Name: Revere Copper Products TDD: 02-9010-16

Site Sketch:

Indicate relative landmark locations (streets, buildings, streams, etc.). Provide locations from which photos are taken.

(See Attached Map)

Signature: Valerie Mathers Date: 12-5-90

Countersigned: Jennifer Deaky Date: 12-6-90

PRELIMINARY ASSESSMENT

INFORMATION REPORTING FORM

Date: 12/5/90

Site Name: Revere Copper Rod. TDD: 02-9010-10

Notes (Periodically indicate time of entries in military time):

11:04 Arrived @ Site and appears to be active. Before beginning recon of site, drove around the area surrounding it to determine proximity of schools, residential areas, etc. George R. Staley Junior High School is located approximately ½ mile from the North West border of the site.

11:21 After driving around perimeter, drove to Columbus Elementary school located ~~at the~~ (VAW) immediately adjacent to the southwest border of the site. School yard is adequately secured from site with chain link fence & bob-wire on top.

11:29 – Sign at Southern border of site on top of bldg. indicates that facility is Revere Copper – Brass. Site appears to be surrounded by residential areas located immediately adjacent to it or within a maximum of a ½ mile. Storage tanks were observed also at the southern border of the site on Nock street across the street from residential homes. The ~~tall~~ (VAW) tags on the tanks indicated that they contained

11:48 liquid nitrogen. Immediately adjacent to the north west border of the site is a small stream. No outfalls were observed.

(Continued)

Signature: Valerie Mathers Date: 12-5-90

Countersignature: Jennifer Leahy Date: 12-6-90

PRELIMINARY ASSESSMENT

INFORMATION REPORTING FORM

Date: 12/5/90

Site Name: Bluff Copper Rod. TDD: 02-9140-16

Notes (Cont'd):

Signs are posted on all the fences surrounding site for No Trespassing. ~~Both~~ Draft There appears to be no fencing at the Northeast border near a portion of the employee parking lot.

11:53 Leaving Site.

Attach additional sheets if necessary. Provide site name, TDD number, signature, and countersignature on each.

Signature: Valerie Matthews Date: 12-5-90

Countersignature: Jennifer Leahy Date: 12-6-90

PRELIMINARY ASSESSMENT

INFORMATION REPORTING FORM

Date: 12/5/90

Site Name: Revere Copper Prod. TDD: 02-9010-16

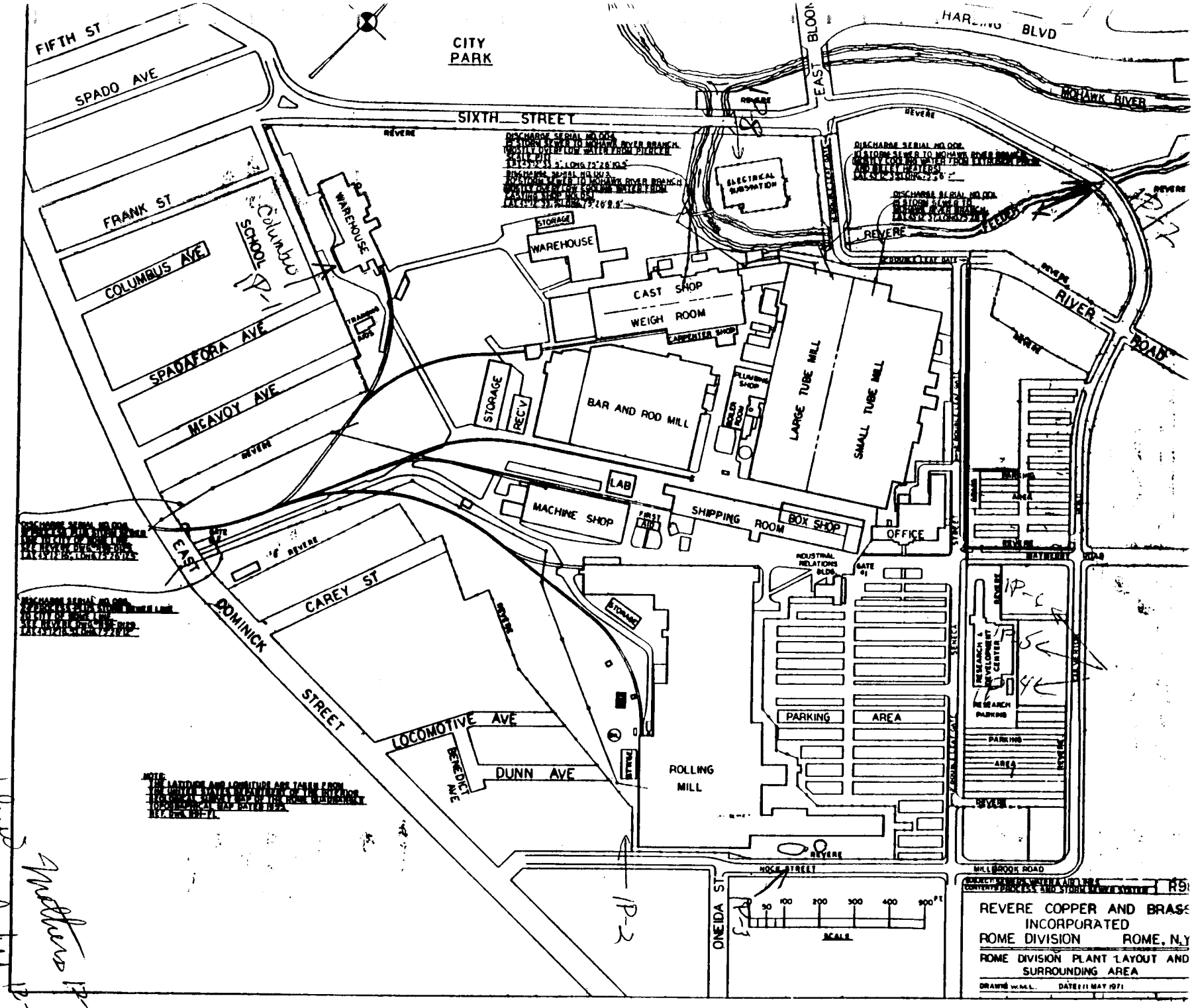
Photolog:

Frame/Photo Number	Date	Time	Photographer	Description
IP-1	12-5-90	11:21	J. Leahy	Photo of site from the Columbus Elementary School playground
IP-2	12-5-90	11:35	J. Leahy	Photo of ~~view~~ facing Northeast. residential home adjacent to site at Southern border facing North
IP-3	12-5-90	11:37	J. Leahy	Photo of storage tanks facing Northeast
IP-4	12-5-90	11:42	J. Leahy	Panoramic photo of employee parking and facilities facing
IP-5	12-5-90	11:42	J. Leahy	Southwest ↓
IP-6	12-5-90	11:42	J. Leahy	↓
IP-7	12-5-90	11:46	J. Leahy	Photo of stream adjacent to border of site facing South
IP-8	12-5-90	11:51	J. Leahy	Photo of transformers on site facing southeast

Attach additional sheets if necessary. Provide site name, TDD number, signature, and countersignature on each.

Signature: Valerie Mathers Date: 12-5-90

Countersignature: Jennifer Leahy Date: 12-6-90


FIFTH ST
SPADO AVE
CITY PARK
SIXTH STREET
HARDING BLVD
MOHAWK RIVER
EAST BLOOMFIELD
FRANK ST
COLUMBUS AVE
Columbus School
SPADAFORA AVE
McAVOY AVE
WAREHOUSE
STORAGE
ELECTRICAL SUBSTATION
CAST SHOP
WEIGH ROOM
CARPENTER SHOP
TRAINING AREA
STORAGE
RECV
BAR AND ROD MILL
PLUMBING SHOP
BOILER ROOM
LARGE TUBE MILL
SMALL TUBE MILL
RIVER ROAD
LAB
MACHINE SHOP
FIRST AID
SHIPPING ROOM
BOX SHOP
OFFICE
EAST DOMINICK STREET
CAREY ST
INDUSTRIAL RELATIONS BLDG
GATE #1
STORAGE
RESEARCH & DEVELOPMENT CENTER
RESEARCH PARKING
PARKING AREA
LOCOMOTIVE AVE
BENEDICT AVE
DUNN AVE
ROLLING MILL
ONEIDA ST
HOSE STREET
MILLBROOK ROAD
0 50 100 200 300 400 900 FT
SCALE
REVERE COPPER AND BRASS INCORPORATED
ROME DIVISION ROME, N.Y.
ROME DIVISION PLANT LAYOUT AND SURROUNDING AREA
DRAWN W.M.L. DATE: 11 MAY 1971

Revere Copper Products
Seneca #1
Rome, N.Y.

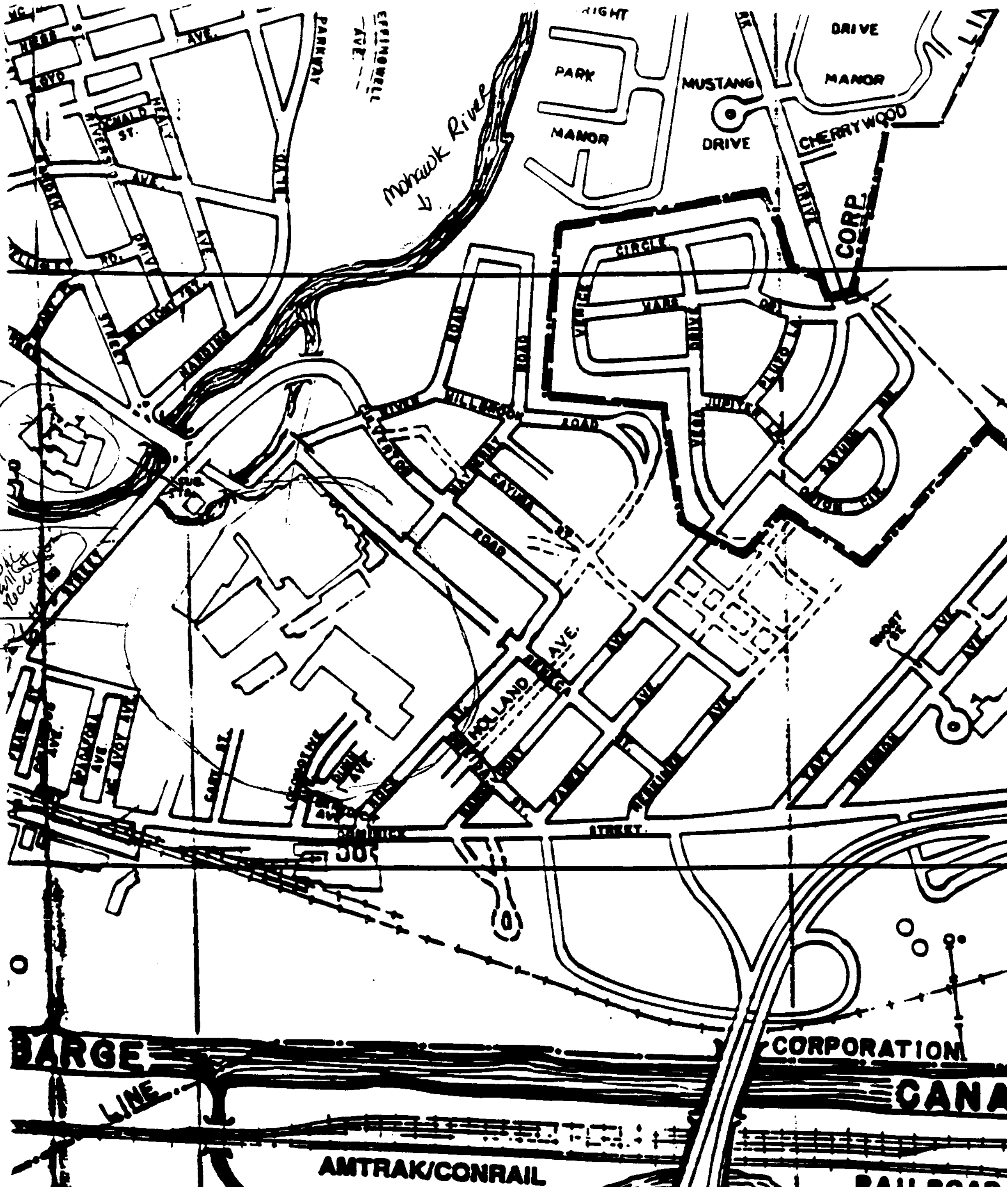
School
how far from site?
1/2 mile

6th street
check for drums
None present

SITE
- how many buildings?
- Are there any storm drains?
- How far is the Mohawk River?
within 1/2 mile.

Valerie Mathews
12-5-90

Jennifer Leahy
12-6-90



Revere Copper Products

- Make sure name is current?
- Is site active?
- Do any of the buildings seem abandoned?
- What do signs say: Revere Copper Products
  or
  Revere Copper & Brass

Pathways

storm drains?, diked areas, lagoons, streams

- Take pictures around perimeter of site
- Note if surrounding streets are residential, etc.

REFERENCE NO. 2

GSC-TR8645

GRAPHICAL EXPOSURE MODELING SYSTEM

(GEMS)

USER'S GUIDE

VOLUME 2. MODELING

Prepared for:

U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF PESTICIDES AND TOXIC SUBSTANCES
EXPOSURE EVALUATION DIVISION
Task No. 3-2
Contract No. 68Ø2397Ø
Project Officer: Russell Kinerson
Task Manager: Loren Hall

Prepared by:

GENERAL SCIENCES CORPORATION
8401 Corporate Drive
Landover, Maryland 20785

Submitted: December 1, 1986

I

REVERE COPPER PRODUCTS
LATITUDE 43:12:26 LONGITUDE 75:26:28 1980 POPULATION

KM	0.00-.400	.400-.810	.810-1.60	1.60-3.20	3.20-4.80	4.80-6.40	SECTOR TOTALS
S 1	192	4447	6193	22983	7614	4840	46269
RING TOTALS	192	4447	6193	22983	7614	4840	46269

I

REVERE COPPER PRODUCTS
LATITUDE 43:12:26 LONGITUDE 75:26:28 1980 HOUSING

KM	0.00-.400	.400-.810	.810-1.60	1.60-3.20	3.20-4.80	4.80-6.40	SECTOR TOTALS
S 1	79	1823	2387	7954	2205	1458	15906
RING TOTALS	79	1823	2387	7954	2205	1458	15906

	Population	Housing
1/4 mile	192	79
1/2 mile	4639	1902
1 mile	10832	4289
2 miles	33815	12243
3 miles	41429	14448
4 miles	46269	15906

REFERENCE NO. 3

ENGINEERING INVESTIGATIONS AT INACTIVE HAZARDOUS WASTE SITES

PHASE 1 INVESTIGATION

Revere Copper and Brass Landfill Site No. 633008
Rome (C) Oneida County

DATE: August, 1985

Prepared for:
New York State Department of Environmental Conservation

50 Wolf Road, Albany, New York 12233
Henry G. Williams, *Commissioner*

Division of Solid and Hazardous Waste
Norman H. Nosenchuck, P.E., *Director*

By:

Recra Research, Inc.

1.0 EXECUTIVE SUMMARY

The Revere Copper and Brass landfill is located at Culverton and Millbrook Roads in Oneida County, Rome, New York (Figures 1 and 2). The site is owned and was used by Revere Copper Products, Inc. located on Culverton Road. The nine acre site was reportedly used for the disposal of demolished building debris, and was active mainly during an on-site building expansion project that occurred between 1966-67. There is no documentation which indicates that any hazardous waste was disposed of on-site.

Recra Research, Inc. (Recra) personnel performed a literature search and compiled available information regarding the site and site vicinity. The search included the review of general information concerning regional geography, geology, and hydrogeology. A site inspection was conducted by Recra at the Revere site on March 27, 1984, in order to assess overall site conditions. No obvious signs of environmental stress were observed during the site inspection.

The Phase I effort included a compiling of information gathered from the New York State Department of Environmental Conservation (NYSDEC), Erie County Department of Environment and Planning, New York State Health Department and personnel associated with site operations.

The intent of the Hazard Ranking System (HRS) is to provide a method by which uncontrolled hazardous waste sites may be systematically assessed as to the potential risk that a site may pose to human health and the environment. The HRS is designed to provide a numerical value through an

assessment of technical data and information, and relating that information with respect to:

- o migration of hazardous substances from the site (Sm)
- o risk involved with direct contact (Sdc)
- o the potential for fire and explosion (Sfe).

The risks involved with direct contact (Sdc) and the potential for fire and explosion (Sfe) are evaluated according to site specific information including toxicity of waste, quantity, site demographics, location with respect to sensitive habitats of wildlife, etc. Migration potential (Sm) is evaluated through the rating of factors associated with three routing modes: groundwater (Sgw), surface water (Ssw) and Air (Sa). The scored value for each route is composited to determine the risk to humans and/or the environment from the migration of hazardous substances from the site (Sm).

Based on information gathered during this investigation, the Revere Copper and Brass Landfill site was scored according to the Mitre Corporation Hazard Ranking System (HRS) and the following scores were obtained:

$S_m = 0$ (Sgw = 0; Ssw = 0; Sa = 0)

S_{fe} = N/A

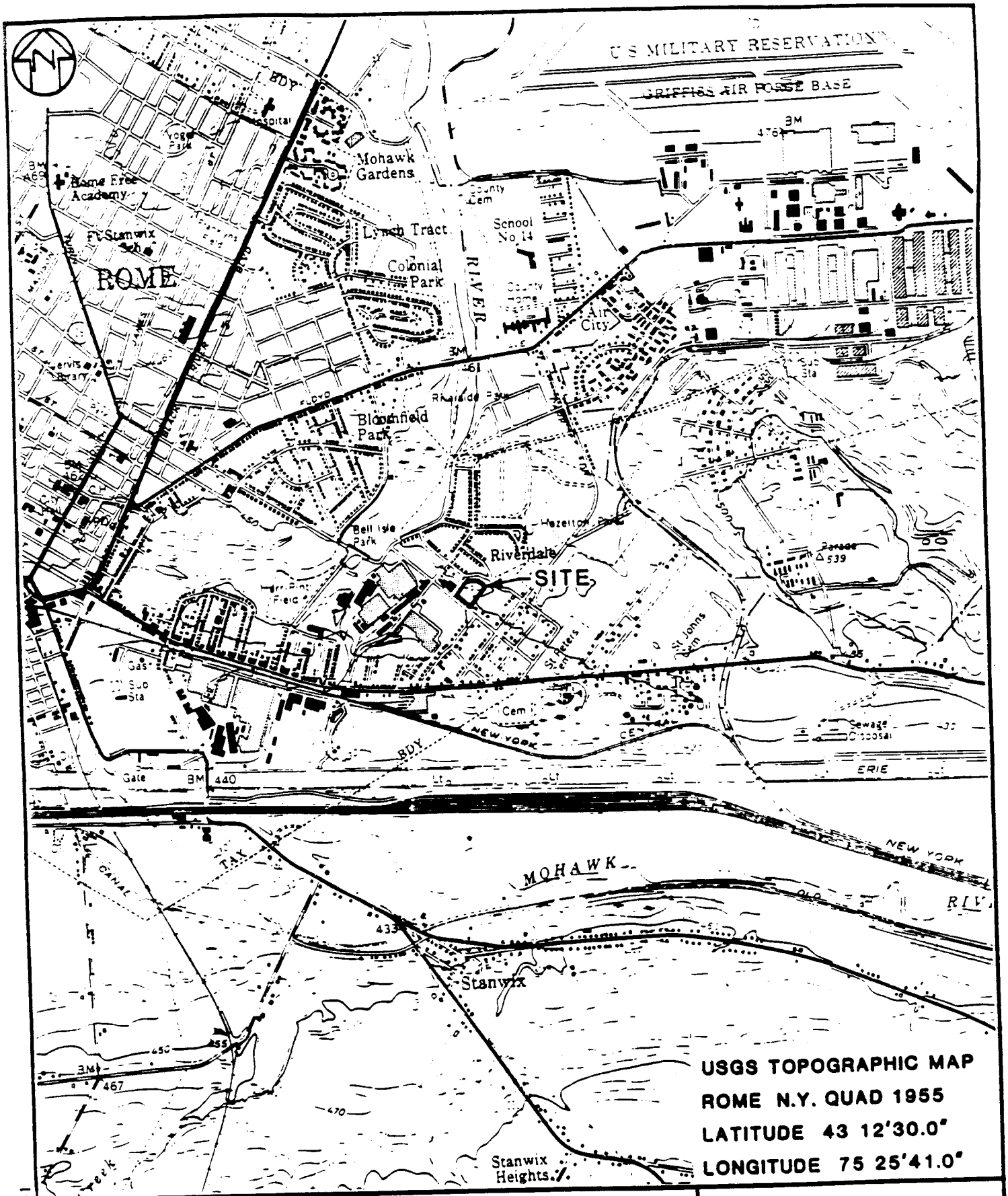
$S_{dc} = 0$

A Phase II investigation program has been proposed for the Revere Copper and Brass Landfill which is designed to expand the informational requirements for a more complete hazard ranking score and enable the development

of possible remedial alternatives. Proposed Phase II activities include:

- o screening of on-site air quality;
- o subsurface investigation and monitoring well installation;
- o soil and groundwater sampling and analysis; and
- o evaluation of all Phase II and previously exising data for development of remedial options and associated cost estimates.

Details of proposed Phase II activities are presented in Section 7 of this report.



USGS TOPOGRAPHIC MAP
ROME N.Y. QUAD 1955
LATITUDE 43 12'30.0"
LONGITUDE 75 25'41.0"

61160-1

RECRA RESEARCH INC.
BUFFALO, NEW YORK

Scale: 1:24,000		
	By	Date
Dwn.	MJS	6/85
Ckd.	PJ	7/85
Ap'vd.	RAC	7/85
Rev.		

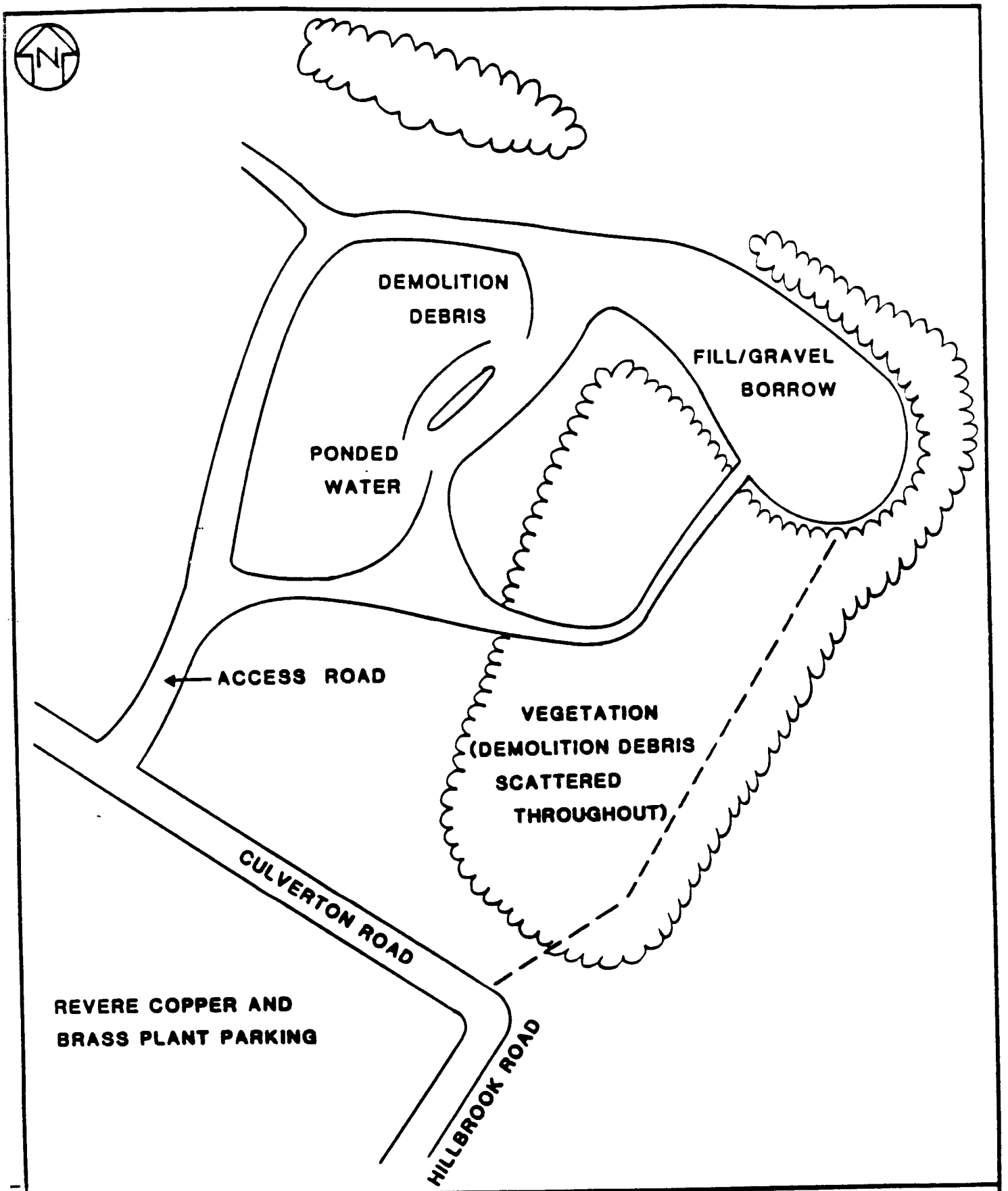
REVERE COPPER AND BRASS N.Y.S. SUPERFUND PHASE I

VICINITY MAP

Project No. 5C280005

A

FIGURE 1



RECRA RESEARCH INC.
BUFFALO, NEW YORK

Scale: NTS		
	By	Date
Dwn.	MJS	6/85
Ckd.	PZ	7/85
Ap'vd.	RLC	7/85
Rev.		

REVERE COPPER AND BRASS
N.Y.S. SUPERFUND
PHASE I

Project No. 5C280005

SITE MAP

A | FIGURE 2

61160-1

RUNING

4/2095

ENGINEERING INVESTIGATIONS AT INACTIVE HAZARDOUS WASTE SITES IN THE STATE OF NEW YORK PHASE I INVESTIGATIONS

Revere Copper and Brass Landfill
City of Rome
Oneida County, New York
Site #633008

Prepared For:

Division of Solid and Hazardous Waste
New York State Department of Environmental Conservation
50 Wolf Road
Albany, New York 12233-0001

Prepared By:

Recra Research, Inc.
4248 Ridge Lea Road
Amherst, New York 14226

August 1985

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4.0 SITE ASSESSMENT

4.1 Site History

Revere Copper Products, Inc., located in Rome, New York, owns and utilized the area of concern. The inactive landfill, which is approximately 9 acres in size is bordered by Culverton, Mayberry, and Millbrook Roads, and was used for the disposal of demolished building debris. There is no information available which suggests that any hazardous waste was disposed of at the site.

Reportedly, the site was used for the disposal of building debris created during a plant expansion project that took place from approximately 1966 to 1967. The site which was used for surface disposal of demolition debris also contains a large open pit area from which sand and gravel are excavated and used as fill material at the Revere Plant. One area of the pit contains ponded surface water, as well as a small quantity of household refuse which has been dumped there by nearby residents.

The site is located within a residential area, approximately 100 feet from the nearest residence. There has been no sampling conducted at the area of concern.

4.2 Site Area Surface Features

4.2.1 Topography and Drainage

The Revere Copper and Brass landfill site is located in a fairly flat topographic area, which exhibits a gentle slope to the south toward the Erie Canal (Reference 2). The closest surface water is the Mohawk River,

which is located approximately 0.3 miles west of the site. The Erie Canal lies approximately 0.4 miles south of the site. Both of these resources are designated as Class "C" waters, which are suitable for fishing and all other uses except drinking purposes (Reference 3). The site is located within the Mohawk River Drainage Basin (Reference 3).

4.2.2 Environmental Setting

The Revere Copper and Brass landfill is located within a densely populated commercial/industrial and residential area in the city of Rome, New York (Reference 2). The Revere landfill property is bordered by a residential area, with the nearest residence located less than 100 feet away from the area of concern. The area is serviced by municipal water which is drawn from the East Branch of Fish Creek (Reference 5). The water intake is located approximately 11.5 miles northwest of the site. A New York State Department of Environmental Conservation (NYSDEC) regulated wetland, RO-9, is located approximately 2,000 feet southeast of the site (Reference 6). There is no knowledge of any endangered species located in the vicinity of the site (Reference 14). The site area is not located within any flood boundaries as designated on the National Flood Hazard Area Map (Reference 6).

4.3 Site Hydrogeology

4.3.1 Geology

The Revere Copper and Brass Company is located in the Hudson-Mohawk Lowlands physiographic province, which is characterized by low elevation and low relief (Reference 12). This area's erosional surface was shaped

during the Cenozoic Era, and was subsequently modified by extensive glaciation of Late Wisconsin Age.

The bedrock underlying the site of concern are shales of Ordovician age, and members of the Cincinnatian Group (Reference 11). These units are generally flat-lying having an average dip of 4-5° to the southwest; and, are characterized as black and grey, slightly fissile to massive shale. The depth to bedrock in this area is approximately 125 feet (Reference 11). Overlying the bedrock is a series of late Pleistocene glacial deposits. These deposits consist of a thin layer of glacial till above the bedrock, which is overlain by a layer of lacustrine sand and clay (Reference 9).

4.3.2 Soils

The soils present at the site are the Alton Series (Reference 7). These soils consist of deep, well-drained to somewhat excessively drained soils which occur on terraces, beach ridges, or kames. They occur in beach deposits, and typically have a dark brown color. The surface material is approximately 7 inches thick and consists of gravelly sandy loam. Subsoil material ranges from 7 to 28 inches in thickness and is reddish brown gravelly sandy loam (Reference 1). The available water capacity is low to moderate. The permeability is also moderate (approximately 10^{-3} cm/sec).

4.3.3 Hydrogeology

The groundwater in the site vicinity occurs in unconsolidated glacial deposits. These deposits consist of a layer of glacial till immediately overlaying the bedrock. The glacial till is overlain by a layer of lacustrine sand and clay (Reference 9). The lacustrine sand can yield a fair amount of groundwater when the unit is below the water table. The transmissivity of the aquifer may be limited by the presence of fine grained sands. The depth to groundwater in this area is variable ranging from 2 to 20 feet (Reference 9).

4.4 Previous Sampling and Analysis

4.4.1 Groundwater Quality Data

There is no groundwater quality data available for the site.

4.4.2 Surface Water Quality Data

There is no surface water quality data available for the site.

4.4.3 Air Quality Data

There is no air quality data available for the site.

5.0 PRELIMINARY APPLICATION OF THE HAZARD RANKING SYSTEM

5.1 Narrative

The Revere Copper and Brass landfill site is located at Culverton and Millbrook Roads in the city of Rome, Oneida County, New York (Figures 1 and 2). The site covers approximately 9 acres of land, and was used for the disposal of demolished building debris (Reference 1). The demolition debris was surface piled on-site. The area was mainly utilized during a building expansion project which took place at the Revere plant between 1966 and 1967. There is no information or documentation that indicates any hazardous waste was disposed of on the property.

The Revere Copper and Brass landfill presently, is not in use; however, sand and gravel is excavated from a pit located on site (Reference 13).

Demolition debris was observed to be present in open piles throughout the site during the site inspection on March 27, 1985 performed by Recra. One area of the open pit which contains ponded water has been utilized by local residents for the unauthorized disposal of household refuse.

The site is located in a densely populated commercial/industrial and residential area. The closest residence is less than 100 feet away. The site and its vicinity are serviced by municipal water, and groundwater usage in the area is minimal if at all. There has been no sampling of any type at the site of concern.

The nearest surface water body to the site is the Mohawk River, a Class "C" water resource, located approximately 0.3 miles west of the area (Reference 2 and 3).

A NYSDEC regulated wetland, RO-9, is located approximately 0.4 miles southwest of the site (Reference 6). The area is not located within any flood boundaries, however, a 100-year flood zone is located 600 feet north of the site. There are no critical habitats of endangered species within a one-mile radius of the site (Reference 14).

In completing the Hazard Ranking Score (HRS), the Revere Site was found to have a migration potential (Sm) score equal to zero (0). This score was based on the review of available literature.

HRS Worksheets

5.2 HRS WORKSHEET

Facility name: Revere Copper & Brass Landfill

Location: Culverton and Millbrook Roads

EPA Region: 2

Person(s) in charge of the facility: David L. Hunt - Plant Engineer
Malcom A. Bingham - Plant Manager of Env'l
Planning & Control

Name of Reviewer: Recra Research, Inc. Date: August, 1985

General description of the facility:
(For example: landfill, surface impoundment, pile, container; types of hazardous substances; location of the facility; contamination route of major concern; types of information needed for rating; agency action, etc.)

The Revere Copper and Brass Company owns a 9 acre parcel of land which reportedly was used for the disposal of building demolition debris that resulted from a building expansion project which took place at Revere plant between 1966 and 1967. Remains of debris are still present on site in uncovered surface piles. Presently sand and gravel is being excavated for use as fill material at the Revere plant. A minor amount of household refuse has been dumped in the large open pit at the site by nearby residents. No analytical sampling has ever been conducted at the site.

Scores: $S_M = 0$ ($S_{gw} = 0$ $S_{sw} = 0$ $S_a = 0$)
$S_{FE} = N/A$
$S_{DC} = 0$

FIGURE 1
HRS COVER SHEET

Ground Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multiplier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0) 45	1	0	45	3.1
If observed release is given a score of 45, proceed to line 4. If observed release is given a score of 0, proceed to line 2					
2 Route Characteristics					3.2
Depth to Aquifer of Concern	0 1 2 (3)	2	6	6	
Net Precipitation	0 1 2 (3)	1	3	3	
Permeability of the Unsaturated Zone	0 1 2 (3)	1	3	3	
Physical State	(0) 1 2 3	1	0	3	
Total Route Characteristics Score			12	15	
3 Containment	0 1 2 (3)	1	3	3	3.3
4 Waste Characteristics					3.4
Toxicity/Persistence	(0) 3 6 9 12 15 18	1	0	18	
Hazardous Waste Quantity	(0) 1 2 3 4 5 6 7 8	1	0	8	
Total Waste Characteristics Score			0	26	
5 Targets					3.5
Ground Water Use	0 (1) 2 3	3	3	9	
Distance to Nearest Well/Population Served	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40	1	0	40	
Total Targets Score			3	49	
6 If line 1 is 45, multiply 1 x 4 x 5. If line 1 is 0, multiply 2 x 3 x 4 x 5			0	57,330	
7 Divide line 6 by 57,330 and multiply by 100		$S_{gw} = 0$			

FIGURE 2
GROUND WATER ROUTE WORK SHEET

Surface Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multiplier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0) 45	1	0	45	4.1
If observed release is given a value of 45, proceed to line 4. If observed release is given a value of 0, proceed to line 2.					
2 Route Characteristics					4.2
Facility Slope and Intervening Terrain	(0) 1 2 3	1	0	3	
1-yr. 24-hr. Rainfall	0 1 (2) 3	1	2	3	
Distance to Nearest Surface Water	0 1 (2) 3	2	4	6	
Physical State	(0) 1 2 3	1	0	3	
Total Route Characteristics Score			6	15	
3 Containment	0 1 2 (3)	1	3	3	4.3
4 Waste Characteristics					4.4
Toxicity/Persistence	(0) 3 6 9 12 15 18	1	0	18	
Hazardous Waste Quantity	(0) 1 2 3 4 5 6 7 8	1	0	8	
Total Waste Characteristics Score			0	26	
5 Targets					4.5
Surface Water Use	(0) 1 2 3	3	0	9	
Distance to a Sensitive Environment	0 (1) 2 3	2	2	6	
Population Served/Distance to Water Intake Downstream	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40	1	0	40	
Total Targets Score			2	55	
6 If line 1 is 45, multiply 1 x 4 x 5. If line 1 is 0, multiply 2 x 3 x 4 x 5			0	64,350	
7 Divide line 6 by 64,350 and multiply by 100		S_{sw} = 0			

FIGURE 7
SURFACE WATER ROUTE WORK SHEET

Air Route Work Sheet						
Rating Factor	Assigned Value (Circle One)		Multiplier	Score	Max. Score	Ref. (Section)
[1] Observed Release	(0)	45	1	0	45	5.1
Date and Location:						
Sampling Protocol:						
If line [1] is 0, the S_a = 0. Enter on line [5]. If line [1] is 45, then proceed to line [2].						
[2] Waste Characteristics						5.2
Reactivity and Incompatibility	0 1 2 3		1		3	
Toxicity	0 1 2 3		3		9	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8		1		8	
Total Waste Characteristics Score					20	
[3] Targets						5.3
Population Within 4-Mile Radius	0 9 12 15 18 21 24 27 30		1		30	
Distance to Sensitive Environment	0 1 2 3		2		6	
Land Use	0 1 2 3		1		3	
Total Targets Score					39	
[4] Multiply [1] x [2] x [3]					35,100	
[5] Divide line [4] by 35,100 and multiply by 100				S_a = 0		

FIGURE 9
AIR ROUTE WORK SHEET

	S	S^2
Groundwater Route Score (S_{gw})	0	0
Surface Water Route Score (S_{sw})	0	0
Air Route Score (S_a)	0	0
$S_{gw}^2 + S_{sw}^2 + S_a^2$		0
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		0
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} / 1.73 = S_M =$		0

FIGURE 10
WORKSHEET FOR COMPUTING S_M

Fire and Explosion Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multiplier	Score	Max. Score	Ref. (Section)
1 Containment	1 3	1		3	7.1
2 Waste Characteristics					7.2
Direct Evidence	0 3	1		3	
Ignitability	0 1 2 3	1		3	
Reactivity	0 1 2 3	1		3	
Incompatibility	0 1 2 3	1		3	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
Total Waste Characteristics Score				20	
3 Targets					7.3
Distance to Nearest Population	0 1 2 3 4 5	1		5	
Distance to Nearest Building	0 1 2 3	1		3	
Distance to Sensitive Environment	0 1 2 3	1		3	
Land Use	0 1 2 3	1		3	
Population Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Buildings Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Total Targets Score				24	
4 Multiply 1 x 2 x 3				1,440	
5 Divide line 4 by 1,440 and multiply by 100		S_{FE} = N/A			

FIGURE 11
FIRE AND EXPLOSION WORK SHEET

Direct Contact Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multiplier	Score	Max. Score	Ref. (Section)
1 Observed Incident	(0) 45	1	0	45	8.1
If line 1 is 45, proceed to line 4 If line 1 is 0, proceed to line 2					
2 Accessibility	0 1 2 (3)	1	3	3	8.2
3 Containment	0 (15)	1	15	15	8.3
4 Waste Characteristics Toxicity	(0) 1 2 3	5	0	15	8.4
5 Targets					8.5
Population Within a 1-Mile Radius	0 1 2 3 4 (5)	4	20	20	
Distance to a Critical Habitat	0 1 (2) 3	4	8	12	
Total Targets Score			28	32	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			0	21,600	
7 Divide line 6 by 21,600 and multiply by 100		S_{DC} =	0		

FIGURE 12
DIRECT CONTACT WORK SHEET

HRS Documentation Records

June 23, 1982

5.3 HRS DOCUMENTATION RECORDS

DOCUMENTATION RECORDS
FOR
HAZARD RANKING SYSTEM

INSTRUCTIONS: The purpose of these records is to provide a convenient way to prepare an auditable record of the data and documentation used to apply the Hazard Ranking System to a given facility. As briefly as possible summarize the information you used to assign the score for each factor (e.g., "Waste quantity = 4,230 drums plus 800 cubic yards of sludges"). The source of information should be provided for each entry and should be a bibliographic-type reference that will make the document used for a given data point easier to find. Include the location of the document and consider appending a copy of the relevant page(s) for ease in review.

FACILITY NAME: Revere Copper and Brass, Inc. Landfill

LOCATION: Culverton and Millbrook Roads, Rome, NY

GROUND WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected (5 maximum):

No analytical data available

Rationale for attributing the contaminants to the facility:

None applicable (N/A)

* * *

2 ROUTE CHARACTERISTICS

Depth to Aquifer of Concern

Name/description of aquifers(s) of concern:

The unconsolidated material is considered the aquifer of concern. (ref. 9)

Depth(s) from the ground surface to the highest seasonal level of the saturated zone [water table(s)] of the aquifer of concern:

2-20 feet (ref. 9)

Depth from the ground surface to the lowest point of waste disposal/ storage:

Demolition debris was disposed of on the ground surface.

Net Precipitation

Mean annual or seasonal precipitation (list months for seasonal):

45.6 inches (ref. 8)

Mean annual lake or seasonal evaporation (list months for seasonal):

27 inches

Net precipitation (subtract the above figures):

18.6 inches

Permeability of Unsaturated Zone

Soil type in unsaturated zone:

The soil type is the Alton Series, which consists of a dark brown gravelly sandy loam surface layer (0-7 inches), the subsoil from 7-28 inches is reddish brown gravelly sandy loam; well drained to somewhat excessively drained. (ref. 7)

Permeability associated with soil type:

$>10^{-3}$ cm/sec

Physical State

Physical state of substances at time of disposal (or at present time for generated gases):

Solids (Ref. 1)

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Method of waste disposal consisted of surface piling.

Method with highest score:

Open dump, no liner, no run-on control.

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

N/A

Compound with highest score:

N/A

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

N/A there are no records available that indicate any hazardous waste was disposed of at the site.

Basis of estimating and/or computing waste quantity:

N/A

* * *

5 TARGETS

Ground Water Use

Use(s) of aquifer(s) of concern within a 3-mile radius of the facility:

The area is serviced by municipal water. The groundwater in the site vicinity is generally not thought to be used, however, shallow wells may exist.

(ref. 1)

Distance to Nearest Well

Location of nearest well drawing from aquifer of concern or occupied building not served by a public water supply:

There are no groundwater wells known to be in use within the site vicinity.

Distance to above well or building:

N/A

Population Served by Ground Water Wells Within a 3-Mile Radius

Identified water-supply well(s) drawing from aquifer(s) of concern within a 3-mile radius and populations served by each:

There are no known water supply wells within 3 miles of the site.

(ref. 5)

Computation of land area irrigated by supply well(s) drawing from aquifer(s) of concern within a 3-mile radius, and conversion to population (1.5 people per acre):

unknown

Total population served by ground water within a 3-mile radius:

Area is serviced by municipal water, therefore population is 0.

(ref. 1)

SURFACE WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected in surface water at the facility or downhill from it (5 maximum):

No analytical data available

Rationale for attributing the contaminants to the facility:

N/A

* * *

2 ROUTE CHARACTERISTICS

Facility Slope and Intervening Terrain

Average slope of facility in percent:

The average slope of the site of concern is less than 1%. (ref. 2)

Name/description of nearest downslope surface water:

The Mohawk River, a Class "C" water resource, is located approximately 0.3 miles west of the site.

Average slope of terrain between facility and above-cited surface water body in percent:

The average slope of the terrain is less than 1%. (ref. 2)

Is the facility located either totally or partially in surface water?

No

Is the facility completely surrounded by areas of higher elevation?

No

1-Year 24-Hour Rainfall in Inches

2.2 inches

Distance to Nearest Downslope Surface Water

Approximately 0.3 miles

Physical State of Waste

Solids (Ref. 1)

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

No methods of containment utilized.

Method with highest score:

Surface piling, with no liner or run-on/run-off control

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated

N/A

Compound with highest score:

N/A

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

N/A, (there is no documentation that any hazardous waste was disposed of at the facility.)

Basis of estimating and/or computing waste quantity:

N/A

* * *

5 TARGETS

Surface Water Use

Use(s) of surface water within 3 miles downstream of the hazardous substance:

The Mohawk River, located approximately 0.3 miles west of the site, is a Class "C" water resource which is suitable for fishing and all other uses except drinking. (ref. 3)

Is there tidal influence?

No

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

N/A

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

There is a protected wetland, RO-9, located approximately 0.4 miles south of the site.

(ref. 6)

Distance to critical habitat of an endangered species or national wildlife refuge, if 1 mile or less:

N/A, the site is not located within one mile of an endangered species

(ref. 14)

Population Served by Surface Water

Location(s) of water-supply intake(s) within 3 miles (free-flowing bodies) or 1 mile (static water bodies) downstream of the hazardous substance and population served by each intake:

N/A, Rome is serviced by the Lee Center Hamlet water system, which draws water from the East Branch of Fish Creek - the intake is located approximately 11.5 miles northwest of the site.

(ref. 5)

Computation of land area irrigated by above-cited intake(s) and conversion to population (1.5 people per acre):

N/A

Total population served:

N/A

Name/description of nearest of above water bodies:

N/A

Distance to above-cited intakes, measured in stream miles.

N/A

AIR ROUTE

1 OBSERVED RELEASE

Contaminants detected:

No analytical data available

Date and location of detection of contaminants

N/A

Methods used to detect the contaminants:

N/A

Rationale for attributing the contaminants to the site:

N/A

* * *

2 WASTE CHARACTERISTICS

Reactivity and Incompatibility

Most reactive compound:

Unknown

Most incompatible pair of compounds:

Unknown

Toxicity

Most toxic compound:

N/A

Hazardous Waste Quantity

Total quantity of hazardous waste:

N/A

Basis of estimating and/or computing waste quantity:

N/A

* * *

3 TARGETS

Population Within 4-Mile Radius

Circle radius used, give population, and indicate how determined:

0 to 4 mi (0 to 1 mi) 0 to 1/2 mi 0 to 1/4 mi

Approximately 27,456 people (REF 10)

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

N/A

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

A fresh water wetland, RO-9, is located approximately 0.4 miles south of the site.

(ref. 6)

Distance to critical habitat of an endangered species, if 1 mile or less:

N/A (Ref. 14)

Land Use

Distance to commercial/industrial area, if 1 mile or less:

Site is located within a commercial/industrial area. (ref. 2)

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

A protected wetland, RO-9 is located 0.4 miles south of the site.

Distance to residential area, if 2 miles or less:

The site is located within a residential area, with the nearest residence located within 100 feet of the area.

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Unknown

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Unknown

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

Unknown

FIRE AND EXPLOSION

1 CONTAINMENT

Hazardous substances present:

N/A

Type of containment, if applicable:

N/A

* * *

2 WASTE CHARACTERISTICS

Direct Evidence

Type of instrument and measurements:

N/A

Ignitability

Compound used:

N/A

Reactivity

Most reactive compound:

N/A

Incompatibility

Most incompatible pair of compounds:

N/A

* * *

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility:

N/A. There are no records available that indicate any hazardous waste was disposed of at the site.

Basis of estimating and/or computing waste quantity:

N/A

* * *

3 TARGETS

Distance to Nearest Population

The site is located within a residential area, with the nearest residence located within 100 feet of the area.
(ref. 2)

Distance to Nearest Building

The site is located within a residential area, with the nearest residence located within 100 feet of the area.
(ref. 2)

Distance to Sensitive Environment

Distance to wetlands:

There is a protected wetland, RO-9, located approximately 0.4 miles south of the site.
(ref. 6)

Distance to critical habitat:

N/A. The site is not located within one mile of an endangered species.
(ref. 14)

Land Use

Distance to commercial/industrial area, if 1 mile or less:

Site is located within a commercial/industrial area.
(ref. 2)

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

A protected wetland, RO-9, is located approximately 0.4 miles south of the site.

(ref. 6)

Distance to residential area, if 2 miles or less:

The site is located within a residential area, with the nearest residence located within 100 feet of the area.

(ref. 2)

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Unknown

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Unknown

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

Unknown

Population Within 2-Mile Radius

Approximately 43,000

(ref. 10)

Buildings Within 2-Mile Radius

Approximately 10,000

(ref. 2)

DIRECT CONTACT

1 OBSERVED INCIDENT

Date, location, and pertinent details of incident:

N/A

* * *

2 ACCESSIBILITY

Describe type of barrier(s):

No barrier

(Recra Phase I site visit, March 27, 1985)

* * *

3 CONTAINMENT

Type of containment, if applicable:

None, waste disposal consisted of surface piling.

(Recra Phase I site visit, March 27, 1985)

* * *

4 WASTE CHARACTERISTICS

Toxicity

Compounds evaluated:

N/A

Compound with highest score:

N/A

* * *

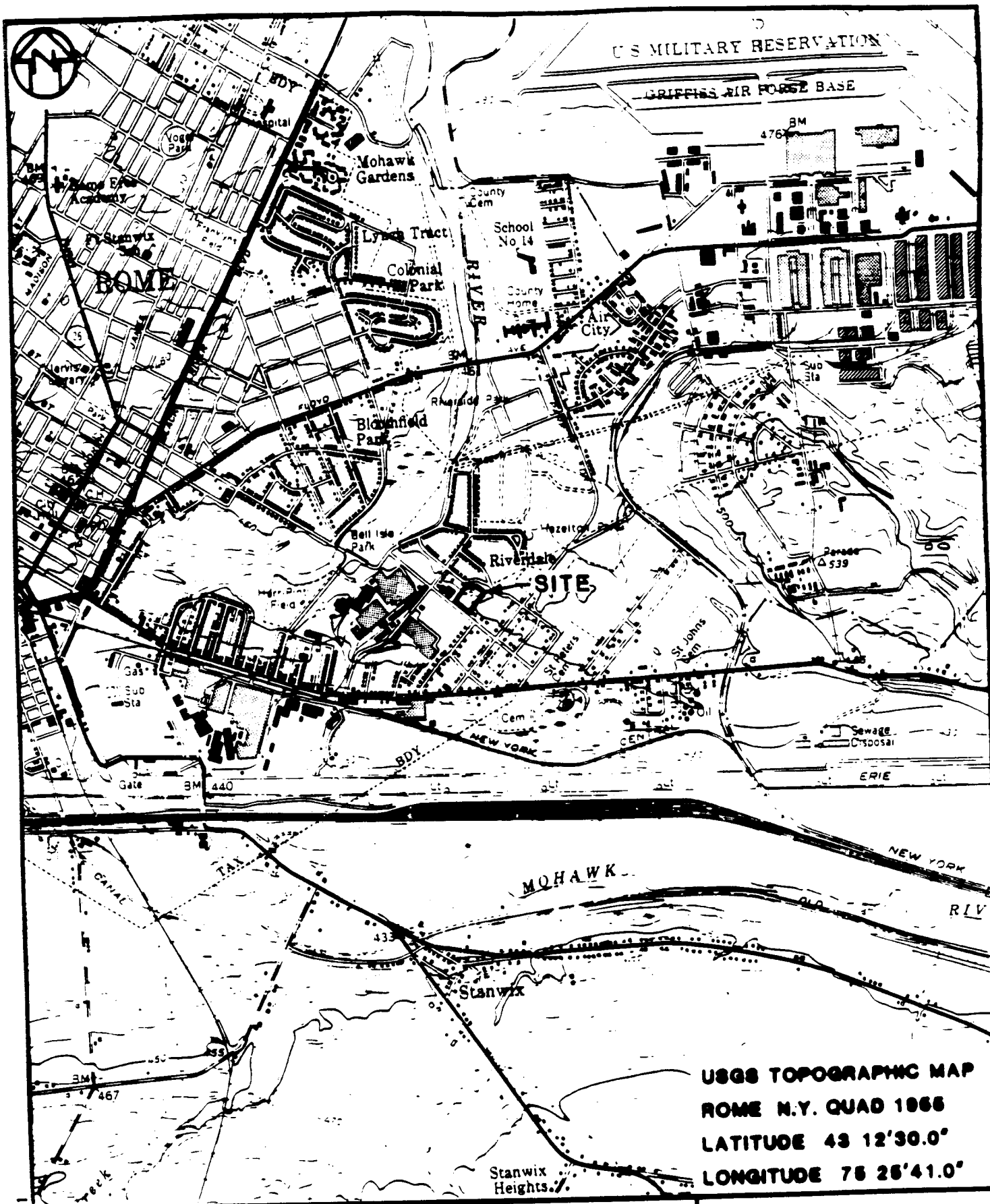
3 TARGETS

Population within one-mile radius

Approximately 27,500 people (ref. 10)

Distance to critical habitat (of endangered species)

N/A (ref. 14)



61160-1

RECRA RESEARCH INC.
BUFFALO, NEW YORK

Scale: 1:24,000		
	By	Date
Dwn.	MJS	6/85
Ckd.	[illegible]	7/85
Ap'vd.	[illegible]	7/85
Rev.		

REVERE COPPER AND BRASS N.Y.S. SUPERFUND PHASE I

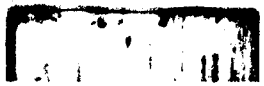
VICINITY MAP

Project No. 5C280005

A

REF. 2

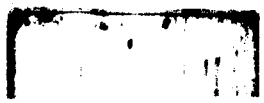
REFERENCE NO. 4



REGION: 02

EPA ID	SITE/ALIAS NAME STREET CITY COUNTY NAME	STATE COUNTY	ZIP CODE	ALIAS SEQ. #	NAME SOURCE	FED FAC
NYD980532444	REPUBLIC STEEL CORP /TROY WORKS MAIN ST TROY RENSSELAER	NY 083	12180		NOTIS	N
NYD000813402	REPUBLIC STEEL CORPORATION HOPKINS & MARILLA ST BUFFALO ERIE	NY 029	14220		HWDMS	N
	MARILLA ST SLD WASTE FACIL			01		
	REPUBLIC STEEL BUFFALO DISTRICT			02		
	REPUBLIC STEEL CORPORATION			03		
	ERIE	NY				
NYD980592653	RESOLVE MANUFACTURING 100 HARMON AVENUE FALCONER CHAUTAUQUA	NY 013	14733			N
NYD980507560	REVERE COPPER & BRASS CULVERTON RD ROME ONEIDA	NY 065	13440		STS	N
NYD980507578	REVERE COPPER & BRASS 6TH ST ROME ONEIDA	NY 065	13440		STS	N
NYD071586127	REVERE COPPER PROD INC SENECA ST	NY	13440			Y
	ONEIDA	065				
	REVERE COPPER PROD INC			01		
		NY				

REFERENCE NO. 5



EPA ID NO.	SITE NAME / STREET / CITY / COUNTY CODE AND NAME	STATE ZIP / CONG DIST.	NFA. FLAG	OPRBLE UNIT	EVENT TYPE	ACTUAL START DATE	ACTUAL COMPL DATE	CURRENT EVENT LEAD
NYD000511717	REMINGTON RAND		NFA	00	DS1		04/24/80	EPA (FUND)
	CEDAR ST				PA1		06/25/87	EPA (FUND)
	SOUTHPORT	NY 14904						
	015 CHEMUNG							
NYD980535090	RENSSELAER LF			00	DS1		04/01/80	EPA (FUND)
	PARTITION ST				PA1		04/01/83	EPA (FUND)
	RENSSELAER	NY 12144			HR1		04/01/83	OTHER
	083 RENSSELAER				SI1	05/20/87	06/08/87	STATE(FUND)
NYD980532444	REPUBLIC STEEL CORP /TROY WORKS			00	DS1		06/01/81	EPA (FUND)
	MAIN ST				PA1		06/16/87	EPA (FUND)
	TROY	NY 12180						
	083 RENSSELAER							
NYD000813402	REPUBLIC STEEL CORPORATION		NFA	00	DS1		03/01/79	EPA (FUND)
	HOPKINS & MARILLA ST				PA1		11/01/83	EPA (FUND)
	BUFFALO	NY 14220			PA2		01/22/90	STATE(FUND)
	029 ERIE				SI1	09/01/83	10/01/83	EPA (FUND)
NYD980592653	RESOLVE MANUFACTURING			00	RV1	12/28/87	08/10/88	RESP. PARTY
	100 HARMON AVENUE				DS1		09/17/87	EPA (FUND)
	FALCONER	NY 14733			PA1		09/23/87	EPA (FUND)
	013 CHAUTAUQUA							
NYD980507560	REVERE COPPER & BRASS		NFA	00	DS1		04/01/80	EPA (FUND)
	CULVERTON RD				PA1		09/29/86	STATE(FUND)
	ROME	NY 13440						
	065 ONEIDA							
NYD980507578	REVERE COPPER & BRASS		NFA	00	DS1		02/16/87	EPA (FUND)
	6TH ST				PA1	03/16/87	03/19/87	EPA (FUND)
	ROME	NY 13440						
	065 ONEIDA							
NYD071586127	REVERE COPPER PROD INC			00	DS1		08/24/90	EPA (FUND)
	SENECA ST							
		NY 13440						
	065 ONEIDA							

REFERENCE NO. 6

REGION: 02 STATE: NY NYD071586127 REVERE COPPER PRODUCTS, INC. LAST UPDATE: 5/16/83

EXISTANCE DATE: 5/14/74

SENECA STREET
ROME NY 13440
315/336/2474

CLOSURE DATE:

COUNTY: ONEIDA 065 DISTRICT: BASIN: LATITUDE: 431237.0 LONGITUDE: 0752605.0

FACILITY STATUS: 1 MODIFY/CONSTRUCT: COMMERCIAL: NON-REGULATED: OWNER TYPE: P FACILITY TYPE: GEN TSDF

MAILING ADDRESS
VACCARO MICHAEL PLANT ENGINEER
PO BOX 151
ROME NY 13440

OWNER ADDRESS
REVERE COPPER PRODUCTS, INC.
PO BOX 151
ROME NY 13440
315/338-2022

OPERATOR ADDRESS
REVERE COPPER PRODUCTS, INC.
PO BOX 151
ROME NY 13440
315/338-2022

INDICATORS

CONFIDENTIALITY NOTIF : 0
CONFIDENTIALITY PART A : 0
NATURE BUSINESS IND : A
MAP STATUS IND : A
DRAWING STATUS IND : A
PHOTO STATUS IND : A
INDIAN LAND IND : N
OWNER/OPERATOR IND : Y

NOTIFICATION DATA

PERMIT STATUS: 1
NOTIFICATION RECEIVED: 8/16/80
NOTIFICATION ACKNOWLEDGED: 11/07/80
PART A RECEIVED: 11/19/80
(1) PART A ACKNOWLEDGED: 1/15/81
(2) PART A ACKNOWLEDGED:

PERMITS

TYPE	NUMBER
Y	77229
Y	77230
Z	13351212002
N	NY 000 5665
S	6-004838

DESIGN CAPACITY

PROCESS	AMOUNT	UNIT
S01	10000.000	G
T01	110.000	D

SIC CODES

3341
3351

TRANSPORTATION

WASTE DESCRIPTION

WASTE CODE: D002	ESTIMATED AMOUNT:	MT	PROCESSES: S01 T01
WASTE CODE: D006	ESTIMATED AMOUNT:	4.536 MT	PROCESSES: S01
WASTE CODE: D008	ESTIMATED AMOUNT:	MT	PROCESSES: S01
WASTE CODE: D001	ESTIMATED AMOUNT:	76.472 MT	PROCESSES: T01
WASTE CODE: D007	ESTIMATED AMOUNT:	.102 MT	PROCESSES: S01
WASTE CODE: D009	ESTIMATED AMOUNT:	.011 MT	PROCESSES: T01 S01
WASTE CODE: F002	ESTIMATED AMOUNT:	.453 MT	PROCESSES: S01
WASTE CODE: F005	ESTIMATED AMOUNT:	.015 MT	PROCESSES: S01

COMMENTS

157 820310 10.16427 W

REFERENCE NO. 7

ENVIRONMENTAL PROTECTION AGENCY

FACILITY ANNUAL HAZARDOUS WASTE REPORT

This report is for the calendar year ending December 31, 1982 1982 ANNUAL REPORT

AFFIX LABEL HERE

Please print/type with elite type (12 characters per inch)

GENERAL INSTRUCTIONS: If you received a preprinted label attached to the mailing envelope in which this form was enclosed, affix it in the space provided. If any of the information on the label is incorrect, draw a line through it and provide the correct information in the appropriate section below. If the information is correct and complete, leave Sections I, II, and III below blank. If you did not receive a preprinted label, complete all sections. REFER TO THE SPECIFIC INSTRUCTIONS CONTAINED IN THIS BOOKLET BEFORE COMPLETING THIS FORM. The information requested in this report is required by law (Section 3004 of the Resource Conservation Recovery Act).

MAIL TO:
NYS-DEC
TSD Annual Report
P.O. Box 15628
Albany, New York 12212

I. FACILITY EPA I.D. NUMBER

F	N	Y	D	0	7	1	5	8	6	1	2	7

1 2 13 14 15

II. NAME OF FACILITY

REVERE COPPER PRODUCTS INC

30 69

III. FACILITY MAILING ADDRESS

ROME DIVISION, BOX 1151

15 16 45

Street or P.O. Box

ROME NY 13440

15 16 41 42 47 51

City or Town State Zip Code

IV. LOCATION OF FACILITY (if different than section III above)

SENECA STREET

15 16 45

Street or Route number

ROME NY 13440

15 16 41 42 47 51

City or Town State Zip Code

V. FACILITY CONTACT

HUNT DAVID L.

15 16 45

Name (last and first)

VI. COST ESTIMATES FOR FACILITIES

315-338-2474

46 55

Phone No. (area code & no.)

$ 117,640.00

16 19 22

Cost Estimate for Facility Closure

$ .00

25 28 31

Cost Estimate for Post Closure Monitoring and Maintenance (disposal facilities only)

VII. CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

R. D. Manfred, Works Manager — R D Manfred — 2/28/83

Print/Type Name Title Signature of Authorized Representative Date Signed

EPA Form 8700-13B(5-80) (Revised 10-82)

Do not make entries in shaded areas

ENVIRONMENTAL PROTECTION AGENCY

Facility Annual Hazardous Waste Report (cont.)

This report is for the calendar year ending December 31, 1982 ANNUAL REPORT

VIII. FACILITY'S EPA I.D. NO.

F

Date received:

Received by:

IX. GENERATOR'S EPA I.D. NO.

G

X. GENERATOR NAME (specify generator from whom all wastes on this page were received)

XI. GENERATOR ADDRESS

XII. WASTE IDENTIFICATION

Sequence #	Line #	A. Description of Waste	B. EPA Hazardous Waste No. (see instructions)		C. Handling Method	D. Amount of Waste	E. Unit of Measure
	1	Baghouse dust from Electric Fce. melting of copper alloys.	D006	D008	S01	17	T
	2	Spent Mercurous nitrate used in Laboratory analysis.	D009	D002	S01	7	P
	3	Spent Stoddard solvent used in degreasing operations.	D001		T50	37	T
	4	Trichloroethane Still Bottom.	F002		S01	500	P
	5	Spent Tolvene	F005		S01	6	P
	6	Condensate from chrome Plating Exhaust.	D002	D007	S01	225	P
	7	Mixture of lead, pumice & water from finishing of lead-	D008		S01	2	T
	8	coated copper sheet.					
	9						
	10						
	11						
	12						

XIII. COMMENTS (enter information by section number —see instructions)

REFERENCE NO. 8

NUS CORPORATION AND SUBSIDIARIES — **TELECON NOTE**

CONTROL NO.:	DATE: FRIDAY April 5, 1991	TIME: 3:45 p.m.

DISTRIBUTION:
1. Pat Hastings
2 Site File

BETWEEN:	OF:	PHONE:
David Prosser & Rand Vaas	NYSDEC, Region 6	(315) 785-2236

AND:
John Copman, Environmental Scientist Edison, NJ (NUS)

DISCUSSION:

I spoke with the above mentioned NYSDEC region 6 Employees in an effort to verify/validate air permits which NUS staff suspected, but could not confirm ~~he~~ corresponded to Rome Division, Revere Copper and Brass, NY. Mr. Prosser verified the location # and Facility I.D# (OUR sheet columns 2 & 3) as belonging the Rome Division Revere Copper & Brass, NY, but had no idea what "Serial #" was. I was tranferred to Mr. Vaas of Regulatory Affairs who also confirmed the facility & location numbers but was unsure of the Serial #'s. ~~He~~ requested And I agreed to mail him a copy of our information so he could investigate. He will call us if he can help.

(JFC)

ACTION ITEMS:

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
CERTIFICATE TO OPERATE EXISTING AIR CONTAMINATION SOURCES (CONT'D)

Serial Number	Location Number	Facility Number	Emission Point No.
6-004867	301300	0362	0022A
6-004868	"	"	0022B
6-004854	"	"	00024
6-004855	"	"	00025
6-004856	"	"	00026
6-004857	"	"	00027
6-004869	"	"	0028A
6-004870	"	"	0028B
6-004858	"	"	00029
6-004859	"	"	00030
6-004860	"	"	00031
6-004871	"	"	0032A
6-004872	"	"	0032B
*	"	"	0033
*	"	"	0034
*	"	"	0035
*	"	"	0036

* Serial Number not issued as of Application Date.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
CERTIFICATE TO OPERATE EXISTING AIR CONTAMINATION SOURCES

Serial Number	Location Number	Facility Number	Emission Point No.
6-004838	301300	0362	00001
6-004839	"	"	00002
6-004108	"	"	00003
6-004861	"	"	0003T
6-004109	"	"	00004
6-004840	"	"	00005
6-006150	"	"	00006
6-006151	"	"	00007
6-006152	"	"	00008
6-004844	"	"	00009
6-006153	"	"	00010
6-006154	"	"	00011
6-006155	"	"	00012
6-006156	"	"	00013
6-004849	"	"	00016
6-004850	"	"	00017
6-004851	"	"	00018
6-004862	"	"	0019A
6-004863	"	"	0019B
6-004864	"	"	0020A
6-004865	"	"	0020B
6-004866	"	"	0020C
6-004852	"	"	00021

REFERENCE NO. 9

Revere Copper Products, Inc.

Products Oneida Co.

A subsidiary of Revere Copper and Brass Incorporated

REVERE

August 13, 1984

Mr. Ernest A. Regna, Chief Solid Waste Branch
U. S. Environmental Protection Agency
26 Federal Plaza, Room 905
New York, N. Y. 10278

Subject: Revere Copper Products, Inc.
I. D. Number NY 1071586127

Our Ref. 3-U

Dear Mr. Regna:

During preparation of our Part B Hazardous Waste Permit Application, it was determined Revere Copper Products, Inc., Rome Division currently generates approximately 1,820 lbs. (825 kilograms) of regulated hazardous wastes per month as listed below:

Waste Name	EPA Code	Yearly Amount	
Baghouse Dust	D006, D008	4,000 lbs.	out of service
Chromic Acid, Liquid	D002, D007	1,840 lbs.	
Chromic Acid, Dry	D007	1,000 lbs.	
Pumice Waste	D008	10,680 lbs.	
Stoddard Solvent, Solids	D001	4,320 lbs.	Burned in BOILER
	Yearly Total	21,840 lbs.	

It is unlikely that future changes in production or manufacturing techniques will significantly increase the amount or type of regulated hazardous wastes generated at Revere Copper Products, Inc., Rome Division. Therefore, Revere does not plan to submit a Part B Permit Application. Further, Revere requests termination of its interim status and reclassification as a small generator.

If you have any questions or require additional information to affect our reclassification, please contact us.

Yours very truly,

REVERE COPPER PRODUCTS, INC.

David L. Hunt
Engineering Department
Rome Division

DLH:mav

cc: Mr. Norman H. Nosenchuck, P.D.
Director, Div. Solid & Hazardous Waste
NYS DEC

Mr. Paul Counterman, P.E.
Chief, Bureau of Hazardous Technology
NYS DEC

Mr. Conrad Simon, Director
Air & Waste Management Division
USEPA

Mr. John Kenna
Regional Solid Waste Engineer
NYS DEC, Region 6

(STATUS Check) 9/5/84

NYD 071586127 ~~[illegible]~~

Revere Copper Products Inc.

~~[illegible]~~

ser 19

Date		Form	Qty	Units		Waste Type	Trans. 364#
?-19-84	solid	02	20800	03	lbs	B011	9A081
		02	1080	03		B007	
		02	794	03		D007	
	liquid	01	44	03		B003	
		01	800	03		D002	
		T - 23568					
?-27-84	solid	02	4320	03	lbs	D006	7A002
	Solid	02	2520	03		D006	
	liquid	01	3680	03		D002	
	Solid	02	2000	03		D007	
	sludge	04	8640	03		D001	
	Solid	02	21360	03		D008	
		T 42520					
?-9-84	liquid	01	260	01 - gals		F002	7A072

T 260 × 8 lbs/gal = 2080 lbs

1984

Total Haz. Waste Manifested Off-Site

* ~~check~~ units lbs (OK)

Total + 23568
+ 42520
~~+ 260~~
~~Tot 66348~~
+ 2080
68168 lbs. Total in 1984 ~~[illegible]~~ as of 9/5/84

9 √68168 ≅ 7575 lbs/mo ≅ 3443 Kg/mo including PCB's

Δ 22768 (OK JW)

9 √45400 ≅ 5044 lbs/mo ≅ 2293 Kg/mo excluding PCB's

REFERENCE NO. 10

7/7

Revere Copper Products Oneida Co.

Revere Copper Products, Inc.

A subsidiary of Revere Copper and Brass Incorporated

June 5, 1985

RECEIVED

JUN 7 1985

NYS Dept. Environmental Conservation
REGION 6
REGIONAL ENGINEER

Mr. George W. Heitzman
New York State Dept. of Environmental Conservation
Division of Solid and Hazardous Waste
Bureau of Hazardous Waste Technology
50 Wolf Road
Albany, NY 12233-0001

Subject: Hazardous Waste Management Inspection
Revere Copper Products, Inc.
Rome Division
Rome, NY
EPA Identification Number NYD071586127

Dear Mr. Heitzman:

With reference to Mr. David Mafrici's letter of May 22, 1985, on August 13, 1984, Revere withdrew it's Part "A" application for interim status as a treatment, storage, and/or disposal facility and claimed the status of a small generator. A copy of that letter, which is attached, was also sent to Mr. Norman Nosenchuck, Mr. Paul Counterman and Mr. John Kenna of New York State Department of Environmental Conservation.

As noted in our 1980 application for interim status, Revere Copper Products, Inc. is a brass mill engaged in the fabrication of various copper and copper alloy products. Revere has not operated an on-site treatment or disposal facility for regulated hazardous wastes. The purpose of filing for interim status was to permit the on-site storage of regulated wastes in excess of 90 days. However, since we have determined that our actual generation of these wastes is considerably below that previously anticipated, we will not require storage in excess of 90 days.

It is our belief that our August 13, 1984 notification to both EPA and DEC is sufficient to permit reclassification as a small generator.

Very truly yours,

D. L. Hunt
Plant Engineer

DLH:jlv
Attachment
CC: Mr. David Mafrici - NYS DEC - Albany
Ms. Carol Young - NYS DEC - Watertown
Mr. John P. Kenna - NYS DEC - Watertown
Mr. Thomas F. Morgan - NYS DEC - Watertown
Mr. Bidjan Rostami - NYS DEC - Utica

P.O. Box 46, Rome, N.Y. 13440-0046 (315) 338-2022

REFERENCE NO. 11

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

Thomas C. Jorling
Commissioner

Mr. David L. Hunt
Plant Engineer
Revere Copper Products, Inc.
P.O. Box 151
Rome, NY 13440

APR 04 1990

Dear Mr. Hunt:

Re: Revere Copper Products, NYD071586127

On May 26, 1989, our department sent you a letter, concerning the status of the above facility (copy enclosed).

In reference to this letter and its contents, the time has come to request that you update and implement a closure plan for this facility by the end of the calendar year, or be subject to the appropriate TSDF regulatory fees for 1991.

Please be advised that closure certification must be accepted by the Department prior to the end of the calendar year in order to preclude 1991 fees. There is no provision for proration at this time. A hazardous waste program fee schedule has been enclosed.

We would be happy to discuss this letter with you and aid you in the necessary reclassification of this facility. Please call Mr. Gary Belcher, of my staff, at (518) 457-6858.

Sincerely,

Salvatore Carlomagno

Salvatore J. Carlomagno, P.E.
Chief
Regional Permit Section
Bureau of Hazardous Waste Facility Compliance
Division of Hazardous Substances Regulation

Enclosure

cc: w/o enc: L. Livingston
J. Gorman
w/enc: J. Middelkoop
J. Desai
T. Morgan, Region 6

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

Thomas C. Jorling
Commissioner

June 14, 1989

Mr. David L. Hunt
Plant Engineer
Revere Copper Products, Inc.
P.O. Box 151
Rome, New York 13440

RE: NYD071586127

Dear Mr. Hunt:

Our records indicate that the above referenced facility has interim status as a treatment, storage, or disposal facility (TSDF) in New York State, but has ceased operating in that capacity without following the closure process required by RCRA or 6NYCRR Part 373-3.

We have been asked to clarify the exact status of this facility. Under both Federal and New York State hazardous waste regulations there are no provisions for the future closure of a TSDF. Our legal authority to accept this practice has been questioned. EPA Region II questions the status of this facility with regard to the corrective action provisions of Hazardous Solid Waste Amendments of 1984 (HSWA). The legal counsel for the Regulatory Fee Unit has questioned why this facility is not subject to TSDF regulatory fees.

I would, therefore, suggest that you implement the closure plan for this facility prior to the issuance of regulatory fee bills this summer. We would be happy to discuss this letter and aid you in completing the reclassification of this facility. Please call me at (518) 457-3274.

Sincerely,

James Sibbald Moran, P.E.
Chief
RCRA Program Support Section
Bureau of Hazardous Waste Program Development
Division of Hazardous Substances Regulation

HAZARDOUS WASTE PROGRAM FEE SCHEDULE

I. For All Generators of Hazardous Waste

(Total quantity of hazardous waste generated)	Annual Fee
From 15 tons to 100 tons per year	$ 1,000.00
From greater than 100 tons to 500 tons per year	6,000.00
From greater than 500 tons to 1,000 tons per year	20,000.00
Greater than 1,000 tons per year	40,000.00

II. Treatment, Storage, and Disposal Facilities
(For facilities subject to Part 360)

A. Base Facility Fee

(Total quantity of hazardous waste treated, stored, or disposed in facilities subject to permitting)

0 to 1,000 tons per year	$ 12,000.00
greater than 1,000 tons per year	$ 30,000.00

B. Additional Facility Fees

1. Landfills (per facility)
   Not generator owned $200,000.00
   Generator owned $100,000.00

2. Incinerators
   (per unit) $ 10,000.00

3. Energy Recovery Units
   (per unit) $10,000.00

4. Surface Impoundments used for treatment or disposal
   (per facility) $24,000.00

Fee Determination

Reporting Requirement

Part 482 of the Environmental Regulatory Fee Regulations requires every hazardous waste generator and treatment, storage, or disposal facility operator to submit a certification to the Department on or before April 30 of each year beginning April 30, 1984. The certification must state the actual amount of hazardous waste generated and/or handled in the State fiscal year (April 1 through March 31) just concluded. The Department will provide forms for certification in a separate mailing.

REFERENCE NO. 12

STATE OF NEW YORK
DEPARTMENT OF HEALTH

MEMORANDUM

September 4, 1979

To: Mr. McCarthy - Syracuse Area Office

From: Mr. Marsch J.M.

Subject: Revere Copper, City of Rome, Oneida County

On August 20, 1979, the writer accompanied by Mr. Darrell Sweredoski of the Department of Environmental Conservation met with Mr. Mike Vaccaro, Pollution Engineer, to inspect Revere Copper's abandoned landfill and acid waste lagoon. A location map is attached.

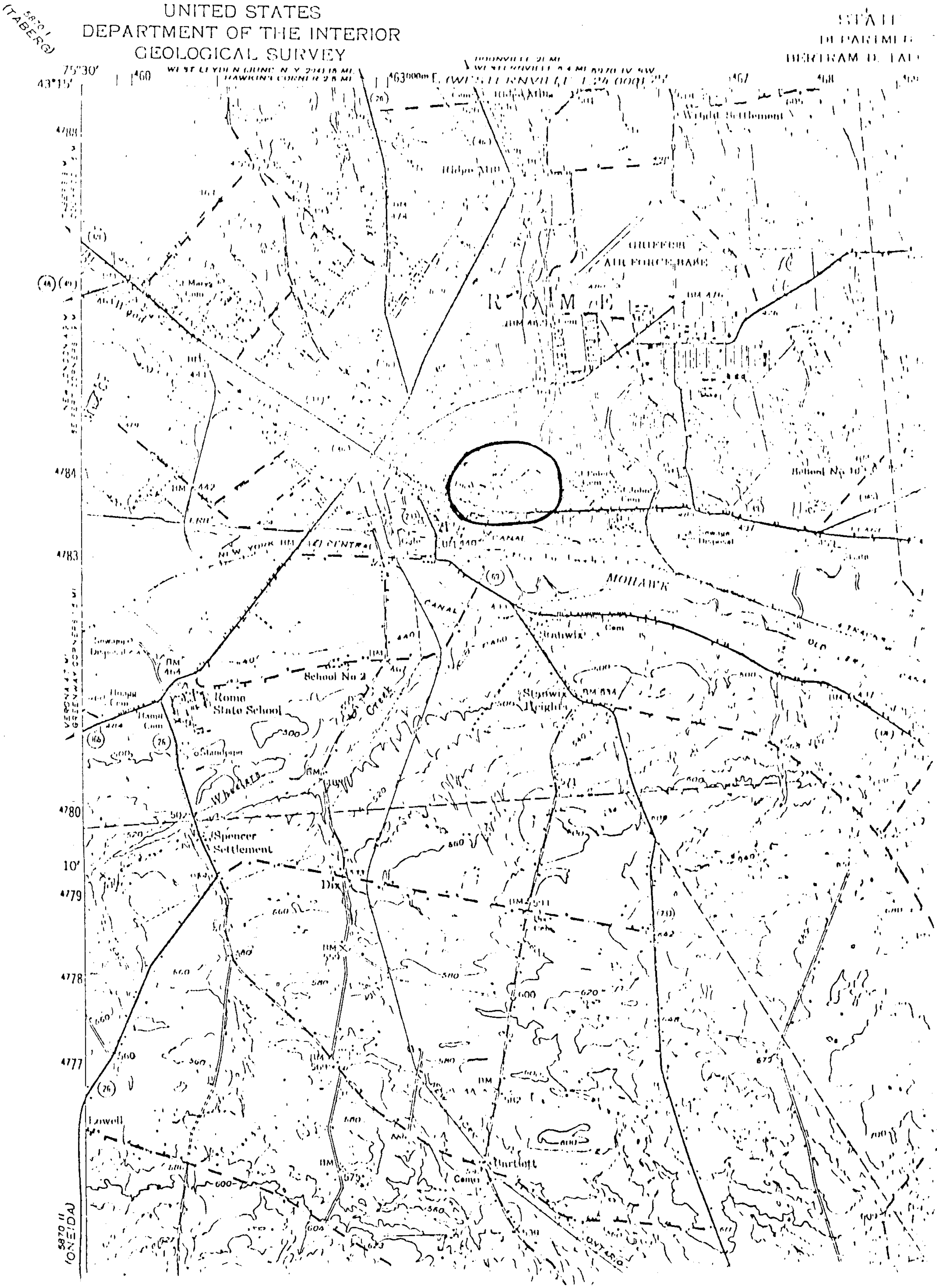
The abandoned landfill is bordered by Culverton Road, Mayberry Road, and Millbrook Road in a residential area. The nearest residence was approximately 100 feet away. The landfill is not fenced or posted. No unusual odor was noted. Vegetation was regrowing. Mr. Vaccaro indicated the landfill was mainly used for disposal of demolished buildings (concrete, bricks). The area is served by the City of Rome's water supply system.

The acid waste lagoon is located on site adjacent to Sixth Street. The lagoon was built in 1971 and contains 125,000 gallons (50 feet by 135 feet). The lagoon is lined, fenced, and posted. The City Park is located approximately 200 feet across the road. The nearest residence is approximately 500 feet away. The lagoon is periodically pumped out by a scavenger waste hauler.

Revere Copper treats its processed waste and obtains approximately 70 to 80 barrels per month of a metal hydroxide taste which is hauled to Model City for appropriate disposal. Revere also has surface water discharges to the Barge Canal and the Mohawk River. The discharges first go through waste oil skimmers.

I recommend that a better accounting of specifically what went into the landfill be obtained. Test wells and appropriate testing should be required, based on this information.

If you have any questions, please call.


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
(TABERG)
75°30'
43°15'
4788
4784
4783
4780
10'
4779
4778
4777
GRIFFISS
AIR FORCE BASE
R O M E
MOHAWK
CANAL
NEW YORK CENTRAL
School No 2
Rome
State School
Stanwix
Heights
Spencer
Settlement
Dix
Lowell
Bartlett
Standpipe
(ONEIDA)

REFERENCE NO. 13

15 (12/75)

4850
Revere Copper
Oneida Co.

New York State Department of Environmental Conservation

MEMORANDUM

TO: Bob Guiendon
FROM: Tom Keelty
SUBJECT: Revere Copper Products, Inc.

DATE: May 4, 1982

On 29 April 82, Tom Morgan and I inspected Revere Copper Products, Inc. (Rome Division). We performed this inspection as an integrated inspection for EPA and N.Y.S.D.E.C. As such, I enclose the EPA inspection form, and comments regarding drawing lubricants, waste oil, PCB's, batteries, and storage of approximately 3,000 drums of treatment plant sludge.

Revere Copper Products, Inc. is a generator, storage, and treatment facility of hazardous waste. The hazardous waste generated is an (EP) toxic baghouse dust, waste ignitables (mineral spirits), chromic acid, 111 trichlorethane still bottoms, batteries, laboratory test wastes, pickling acid wastes. The treatment plant is utilized for the pickling waste, laboratory test acid (resulting in 2 gal./yr. mercurous nitrate) and other waste streams in the plant. Oils are blended, including waste ignitable (mineral spirits) in (3) underground tanks, the condition of which is questionable.

Storage for baghouse dust is outdoors, adjacent to baghouse facility. Storage for smaller quantities generated, i.e. chromic acid, toluene, still bottoms, is inside a storage building.

The waste treatment plant sludge is only 10% solid, decreasing recycle value. When dried, the sludge is worthwhile for copper recycle. Presently, there are several thousand drums of 10% solid sludge stored along the western gate bordering Sixth Street and across from the school. The waste drums are inside the plant gate.

The present thinking is to decant water off sludge into a tank, preparing waste for recycle.

The company also "collects and maintains" drawing lubricants, in the blending operation. They are also storing 4-12 barrells of lubricants on-site. All transformers have been tested and only two or three of thirty transformers are PCB transformers. They are prepared for accidental discharge. They are presently treating vehicle batteries as hazardous waste.

Much of the information that was supplied to us for this inspection was compiled within the last week, i.e. labels on hazardous wastes were dated 27 April 82, letter from local authorities dated 27 April 82, letter to EPA adding wastes to notification list dated 27 April 82, etc. Realistically, the company has managed only baghouse dust as hazardous over the past year, and is now only beginning to join the Hazardous Waste Management System.

I believe that the integration of the system into plant operations will provide a measuring tool in several months. If the handling procedures are incorporated into the plant, Revere Copper Products, Inc. will have a successful Hazardous Waste Management System.

Thomas F. Keelty
Sr. Engineering Technician
Region 6 - Utica

TFK:ljm
Attachments

REFERENCE NO. 14

New York State Department of Environmental Conservation

MEMORANDUM

TO: Bruce Knapp, Bureau Hazardous Waste Operations - Compliance Section
FROM: Tom Morgan, Division Solid & Hazardous Waste, Region 6
SUBJECT: REVERE COPPER PRODUCTS, INC., - NYD 071586127
DATE: March 7, 1985

Enclosed please find an inspection report prepared by Bidjan Rostami for the above facility. I accompanied Bidjan during this inspection. This company originally notified as a GEN/TSDF. During 1984 they were to have submitted a Part B application by August 9, 1984. This application was never submitted. On August 13, 1984 Revere made a formal request to EPA (copy NY State) to change their facility status to SQG and hence not submit a Part B. The company never received a response.

The region was somewhat unclear as to how to inspect this facility, so here's what we have (we'll let you figure it out): During 1984 the company did act as a GENERATOR and there were two off-site shipments greater than 1000 kg each on 3/27/84 and 7/19/84. Since then they have apparently acted as a SQG (their status change request is dated 8/13/84). What small amount of hazardous waste was on site (approximately 300 kg) had been accumulated for > 90 days. This company could easily go over the 1000 kg limit at any time (unpredictable) due to a PCB item failure.

1. If the company is a GEN/TSDF, there is a Part B violation and we should have additionally filled out Appendix A.

2. If the company is a GENERATOR, they have accumulated hazardous waste (even though a small amount) for > 90 days.

3. If the company is a SQG, no problems.

Please take this into consideration for item 3(A) on Page II-2, we may have to modify this section to indicate a violation.

Thomas F. Morgan, P.E.
Sr. Sanitary Engineer
Region 6

TFM:kw

cc: Bidjan Rostami, Utica sub-office

REFERENCE NO. 15

15 (12-75)

New York State Department of Environmental Conservation

MEMORANDUM

TO: Thomas Morgan/Darrell Sweredoski
FROM: David E. Marcisofsky
SUBJECT: Revere Copper & Brass
Rome (C), Oneida County
DATE: August 2, 1990

1990

On August 1, 1990, I received information from Nick Daniello (336-7335) of Rome regarding a potential inactive hazardous waste site located at Revere Copper and Brass. Mr. Daniello told me that the facility did dispose of solvents into an abandoned dump located out back of the facility. Attached for your information and use, please find a map showing the approximate location of the site.

This facility does generate hazardous waste and the potential for groundwater contamination at the site may exist. I am, therefore, providing you this information so that you may determine if the site needs to be addressed by your division. Please contact me if you require additional information.

David E. Marcisofsky

David E. Marcisofsky
Environmental Engineering Technician II
Region 6 - Utica

DEM/dk

Attachments

cc: J. Doyle
J. Luz
J. Marsch

N.Y.S.D.E.C. - Utica Office
Complaint Report

LOG NO. 90-74

Received by P. Merusiuky Date 8/1/90

How Received: Phone ✓ Verbal ___ Written ___
Other ___

INFORMATION

Facility Name Revere Copper & Brass

Address

Location (C)T,V) Rome Directions

When Observed (Day, Time) When does problem occur?

Description potential inactive hazardous waste site at Revere Copper & Brass. The facility did disposed of solvents into a dump on site.

COMPLAINANT (Confidential)

Name Nick Daniello Telephone 336-7335 / 337-1112

Address Available when

INVESTIGATION

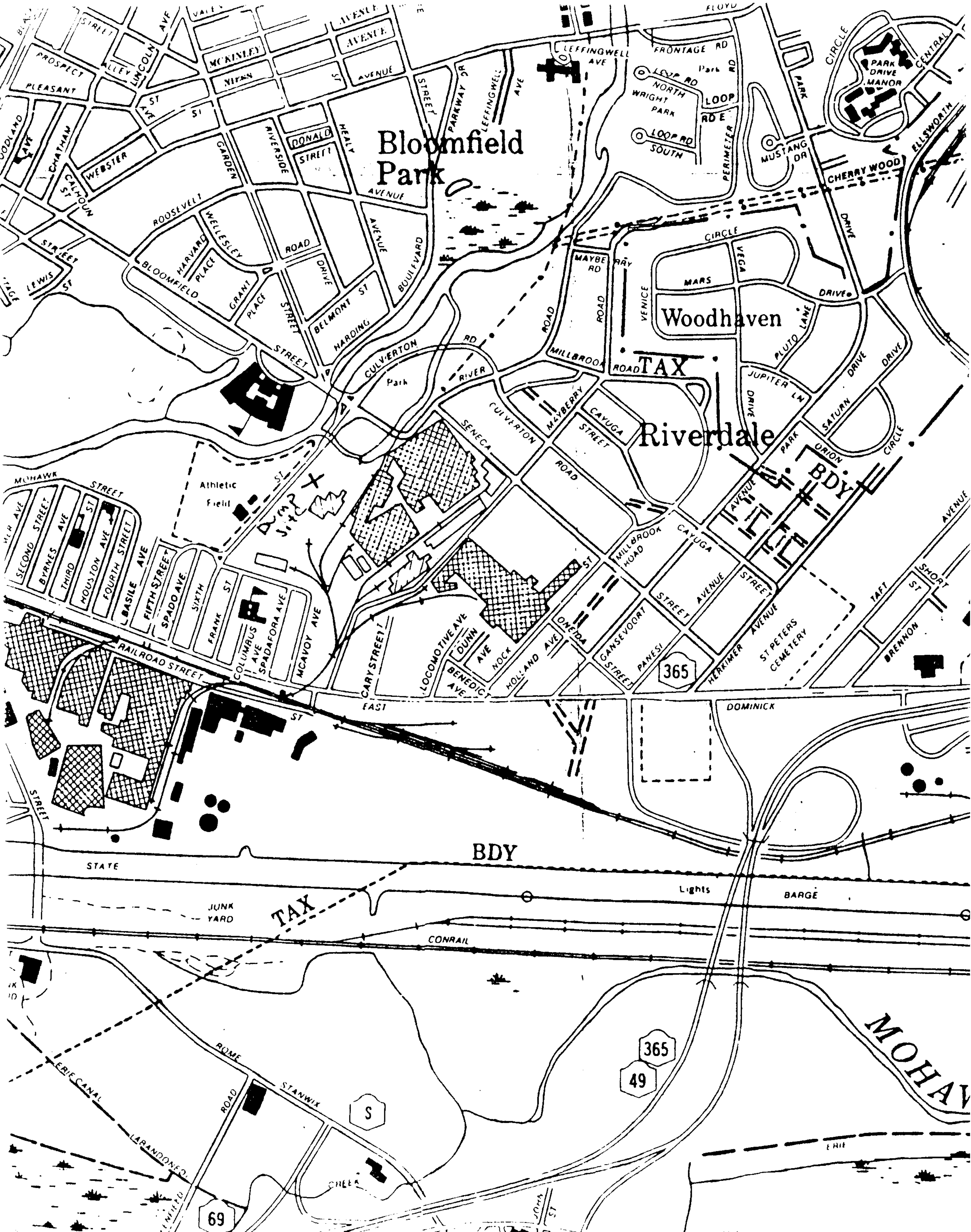
Date Time Weather Conditions

Investigator

RECOMMENDED ACTION

Disposition

Date Closed


Bloomfield
Park
Woodhaven
Riverdale
TAX
BDY
Athletic
Field
Dump Site
St Peters
Cemetery
365
49
S
69
STATE
JUNK
YARD
Lights
BARGE
CONRAIL
ERIE CANAL
ROME
STANWIX
MOHAWK STREET
RAILROAD STREET
EAST DOMINICK
CULVERTON RD
RIVER
SENECA
MILLBROOK ROAD
CAYUGA
GANSEVOORT STREET
HERKIMER AVENUE
ORION
SATURN
JUPITER LN
PLUTO LANE
MARS
VEGA
VENICE
CIRCLE
DRIVE
MAYBERRY
LEFFINGWELL AVE
FRONTAGE RD
NORTH WRIGHT PARK
LOOP RD
LOOP RD SOUTH
PERIMETER
MUSTANG DR
CHERRY WOOD
ELLSWORTH
PARK DRIVE MANOR
CENTRAL
FLOYD
MCKINLEY
PROSPECT
PLEASANT
LINCOLN
WEBSTER
CHATHAM
CALHOUN ST
ROOSEVELT
WELLESLEY
HARVARD PLACE
GRANT PLACE
BLOOMFIELD STREET
GARDEN
RIVERSIDE
DONALD STREET
HEALY AVENUE
PARKWAY DR
BOULEVARD
HARDING
BELMONT ST
LEWIS ST
SECOND STREET
BYRNES AVE
THIRD ST
HOUSTON AVE
FOURTH STREET
BASILE AVE
FIFTH STREET
SPADO AVE
SIXTH
FRANK ST
COLUMBUS AVE
SPADAFORA AVE
MCAVOY AVE
CARY STREET
LOCOMOTIVE AVE
DUNN AVE
NOCK
BENEDICT AVE
HOLLAND AVE
ONEIDA ST
PANESI
TAFT ST
BRENNON
SHORT
LARANDONEO
CREEK
MOHAW

Revere Complaint from Mr. Daniello 336-7335

8/6 - file search indicates
complainant's site is close to old acid pit site
- State Superfund site # 633007
- site situated between factory and Sixth St., Rome

8/6 - Called for Mr. Daniello - no answer
8/7 - 9:30 AM - Called Mr Daniello -
- he was away, left message for him to call me

8/7 11:30 AM Mr. Daniello called me
- complaint about old "Sixth St. Dump."
- ran along length of Sixth St. to Mohawk River
- from Brown's Soap Factory from 1930's to late 40's
- use to dump all sorts of "stuff"
- He used to work @ Revere from 1949 to about 1953
- remembers old "acid solvent" pit & old Revere dump there
- says biggest problem is fugative dust which corrodes aluminum siding of local homes.
- says Revere must have dumped something "bad" there like "copper & cyanides" since no vegetation grows there
- says the acids are the solvents he was referring to

[Revere Site used to belong to Brown's Soap Factory]

REFERENCE NO. 16

47-15-15 (7/82)

Revere Copper [illegible]
Seneca St

Why has company not rec'd EPA response from 29 APR 82 inspection?

Oneida Co.

RCRA INSPECTION FORM

Report Prepared for:

Generator [X]

Transporter [ ]

HWM (TSD) facility [X] STORAGE, TREATMENT (SPDES)

Copy of report sent to the facility [ ]

Facility Information

Name: REVERE Copper Products INC.

Address: BOX 151 SENECA St.

ROME NY

EPA ID#: NYD071586127

Date of Inspection: 2 Aug 83

Participating Personnel

State or EPA Personnel: Thomas F. Keelty

Facility Personnel: DAVE HUNT

Plant Engineer

Report Prepared by Name: Thomas F. Keelty

Agency: NYS DEC

Telephone #: (315) 793 2554

Approved for the Director by: [signature]

Facility Name Revere Copper Products Inc Date Of Inspection 2 Aug 83

EPA I.D No. NYD071586127

NO USEPA response from 29 APR 82 inspection report??

NOT FOR RELEASE TO COMPANY, PROTECTED INFROMATION

Revere generates, stores, and treats per SPDES.

Summary, Conclusions and Recommendations

- Regarding the wastes generated, the baghouse dusts have been treated as hazardous wastes for several years, handled by CECOS.
- The pickling liquor was transported to hazardous facility until 1982 when Revere started treating on site, SPDES #NY0005665.
- One drum of Chromic Acid solids was uncovered in storage
- Pumice waste has only recently been discovered to be haz wst.
- Stoddard Solvent is blended in waste oil system; no longer hazardous

The storage facility does not have available ~~sump~~ containment for spills. An old sump pit was filled in, while drainage would not necessarily go to the pit. The wastes are generally maintained in good shape.

~~The~~ The waste water residuals, NON-HAZARDOUS WASTE, are now maintained inside a fenced area, ≈ 2000 drums, recycled each year. A DRAMATIC IMPROVEMENT.

The waste oil system has been improved substancially also. A separator system is now used (diagram enclosed) to separate to reusable and non reusable oils. Two problems include the use of old underground tanks (3) and general spillage. I recommended the company put a small channell inside room to a ~~sump~~ for collection, and use sorbents on the ramps.

Recordkeeping has recently shown one problem, that of recording inspections. Otherwise, the records are very

Facility Name: Revere Copper Products Inc. Date Of Inspection 2 Aug 83

EPA I.D No. NYD 071586127

NOT FOR RELEASE TO COMPANY, PROTECTED INFORMATION

Summary, Conclusions and Recommendations

comprehensive and orderly, detailing wst. analysis and contingencies.

Apparently, Matlack trucks all company waste, the last 364 permit being the exemption type. Does Matlack report Revere Non-Haz on annual report??

Revere needs an interpretation clarification regarding pickling liquor which is generated and treated in house.

① Is the waste a generated Haz Wst? I believe yes

② Is treatment exempt due to SPDES? I believe yes.

The company simply believes in Blanket EXEMPTION. 40 CFR 264.1(g)(6) How much spent corrosive is generated?

Other items of concern include:

- spent Stoddard Solvent blending — Does this qualify as Haz wst treatment.
- open drum in storage — sludge from chromic acid flue (Condensate)
- storage facility inspection log was not kept in recent months. The log went from req'd daily records, to periodic, to no recorded inspections in recent (3) months.
- interim storage standards — collection of spills

good justification for training for annual review

Generally, the facility has accomplished much since Apr 82 inspection (wastewater treat residuals, wst oil system, program administration, identification) [redacted] Now attempt to work on waste oil tank integrity and storage in underground tanks

Facility Name REVERE Copper Products, Inc.

Date Of Inspection 2 Aug 83

EPA I.D No. NYD071586127

NOT FOR RELEASE TO COMPANY, PROTECTED INFORMATION

Summary, Conclusions and Recommendations

PICKLING OPERATION CONSIDERED CHARACTERISTIC HAZ WST ; EXEMPTION

SPENT PICKLE LIQUOR FROM COPPER FINISHING

QUANTIFY SPENT PICKLING LIQUOR

(3) NEUTRALIZATION BASINS

Baghouse dusts

Chromic Acid uncovered drum

Waste Oil seperator room – better spill housekeeping

inspections of facility less than adequate → annual training review

~~Operating record not maintained in recent months.~~

cleanup solids from chromic acid operation (floor sweepings)

manhole cleanout wastes to SCA Model City secure LF #10

from sumps manholes etc

(2) Plant Layout showing Haul Wst generation, treat, & Storage

Part I
Page of
Facility ID No.: NY 000 5665

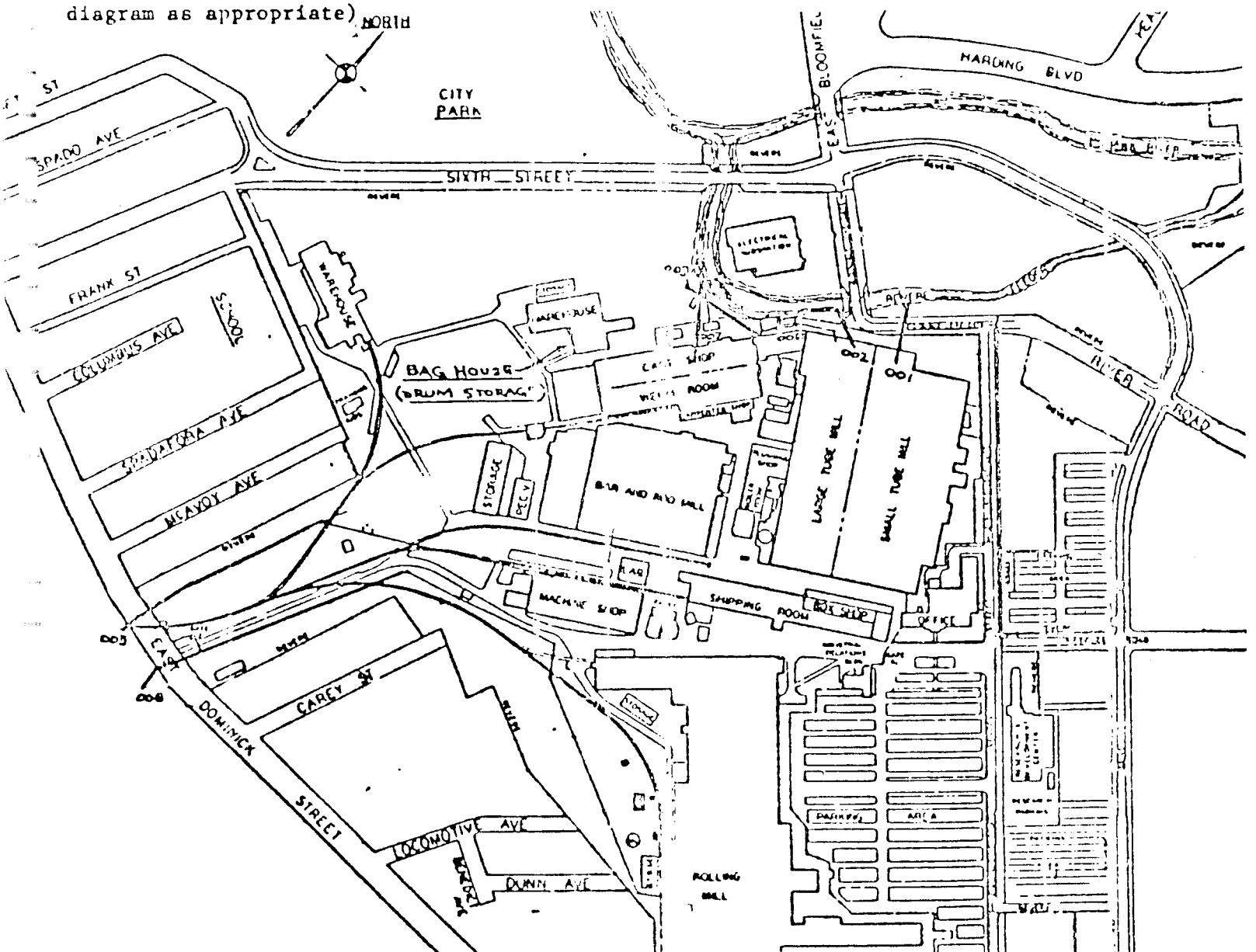
Definition of Daily Average and Daily Maximum

The daily average discharge is the total discharge by weight or in other appropriate units as specified herein, during a calendar month divided by the number of days in the month that the production or commercial facility was operating. Where less than daily sampling is required by this permit, the daily average discharge shall be determined by the summation of all the measured daily discharges in appropriate units as specified herein divided by the number of days during the calendar month when the measurements were made.

The daily maximum discharge means the total discharge by weight or in other appropriate units as specified herein, during any calendar day.

Monitoring Locations

Permittee shall take samples and measurements to meet the monitoring requirements at the location(s) indicated below: (Show locations of outfalls with sketch or flow diagram as appropriate)



Summary of Findings

Facility

The Revere Copper Products, Inc. - Rome Division, located on Seneca Street in the City of Rome, produces copper and copper alloy rods, bars, sheets, strips and tubes. The processes in the manufacturing of the products include: slitting, rolling, pointing, sawing, straightening, stamping, casting, overhauling, chopping, grinding, pickling, chamfering, degreasing, deburring, marking, inspecting and packing. The average production rate for 1980 was 10 million lbs. per month compared with a rated plant capacity of [illegible] million lbs. per month. The average for the month of June 1982 was 9 million lbs.. The Rome Division Plant currently employs 1,148 employees, and is operating three shifts, five days per week with some operations running seven days per week. Production runs for fifty weeks during the year with the plant being shut down for the first two weeks in July. The plant was constructed in 1930 with the last major expansion occurring in 1967. The plant discharges approximately 7 million gallons per day of cooling and process water to the Mohawk River through 7 outfalls. Sanitary wastes are conveyed to the City of Rome's Sanitary Sewer System for treatment at the City of Rome Wastewater Treatment Plant. (SIX OUTFALLS(6) since 003 was recently terminated)

Process

The Revere Copper Products, Inc.-Rome Division produces copper and copper alloy tubing, rods, sheets and strips. The company purchases approximately 50% of its raw materials as billits and cakes with the remainder purchased as metal scraps from outside vendors, plus scraps generated as part of the manufacturing process. The scraps are melted and cast at the manufacturing facilities. The raw materials are rolled to shape, pickled and rinsed, the process water being contaminated in conjunction with the pickling and rinse tanks. The cooling water is generally non-contact once through cooling, the exception to this being in the casting room where closed circuit cooling of the billits and furnaces takes place.

Treatment of wastewater is provided for flows to outfall 003 and 005. Outfall 003 is the effluent from treatment facility "A", which provides for screening, settling of solids and skimming of [illegible]. The contact water from the cast shop, which is treated at treatment facility "B", contains a carbon dust which can be found throughout the cast shop. Visual observations of the effluent from 003 indicat that it was moderately turbid while observations of the receiving stream indicated evidence of stream degradation in terms of stream discoloration and accumulated sludg deposits.

Process wastewaters from the pickling operations in the rod and bar mill are conveye to a 10,000 gallon continuous neutralization basin. The acidic pickling water's pH is raised to 8.5 using sodium hydroxide prior to being pumped to the wastewater treatment plant. Likewise, process wastewater from the pickling operation in the tube mill is conveyed to a 6,000 gallon neutralization tank. Treatment and monitori equipment at the wastewater treatment plant includes: pH recording and monitoring equipment, flow measurement utilizing a Doppler flow meter, polymer addition, solid

separation using a Lamella Separator, and sludge dewatering using a basket centrifuge which regularly produces [illegible] solids cake. The clarified effluent is then mixed with other wastewater flows which are conveyed to treatment facilities "B" for additional treatment. Treatment facilities at station "B" include: settling and oil separation by skimming. Separated oils are transferred to an on-site waste oil storage facility and are periodically sent to Chem Clear in Pennsylvania ~~for reclaiming.~~ and Booth Oil in Buffalo.

Accumulated sludges are cleaned from the settling tank bi-annually by [illegible] wastewater into the treatment tank [illegible] mixing while its pH is adjusted to [illegible] using sodium hydroxide. A polymer and de-emulsifier are added and after adequate mixing, agitation is ceased. Solids are allowed to settle for 8 to 48 hours and the clear liquid is decanted off. Accumulated sludges from all treatment operations are placed in 55 gallon drums and sent for reclaiming to AMAX of New Jersey.

Flow measurement equipment at outfall 001 consists of a 90 degree V-notch weir, stilling well and a Stevens float actuated flow graph recorder with a totalizer. Flow measurement equipment for outfall 002 consists of a 90 degree V-notch weir, a float actuated Stevens graph recorder and a totalizer. The flow measurement equipment at both outfalls has been calibrated within the last nine months. Flows for outfalls 001, 002, 006, 007, and 008 were estimated based on previous studies and current water usage.

Checklist

1. Financial Questions — Assurance ✓ ; Insurance ✓

2. Recycling Data Documentation — waste water sludge NON-hazardous

Company: AMAX COPPER INC, Carteret, NJ.
Location: subsid. US Metals & Refining Co. " "
Quantity: between (May 20 & Aug 13 82) 355,000#
Hauling: dump truck by Matlack
Recordkeeping: generating, shipping + SPDES records

- represents < 50% of sludge wt. as produced
- clear liquid results on top from winter freeze
- decanted to waste water treatment plant

[illegible] ie 1983 sludge now separated, not yet decanted
to be shipped Aug - Sept 83

3. Groundwater Monitoring Procedures — No

Observations:

Water Levels

Sediment

Other Permits

Background

Sub-part F Compliance

4. N.Y.S. and Federal Superfund

5. Inspection Report

empty drums used for slag + supplied to customers to supply Revere with scrap

presently on site: 3000 drums empty
2000 + sludge from wst. water treat

Waste oil ← Matlack to Chem clear Pa.
Booth to Buffalo
[refer to sketch]

Waste water sludge storage now inside fence

Describe the activities that result in the generation of hazardous waste.

Baghouse collection from furnaces
Pickling liquor for finishing copper (many tanks: all mills)
(PCB) Capacitor failures (at multiple mills)
Trichlorethane recovery unit in the Bar Mill
Pumice Waste scouring metal
Stoddard Solvent used in All Mills

Identify the hazardous waste located on site, and estimate the approximate quantities of each. (Identify Waste Codes)

pollution monitor keeps operating record

Baghouse Dust 16 drums and 3 bags (30 ft^3) (D006, D008)
Chromic Acid 5 liquid and 4 solids cleanup (D002 and D007)
Capacitors one box with several
Pumice Waste 27 drums D008
Trichlorethane 1 drum still bottom F002
Stoddard Solvent ~~blended into~~ slop oil tank (part of 10000 gallon tank)

Is there reason to believe that the facility has hazardous waste on-site?

a. If yes, what leads you to believe it is hazardous waste? Check appropriate boxes:

[X] Company admits that its waste is hazardous during the inspection.

[X] Company admitted the waste is hazardous in its RCRA notification and/or Part A Permit Application.

[X] The waste material is listed in the regulations as a hazardous waste from a nonspecific source (§261.31)

[ ] The waste material is listed in the regulations as a hazardous waste from a specific source (§261.32)

[ ] The material or product is listed in the regulations as a discarded commercial chemical product (§261.33)

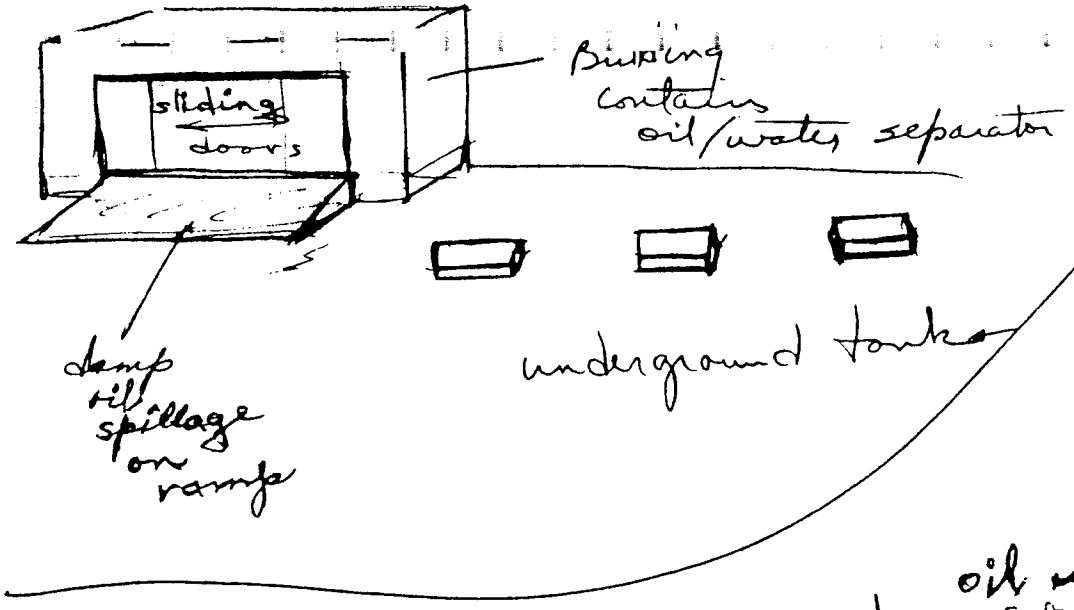
[X] Testing has shown characteristics of ignitability, corrosivity, reactivity or extraction procedure toxicity, or has revealed hazardous constituents (please attach analysis report)

[X] Company is unsure but there is reason to believe that waste materials are hazardous. (Explain)

uncertainty of pickling liquor (corrosive) generation rate? generation/treatment (SPDES) exemption?

How does exemption apply?

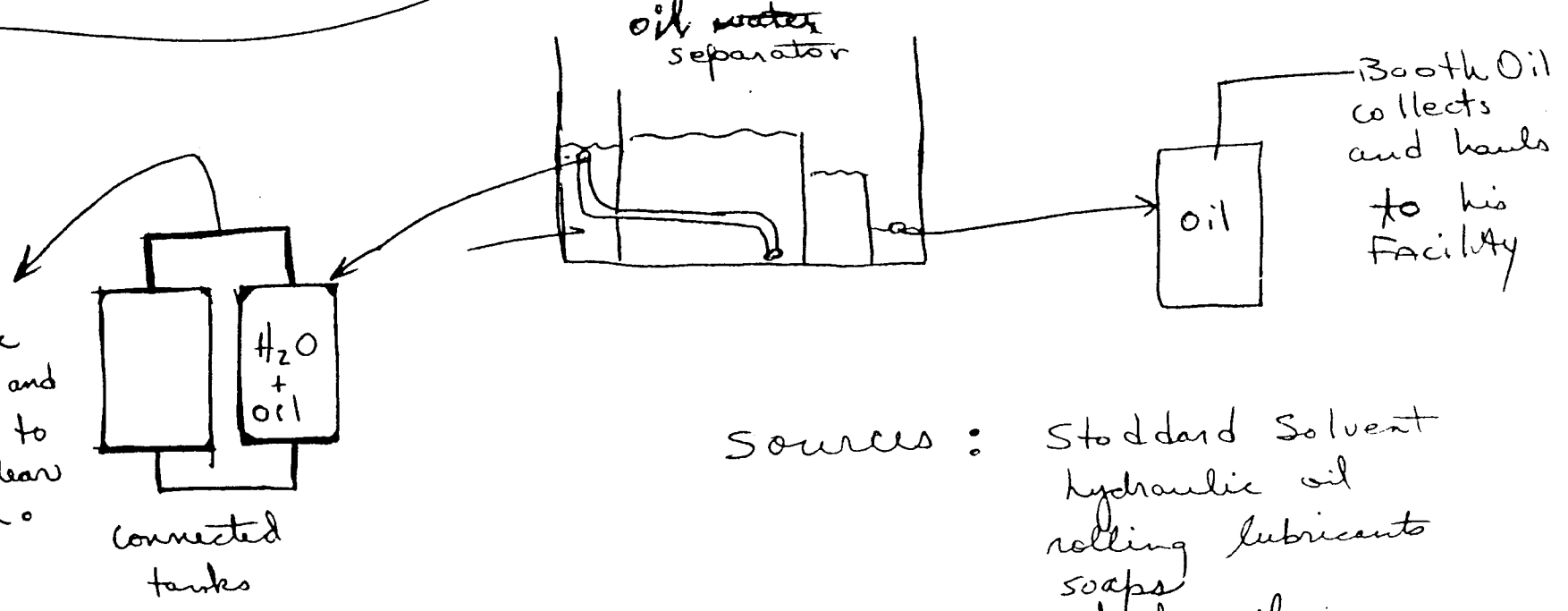
~~[illegible]~~



tanks installed early 40's as fuel oil tanks

Last fall, piping changes req'd excavating to 80% of tanks

no monitoring or integrity check



sources: Stoddard Solvent
hydraulic oil
rolling lubricants
soaps
whale oil
gear oil

Waste Oil System Revere

ANALYTICAL REPORT

CECOS INTERNATIONAL, INC.
REVERE COPPER WASTE

Report Date: 9/10/80
Date Received: 8/14/80

AQUEOUS METAL HYDROXIDE SLUDGE

TREATMENT FAC. SLUDGE

	SAMPLE IDENTIFICATION			
	SOLID WASTE MATERIAL		LEACHATE	
PARAMETER	UNITS OF MEASURE	VALUE	UNITS OF MEASURE	VALUE
Arsenic	µg/g (dry)	2.6	µg/l	<2
Barium	µg/g (dry)	60	mg/l	<0.1
Cadmium	µg/g (dry)	<0.90	mg/l	<0.003
Chromium	µg/g (dry)	180	mg/l	0.006
Copper	µg/g (dry)	348,000	mg/l	3.1
Lead	µg/g (dry)	920	mg/l	<0.02
Mercury	µg/g (dry)	<0.2	µg/l	<0.8
Selenium	µg/g (dry)	<2	µg/l	<3
Silver	µg/g (dry)	7.9	mg/l	<0.005
Zinc	µg/g (dry)	55,000	mg/l	3.2
Dry Weight	%	8.9	-	-

COMMENTS: All analyses were performed according to U.S. Environmental Protection Agency methodologies.

FOR RECRA RESEARCH, INC. D. V. Finn

DATE 9/10/80

RECRA RESEARCH INC.
I.D. #837/W-37

GENERATOR INSPECTION CHECKLIST

40 CFR 262 Subpart A-General	YES	NO	N/A
262.11 - Hazardous waste determination			
1) Did the generator test its waste to determine whether it is hazardous?	X		
Is the waste hazardous?	X		
2) Is the generator determining that its waste exhibits a hazardous waste characteristic(s) based on its knowledge of the material(s) or processes used?	X		

non-hazardous and hazardous waste streams have been tested

40 CFR 262 Subpart B-The Manifest			
Has hazardous waste been shipped off-site since November 19, 1980?	X		
If yes, approximately how many shipments, off-site, have been made and describe the approximate size of an average shipment made on a monthly basis. If facility is a small quantity generator, please explain. one since last inspection	124 drums (55 gal) + 30 ft³ bags dusts		
262.21 Does each manifest (or representative sample) have the following information? Please circle the missing elements.			
— a manifest document number?	X		
— the generators name, mailing address, telephone number and EPA I.D. Number?	X		
— the transporters name and EPA I.D. Number?	X		
— the name, address and EPA ID Number of the designated facility?			
— a description of the wastes (DOT)?	X		
— the total quantity of each hazardous waste by units of weight or volume, and the type and number of containers as loaded into or onto the transport vehicle?	X		
— a certification that the materials are properly classified, described, package, marked and labeled, and are in proper condition for transportation under regulations of the DOT and EPA?	X		
(obtain a copy of the incomplete manifests)			

40 CFR 262 - Subpart D - Recordkeeping and Reporting			
262.40 Has the generator maintained facility records since Nov. 19, 1980? (manifest, exception report and waste analysis)	X		
262.42 Has the generator received signed copies (from the TSD facility) of all the manifests for waste shipped off-site more than 35 days ago?	X		
If not, have Exception Reports been submitted to EPA covering any of these shipments made more than 45 days ago?			

	YES	NO	N/A
40 CFR 262 - Subpart C - Pretransportation Requirements			
262.30-33 Before transporting or offering hazardous waste for transportation off-site does the generator:			
1) Package the waste in accordance with applicable DOT regulations (i.e., 49 CFR Parts 173, 178 & 179)	X		
2) Label each package according to DOT (i.e., 49 CFR 172)	X		
3) Mark each package according to DOT (i.e., 49 CFR 172)	X		
4) Mark each container of 110 gallons or less with the words "Hazardous Waste - Federal Law Prohibits Improper Disposal. If found, contact the nearest police or public safety authority or the U.S. EPA." and include the generators name, address and manifest document number. (i.e., 49 CFR 172.304)	X		
262.34 Accumulation Time			
1) How is waste accumulated on-site?			
☒ Containers			
☒ Tanks waste oil blending contains Stoddard Solvent (non-haz after blend)			
☐ Surface impoundments (complete SWMF checklist)			
☐ Piles (complete SWMF checklist)			
2) Is waste accumulated for more than 90 days?	X		
If yes, complete SWMF checklist			
3) Is each container clearly dated with each period of accumulation so as to be visible for inspection?			
4) Is each container or tank marked or labeled with the words "Hazardous Waste" or in compliance with the DOT labeling requirements?			

STOP HERE IF THE HAZARDOUS WASTE MGT FACILITY (TSD) CHECKLIST IS FILLED OUT

GENERAL WASTE ANALYSIS

LISTING OF HAZARDOUS WASTES

Hazardous Wastes	Generated	T, S, or D Location	Activity	E.P.A. Identification
Baghouse Dust 16 dr. + 3 bags	Cast Shop	Baghouse	Stored	D006 & D008
Chromic Acid 5 4 solids cleanup	Mach. Shop	Haz. Waste Storage	Stored	D002 & D007
Electric Batteries	Tractor Shop	Tractor Shop	Stored	D002 & D008
Mercurous Nitrate	Laboratory	Laboratory	Treated & Stored	D009 & D002
PCB's	All Mills	Haz. Waste Storage	Stored	-
Pumice Waste 7 dr	Roll. Mill	Haz. Waste Storage	Stored	D008
Still Bottom from Trichloroethane Recovery	Bar Mill	Poll. Bldg. & Haz. Waste Storage	Stored	F002
Stoddard Solvent 20 dr sludge	All Mills	Covered Tanks	Treated	D001 blended no longer haz
Toluene	Laboratory	Laboratory	Stored	F005

Do not make entries in shaded areas

ENVIRONMENTAL PROTECTION AGENCY

Generator Annual Hazardous Waste Report (cont.)

This report is for the calendar year ending December 31, 1981.

Date rec'd: _____ Rec'd by: _____

VII. GENERATOR'S EPA I.D. NO.

T A C

N Y D 0 7 1 5 8 6 1 2 7 1

1 2 13 14 15

VIII. FACILITY NAME (specify facility to which all wastes on this page were shipped)

CECOS International Inc.

IX. FACILITY'S EPA I.D. NO.

F N Y D 0 8 0 3 3 6 2 4 1

16 28

X. FACILITY ADDRESS

4626 Royal Ave.
Niagara Falls, N. Y. 14203

XI. TRANSPORTATION SERVICES USED (List the name and EPA identification numbers of all transporters whose services were used during 1981. This section to be completed only once. Do not repeat on supplemental sheets.)

Matlack PAD046548756
D&J Transportation NYD088658646

XII. WASTE IDENTIFICATION

Sequence #	Line	A. Description of Waste	B. DOT Hazard code	C. EPA Hazardous Waste No. (see instructions)		D. Amount of Waste	E. Unit of Measure
	1	Spent Pickle Solution From Brass Mill	0 2	D 0 0 2		1 0 0	T
	2	Baghouse Dust From Brass Mill Cast Shop	1 5	D 0 0 6	D 0 0 8	1 0	T
	3						
	4						
	5						
	6						
	7						
	8						
	9						
	10						
	11						
	12						

Tear out here

XIII. COMMENTS (enter information by section number—see instructions)

40 CFR 265 Subpart J - Tanks	YES	NO	N/A
265.190 1) What are the approximate number and size of tanks containing hazardous waste? 1 blended oil	X		non-haz
2) Identify the waste treated/stored in each tank. blended kero spirits w/waste oil			
265.192 - General Operating Requirements			
1) Are the tanks maintained so that there is no evidence of past, present, or risk of future leaks?		X	
If no, please explain. underground tanks >40 year old			
2) Are there leaking tanks?			X don't know
3) Are all hazardous wastes or treatment reagents being placed in tanks compatible with the tank material so that there is no danger of ruptures, corrosion, leaks or other failures?	X	X	
4) Do uncovered tanks have at least 2 feet of freeboard or an adequate containment structure?			X
5) If waste is continuously fed into a tank, is the tank equipped with a means to stop the inflow from the tank? e.g. bypass system to a standby tank			X
265.194 - Inspections			
1) Is the tank(s) inspected each operating day for a) discharge control equipment			X
b) monitoring equipment			X
c) level of waste in tank	X		dip stick (daybtfill)
2) Are the tanks and surrounding areas (e.g., dike) inspected weekly for leaks, corrosion or other failures?			X underground
3) Are there underground tanks?	X		
If yes, how many and can they be entered for inspection? hatches need be excavated	X		they can, but are not.
265.198 - Are ignitable or reactive wastes stored in a manner which protects them from a source of ignition or reaction?	X		
If no, please explain.			
265.199 - Does it appear that incompatible wastes are being stored separate from each other?			X

ENVIRONMENTAL PROTECTION AGENCY

Facility Annual Hazardous Waste Report (cont.)

This report is for the calendar year ending December 31 (1982) 1982 ANNUAL REPORT

VIII. FACILITY'S EPA I.D. NO. T:A C

F 1 1 2 13 14 15

Date received: _____

Received by: _____

IX. GENERATOR'S EPA I.D. NO.

G 16 28

X. GENERATOR NAME (specify generator from whom all wastes on this page were received)

XI. GENERATOR ADDRESS

XII. WASTE IDENTIFICATION

Sequence #	Line #	A. Description of Waste	B. EPA Hazardous Waste No. (see instructions)		C. Handling Method	D. Amount of Waste	E. Unit of Measure
29 32	1	Baghouse dust from Electric Fce. melting of copper alloys.	D006 (33 36)	D008 (37 40)	S01 (49 51)	17 (52 60)	T (61)
	2	Spent Mercurous nitrate used in Laboratory analysis.	D009	D002	S01	7	P
	3	Spent Stoddard solvent used in degreasing operations.	D001		T50	37	T
	4	Trichloroethane Still Bottom.	F002		S01	500	P
	5	Spent Tolvene	F005		S01	6	P
	6	Condensate from chrome Plating Exhaust.	D002	D007	S01	225	P
	7	Mixture of lead, pumice & water from finishing of lead-coated copper sheet.	D008		S01	.2	T
	8						
	9						
	10						
	11						
	12						

Tear out here

XIII. COMMENTS (enter information by section number—see instructions)

7-15-16 (12/82)

(1)

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SOLID WASTE

GENERATOR / WASTE TRANSPORTER ANNUAL REPORT

for the year ending December 31, 19 82

Page No 2 of 2

(2) [X] GENERATOR EPA ID NUMBER N Y D 0 7 1 5 8 6 1 2 7 OR [ ] SMALL GENERATOR

NAME Revere Copper Products, Inc., Rome Division

STREET Box 151, Seneca Street | STATE New York | ZIP CODE 13440

CITY Rome | NYSDEC Part 364 Permit No

(3) [ ] TRANSPORTER EPA ID NUMBER

NAME

STREET | STATE | ZIP CODE

CITY

(4) TREATMENT, STORAGE, OR DISPOSAL FACILITY (TSDF)

EPA ID NUMBER N Y D 0 7 1 5 8 6 1 2 7 NYSDEC Facilty I.D. No

NAME Revere Copper Products, Inc., Rome Division

STREET Seneca Street | STATE New York | ZIP CODE 13440

CITY Rome

WASTE INFORMATION

(5) WASTE DESCRIPTION	(6) WASTE CODE	(7) FORM	(8) HANDLING METHOD	(9) QUANTITY	(10) UNITS	(11) ON-OFF SITE
Spent Mercurous Nitrate	D009	01	S01	17	03	01
Spent Stoddard Solvent	D002					
Trichloroethane Still Bottom	D001	01	T50	317	04	01
Spent Tolvene & Oil Mix	F002	01	S01	5010	03	01
Condensate from chrome plating	F005	01	S01	16	03	01
Exhaust	D002	04	S01	2215	03	01
Water, Pumice & Lead Mixture	D007					
	D008	04	S01	12	04	01

I hereby affirm under penalty of perjury that information provided on this form is true to the best of my knowledge and belief. False statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law

(12) PRINT OR TYPE NAME Robert D. Manfred | TITLE Works Manager

SIGNATURE | DATE 2/25/83

47 15-16 (12/82)

(1)

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SOLID WASTE

GENERATOR / WASTE TRANSPORTER ANNUAL REPORT

for the year ending December 31, 19 82

Page No 1 of 2

(2) [X] GENERATOR EPA ID NUMBER N Y D 0 7 1 1 5 8 1 6 2 1 2 1 7 OR [ ] SMALL GENERATOR

NAME Revere Copper Products, Inc., Rome Division

STREET Box 151, Seneca Street

CITY Rome | STATE New York | ZIP CODE 13440

(3) [ ] TRANSPORTER EPA ID NUMBER | NYSDEC Part 364 Permit No

NAME Matlack

STREET

CITY | STATE | ZIP CODE

(4) TREATMENT, STORAGE, OR DISPOSAL FACILITY (TSDF)

EPA ID NUMBER P A D 0 1 0 1 2 3 9 5 1 8 8 7 | NYSDEC Facility I.D. No.

NAME New Jersey Zinc Compay, East Plant

STREET 4th and Delaware Ave.

CITY Palmerton | STATE Pa. | ZIP CODE 18071

WASTE INFORMATION

(5) WASTE DESCRIPTION	(6) WASTE CODE	(7) FORM	(8) HANDLING METHOD	(9) QUANTITY	(10) UNITS	(11) ON-OFF SITE
Baghouse Dust from Electric Furnace Melting of Copper Alloys	D 0 1 0 1 6	0 1 4	T 1 6 1 6	* 1 1 1 1 1 7	0 1 4	0 1 2
	D 0 1 0 1 8					
* Beneficial reclamation of metals.						

I hereby affirm under penalty of perjury that information provided on this form is true to the best of my knowledge and belief. False statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law.

(12) PRINT OR TYPE NAME Robert D. Manfred | TITLE Works Manager

SIGNATURE [signature] | DATE 2/25/83

HAZARDOUS WASTE MANAGEMENT FACILITY CHECK LIST
(Facilities Subject to 40 CFR 265 Standards)

	YES	NO	N/A

40 CFR Part 265 Subpart B General Facility Standards

265.13-General Waste Analysis

1) Is there a detailed chemical and physical anaylsis of a representative sample of the waste or each waste? (At a minimum this analysis must contain all the information necessary for proper management of the waste) | X | | |

2) Does the character of the waste handled at the facility change from day to day, week to week, etc., thus requiring frequent testing?
You may check only one

Waste characteristics vary ____
All waste are basically the same X
Company treats all waste as hazardous ____

3) Is there a written waste analysis plan at the facility? | X | | |

Does it contain the following:

a) Parameters for each waste to be analyzed and the rationale for the selection of these parameters. | X | | |

b) Test methods used to test these parameters. | X | | |

c) Sampling methods to obtain a representative sample of the waste to be analyzed. | X | | |

d) Frequency of repeated analysis to ensure accurate and current information. | X | | |

4) Does hazardous waste come to this facility from an outside source? e.g. another generator. | | X | |

5) If waste comes from an outside source, are there procedures in the plan to insure that waste received conforms to the accompanying manifest? | | | X |

265.14-Security

1) Is there: a) a 24-hour surveillance system? or,

b) a suitable barrier which completely surrounds the active portion of this facility? | X | | |

2) Are there "Danger-Unauthorized Personnel Keep Out" signs posted at each entrance to the facility? | X | | |

If no, explain what measures are taken for security.

265.15 - General Inspections Requirements

1) Does the facility have a written inspection schedule? | X | | |

2) Does the schedule identify the types of problems to be looked for and the frequency of inspections? | X | | |

3) Does the owner/operator record inspections in a log? | X | | |

4) Is there evidence that problems reported in the inspection log have been remedied? | | (X) | |

If no, please explain. Log had been kept well until a few months ago

Log not kept adequately

6 individuals pollution monitors

265.16 - Personnel Training	YES	NO	N/A
1) Have facility personnel successfully completed a program of classroom instruction or on-the-job training within 6 months of having been employed?	X		
If yes, have facility personnel taken part in an annual review of training?			
2) Is there written documentation of the following:			
—job title for each position at the facility related to hazardous waste management and the name of the employee filling each job?	X		
—type and amount of training to be given to personnel in jobs related to hazardous waste management?	X		
—actual training or experience received by personnel?	X		
3) Are training records kept on all employees for at least 3 years?	X		

on the job safety ee! contingencies

265.17-General Requirements for Ignitable, Reactive or Incompatible Wastes

1) Are there ignitable reactive or incompatible wastes on site? X

If yes, what are the approximate types and quantities and location of the waste.
SPENT STODDARD SOLVENT INTO BLENDING WHITE OIL 10,000 gal tank

2) Have precautions been taken to prevent accidental ignition or reaction of ignitable or reactive waste? X

If no, please explain.

3) In your opinion, are proper precautions taken so that these wastes do not:

— generate extreme heat or pressure, fire or explosion, or violent reaction?	X		
— produce uncontrolled toxic mist, fumes, dusts or gases in sufficient quantities to pose a risk of fire or explosions?	X		
— damage the structural integrity of the device or facility containing the waste?	X		
— threaten human health or the environment?	X		

G.W. ? around waste oil

40 CFR 265 - Subpart C - Preparedness and Prevention	YES	NO	N/A
265.32 Does the facility comply with preparedness and prevention requirements including maintaining:			
— an internal communications or alarm system?	X		
— a telephone or other device to summon emergency assistance from local authorities?	X		
— portable fire equipment?	X		
— water at adequate volume and pressure to supply water hose streams, foam producing equipment, etc.	X		
265.33 Is equipment tested and maintained?	X		
265.34 Is there immediate access to communications or alarm systems during handling of hazardous waste?	X		
265.35 Adequate aisle space?	X		
If no, please explain storage pattern.			
In your opinion, do the types of waste on-site require all of the above procedures, or are some not needed: Explain.	X		

40 CFR 265 - Subpart D - Contingency Plan and Emergency Procedures			
Does the facility have a written contingency plan for emergency procedures designed to deal with fires, explosions or any unplanned release of hazardous waste?	X		
1) Does the plan describe arrangements made with the local authorities?	X		
2) Has the contingency plan been submitted to the local authorities?	X		
3) Does the plan list names, addresses and phone numbers of Emergency Coordinators?	X		
4) Does the plan have a list of what emergency equipment is available?	X		
5) Is there a provision for evacuating facility personnel?	X		
6) Was there an emergency coordinator present or on call at the time of the inspection?	X		

40 CFR 265 Subpart E-Manifest System, Recordkeeping and Reporting

265.71 - Use of the Manifest

1) Has the facility received hazardous waste from an off-site source since November 19, 1980?		X	
If no, skip to 265.73 - Operating Record			
2) If yes, does it appear that the facility has a copy of a manifest for each hazardous waste load received?			
If not, please explain.			

	YES	NO	N/A
3) How many post-November 19 manifests does the facility have? (Estimate if the number is large)			
4) Does each manifest have the following information? (circle missing information)			
— a manifest document number?	—	—	—
— the generators name, mailing address, telephone number and EPA I.D. #?	—	—	—
— the transporters name and EPA I.D. Number?	—	—	—
— the TSD name, address, telephone number & EPA I.D. Number?	—	—	—
— a description of the waste (DOT)?	—	—	—
— the total quantity of each hazardous waste by units of weight or volume, and the type and number of containers as loaded into or onto the transport vehicle?	—	—	—
— a certification that the materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation under regulations of the DOT and EPA?	—	—	—
(Obtain a copy of the incomplete manifests)			

265.72 - Manifest Discrepancies

Have there been significant discrepancies between the quantity and type of waste received and the waste identified on the manifest?	—	—	—
Describe unreconciled descrepancies.			

265.73 - Operating Record

1) Does the facility keep an operating record?	X	—	—
2) Does the record contain the following information:			
a) Description and quantity of waste on-site and the method(s) and date(s) of its Treatments, Storage & Disposal?	X	—	—
b) The location and quantity of each hazardous waste at each location?	X	—	—
c) Records and results of waste analysis and trial tests performed and identified in the waste analysis plan?	X	—	—
d) Summary reports and details of all incidents that require implementing the contingency plan.			
e) Records and results of inspections for the past 3 years or November 19, 1980 which ever is less?	X (X)	—	— records kept well until recent several months
f) Monitoring, testing or analytical data where required for:			
Groundwater, Land Treatment, Incinerators, and Thermal Treatment?	—	—	X

265.76 - Unmanifested Waste Report

Has the facility accepted hazardous waste from off-site sources without a manifest?	—	X	—
If yes, has the facility submitted an unmanifested waste report?	—	—	—

40 CFR 265 Subpart F - Groundwater Monitoring	YES	NO	N/A
(Applies only to surface impoundments, landfills and/or land treatment facilities.)			
Is a groundwater monitoring plan available at the facility?			
If yes, please fill out the appropriate Groundwater Monitoring Questionnaire and attach to this report.			

40 CFR 265 Subpart G - Closure and Post-Closure

265.111 Closure Performance Standard

Have any portions of the facility been closed since November 19, 1980?			
If yes, please explain			

265.112 - Closure Plan

Does the facility have a written closure plan? (Applies to all types of TSD facilities)			
If yes, does the written plan include:			
1. A description of how and when the facility will be partially (if applicable) and ultimately closed?	X		
1. An estimate of the maximum inventory of wastes in storage or treatment at any time during the life of the facility?	X		
3. A description of the steps necessary to decontaminate facility equipment during closure?	X		
4. A schedule for final closure including the anticipated date when waste will no longer be received and when final closure will be completed?	X		
5. Does the owner/operator have a written estimate of of the cost of closing the facility?			
If yes, what is it? ($)			

265.118 - Post Closure Plan

Does the facility have a written post-closure plan? (Applies only to disposal facilities)			
If yes, Does the Plan:			
1. Identify the activities which will be carried on after closure and the frequency of these activities?			
2. Include a description of planned groundwater monitoring activities and their frequency during post-closure?			
3. Include a description of planned maintenance activities and frequency to insure integrity of final cover during post-closure?			
4. Include the name, address and phone number of a person or office to contact during post-closure?			
5. Does the owner/operator have a written estimate of the cost of post-closure for the facility?			
If yes, what is it? ($)			

Please circle all appropriate activities and answer questions on indicated pages for all activities circled.

Blending

Storage	Treatment	Disposal
Container - pg 5	Tank - pg 7	Landfill - pg 11
Tank, above ground-pg 7	Surface Impoundment-pg 8	Land Treatment - pg 10
Tank, below ground-pg 7	Incineration - pg 12	Surface Impoundments - pg 8
Surface Impoundments-pg 8	Thermal Treatment- pg 12	Other_____
Waste Piles - pg 9	Land Treatment - pg 10	
Other_____	Chemical, Physical and Biological Treatment - pg 13	
	Other_____	

	YES	NO	N/A

40 CFR 265 - Subpart I - Containers

1) - What type of containers are used for storage. Describe the size, type, quantity and nature of waste (e.g. 12 fifty-five gallon drums of waste acetone)

55 gallon drums (see list)
(3) 50 ft³ bags (baghouse dust)

2) - Is there a containment system for spills, leaks and precipitation? — X — inadequate since bunk has been filled with dirt.

If yes, describe.

265.171 - Do the containers appear to be in good condition, not in danger of leaking? X

If not, please describe the type, condition and number of leaking or corroded containers. Be detailed and specific.

265.172 - Are hazardous waste stored in containers made of compatible materials? X

If not, please explain.

* chromic acid flue sludge drum

265.173(a) - Are all containers closed except those in use? X

265.173(b) - Do containers appear to be properly opened, handled or stored in a manner which will minimize the risk of the container rupturing or leaking? X

265.174 - Is the storage area inspected at least weekly? — X — not reflected in log

265.176 - Are containers holding ignitable and reactive waste located at least 50 feet (15 meters) away from the facility's property line? X

265.177 - Are incompatible wastes stored separate from each other? X

If no, explain

REFERENCE NO. 17

Revere Copper Products
Oneida Co.

RCRA INSPECTION FORM

Report Prepared for:

Generator X

Transporter —

HWM ("TSD") facility X

Copy of report sent to the facility —

E/A - SWISS
#301300

Facility Information

Name: REVERE COPPER PRODUCTS

Address: SENECA ST.
ROME, NEW YORK 13440

EPA ID#: NYD071586127

Date of Inspection: 3-28-84

Participating Personnel

State or EPA Personnel: THOMAS F. MORGAN - DEC
PAUL G. INGRISANO - EPA
BIJAN Rostami - DEC

Facility Personnel: DAVID L. HUNT - Plant Engineer

Report Prepared by Name: THOMAS F. MORGAN

Agency: NYSDEC

Telephone #: 315/782-0100 EXT. 543

Approved for the Director by: [signature]

Facility Name REVERE COPPER PRODUCTS

Date of Inspection 3-28-84

EPA I.D. No. NYD071586127

NOT FOR RELEASE TO COMPANY. PROTECTED INFROMATION

Summary, Conclusions and Recommendations

1. Summary:

The following deficiencies from Federal Regulatory requirements were noted:

a) The storage building (facility) does not have telephone or other emergency communication equipment. Windows were broken through which access could occur. The building has no utility service at all.

b) The training program included no provision for a formal annual review.

2. Regulatory Problems:

The following regulatory problems surfaced. During New York State's interim authorization period, all facilities are now subject to New York State standards 6 NYCRR Part 360, Part 365, and Part 366. This set of regulations is more stringent than Federal regulations in the following area: Federal Reg. 40 CFR Part 264.1 details that on-site operations such as a "Totally Enclosed Treatment Facility", Elementary Neutralization Unit", and on-site treatment and storage of hazardous waste subject to special requirements (40 CFR 261.6) for waste which is used, re-used or reclaimed are all exempt operations. Also, by Federal Regulations the wastes handled by these operations are not subject to regulation under Part 262 - 265 or Part 122 - 124.

SEE ADDITIONAL SHEET

Summary, Conclusions and Recommendations (Cont'd)

New York State Regulations, however, do not specifically exempt the wastes that are generated on site and go to these exempt-from-permit operations (6 NYCRR Part 360). Therefore, the generation, handling, storage, and tracking of these wastes prior to delivery to the exempt operation are subject to regulation. The generation of these wastes must, therefore, be included in the NYS Annual Report. Most companies, Revere included, are probably not aware of the more stringent New York State requirements.

5. Recommendation:

a) Regarding deficiencies: An appropriate warning letter with specific time frames for corrective action should be sent to Revere regarding the noted deficiencies at the storage building and with the training program.

b) Regarding Regulatory changes, Federal vs. New York State: It is my recommendation to have New York State (Central Office staff) review our regulations carefully to assure the apparent more stringent requirements were intentionally developed or whether a clarification in our regulations is needed through Policy Memoranda or other uniform mechanism.

Once New York State's regulatory intent is clarified, I will be able to establish contact with the company and explain any more stringent requirements.

Revere Copper Prod.
NYD071586127

Summary of Findings

Facility Description and Operations

Revere Copper Products manufactures copper sheets, rods, tubing to various size and alloy specifications. The copper is rolled, shaped, tempered, formed, cast, ground, chopped, pickled, and degreased. The Company purchases its raw material as scrap on the open market and also directly from suppliers.

A forging operation melts purchased copper and forms it into useable shapes (billets). Baghouse dust from forging is E.P. Toxic (D006, D008).

Copper products are run through a pickling operation. This amounts to an acid (H_2SO_4) dip followed by several rinse baths. The pickling acid eventually becomes contaminated with copper and must be replaced, resulting in a (D002 waste). Previously, this acid was batch removed to an open top neutralization tank where it was batch neutralized prior to discharge (subject to SPDES). Currently, Revere has installed an acid recovery unit. This state-of-the-art equipment has been on-line only a short while. So far it has functioned well. The Company is awaiting analytical results for documentation of its effectiveness.

The pickling dip baths have continuous overflows where the waste water is fed to the on-site treatment system for neutralization, copper hydroxide precipitation and discharge per SPDES permit.

Stoddard solvent (D001) is used for degreasing. This material is collected and taken to the on-site waste oil management facility. The

SEE ADDITIONAL SHEET

Facility Description and Operations (Cont'd)

solvent is blended (dumped) into an underground 10,000 gallon waste oil holding tank. The resultant mixture (verified by analysis) is non-hazardous.

Revere operates a waste oil management facility on site. Generated waste oils consist of: hydraulic oils, rolling lubricants, cutting and milling lubricants, gear oils, soaps, emulsified oils, etc. Oils are taken and run through a simple oil/water separator. The relatively "good" material from this operation, to which the D001 Stoddard is blended into, is placed in an underground 10,000 gallon tank. This oil goes to, and is collected by, Booth Oil in Buffalo. The separated oily/water waste is placed into two underground 10,000 gallon tanks. This waste is hauled by Matlack to Chem Clear in Pennsylvania. The area in front of the waste oil management area (about 50' by 200') was saturated with oil. Apparently spillage from sloppiness; unable to visually determine if tanks leak underground.

Pumice waste is generated at a copper sheet lead coating operation. The material is E.P. toxic D008.

PCB wastes occur from occasional capacitor failures and related clean-up debris.

Waste electric storage batteries D002/D008 are accumulated prior to shipment for recycling.

The designated hazardous waste storage area is adjacent to the waste oil management facility. It is an abandoned powerhouse. The building has a concrete floor and a few broken windows through which pigeons now enter and people could possibly enter. The door was locked, however. There is no utility service to the storage building. There is no phone or other communication equipment in the building. There was a fire extinguisher. The storage building does not have secondary containment.

Revere Copper Inland
NYD071586127

Describe the activities that result in the generation of hazardous waste.

1. Forging Operation — EP Toxic Bag House Dusts
2. Stoddard Solvent — used for degreasing (Vansol)
3. Pickling Acid — Copper finishing operation (Sulfuric Acid)
4. Pumice Waste — EP Toxic from lead coated copper operation
5. PCB waste — from occasional capacitor failures
6. Waste Oils — Rolling coolants, hydraulic fluids
7. Waste Storage Batteries — Recycled
8. Mercuric Nitrate — lab error waste

Identify the hazardous waste located on site, and estimate the approximate quantities of each. (Identify Waste Codes)

*note: 84 drums shipped off site 3-27-84, one day before inspection

D006/D008 — Bag House Dusts < 1 drum

D009/D002 — Mercuric ~~Oxide~~ Nitrate (in storage since 1981) < 1 drum

D008 — Pumice Waste (none accumulated)

D001 — Stoddard Solvent — blended with non-haz waste oil until mixture is non-haz.

B004 + other Misc. PCB — 2 small drums + containers of spill residue in a box.

D002 — Pickling Acid — approx ¼ full 10,000 gallon open top stainless steel storage tank where waste is stored prior to neutralization +/or run through an acid recovery unit (newly installed)

Waste Storage Batteries D002/D008 Sent to Recycler.

D002/D007 — Chromic Acid salt residuals — floor scapings around plating tank

NYD071586127

Is there reason to believe that the facility has hazardous waste on-site?

a. If yes, what leads you to believe it is hazardous waste? Check appropriate boxes:

☒ Company admits that its waste is hazardous during the inspection.

☒ Company admitted the waste is hazardous in its RCRA notification and/or Part A Permit Application.

☐ The waste material is listed in the regulations as a hazardous waste from a nonspecific source (§261.31)

☐ The waste material is listed in the regulations as a hazardous waste from a specific source (§261.32)

☐ The material or product is listed in the regulations as a discarded commercial chemical product (§261.33)

☒ Testing has shown characteristics of ignitability, corrosivity, reactivity or extraction procedure toxicity, or has revealed hazardous constituents (please attach analysis report)

☐ Company is unsure but there is reason to believe that waste materials are hazardous. (Explain)

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Hazardous Waste Generator Facility Checklist
Facilities Subject to 40 CFR 265 Standards

	YES	NO	N/A

40 CFR Part 265 Subpart B General Facility Standards

265.13-General Waste Analysis

1) Is there a detailed chemical and physical analysis of a representative sample of the waste or each waste? (At a minimum this analysis must contain all the information necessary for proper management of the waste) — X

2) Does the character of the waste handled at the facility change from day to day, week to week, etc., thus requiring frequent testing?
You may check only one

Waste characteristics vary ____
All waste are basically the same X
Company treats all waste as hazardous ____

3) Is there a written waste analysis plan at the facility? X

Does it contain the following:

a) Parameters for each waste to be analyzed and the rationale for the selection of these parameters. X

b) Test methods used to test these parameters. X

c) Sampling methods to obtain a representative sample of the waste to be analyzed. X

d) Frequency of repeated analysis to ensure accurate and current information. Repeated if operation change instituted X

4) Does hazardous waste come to this facility from an outside source? e.g. another generator. X

5) If waste comes from an outside source, are there procedures in the plan to insure that waste received conforms to the accompanying manifest? X

265.14-Security — Entire plant is fenced

1) Is there: a) a 24-hour surveillance system? or,

b) a suitable barrier which completely surrounds the active portion of this facility? X

2) Are there "Danger-Unauthorized Personnel Keep Out" signs posted at each entrance to the facility? X

If no, explain what measures are taken for security.

St Peage Bldg is locked, windows (some) in building were missing. Someone inside fence could have gained access into the locked building.

Entire Plant is fenced with security guards

265.15 - General Inspections Requirements

1) Does the facility have a written inspection schedule? X

2) Does the schedule identify the types of problems to be looked for and the frequency of inspections? X

3) Does the owner/operator record inspections in a log? X

4) Is there evidence that problems reported in the inspection log have been remedied? X

If no, please explain.

Missing windows a minor problem which was not addressed.

- 11
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265.16 - Personnel Training	YES	NO	N/A
1) Have facility personnel successfully completed a program of classroom instruction or on-the-job training within 6 months of having been employed?	X		
If yes, have facility personnel taken part in an annual review of training?		X	
2) Is there written documentation of the following:			
—job title for each position at the facility related to hazardous waste management and the name of the employee filling each job?	X		
—type and amount of training to be given to personnel in jobs related to hazardous waste management?	X		
—actual training or experience received by personnel?	X		
3) Are training records kept on all employees for at least 3 years?	X		

ANNUAL REVIEW NOT YET IMPLEMENTED

265.17-General Requirements for Ignitable, Reactive or Incompatible Wastes	YES	NO	N/A
1) Are there ignitable, reactive or incompatible waste on site?	X		

If yes, what are the approximate types and quantities and location of the waste.

Stoddand Solvent D001 — collected + treated by blending with non-haz. oil until mixture is non-hazardous.

	YES	NO	N/A
2) Have precautions been taken to prevent accidental ignition or reaction of ignitable or reactive waste?	X		

If no, please explain.

3) In your opinion, are proper precautions taken so that these wastes do not:

	YES	NO	N/A
— generate extreme heat or pressure, fire or explosion, or violent reaction?	X		
— produce uncontrolled toxic mist, fumes, dusts or gases in sufficient quantities to pose a risk of fire or explosions?	X		
— damage the structural integrity of the device or facility containing the waste?	X		
— threaten human health or the environment?	X		

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40 CFR 265 - Subpart C - Preparedness and Prevention

	YES	NO	N/A
265.31 Does the facility comply with preparedness and prevention requirements including maintaining:			
— an internal communications or alarm system?	X	X	
— a telephone or other device to summon emergency assistance from local authorities?		X	
— portable fire equipment?	X		
— water at adequate volume and pressure to supply water hose streams, foam producing equipment, etc.		X	
265.33 Is equipment tested and maintained?	X		
265.34 Is there immediate access to communications or alarm systems during handling of hazardous waste?	X	X	
265.35 Adequate aisle space?	X		
If no, please explain storage pattern.			
In your opinion, do the types of waste on-site require all of the above procedures, or are some not needed? Explain.	X		

In plant + Utility Areas.

NONE IN STORAGE BLDG.

NOT IN STORAGE BUILDING

NOT in STORAGE BLDG

NEARBY BUILDING ONLY

40 CFR 265 - Subpart D - Contingency Plan and Emergency Procedures

	YES	NO	N/A
Does the facility have a written contingency plan for emergency procedures designed to deal with fires, explosions or any unplanned release of hazardous waste?	X		
1) Does the plan describe arrangements made with the local authorities?	X		
2) Has the contingency plan been submitted to the local authorities?	X		
3) Does the plan list names, addresses and phone numbers of Emergency Coordinators?	X		
4) Does the plan have a list of what emergency equipment is available?	X		
5) Is there a provision for evacuating facility personnel?			X
6) Was there an emergency coordinator present or on call at the time of the inspection?	X		

STORAGE BUILDING IS VERY SMALL

40 CFR 265 Subpart E-Manifest System, Recordkeeping and Reporting

265.71 - Use of the Manifest

	YES	NO	N/A
1) Has the facility received hazardous waste from an off-site source since November 19, 1980?		X	
If no, skip to 265.73 - Operating Record			
2) If yes, does it appear that the facility has a copy of a manifest for each hazardous waste load received?			X
If not, please explain.			

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	YES	NO	N/A
3) How many manifest numbers (# manifests does the facility have? (Estimate if the number is large)			
4) Does each manifest have the following information? (Circle missing information)			
— a manifest document number?			X
— the generators name, mailing address, telephone number and EPA I.D. #?			
— the transporters name and EPA I.D. Number?			
— the TSD name, address, telephone number & EPA I.D. Number?			
— a description of the waste (DOT)?			
— the total quantity of each hazardous waste by units of weight or volume, and the type and number of containers as loaded into or onto the transport vehicle?			
— a certification that the materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation under regulations of the DOT and EPA?			
(Obtain a copy of the incomplete manifests)			
265.72 - Manifest Discrepancies			
Have there been significant discrepancies between the quantity and type of waste received and the waste identified on the manifest?			
Describe unreconciled descrepancies.			
265.73 - Operating Record *			
1) Does the facility keep an operating record?	X		
2) Does the record contain the following information:			
a) Description and quantity of waste on-site and the method(s) and date(s) of its Treatments, Storage & Disposal?	X	X	
b) The location and quantity of each hazardous waste at each location?	X		
c) Records and results of waste analysis and trial tests performed and identified in the waste analysis plan?	X		
d) Summary reports and details of all incidents that require implementing the contingency plan. N/A			
e) Records and results of inspections for the past 3 years or November 19, 1980 -which ever is less?	X		
f) Monitoring, testing or analytical data where required for:			
Groundwater, Land Treatment, Incinerators, and Thermal Treatment?			X
265.76 - Unmanifested Waste Report			
Has the facility accepted hazardous waste from off-site sources without a manifest?		X	
If yes, has the facility submitted an unmanifested waste report?			X

Does not detail wastes treated on site by (A) neutralization (b) blending

* N.Y. State Regs may require a generator/TSD to track & keep records on all hazardous wastes treated on site by a) neutralization b) blending & generation rates of these wastes must be detailed in the annual report. They currently are not. State Regs do not require such information!

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	YES	NO	N/A
40 CFR 265 Subpart F - Groundwater Monitoring			
(Applies only to surface impoundments, landfills and or land treatment facilities)			
Is a groundwater monitoring plan available at the facility?			
If yes, please fill out the appropriate Groundwater Monitoring Questionnaire and attach to this report.			
40 CFR 265 Subpart G - Closure and Post-Closure			
265.111 Closure Performance Standard			
Have any portions of the facility been closed since November 19, 1980?		X	
If yes, please explain			
265.112 - Closure Plan			
Does the facility have a written closure plan? (Applies to all types of TSD facilities)	X		
If yes, does the written plan include:			
1. A description of how and when the facility will be partially (if applicable) and ultimately closed?	X		
2. An estimate of the maximum inventory of wastes in storage or treatment at any time during the life of the facility?	X		
3. A description of the steps necessary to decontaminate facility equipment during closure?	X		
4. A schedule for final closure including the anticipated date when waste will no longer be received and when final closure will be completed?		X	NO CLOSURE ANTICIPATED
5. Does the owner/operator have a written estimate of of the cost of closing the facility?	X		
If yes, what is it? ($) * * See 1983 Annual Report			
265.118 - Post Closure Plan			
Does the facility have a written post-closure plan? (Applies only to disposal facilities)			X
If yes, Does the Plan:			
1. Identify the activities which will be carried on after closure and the frequency of these activities?			
2. Include a description of planned groundwater monitoring activities and their frequency during post-closure?			
3. Include a description of planned maintenance activities and frequency to insure integrity of final cover during post-closure?			
4. Include the name, address and phone number of a person or office to contact during post-closure?			
5. Does the owner/operator have a written estimate of the cost of post-closure for the facility?			
If yes, what is it? ($)			

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Please circle all applicable activities and answer questions on indicated pages for all activities circled → Operations exempt from Federal Regulations but may NOT be exempt from N.Y State Regs during handling + storing prior to treatment.

Storage	Treatment	Disposal
Container - pg 6	Tank - pg 7	Landfill - pg 11
Tank above ground-pg 7	Surface Impoundment-pg 8	Land Treatment - pg 10
Tank below ground-pg 7	Incineration - pg 12	Surface Impoundments - pg 8
Surface Impoundments-pg 8	Thermal Treatment- pg 12	Other ______
Waste Piles - pg 9	Land Treatment - pg 10	
Other ______	Chemical, Physical and Biological Treatment - pg 12	
	Other ______	

Chemical, Physical and Biological Treatment → (1) Blending D001 until mixture is non-hazardous (2) Neutralizing or Recovering D002 wastes

YES NO N/A

40 CFR 265 - Subpart I - Containers

Most all drums were removed [illegible] day before the inspection

1. - What type of containers are used for storage. Describe the size, type, quantity and nature of waste (e.g. 12 fifty-five gallon drums of waste acetone).
55 gal drums - most wastes
PCB wastes - actual capacitors + boxes of debris

2. - Is there a containment system for spills, leaks and precipitation? __ X __

If yes, describe. * 10% containment required in Part 264. No containment is required in Part 265 Interim Status Stds. N.Y.S. Regs 6NYCRR Part 360 does not require secondary containment.

265.171 - Do the containers appear to be in good condition, not in danger of leaking? ONLY PCB wastes in storage X __ __

If not, please describe the type, condition and number of leaking or corroded containers. Be detailed and specific.

265.172 - Are hazardous waste stored in containers made of compatible materials? X __ __

If not, please explain.

265.173(a) - Are all containers closed except those in use? X __ __

265.173(b) - Do containers appear to be properly opened, handled or stored in a manner which will minimize the risk of the container rupturing or leaking? X __ __

265.174 - Is the storage area inspected at least weekly? X __ __

265.176 - Are containers holding ignitable and reactive waste located at least 50 feet (15 meters) away from the facility's property line? X __ __

265.177 - Are incompatible wastes stored separate from each other? __ __ X

If no, explain

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40 CFR 265 Subpart J - Tanks — YES / NO / N/A

265.190 1) What are the approximate number and size of tanks containing hazardous waste? — YES: X

2) Identify the waste treated, stored in each tank.
→ Pickling Acid H_2SO_4 → held in approx 10K gal opentop tank prior to { a) Acid Recovery / b) neutralization
→ Stoddard Solvent → blended in one 10K gal underground waste oil tank.

265.192 - General Operating Requirements

1. Are the tanks maintained so that there is no evidence of past, present, or risk of future leaks? — N/A: X UNDERGROUND

If no, please explain. * Waste oil spillage all over ground around oil tank & fill area
+ Stoddard Solv (D001) blending operation → Mixture sent for recovery

2) Are there leaking tanks? — N/A: X undergrnd.

3) Are all hazardous wastes or treatment reagents being placed in tanks compatible with the tank material so that there is no danger of ruptures, corrosion, leaks or other failures? — YES: X

4) Do uncovered tanks have at least 2 feet of freeboard or an adequate containment structure? — YES: X

5) If waste is continuously fed into a tank, is the tank equipped with a means to stop the inflow from the tank? e.g. bypass system to a standby tank — N/A: X

265.194 - Inspections

(Pickling acid recovery &/or neutralization)

1) Is the tank(s) inspected each operating day for
a. discharge control equipment — YES: X
b. monitoring equipment — YES: X
c. level of waste in tank — YES: X

2) Are the tanks and surrounding areas (e.g., dike) inspected weekly for leaks, corrosion or other failures? — YES: X (Pickling Acid); NO: X (WASTE OIL SPILLAGE ALL OVER GROUND D001 blending area.)

3) Are there underground tanks? Waste Oil to which D001 wastes are added — YES: X

If yes, how many and can they be entered for inspection? — NO: X

265.198 - Are ignitable or reactive wastes stored in a manner which protects them from a source of ignition or reaction? — YES: X

If no, please explain.

265.199 - Does it appear that incompatible wastes are being stored separate from each other? — N/A: X

Note: The tank operations are exempt under Federal Regs, & so is the hazardous waste those operations handle. Under N.Y. State Regulations, the operations (Treatment by blending &/or neutralization) are exempt from permit requirements but, the wastes generated that go to these operations are not specifically exempted. Therefore, the generation of these wastes and the handling and storage prior to treatment/neutralization are subject to regulation. The generation of these wastes must therefore be included in N.Y. State's Annual Report.

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	YES	NO	
265.382 Is there open burning of hazardous waste?	—	—	X

a) If yes, what is being burned? (Only burning or detonation of explosives is permitted)

b) If open burning or detonation of explosives is taking place approximately what is the distance from the open burning or detonation to the property of others?

40 CFR 265 Subpart J - Chemical, Physical and Biological Treatment (other than in tanks, surface impoundments or land treatment units)

1) Describe the treatment system at this facility and the the types of wastes treated.
① Pickling Acid H_2SO_4 → a) neutralized + discharged per SPDES
② STODDARD SOLVENT → b) acid recovery equip. newly installed
Blended with non-hazardous OIL UNTIL MIXTURE IS NON-HAZARDOUS

265.401 - Does the treatment process system show any signs of ruptures, leaks or corrosion?	—	X	—

If yes, describe. The blended Solvent/waste oil is placed into an underground 10,000 gal. waste oil tank.

265.401 - Is there a means to stop the inflow of continuously-fed hazardous wastes?	—	—	X

265.402 - Inspections

1) Is the discharge control safety equipment (e.g. waste feed cut-off systems, by-pass systems, drainage systems and pressure relief systems) in good working order?	X			
Are they inspected at least once each operation day?	X	—	—	
2) Does the data gathered from the monitoring equipment (e.g., pressure and temperature gauges) show treatment process is operating according to design?	X	—	—	new acid recovery operation recently installed.
Is data gathered at least once each operating day?	X	—	—	NO LOGS KEPT.
3) Are construction materials of the treatment process inspected at least weekly to detect corrosion or leaking of fixtures and seams?	X	—	—	
4) Are the discharge containment structures, (e.g. dikes) immediately surrounding the treatment unit inspected at least weekly to detect erosion or obvious signs of leakage (e.g. wet spots or dead vegetation)?	—	—	X	NO CONFINEMENT STRUCTURES

265.405 - Are ignitable or reactive waste fed into the waste treatment system treated or protected from any material or or conditions which may cause it to ignite or react?	X	—	—

If yes, explain how. Ignitable Stoddard Solvent (D001) is collected via small collection funk + taken to a collection area adjacent to waste oil storage. this D001 waste is then blended with the non-haz. waste oil

265.406 - Are the incompatible wastes placed in the same treatment process?	—	—	X

If yes, please explain.

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GENERATOR INSPECTION CHECKLIST

40 CFR 262 Subpart A-General	YES	NO	N/A
262.11 - Hazardous waste identification			
1) Did the generator test its waste to determine whether it is hazardous?	X		
Is the waste hazardous?	X		
2) Is the generator determining that its waste exhibits a hazardous waste characteristic(s) based on its knowledge of the material(s) or processes used?	X		
40 CFR 262 Subpart B-The Manifest			
Has hazardous waste been shipped off-site since November 19 1980?	X		
If yes, approximately how many shipments, off-site, have been made and describe the approximate size of an average shipment made on a monthly basis. If facility is a small quantity generator, please explain. Approx. 124 drums (55 gal) + 84 drums sent 3/27/84			
262.21 Does each manifest (or representative sample) have the following information? Please circle the missing elements.			
— a manifest document number?	X		
— the generators name, mailing address, telephone number and EPA I.D. Number?	X		
— the transporters name and EPA I.D. Number?			
— the name, address and EPA ID Number of the designated facility?	X		
— a description of the wastes (DOT)?	X		
— the total quantity of each hazardous waste by units of weight or volume, and the type and number of containers as loaded into or onto the transport vehicle?	X		
— a certification that the materials are properly classified, described, package, marked and labeled, and are in proper condition for transportation under regulations of the DOT and EPA?	X		
(obtain a copy of the incomplete manifests)			
40 CFR 262 - Subpart D - Recordkeeping and Reporting			
262.40 Has the generator maintained facility records since Nov. 19, 1980? (manifest, exception report and waste analysis)	X		
262.42 Has the generator received signed copies (from the TSD facility) of all the manifests for waste shipped off-site more than 35 days ago?	X		
If not, have Exception Reports been submitted to EPA covering any of these shipments made more than 45 days ago?			X

Revere Copper Products

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	YES	NO	N/A
40 CFR 262 - Subpart C - Pre-Transportation Requirements			
262.30-33 Before transporting or offering hazardous waste for transportation off-site does the generator:			
1) Package the waste in accordance with applicable DOT regulations (i.e., 49 CFR Parts 173, 178 & 179)	X		
2) Label each package according to DOT (i.e., 49 CFR 172)	X		
3) Mark each package according to DOT (i.e., 49 CFR 172)	X		
4) Mark each container of 110 gallons or less with the words "Hazardous Waste - Federal Law Prohibits Improper Disposal. If found, contact the nearest police or public safety authority or the U.S. EPA," and include the generator's name, address and manifest document number. (i.e., 49 CFR 172.304)	X		

* only PCB wastes in storage.

= other wastes currently in storage: 91 6 volt storage batteries + 2 large Forklift batteries.

262.34 Accumulation Time

1) How is waste accumulated on-site?

- X Containers
- X Tanks → Stoddard Solvent (D001) blended with Waste Oil; → Copper Contaminated Pickling Acid H_2SO_4 – stainless tank
- _ Surface impoundments (complete HWMF checklist)
- _ Piles (complete HWMF checklist)

	YES	NO	N/A
2) Is waste accumulated for more than 90 days? If yes, complete HWMF checklist	X		
3) Is each container clearly dated with each period of accumulation so as to be visible for inspection?			X
4) Is each container or tank marked or labeled with the words "Hazardous Waste" or in compliance with the DOT labeling requirements?	X		

TSDF Dates container when placed in storage

PCB's in storage were marked.

- 84 drums sent off site 3/27/84

STOP HERE IF THE HAZARDOUS WASTE MGT FACILITY (TSD) CHECKLIST IS FILLED OUT

*Wastes are currently stored NOT ACCUMULATED.

REFERENCE NO. 18

Oneida Co.

INSPECTION FORM

REGION: 6
Major:
Major TSDF:
Non-Major: Y
Substitution:

NEW YORK STATE INDUSTRIAL HAZARDOUS WASTE MANAGEMENT ACT

Chapter 639, Laws of 1978

Prepared for:

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Henry G. Williams, Commissioner

Division of Solid and Hazardous Waste
Norman H. Nosenchuck, Director

Send to: Compliance Inspection Section
50 Wolf Road - Room 209/415
Albany, New York 12233-0001

EPA I.D. NUMBER: N Y D 0 7 1 5 8 6 1 2 7

*HANDLER'S NAME (Corporate): Revere Copper Products

(Division):

*HANDLER'S MAILING ADDRESS: Seneca St.

City, State & Zip Code Rome, NY. 13440

*HANDLER'S LOCATION ADDRESS: (if different than mailing)

City, State & Zip Code

*HANDLER'S TELEPHONE NUMBER: (315) 338-2474 Extension:

*FULL NAME OF HANDLER'S CONTACT: (Mr.) (~~Ms.~~) Dave Hunt

*TITLE OF HANDLER'S CONTACT: Plant Engineer

INSPECTION DATE: 2 / 22 / 19 89 TIME OF INSPECTION: 10:00 (a.m.) (~~p.m.~~)

INSPECTOR'S SIGNATURE: Craig A Weil

COUNTY: Oneida E/A NUMBER: 3 C 1 3 0 0

INSPECTOR'S NAME: Craig A. Weil

TITLE: Chemical Engineer

NAME:

TITLE:

CHECK ONE: Copy of THIS report (X has) (___ has not) been given to the Handler.

REPORT PREPARED BY: C. Weil DATE:

REPORT APPROVED BY: Thomas F. Morgan DATE: 2-27-89

) TOTALS
ENTER GENERATOR ID NUMBER)) NYD071586127
ENTER TODAYS DATE YRMODA)) 890221
Total number of records = 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19

REVERE COPPER PRODUCTS, INC.
1988 TO DATE WASTE TOTALS

DATE	UNITS	QUANTITY	WASTE CODE	NUMBER OF CONTAINERS	TYPE	NYS TRANSPORTER
880429	G	150	D001	3	DF	P40237ME
880429		55		1	DM	P40237ME
880429		55		1	DM	P40237ME
880429		5		1	DF	P40237ME
880429		5		1	DF	P40237ME
880525		1925	D002	35	DM	20910MA
880429		10		2	DF	P40237ME
880429		55		1	DM	P40237ME
880429		5	D003	1	DF	P40237ME
880525		165	D006	3	DM	20910MA
880525		110	D007	2	DF	20910MA
880525		440	D008	8	DM	20910MA
880429		55		1	DM	P40237ME
880429		55		1	DM	P40237ME
880429		10	D009	2	DF	P40237ME
880429		5		1	DF	P40237ME

Enter (CR) to continue:

REVERE COPPER PRODUCTS, INC.
1988 TO DATE WASTE TOTALS

DATE	UNITS	QUANTITY	WASTE CODE	NUMBER OF CONTAINERS	TYPE	NYS TRANSPORTER
880429	G	30	MA01	1	DM	P40237ME
880429		20		1	DM	P40237ME

SUMMARY FOR UNITS-OF-QUANTITY = G
3155

SUM

890111	P	43000	D002	90	DM	MA17****

SUMMARY FOR UNITS-OF-QUANTITY = P
43000

SUM

New York State Department of Environmental Conservation
Division of Solid and Hazardous Waste
50 Wolf Road, Albany, New York 12233

PART I

General Information and Classification of Facility

1. Identification of Hazardous Waste - 371

	Yes	No
A. Is there reason to believe the facility has hazardous waste on-site? If yes, what leads you to believe it is hazardous waste? Check appropriate box/boxes and attach any applicable correspondence with DEC or EPA:	X	

(1) X Company recognizes that its waste is hazardous during the inspection.

(2) X Company admitted the waste is hazardous in its RCRA notification and/or Part A permit application.

(3) ____ Testing has shown characteristics of:
(X) ignitability - 371.3(b);
(X) corrosivity - 371.3(c);
(X) reactivity - 371.3(d);
(X) EP toxicity - 371.3(e) D006, D001, D008, D009

____ Has revealed hazardous constituents (please attach analysis report) 371.4(a)(2), Appendix 22, Appendix 23

(4) ____ The material is listed in the regulations as a hazardous waste from non-specific sources 371.4(b).

(5) ____ The waste material is listed in the regulations as a hazardous waste from specific sources. 371.4(c).

(6) ____ The material or product is listed in the regulations as discarded commercial chemical products, off-specification species, container residues and spill residues thereof. 371.4(d).

(7) ____ Company is unsure, but they have reason to believe that waste materials are hazardous. (Explain) _____

_____

_____

_____

_____

NOT FOR RELEASE TO COMPANY, PROTECTED INFORMATION

PART III

Comments, Conclusions and Recommendations Section

Facility Name Revere Copper Products I

EPA I.D. No. N Y D 0 7 1 5 8 6 1 2 7

Date of Inspection 2/23/89

General Comments and Conclusions (cite appropriate State regulations in violation and attach additional sheets and other information as required)

During a recent inspection of Revere Copper Products no violations were encountered

Note: Revere Copper Products does not generate hazardous waste on a regular basis any more. There operation has been scaled down to a point that the operations that generate the wastes are now using the material instead of creating wastes. The only time when Revere Copper Products generates any waste is when the company shuts down and cleans all the equipment during a 2 month period. The only other time they generate waste is when virgin material is contaminated with foreign matter, that is not from the regular use of the material

NOT FOR RELEASE TO COMPANY, PROTECTED INFORMATION

Recommendations EPA I.D. No. NYD071586127

____ Formal confidentiality is being requested.

__X__ No follow-up necessary.

____ Do you recommend that the central office wait a maximum of two weeks for you to review supplemental documents prior to determining if a warning letter should be issued?

____ A soft warning letter should be issued.

____ A strong warning letter should be issued.

____ A complaint letter should be issued and a fine levied.

____ DO NOT PROCESS, THIS COMPANY HAS BEEN REFERRED TO THE BUREAU OF ENVIRONMENTAL CONSERVATION INVESTIGATION (BECI) ON _____ (Date).

____ Facility representative would like a copy of report (inspector submit two copies to C.O. and C.O. will send with reply)

____ Facility representative has been given a copy of report on _____ (Date) (inspector submit one copy to C.C.)

____ Other (please explain)

_____

_____

_____

_____

_____

_____

_____

_____

____ Sample(s) have been taken.

Comments on sample results: _____

_____

_____

B. Is there reason, other than those above, for you to believe that there is hazardous waste on site? (Explain) _____

No

C. What other environmental permits are held by the company, relative to hazardous waste management?

____ SPDES Permit Number ____ Air Permit Number

____ Part 364 Industrial Waste Transporter Permit (indicate this company's permit number if any)

Please describe other relavent (if any) permits and give the name, address, Part 364 Permit Number and EPA I.D. Number of transporter(s) used by company.

Clean Harbors of Kingston - MAD039322250 - MA006

Prince Trucking Corporation - NYD046765574 - 9A025

D. If the facility is a treatment, storage or disposal facility, have they:

____ Submitted a Part A application. ____ Have changes been made that are not reflected in the Part A application? Should the Part A be modified by the Company? ____ If so, explain.

Not a TSD

____ Submitted a Part B application.

____ Been granted a Part 373 permit.

If so, when does it expire: _____
Please attach or explain any special conditions or variances - 373-1.1(e) _____

Not a TSD

____ Been granted a hazardous waste Part B permit.

If so, also complete Appendix M.

E. Describe the activities that result in the generation of hazardous waste. Include the company's manufacturing processes. _____

Revere Copper Products produces Copper alloy sheets, bars and copper parts which produces the following wastes:

D001 - parts washing in dipping operation

D002 - chrome plating operation & parts cleaning

D003, D006, D007, D009 - from laboratory clean up

D008 - fumice operation; in lead dipping of copper

F. Identify the hazardous wastes that are on-site and the quantity of each (use the identification numbers referred to in Part 371). _____

No wastes on site at time of inspection

G. The handler notified EPA as a:

Generator

Has EPA or DEC officially modified the handlers status? If so, attach correspondence. _____

_____

2. Status Identification:

This handler should be inspected as a (check each appropriate category after considering exemptions)

A. ____ Transporter - complete Appendix B

B. Generator Status Identification 372.1

1. ____ Category 1 generator - small quantity generator - generates less than 100 kg/mo and stores less than 100 kg. - 372.1(e)(1)(vii)(a) Complete Part II, 1A.

2. ____ Category 2 generator - small quantity generator - generates less than 100 kg/mo and stores more than 100 kg but less than 1,000 kg. - 372.1(e)(1)(vii)(b) - Complete Part II, 1B.

When they have contaminated material

3. X Category 3 generator - small quantity generator - generates more than 100 kg/mo but less than 1,000 kg/mo and stores less than 1,000 kg. - 372.1(e)(1)(viii) - Complete Part II, 1B and 1C.

Only when they do cleaning of equipment during shutdown once a year for two months

4. X Category 5 generator - generated 1,000 kilograms or more per month or generated acute hazardous waste in quantities greater than those specified in Part 372.1(e)(1)(v). Complete Part II. Generators over sole source aquifers also complete Appendix A.

5. ____ Category 6 generator - stores 1,000 kilograms or more or stores acute hazardous waste in quantities greater than those specified in Part 372.1(e)(1)(v). Complete Part II. Generators over sole source aquifers also complete Appendix A.

C. Treatment, Storage or Disposal Facility Status

If yes, complete Appendix A and other appropriate Appendices.

1. Is hazardous waste generated and stored on-site? If so:

(a) No Has hazardous waste been stored on-site longer than 90 days? 373-1.1(d)(1)(iii)

(b) No Has more than 8,800 gallons of hazardous waste been stored in containers? 373-1.1(d)(iii)(a)

(c) No Has more than 20,000 gallons of hazardous waste been stored in tanks? 373-1.1(d)(iii)(b)

2. No Hazardous waste received from off-site and not beneficially used, reused or legitimately recycled or stored.

3. No Hazardous waste is treated on-site.

4. No Hazardous waste is disposed of on-site.

3. Exemptions

A. Generator Exemptions

(1) ____ Not a regulated handler (be sure to indicate why in Part I 1F and 1G and/or in appropriate exemption below - for example the company notified for precautionary reasons or the waste generated is not hazardous as specified in 371.1(e)(2).

(2) ____ Delisted hazardous waste. IDENTIFY the waste that was delisted: (If the company is in the delisting process they are still regulated until their delisting petition is favorably approved) Complete appropriate parts depending on company status.

_____

_____

(3) ____ Exemption for used engine lubricating oil. 372.1(e)(8) -

(4) ____ Exemption for publicly owned treatment works 372.1(e)(4).

(5) ____ Samples collected for testing. 372.1(e)(5).

(6) ____ Residues of hazardous waste in empty containers. 372.1(e)(6).

(7) ____ A hazardous waste which is generated in a product or raw material storage tank, a product or raw material transport vehicle or vessel, a product or raw material pipeline, or in a manufacturing process unit or an associated non-waste treatment manufacturing unit is not subject to regulation until it exits the unit in which it was generated, unless the unit is a surface impoundment, or unless the hazardous waste remains in the unit more than 90 days after the unit ceases to be operated for manufacturing, or for storage or transportation of product or raw materials. 372.1(e)(7).

B. TSD Exemptions

1. TSD exemptions - 373-1.1(d)(1) (for facilities and operations that manage hazardous waste other than waste oil)

(a) ____ Storage of hazardous wastes indicated in 373-1.1(d)(4) prior to its beneficial use or reuse or legitimate recycling or reclamation. 373-1.1(d)(1)(vi). If yes, complete Part II, Questions 3, 5, 6, 7.

(b) ____ Beneficial use or reuse or legitmate recycling or reclamation of a characteristic hazardous waste not identified in 373-1.1(d)(5) other than sludge. (373-1.1(d)(1)(vii)). Complete manifest questions.

(c) ____ Beneficial use or reuse or legitimate recycling or reclamation of a listed hazardous waste or hazardous waste sludge other than at commercial facilities. Units utilized for precious metal recovery at commercial facilities are exempt. Recyclable materials listed in 373-1.1(d)(5) are not exempt. Any off-site facility must have an EPA identification number. (373-1.1(d)(1)(viii)) Complete manifest questions.

(d) ____ The treatment of characteristic hazardous waste other than sludge prior to its beneficial use or reuse or legitimate recycling or reclamation. Recyclable materials listed in 373-1.1(d)(5) are not exempt. 373-1.1(d)(1)(ix). Complete manifest questions.

(e) ____ The treatment of a listed hazardous waste or hazardous waste sludge prior to its beneficial use or reuse or legitimate recycling or reclamation other than at commercial facilities. Units utilized for precious metal recovery at commercial facilities are exempt. Any off-site facility must have an EPA identification number and comply with manifesting requirements. Recyclable materials listed in 373-1.1(d)(5) are not exempt. (373-1.1(d)(1)(x))

(f) ____ Totally enclosed treatment facility (373-1.1(d)(1)(xi))

(g) ____ Elementary neutralization units or wastewater treatment units other than units located at commercial facilities. Units utilized for precious metal recovery at commercial facilities are exempt. If yes, complete Part II, 3. (373-1.1(d)(1)(xii))

(h) ____ A wastewater treatment facility holding a SPDES Permit for a surface water point source discharge that reuses spent pickle liquor or facilities that accumulate, store or physically, chemically or biologically treat spent pickle liquor prior to reuse in a wastewater treatment facility. (373-1.1(d)(1)(xvi))

2. TSD exemptions - 373.1.1 (d)(2)-(for facilities and operations that manage waste oils)

(a) ____ Storage or treatment of waste oil generated on-site prior to its beneficial use or reuse or legitimate recycling or reclamation if the waste oil is not a listed hazardous waste, and the waste oil is not a hazardous sludge. 373-1.1(d)(2)(ii). If yes, complete Part II: 3, 5, 6, 7.

(b) ____ Exemptions for storage of waste oil at an energy recovery facility prior to its on-site combustion of such waste oils are not listed hazardous wastes, waste oils are not hazardous sludges, and the facility stored less than 80,000 gallons of waste oil. 373-1.1(d)(2)(iii). If yes, complete Part II: 3, 5, 6, 7.

(c) ____ Combustion units that recover energy from waste oil, other than listed hazardous waste and sludges and the related treatment on-site of such combustion units.

3. TSD exemptions - (for facilities and operations that manage hazardous waste or waste oils).

(a) _X_ Storage of hazardous waste generated and stored on-site for 90 days or less and 8,800 gallons or less is stored in containers or 20,000 gallons or less is stored in tanks. The facility cannot be located in a geographical area overlying a sole source aquifer. If yes, complete Part II. 373-1.1(d)(1)(iii).

(b) ____ Storage or treatment of hazardous waste on-site of generation if generated and stored less than 1,000 kilograms of hazardous waste in each calendar month and do not generate or store acute hazardous waste as described in 373-1.1(d)(1)(i)(b). 373-1.1(d)(1)(v).

(c) ____ Treatment or containment activities during an immediate response 373-1.1(d)(1)(xiii).

(d) ____ Accumulation areas. If yes, complete Part II: 3C, questions 1-5. 373-1.1(d)(1)(xiv).

(e) ____ Storage of manifested shipments of hazardous waste in containers or vehicles by a transporter at its own transfer facility for 5 days or less. If yes, complete Appendix B: 3. 373-1.1(d)(1)(xv).

New York State Department of Environmental Conservation
Division of Solid and Hazardous Waste
Bureau of Hazardous Waste Operations
50 Wolf Road, Albany, New York 12233

Part II

Generator Inspection Section

Indicate:

X Violations

Indicate:

X Satisfactory
NA Not Applicable

Refer to questions based upon category checked in Part I.

1. Requirements for Category 1-3 Generators:

A. If Category 1, the generator has:

____ disposed of hazardous waste in a solid waste facility - 372.1(e)(1)((vii)(a)(2) N/A

____ made a hazardous waste determination - 372.1(e)(1)(vii)(a)(1) ✓

B. If Category 2 or 3, the generator has met the following: for general status

____ made a hazardous waste determination - 372.1(e)(1)(vii)(b)(1) X

____ disposed of in authorized hazardous waste facility - 372.1(e)(1)(vii)(b)(2) X

____ used appropriate containers; properly packaged, labeled and marked during storage and shipment - 372.1(e)(1)(vii)(b)(4) X

____ had containers and tanks stored properly; not open, not handled or stored in a way which may cause it to leak; inspected at least quarterly - 372.1(e)(1)(vii)(b)(5) NA No containers on site

____ had tanks designed, constructed and operated in accordance with regulations - 372.1(e)(1)(vii)(b)(6) No tanks

____ had tanks properly sheltered and protected-372.1(e)(1)(vii)(b)(7) No tanks

C. If Category 3 generator, has:

____ annual report prepared and sent to DEC - 372.1(e)(1)(viii)(f) X

____ obtained an EPA Identification Number - 372.1(e)(1)(viii)(b) X

Indicate:

X Violations for cleaning during shut down.

Indicate:

X Satisfactory
NA Not Applicable

For Category 5 and 6 generators complete remainder of Part II.

2. General Requirement

A. ____ The generator has made a determination as to whether or not his solid waste is a hazardous waste - 372.2(a)(2) — Y

3. On-site accumulation of hazardous waste prior to shipment

A. ____ All such wastes are shipped off-site to an authorized treatment, storage or disposal (TSD) facility in 90 days or less. 372.2(a)(8)(ii) — Y

B. ____ The date upon which each period of accumulation begins is clearly marked and visible for inspection on each container or tank 372.2(a)(8)(ii) — NA No containers on site at time of inspection

C. Standards for management of containers - 372.2(a)(8)(ii); 373-3.9
(This section will also be completed for TSD's as referred to from Appendix A.)

1. What type of containers are used for accumulation? Describe the size, type. (e.g., 12 fifty-five gallon drums of waste acetone).

No containers on site

Indicate:

X Violations

Indicate:

X Satisfactory
NA Not Applicable

2. ____ Each container is marked with the words "Hazardous Waste." 372.2(a)(8): 373-1.1(d)(1)(iii) — NA — No containers on site

3. ____ The containers appear to be in good condition and are not in danger of leaking. (If containers are leaking, describe the type, condition and number that are leaking or corroded. Be detailed and specific) - 373-3.9(b)

_____

_____

_____

4. ____ Hazardous waste is stored in containers made of compatible materials 373-3.9(c) (If not, please explain). — X

_____

_____

_____

5. ____ All containers except those in use are closed - 373-3.9(d)(1) — NA — No containers on site

6. ____ Containers holding hazardous waste must not be opened, handled or stored in a manner which may rupture the container or cause it to leak - 373-3.9(d)(2)

7. ____ The storage area is inspected at least weekly - 373-3.9(e) — NA — don't use ship wastes right away

8. The generator complies with the following special requirements related to storage of ignitable, or reactive wastes 373-3.9(f):

(a) ____ Containers holding ignitable or reactive waste are located at least 15 meters (50 feet) from the facility property line. 373-3.9(f) — X

(b) ____ Generator has taken precuations to prevent accidental ignition or reaction of ignitable or reactive waste - 373-3.2(h)(1) — X

(c) ____ Generator has placed "No Smoking" signs conspicuously wherever there is a hazard from ignitable or reactive waste - 373-3.2(h)(1) — X

Indicate:

X Violations

Indicate:

X Satisfactory
NA Not Applicable

9. The generator complies with the following special requirements related to incompatible wastes: 373-3.9(g)

(a) The storage of ignitable or reactive wastes, and the mixture or comingling of incompatible wastes, or incompatible wastes and materials, is conducted to prevent - 373-3.2(h)(2)

(1) ___ the generation of extreme heat or pressure, fire or explosion, or violent reaction - 373-3.2(h)(2)(i) X

(2) ___ production of uncontrolled toxic mists, fumes, dusts or gases in sufficient quantities to threaten human health - 373-3.2(h)(2)(ii) X

(3) ___ production of uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions - 373-3.2(h)(2)(iii) X

(4) ___ the damage to the structural integrity of the device or facility containing the waste - 373-3.2(h)(2)(iv) X

(5) ___ a threat to human health or the environment - 373-3.2(h)(2)(v) X

(b) ___ Hazardous waste must not be placed in an unwashed container that previously held an incompatible waste or material. 373-3.9(g)(2) X

(c) ___ Hazardous waste in containers stored nearby incompatible waste or material is separated by the incompatible waste by a dike, berm, wall or other device. 373-3.9(g)(3). NA

D. Standards for management of tanks - 372.2(a)(8)(ii); 373-3.10

1. What are the approximate number and size of tanks containing hazardous waste?

No tanks

2. Identify the waste treated/stored in each tank. Include whether they are above or below ground.

No tanks

3. ___ Each tank is marked with the words "Hazardous Waste" NA

Indicate:

X Violations

Indicate:

X Satisfactory
NA Not Applicable

No tanks

Tank General Operating Requirements - 373-3.10(b)

4. ____ Hazardous wastes or treatment reagents are not placed in a tank, if they could cause the tank or its inner liner to rupture, leak, corrode, or otherwise fail before the end of its intended life - 373-3.10(b)(2). If so, please explain. NA

5. ____ Uncovered tanks have at least 60 centimeters (2 feet) of freeboard or an adequate containment structure - 373-3.10(b)(3)

6. ____ Where waste is continuously fed into a tank, the tank must be equipped with a means to stop the inflow (e.g., bypass system to a standby tank or a waste feed cutoff system) - 373-3.10(b)(4)

Tank Waste Analysis - 373-3.10(c)

7. ____ There is a waste analysis plan if tank is to be used to chemically treat or store a hazardous waste substantially different from the previous waste, or if a different process is used from the previous process. (Complete Appendix A, Number 4).

Tank Inspections - 373-3.10(d)

8. Tank(s) are inspected each operating day for:

   (A) ____ discharge control equipment (e.g., waste feed cutoff systems, bypass systems and drainage systems) - 373-3.10(d)(1)(i)

   (B) ____ monitoring equipment (e.g., pressure and temperature gauges) - 373-3.10(d)(1)(ii)

   (C) ____ level of waste in tank to ensure proper freeboard - 373-3.10(d)(1)(iii)

9. Tank(s) are inspected weekly for:

   (A) ____ Corrosion or leaking of fixtures or seams - 373-3.10(d)(iv)

   (B) ____ Erosion or obvious signs of leakage (e.g., wet spots or dead vegetation) of the construction materials of, and the area immediately surrounding discharge confinement structures (e.g., dikes). 373-3.10(d)(v)

Include:

X Violations

X Satisfactory
NA Not Applicable

No tanks

Ignitable or reactive wastes - 373-3.10(f)

10. ____ Ignitable or reactive waste is placed in a tank and the waste is stored, treated, rendered or mixed before or immediately after placement in the tank so that the resulting wastes, mixture or dissolution of material is no longer ignitable or reactive. NA

11. ____ Ignitable and reactive waste is stored in a tank and the tank is used solely for emergencies.

12. ____ Storage of ignitable or reactive waste in covered tanks complies with the National Fire Protection Association's (NFPA's) buffer zone requirements for tanks, contained in Tables 2-1 thru 2-6 of the "Flammable and Combustible Liquids Code, 1981."

Incompatible Wastes - 373-3.10(g)

13. ____ Incompatible wastes, or incompatible wastes and materials must not be placed in the same tank unless 373-3.2(h)(2) is complied with. 373-3.10(g)(1)

14. ____ Incompatible wastes must not be placed in an unwashed tank which previously held an incompatible waste or material unless 373-3.2(h)(2) is complied with. 373-3.10(g)(2)

Special Requirements in sole source aquifer areas - 373-3.10(h)

15. ____ The base underlying the tank is free of cracks and is sufficiently impervious to contain leaks.

16. ____ The base is designed to drain or the tank is elevated to prevent contact with accumulated liquids.

17. ____ Containment system can contain at least 110 percent of tank volume.

18. ____ Run-on into containment system is prevented or designed for.

19. ____ Leaked waste or accumulated precipitation is timely removed to prevent possible overflow.

Indicate:

X Violations

Indicate:

X Satisfactory
NA Not Applicable

4. Manifest Records and Reporting

A. ___ It appears, from the available information, that there is a manifest copy available for each hazardous waste shipment off-site that has been made - 372.2(b)(5)(i). X

If "violation" checked or "don't know," please elaborate.

B. Describe the approximate size of an average shipment made and how many shipments per month? ___

Wastes are shipped during two month period during plant shutdown & cleaning appros. 13000 lb/month and when material is accidently contaminated.

C. Each manifest (a representative sample) has the following information: - 372.2(b)(1); Appendix 30

	Generator	Transporter 1	Transporter 2	TSDF	
1. ___ Name of	___	___	___	___	X
2. ___ EPA ID No. of	___	___	___	___	X
3. ___ Mailing Address of	___	___	___	___	X
4. ___ Telephone No. of	___	___	___	___	X
5. ___ Manifest Document No.	___	___	___	___	X
6. ___ The proper USDOT description.					X
7. ___ The appropriate ___ quantity, ___ container no. ___ container type, and ___ waste type by units of weight or volume.					
8. ___ Signed certification that the materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation under regulations of the USDOT and NYSDEC - 372.2(a)(4) and 372.2(a)(5) and 372.2(a)(6).					X
9. ___ Signed copies of the manifest records have been retained at the facility for at least three years - 372.2(c)(1)(i)					X

Indicate:

X Violations

Indicate:

X Satisfactory
NA Not Applicable

D. ____ There is written communication that the designated treatment, storage or disposal facility is an authorized treatment, storage or disposal facility for the particular wastes being offered for shipment and has capacity to accept the hazardous waste set forth on the manifest and will assure the ultimate disposal method is followed. 372.2(b)(2)(i) — X

E. ____ The generator must distribute copies of the manifest as specified on the manifest form - 372.2(b)(3) — X

F. International shipments - 372.5

(1) ___ EPA has been notified four weeks prior to shipment of hazardous waste destined for treatment, storage or disposal outside the United States - 372.5(b)(1) — NA

(2) ___ Delivery of the wastes has been confirmed within 90 days of acceptance of initial transporter - 372.5(b)(2)

(3) ___ The generator has identified the point of departure from the United States through which the waste must travel before entering a foreign country - 372.5(b)(3)(ii)

G. ___ Has complied with interstate shipments - 372.6 — X

H. ___ Has complied with shipments by rail or water (bulk) - 372.7 — NA

I. ____ Copies of all records have been kept for at least three years (e.g., annual reports, manifests, exception reports, sampling data) - 372.2(c)(1)(i), (ii), and (iii). — X

J. ____ All records required under this subdivision were furnished upon request, or made available at a reasonable time for inspection - 372.2(c)(1)(iv) — X

K. ____ The generator has received signed copies (from the TSD facility) of all manifests for wastes shipped off-site more than 20 days ago: — X

____ If not, exception reports have been submitted covering these shipments - 372.2(c)(3) — N/A

L. ____ A generator annual report has been prepared and sent to the department. 372.2(c)(2) — X

Indicate:

X Violations

Indicate:

X Satisfactory
NA Not Applicable

5. Personnel Training - 372.2(a)(8)(ii) and 373-3.2(g)

A. There is a:

___ written description of the job title for each position at the facility related to hazardous waste management and name of the employee filling each job - 373-3.2(g)(4)(i) X

___ written job description for each position 373-3.2(g)(4)(ii) X

___ written description of the type and amount of both introductory and continuing training that will be given to each person related to hazardous waste management - 373-3.2(g)(4)(iii) X

___ Records that document the training or job experience required 373-3.2(g)(4)(iv) has been given to and completed by facility personnel. X

B. ___ The training program is directed by a person trained in hazardous waste management procedures and must include instruction which teaches facility personnel hazardous waste management procedures (including contingency plan implementation) relevant to the positions in which they are employed. 373-3.2(g)(1)(i),(ii) and (iii). The components are: X

(1) ___ Procedures for using, inspecting, repairing and replacing facility emergency and monitoring equipment; X

(2) ___ Key perameters for automated waste feed cutoff systems; X

(3) ___ Communications or alarm systems; X

(4) ___ Response to fires and explosions; X

(5) ___ Response to groundwater contamination incidents; and X

(6) ___ Shutdown of operations. X

C. ___ Facility personnel have successfully completed the program by the effective date of these regulations or six months after the date of their employment. 373-3.2(g)(2) X

D. ___ Facility personnel have taken part in an annual review of the initial training required. 373-3.2(g)(3) X

Indicate:

X Violations

Indicate:

X Satisfactory
NA Not Applicable

E. ____ Training records on current personnel have been kept permanently at the facility (until closure). 373-3.2(g)(5) — X

F. ____ Training records on former employees have been kept for at least three years from the date the employee last worked at a facility. 373-3.2(g)(5) — X

6. Preparedness and Prevention - 372.2(a)(8)(ii); 373-3.3

A. ____ The facility is maintained and operated to minimize the possibility of a fire or explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil or surface water - 373-3.3(b) — X

B. The facility must be equipped with the following (Check missing equipment if needed in this facility's particular operations.) - 373-3.3(c)

(1) ____ An internal communication or alarm system capable of providing immediate emergency instruction (voice or signal) to facility personnel; — X

(2) ____ A device, such as a telephone or a hand-held, two-way radio capable of summoning emergency assistance from local police departments, fire departments or state or local emergency response teams; — X

(3) ____ Portable fire extinguishers, fire control equipment. — X

(4) ____ Water at adequate volume and pressure to supply water hose streams, or foam-producing equipment, or automatic sprinklers, or water spray systems. — X

C. ____ Facility communications or alarm systems, fire protection equipment, and spill control equipment are tested and maintained as necessary to assure their proper operation in time of emergency - 373-3.3(d) — X

D. ____ Personnel involved in hazardous waste operations have immediate access to an internal alarm or emergency communication device 373-3.3(e) — X

E. ____ The facility has the required aisle space - 373-3.3(f) (Inspections should be able to be made of each drum and space should be sufficient to fight a fire). — NA No containers on site

Indicate:

X Violations

Indicate:

X Satisfactory
NA Not Applicable

F. The facility owner or operator has made an attempt in good faith to make the following arrangements with local authorities, as appropriate for the type of waste handled at the facility and the potential need for the services of these organizations - 373-3.3(g)(1):

(1) ___ Arrangements to familiarize police, fire departments and emergency response teams with the functions and layout of the facility; X

(2) ___ Where more than one police and fire department might respond to an emergency, an agreement designating primary emergency authority to a specific police and a specific fire department, and agreements with any others to provide support to primary emergency authority; NA only Remc

(3) ___ Agreements with government emergency response teams, emergency response contractors, and equipment suppliers; NA

(4) ___ Arrangements to familiarize local hospitals with the properties of hazardous waste handled at the facility and the types of injuries or illness which could result from fires, explosions or releases at the facility; and X

(5) ___ Where state or local authorities decline to enter into such arrangements, the owner or operator has documented the refusal in the operating record. NA

7. Contingency Plan and Emergency Procedures - 372.2(a)(8)(ii); 373-3.4

A. ___ The facility has a contingency plan or some other emergency plan which incorporates hazardous waste management. X

B. The following are included in the contingency plan - 373-3.4(c)

(1) ___ A description of actions facility personnel must take in response to fires, explosions or any unplanned sudden or non-sudden releases of hazardous waste or hazardous waste constituents to air, soil or surface water; X

Indicate:

X Violations

Indicate:

X Satisfactory
NA Not Applicable

(2) ___ A description of arrangements agreed to by local police departments, fire departments, hospitals, contractors, and state and local emergency response teams to coordinate emergency services; — X

(3) ___ Names, addresses and phone numbers of all persons qualified to act as emergency coordinator; — X

(4) ___ A list of all emergency equipment at the facility, and decontamination equipment, where this equipment is required; — X

(5) ___ The location and the physical description of each item on the list, and a brief outline of its capabilities; — X

(6) ___ An evacuation plan for facility personnel, where there is a possibility that evacuation could be necessary. — X

C. ___ Copies of the contingency plan are maintained at the facility - 373-3.4(d)(1) — X

D. ___ Copies of the contingency plan have been submitted to all local police departments, fire departments, hospitals, and state and local emergency response teams that may be called upon to provide emergency services - 373-3.4(d)(2) — X

E. ___ The contingency plan has been amended - 373-3.4(e) — NA No changes required

F. ___ There was at least one employee either on the facility premises or on call with the responsibility for coordinating all emergency response measures - 373-3.4(f) — X

G. ___ During a past emergency situation the emergency coordinator (or his designee when the emergency coordinator is not on call) immediately activated emergency procedures - 373-3.4(g) — NA No emergency

The following was done:

(1) ___ Activated internal facility alarms or communication systems; —

(2) ___ Notified appropriate state or local agencies; —

(3) ___ Immediately identified the character, extent, exact source, amount and areal extent of any released materials; —

(4) ___ The emergency coordinator assessed possible hazardous to human health and the environment; —

Indicate:

X Violations

Indicate:

X Satisfactory
NA Not Applicable

No emergency

(5) ___ The emergency coordinator, after determining that the facility had a release, fire or explosion which could threaten human health or the environment outside the facility, reported his findings; NA

(6) ___ During the emergency, the emergency coordinator took all reasonable measures necessary to ensure that fire, explosions and releases do not occur, recur or spread to other hazardous waste;

(7) ___ The emergency coordinator monitored for leaks, pressure buildup, gas generation or ruptures in valves, pipes or other equipment, where appropriate during the facility's response to the emergency;

(8) ___ The emergency coordinator provided for treating, storing or disposing of recovered waste, contaminated soil or surface water, or any other material that resulted from a release, fire or explosion at the facility;

(9) ___ The emergency coordinator ensured that in the affected area no waste that may be incompatible with the released material was treated, stored or disposed of prior to cleanup procedures being completed;

(10) ___ The emergency coordinator ensured that all emergency equipment listed in the contingency plan was cleaned and fitted for its intended use before operations were resumed;

(11) ___ The owner or operator notified the Commissioner that the facility is in compliance with Part 373-3.4(g)(8) before operations were resumed in the affected areas of the facility;

(12) ___ The owner or operator noted in the operating record the time, date and details of the incident that required implementation of the contingency plan;

(13) ___ The owner or operator submitted a complete written report on the incident within 15 days after the incident occurred.

REFERENCE NO. 19

New York State Department of Environmental Conservation
Division of Regulatory Affairs
207 Genesee Street
Utica, New York 13501-2885
(315) 793-2555

REF 6

Henry G. Williams
Commissioner

May 9, 1985

Ms. Diane M. Werneiwski
Staff Geologist
RECRA Research, Inc.
4248 Ridge Lee Road
Amherst, New York 14226

Re: General Project Review

Dear Ms. Werneiwski:

Per your April 30, 1985 correspondence, I submit the following information about the four sites in question:

Regulated Freshwater Wetlands

1) Bendix Fluid Power Division - None in close proximity (less than one mile).

2) Chicago Pneumatic Tool Company - D.E.C. regulated wetland UE-12 is associated with the Mohawk River and is located approximately 2,500' from the company (see attached map).

3) Hiteman Leather - There are no D.E.C. regulated wetlands in close proximity to this site. There is a wetland directly west of the company, but it is not large enough (12.4 acres or larger) to be regulated.

4) Revere Copper - D.E.C. regulated wetland RO-9 is approximately 2,000' southeast of the company (see attached map).

Floodplain

Attached please find copies for the above sites of the National Flood Hazard Area Maps, with the 100-year floodway shown in gray.

Endangered Species

The U. S. Fish and Wildlife Service in Cortland, New York may be able to provide information in this regard. The D.E.C. Region 6 Division of Fish and Wildlife in Watertown may also have information in this regard. Mr. Lee Chamberlaine, phone 315-785-2269, is a contact.

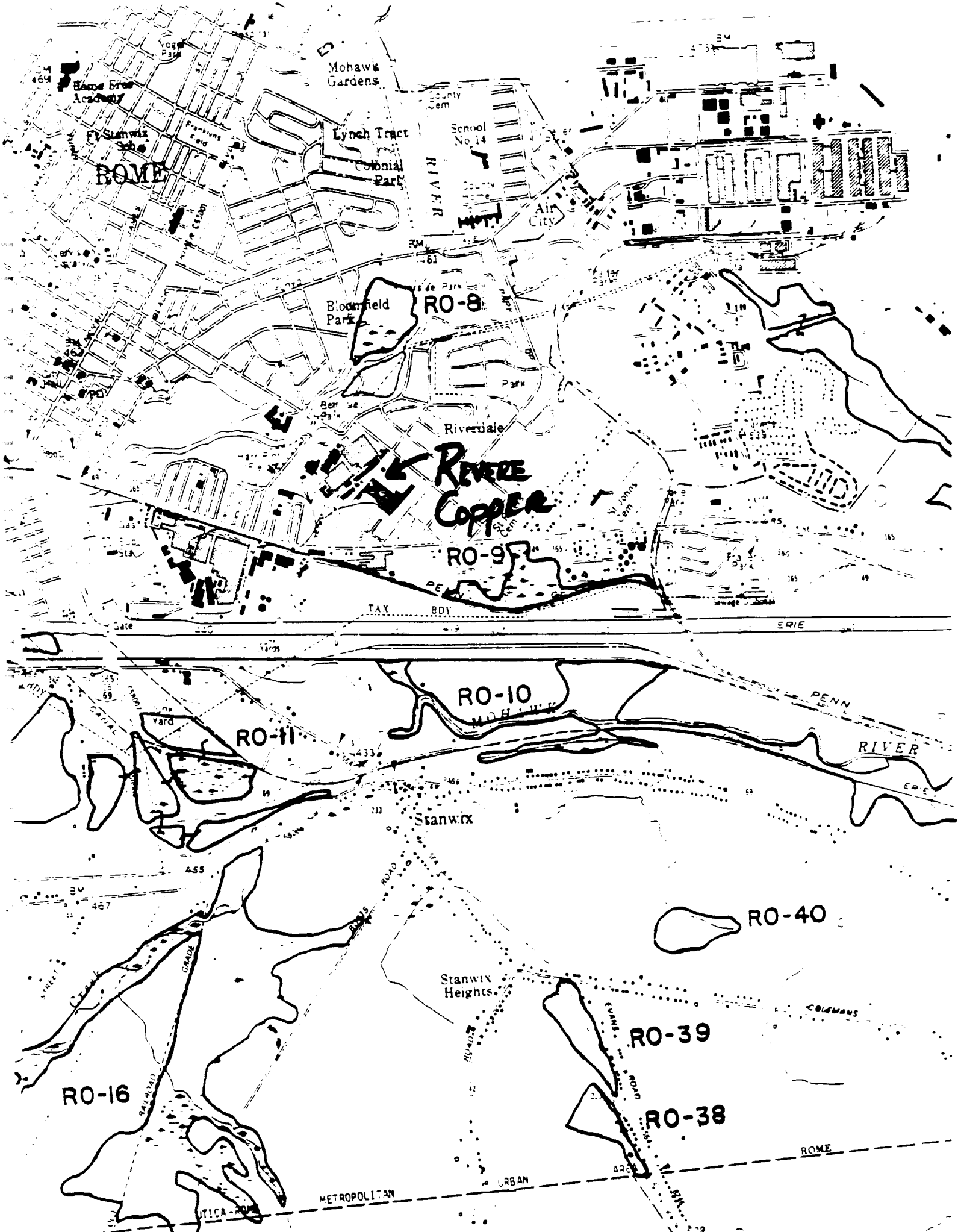
I hope I have been of assistance.

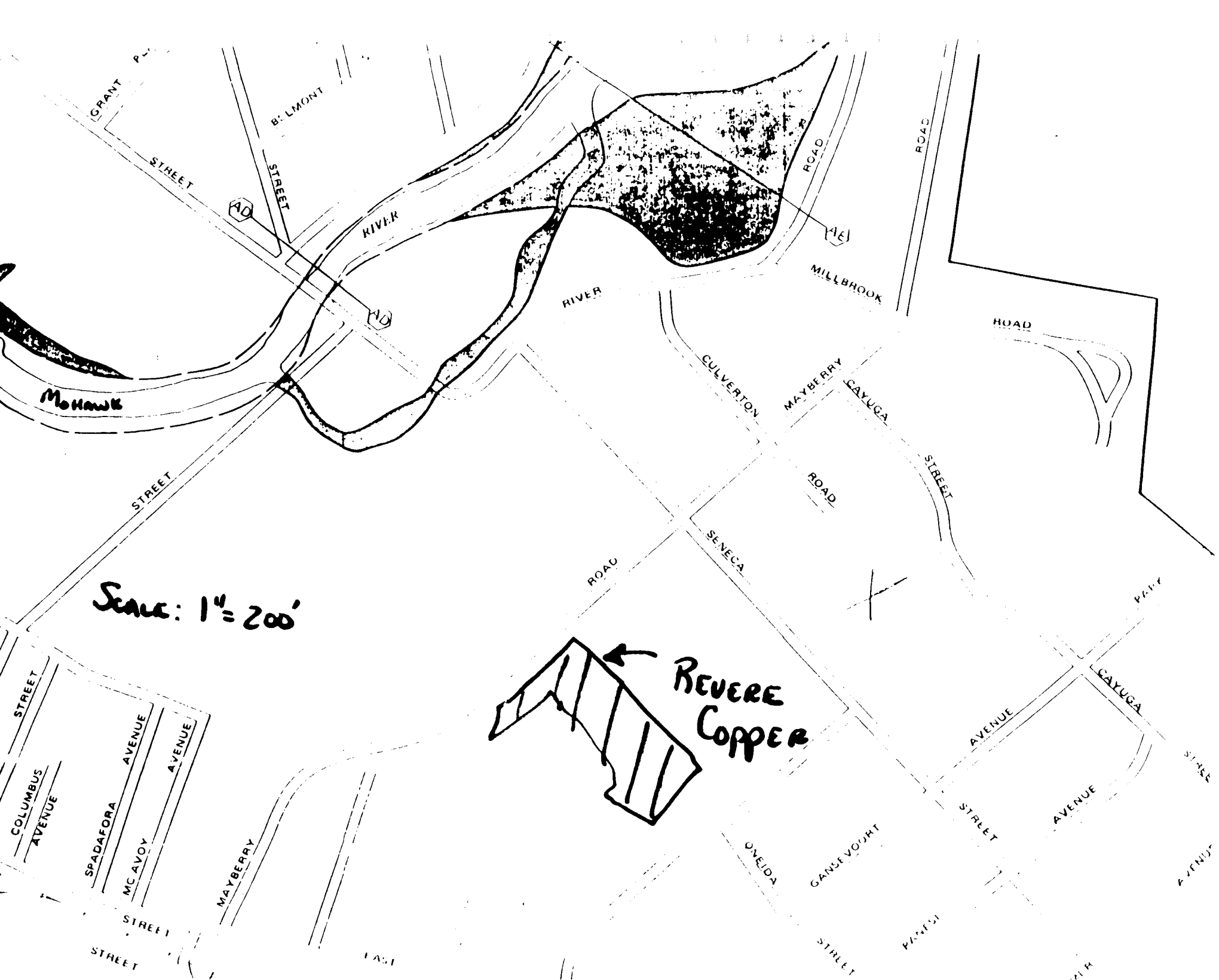
Sincerely,

John F. Sandwick, Jr.
Environmental Analyst
Region 6 - Utica

JFS:blc
cc: Mr. C. Randy Vaas

Attachments


ROME
Mohawk Gardens
Lynch Tract
Colonial Park
School No. 14
RIVER
Air City
Bloomfield Park
RO-8
Riverdale
REVERE COPPER
RO-9
TAX BDY
ERIE
RO-10
MOHAWK
PENN
RIVER
RO-11
Yard
Stanwix
RO-40
Stanwix Heights
COLEMANS
RO-39
RO-38
RO-16
ROME
URBAN
METROPOLITAN
UTICA-ROME


GRANT
BELMONT
STREET
STREET
AD
RIVER
AE
ROAD
ROAD
MILLBROOK
RIVER
AD
MOHAWK
CULVERTON
MAYBERRY
CAYUGA
ROAD
STREET
STREET
ROAD
SENECA
ROAD
SCALE: 1" = 200'
REVERE COPPER
STREET
COLUMBUS
AVENUE
SPADAFORA
AVENUE
MCAVOY
AVENUE
MAYBERRY
CAYUGA
AVENUE
STREET
AVENUE
ONEIDA
GANSEVOORT
STREET
STREET
STREET

REFERENCE NO. 20

REF 14

New York State Department of Environmental Conservation
Wildlife Resources Center
Delmar, New York 12054

Henry G. Williams
Commissioner

May 30, 1985

Ms. Venessa Devillez
RECRA Research, Inc.
4248 Ridge Lea Road
Amherst, New York 14226

Dear Ms. Devillez:

Enclosed is the significant habitat report you requested concerning the Revere Copper Landfill site near Rome, New York.

If you have any questions concerning this report please let us know.

In addition, you may wish to contact John Page, Senior Wildlife Biologist, in our Utica sub-office (315) 793-2554 for any concerns he may have.

Sincerely,

John W. Ozard
Significant Habitat Unit

JWO:t
cc: J. Page

this report to: Eric Fried, Wildlife Resources Center, Delmar, New York 12054

SIGNIFICANT HABITAT REPORT

33-112

* * *

Name of area: Verona Mills Wetland

Location of area:

a) Distance and direction from known location (e.g., "one-half mile northwest of Centertown"): SEE ATTACHED MAP

b) County and town: ONEIDA Co., Town of ROME

NOTE: If possible, attach map (e.g., USGS 7½' topographic quad) showing location of area

Approximate size, if known: 900 acres

Reason for considering significant: Area very important to dear wintering this portion of the state. Shelter and good winter browse available, if the area is large enough and mixed to the point where a different atmosphere exists. These conditions, all essential to winter survival would be difficult if not impossible to find in rural area.

Other information about area (e.g., vegetation, water chemistry, soils, ownership, vulnerability, recommended action), if known: white cedar, hemlock, white pine, young balsam are common softwood species. Red maple predominate hardwood, all other common species occur. Wet meadow.

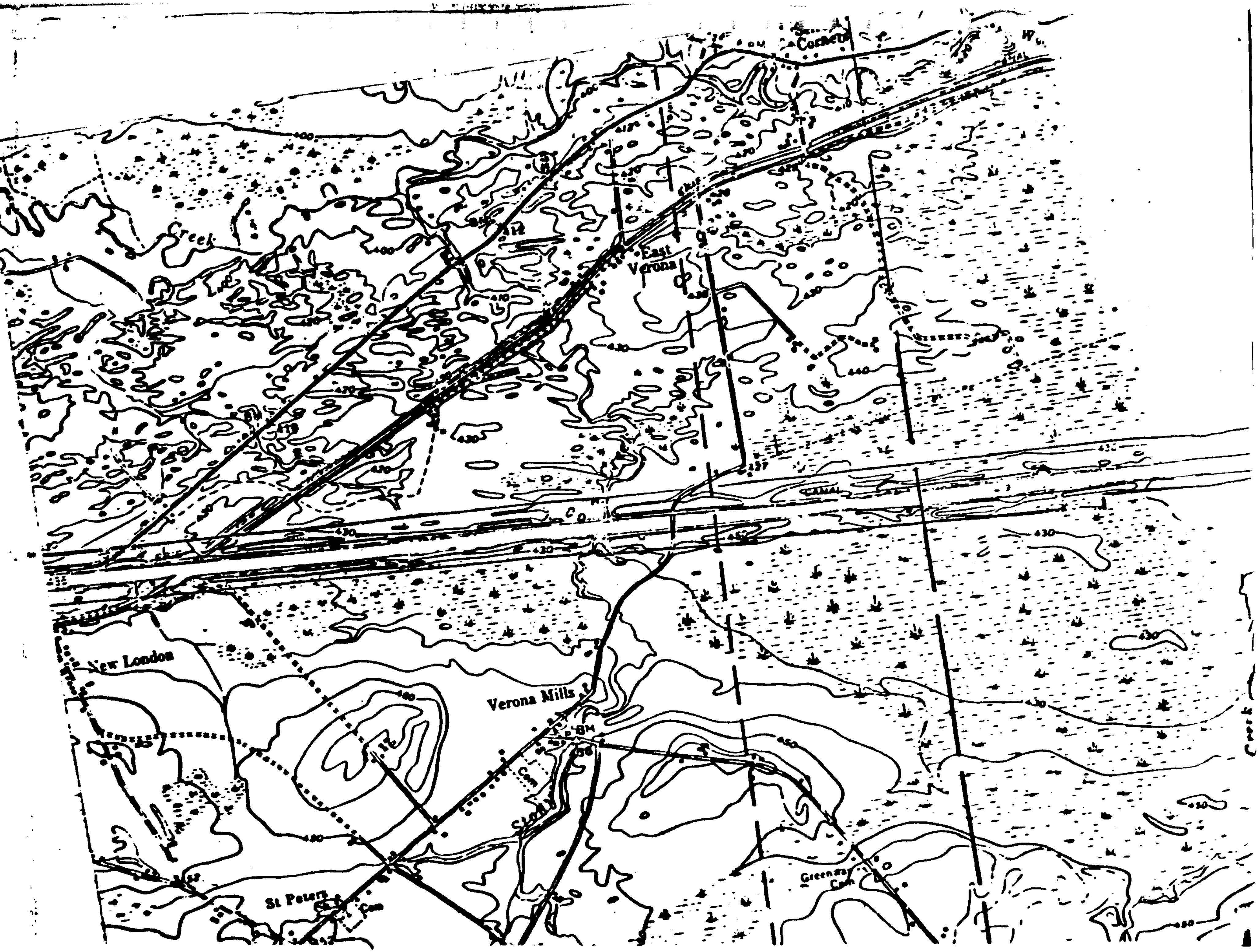
More information on this area is available from the following source(s):

Date of Report: 6/13/78

Submitted by: M. Myers

Affiliation: N.Y.S.D.E.C. - Utica Office, Bur. Wildlife - J. Page

-Use reverse side for continuations, if needed-
-If available, enclose other material on this area -



East Verona
Verona Mills
New London
St Peters
Creek
CANAL

REFERENCE NO. 21

NUS CORPORATION AND SUBSIDIARIES — **TELECON NOTE**

CONTROL NO:	DATE:	TIME:
02-9010-07 NYNZPA	February 21, 1991	0855

DISTRIBUTION:
General Electric (Liverpool)

BETWEEN:	OF:	PHONE:
Mr. Mark Richardson	Environmental Conservation Office	(315) 426-7400

AND:
Susan Lencyzk

DISCUSSION:

I asked Mr. Richardson whether the following bodies of water are used for fishing:

Seneca River - Erie Canal	Fish Creek
Oswego River - Oswego Canal	Bupton Creek
Oneida River	Mud Creek
Caughdenoy Creek	Shaver Creek
Crippen Creek	Youngs Creek
Bell Creek	Black Creek
Sixmile Creek	Pleasant Lake
Three Rivers State Game Management Area	

He said that he was not familiar with Mud Creek, Shaver Creek, Youngs Creek, or Bupton Creek. Crippen Creek is used for fishing where it runs into ~~the~~ al Caughdenoy Creek. Pleasant Lake in Oswego County is private, but it is used for fishing. There is restricted fishing in the Three Rivers State Game Management area. All other bodies of water listed above are used for fishing.

ACTION ITEMS:

I asked about flow rates. He did not have that information, but he suggested I call the Fisheries Office in Cortland (607-753-3095) or the Department of Transportation, who should have that info for the larger rivers.

Sue Lencyzk 2/21/91

REFERENCE NO. 22

NUS CORPORATION AND SUBSIDIARIES — **TELECON NOTE**

CONTROL NO:	DATE:	TIME:
02-9007-01	3/14/91	

DISTRIBUTION: Niagara Mohawk / Gas Reg Station (NM/GRS)

BETWEEN:	OF:	PHONE:
Jack Hassé	NYSDEC Fish & Wildlife	(315) 793-2554

AND: M. Gallagher (NUS)

DISCUSSION:

Called to verify earlier ~~comments~~ regarding fishing in Mohawk River.

Mr. Hassé said boat fishing in the area is not common, but people regularly fish off of the closed Whitesboro St. Bridge & from the rivers edge. He also stated that fish are not thrown back, but are carried away, which indicates that these fish are kept for consumption.

3/14/91

ACTION ITEMS:

REFERENCE NO. 23

MITRE

26 May 1988
W52-219

Ms. Lucy Sibold
U.S. Environmental Protection Agency
401 M Street, S.W.
Room 2636, Mail Code WH-548A
Washington, D.C. 20460

Dear Ms. Sibold:

Enclosed is a copy of the draft revised HRS net precipitation values for 3,345 weather stations where data were available. The data are presented by state code, station name, latitude, longitude, and net precipitation in inches. A list of state codes is also enclosed.

The net precipitation values are provided to assist the Phase II - Field Testing efforts. It is suggested that the value from the nearest weather station in a similar geographic setting be used as the net precipitation value for a site.

If there are any questions regarding this material, please contact Dave Egan at (703) 883-7866.

Sincerely,

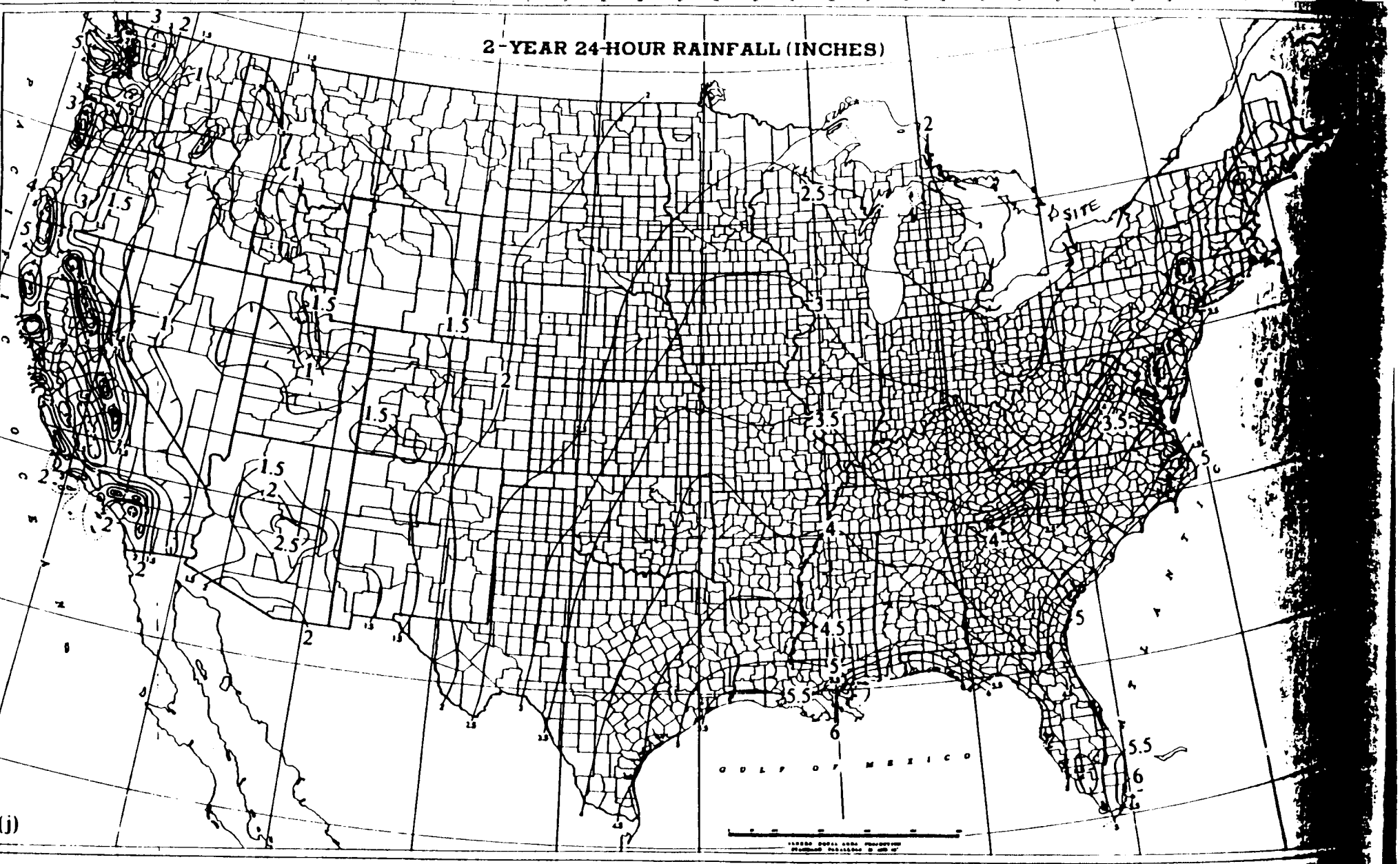
Andrew M. Platt
Group Leader
Hazardous Waste Systems

AMP:DEE/hme

Enclosures

cc: Scott Parrish

OBS	STATE	NAME		LATNUM	LONNUM	NETPREC
1926	30	CORTLAND		42.36	76.11	20.7838
1927	30	PENN YAN 2 SW		42.39	77.05	12.5077
1928	30	COOPERSTOWN		42.42	74.55	18.8574
1929	30	MOUNT MORRIS 2 W		42.44	77.54	10.4639
1930	30	ALBANY WSO	R	42.45	73.48	15.9544
1931	30	GRAFTON		42.47	73.28	22.0022
1932	30	HEMLOCK		42.47	77.37	11.9324
1933	30	CHERRY VALLEY 2 NNE		42.49	74.44	20.2273
1934	30	CANANDAIGUA 3 S		42.51	77.17	12.7669
1935	30	GENEVA RESEARCH FARM		42.53	77.02	13.9284
1936	30	BUFFALO WSO	//R	42.56	78.44	17.7174
1937	30	BATAVIA		43.00	78.11	13.6542
1938	30	GLOVERSVILLE		43.02	74.21	21.0367
1939	30	LITTLE FALLS CITY RES		43.04	74.52	20.7002
1940	30	SYRACUSE WSO	R	43.07	76.07	17.6763
1941	30	ROCHESTER WSO	//R	43.07	77.40	13.6956
1942	30	UTICA FAA AP		43.09	75.23	22.2934
1943	30	SALEM		43.10	73.19	18.9243
1944	30	LOCKPORT 2 NE		43.11	78.39	16.1722
1945	30	SODUS CENTER	//	43.12	77.01	16.8156
1946	30	BROCKPORT 2 NW		43.15	77.58	11.2999
1947	30	GLENS FALLS FAA AP		43.21	73.37	16.5423
1948	30	BOONVILLE 2 SSW		43.27	75.21	36.1207
1949	30	OSWEGO EAST	//	43.28	76.30	20.3430
1950	30	WHITEHALL		43.33	73.24	16.8594
1951	30	INDIAN LAKE 2 SW		43.45	74.17	21.2865
1952	30	LOWVILLE		43.48	75.30	20.7264
1953	30	STILLWATER RESERVOIR		43.53	75.02	25.4735
1954	30	WATERTOWN		43.58	75.52	20.9289
1955	30	WANAKENA RANGER SCHOOL	//	44.09	74.54	21.7079
1956	30	ELIZABETHTOWN		44.13	73.35	15.8559
1957	30	TUPPER LAKE SUNMOUNT		44.14	74.26	18.9485
1958	30	LAKE PLACID CLUB		44.17	73.59	19.0324
1959	30	GOUVERNEUR		44.20	75.29	18.7478
1960	30	PERU 2 WSW		44.34	73.34	11.4853
1961	30	CANTON 4 SE		44.34	75.07	16.1006
1962	30	DANNEMORA		44.43	73.43	13.9140
1963	30	OGDENSBURG 3 NE		44.44	75.27	14.0445
1964	30	CHASM FALLS		44.45	74.13	19.9423
1965	30	LAWRENCEVILLE		44.45	74.39	13.3298
1966	30	CHAZY		44.53	73.26	14.3031
1967	30	MASSENA FAA AP		44.56	74.51	15.1585
1968	31	SOUTHPORT 5 N		34.00	78.01	20.0467
1969	31	WILMINGTON WSO	R	34.16	77.54	17.0337
1970	31	WILLARD 4 SW		34.39	78.02	18.0505
1971	31	LUMBERTON 6 NW		34.42	79.04	14.5491
1972	31	MOREHEAD CITY 2 WNW		34.44	76.44	17.6482
1973	31	SLOAN 3 S		34.47	77.49	20.0112
1974	31	LAURINBURG		34.47	79.27	15.5062
1975	31	MAYSVILLE 6 SW		34.50	77.18	22.4726
1976	31	HAMLET		34.54	79.42	17.2670
1977	31	WADESBORO		34.57	80.04	16.8853
1978	31	MONROE 4 SE		34.58	80.30	17.2467
1979	31	HIGHLANDS 2 S		35.01	83.12	54.9816
1980	31	COWEETA EXP STATION		35.02	83.26	45.1349



(j)

REFERENCE NO. 24

NUS CORPORATION AND SUBSIDIARIES — TELECON NOTE

CONTROL NO:	DATE:	TIME:
02-9007-01	3/4/91	1510

DISTRIBUTION: Niagara Mohawk / Gas Reg Sta (NM/GRS)

BETWEEN:	OF:	PHONE:
Jim Kauffman	NYSDOT / Waterways	(315) 793-2443

AND: M. Gallagher (NUS)

DISCUSSION:

Re: Flow in Mohawk River & Erie Canal

Flow in Mohawk River is regulated at the Delta Reservior (upstream of site), and is maintained at a minimum of 150 cfs during water ~~or~~ shortages, but may increase to >4000 cfs ~~under~~ during overflow conditions at the reservior. Flow values are measured at the reservior; they do not include additional SW runoff into the river.

There is no "real" flow in the Erie Canal

He doesn't know about flow in the Mohawk River below the Erie Canal. Water spills over from the canal to the river, or is drained, but he does not know to what extent

ACTION ITEMS:

3/5/91

REFERENCE NO. 25

NUS CORPORATION AND SUBSIDIARIES — **TELECON NOTE**

CONTROL NO:	DATE:	TIME:
02-9007-01	3/5/91	0920

DISTRIBUTION: Niagara Mohawk/Gas Reg Sta. (NM/GRS)

Pg 1 of 2

BETWEEN:	OF:	PHONE:
Carl Quance	NYS DEC/Utica ~~Fish & Wildlife~~ Flood plains	(315) 793-2554/5

AND: M. Gallagher (NUS)

DISCUSSION:

Re: Mohawk River Flow data near Utica & location of Intakes (Mohawk River Study)

Only aware of discharge points to the Mohawk & Erie Canal (WW Trmt Plant, etc.)

All Rome-Utica drinking water is from surface water sources (Rome - E Fish Creek; Utica - Nine Mile Creek & Black River Feeder Canal (Marcy & Utica ~~Reservoirs~~)

Swimming in Oriskany Flats Area

No other uses of ~~the~~ Mohawk River

~~ACTION ITEMS~~: Only intake is for WW Trmt. Plant

REFERENCE NO. 26

NUS CORPORATION AND SUBSIDIARIES — **TELECON NOTE**

20

CONTROL NO:	DATE:	TIME:
02-9007-01	3/6/91	0930

DISTRIBUTION: Niagara Mohawk / Gas Reg Sta

BETWEEN:	OF:	PHONE:
George Sisly	City of Rome Water Shop Superintendent	(315) 339-7621

AND: M. Gallagher (WDS)

DISCUSSION:

Re: Extent of city of Rome water distribution system

He said new hookups have effectively put everyone on city water. Approximately 6-10 homes east of the prison along Landfare Rd may be on private wells.

Everyone north of the Erie Canal is on city water, also 4 miles of Kingsley Ave.

He doubts any wells are used for irrigation. Natural precipitation is

ACTION ITEMS:

sufficient

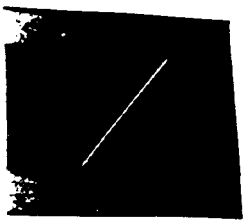
REFERENCE NO. 27

KEY TO MAP

500-Year Flood Boundary

100-Year Flood Boundary

Zone Designations*



100-Year Flood Boundary

500-Year Flood Boundary

Base Flood Elevation Line With Elevation In Feet** — 513

Base Flood Elevation in Feet Where Uniform Within Zone** (EL 987)

Elevation Reference Mark RM7x

Zone D Boundary

River Mile •M1.5

**Referenced to the National Geodetic Vertical Datum of 1929

*EXPLANATION OF ZONE DESIGNATIONS

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
A0	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

NOTES TO USER

Certain areas not in the special flood hazard areas (zones A and V) may be protected by flood control structures.

This map is for flood insurance purposes only; it does not necessarily show all areas subject to flooding in the community or all planimetric features outside special flood hazard areas.

For adjoining map panels, see separately printed Index To Map Panels.

INITIAL IDENTIFICATION:

AUGUST 30, 1974

FLOOD HAZARD BOUNDARY MAP REVISIONS:

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

CITY OF ROME, NEW YORK ONEIDA COUNTY

PANEL 21 OF 30

(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER

360542 0021 B

EFFECTIVE DATE:

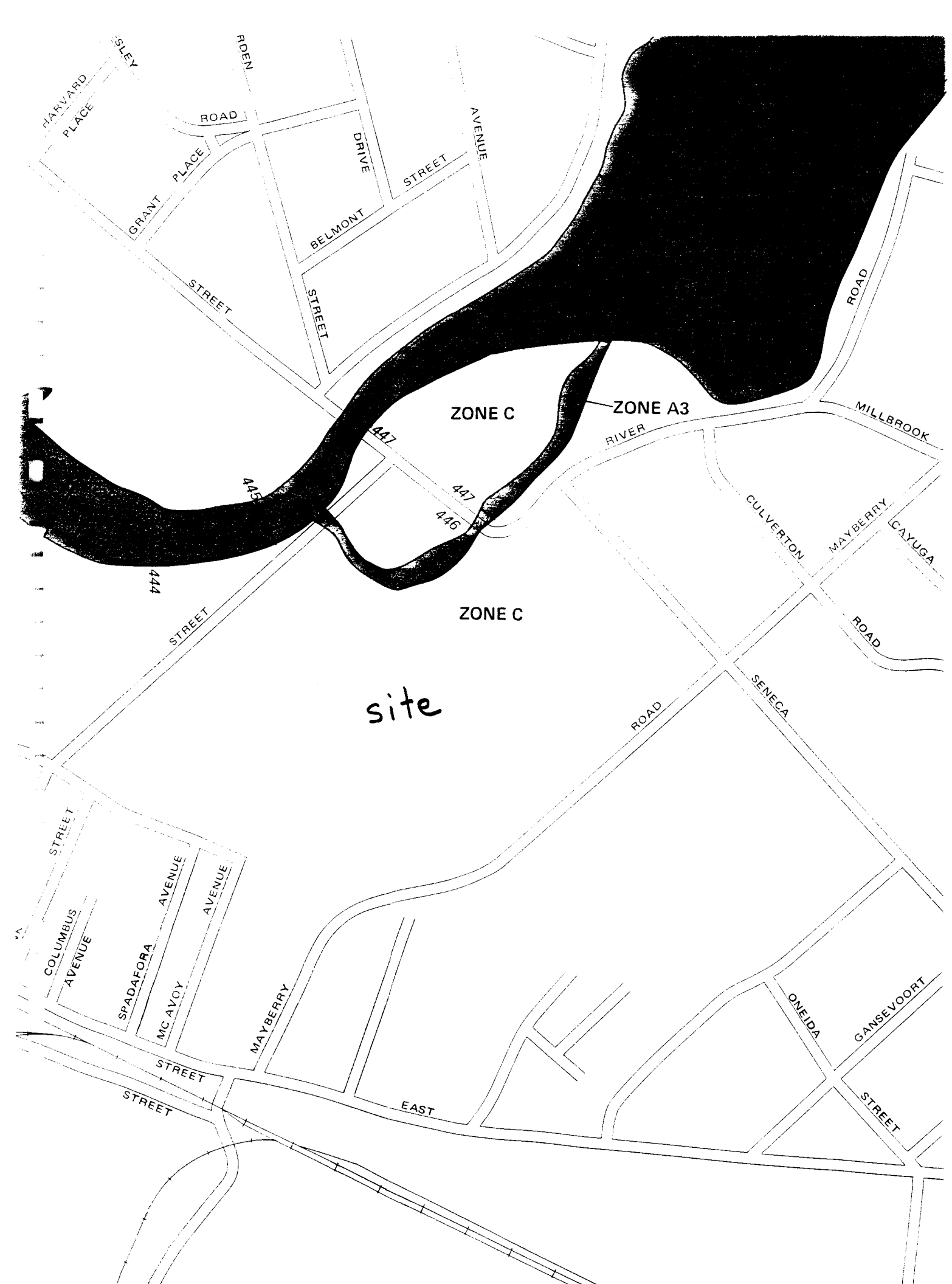
JANUARY 3,1985

Federal Emergency Management Agency

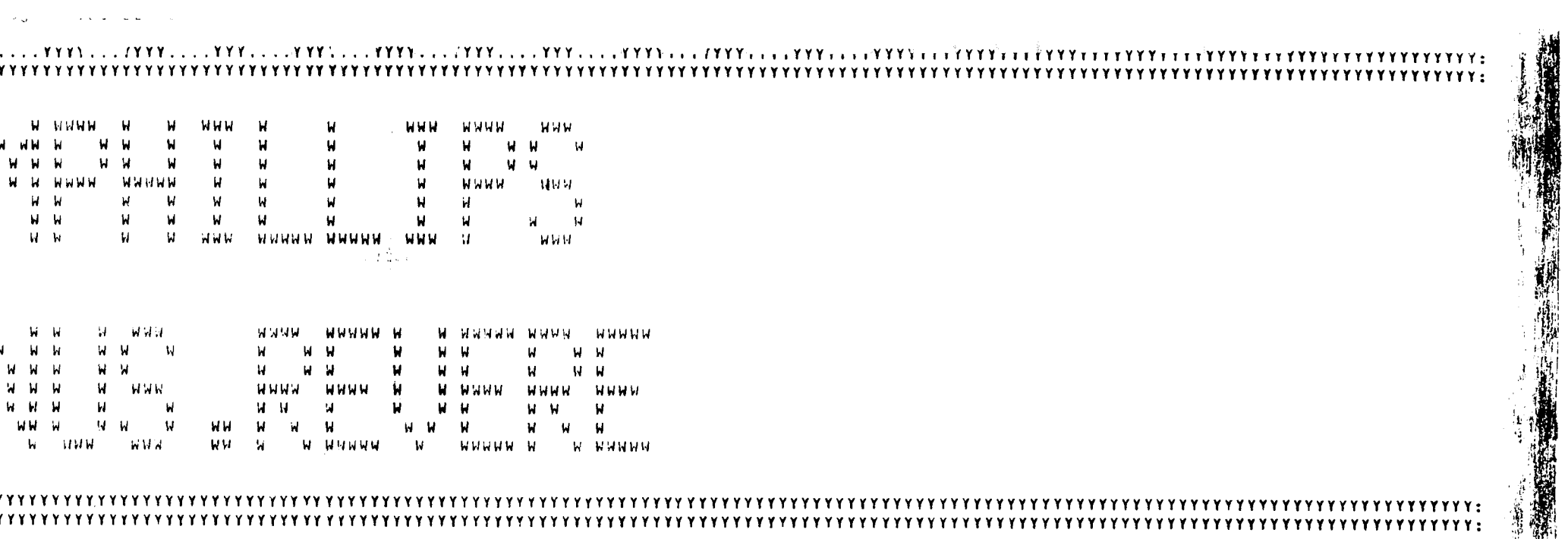
Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE date shown on this map to determine when actuarial rates apply to structures in the zones where elevations or depths have been established.

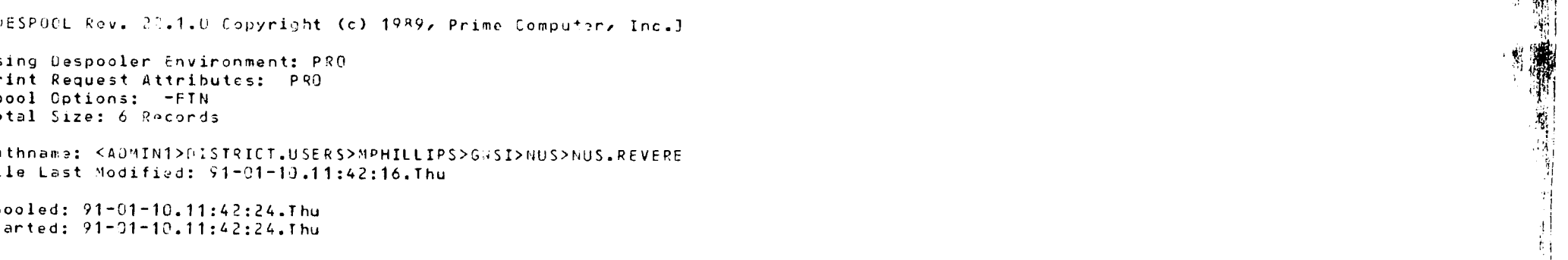
To determine if flood insurance is available in this community, contact your insurance agent, or call the National Flood Insurance Program, at (800) 638-6620.

APPROXIMATE SCALE


HARVARD PLACE
ROAD
GRANT PLACE
DRIVE
STREET
AVENUE
BELMONT
STREET
STREET
ROAD
ZONE C
ZONE A3
MILLBROOK
RIVER
447
445
447
446
444
CULVERTON
MAYBERRY
CAYUGA
STREET
ZONE C
ROAD
site
SENECA
ROAD
STREET
COLUMBUS AVENUE
SPADAFORA AVENUE
MC AVOY AVENUE
MAYBERRY
ONEIDA
GANSEVOORT
STREET
STREET
EAST
STREET

REFERENCE NO. 28





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LATITUDE (DEGREES)	LONGITUDE (DEGREES)	OWNER	DEPTH DRILLED (FEET)	WATER LEVEL (FEET)	OPEN INTERVAL (FEET)	OPEN INTERVAL (FEET)	AQUIFER CODE	FORMATION CODE
430901	0752612	MOWERS * 16 , BURR M.	--	--	--	--	--	--
430948	0752458	BUCHMAN * 15 , JACOB	--	--	--	--	300PLZC	SLTE
430952	0752740	WILSON * 17 , DELOS	--	--	--	--	300PLZC	SLTE
430958	0752602	ABBE * 14 , GILES	--	--	--	--	300PLZC	SHLE
430959	0752853	PRITCHARD * 19 , HERBERT	--	--	--	--	300PLZC	SLTE
431026	0752325	BISH * 10 , WALTER	--	--	--	--	300PLZC	SLTE
431033	0752513	MISKAN * 13 , ROBERT	--	--	--	--	--	--
431034	0752752	PACELLI LEWIS * H 18	--	--	20.0	--	361LRRN	SHLE
		--		--	--	--	BEDROCK	--
431043	0752555	MATHEWS * 12 , F. A.	--	--	--	--	300PLZC	SLTE
431050	0752251	LEWIS , JOHN	--	--	--	--	110QRNR	GRVL
431059	0752511	MURPHY * 11 , OWEN	--	--	--	--	--	--
431101	0752304	ROUX * 9 , W. S.	--	--	--	--	112SDGV	GRVL
431106	0752358	ROME STATE SCHOOL * 20	22.5	--	--	--	112SDGV	SAND
		Mohawk/Oneida correctional Facilities		--	--	--	112SDGV	SDGL
431119	0752422	CARLETTA * 8 , C.	--	--	--	--	361UTIC	--
431131	0752439	JONES * 7 , KENDALL	--	--	--	--	--	--
431134	0752529	LYNCH * 6 , T.	--	--	--	--	361UTIC	--
431135	0752540	GRAHAM * 5 , E.	--	--	--	--	361UTIC	--
431146	0752205	NYSDOT WATERWAYS DIVISION	16	--	--	--	--	--
431151	0752216	NYSDOT CANAL DIVISION	29	--	--	--	111ALVM	--
		--		--	--	--	110QRNR	SDGL
431157	0752201	CRONK , S.	--	--	--	--	112SDGV	GRVL
431157	0752242	NYSDOT WATERWAYS DIVISION	16.1	--	--	--	--	--
431158	0752322	NYSDOT WATERWAYS DIVISION	14.8	--	--	--	--	--
431158	0752336	NYSDOT WATERWAYS DIVISION	16	--	--	--	--	--
431159	0752355	NYSDOT WATERWAYS DIVISION	16	--	--	--	--	--
431200	0752422	NYSDOT WATERWAYS DIVISION (in canal)	19.1	--	--	--	--	--
431200	0752434	NYSDOT CANAL DIVISION	20	--	--	--	111ALVM	--
		--		--	--	--	110QRNR	SAND
431201	0752459	NYSDOT WATERWAYS DIVISION	17.5	--	--	--	--	--
431201	0752539	NYSDOT WATERWAYS DIVISION	14.2	--	--	--	--	--
431202	0752552	NYSDOT WATERWAYS DIVISION	13	--	--	--	--	--
431202	0752605	NYSDOT WATERWAYS DIVISION	23	--	--	--	--	--
431202	0752614	NYSDOT WATERWAYS DIVISION	25	--	--	--	--	--
431203	0752625	NYSDOT WATERWAYS DIVISION	25	--	--	--	--	--
431203	0752633	NYSDOT CANAL DIVISION	30	--	--	--	111ALVM	--
		--		--	--	--	110QRNR	SDGL
431203	0752646	NYSDOT WATERWAYS DIVISION	30	--	--	--	--	--
431204	0752726	NYSDOT WATERWAYS DIVISION	23	--	--	--	--	--

u unused

X Located south of the Mohawk River

D Documented discharge

* mapped potential drinking water well

NYSDOT canal/waterways (in canal)

TUDE (DEGREES)	ONG (DEGREES)	E	HARG (GPM)	USE OF WATER	THER IDENTIFIER
430901	0752612		--	-	OE 224
430948	0752458		10	-	OE 221
430952	0752740		.5	-	OE 245
430958	0752602		--	-	OE 225
430959	0752903		3	-	OE 244
431026	0752725		6	-	OE 257
431035	0752513		[illegible]	-	OE 220
431054	0752752		.03	H	--
			--		--
431043	0752536		3	-	OE 226
431050	0752251		5	-	OE 552
431059	0752511		20	-	OE 259
431101	0752304		5	-	OE 141
431105	0752653		--	-	OE-182
			--		MH 28 #28
431119	0752422		3	-	OE 142
431131	0752439		6	-	OE 947
431134	0752529		5	-	OE 143
431135	0752540		5	-	OE 144
431146	0752205		--	-	EAH-239
431151	0752216		--	-	WDH
			--		--
431157	0752201		[illegible]	-	OE 146
431157	0752242		--	-	EAH-241
431153	0752[illegible]7		--	-	EAH-244
431158	0752236		--	-	EAH-425
431159	0752355		--	-	WDH-43
431200	0752422		--	-	WDH-45
431200	0752434		--	-	WDH-46
			--		--
431201	0752459		--	-	WDH-48
431201	0752539		--	-	WDH-51
431202	0752552		--	-	WDH-52
431202	0752600		--	-	WDH-11
431202	0752614		--	-	WDH-10
431203	0752525		--	-	WDH-9
431203	0752633		--	-	WDH-8
			--		--
431203	0752646		--	-	WDH-7
431204	0752726		--	-	WDH-1

LATITUDE (DEGREES)	LONGITUDE (DEGREES)	OWNER	DRILLED (FEET)	LEVEL (FEET)	INTERVAL (FEET)	INTERVAL (FEET)	AQUIFER CODE	QUALITY CODE
431206	0752743	NYSDOT WATERWAYS DIVISION	22	--	--	--	--	--
431206	0752803	NYSDOT CANAL DIVISION	23	--	--	--	111ALVM	--
431207	0752243	PHELPS , A. * 4	--	--	--	--	112SAND	--
431208	0752343	NYSDOT WATERWAYS DIVISION	19	--	--	--	--	--
431209	0752203	WAPC , L. * 3	--	--	--	--	112SDGV	GRVL
431211	0752451	NYSDOT WATERWAYS DIVISION	18	--	--	--	--	--
431213	0753017	NYSDOT CANAL DIVISION	29	--	--	--	111ALVM	--
431214	0753045	NYSDOT WATERWAYS DIVISION	22	--	--	--	--	--
431215	0753054	NYSDOT WATERWAYS DIVISION	23	--	--	--	--	--
431224	0752831	SALSBURY , C. (no phone listing available)	--	--	--	--	112SDGV	GRVL
431225	0752651	--	1630	--	--	--	112SDGV	DRFT
		--		--	--	--	361UTIC	SHLF
		--		--	--	--	364TRNN	LMSN
		--		--	--	--	3640DVCM	LMSN
		--		--	--	--	3640DVCM	LMSN
		--		--	--	--	371LLFL	DLMT
		--		--	--	--	371PSDM	SNDS
		--		--	--	--	400BCPX	--
431229	0753414	USGS	20.0	--	19	21.5	110QRNR	CLAY
		--		--	--	--	110QRNR	SAND
431233	0752419	USGS	31	--	24	26.5	110QRNR	SAND
		--		--	--	--	110QRNR	SDGL
431233	0752424	USGS	47.0	--	43.5	46	112SAND	SAND
431234	0752702	GENERAL CABLE CORP -- (no phone listing available)	70	--	--	--	112SDGV	SDGL
				--	--	--	112TILL	--
431234	0752754	ROME CABLE CORP , NO 1	--	--	--	--	361UTIC	--
431234	0752754	ROME CABLE CORP , NO 2	--	--	--	--	361UTIC	--
431234	0752754	ROME CABLE CORP , NO 3	--	--	--	--	361UTIC	--
431235	0752751	ROME CABLE CORP	89	--	--	--	112SDGV	SDGL
		--		--	--	--	112SAND	SAND
		--		--	--	--	112PLTC	CLAY
		--		--	--	--	112SDGV	SDGL
		--		--	--	--	340DVNN	SHLF
431236	0752450	ROME AIRBASE , SOUTH GATE	--	--	--	--	112SDGV	GRVL
431240	0752413	USGS	--	--	--	--	110QRNR	SAND
431240	0752423	USGS	24.5	--	20	22.5	112SAND	SAND
431240	0752703	NYSDOT CANAL DIVISION	34	--	--	--	111ALVM	--
		--		--	--	--	110QRNR	SDGL
431242	0752502	--	--	--	--	--	112SAND	--
431243	0752427	USGS	35	--	33.5	35	112SAND	SAND

[illegible]TUDE (DEGREES)	LONGITUDE (DEGREES)	DISCHARGE (GPM)	USE OF WATER	OTHER IDENTIFIER
431206	0752743	--	-	WDH-415
431206	0752803	--	-	WDH-22
431207	0752243	7	-	OE 47
43120[illegible]	0752[illegible]43	--	-	WDH-23
4312[illegible]	075[illegible]	--	-	OE [illegible]
431211	0752931	--	-	WDH-24
431213	075[illegible]17	--	-	WDH-11
431214	0753045	--	-	WDH-10
43121[illegible]	075[illegible]	--	-	WDH-27
4312[illegible]4	075[illegible]1	40	-	[illegible] 4[illegible]
431225	075[illegible]1	--	-	--
		--		--
		--		--
		--		--
		--		--
		--		--
		--		--
		--		--
431[illegible]	075[illegible]414	--	U	[illegible] MI CK 1
		--		--
4312[illegible]	075[illegible]41[illegible]	--	-	[illegible] MI CK [illegible]
		--		--
4312[illegible]	075[illegible]4[illegible]4	--	U	3 MI CK [illegible]
4312[illegible]4	075[illegible]	--	-	[illegible]-1[illegible]1
		--		[illegible]ORING [illegible]
4312[illegible]4	075[illegible]754	[illegible]	-	[illegible] 55
431234	0752754	4[illegible]	-	[illegible] [illegible]
431234	0752754	--	-	OE 57
4312[illegible]	0752731	--	-	[illegible]-1[illegible]
		--		--
		--		--
		--		--
		--		--
4312[illegible]	075[illegible]4[illegible]	[illegible]	-	OE 147
43124[illegible]	0752[illegible]1[illegible]	--	-	[illegible] MI CK [illegible]
43124[illegible]	075242[illegible]	--	-	3 MI CK 1[illegible]
43124[illegible]	075[illegible]7[illegible]	--	-	WDH-[illegible]
		--		--
43124[illegible]	075[illegible]	--	-	[illegible]-7
43124[illegible]	075[illegible]43[illegible]	--	U	[illegible] MI CK 11

LAT (DEGREES)	LONGITUDE (DEGREES)	OWNER		DRILLED DEPTH (FEET)	WATER LEVEL (FEET)	INITIAL (FEET)	RVA (FEET)	ADJU CODE	CODE
431244	0752417	USGS		26.0	--	22.5	25	110QRNR	SAND
			--		--	--	--	110QRNR	SAND
431245	0752441	USGS		42.0	--	36.5	41	112SAND	SAND
			--		--	--	--	110QRNR	SDGL
431247	0752425	USGS		77	--	31.5	74	110QRNR	SAND
			--		--	--	--	110QRNR	SDGL
431252	0752450	USGS		30.5	--	28	30.5	110QRNR	SAND
			--		--	--	--	110QRNR	SAND
431256	0752753	CAPITAL [illegible]		--	--	--	--	361UTIC	--
431255	0752447	USGS		42	--	37.5	42	110QRNR	SAND
			--		--	--	--	110QRNR	SDGL
431258	0752437	USGS		27	--	22.5	25	110QRNR	SAND
			--		--	--	--	110QRNR	SAND
431302	0752451	USGS		--	--	22	24.5	110QRNR	SDGL
431311	0752402	USAF		54	--	--	--	112SDGV	--
431333	0752443	ROME AIRBASE	, EAST GATE	--	--	--	--	361UTIC	--
431333	0750015	IOVACCI	, NICK	--	--	--	--	110QRNR	GRVL
431339	0752739	USAF		--	14.1	--	--	112SAND	--
431341	0752341		--	--	--	--	--	--	--
431343	0752943	MYERS		67	--	--	--	--	--
431357	0752533	ROME AIRBASE	, BLOCK HOUSE	--	--	--	--	361UTIC	--
431403	0752551	ROME AIR DEPOT		--	--	--	--	361UTIC	--
431404	0752555	SMITH	, H. A.	--	--	--	--	361UTIC	--
431412	0752554	MURPHY, SILAS		746	--	--	--	112SDGV	DRFT
			--	* 2	--	--	--	361LRRN	SHLE
			--		--	--	--	361UTIC	SHLE
			--		--	--	--	364TRNN	LMSN
431417	0752022	COLESTON	, A. L.	--	--	--	--	--	--
431430	0752711	NATURAL GAS CO		543	--	--	--	112SDGV	DRFT
			--		--	--	--	361LRRN	SHLE
			--		--	--	--	361LRRN	LMSN
			--		--	--	--	361LRRN	SHLE
			--		--	--	--	361LRRN	LMSN
			--		--	--	--	361LRRN	SHLE
			--		--	--	--	361UTIC	SHLE
431431	0752235	AIR FORCE US		--	--	--	--	112SAND	SAND
431503	0752552	CARL, EDDY		389	--	--	--	112SDGV	--
			--	* 1	--	--	--	344ONDG	LMSN
			--		--	--	--	361LRRN	SHLE
			--		--	--	--	361UTIC	SHLE

LAT (DEGREES)	LONG (DEGREES)	AVG (GPM)	USE OF WATER	OTHER IDENTIFIER
431244	0752417	--	U	7 MI CK 4
		--		--
431246	0752441	--	U	7 MI CK 12
		--		--
431247	0752435	--	-	7 MI CK 5
		--		--
431252	0752430	--	U	7 MI CK 6
		--		--
431252	0752750	20	-	OE 145
431256	0752442	--	-	7 MI CK 17
		--		--
431256	0752437	--	U	7 MI CK 7
		--		--
431300	0752431	--	-	7 MI CK 4
431311	0752428	--	-	DH-30
431313	0752443	1	-	OE 142
431335	0753016	10	-	OE 346
431339	0752329	5	-	MW-17
431341	0752341	--	Z	MW-3
431347	0751945	--	-	BRIDGE R-69
431357	0752332	1.5	-	OE 149
431403	0752351	--	-	OE 150
431404	0752355	4	-	OE 58
431412	0752359	--	-	--
		--		--
		--		--
		--		--
431417	0753022	5	-	OE 347
431422	0752711	--	-	--
		--		--
		--		--
		--		--
		--		--
		--		--
		--		--
431431	0752933	--	-	514-509-1
431504	0752652	--	-	--
		--		--
		--		--
		--		--

...DE (DEGREES)	...GI (DEGREES)	OWNER	...DEPTH DRILLED (FEET)	...WATER LEVEL (FEET)	INTERVAL (FEET)	...INTERVAL (FEET)	...AQUIFER CODE	...OF... CODE
431504	0752652	--	389	--	--	--	364TRNN	LMSN

LATITUDE (DEGREES)	LONGITUDE (DEGREES)	DISCHARGE (GPM)	USE OF WATER	OTHER IDENTIFIER
4315.[illegible]	0751452	--	-	--

REFERENCE NO. 29

NUS CORPORATION
UPERFUND DIVISION

PROJECT NOTES

TO: File

DATE: March 20, 1991

FROM: Dorothy Ponte

COPIES:

SUBJECT: Telecon Notes from Niagara Mohawk/Gas Reg Station File, TDD No. 02-9007-01, concerning wells located within a 4-mile radius of Revere Copper Products, Inc. Site,

~~REFERENCE~~:

Mike Gallagher, NUS Corporation, made several phone calls to the Utica-Rome area to determine the status of potentially active wells listed in a computer print out of wells located within a 4-mile radius of Niagara Mohawk/Gas Reg Station Site.

Rome Capitol Theatres, Griffis Air Force Base, Rome Cable Corp, Demand Cable Corp., Oneida Correctional Facility & Mohawk Correctional Facility all obtain potable water from the Rome public supply water system.

NUS CORPORATION AND SUBSIDIARIES — **TELECON NOTE**

CONTROL NO.:	DATE:	TIME:
02-9007-01	9/12/90	1130

DISTRIBUTION: Niagara Mohawk / Gas Reg Station

BETWEEN:	OF:	PHONE:
Eileen Koumbis	Rome Capital Theatre Administrative Office	(315) 337-6277

AND: M. Cashnagher (NUS)

DISCUSSION:

Source of Drinking Water for Theatre

- The theatre is hooked up to the city of Rome public supply distribution.

- Use of well rig may be unknown; they had no knowledge of it

9/12/90

ACTION ITEMS:

NUS CORPORATION AND SUBSIDIARIES — **TELECON NOTE**

CONTROL NO.:	DATE:	TIME:
02-9007-01	9/12/90	1150

DISTRIBUTION:

Niagara Mohawk / Gas Reg Station

BETWEEN:	OF:	PHONE:
Ms. Marrow	Griffis A.F Base Env. Mgmt. Coordinator	(315) 330-1110

AND:

M Gallagher (NUS)

DISCUSSION:

Source of Drinking Water on Base

- Ms. Marrow stated that to his knowledge, all drinking water was from city supply. Old wells are used for latrines. Many monitoring wells exist on site due to RI/FS in progress; Griffis Air Force Base is a NPL Superfund site. The Base is presently supplying bottled water to residents, W & E of Base who are/were obtaining drinking ~~water~~ water from private wells.
- Wells located in the Jervis site are also used for monitoring/latrine. The site is unmanned & abandoned to the best of his knowledge, & was the location of a radar tower when operating.

ACTION ITEMS:

For verification of water uses on sites, call

Real Property Office (315) 330-4014/~~4365~~

~~9/13/90~~ AH

NUS CORPORATION AND SUBSIDIARIES — **TELECON NOTE**

CONTROL NO.:	DATE:	TIME:
02-9007-01	9/12/90	1320

DISTRIBUTION:

Niagara Mohawk/
Gas Reg. Station

BETWEEN:	OF:	PHONE:
Ron Young	Rome Cable Corp. Env. Dept	(315) 337-2564

AND:

M Gallagher (NUS)

DISCUSSION:

Source of drinking water @ Rome Cable

- Mr. Young informed me that Rome Cable Corp. has an on site water supply & did not use groundwater from listed wells.

9/12/90

ACTION ITEMS:

NUS CORPORATION AND SUBSIDIARIES — **TELECON NOTE**

CONTROL NO.:	DATE:	TIME:
02-9007-01	9/12/90	1340

DISTRIBUTION: Niagara Mohawk / Gas Reg Station

BETWEEN:	OF:	PHONE:
—	Demand Cable	(315) 337-5367

AND: M Gallagher (NUS)

DISCUSSION:

Use of ground water at facility

- I was given this number by directory assistance when they could not find a listing for General Cable Corp. They are not located in Rome area

- As a listing exists for General Cable Corp & all surrounding buildings/residences are on city water, it is reasonable to assume that this location is also on city water supply & that the registered well is not used for drinking water.

ACTION ITEMS:

NUS CORPORATION AND SUBSIDIARIES — **TELECON NOTE**

CONTROL NO.:	DATE:	TIME:
OZ-5007-01	9/13/90	1025

DISTRIBUTION: Niagara Mohawk / Gas Reg Station

BETWEEN:	OF:	PHONE:
M. Vanderhoff	Griffis A.F. Base Real Property Office	(315) 330-4014

AND: M. Gallagher (NUS)

DISCUSSION:

Source of Drinking Water

- M. Vanderhoff stated that all sites in the area are either on city water or bottled water (due to Griffis RI/FS)

ACTION ITEMS:

NUS CORPORATION AND SUBSIDIARIES — **TELECON NOTE**

CONTROL NO:	DATE:	TIME:
02-9007-01	9/13/90	1030

DISTRIBUTION: Niagara Mohawk / Gas Res Station

BETWEEN:	OF:	PHONE:
Mr. Bill Baldwin	Oneida Correctional Fac. Maintenance Supervisor	(315) 339-6880

AND: M. Gallagher

DISCUSSION:

Drinking water source

- Mr. Baldwin stated that the facilities drinking water was from the city supply & that the Mohawk Correctional facilities water was also from the city

9/13/90

ACTION ITEMS:

JS 067 REVISED 0686

NUS CORPORATION AND SUBSIDIARIES — **TELECON NOTE**

CONTROL NO:	DATE:	TIME:
02-9007-01	9/13/90	1035

DISTRIBUTION: Niagara Mohawk / Gas Reg Station

BETWEEN:	OF:	PHONE:
Frank Buda / Ron Rutledge	Mohawk Correctional Facility / Bain. Sanitary Engr.	(315) 339-5232

AND: M. Gallagher

DISCUSSION:

Drinking water source

- Mr. Buda stated that as far as he knows the facility was on the Rome public supply system; he would verify this w/ Mr. Rutledge & call back

ACTION ITEMS:

IS 067 REVISED 0885

REFERENCE NO. 30

Water Resources of the Utica-Rome Area New York

By H. N. HALBERG, O. P. HUNT, *and* F. H. PAUSZEK

WATER RESOURCES OF INDUSTRIAL AREAS

GEOLOGICAL SURVEY WATER-SUPPLY PAPER 1499–C

UNITED STATES GOVERNMENT PRINTING OFFICE, WASHINGTON : 1962

UNITED STATES DEPARTMENT OF THE INTERIOR

STEWART L. UDALL, *Secretary*

GEOLOGICAL SURVEY

Thomas B. Nolan, *Director*

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Washington 25, D.C.

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ILLUSTRATIONS

[Plates are in pocket]

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WATER RESOURCES OF THE UTICA-ROME AREA, NEW YORK

By H. N. Halberg, O. P. Hunt, and F. H. Pauszek

ABSTRACT

The Utica-Rome area is along the Mohawk River and New York State Erie (Barge) Canal about midway between Lake Ontario and Albany. It encompasses about 390 square miles centered around the industrial cities of Utica and Rome.

The Mohawk River, its tributary West Canada Creek, and a system of reservoirs and diversions to maintain the flow in the barge-canal system, assure an ample water supply for the foreseeable needs of the area. The water from these sources is generally of good chemical quality requiring little treatment, although that from the Mohawk River is only fair and may require some treatment for sensitive industrial processes. Additional surface water is available from smaller streams in the area, particularly Oriskany and Sauquoit Creeks, but the water from these sources is hard, and has a dissolved-solids content of more than 250 ppm (parts per million). Ground water is available in moderate quantities from unconsolidated sand and gravel deposits in the river valleys and buried bedrock channels, and in small quantities from bedrock formations and less permeable unconsolidated deposits. The quality of water from sand and gravel, and bedrock ranges from good to poor. However, where necessary, the quality can be improved with treatment.

The Mohawk River is the source of the largest quantity of water in the area. The flow of the stream below Delta Dam equals or exceeds 108 mgd (million gallons per day) 90 percent of the time, and at Little Falls it equals or exceeds 240 mgd 90 percent of the time. The flow between these two points is increased by additions from Oriskany, Sauquoit, and West Canada Creeks and from many smaller tributary streams. The flow is also increased by diversions from outside the area, from the Black and Chenango Rivers and West Canada Creek for improvement of navigation in the Erie (Barge) Canal, and from West Canada and East Branch Fish Creeks for the public supplies of Utica and Rome. Much of the public-supply water eventually reaches the river by way of sewerage and industrial waste-disposal systems. The total diversion from these sources averages more than 92 mgd. An estimated 18.5 mgd is withdrawn from the Mohawk River by industry, mostly for nonconsumptive uses.

Floods in the Utica-Rome area are not a frequent problem owing to the use of regulatory measures. The major streams fluctuate through a narrow range in stage and generally only a narrow strip along the streams is subject to flooding.

Water-bearing sand and gravel deposits in the major river valleys are the principal sources of ground water, especially where they are recharged by infiltration from streams. The most important potential source is the deposit of sand and gravel underlying the extensive plain adjacent to the Mohawk River between Delta Reservoir and Rome. Maximum sustained yields from these deposits are not known: but moderate quantities of water, 300 gpm (gallons per minute) or less from a single well, can probably be obtained from some parts of the sand plain area, particularly in the vicinity of a buried bedrock channel that extends southwestward from Delta Reservoir. Similar quantities of ground water probably can be withdrawn from some parts of the flood plain of the Mohawk River between Rome and Frankfort and from the sand and gravel deposits filling the valley of Ninemile Creek below Holland Patent. The deposits underlying the flood plain of the Mohawk River generally are fine grained but in places contain interstratified beds of coarser sand and gravel. The most productive part of the flood plain is at the east end near Frankfort. The deposits in Ninemile Creek valley also are generally fine grained: but where they are sufficiently thick, as over a buried bedrock valley southwest of Floyd, moderate quantities of water may be obtained.

Small to moderate quantities of water (150 gpm or less from a single well) can be obtained from sand and gravel deposits in the bottoms of Oriskany and Sauquoit Creek valleys, especially where the materials are coarse grained and are connected hydraulically with the streams. Small quantities of water (20 gpm or less from a single well) can be obtained from smaller areas of sand and gravel filling minor channels carved in the bedrock of the uplands and from some of the bedrock formations.

The depth to water in most wells in the Utica-Rome area ranges from 5 to 50 feet below the land surface. In general the water table is closer to the surface in the valley bottoms than in the uplands or along the sloping valley sides, where not otherwise affected by differences in geologic or hydrologic conditions. The water table is nearly flat in the flood plain of the Mohawk River and stands generally only slightly higher than the adjacent river.

The amount of water used in the area is not large. The estimated average withdrawal was about 48.5 mgd in 1954. Of this, industry used the largest amount, requiring 60 percent or about 29 mgd. About one-third of the water used by industry was self supplied, the remainder was purchased from public water systems. Of the 48.5 mgd withdrawn, about 27.4 mgd was supplied by municipally owned systems, and 21.1 mgd was obtained from private sources. About 96 percent of the total was taken from surface sources, and 4 percent was drawn from ground-water sources. All the water for municipal supply and most of the water for industry was drawn from surface sources. The uses of water in this area are mostly nonconsumptive, and they cause little depletion of the supply. However, practically all withdrawal uses add dissolved solids or suspended matter to the water and decrease its usefulness for some purposes.

INTRODUCTION

The development of the water resources of the Utica–Rome area, to meet the increasing demands of municipal and industrial expansion, requires a knowledge of the occurrence and use of water. Information is required about sources of water, quantity available, chemical and physical quality, amount used, effect of use on the quantity and quality, and magnitude and frequency of floods.

The purpose of this report is to summarize the available data on the water resources of the area and to express them in general terms. The report should be useful for initial guidance in the planning of water-supply facilities by pointing out the sources of water, by describing their quantity and quality, and by giving ground-water and flood levels. It is not within the scope of this report to provide solutions for all possible water problems that may arise owing to the establishment of new industries within the area, use of new processes within individual industries, and shifts and trends in population. Each individual problem may require its own detailed investigation and design study. The information contained in this report will serve as a foundation for individual studies and appraisals of local water potential.

Most of the basic data summarized in this report were collected over a period of years by the U.S. Geological Survey as part of programs conducted cooperatively with the New York State Departments of Commerce, Conservation, Health, and Public Works, and the New York Water Power and Control Commission. Thanks are due many individuals, well drillers, public officials, and industries for furnishing information from their files and for granting permission to the Geological Survey for the collection of field data at their installations. The authors especially wish to acknowledge the courtesy and cooperation of Mr. L. J. Griswold, chief engineer, Board of Water Supply, City of Utica, and Mr. Ralph Hadlock, Associate County Agricultural Agent, New Hartford.

The report was prepared by H. N. Halberg, under the supervision of G. C. Taylor, Jr., district geologist; O. P. Hunt, under the direct supervision of A. W. Harrington, district engineer; and F. H. Pauszek, district chemist. R. V. Cushman was responsible for staff coordination, under the general supervision of C. C. McDonald, Chief, General Hydrology Branch.

LOCATION AND EXTENT OF AREA

The area covered by this report is along the Mohawk River and Erie (Barge) Canal, about midway between Lake Ontario and Albany. It encompasses about 390 square miles and includes the highly industrialized centers of Utica and Rome and the smaller industrial and rural communities south and north of these two cities (pl. 1). The area includes Floyd, Kirkland, Marcy, New Hartford, Utica, Westmoreland, and Whitestown, and parts of Deerfield, Rome, and Trenton in Oneida County, and Frankfort and Schuyler in Herkimer County.

PHYSICAL FEATURES

The Utica–Rome area is partly within the Mohawk valley lowland and partly in the north-central margin of the Allegheny plateau. The major topographic features are the valley of the Mohawk River trending northwest-southeast across the central part of the area, the prominent upland front of the Allegheny plateau south of the river, and the rolling upland plateau north of the river. These major features are largely the result of differential erosion of the underlying sedimentary rocks.

The Mohawk valley was carved out of the underlying soft Utica shale by preglacial and glacial streams. It is now partly filled with clay, sand, and gravel deposited during the earlier formative stages of the Great Lakes. These deposits underlie the modern flood plain of the river and form the conspicuous terraces that flank the flood plain, such as those in the part of the valley between Marcy and Oriskany. The plain is about 1 mile wide in the stretch between Rome and Frankfort. The plain also extends west of Rome where it is much wider. The flanking terraces are continuous with the valley fill in the lower reaches of Ninemile, Oriskany and Sauquoit Creeks and were formed during the outflow of higher stages of the glacial Great Lakes. The surface deposits throughout the valley consist of sand and gravel with some silt and clay.

The northern front of the plateau south of the Mohawk valley rises abruptly from the inner edges of the sand and gravel terraces at an altitude of about 600 feet to summit altitudes of 1,380 feet near the southern border of the area. The bedrock is exposed in the deeply cut tributary valleys and along the steeper upland slopes. The plateau is underlain by more resistant sedimentary rocks consisting predominantly of limestone, dolomite, shale, and sandstone with several intercalated beds of iron ore. The north-facing slope is deeply dissected by two large northward-flowing tributaries of the Mohawk River, Oriskany and Sauquoit Creeks.

The rolling plateau north of the river slopes gently from an altitude of 1,300 feet southward to an altitude of about 600 feet along the Mohawk River. It is underlain by the Utica and Frankfort shales, the latter being the more resistant and capping the higher hills. The plateau surface is scarred deeply by West Canada and Ninemile Creeks and several other smaller tributaries of the Mohawk River, exposing the underlying shale beds. Elsewhere in the upland area the bedrock is covered by a veneer of ground moraine (till).

The area is drained by the Mohawk River except the westernmost part, which is drained by the Oswego River, through Wood Creek and the drainage west of Rome (pl. 1). The Mohawk River enters

the area north of Rome and flows in a meandering path through the central part of the Utica-Rome area to the eastern edge at Frankfort. Within this reach it has a fall of only about 40 feet and within its wide flat valley is most of the industry in the area. In places some of the river water is diverted by the Erie (Barge) Canal, which parallels its course from Rome to the eastern border of the area. The main tributaries of the Mohawk River within the area are Oriskany and Sauquoit Creeks, which enter from the south, and Ninemile Creek, which enters from the north. West Canada Creek forms the northeastern border of the area and enters the Mohawk River to the east. During the navigation season, Ninemile Creek carries water that is diverted from West Canada Creek basin to the Erie (Barge) Canal. Industrial development has occurred primarily along the Mohawk River and to the south along Oriskany and Sauquoit Creeks.

SOURCES OF SURFACE WATER

The water resources of the Utica-Rome area are its most important natural resource. The Mohawk River and its larger tributaries, Oriskany, Sauquoit, and West Canada Creeks, are the important sources of water in the area and assure an ample supply of good or improvable quality for all foreseeable needs. Additional surface water is obtained outside the area from East Branch Fish Creek in the Lake Ontario basin.

MOHAWK RIVER

The Mohawk River is formed by the confluence of its east and west branches just north of the Utica-Rome area. About 9 miles downstream from this point it enters and flows through Delta Reservoir, the lower or outflow end of which is just within the report area (pl. 1). Immediately south of Rome, the Mohawk River is intersected and crossed by the Erie (Barge) Canal, Division of the New York State Barge Canal System. The flow of the Mohawk River is divided between an integrated canal and river system from Rome until the river becomes the canal at Frankfort just east of the report area. The canal is north of the river and parallel to it, receiving the water from all tributaries to the north; the river receives the flow of tributaries to the south.

The Mohawk River is economically important to the thousands of people residing in the Utica-Rome area and to the State of New York. It supplies water for industrial use, recharges adjacent groundwater reservoirs, and provides a medium for sewage and waste disposal. An estimated 18.5 mgd is withdrawn from the river by industries in Rome and Utica for cooling and process purposes. Most of this water is returned to the river after use.

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The flow of the Mohawk River in the Utica-Rome area is regulated by the operation of Delta Reservoir and several diversions or feeders (Black River, Ninemile, and Oriskany Creek feeders) which bring water into the area in order to maintain a reasonably constant flow through the Erie (Barge) Canal during the canal operating season. Delta Reservoir was completed in 1912 and has a usable capacity of 21,000 million gallons. Water is diverted from the Black River at Forestport, about 11 miles northeast of the area, through Forestport feeder and Black River Canal (flowing south), into Delta Reservoir. Diversion for the 1953 water year averaged 16.6 mgd (25.7 cfs). (A water year begins on October 1 and ends on September 30, the dates selected to facilitate water studies.) Water also is diverted from the West Canada Creek basin at Trenton Falls through Ninemile feeder and reaches the Erie (Barge) Canal through Ninemile Creek about 7 miles northwest of Utica. Records of diversion through Ninemile feeder (navigation season only) have been collected by the Geological Survey since 1919 at a gaging station near Holland Patent. The amount of diversion depends upon requirements for navigation. For example, during the 1938 and 1948 canal seasons, there was no diversion; from June 15 to December 8 of the 1953 canal season, the diversion averaged 38 mgd (59.2 cfs). The maximum diversion occurred from April 28 to October 30 of the 1941 canal season when the flow averaged 101 mgd (156 cfs). The canal season usually begins about mid-April and ends about December 1. Oriskany Creek feeder diverts water from the upper Chenango River basin into Oriskany Creek near Solsville. No record is available of the amount of the diversion. Water occasionally may be received from the Oswego River basin through the summit level of the Erie (Barge) Canal near Rome.

The flow of the Mohawk River in the Utica-Rome area also is increased by diversions for the public water supplies of Utica and Rome which reach the river by way of public sewer and industrial waste-disposal systems. The amounts of these diversions are discussed under public water-supply systems. Figure 1 shows where water is diverted to the area and indicates the average amount of diversion in 1953 where records are available.

The flow of the Mohawk River is measured at gaging stations below Delta Dam, where the river enters the area, and below Rocky Rift Dam near Little Falls, about 19 miles east of the area. (See pl. 1; fig. 2, and table 1.) The New York State Department of Public Works also obtains records of stage at each lock in the Erie (Barge) Canal system.

The flow of the Mohawk River at the gage below Delta Dam is completely regulated by Delta Reservoir except during periods of

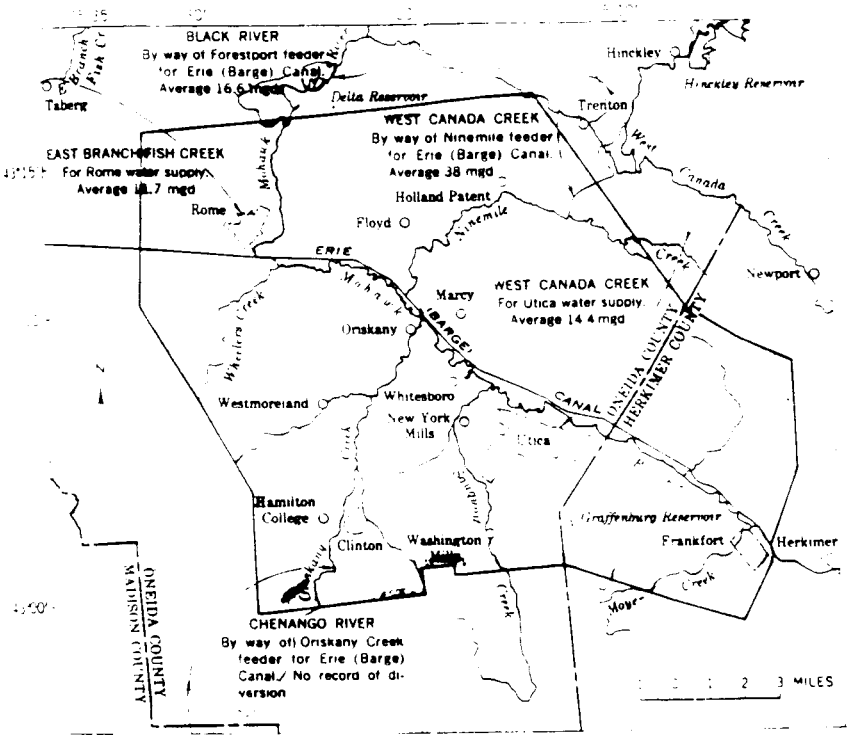


FIGURE 1.—Outline map showing location and amount of major diversions of water into the Utica-Rome area, 1953.

spilling. The pattern of regulation remained practically unchanged during the time records were collected, so that all records at this station represent conditions under the present pattern of diversion and storage. Average observed discharge for the 32-year period 1921–53 was 259 mgd (401 cfs). Observed monthly discharge (fig. 3) during this period ranged from a maximum of 1,034 mgd (1,600 cfs) to a minimum of 49.1 mgd (76 cfs).

The flow-duration curve, figure 4, shows the percentage of time the daily flow of Mohawk River below Delta Dam equaled or exceeded different quantities. For example, the curve indicates that the flow would be equal to or exceed 66 mgd (102 cfs) 99 percent of the time, and would be at least 108 mgd (167 cfs) 90 percent of the time. The flow would equal or exceed 259 mgd (401 cfs, average flow below Delta Dam) about 30 percent of the time. The flow during the summer and fall is maintained well above natural low-flow conditions in accordance with requirements for navigation.

No gaging stations are maintained on that part of the Mohawk River between Delta Dam and Little Falls and therefore no records of flow are available in the vicinity of Utica where the river leaves

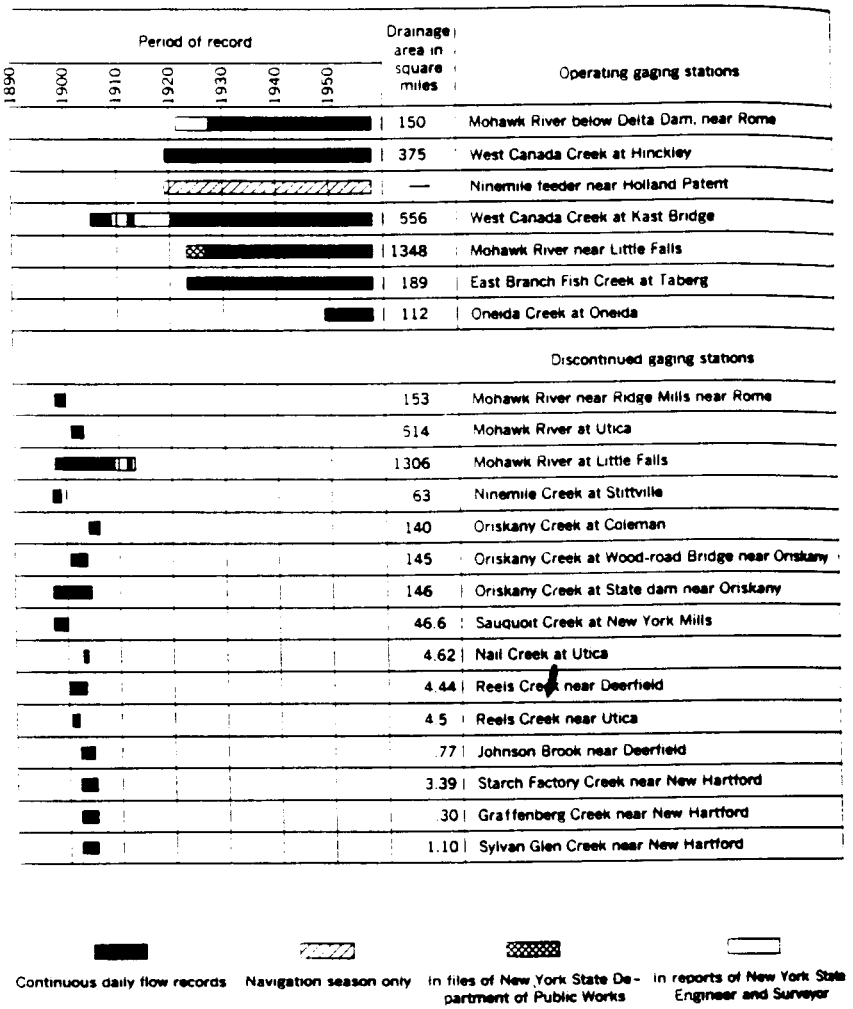


FIGURE 2.—Duration of streamflow records in the Utica-Rome area and vicinity.

the report area. However, records for the Mohawk River below Delta Dam and below Little Falls, together with records for West Canada Creek at Kast Bridge and Ninemile feeder near Holland Patent, have been used to synthesize a flow record for the Mohawk River above the mouth of West Canada Creek, a few miles east of the area. The record, as summarized in table 2, shows that monthly discharges ranged from 4,074 mgd (6,304 cfs) to 202 mgd (312 cfs). The flow-duration curve (fig. 4) represents probable flow conditions above the mouth of West Canada Creek and shows that the discharge would be equal to or greater than 170 mgd (263 cfs) 99 percent of the time and at least 248 mgd (384 cfs) 90 percent of the time.

TABLE 1.—*Summary of streamflow data*

Gaging station	Drainage area (sq mi)	Elevation of gage (feet above mean sea level)	Period of record	Average flow		Maximum flow			Minimum daily flow		Remarks
				Quantity (mgd)	Years	Quantity (mgd)	Gage height (feet)	Date	Quantity (mgd)	Date	
Mohawk River below Delta Dam.	150	474.00	Dec. 1, 1919, to Sept. 30, 1953.[1]	[2]259	32	5,530	11.18	Oct. 2, 1945	29	Jan. 17, 1931.....	Regulated.
Mohawk River near Little Falls.	1,348	310.00	Oct. 1, 1927, to Sept. 30, 1953.	1,815	26	[2]16,400	17.80	Oct. 3, 1945	299	Sept. 2, 1934.....	Includes flow in Erie (Barge) Canal.
West Canada Creek at Hinckley.	375	1,134.00	June 14, 1919, to Sept. 30, 1953.	[2]648	34	11,100	11.45	Oct. 2, 1945	48	Aug. 31, 1919.....	
West Canada Creek at Kast Bridge.	556	438.99	Oct. 1, 1920, to Sept. 30, 1953.[4]	868	33	13,200	8.08	Oct. 2, 1945	38	Sept. 2, 1929.....	
East Branch Fish Creek at Taberg.	189	490.12	Apr. 1, 1923, to Sept. 30, 1953.	[2]354	30	8,790	10.90	Oct. 2, 1945	[2]3.4	Aug. 15–17, 1949.	Diversion above gage by cities of Oneida and Rome for water supply.

[1] December 1919 to September 1926 from reports of State engineer and surveyor. Gage-height readings only prior to July 1921.
[2] Unadjusted.
[3] Flow in river channel only.
[4] Additional records available May 1905 to December 1909 (1905–06, gage heights and discharge measurements only), January 1912 to December 1913.

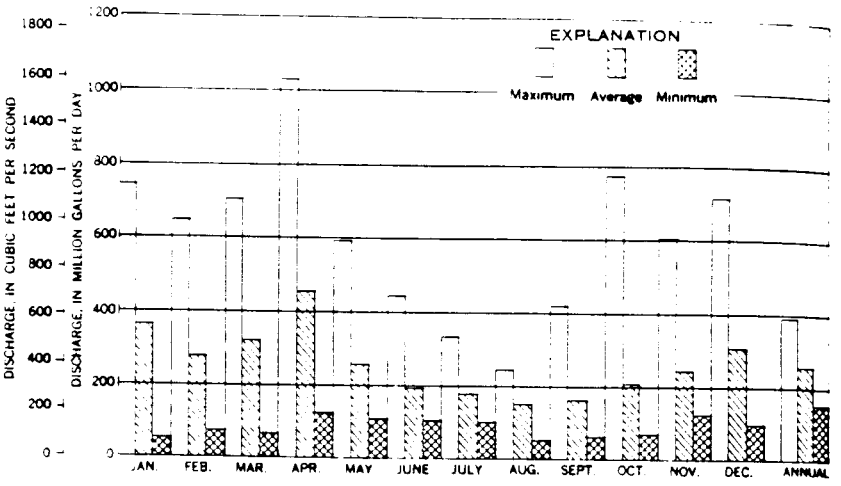


FIGURE 3.—Maximum, average, and minimum monthly and annual observed discharge of the Mohawk River below Delta Dam, near Rome, 1921–53.

Records of daily flow of the Mohawk River near Little Falls include diversion at Rocky Rift Dam into the Erie (Barge) Canal for power and lockage at lock 16, near St. Johnsville. The average flow for the 26-year period 1927–53 was 1,815 mgd (2,808 cfs).

Monthly flows during this period, as shown in table 2, ranged from 7,749 mgd (11,990 cfs) to 415 mgd (642 cfs). The minimum daily flow during 1927–53 was 299 mgd (463 cfs) on September 2, 1934.

The flow-duration curve, figure 4, defines the flow characteristics of the Mohawk River at the Little Falls gaging station. The curve indicates that there will be a flow of at least 400 mgd (619 cfs) available 99 percent of the time, and at least 560 mgd (866 cfs) 90 percent of the time. Discharges during summer and fall are maintained well above natural low flows by regulation of Delta Reservoir and of Hinckley Reservoir on West Canada Creek.

Floods on the Mohawk River have not caused much damage in the Utica-Rome area in recent years because of regulation by storage in Delta Reservoir and closing of head gates in feeder canals. They are discussed briefly, however, because the records are useful in design of intake structures and docks and in locating building sites in areas of potential flooding. The floods in this area are most likely to occur during March, April, and May, although the greatest flood of record in the upper Mohawk River basin since the completion of the Erie (Barge) Canal and storage reservoirs about 1918 was the flood of October 2, 1945. Other large floods during this period occurred in March 1936 and April 1950. Fragmentary records indicate that

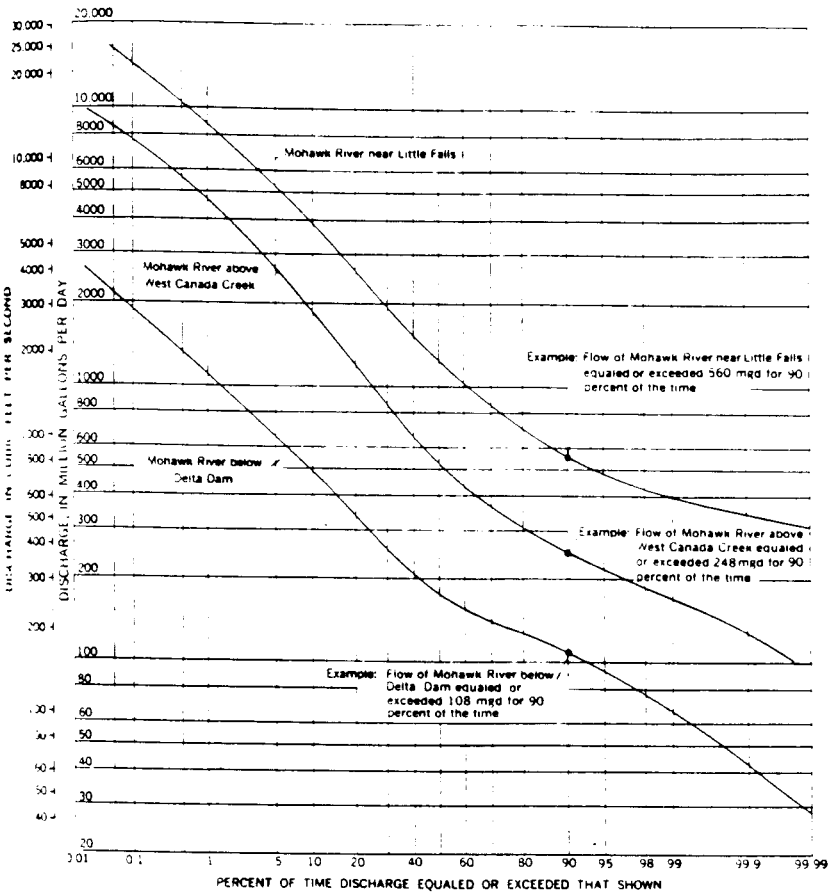


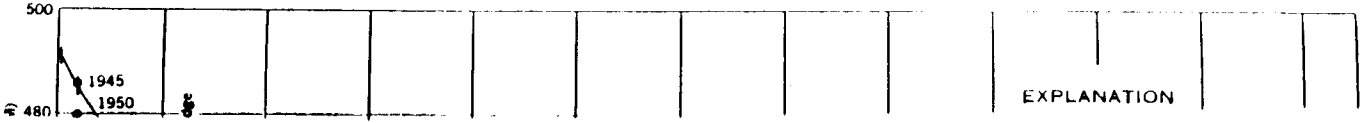
FIGURE 4.—Duration curve of daily flow, Mohawk River below Delta Dam, above West Canada Creek, and near Little Falls, 1928–53.

greater floods than the 1945 flood occurred in 1901, 1902, 1904, and 1913, and that the greatest flood known occurred in the 1860's.

The profile of the water surface of the flood of October 1945 for the stretch of river between Delta Dam and Hanson Avenue Bridge at Little Falls (outside the area) is shown in figure 5. Also shown are the profiles of the floods of March 1936 and April 1950 for the stretch of river between Oriskany Bridge and Hanson Avenue Bridge in Little Falls. The peaks of the 1945 flood were reduced materially by storage in the reservoirs in the upper Mohawk River basin even though the latter were nearly full on October 1, 1945, as the result of heavy rainfall in September. For example, the peak flow of the Mohawk River above Delta Reservoir was computed as 10,300 cfs at the town of North Western (from a drainage area of 77.7 sq mi) and

TABLE 2.—*Maximum, minimum, and average monthly and annual discharges, in million gallons per day, in the Mohawk River basin, 1928–53*

Gaging station	January	February	March	April	May	June	July	August	September	October	November	December	Annual
Mohawk River above West Canada Creek (697 sq mi):													
Maximum	2,303	1,819	3,272	2,682	1,932	1,361	979	781	4,074	1,935	1,651	1,932	1,283
Minimum	202	225	259	527	379	253	214	223	219	219	213	202	492
Average	1,103	931	1,614	1,755	838	495	446	348	538	505	752	883	855
Mohawk River near Little Falls (1,348 sq mi):													
Maximum	4,595	3,420	6,177	7,749	5,092	3,283	2,437	1,552	1,947	4,220	3,316	4,007	2,581
Minimum	530	439	1,094	1,563	948	584	443	415	442	482	485	685	1,086
Average	2,274	1,870	3,262	3,859	2,192	1,116	964	760	833	1,132	1,628	1,932	1,815
West Canada Creek at Hinckley (375 sq mi):													
Maximum	1,428	1,113	1,506	2,191	2,457	1,357	975	659	611	1,459	1,267	1,234	860
Minimum	216	144	233	690	505	251	243	221	256	269	275	300	439
Average	649	584	806	1,364	1,032	476	416	367	365	492	606	620	648



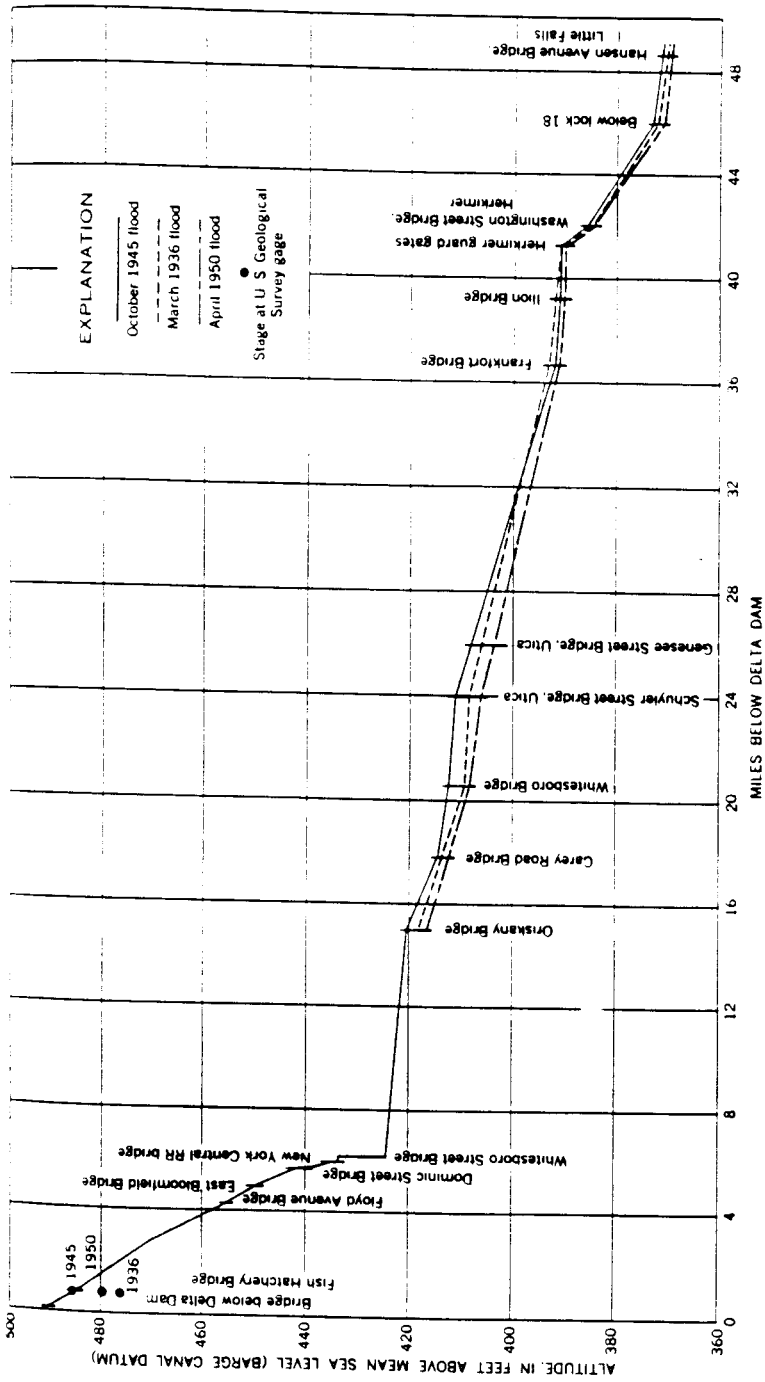


FIGURE 5.—Water-surface profile of selected floods on the Mohawk River from Delta Dam to Little Falls.

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the peak outflow from Delta Reservoir (from a drainage area of 145 sq mi) was only 8,560 cfs.

The chemical quality of the water of the Mohawk River in the Utica-Rome area is fair. Analyses of two water samples from the Mohawk River taken in January 1955 just below Delta Reservoir and at Utica 20 miles downstream showed an increase of dissolved solids from 84 to 195 ppm in the 20-mile stretch. The higher concentrations of dissolved solids reflect increases in concentrations of individual chemical constituents including calcium, magnesium, bicarbonate, and sulfate. As a result, hardness increased from 56 to 128 ppm. (Analyses are given in table 3.) The increases may be due in part to natural conditions, as the more mineralized water in Oriskany and Sauquoit Creeks joins the Mohawk River between the points sampled, and in part to an increase of industrial and municipal pollution which alter the chemical character of the water. Both domestic and industrial pollution in this area are reported by the New York State Water Pollution Control Board (1952).

Downstream from the Utica-Rome area, a station for daily sampling of the Mohawk River water was established near Little Falls in October 1956 and operated through September 1957. During this period, concentrations of dissolved solids and hardness fluctuated within a narrower range than at the locations in the Utica-Rome area (table 4).

The dissolved-solids content of water from the Mohawk River probably is low enough for many industrial uses. But for sensitive industrial processes requiring soft water that is low in dissolved solids, suitable treatment would have to be applied. The temperature of the Mohawk River water generally follows the same trend as the air temperature in the region. At the sampling station near Little Falls the water temperature fluctuated between 32° and 78° F from October 1, 1956, to September 30, 1957 (fig. 6). The daily water temperature generally changed less than 3° F between successive days. In some sections the temperature of the river water may be affected by the inflow of industrial wastes.

ORISKANY CREEK

Oriskany Creek is the first major tributary stream on the south side of the Mohawk River below Rome (pl. 1). It drains the north slope of the Allegheny plateau, rising in Oneida County at an altitude of 1,500 feet and entering the Mohawk River about 6 miles northwest of Utica at an altitude of 410 feet. The two-thirds of Oriskany Creek drains an area of relatively steep slopes underlain by bedrock covered with thin till deposits. The lower one-third, below Clinton,

TABLE 3.—*Chemical analyses of surface water in parts per million, at points in the Utica–Rome area*

Stream and location	Date of collection	Discharge (cfs)	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate HCO_3	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved solids	Hardness as $CaCO_3$		Specific conductance (micromhos at 25° C)	pH	Color
																Calcium, magnesium	Noncarbonate			
East Branch Fish Creek at Taberg	Jan. 18, 1955	186	4.8	0.06	0.00	8.7	1.8	3.5		29	10	1.2	0.1	0.7	55	29	5	69.9	7.7	2
Do	Apr. 7, 1955	3,170	3.0	.09	----	5.2	1.2	.8		12	7.3	.2	.1	2.1	33	18	8	41.0	6.8	4
Mohawk River near Rome	Jan. 19, 1955	423	7.5	.09	.00	19	2.2	3.9		55	15	2.0	.1	1.5	84	56	11	127	8.0	5
Oriskany Creek near Oriskany	Jan. 17, 1955	143	9.0	.06	.00	79	20	6.2		239	82	3.5	.0	8.2	351	279	84	557	8.1	5
Do	Apr. 7, 1955	641	3.9	.06	.01	59	9.3	14		[1] 187	48	6.0	.1	5.2	287	185	32	402	8.4	5
Sauquoit Creek at New Hartford	Jan. 17, 1955	54.6	7.5	.15	.00	87	20	4.9		209	122	3.5	.0	8.3	380	299	128	579	8.2	3
Do	Apr. 7, 1955	366	5.4	.11	.00	60	9.1	11		[2] 172	56	4.0	.1	6.8	273	187	46	396	8.4	3
Mohawk River near Utica	Jan. 17, 1955	905	6.0	.23	.00	40	6.8	12		115	43	7.0	.0	5.9	195	128	34	309	8.2	4
West Canada Creek at Hinckley	Apr. 7, 1955	842	5.4	.10	.00	4.8	3	4.4		9	12	5	1	2.1	38	13	6	40.7	7.0	5
West Canada Creek at East Bridge	Sept. 11, 1956	486	4.0	.18	.00	15	1.3	[3] 1.6		44	7.4	8	1	.7	61	43	7	93.9	6.8	22
Do	May 27, 1957	1,280	4.3	.07	.00	17	2.5	[4] 1.5		54	6.5	6	1	1.0	65	53	9	107	7.5	12

[1] Includes equivalent of 5 ppm CO_3.
[2] Includes equivalent of 3 ppm CO_3.
[3] Na, 1.1 ppm; K, 0.5 ppm.
[4] Na, 1.1 ppm; K, 0.4 ppm.

TABLE 4.—*Summary of chemical analyses, in parts per million, Mohawk River at Little Falls, October 1956 to September 1957*

Constituents	Minimum	Time weighted-average	Maximum
Silica (SiO_2)	4.2	6.4	11
Iron (Fe)	.05	.14	.38
Calcium (Ca)	27	31	38
Magnesium (Mg)	4.0	5.3	7.0
Sodium (Na)	4.1	5.7	7.6
Potassium (K)	1.1	1.3	1.7
Bicarbonate (HCO_3)	79	92	104
Sulfate (SO_4)	23	28	37
Chloride (Cl)	4.2	5.9	7.8
Fluoride (F)	.0	.1	.2
Nitrate (NO_3)	1.4	3.3	4.6
Dissolved solids	122	138	170
Hardness as calcium, magnesium ($CaCO_3$)	84	101	124
Oxygen consumed:			
Unfiltered	4	7	16
Filtered	2	4	5
Specific conductance (micromhos at 25°C)	163	231	314
pH	7.0	------	7.6
Color	3	9	17

drains a nearly flat valley in which thick deposits of sand and gravel overlie the bedrock. Below Clinton the creek furnishes water to several industries.

Water has been diverted into Oriskany Creek from the Chenango River basin through Oriskany Creek feeder at Solsville, about 8 miles outside the report area for more than 100 years. Incomplete records during 1954–58 indicate that the amount of water diverted averages about 6.5 mgd (10 cfs) during the summer months.

Although no gaging station is operated on Oriskany Creek, seven discharge measurements were made in 1954 and 1955 near Oriskany, where the drainage area is 145 square miles. These measured discharges were correlated with discharges of gaged streams in the vicinity and on this basis, with the pattern of feeder operation during 1954–55, approximately low-flow duration data were computed. Tabulated below are the results of these correlations:

Percentage of time discharge was equaled or exceeded	Mgd per square mile	Percentage of time discharge was equaled or exceeded	Mgd per square mile
50	0.50	80	0.25
60	.40	90	.19
70	.32	95	.16

Under the pattern of feeder operations during 1954–55, magnitude and frequency of annual low flows has been computed for this stream. These data, listed below, are also based on correlation methods using the regional low-flow frequency data for gaged streams in the vicinity.

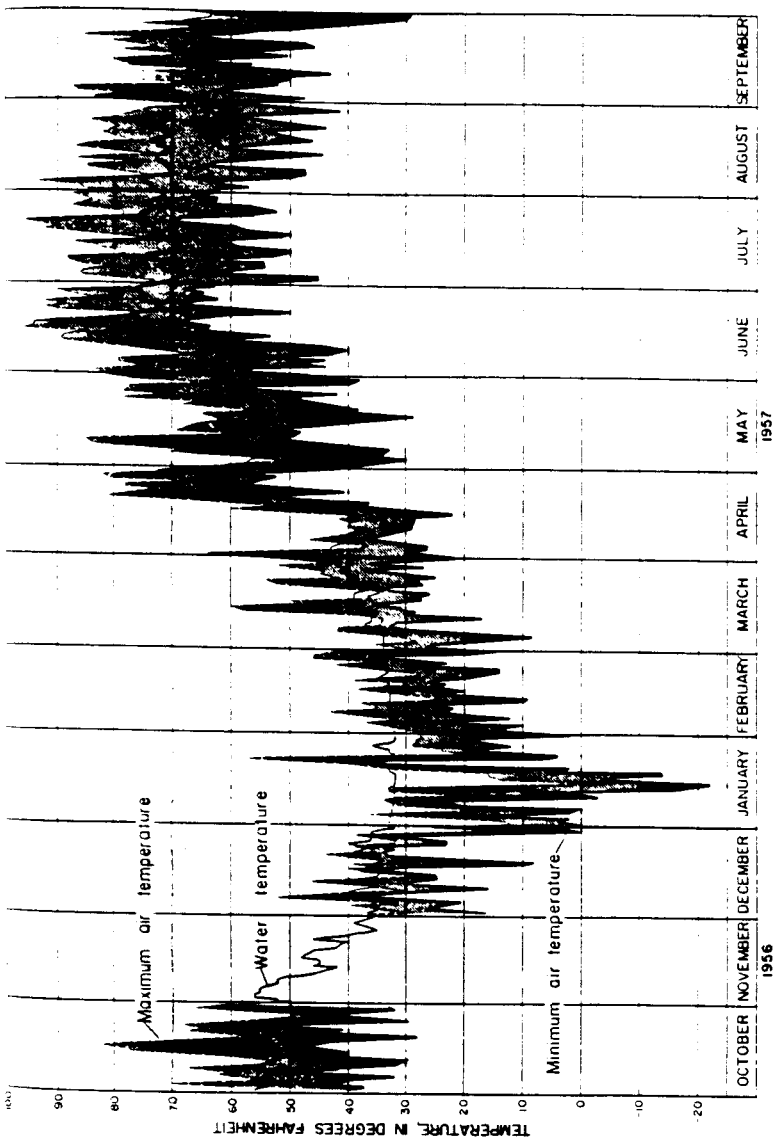

FIGURE 8.—Temperature of Mohawk River water and air at Little Falls, October 1, 1956, to September 30, 1957.

is incised deeply into the underlying bedrock. Most of the drainage basin is outside the area considered in this report but the following discussion is included because of the diversions into the Utica-Rome area for public water supply and Erie (Barge) Canal operations and because the flow record was used in the computation of the previously mentioned synthetic record for the Mohawk River above the mouth of West Canada Creek.

Water is diverted from Hinckley Reservoir into the Utica-Rome area for the public supply of the city of Utica. The reservoir, which has a usable capacity of 25,000 million gallons, was completed in 1915 by the State of New York as a feeder reservoir for the Erie (Barge) Canal; but through acquisition of riparian rights on West Canada Creek prior to construction of the reservoir, the city of Utica has the right to divert about 50 mgd from Hinckley Reservoir. The present diversion for this purpose is about 14.4 mgd.

The flow of West Canada Creek has been gaged since June 1919 at Hinckley, 1 mile downstream from Hinckley Dam (pl. 1 and fig. 2). Discharge is completely regulated by Hinckley Reservoir, except for periods of spilling. Average discharge observed for the 34-year period 1919–53 was 648 mgd (1,002 cfs). Monthly discharges during this period ranged from 2,457 mgd (3,801 cfs) to 144 mgd (223 cfs); see tables 1 and 2. The minimum daily discharge during this period was 48 mgd (75 cfs) on August 31, 1919. Discharges during the summer and fall are maintained well above natural low flows in accordance with requirements for navigation.

The chemical quality of the water is excellent. The concentration of dissolved solids is low, generally less than 50 ppm. Calcium and magnesium comprise about one-tenth of the concentration of dissolved solids and the water is very soft. The concentrations of other cations and anions are low and have no significance insofar as the utility of the water is concerned. (See analysis in table 3.)

Moderate increases in the overall mineral content and the hardness from the quality at Hinckley have been noted at Kast Bridge about 20 miles downstream from the reservoir and 4 miles upstream from the confluence with the Mohawk River (table 3). Such increases probably have resulted from the solution of the underlying dolomitic limestone formations that form the creekbed below the reservoir. The chemical character of the water, however, remains excellent and the water is suitable for most purposes.

EAST BRANCH FISH CREEK

East Branch Fish Creek drains a large area of the Tug Hill plateau in Lewis and Oneida Counties and flows southward into Oneida Lake

by way of Fish and Wood Creeks. The area drained is outside the Utica-Rome area as considered in this report (pl. 1), but the stream is discussed here because it is the source of the public water supply for the city of Rome. Above Taberg the creek drains an area underlain by exposed shale bedrock and generally poorly sorted fine-grained surficial deposits. Below Taberg the surficial deposits are stratified and coarse grained.

Water diverted from East Branch Fish Creek above Taberg into the Utica-Rome area by the city of Rome for public supply, reaches the Mohawk River as sewage effluent. Figure 7 shows the annual diversion by water years during 1924–58 and indicates a large increase in water use during the war-emergency years. The minimum average diversion of 8.2 mgd (12.7 cfs) occurred in the 1931 and 1932 water years; the maximum, 15.1 mgd (23.3 cfs), occurred during the 1948 water year.

Discharge records for East Branch Fish Creek at Taberg (drainage area, 189 square miles) have been collected since 1923 (fig. 2). Average observed discharge for the 35-year period 1923–58 was 351 mgd (543 cfs). The minimum observed daily discharge during the same period was 3.4 mgd (5.2 cfs) on August 14–17, 1949. Average diversion for water supply by the cities of Oneida and Rome for the 35-year period was about 13.6 mgd (21 cfs).

The flow characteristics, after diversion for water supply by the cities of Oneida and Rome, are shown by a flow-duration curve (fig. 8). This curve is based on observed discharges for the period October 1, 1923, to September 30, 1958. The curve shows the approximate quantity of water available for further development and can be useful in the solution of many design problems. For example, if a flow of 13 mgd (20 cfs) is required for industrial use, this quantity of water would be available about 99 percent of the time with present diversions (fig. 8).

The 7-day low-flow frequency curve for East Branch Fish Creek at Taberg (fig. 9) gives the average intervals at which a specified average consecutive 7-day discharge may be expected to recur as the lowest in the climatic year, April 1 to March 31. For example, under the pattern of diversion and climatic conditions that existed during 1923–58, an average consecutive 7-day flow of 13 mgd (20 cfs) has occurred on an average of every 5.8 years.

This curve of low-flow frequency and the flow-duration curve in figure 8 represent the observed flow at Taberg that occurred 1923–58, which was affected by variation in the amount and pattern of diversion. In view of the changing pattern of diversion, these curves can be used only to determine approximate future flow.

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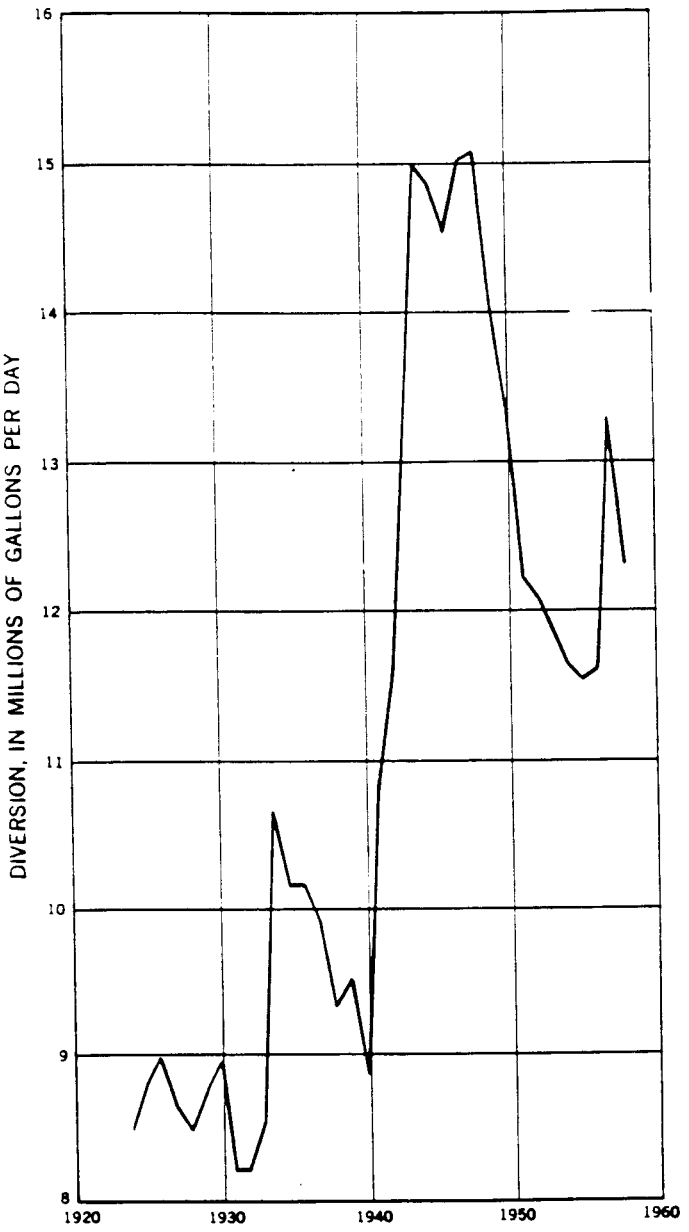

FIGURE 7.—Annual diversion by the city of Rome from East Branch Fish Creek, 1924–58.

The chemical quality of water samples from the East Branch Fish Creek taken at periods of low flow and high flow is available. (See table 3.) The chemical quality is excellent. Only moderate amounts

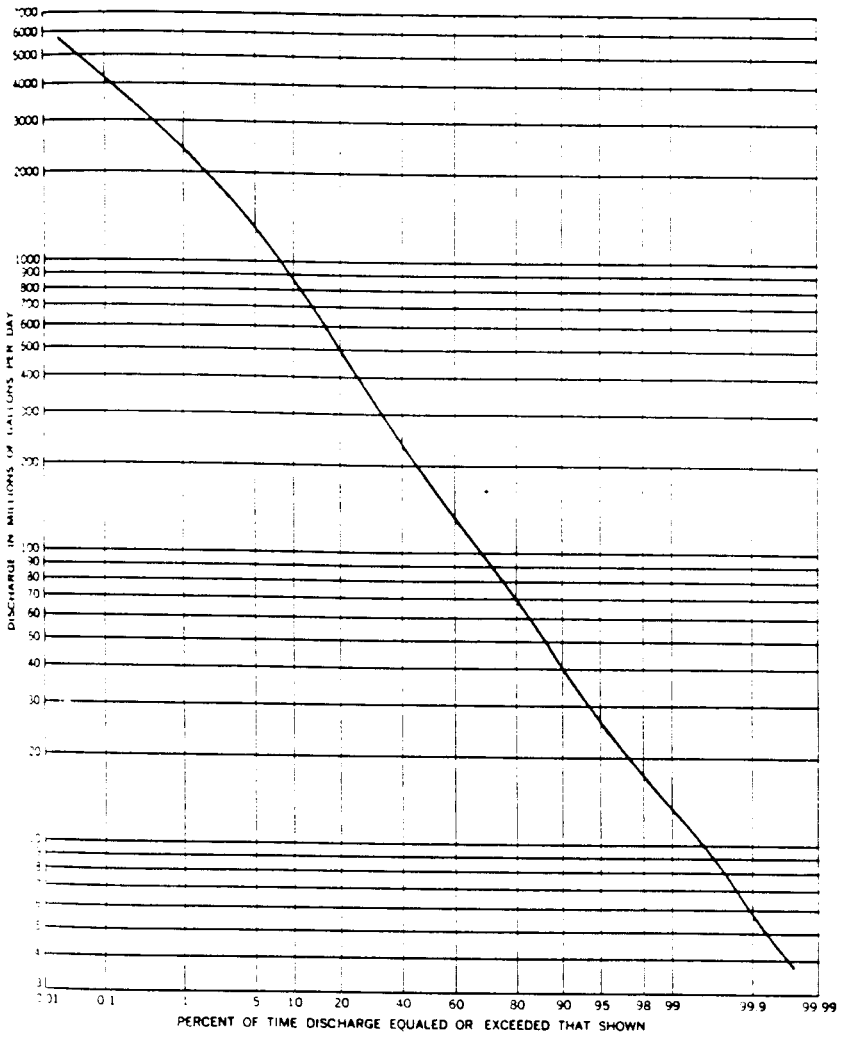

FIGURE 8.—Duration curve of observed daily flow, East Branch Fish Creek at Taberg, 1924–58.

of mineral matter are present and the water is soft. Generally, the water is suitable for most purposes.

SOURCES OF GROUND WATER

SAND AND GRAVEL DEPOSITS

Ground water, of good or improvable quality is available in moderate supply from sand and gravel deposits in the Mohawk River lowland and from similar deposits in the lower valleys of Oriskany

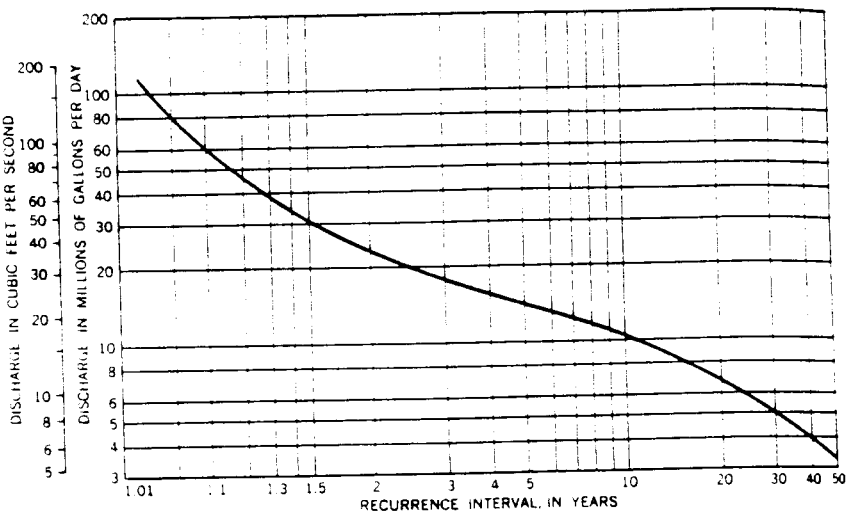

FIGURE 9.—Magnitude and frequency of observed annual consecutive 7-day low flows, East Branch Fish Creek at Taberg, 1923–58.

and Sauquoit Creeks. It is available in small supply from the bedrock formations and from the veneer of ground moraine overlying the bedrock in the upland areas, although it may be hard. Ground water also serves to maintain the low-water flow of the streams and conversely may be recharged by adjacent streams during floods or periods of heavy ground-water pumpage.

MOHAWK RIVER LOWLAND

The Mohawk River lowland as described in this report is the area within the Mohawk River valley that is underlain by glaciofluvial deposits and by lacustrine and alluvial deposits (pl. 1). The land surface is mainly valley bottom or flood plain and adjacent terraces. It is nearly level and has a maximum relief of about 200 feet, the outer limit of the lowland being at an altitude of about 600 feet. Within the lowland, moderate to large quantities of ground water can be obtained from sand and gravel deposits (table 5). These deposits make up the greater part of the unconsolidated material underlying the extensive sand plain north of Rome, the valley of Ninemile Creek below Holland Patent, and the terraces bordering the Mohawk River plain from west of Rome to Frankfort. They also are interspersed with extensive beds of clay and silt in the fill of the Mohawk River plain.

Data upon which to base reliable appraisals of yield of ground water are lacking for this area because many wells for which records are available were drilled for domestic users requiring only small supplies and the wells were not constructed or developed for maximum yield.

TABLE 5.—*Geologic formations in the Utica-Rome area and their water-bearing properties* (modified from Date, 1953 and Kay, 1953)

Age	Geologic unit	Thickness (feet)	Average depth of wells	Range in yield of wells	Average yield of wells	Character of material and water-bearing properties

TABLE 6.—*Geologic formations in the Utica-Rome area and their water-bearing properties (modified from Dale, 1953 and Kay, 1953)*

Age		Geologic unit	Thickness (feet)	Average depth of wells (feet)	Range in yield of wells (gpm)	Average yield of wells (gpm)	Character of material and water-bearing properties
System	Series						
Quaternary	Recent and Pleistocene	Fine grained glaciofluvial, lacustrine and alluvial deposits	70–150	68	2–40	11	Clay, silt, and sand formed in temporary lakes or by recent streams. Poor aquifer generally, but sand beds may yield moderate supplies, especially where recharged by nearby streams.
	Pleistocene	Medium to coarse-grained glaciofluvial and deltaic deposits	10–140	67	10–200	80	Interbedded and interlensing sand and gravel formed by sorting action of glacial melt water. Most productive aquifer in area, especially where recharged by nearby streams. Furnishes good-quality water, suitable for most purposes.
		Ground moraine (till)	1–40	10	1/2–10	3	Heterogeneous mixture ranging in grain size from clay to boulders. Found mostly in the uplands. Poor aquifer but furnishes enough water from dug wells for domestic use.
Silurian		Manlius limestone	150+				Dark blue fossiliferous limestone having dark shale partings. Furnishes small to moderate quantities of moderately hard water.
	Cayuga	Bertie limestone	30				Drab-colored, thin-bedded, clayey limestone. Furnishes small to moderate quantities of moderately hard water.
	Salina group	Camillus shale	200–300	100	0–40	7	Mottled red and green, drab-colored shale and thin-bedded limestone zones. Yields sufficient water for domestic use but quality is very poor.
		Vernon shale	300				Purplish-red shale spotted with green, and thin beds of green shale and limestone. Yields sufficient water for domestic use but quality is very poor.
		Lockport dolomite	80	86	0–8	2½	Dark-colored nearly black dolomite and shale. Furnishes small quantities of poor-quality water.
	Niagara	Clinton group	270	67	½–35	9½	Green and gray shale and sandstone, a few dolomite and conglomerate beds, and several thin beds of fossiliferous red oolitic hematite (iron ore). Yields sufficient water for domestic purposes. Water may be hard in some places.
		Oneida conglomerate	20				Quartz-pebble conglomerate and crossbedded sandstone, pyritiferous. Relatively unimportant aquifer owing to thinness.
Ordovician	Upper Ordovician	Frankfort shale (includes Pulaski shale)	400–500	114	½–20	5	Gray sandy shale, thin beds of dolomite and calcareous sandstone. Furnishes small to moderate quantities of good-quality water.
		Utica shale	300–400	127	½–48	7½	Black and gray carbonaceous shale containing calcareous argillites. Reliable source of small to moderate quantities of water. Water obtained from openings along joints and bedding planes. Water is of good quality but contains hydrogen sulfide in some places.

From the available data it would seem that the most important potential sources of ground water in the area are the deposits of sand and gravel underlying the extensive plain between Rome and Delta Reservoir. These sediments were carried southward into the area by glacial melt water and were probably deposited in several stages, partly as glaciofluvial terraces and partly as a delta of the glacial Mohawk River. The deposits are coarse grained to the north near Delta Reservoir and become finer grained southward. They are generally less than 40 feet thick except in the vicinity of a buried bedrock channel that extends southwestward from the southwestern part of Delta Reservoir, in which they reach a maximum known thickness of 90 feet. They are a potentially productive source of ground water because they are highly permeable and are saturated for most of their thickness. Water levels in wells tapping sand and gravel deposits in the plain north of Rome are commonly 10 to 30 feet below the land surface. Maximum sustained yields from the glaciofluvial deposits in this area are not known as they are tapped only by domestic wells, except for an 8-inch-diameter screened well at the State Fish Hatchery north of Rome that is reported to have yielded 290 gpm with a drawdown in water level of 13 feet. Yields of about the same magnitude or even greater can probably be obtained from properly constructed wells elsewhere in the plain north of Rome.

The fill underlying the Mohawk River plain between Rome and Frankfort is the second most important source of ground water in the lowland. It occupies an older channel that was eroded deeply into the soft shales of the region. The maximum thickness of the valley fill ranges from about 70 feet at Rome to 150 feet at Frankfort. The deposits are thickest over the axis of the older eroded bedrock channel which seems to be south of the present river in the reach between Rome and Whitesboro and north of the Erie (Barge) Canal in the reach between Whitesboro and Frankfort. The sediments making up most of the valley fill were carried in by glacial melt water and deposited in the standing water bodies that were earlier glacial stages of the development of the Great Lakes. These are overlain generally by a veneer of flood-plain deposits of the present Mohawk River. Consequently the sediments are predominantly fine sand, silt, and clay, but they are interstratified in places with beds and lenses of coarser sand and gravel that were washed in by stronger currents (pl. 3). These water-bearing sand and gravel deposits yield moderate supplies to a few industrial and domestic wells and are potential sources of additional supplies. The yields of 9 wells between Rome and Frankfort penetrating sand and gravel ranged from 7 to 80 gpm.

Most of the higher yielding wells are at the east end of the channel, between Utica and Frankfort. Most wells in the channel obtain water from beds or lenses of sand and gravel that underlie fine-grained materials and hence have little direct hydraulic connection with the Mohawk River or the Erie (Barge) Canal. However, in this area long-sustained, moderate to large quantities of ground water can probably be obtained from properly constructed wells that penetrate coarse-grained deposits of appreciable thickness. These coarse-grained deposits lie close to and are hydraulically connected with the river or canal, from which recharge can be effectively induced. For example, 1 well in the Mohawk River channel at Frankfort yields 500 gpm and 2 wells at Ilion, about 2 miles east of Frankfort, have a combined yield of 400 gpm. Their sustained high production is due partly to induced infiltration from the Mohawk River. In the broad, featureless plain west of Rome drained by Wood Creek, which is the western continuation of the channel discussed above, the underlying deposits are of lacustrine origin and comprise primarily clay and silt. They commonly are not very permeable and, hence, do not yield water readily. However, a few wells yield small supplies from discontinuous beds of sand and gravel at the base of the fill in the deepest part of the channel near Coonrod.

The unconsolidated materials filling the valley of Ninemile Creek also are a potential source of moderate quantities of ground water. The deposits originated as a delta of an earlier glacial stream and extend in typical fan-shaped form from Holland Patent nearly to the Mohawk River. They are coarse grained and poorly sorted near the head of the delta and grade southwestward into silt and medium- to fine-grained sand. The finer grained deposits underlie the broad sand plain south and west of Floyd as well as the irregular sand hills near Griffiss Air Force Base and the extensive flat-topped terrace or bench between Marcy and the Mohawk River. The unconsolidated deposits in Ninemile Creek valley range in thickness from 30 feet near the head of the delta at Holland Patent, and along its south edge, to 140 feet near the center of the delta front east of the airbase. The thickest deposits overlie a buried preglacial bedrock channel of an earlier Ninemile Creek whose axis lies north of the present creek and extends southwestward from a point just east of Floyd. The present Ninemile Creek has trenched the delta along its south side and cut through the sediments to bedrock in many places. As a result the upper beds are well drained, particularly in the reach of the delta between Holland Patent and Floyd, and conditions for storage of large quantities of water are poor. Moreover, because the streambed rests on bedrock, opportunities for induced recharge of stream water are poor.

The most favorable area for development of moderate ground-water supplies in the valley of Ninemile Creek seems to be in the area of the buried bedrock channel from a point just east of Floyd to Griffiss Air Force Base. The sand and gravel filling of the channel in this area is a potentially productive source of water because the stratified deposits are thick, are saturated for much of their thickness, and in at least one area are crossed by Ninemile Creek, which is a potential source of induced recharge. Only a few wells tap the sand and gravel in Ninemile Creek valley. They supply sufficient water for domestic and agricultural needs, but their yields give no indication of the maximum available. Larger yields probably could be obtained if the wells were designed for higher productivity.

The depths to water in most wells in the sand and gravel deposits of the Mohawk River lowland range from 5 to 40 feet below the land surface. In general the water table is closer to the land surface in the valley bottoms than in the terraces or along the sloping valley sides. In the flat valley bottoms, such as the low plain west of Rome and the Mohawk River channel, the water table is nearly level and stands generally only slightly higher than the level of the adjacent stream. Under natural conditions it slopes toward the streams or open bodies of water such as swamps, ponds, and reservoirs. The maximum depth to the water table (about 50 feet) is in the riverward faces of the sand and gravel terraces, where the slopes are steep and well drained.

No record of the fluctuations of water levels has been collected in the Utica-Rome area. The water levels in wells in the area close to the Mohawk River and its larger tributaries are probably affected by changes in river level. Water levels in some wells may be affected by the pumping of nearby wells. Elsewhere in the Mohawk River lowland, the fluctuations probably follow the general seasonal patterns of precipitation and evapotranspiration; the range of fluctuations is probably between 3 and 15 feet per year.

Observations of the water level during 1926-55 in a well tapping sand and gravel near Woodgate, about 17 miles north of the area, and observations at other wells in the State show that water levels commonly rise in early spring in response to infiltration from rain and melting snow. They decline in late spring, summer, and early fall in response to transpiration and evaporation during the growing season. Although water levels have fluctuated from year to year, the long-term levels have been stable, and there has been no regional lowering of ground-water levels. In the well at Woodgate, the water level declined to the lowest stage of record during the period of deficient precipitation and low temperatures in 1930–31.

wells receiving water by infiltration from Oriskany and Sauquoit Creeks may be similar to that of water from the creeks. In addition, water from these wells may be adversely contaminated by industrial wastes in the stream water, particularly wells in the lower reaches of the creeks where contamination of the water is greatest.

OTHER SOURCES

The ground moraine and isolated bodies of sand and gravel that are the surficial deposits outside the areas discussed previously and the consolidated bedrock which underlies the entire Utica-Rome area are also sources of ground water.

Most of the uplands above an altitude of about 600 feet in the Utica-Rome area are covered by a mantle of ground moraine and small isolated bodies of sand and gravel. In the lowlands ground moraine occurs beneath the stratified deposits. The ground moraine is mostly till, a direct deposit of the glacial ice consisting generally of a clay matrix containing sand and boulders. The till in this area is tough and compact and is often called hardpan by well drillers and farmers. It commonly has a very low permeability. Owing to its low permeability, till generally yields less than 1 gpm to wells but is an important source of water in quantities adequate for homes and small farms. Probably the maximum yield that can be obtained from a well tapping till is between 200 and 2,000 gpd. The water is commonly obtained by means of large-diameter dug wells which provide large infiltration area and storage capacity.

Supplies adequate for the needs of rural homes, small municipalities, and industries requiring only small quantities of water may be obtained from some of the small bodies of sand and gravel that overlie the till in the gently sloping parts of the upland areas. Ordinarily this sand and gravel mantle is a recent deposit of streams draining the upland. Although thin and of small areal extent, the sand and gravel bodies may yield small to moderate amounts of water to shallow wells of proper construction, especially where they are adjacent to streams. One of two wells of the Westmoreland Water District finished in these sand and gravel bodies was pumped at the rate of 380 gpm, the other at 194 gpm. The specific capacities of the wells were 69 and 16 gpm per foot, respectively.

Where exposed, the bedrock consists of sedimentary rock formations composed principally of shale, sandstone, limestone, and dolomite. As described in table 5, they include the Utica and Frankfort shales, the Clinton group containing the red iron ores, the Lockport dolomite, the Vernon and Camillus shales, and the Bertie and Manlius limestones. The well-known Utica and Frankfort shales

underlie the bottom and sides of the Mohawk River lowland and the upland north of the Mohawk River. The Vernon and Camillus shales are the distinctive red and green shales that form the steep northern slope of the Allegheny plateau; the limestone formations are the distinctive capping of the plateau and underlie the highest areas in the southern part of the Utica-Rome area. The physical characteristics and water-yielding capacity of the bedrock formations are shown in table 5 and their distribution is shown on plate 2. Limestone and dolomite beds of the Trenton group underlie the Utica shale in this area but are not exposed, although rocks of this group have been found in many deep wells.

Most ground water in the bedrock is transmitted through secondary openings along joints, bedding planes, and faults. As a result the yields of wells penetrating these formations range widely. The yields generally are small but are adequate for the needs of farms or households, and the wells are an important source of water in areas in which more productive aquifers are not available. The yields of 77 wells tapping the bedrock formations in the area average about 8 gpm and range from less than 1 to 75 gpm. Wells tapping the Clinton group yield, on the average, a little more water than the other formations: 18 wells tapping the Clinton have an average yield of 9½ gpm, as compared with an average yield of 7½ gpm for 26 wells tapping the Utica shale. Wells tapping the other consolidated rock formations in the area generally yield less water than wells in the Utica shale. Few wells draw fresh water from depths greater than 250 feet. In fact, deeper drilling in the outcrop area of the Utica shale has tapped salt water and occasionally natural gas (Dale, 1953, p. 176–182).

The chemical quality of water from the bedrock differs greatly from place to place, partly because of differences in geology. (See table 6.) The concentration of dissolved solids in water samples collected at scattered locations ranged from 232 to 1,090 ppm. The mineral matter consists principally of calcium, sodium, and bicarbonate and lesser amounts of magnesium. However, water from well Oe 742 (dissolved-solids content, 1,090 ppm) contained 220 ppm of sulfate and 262 ppm of chloride. Water from well Oe 762 contained 1.7 ppm of fluoride, which is slightly greater than the content recommended for drinking water (U.S. Public Health Service, 1946). Moderately large amounts of mineral matter were present in water samples from three other wells (wells Oe 3, Oe 132, and Oe 738 in table 6), and water in these was soft and moderately hard. Because of the difference in chemical composition, a general evaluation of the chemical quality of water from bedrock cannot be made. However,

if water is present in sufficient quantity to be an important source of supply, the chemical quality can be improved by treatment to reduce hardness.

The water from the Utica and Frankfort shales commonly is moderately hard (wells Oe 3 and Oe 132 in table 6) and in some wells has a slightly sulfurous taste and odor. Salt water and natural gas from the limestone beds underlying the Utica shale occur in several wells in the Rome area (Dale, 1953, p. 176–182). Ground water from the Clinton group is generally suitable for most uses (well Oe 738, table 6), although water from the limy beds of the Clinton is hard.

Probably the water of poorest quality obtained from bedrock in Utica-Rome area is drawn from the Lockport dolomite and the overlying Vernon and Camillus shales. The Lockport dolomite yields water that is hard and has a noticeable hydrogen sulfide taste and odor. Also, high sulfate and chloride concentrations in the water from the Lockport dolomite are reported by many well owners. (See also well Oe 742, table 6.) No analyses of water from wells tapping the Vernon and Camillus shales are available, but a high mineral content and undesirable concentrations of sulfate and chloride have been reported in water from wells in the outcrop areas of these formations. The sulfate and chloride are probably derived from beds of gypsum and salt, which occur in the Vernon and Camillus shales in the Utica-Rome area. The calcareous mud or tufa, known locally as horse bone, that is deposited near the head of the village of Clinton and Hamilton College reservoirs is derived from minerals dissolved from the Vernon and Camillus shales by circulating ground water. The water from many small brooks and tributary streams that originate in springs draining the slopes underlain by the Vernon and Camillus shales is moderately to very hard as shown by analyses reported by Dale (1953, p. 19–20). Water from the younger limestones in the area (Bertie and Manlius limestones) may also be very hard. (See well Oe 762, table 6.)

PUBLIC WATER-SUPPLY SYSTEMS

Seven public water-supply systems in the Utica-Rome area serve about 92 percent of the population and some industries. All the systems are supplied by surface water. The two largest public water-supply systems are those of the cities of Utica and Rome (fig. 11).

These cities obtain most of their water from sources outside the Utica-Rome area. Descriptive data for public water-supply systems are summarized in table 7, and analyses of finished water are given in table 8.

Utica obtains its supply from Hinckley Reservoir on West Canada Creek and Graffenburg Reservoir southeast of the city. Hinckley

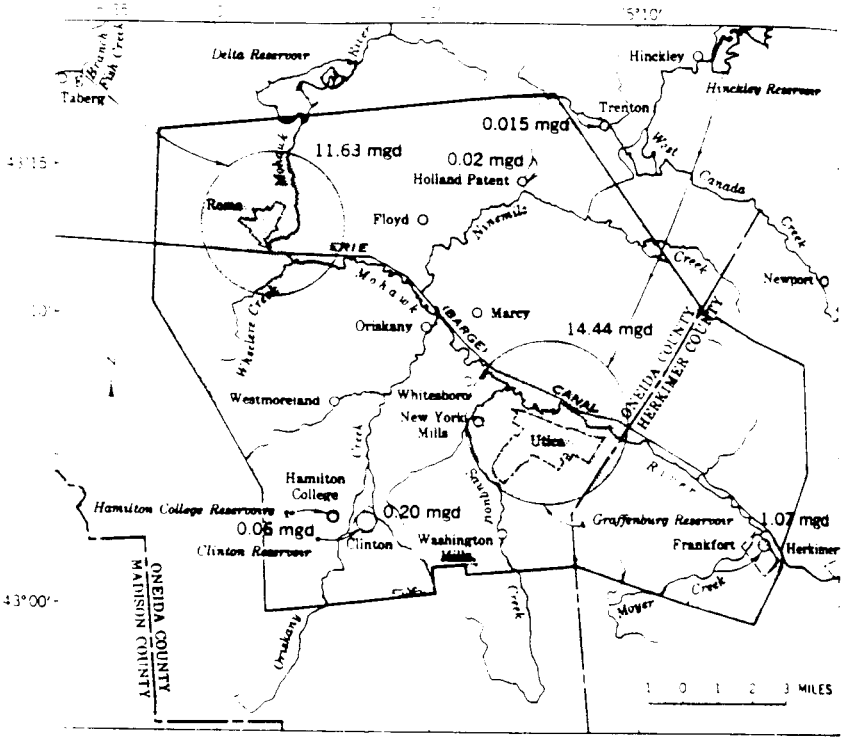

FIGURE 11.—Source of and demand on the public water supplies.

Reservoir, constructed by the State in 1915 as a feeder reservoir for the Erie (Barge) Canal, has a capacity of 25,000 million gallons; and Graffenburg Reservoir, built in 1854, has a capacity of 654 million gallons. About 98 percent of the demand is obtained from Hinckley Reservoir, the city of Utica having the right to divert about 50 mgd. In addition to supplying the city, the water-supply system furnishes water to the villages of New Hartford, New York Mills, Oriskany, Whitesboro, and Yorkville and to suburban customers in the towns of Deerfield, Frankfort, Marcy, New Hartford, Schuyler, Trenton, and Whitestown.

The water from Hinckley and Graffenburg Reservoirs has the lowest mineral content and is the softest water (19 ppm, hardness as $CaCO_3$) of any of the public supplies in the area (fig. 12 and table 8).

Rome takes its entire supply from East Branch Fish Creek in the Oneida River basin. The maximum daily use in 1954 was 17.8 million gallons of which slightly less than half was used by industry. The present rated capacity of the system is 21 mgd, and it is being

TABLE 7.—*Public water-supply systems*

[Treatment: Dc, chlorine gas disinfection; Dh, hypochlorite disinfection; N, ammoniation; Ng, NH_3 gas; S, sedimentation; Z, zeolite softening]

Public water-supply system	Estimated population served (1954)	Source of water	Raw water storage (million gallons)	Treated water storage (million gallons)	Treatment	Daily use in 1954		
						Maximum (mgd)	Average (mgd)	Average per capita (gallons)
Clinton	1,600	Stream	19	0	Dc		0.20	125
Frankfort	4,564	Streams, wells (auxiliary).	10	0	Dh	1.35	1.07	235
Hamilton College.	750	Springs	27	0			.06	80
Holland Patent	370	Stream	24	0	Dc		.02	55
Rome	44,000	do	0	66	Dc, N, S	17.80	11.63	265
Trenton	250	Spring	15	0	None		.015	60
Utica	133,170	Streams, springs.	26,455	2.47	Dc, Ng, Z	19.62	14.44	108

TABLE 8.—*Chemical analyses, in parts per million, of finished water from major public water-supply systems in the Utica-Rome area*

[Samples collected Jan. 27, 1955]

Constituents	Frankfort	Rome	Utica [1]	Utica [2]
Silica (SiO_2)	7.2	4.7	6.3	6.5
Iron (Fe), dissolved [3]	.01	.01	.11	.01
Iron (Fe), total	.04	.06	.18	.09
Manganese (Mn), dissolved [3]	.01	.00	.00	.01
Manganese (Mn), total				
Calcium (Ca)	48	9.1	6.4	26
Magnesium (Mg)	12	1.9	.8	8.8
Sodium and Potassium (Na+K)	8.5	3.7	2.2	34
Bicarbonate (HCO_3)	161	28	14	161
Carbonate (CO_3)	6	0	0	0
Sulfate (SO_4)	35	10	8.3	35
Chloride (Cl)	4.5	2.5	2.0	3.5
Fluoride (F)	.0	.1	.1	.0
Nitrate (NO_3)	3.5	1.6	1.2	1.3
Dissolved solids	230	59	49	200
Hardness as $CaCO_3$, calcium, magnesium	169	30	19	101
Noncarbonate	27	8	8	0
Specific conductance (micromhos at 25° C)	349	75.6	50.2	332
pH	8.5	7.4	6.7	8.0
Color	2	6	12	3
Temperature (°F)	36	34	34	33

[1] Mixture of finished water from Hinckley Reservoir (West Canada Creek) and Graffenburg Reservoir springs).
[2] Finished water from Graffenburg Reservoir.
[3] In solution at time of analysis.

enlarged. Additional descriptive information is given in table 7. An analysis of the finished water indicates that the water is soft and has a low mineral content (table 8).

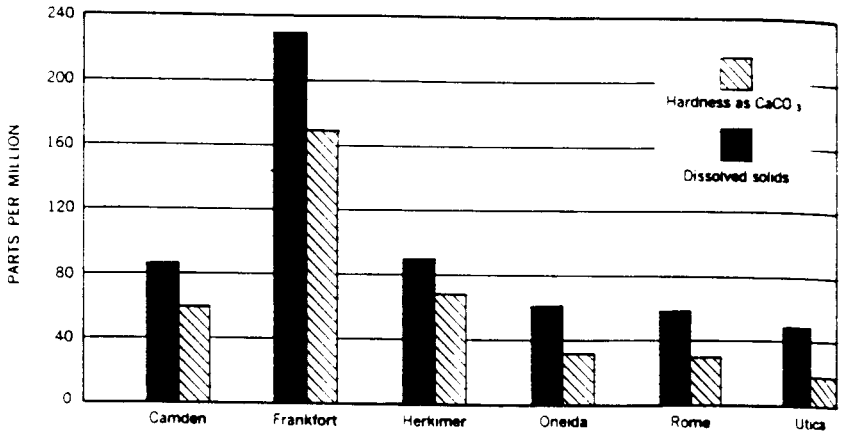

FIGURE 12.—Dissolved solids and hardness of finished water from public water supplies.

The village of Frankfort obtains its principal supply from Moyer Creek and has two wells as an auxiliary supply. The impounding reservoir on Moyer Creek has a capacity of 10 million gallons and the maximum demand by the village was 1.3 mgd in 1954. The finished water from the system is hard and contains more dissolved solids than most other public supply water in the area (fig. 12 and table 8). The village supplies water to 3 water districts serving about 400 people outside the village in the town of Frankfort. An additional 320 people in the town are supplied by the village of Ilion.

SUMMARY OF WATER USED

The estimated use of water in the Utica-Rome area averaged about 48.5 mgd in 1954 (table 9). About 57 percent, or 27.4 mgd, was supplied by municipally owned systems and 43 percent, or 21.1 mgd, was obtained from private sources. All the water for municipal supply and most of the water for industry was drawn from surface sources; only about 4 percent of the total was drawn from groundwater sources. Industry used the most water, requiring 60 percent or 29.1 mgd.

Of the 27.4 mgd furnished by public water supplies in 1954, about 35 percent was supplied to industry, about 43 percent was for domestic use, and the remaining 22 percent was for all other uses. About 40 percent of the water delivered by the city of Utica was used by industry. In the city of Rome, 57 percent of the water was used for domestic purposes and 34 percent for industrial purposes.

About two-thirds of the 29.1 mgd used by industry in 1954 was self supplied; the other one-third was purchased from public-water systems. Of the two-thirds that was self supplied, more than 99 per-

cent of the water was drawn from surface sources, the largest withdrawals being from the Mohawk River and the Erie (Barge) Canal. The ready availability of these large sources in contrast to the low yield of most aquifers accounts for the greater use of surface water. The small amount of well water used (0.2 mgd) was mostly for light industries such as dairies and bottling plants. The largest single ground-water development for industrial purposes used an average of about 44,000 gpd in 1954.

TABLE 9.—*Average use of water in the Utica–Rome area in 1954, in million gallons per day*

Use	Public supply	Self-supplied			All systems
	All surface water	Ground water	Surface water	All sources	
Domestic	11.7	1.0	------	1.0	12.7
Public, commercial, and leakage	5.9	------	------	------	5.9
Industrial	9.8	.2	19.1	19.3	29.1
Agricultural (excluding domestic use on farms)	------	.8	------	.8	.8
All uses	27.4	2.0	19.1	21.1	48.5

Industry in the Utica-Rome area uses water for cooling and processing, for boiler feed, and for sanitary and service needs. The largest amount is used as process water for production of heavy metals, paper products, and textiles. The Rome Division of Revere Copper and Brass, Inc., uses more water than any other industry in the area. Table 10 shows the quantities of water used by the various types of industries in the area.

An estimated 15,700 persons live outside areas served by the public water-supply systems and obtain most of their water from privately owned wells and springs. About 10,000 of these people live in suburban residences; the remaining 5,700 live on farms. The quantity of water used by this group of people is estimated to be 1 mgd, based on a per capita consumption of 65 gpd. This figure includes water for domestic use on farms but not for livestock or irrigation.

In the Utica-Rome area, water is used for agricultural purposes such as watering dairy cattle and poultry, irrigation, and domestic use on farms at an average rate of about 0.8 mgd, according to Ralph Hadlock, associate county agricultural agent; the principal use is by dairy cattle. During the growing season of 1954 about 6.2 million gallons was used for irrigation or about 17,000 gpd on a year-round basis. Water is applied entirely by sprinklers and is used principally

to irrigate potatoes, beans, and other vegetables, forage crops, and pastures.

TABLE 10.—*Industrial use of water, 1954*

Community and type of industry	Number of installations	Average use, (gpd)		
		All sources	Public supply	Private supply
City of Utica:				
Heavy-metal production	9	1, 583, 000	1, 514, 000	69, 000
Light-metal production	8	643, 000	643, 000	----------
Food processing	35	805, 000	762, 000	43, 000
Beverages and breweries	5	725, 000	725, 000	----------
Laundry and dry cleaning	13	262, 000	262, 000	----------
Paper products	2	1, 982, 000	192, 000	1, 790, 000
Textiles	5	7, 379, 000	372, 000	7, 007, 000
Electrical equipment	3	636, 000	636, 000	----------
Construction materials	3	26, 000	26, 000	----------
Transportation	1	204, 000	204, 000	----------
Public utilities	1	61, 000	61, 000	----------
Miscellaneous	10	172, 000	172, 000	----------
Total	95	14, 478, 000	5, 569, 000	8, 904, 000
Suburban Utica (supplied by city of Utica):				
Heavy-metal production	2	427, 000	422, 000	5, 000
Light-metal production	6	268, 000	266, 000	2, 000
Food processing	9	53, 000	40, 000	13, 000
Beverages and breweries	3	51, 000	51, 000	----------
Paper products	1	7, 000	7, 000	----------
Textiles	2	3, 328, 000	251, 000	3, 077, 000
Construction materials	1	3, 000	3, 000	----------
Miscellaneous	2	13, 000	6, 000	7, 000
Total	26	4, 150, 000	1, 046, 000	3, 104, 000
City of Rome:				
Heavy-metal production	8	8, 538, 000	1, 665, 000	6, 873, 000
Light-metal production	4	1, 156, 000	1, 156, 000	----------
Food processing	10	105, 000	102, 000	3, 000
Laundry and dry cleaning	3	36, 000	36, 000	----------
Beverages and breweries	1	5, 000	5, 000	----------
Textiles	1	19, 000	19, 000	----------
Miscellaneous	10	81, 000	81, 000	----------
Total	37	9, 940, 000	3, 064, 000	6, 876, 000
Other communities:				
Heavy-metal production	4	84, 000	80, 000	4, 000
Light-metal production	1	20, 000	----------	20, 000
Food processing	6	97, 000	34, 000	63, 000
Beverages and breweries	2	46, 000	----------	46, 000
Paper products	2	255, 000	----------	255, 000
Miscellaneous	5	8, 000	1, 000	7, 000
Total	20	510, 000	115, 000	395, 000
Total, all communities	178	29, 078, 000	9, 794, 000	19, 284. 000

More than half the water for livestock and domestic use on farms is drawn from springs; the remainder is obtained from wells. Farm ponds supply a small part of the water used for watering stock.

POSSIBILITY OF FURTHER DEVELOPMENT

Ample supplies of water are available in most of the Utica-Rome area for all uses. The Utica municipal supply is capable of furnishing much more water to current or potential users than is presently demanded, by virtue of its right to divert 50 mgd from Hinckley Reservoir. The present demand upon the public supply of the city of Rome is near the rated capacity of the present system, which is being enlarged.

The area can be supplied with much more surface water. The Mohawk River and the Erie (Barge) Canal and its two feeders near the area, Delta and Hinckley Reservoirs, are the major sources. The larger tributaries of the Mohawk River within the area, Oriskany and Sauquoit Creeks, can supply moderate quantities of water.

Ground water is available in moderate quantities from extensive deposits of sand and gravel along the main river channels or in a few buried valleys. This is true especially if the bodies of coarse-grained materials are in a position to be recharged with surface water.

The quality of the surface water is generally fair. Ground water from the unconsolidated deposits is generally of good quality and can be used for most purposes with little treatment.

MOHAWK RIVER LOWLAND

The Mohawk River is a source of water for large potential development. The present withdrawal from the Mohawk River and Erie (Barge) Canal is only a small part of the flow, and much of the water withdrawn is not consumed. The flow below Delta Dam, where the river enters the area, equals or exceeds 108 mgd 90 percent of the time; and the flow at Little Falls, about 10 miles east of the point where the river leaves the Utica-Rome area, equals or exceeds 560 mgd 90 percent of the time. The quality of the water is fair and is probably satisfactory for most uses or can be made satisfactory by suitable treatment. The Mohawk River is an important potential source of water for industrial, agricultural, and fire-fighting uses in its present condition. The impounded water in Delta Reservoir and the water in the Mohawk River are potential sources for municipal supply if treated.

The valley fill of the Mohawk River lowland includes many bodies of coarse-grained sand and gravel that are potential sources of ground water. The water generally is of good quality and is suitable for most uses without treatment. The most favorable areas of potential

development are the extensive plains between Rome and Delta Reservoir, the flood plain of the Mohawk River between Rome and Frankfort, and the valley lowland of Ninemile Creek below Holland Patent. Deposits of sand and gravel underlying the northern part of the plain between Rome and Delta Reservoir are a potentially productive source of moderate supplies of ground water because they are highly permeable and are saturated for most of their thickness. Available test data indicate that yields of about 300 gpm or larger can be obtained. The valley fill underlying the flood plain of the Mohawk River is mostly fine sand, clay, and silt; however in some places these fine-grained materials are interstratified with sand and gravel. Drill data and information from a few industrial wells indicate that wells yielding as much as 500 gpm can be developed at sites where the sand and gravel aquifers are hydraulically connected with the river. Where the aquifers are not connected with the river, wells are likely to yield 80 gpm or less. The sand and gravel deposits in Ninemile Creek valley are a potentially productive source because they are thick and saturated throughout much of their thickness. Maximum sustained yields are not indicated from existing data. The most favorable area of potential development in Ninemile Creek valley is along the axis of a buried bedrock channel southwest of Floyd and north of the present creek.

OTHER POTENTIAL SOURCES

Several creeks and smaller streams tributary to the Mohawk River and draining the upland areas of the valley in the Utica-Rome area have well-sustained low flows and are important sources for potential development. Oriskany and Sauquoit Creeks are examples of such streams. Miscellaneous flow measurements on Sauquoit Creek, for example, show that the creek has a probable flow that equals or exceeds 0.33 mgd per square mile 90 percent of the time. The mineral content of water in streams draining the south slopes of the Mohawk valley is high and may require treatment before it can be used by industries and municipalities.

Coarse-grained sand and gravel deposits adjacent to the smaller streams may yield small to moderate quantities of water. These deposits are much smaller than those in the Mohawk River lowland, but where they are hydraulically connected with adjacent streams, they may yield dependable supplies. Industrial wells tapping sand and gravel deposits in the Oriskany and Sauquoit Creek valleys have yielded from 64 to 170 gpm. The water from these wells probably has a high content of dissolved solids.

The public water-supply may be the most satisfactory source of water for industrial use in the Utica-Rome area. The cities of Utica

and Rome now serve a large percentage of the industries. The capacities of the systems will exceed present peak demands for many years and the sources of water are adequate for expansion. The maximum daily use of water by the city of Utica in 1954 was less than half the 50 mgd that the city may divert from Hinckley Reservoir. The finished water from the public supply systems is of good quality and meets all U.S. Public Health Service standards for drinking water.

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REFERENCE NO. 31

STATE OF NEW YORK

OFFICIAL COMPILATION

OF

CODES, RULES AND REGULATIONS

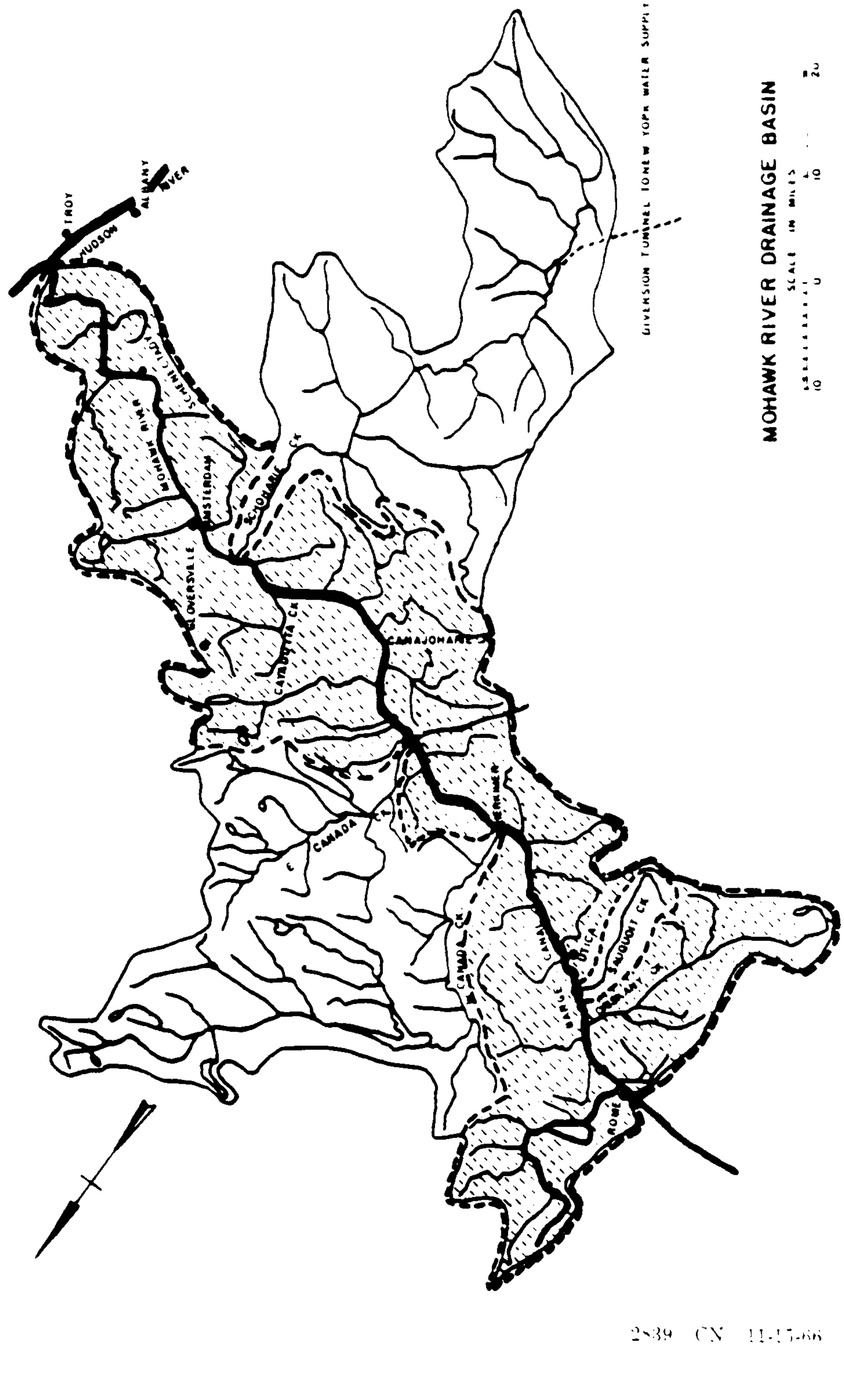
MARIO M. CUOMO
Governor

GAIL S. SHAFFER
Secretary of State

Published by
DEPARTMENT OF STATE
162 Washington Avenue
Albany, New York 12231

1/83

876.5 Map 1.

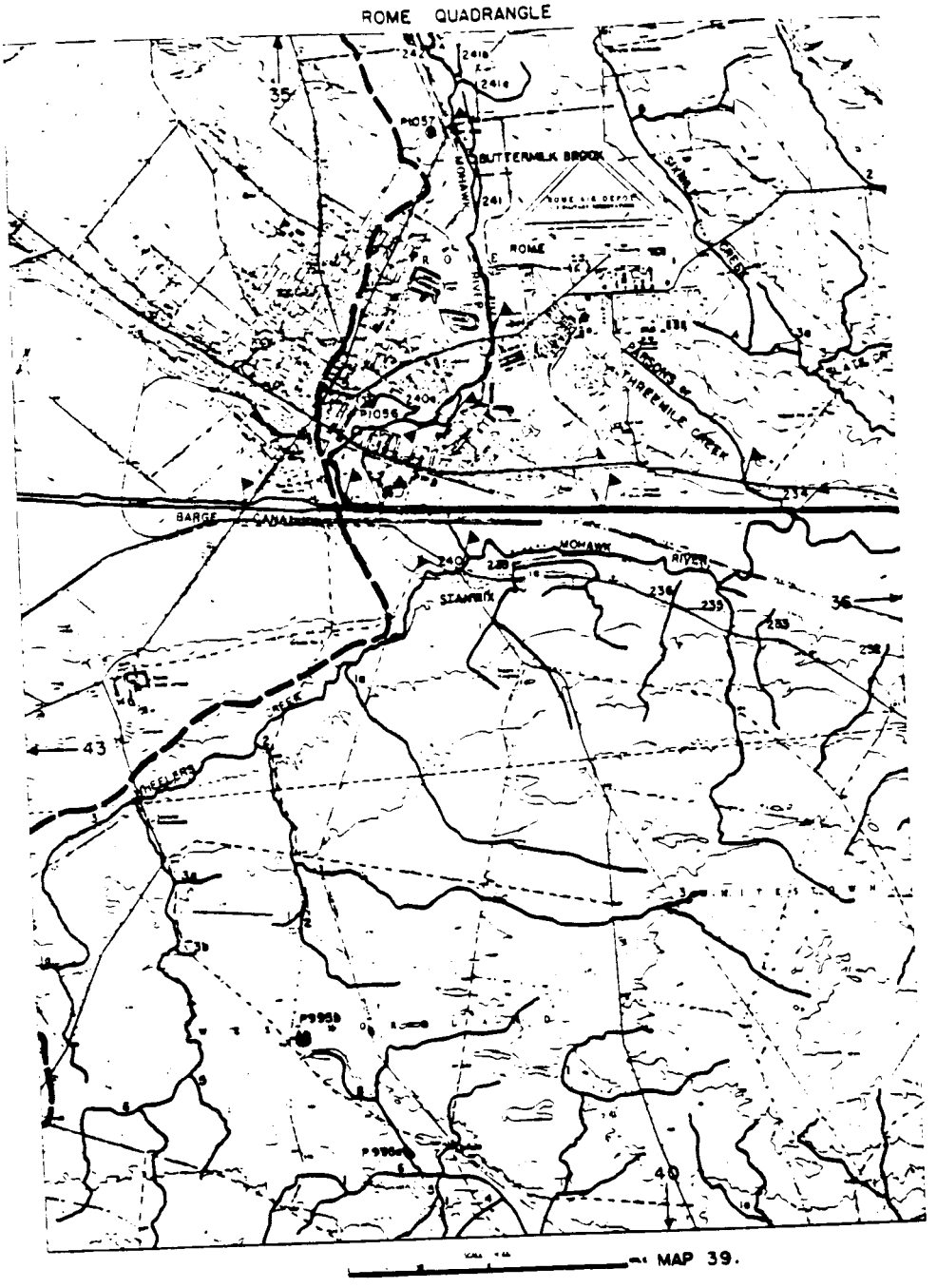

MOHAWK RIVER DRAINAGE BASIN
SCALE IN MILES
DIVERSION TUNNEL TO NEW YORK WATER SUPPLY
TROY
HUDSON
ALBANY
RIVER
MOHAWK RIVER
AMSTERDAM
SCHOHARIE CK
GLOVERSVILLE
CANAJOHARIE
CANADA
UTICA
BARGE CANAL
ROME

877.4 Table I.

TABLE I

Classifications and Standards of Quality and Purity Which Are Assigned to Fresh Surface Waters within the Mohawk River Drainage Basin

Item No.	Waters Index Number	Name	Description	Map Ref. No.	Class	Standards
1	240 portion as described	Mohawk River	From the boundary line between the towns of Floyd and Marcy to Floyd Avenue Bridge in City of Rome.	36 39	C	C
2	240 portion as described	Barge Canal	From trib. 227 (Ninemile Creek) west to edge of drainage basin.	36 39	C	C


ROME QUADRANGLE
BUTTERMILK BROOK
ROME
THREEMILE CREEK
BARGE CANAL
MOHAWK RIVER
STANWIX
WHEELERS CREEK
MAP 39.

REFERENCE NO. 32

REFERENCE NO. 34

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

Thomas C. Jorling
Commissioner

MAR 26 1991

Ms. Dorothy Ponte
c/o N.U.S. Corp
1090 King George's Post Road
Suite 1103
Edison, NJ 08837

Dear Ms. Ponte:

Re: Request for Information Relevant to the Sampling of the Revere Copper & Brass Property (Site ID #633008)

This letter is in response to your recent telephone request for information concerning sampling of the Revere Copper & Brass Co. property (Site ID #633008) in Rome, New York on July 1, 1987.

I have enclosed a copy of the field notes and the analytical results for your information.

If you have any further questions or comments, please feel free to contact me at (518) 457-0747.

Sincerely,

Thomas M. Koch

Thomas M. Koch
Solid Waste Management Specialist II
Site Control Section
Bureau of Hazardous Site Control
Division of Hazardous Waste Remediation

Enclosures

CURVE FORMULAS

$T = R \tan \frac{1}{2} I$

$T = \frac{50 \tan \frac{1}{2} I}{\text{Sin. } \frac{1}{2} D}$

$\text{Sin. } \frac{1}{2} D = \frac{50}{R}$

$\text{Sin. } \frac{1}{2} D = \frac{50 \tan \frac{1}{2} I}{T}$

$R = T \cot. \frac{1}{2} I$

$R = \frac{50}{\text{Sin. } \frac{1}{2} D}$

$E = R \text{ ex. sec } \frac{1}{2} I$

$E = T \tan \frac{1}{4} I$

$\text{Chord def.} = \frac{\text{chord}^2}{R}$

$\text{No. chords} = \frac{I}{D}$

Tan. def. = ½ chord def.

The square of any distance, divided by twice the radius, will equal the distance from tangent to curve. very nearly.

To find angle for a given distance and deflection.

Rule 1. Multiply the given distance by .01745 (def. for 1° for 1 ft.) and divide given deflection by the product.

Rule 2. Multiply given deflection by 57.3, and divide the product by the given distance.

To find deflection for a given angle and distance. Multiply the angle by .01745, and the product by the distance.

GENERAL DATA

RIGHT ANGLE TRIANGLES. Square the altitude, divide by twice the base. Add quotient to base for hypotenuse.

Given Base 100, Alt. $10.10^2 \div 200 = .5$. $100 + .5 = 100.5$ hyp.

Given Hyp. 100, Alt. $25.25^2 \div 200 = 3.125$; $100 - 3.125 = 96.875$ = Base.

Error in first example, .002; in last, .045.

To find Tons of Rail in one mile of track: multiply weight per yard by 11, and divide by 7.

LEVELING. The correction for curvature and refraction, in feet and decimals of feet is equal to $0.574 d^2$, where d is the distance in miles. The correction for curvature alone is closely, $\frac{2}{3} d^2$. The combined correction is negative.

PROBABLE ERROR. If d_1, d_2, d_3, etc. are the discrepancies of various results from the mean, and if Σd^2 = the sum of the squares of these differences and n = the number of observations, then the probable error of the mean $= \pm 0.6745 \sqrt{\frac{\Sigma d^2}{n(n-1)}}$

MINUTES IN DECIMALS OF A DEGREE

1'	.0167	11'	.1833	21'	.3500	31'	.5167	41'	.6833	51'	.8500
2	.0333	12	.2000	22	.3667	32	.5333	42	.7000	52	.8667
3	.0500	13	.2167	23	.3833	33	.5500	43	.7167	53	.8833
4	.0667	14	.2333	24	.4000	34	.5667	44	.7333	54	.9000
5	.0833	15	.2500	25	.4167	35	.5833	45	.7500	55	.9167
6	.1000	16	.2667	26	.4333	36	.6000	46	.7667	56	.9333
7	.1167	17	.2833	27	.4500	37	.6167	47	.7833	57	.9500
8	.1333	18	.3000	28	.4667	38	.6333	48	.8000	58	.9667
9	.1500	19	.3167	29	.4833	39	.6500	49	.8167	59	.9833
10	.1667	20	.3333	30	.5000	40	.6667	50	.8333	60	1.0000

INCHES IN DECIMALS OF A FOOT

1-16	3-32	⅛	5-16	¼	5-16	⅜	7-16	½	9-16	⅝	¾
.0052	.0078	.0104	.0156	.0208	.0260	.0313	.0417	.0521	.0625	.0729	
1	2	3	4	5	6	7	8	9	10	11	
.0833	.1667	.2500	.3333	.4167	.5000	.5833	.6667	.7500	.8333	.9167	

Revere Copper & Brass
Rome, Oneida Co.
near Culverton & Mayberry Streets
Rome, N.Y.
Site ID N°: 633008

1 soil/sediment sample is to be taken @ this site.

Contacted ERCO lab on 6/24 & placed an order for sample bottles. Placed the order w/ Clyde Tressler.

Sample bottles arrived by Fed X-Press on 6-26-87. All bottles were in good shape.

Samples are to be analysed for priority pollutants.

Sample ID N°

SH87633008010/

Site Visit on
July 1, 1987

Arrive on site @ 11:20 AM.
Site is located across the street from the plant.

The site was used for C & D waste from the old plant that was dismantled.

Present for the sampling were

Tom Koch
Darrel Swerdzewski
Greg Townsend

from Revere were:
Dave Hunt &
Malcolm Bingaman

We split the sample w/ the representatives from Revere.
Sample taken 11:45 AM.

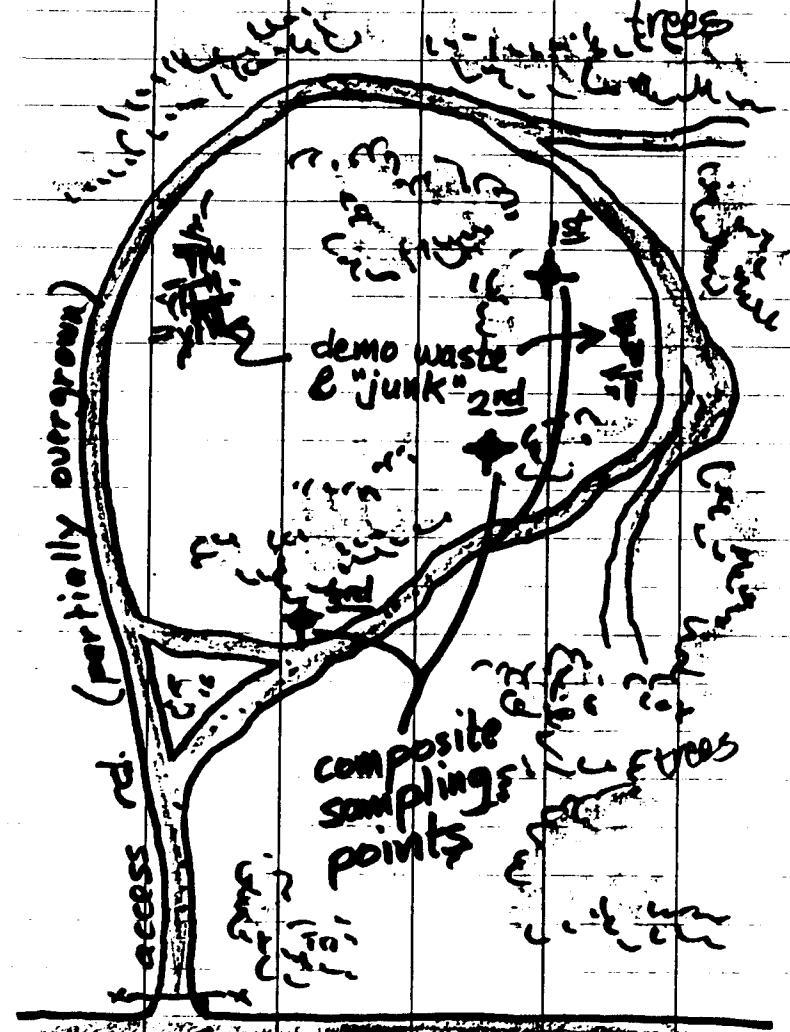
The area was completely overgrown w/ grass & trees Some evidence of old concrete block.

We brought the photovac tip back thru the entire area. There was no reading anywhere on this site.* There was no odor anywhere around the property. (except for flowers)

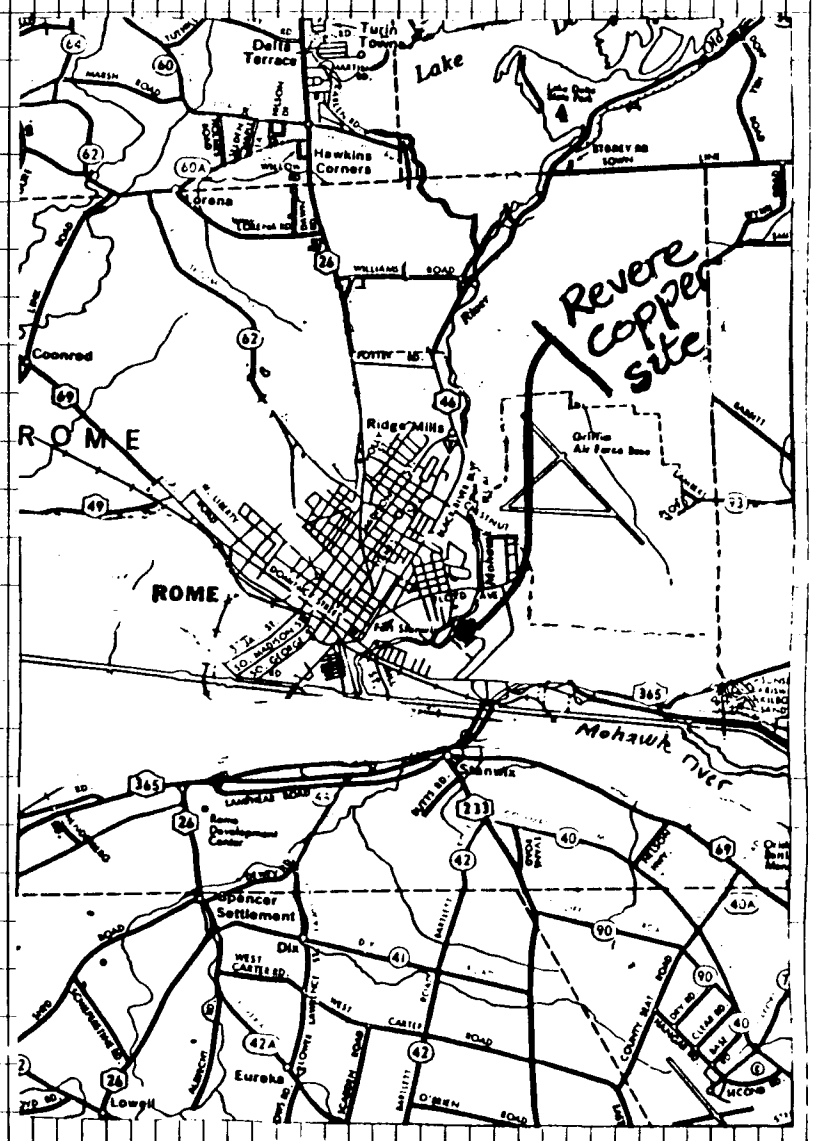
*we checked the operation of the photovac w/ a magic marker; it was working okay.

Weather conditions:

Mild, low 70s, overcast no wind. Site was dry.



Revere Copper Parking Area



Site location map

Details of the Sampling:

A composite sample was taken by Darrel Swerenowski. Sample soil was taken from 3 locations on the property approximately where shown on the map sketch. The soil at both sites was placed on the deconned stainless steel tray & thoroughly mixed. We split the sample w/ the Revere team. They used the extra bottles that we had left over from Duxbol. The soil was dry & gravelly. There was NO odor noted. Photovac reading: negative. Sample was completed @ 11:45 AM.

After sampling, the equipment was deconned, samples were put in the cooler & we left the site.

General Site Observations:

The site is a heavily treed area about 3-4 acres in area directly across from the Revere Copper & Brass parking lot. Demo waste from the old Revere bldgs. was dumped here years ago. Most of the old waste (concrete block, brick & wood) was buried. We did note piles of some "junk" in one section of the property (see map-sketch). The "junk" consisted of old mattresses, wood, etc.

As noted before, there was no photovac readings noted on the property. The only odors noted were from flowers & plants on site. The soil on site was gravelly & dry. All vegetation on site looked very healthy - no evidence of distress.

The nearest houses to this site were less than 200 ft. away.

Samples & all appropriate paper-work were delivered to the Fed X-Press office near Water-town (Talcott Falls) @ about 5 PM on 7/1. I called ERCO on 7/2 & confirmed that the samples arrived okay.

Revere Copper
Collecting part of the Composite

1st Composite point

Revere Copper
2nd Composite point.

Note:
Composite soil samples were taken about 10 inches ± below the surface.

New York State
DEC

Sample Number
87633008010

Organics Analysis Data Sheet
(Page 1)

Revere Copper & Brass

Laboratory Name: Enseco, Inc - Erco Lab
Lab Sample ID No: 87-009385
Sample Matrix: ~~Water~~ ~~TM~~ Soil
Data Release Authorized By: [signature]

Invoice No: —
QC Report No: —
Contract No: Coo428
Date Sample Received: 7.2.87

Volatile Compounds

633008

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 7.10.87
Date Analyzed: 7.10.87
Conc/Dil Factor: 1.7 pH —
Percent Moisture: (Not Decanted) 14%

CAS Number		ug/l or (ug/Kg) (Circle One)
74-87-3	Chloromethane	17U
74-83-9	Bromomethane	17U
75-01-4	Vinyl Chloride	17U
75-00-3	Chloroethane	17U
75-09-2	Methylene Chloride	34B
67-64-1	Acetone	17U
75-15-0	Carbon Disulfide	8.5U
75-35-4	1, 1-Dichloroethene	8.5U
75-34-3	1, 1-Dichloroethane	8.5U
156-60-5	Trans-1, 2-Dichloroethene	8.5U
67-66-3	Chloroform	8.5U
107-06-2	1, 2-Dichloroethane	8.5U
78-93-3	2-Butanone	17U
71-55-6	1, 1, 1-Trichloroethane	8.5U
56-23-5	Carbon Tetrachloride	8.5U
108-05-4	Vinyl Acetate	17U
75-27-4	Bromodichloromethane	8.5U

CAS Number		ug/l or (ug/Kg) (Circle One)
78-87-5	1, 2-Dichloropropane	8.5U
10061-02-6	Trans-1, 3-Dichloropropene	8.5U
79-01-6	Trichloroethene	8.5U
124-48-1	Dibromochloromethane	8.5U
79-00-5	1, 1, 2-Trichloroethane	8.5U
71-43-2	Benzene	8.5U
10061-01-5	cis-1, 3-Dichloropropene	8.5U
110-75-8	2-Chloroethylvinylether	17U
75-25-2	Bromoform	8.5U
108-10-1	4-Methyl-2-Pentanone	17U
591-78-6	2-Hexanone	17U
127-18-4	Tetrachloroethene	8.5U
79-34-5	1, 1, 2, 2-Tetrachloroethane	8.5U
108-88-3	Toluene	8.5U
108-90-7	Chlorobenzene	8.5U
100-41-4	Ethylbenzene	8.5U
100-42-5	Styrene	8.5U
	Total Xylenes	8.5U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 µg/l and a concentration of 3 µg/l is calculated, report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

Laboratory Name ENSECO INC.

New York Department of Environmental Conservation

Sample Number #876330080101

Organics Analysis Data Sheet (Page 2)

9585

Revere Copper & Brass

Semivolatile Compounds

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 7-10-87

Date Analyzed 7-24-87

Conc/Dil Factor: 1

Percent Moisture (Decanted) 7

GPC Cleanup ☐Yes ☑No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	360u
111-44-4	bis-2-Chloroethyl)Ether	360u
95-57-8	2-Chlorophenol	360u
541-73-1	1 3-Dichlorobenzene	360u
106-46-7	1 4-Dichlorobenzene	360u
100-51-6	Benzyl Alcohol	360u
95-50-1	1 2-Dichlorobenzene	360u
95-48-7	2-Methylphenol	360u
39638-32-9	bis(2-chloroisopropyl)Ether	360u
106-44-5	4-Methylphenol	360u
621-64-7	N-Nitroso-Di-n-Propylamine	360u
67-72-1	Hexachloroethane	360u
98-95-3	Nitrobenzene	360u
78-59-1	Isophorone	360u
88-75-5	2-Nitrophenol	360u
105-67-9	2 4-Dimethylphenol	360u
65-85-0	Benzoic Acid	1800u
111-91-1	bis-2-Chloroethoxyl)Methane	360u
120-83-2	2 4-Dichlorophenol	360u
120-82-1	1 2 4-Trichlorobenzene	360u
91-20-3	Naphthalene	130j
106-47-8	4-Chloroaniline	360u
87-68-3	Hexachlorobutadiene	360u
59-50-7	4-Chloro-3-Methylphenol	360u
91-57-6	2-Methylnaphthalene	81j
77-47-4	Hexachlorocyclopentadiene	360u
88-06-2	2 4 6-Trichlorophenol	360u
95-95-4	2 4 5-Trichlorophenol	1800u
91-58-7	2-Chloronaphthalene	360u
88-74-4	2-Nitroaniline	1800u
131-11-3	Dimethyl Phthalate	360u
208-96-8	Acenaphthylene	360u
99-09-2	3-Nitroaniline	1800u

d=coelution

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	260j
51-28-5	2 4-Dinitrophenol	1800u
100-02-7	4-Nitrophenol	1800u
132-64-9	Dibenzofuran	170j
121-14-2	2 4-Dinitrotoluene	360u
606-20-2	2 6-Dinitrotoluene	360u
84-66-2	Diethylphthalate	360u
7005-72-3	4-Chlorophenyl-phenylether	360u
86-73-7	Fluorene	270j
100-01-6	4-Nitroaniline	1800u
534-52-1	4 6-Dinitro-2-Methylphenol	1800u
86-30-6	N-Nitrosodiphenylamine (1)	74j
101-55-3	4-Bromophenyl-phenylether	360u
118-74-1	Hexachlorobenzene	360u
87-86-5	Pentachlorophenol	1800u
85-01-8	Phenanthrene	2900
120-12-7	Anthracene	540
84-74-2	Di-n-Butylphthalate	360u
206-44-0	Fluoranthene	3500
129-00-0	Pyrene	3400
85-68-7	Butylbenzylphthalate	360u
91-94-1	3 3'-Dichlorobenzidine	730u
56-55-3	Benzo(a)Anthracene	1400
117-81-7	bis(2-Ethylhexyl)Phthalate	73j
218-01-9	Chrysene	1700
117-84-0	Di-n-Octyl Phthalate	360u
205-99-2	Benzo(b)Fluoranthene	2400d
207-08-9	Benzo(k)Fluoranthene	2400d
50-32-8	Benzo(a)Pyrene	1300
193-39-5	Indeno(1 2 3-cd)Pyrene	530
53-70-3	Dibenzo(a h)Anthracene	180j
191-24-2	Benzo(g h i)Perylene	470

(1)-Cannot be separated from diphenylamine

DF

Laboratory Name ERCO/ENSECO

Case No ______

Sample Number
SH96530080101

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 7-10-87

Date Analyzed 8-3-87 ; 8-7-87

Conc/Dil Factor (10)

Percent Moisture (decanted) 9

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

Reverse

CAS Number		ug/l or (ug/Kg) (Circle One)
319-84-6	Alpha-BHC	80U
319-85-7	Beta-BHC	80U
319-86-8	Delta-BHC	80U
58-89-9	Gamma-BHC (Lindane)	80U
76-44-8	Heptachlor	80U
309-00-2	Aldrin	80U
1024-57-3	Heptachlor Epoxide	80U
959-98-8	Endosulfan I	80U
60-57-1	Dieldrin	160U
72-55-9	4 4 -DDE	160U
72-20-8	Endrin	160U
33213-65-9	Endosulfan II	160U
72-54-8	4 4 -DDD	160U
1031-07-8	Endosulfan Sulfate	160U
50-29-3	4 4 -DDT	160U
72-43-5	Methoxychlor	800U
53494-70-5	Endrin Ketone	160U
57-74-9	Chlordane	800U
8001-35-2	Toxaphene	1600U
12674-11-2	Aroclor-1016	800U
11104-28-2	Aroclor-1221	800U
11141-16-5	Aroclor-1232	800U
53469-21-9	Aroclor-1242	800U
12672-29-6	Aroclor-1248	800U
11097-69-1	Aroclor-1254	800U
11096-82-5	Aroclor-1260	800U

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s NA or W_s 27.1 V_t 10,000 V_i 2.0

Laboratory Name: ERCO / DIVISION OF ENECO

Case No: NEW YORK STATE D.E.C.

Sample Number: SW8530080101

Organics Analysis Data Sheet
(Page 4)

Reverse

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.		C1-PHENANTHRENE/ANTHRACENE ISOMER	BNA	1173	1100
2.		UNKNOWN	BNA	1321	910
3.	57-11-4	OCTADECANOIC ACID	BNA	1335	1600
4.		$C_{17}H_{12}$ ISOMER	BNA	1365	620
5.		UNKNOWN PAH	BNA	1513	710
6.		$C_{19}H_{14}$ ISOMER	BNA	1563	1100
7.		Unknown	BNA	1615	610
8.		Unknown	BNA	1633	800
9.		Unknown	BNA	1643	1200
10.		Unknown	BNA	1686	590
11.	198-97-2	BENZO(e)PYRENE	BNA	1699	1000
12.		Unknown	BNA	1723	1700
13.		Unknown	BNA	1732	880
14.		Unknown	BNA	1801	680
15.		Unknown	BNA	1842	950
16.		Unknown	BNA	1873	980
17.		Unknown	BNA	1893	770
18.		Unknown	BNA	1915	620
19.		Unknown	BNA	2016	580
20.		Unknown	BNA	2111	1200
21.		unknown hydrocarbon	VOA	827	8.9
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

AVC

Revere Copper & Brass

Date 7-23-87

COVER PAGE

INORGANIC ANALYSIS DATA PACKAGE

000001

Lab Name: RMAL

Project No. N/A

APPROVED: Lab Manager [signature]

Q.C. Report No. 59123

Sample Numbers

NYSDEC ID	ERCO SAMPLE NO	RMA SAMPLE NO	NYSDEC ID	ERCO SAMPLE NO	RMA SAMPLE NO
S...76 3...0010101	9384	59123-01	S...6330080101	~~9384~~ ~~9385~~	59123-~~01S~~ 02
Duplicate	9384	59123-01D	spike	~~9385~~ 9384	59123-~~02S~~ 01S

PARAMETERS	METHOD #	DETECTION LIMIT	SOURCE
TOTAL PHENOL	420.1	0.01 MG/KG	1

COMMENTS 2 soils for total phenol analysis.

SOURCE:
1="METHODS FOR CHEMICAL ANALYSIS OF WATER AND WASTES", USEPA-EMSL, CINCINNATI.

Footnotes:

NR - not required by contract at this time.
Value - If the result is a value greater than or equal to the instrument detection limit but less than the contract required detection limit report the value in brackets (i.e.,[10]). Indicate method used with P (for ICP/Flame AA), F (for furnace) & CV (for Cold Vapor).
U - Indicates element was analyzed for but not detected. Report with the detection limit value (e.g., 10U).
E - Indicates a value estimated or not reported due to the presence of interference. Explanatory note included on cover page.
S - Indicates value determined by Method of Standard Addition.
R - Indicates spike sample recovery is not within control limits.
* - Indicates duplicate analysis is not within control limits.
+ - Indicates the correlation coefficient for method of standard addition is less than 0.995.

RMA SAMPLE NO
59124-02
ERCO SAMPLE NO
9385

Revere

INORGANIC ANALYSIS DATA SHEET

Lab Name: RMAL

Project No.

Q.C. Report No. 59124

Matrix: SOIL

Elements Identified and Measured

1.	ANTIMONY	12U	MG/KG	P R
2.	ARSENIC	5.7U	MG/KG	F
3.	BERYLLIUM	0.57U	MG/KG	P
4.	CADMIUM	13	MG/KG	P
5.	CHROMIUM	23	MG/KG	P
6.	COPPER	3840	MG/KG	P *
7.	CYANIDE	0.57U	MG/KG	AS
8.	LEAD	86	MG/KG	F *
9.	MERCURY	0.32	MG/KG	CV
10.	NICKEL	50	MG/KG	P
11.	SELENIUM	2.9U	MG/KG	F
12.	SILVER	2.3U	MG/KG	P R
13.	THALLIUM	5.7U	MG/KG	F
14.	ZINC	5180	MG/KG	P R *

PERCENT SOLIDS (%) 87

COMMENTS: Lead value is reported at an additional 10x dilution

Reverse important Note

NARRATIVE

RMA QC#: 59123

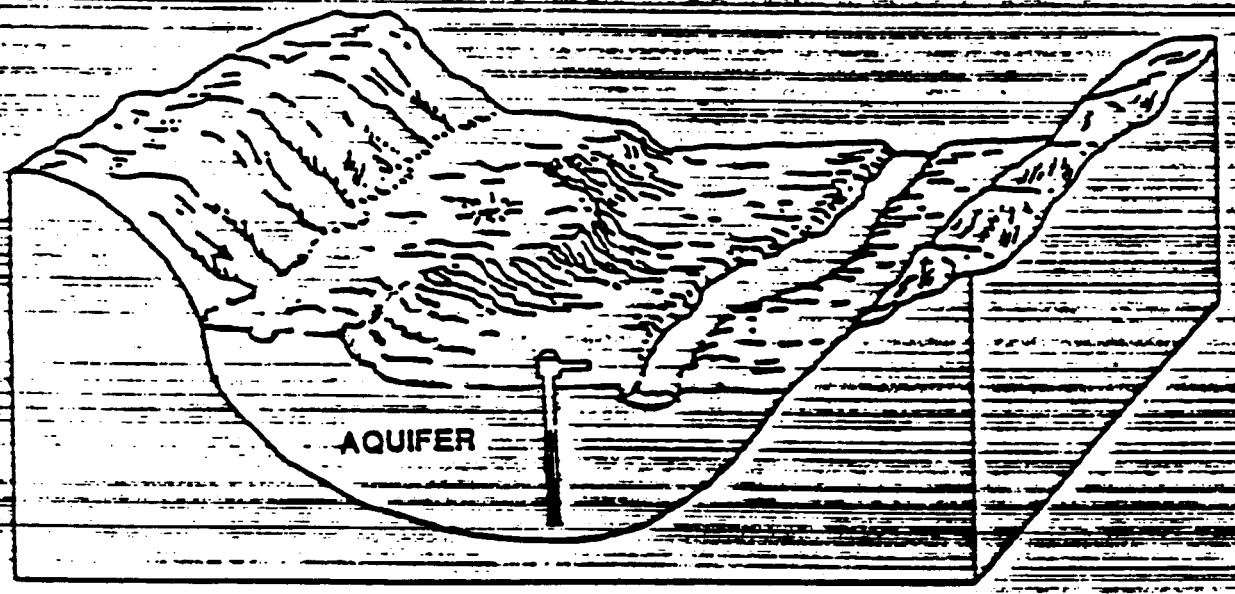
COMMENTS: Sample 59123-02 was spiked instead of sample 59123-01.

LAB MANAGER: KLO

REFERENCE NO. 35

Department of Environmental Conservation

PROPOSED NEW YORK STATE WELLHEAD PROTECTION PROGRAM



Submittal

to

United States Environmental Protection Agency

New York State Department of Environmental Conservation

MARIO M. CUOMO, *Governor* THOMAS C. JORLING, *Commissioner*

May 1990

Approved by EPA
9/90

emphasized. A number of different zones may be delineated for a single water supply to provide different levels of management. The management options may range from selected land use prohibitions to specialized design specifications, enhanced facility inspections, or increased monitoring and education.

The remedial action area approach excludes high risk activities from a specifically defined zone but still allows them in more distant recharge areas. This may be refined by varying exclusions in different zones according to risk or the importance of the activity. The remedial action area concept is best applied to new or changing land uses, whereas wellfield management may be applied to existing or new land uses.

The contamination attenuation zone approach described by EPA is difficult to strictly apply due to limited capabilities to accurately predict chemical migration and persistence. In addition, the New York State groundwater standards apply to all fresh groundwaters, reducing the utility of an attenuation zone approach.

3.2.3. Delineation Policy

The underlying objective of delineation is to use different degrees of management to control risks to water supplies. The significant diversity in geological conditions, aquifer use, and in local government capabilities across New York State indicates that the approach to delineation can not be uniform and rigid for all locations.

The ideal technical goal of wellhead delineation is to have sufficient knowledge of the hydrogeology of each public water supply well or wellfield to allow precise determination of the catchment area along with accurate times-of-travel for the entire flow system. Such information is not uniformly available across the state. New information will become available unevenly as funding from various local, state and federal sources is applied to specific priority areas.

In this setting, the New York State Wellhead Protection Program proposes general recognition of high-yielding aquifers (both confined and unconfined) as the fundamental wellhead protection area units. As described in Section 3.2.4., this policy recognizes that more targeted delineations will be necessary on Long Island because it is entirely an aquifer. Also, bedrock aquifers are not adequately characterized now to allow this approach; however, most of the major, high-yielding aquifers in New York are in unconsolidated deposits. Within the wellhead protection area, delineation of an area designated as the remedial action area is proposed, as described in Sectin 3.2.5.

This policy is intended to reinforce public and management program recognition of the need to protect high-yielding aquifers. It takes advantage of considerable past and ongoing work on aquifer mapping and delineation and will permit further progress in communities which have already delineated aquifer boundaries and protection areas. These communities may directly proceed to management implementation or may utilize available funds on more advanced hydrogeologic evaluations within the WHPA, depending on local needs and goals.

Within this framework, utilization of alternative delineation approaches (such as time-of-travel) is allowed and encouraged. In most cases, such alternative approaches would be applied to subdividing the WHPA within the unconsolidated aquifer boundaries for applying different levels of management. The WHPA itself would remain the area defined by aquifer boundaries. In some cases, such as for bedrock aquifers, the alternative approaches may be used to redefine the WHPA itself. The Department of Environmental Conservation will be responsible for providing guidance for such alternative approaches.

3.2.4. Wellhead Protection Area Delineations

The wellhead protection area delineation approach is summarized in Table 3.1. It recognizes that the aquifer system on Long Island and bedrock aquifers in Upstate New York must be treated differently than the unconsolidated aquifers in Upstate. The unconsolidated aquifer boundaries for the wellhead protection areas are those delineated on a series of maps titled

TABLE 3.1.
WELLHEAD PROTECTION AREA
DELINEATION SUMMARY

Geographic Region	Aquifer Area	Wellhead Protection Area Baseline Delineation
Long Island	Magothy & Lloyd Aquifers	Deep Flow Recharge Area
	Glacial Aquifer	Simplified Variable Shape: 1,500 ft. radius upgradient 500 ft. radius downgradient
Upstate	Unconsolidated Aquifers	Aquifer Boundaries (land surface)
	Bedrock Aquifers	Fixed Radius: 1,500 ft. radius

Potential Yields of Wells in Unconsolidated Aquifers in Upstate New York" by the U.S. Geological Survey. Specifically, these maps, distributed for sale by the U.S. Geological Survey, are as follows:

1. Bugliosi, E.F., et al., 1988. Potential Yields of Wells in Unconsolidated Aquifers in Upstate New York - Lower Hudson Sheet. Water Resources Investigations Report 87-4274. U.S. Department of the Interior, Geological Survey, Albany, NY.

2. Bugliosi, E.F., et al., 1988. Potential Yields of Wells in Unconsolidated Aquifers in Upstate New York - Hudson Mohawk Sheet. Water Resources Investigations Report 87-4275, U.S. Department of the Interior, Geological Survey, Albany, NY.

3. Bugliosi, E.F., et al., 1988. Potential Yields of Wells in Unconsolidated Aquifers in Upstate New York - Adirondack Sheet. Water Resources Investigations Report 87-4276, U.S. Department of the Interior, Geological Survey, Albany, NY.

4. Miller, T.S., 1988. Unconsolidated Aquifers in Upstate New York - Finger Lakes Sheet. Water Resources Investigations Report 87-4122, U.S. Department of the Interior, Geological Survey, Albany, NY.

5. Miller, T.S., 1988. Potential Yields of Wells in Unconsolidated Aquifers in Upstate New York - Niagara Sheet. Water Resources Investigations Report 88-4076. U.S. Department of the Interior, Geological Survey, Albany, NY.

The boundaries illustrated on these maps serve as the total wellhead protection areas for public water supplies utilizing those aquifers. In certain cases, more detailed aquifer boundary maps or determinations for primary or principal aquifers (subsets of the full range of unconsolidated aquifers) have been or will be made by the U.S. Geological Survey or NYS Department of Environmental Conservation. These more detailed boundary determinations will generally supersede boundaries illustrated on the above referenced maps as "revised" delineations of wellhead protection areas.

Both unconfined and confined unconsolidated aquifers are included on these maps and both are included in this definition of the overall wellhead protection area.

For all public water supplies utilizing groundwater, the overall wellhead protection area (WHPA) delineation will be subdivided into two parts. The innermost zone is referred to as the Remedial Action Area. The remainder of the WHPA is referred to as the Wellfield Management Area. The terminology is derived from the EPA guidance referenced earlier. Depending on local management objectives for groundwater protection, local hydrogeology, and data availability and resource availability, the Wellfield Management Area may be further subdivided. This further subdivision of the Wellfield Management Area would be considered a refinement of the "baseline" delineation. Methodologies, criteria and thresholds used for such revisions are flexible. Approaches proposed by local water purveyors will be evaluated and approved or disapproved upon submittal to the New York State Department of Environmental Conservation.

The term "baseline" delineation, as used in this submittal, is intended to represent the initial WHPA delineation advocated by the Department of Environmental Conservation. The delineation may be directly utilized in implementing management activities for groundwater protection. However, if site-specific conditions suggest that alternative delineations are appropriate (including the further subdivision of the Wellfield Management Area already cited), those delineations may be accepted by the Department of Environmental Conservation. The evolution of improved delineation techniques, the growing availability of hydrogeologic information, and the longer-term enhancements of groundwater protection programs may lead to a redefinition of the baseline delineations by the Department of Environmental Conservation.

These baseline delineations apply to public water supply wells. Applicants for new public water supply wells may be required to perform

rnative site-specific delineations according to conditions stipulated through the Water Supply Permit Program (refer to Chapter 7).

The proposed WHPA delineations are described according to the following geographic and hydrogeologic settings. They are also summarized in Table 3.1.

- Unconsolidated Aquifers - Upstate New York

1. WHPA Definition:

The boundaries of wellhead protection areas for public water supplies in unconsolidated aquifers in Upstate New York are the land surface boundaries of the aquifers as illustrated on the five-aquifer sheet maps for Upstate published and distributed by the U.S. Geological Survey (see earlier reference). These boundaries may be revised in accordance with more detailed primary and principal aquifer maps and boundary determinations as approved by the Department of Environmental Conservation. The maps provide definition for both unconfined and confined aquifers. Revisions of these boundaries may be made, pending approval by the Department of Environmental Conservation.

2. Rationale:

The delineations proposed above are hydrogeologically-based and are consistent with the policies and goals of the Upstate Groundwater Management Program already adopted and certified by the Governor of New York as an element of the New York State Water Quality Management Plan.

3. Mapping and Case Studies:

Mapping of these areas is already completed and published. Case studies are not considered appropriate, as the maps have been reviewed and approved by the U.S. Geological Survey and the Department of Environmental Conservation as part of the publication process.

4. Public Water Supply Significance:

The large majority of public water supplies using groundwater, particularly for municipal and community systems, are located in unconsolidated aquifers. It is expected that a significant proportion of additional future supplies will also tap these systems.

- Bedrock Aquifers - Upstate New York

1. WHPA Definition:

The baseline boundaries of wellhead protection areas for public water supplies in bedrock aquifers are fixed radius areas with a radius of 1,500 feet from the wellhead. Revisions based on site-specific information are desirable, with the goals being to identify and delineate principal recharge areas. Revisions may be developed, pending approval by the Department of Environmental Conservation.

2. Rationale:

The fixed radius approach for the initial WHPA is not based on estimated times-of-travel or drawdown. It provides a substantial increase in protection over more commonly existing protection zones (typically 100 feet or 200 feet). The principal rationale is that the baseline delineation gives a basis for immediate action on wellfield management without requiring expensive site-specific delineations. Revisions based on local conditions are encouraged, particularly for municipal community systems, of which there are relatively few in the State. The geographic targeting benefits of uniformly delineating substantially larger fixed radius areas for all bedrock wells are very questionable. Many of the bedrock public water supply wells are among the approximately 10,000 non-community public wells (e.g., isolated public buildings, roadside rest areas, etc.). There will be little geographic targeting advantage for groundwater protection programs if

numerous 3 to 12 square mile WHPA's (1-2 mile radius) for non-community wells intersect or nearly intersect across the State. It must be recognized that all fresh groundwaters in bedrock aquifers are classified as GA groundwaters and thus are already protected by substantial statewide protection programs which use rigorous ambient water quality standards in their design.

3. Mapping and Case Studies:

Mapping will be performed according to the phasing priorities described in Section 3.3. Case studies of fixed radius approaches are not considered to be of significant benefit. As proposals for revisions based on alternative approaches are submitted to the Department of Environmental Conservation, they will be evaluated for potential use as models for comparable hydrogeologic conditions.

4. Public Water Supply Significance:

Relatively few municipal community systems utilize bedrock aquifers in New York State and those that do are generally with low population dependence. Public water supplies in bedrock aquifers are typically non-community wells serving small numbers of people.

Magothy and Lloyd Aquifers - Long Island

1. WHPA Definition:

The boundaries of the wellhead protection area for public water supplies using the Magothy and Lloyd aquifers are the boundaries of the Deep Flow Recharge Area as recognized by the Department of Environmental Conservation. Refinements within the overall WHPA may include further definition of Wellfield Management Areas, pending approval by the Department of Environmental Conservation.

2. Rationale:

The Deep Flow Recharge Area was determined to be the most important overall groundwater protection area for wells in the Magothy and Lloyd aquifers in the Long Island Groundwater Management Program already adopted and certified by the Governor of New York as an element of the New York State Water Quality Management Program. The delineations have also been adopted in the Suffolk County Sanitary Code.

3. Mapping and Case Studies:

Mapping of the Deep Flow Recharge Area is already completed. Additional case studies are not considered appropriate.

4. Public Water Supply Significance:

Most public water in Nassau County is withdrawn from the Magothy aquifer. The majority of public water supplies in Suffolk County are also withdrawn from the Magothy aquifer. Of those public water supplies in Suffolk County utilizing the Glacial aquifer, approximately half are located within the Deep Flow Recharge Area. Thus, these wells are included within the overall wellhead protection area for the deeper aquifers.

Glacial Aquifer - Long Island

1. WHPA Definition:

The boundaries of the wellhead protection area for public water supplies using the Glacial aquifer are defined as a fixed variable shape zone with a fixed radius in the upgradient groundwater flow direction of 1,500 feet and a fixed radius in the downgradient direction of 500 feet. Revisions may be made, pending approval by the Department of Environmental Conservation.

2. Rationale:

Fixed-shape zones are not based on calculated time-of-travel or drawdown. The proposed definition is consistent with Water Supply Sensitive Areas already delineated by Suffolk County (which contains nearly all of the Glacial wells on Long Island) and for which enhanced protection programs have already been implemented in the Suffolk County Sanitary Code. Approximately half of the Glacial wells are within the Deep Flow Recharge Area and are thus protected within a larger overall WHPA. Significant expansion of the WHPA for all Glacial wells may not provide any reasonable geographic targeting benefits, as most of the WHPA's would intersect or nearly intersect. All fresh groundwaters in the Glacial aquifer are already covered by substantial protection programs which utilize a rigorous set of ambient water quality standards.

3. Mapping and Case Studies:

Mapping of the WHPA's for Glacial wells in Suffolk County has been completed through the Water Supply Sensitive Area delineations. For the relatively few Glacial wells in Nassau County, mapping will be completed according to the phasing priorities described in Section 3.3. Case studies of fixed-shape delineations are not considered to be of significant benefit. As proposals for revisions based on alternative approaches are submitted to the Department of Environmental Conservation, they will be evaluated for potential use as models for other Glacial well delineations.

4. Public Water Supply Significance:

As stated previously, approximately one-fourth of the public water supplies in Suffolk County are based in Glacial wells that are outside of the Deep Flow Recharge Area. If Nassau County is included, only about one-eighth of the water supply dependency is from Glacial wells outside of the Deep Flow Recharge Area.

3.2.5. Remedial Action Areas

For all community public water supply wells, regardless of setting, a remedial action area will be delineated within the WHPA. For those supply wells, the proposed baseline delineation of this area will be a fixed radius zone of 200 feet radius from the well. Revisions may be made after evaluation by the Department of Environmental Conservation. For non-community public water supply wells (e.g., isolated public buildings, etc.), the existing New York State Department of Health standards for well separations (e.g., from waste disposal facilities) are to be followed.

The rationale for this baseline delineation is based upon general observations in the past that such a zone has been adequate for protection against microbiological contamination. An alternative time-of-travel basis for delineating revised remedial action area boundaries would be to use a time-of-travel from a minimum of 60-days up to one year. The 60-day period has been used in New York State and in many European countries (USEPA, EFA 440/6-87-010, Guidelines for Delineation of Wellhead Protection Areas). A one-year period is considered conservative. In certain cases, the site-specific hydrogeology (e.g., confined aquifer conditions or long times-of-travel) and the nature of existing land uses and management options may allow remedial action areas smaller than 200 feet radius.

3.2.6. Potential Refinements and Summary

Table 3.1 summarizes the baseline delineations for wellhead protection areas.

Refinements may include:

- Subdivision of the Wellfield Management Area portion of the WHPA, to allow application of different levels of management within the WHPA.
- Revision of the Remedial Action Area portion of the WHPA, according to alternative methods, including time-of-travel or drawdown analysis.

- Revised boundary determinations of the unconsolidated aquifers in Upstate, including primary and principal aquifers, or of the Deep Flow Recharge Area on Long Island.

- Alternative hydrogeologic determinations of appropriate WHPA's in bedrock aquifers or for wells in the Glacial aquifer on Long Island.

3.3. Phasing Considerations

The published unconsolidated aquifer maps cited in the previous section complete the baseline WHPA delineations for all public water supply wells within those aquifers. The completed delineation of the Deep Flow Recharge Area on Long Island has been defined according to road boundaries. That delineation defines the WHPA for all public water supply wells in the Magothy and Lloyd aquifers. The baseline WHPA boundaries for public water supply wells using the Glacial aquifer in Suffolk County have been determined by the Suffolk County Department of Health Services through its Water Supply Sensitive Area designations.

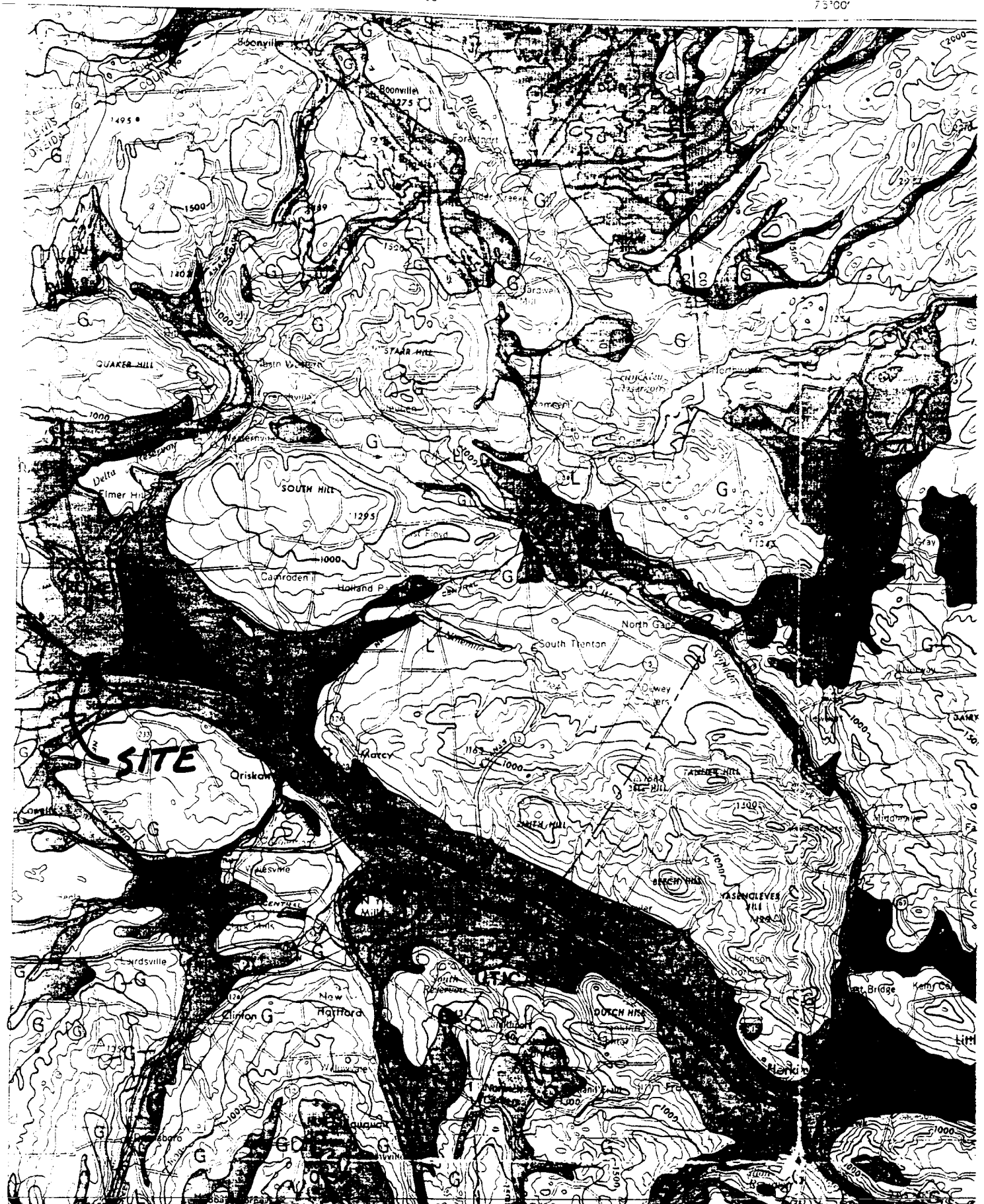
The remaining baseline WHPA boundary determiantions that are needed consist of a relatively small set of Glacial aquifer wells and public water supply wells in bedrock aquifers. The phasing priorities for these groups are, in order:

1. Municipal community wells
2. Non-municipal community wells
3. Non-community public wells

Within each priority group additional phasing may be generally ordered by population dependency with modifications made if there are significant known or suspected threats to the wells.

It is emphasized that the baseline WHPA delineations for the very large majority of public water supply wells (by population served) are completed. The delineations for the remaining bedrock wells and Glacial wells will be performed as resources permit.

D STATES DEPARTMENT OF THE INTERIOR
LOGICAL SURVEY



REFERENCE NO. 36

NUS CORPORATION AND SUBSIDIARIES — **TELECON NOTE**

CONTROL NO.:	DATE:	TIME:
02·9010-16	October 15, 1990	2:05

DISTRIBUTION:

Revere Copper Products

BETWEEN:	OF:	PHONE:
Tom Morgan	NYDEC / Water Division	(315)793-2554

AND: Susan J. Hodgkiss (NUS)

DISCUSSION:

I spoke with Mr Morgan about the Revere Copper Products Company on Seneca St. He informed me that they have several on going problems on site and are as followed: (1) Underground waste oil tanks are leaking

(2) Loss of chemical products into the ground from bulk storage tanks. (underground tanks)

(3) Air emissions from stacks have been exceed. They have been numerous Complaints

(4). Numerous complaints from Vapor recovery system.

The DEC is currently tracking groundwater contamination from leaking tanks. The NYDEC Air Division is taking care of the stack emission.

ACTION ITEMS: Mr. Morgan did not know if this site was ever reclassified ~~as~~ sml to a generator status.

Susan J. Hodgkiss
10/15/90

REFERENCE NO. 37

NUS CORPORATION AND SUBSIDIARIES — TELECON NOTE

CONTROL NO.:	DATE:	TIME:
02-9010-16	March 7, 1991	14:20

DISTRIBUTION:

Revere Copper Products, Inc.

BETWEEN:	OF:	PHONE:
Jack Marsch	Oil Spills Program NYDEC Region 6- Utica, New York	(315) 793-2554

AND:

Dorothy Ponte (NUS)

DISCUSSION:

I asked Jack if he was aware of any health problems attributable to spills which have occurred at Revere Copper Products, Inc.

He mentioned that a family residing close to the site of the stoddard solvent spill has a daughter with numerous medical problems. It is not known whether her condition can directly be attributed to the indoor air pollution derived from contaminants attributable to a plume of stoddard solvent (mineral spirits) ~~plume~~ product leaked from the Revere Copper site. His department has sampled the air inside the home of the family experiencing health problems. They obtained a 51-15 pattern which has been identified as the same as that of stoddard solvent. However, the Health Department desired more conclusive data, therefore a 31-2 scan was obtained identifying the constituents and levels of these constituents contained in the indoor air sample obtained from the particular residence.

ACTION ITEMS:

I asked him if he had any information concerning the warehouse near the elementary school. He confirmed that the property had recently been sold and that he had been present when one of the tanks was removed - He noted nothing unusual. Jack however stated that that particular property could be considered very suspicious and probably should be investigated.

REFERENCE NO. 38

NUS CORPORATION AND SUBSIDIARIES — TELECON NOTE

CONTROL NO.:	DATE:	TIME:
02-9010-16	March 7, 1991	9:15

DISTRIBUTION:

Revere Copper Products, Inc.

BETWEEN:	OF: NYDEC Environmental Quality Watertown, New York	PHONE:
Darrell Swieredowski		(315) 785-2513

AND: Dorothy Ponte (NUS)

DISCUSSION:

I asked Darrell specific information concerning chemical testing of soil and water matrices at Revere Copper Products, Inc., Rome, New York.

Darrell stated that there never was any chemical testing of the neutralization pit/lagoon which had been drained, filled and capped by the company. He stated that only soil testes were performed at the landfill (site number 633008). He was unaware of the dump site located near the old soap factory off of Sixth street.

He directed me to call Tom Koch at the central office in Albany, New York for further information concerning results of soil tests conducted at the landFill. (518) 457-0747. He also suggested I contact Tom Morgan concerning the status of the facility. (315) 793-2554.

He stated DEC files of Revere Copper Products, Inc. at his office were not very large. Therefore he again suggested I contact Tom Koch.

ACTION ITEMS:

Phoned Tom Koch and left a message with his secretary.

REFERENCE NO. 39

NUS CORPORATION AND SUBSIDIARIES — TELECON NOTE

CONTROL NO.:	DATE:	TIME:
02-9010-16	March 7, 1991	10:00

DISTRIBUTION:

Revere Copper Products, Inc.

BETWEEN:	OF: NYDEC/	PHONE:
Tom Morgan	Water Division	(315) 793-2554

AND:

Dorothy Ponte (NUS)

DISCUSSION:

I asked Tom if Revere Copper Products, Inc - Riverdale was an ongoing generator of hazardous waste. He stated that yes the company was still a generator. He could not tell me offhand when the company obtained generator status only. Tom also verified the location of the waste source facility corresponding to EPA I.D. Number NYD071586127 as the brick warehouse somewhat parallel to the former site of the neutralization pit/lagoon. He stated that Seneca Street corresponded to the administrative offices for all of Revere Copper Products, Inc. divisions in Rome, New York. Previously, all wastes were generated and stored in the aforementioned brick warehouse. I mentioned to Tom that that piece of property appears to have been recently sold by the company to another entity (Rome Realty Corp). Mr. Morgan was unaware of the recent (December '90) sale of the approximately 6 acre size property.

ACTION ITEMS:

He stated that the facility utilizes a sulfuric acid recovery system on site. Revere Copper Products, Inc. is not a "big" solvent producer. Presently sludges are generated out of the plating operations. The lead tining operation generates lead sludge. Electroplating and copper plating operations generate a "less" toxic waste sludge.

NUS CORPORATION AND SUBSIDIARIES — TELECON NOTE

CONTROL NO.:	DATE:	TIME:
02-9010-16	March 7, 1991	10:00

DISTRIBUTION:

Revere Copper Products, Inc.

BETWEEN:	OF:	PHONE:
Tom Morgan	NYDEC Water Division	(315) 793-2554

AND:

Dorothy Ponte (NUS)

DISCUSSION Continued:

Tom stated that generally all underground tanks at the facility have decayed and leaked over time. Some of the chemical products leaked into the ground have caused odor problems in basements of neighboring residents. There may have been allegations of illness. He directed me to phone Jack Marsch, head of the Oil Spills program at the Utica DEC office - (315) 793-2554. He recommended I speak with Jack's department over the County Health Department, as the County Health Department is concerned mostly with inspections of restaurants and other similar facilities. He stated no one is using groundwater to his knowledge for drinking purposes in the region surrounding the facility. He is not aware of any tank removal from the old powerhouse (or brick warehouse) corresponding to the EPA ID Number NYD071586127. He stated that groundwater monitoring near the site has detected hydrocarbons and constituents of petroleum products, however unless a tracer were utilized these contaminants ~~could~~ can not be attributed to any particular waste source location at the site.

Tom was also unable to identify what waste source (TSD facility) corresponded to NYDEC ID. Number NYD002206894. He has no record of this number in his computer file.

ACTION ITEMS:

Phoned Jack Marsch 3/07/91 13:25 - he is out at Albany.

REFERENCE NO. 40

NUS CORPORATION AND SUBSIDIARIES — **TELECON NOTE**

CONTROL NO.:	DATE:	TIME:
02-9010-16	March 6, 1991	15:30

DISTRIBUTION:

Revere Copper Products, Inc.

BETWEEN:	OF: Tax Assessor's Office	PHONE:
Jean Mahoney	Rome, Oneida Cty, NY	(315) 339-7614

AND:

Dorothy Ponte (NUS)

DISCUSSION:

I asked Jean if she could provide me with the names of previous and current owners of Revere Copper Products, Inc. property.

Revere Copper Products, Inc. property in Rome, New York is as follows:

Property description	Location	Size	Current/Previous Owner
Revere Printing Inc.	100 Bouck Street, Rome		Revere Copper Products, Inc./NA
Railroad Street Manufacturing Division - Main Office Tax ID Nos. 242.068-1-77 242.020-1-16.1	320 East Dominick and 200 Railroad Street, Rome	13.148 acres	Nash Metalware Co. Inc./ Revere Copper Products, Inc.
Revere Business Office Tax ID. No. 242.020-1-16.2	211 Mill Street, Rome	4.3816 acres	Rome Realty Corp./Revere Copper Products, Inc.
Brown's Soap Factory ~~Tax ID No. 243.013-1-1.4~~	Near the cast shop of Revere Copper Products Inc. - Riverdale off of Sixth Street, Rome.		Revere Copper Products, Inc./N/A

DP

ACTION ITEMS:

Brick warehouse Tax ID No. 243.013-1-1.4	Across from Columbus Avenue Elementary School	5.15 acres	Rome Realty Corp./ Revere Copper Products, Inc.
Riverdale Rome Manufacturing Division Tax ID No. 243.013-1-1.1	Off of Seneca Street, Rome	79.39 acres	Revere Copper Products, Inc./N/A

NUS CORPORATION AND SUBSIDIARIES — **TELECON NOTE**

CONTROL NO.:	DATE:	TIME:
02-9010-16	March 6, 1991	15:30

DISTRIBUTION:

Revere Copper Products, Inc.

BETWEEN:	OF: Tax Assessor's Office	PHONE:
Jean Mahoney	Rome, Oneida County, New York	(315) 339-7614

AND:

Dorothy Ponte (NUS)

DISCUSSION: cont'd.:

Jean stated that the facility in Riverdale originally was 84.4 acres in size and that in December 1990 Revere Copper Products, Inc. sold 5.15 acres to Rome Realty Corp. This property contains the old brick warehouse located near Columbus Avenue Elementary School. (Note from Dorothy: this property also corresponds to the warehouse known as the old generator building which is addressed as the Seneca Street Tranfer Storage and Disposal Facility (TSDF) location corresponding to EPA Identification Number NYD071586127.)

Revere Copper Products, Inc presently is 79.39 acres in size. The current listing for the Facility includes the Rolling Mill plant in the Riverdale section off of Seneca Street. The main office or manufacturing division of Revere Copper was sold to Nash Metalware Co., Inc. Nash Metalware currently owns the 320 East Dominick Street property (an 8.15 by 43 foot size parking lot) and the Railroad Street property known formerly as the Revere Copper Products Rome manufacturing division for pots and pans.

ACTION ITEMS:

Revere Copper Products, Inc. manufactures wire and heavy duty cables in its manufacturing plant in Riverdale.

Brown's soap factory was in operation from 1930-1947 when the company sold the property to Revere Copper Products, Inc.

NUS CORPORATION AND SUBSIDIARIES — **TELECON NOTE**

CONTROL NO.:	DATE:	TIME:
02-9010-16	March 6, 1991	15:30

DISTRIBUTION:

Revere Copper Products, Inc.

BETWEEN:	OF:	PHONE:
Jean Mahoney	Tax Assessors Office Rome, Oneida County, NY	(315) 339-7614

AND:

Dorothy Ponte (NUS)

DISCUSSION cont'd.:

Nash Metalware is a firm out of New York City. It's address in Rome on the former Revere property on Railroad street is:

200 Railroad Street, Rome, New York

phone number: (315) 339-5794

The address for Revere Painting Inc. is: 100 Bouck St, Rome

phone number: (315) 339-2224

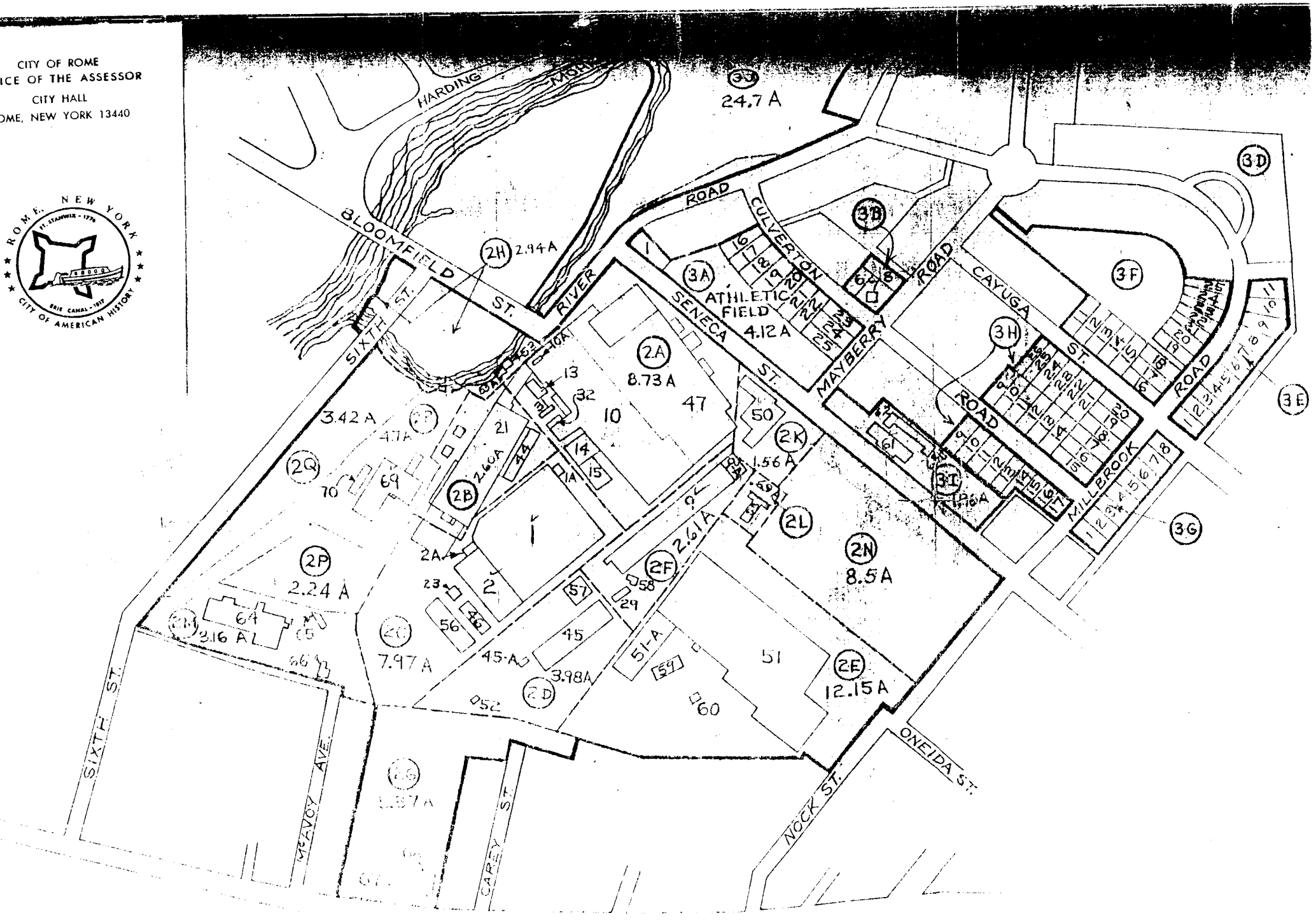
Revere Copper Products, Inc. had property on Mill Street which was sold to General Cable Corporation. General Cable split off from manufacturing. Charles Gaetano presently owns the General Cable Corp. part of the property previously owned by Revere's Rome manufacturing division. The other property, as previously mentioned, was aquired by Nash Metalware Co., Inc.

ACTION ITEMS:

Jean will be sending a tax map of Revere Copper Products, Inc. with a matching key to NUS Corp., in Edison, NJ.

REFERENCE NO. 41

CITY OF ROME
ICE OF THE ASSESSOR
CITY HALL
OME, NEW YORK 13440



TAX PARCEL		ACRES
1C	(PORTION S.F.)	.55
2A	Tube Mill	(TOTAL) 8.73
2B	Last Shop	2.60
2C	Bar + Rod	7.97
2D	Lab + Mach Shop	3.98
2E	Rolling Mill	12.15
2F	Metal Shipping	2.61
2G	~~Pattern Storage~~	5.37
2H	Pump House	2.94
2K	Main Office	1.56
2L	Personnel	.69
2M	T.A + Storehouse	3.16
2N	Parking Lot	8.50
2P	South of Rome Soap	1.34
2Q	Between Sixth St + Rome Soap	2.12
2R	Rome Soap	4.70
3A		(TOTAL—70.6)
3E		2.12
3F	(LOTS 11 THRU 18)	1.98
	(LOTS 19 THRU 25)	1.36
	(UNDIVIDED AREA)	1.00
3G		2.96
3H	(18 LOTS NORTH OF CULVERTON ROAD)	1.32
	(9 LOTS SOUTH OF CULVERTON ROAD)	3.00
3L	Research	1.28
3M		1.96
3B	(RIVERDALE STORE)	24.7
		(TOTAL-44.2) .504

GRAND TOTAL 115.4

APR 1 1964

5-21-59-fdc
5-5-53-RAM
DATE LAST REV. 4-27-54-RAM

RASS | DATE OF PRINT | DATE | INITIALS | APPROVED | SUBJECT LAND OF ROME DIVISION REVERE COPPER & BRASS INCORPORATED | NO. R-104

REFERENCE NO. 42

NUS CORPORATION
SUPERFUND DIVISION

PROJECT NOTES

TO: File

DATE: March 19, 1991

FROM: Dorothy Ponte

COPIES:

SUBJECT: NYS DEC Region 6 Oil and Hazardous Material Spill - Fact sheets for Revere Copper Products, Inc. site, TDD No. 02-9010-16.

REFERENCE:

A file search was conducted at NYSDEC Region 6 by NUS Corporation on December 5, 1990.

Fact sheets delineating Oil and Hazardous Material Spills at the site were obtained for recent spills which have occurred on site. Attached are fact sheets for spill numbers 8701259, 9002016, 9003743, 9003912, and 9002750.

NYS DEC Region 6
Oil & Hazardous Material Spill - Fact Sheet
10/25/89

Spill Name: REVERE COPPER PRODUCTS
Spill No: 8701259

Spill Time: 1400
Spill Date: 05/14/87

Spill Name: REVERE COPPER PRODUCTS
Spill No: 8701259

Central Office Date: 05/14/87
Central Office Time: 1540

Answering Service Date: / /
Answering Service Time: 0

Regional Office Date: 05/14/87
Regional Office Time: 1550

Material Class: Petroleum
Petroleum Spilled: No Data Entered
Other Material: STODDARD SOLVENT

Quantity Spilled: 0.00
Quantity Recovered: 0.00
Spill Cause: Equipment failure

Spiller: REVERE COPPER PRODUCTS
Street: ROME DIVISION
City, State, Zip: ROME, NY 13440
Telephone: 315-338-2022

Spill Source: Commercial est. (no petro for sale)
Spill Location: ROME DIVISION
Municipality: ROME C
County: ONEIDA SWIS Code: 30

Waterbody:
Notifier: Responsible entity/spiller

Resources Affected: Ground water
Drainage Basin: 1201

Remarks:

UNDERGROUND PIPELINE FAILED;PINHOLES IN PIPE;SHUT OFF;IN PROCESS OF REPLACING PIPE;F.PEDUTO SUGGESTE D LEAVE AREA EXPOSED FOR INVESTIGATION

Caller:
Affiliation:
Telephone:

Pin Number: 99290
Status: A
Cleaner: Spiller

T/A: 4269
Cost Center Code (St.): 90992906--89
Clean Date: / /
Date I.S.R. sent to C.O.: / /

UST Trust Eligible?: No
Cost Center Code (Fed):

PBS Number: 0
Tank ID Numbers:

Close Date: / /

Investigator: MARSCH
Last Update: 10/25/89

NYS DEC Region 6
Oil & Hazardous Material Spill - Fact Sheet
06/11/90

Spill Name: REVERE COPPER PRODUCTS
Spill No: 9002016

Spill Time: 630
Spill Date: 05/22/90

Spill Name: REVERE COPPER PRODUCTS
Spill No: 9002016

Central Office Date: 05/22/90
Central Office Time: 832

Answering Service Date: 05/22/90
Answering Service Time: 816

Regional Office Date: 05/22/90
Regional Office Time: 924

Material Class: Petroleum
Petroleum Spilled: Waste oil
Other Material:

Quantity Spilled: 0.00 G
Quantity Recovered: 0.00 G
Spill Cause: Unknown

Spiller: REVERE COPPER PRODUCTS
Street:
City, State, Zip: ROME, NY 13440
Telephone: 315-338-2474

Spill Source: Commercial est. (no petro for sale)
Spill Location: REVERE COPPER, SENECA ST.
Municipality: ROME (C)
County: ONEIDA SWIS Code: 30

Waterbody:
Notifier: Responsible entity/spiller

Resources Affected: On land
Drainage Basin: 1201

Remarks:
SHUT DOWN EQUIPMENT. CONTINUING INVESTIGATION.

Caller: DAVID HUNT
Affiliation: REVERE COPPER PRODUCTS
Telephone: 315-338-2474

Pin Number: 0
Status: C
Cleaner: Spiller

T/A: 0
Cost Center Code (St.):
Clean Date: 05/29/90
Date I.S.R. sent to C.O.: / /

UST Trust Eligible?: No
Cost Center Code (Fed):

PBS Number: 129550
Tank ID Numbers:

Close Date: 05/29/90

Investigator: CARRIER
Last Update: 06/11/90

NYS DEC Region 6
History Records For Spill Number 9002016
06/11/90

DATE	HISTORY
05/23/90	CHECKED OUTFALL AT CANAL. CLEAR - NO SHEEN OR DISCOLORATION. (NC)
05/29/90	CHECKED OUTFALL - ALL PILLOWS AND BOOMS REMOVED. MINOR SHEEN OBSERVED. CLOSE THIS SPILL - REFER TO 8810130. (NC)

NYS DEC Region 6
Oil & Hazardous Material Spill - Fact Sheet
07/16/90

Spill Name: REVERE COPPER
Spill No: 9003743

Spill Time: 0
Spill Date: 07/03/90

Spill Name: REVERE COPPER
Spill No: 9003743

Central Office Date: 07/03/90
Central Office Time: 1424

Answering Service Date: / /
Answering Service Time: 0

Regional Office Date: 07/03/90
Regional Office Time: 1433

Material Class: Petroleum
Petroleum Spilled: PCB oil
Other Material:

Quantity Spilled: 100.00 G
Quantity Recovered: 0.00 G
Spill Cause: Other (see Remarks)

Spiller: REVERE COPPER
Street: SENECA STREET
City, State, Zip: ROME, NY 13440
Telephone: 315-338-2474

Spill Source: Commercial est. (no petro for sale)
Spill Location: REVERE COPPER, SENECA ST.
Municipality: ROME
County: ONEIDA SWIS Code: 30

Waterbody:
Notifier: Responsible entity/spiller

Resources Affected: On land
Drainage Basin: 1201

Remarks:
TRANSFORMER OIL SPILLED. IN PROCESS OF CLEANING UP.

Caller: DAVE HUNT
Affiliation: REVERE COPPER
Telephone: 315-338-2474

Pin Number: 0
Status: C
Cleaner: Spiller

T/A: 0
Cost Center Code (St.):
Clean Date: 07/12/90
Date I.S.R. sent to C.O.: / /

UST Trust Eligible?: No
Cost Center Code (Fed):

PBS Number: 0
Tank ID Numbers:

Close Date: 07/12/90

Investigator: MASON
Last Update: 07/16/90

NYS DEC Region 6
History Records For Spill Number 9003743
07/16/90

DATE	HISTORY
07/03/90	CALLED DAVE HUNT AT 1440, NO ANSWER. LEFT MESSAGE ON ANSWERING MACHINE. (HM)
07/09/90	EXCAVATION OF CONTAM. SOIL UNDER WAY. SOIL SAMPLING & LAB ANALYSIS BEING PERFORMED. REVERE HAD KNOWLEDGE OF SPILL ON 6/15/90 OR EARLIER. POSSIBLE GW CONTAM. (HM)
07/06/90	PCB OIL RANGE RECENTLY TESTED 48 TO 61 PPM. (HM)
07/09/90	13 BBLS OF CONTAMINATED SOIL EXCAVATED MANUALLY, AT LEAST 8 MORE TO GO PER LARRY PRIEVO.ONLY APPROX 30 GAL REPORTED LY SPILLED, ALTHOUGH I SUSPECT MUCH LARGER HISTORICAL AMOUNT AT W WALL CAST SHOP (HM)
07/12/90	SPILL ADMINISTRATIVELY CLOSED. REFERRED TO D SWEREDOSKI FOR PCB SOIL FOLLOWUP. (HM)

NYS DEC Region 6
Oil & Hazardous Material Spill - Fact Sheet
07/25/90

Spill Name: REVERE COPPER & BRASS,INC
Spill No: 9003912

Spill Time: 1215
Spill Date: 07/09/90

Spill Name: REVERE COPPER & BRASS,INC
Spill No: 9003912

Central Office Date: 07/09/90
Central Office Time: 1536

Answering Service Date: / /
Answering Service Time: 0

Regional Office Date: 07/09/90
Regional Office Time: 1300

Material Class: Petroleum
Petroleum Spilled: Waste oil
Other Material:

Quantity Spilled: 0.00 G
Quantity Recovered: 0.00 G
Spill Cause: Unknown

Spiller: REVERE COPPER & BRASS INC
Street: SENECA STREET
City, State, Zip: ROME, NY 13440
Telephone: 315-338-2474

Spill Source: Commercial est. (no petro for sale)
Spill Location: LOCOMOTIVE AVE.
Municipality: ROME (C)
County: ONEIDA SWIS Code: 30

Waterbody:
Notifier: Private citizen

Resources Affected: On land
Drainage Basin: 1201

Remarks:

CALLER NOTED REVERE EMPLOYEE SHOVELING SOIL OFF GROUND WITHIN LAST 1/2 HR. TO 45 MINUTES. DURING RO UTINE SKIMMING OF 20,000 GAL. TANK INSIDE FENCE NEAR LOCOMOTIVE AVE.

Caller: WAYNE SCHULER
Affiliation: CITIZEN
Telephone:

Pin Number: 0
Status: C
Cleaner: No Action Taken

T/A: 0
Cost Center Code (St.):
Clean Date: 07/18/90
Date I.S.R. sent to C.O.: / /

UST Trust Eligible?: No
Cost Center Code (Fed):

PBS Number: 0
Tank ID Numbers:

Close Date: 07/18/90

Investigator: CARRIER
Last Update: 07/25/90

NYS DEC Region 6

History Records For Spill Number 9003912

07/26/90

DATE	HISTORY
07/09/90	TO BE INVESTIGATED DURING NEXT VISIT TO SITE BY SPILL STAFF. (HM)
07/18/90	PER D. HUNT "NO KNOWLEDGE OF ANY SPILL." (NC)

NYS DEC Region 6
Oil & Hazardous Material Spill - Fact Sheet
08/13/90

Spill Name: REVERE COPPER PRODUCTS
Spill No: 9002750

Spill Time: 1600
Spill Date: 06/08/90

Spill Name: REVERE COPPER PRODUCTS
Spill No: 9002750

Central Office Date: 06/11/90
Central Office Time: 838

Answering Service Date: / /
Answering Service Time: 0

Regional Office Date: 06/08/90
Regional Office Time: 1600

Material Class: Petroleum
Petroleum Spilled: Waste oil
Other Material:

Quantity Spilled: 0.00 G
Quantity Recovered: 0.00 G
Spill Cause: Sloppy housekeeping

Spiller: REVERE COPPER PRODUCTS
Street: BOX 300
City, State, Zip: ROME, NY 13440
Telephone: 315-338-2474

Spill Source: Commercial est. (no petro for sale)
Spill Location: REVERE COPPER PRODUCTS
Municipality: ROME (C)
County: ONEIDA SWIS Code: 30

Waterbody:
Notifier: DEC

Resources Affected: On land
Drainage Basin: 1201

Remarks:

6/8/90-WORKER PULLING HOSE OFF PUMP CART/OIL RAN OUT OF HOSE ON TO GROUND/ADVISED HUNT TO EXCAVATE/3 X POLAROIDS TAKEN.

Caller: NEAL CARRIER
Affiliation: DEC
Telephone: 315-793-2554

Pin Number: 0
Status: C
Cleaner: Spiller

T/A: 0
Cost Center Code (St.):
Clean Date: 06/11/90
Date I.S.R. sent to C.O.: / /

UST Trust Eligible?: No
Cost Center Code (Fed):

PBS Number: 0
Tank ID Numbers:

Close Date: 06/11/90

Investigator: CARRIER
Last Update: 08/13/90

NYS DEC Region 6
History Records For Spill Number 9002750
08/13/90

DATE	HISTORY
06/11/90	COVERED WITH SPEEDI DRY FRIDAY. SD & OIL HAND DUG CLEAN. CLOSE. (NC)

REFERENCE NO. 43

Interim

INVESTIGATIVE SUMMARY REPORT

To: Thomas Quinn, Bureau of Spill Response, Rm 326 Date: 08/27/90
From: Regional Spill Engineer Region: 6

Spill Number: 8701259 Pin No: 99290
Cost Center(S): 90992906--89 T/A Code: 4269
Cost Center(F):

Spill Date: 05/14/87
Date Cleanup Completed: / / Date Spill Reported: 05/14/87

Amount Spilled: 0 Petroleum Spilled: No Data Entered
Amount Recovered: 0 Material Spilled: STODDARD SOLVENT

Spill Name: REVERE COPPER PRODUCTS
Owner's Name: Revere Copper Products, Inc.

Spill Location: ROME DIVISION
City/Town: ROME C
County: ONEIDA

Resources Impacted: Ground water, indoor air - The groundwater under the spiller's property and in the adjacent neighborhood contains stoddard solvent, #2 fuel oil, #6 fuel oil and/or gasoline. Three homes located next to the property have detectable quantities of stoddard solvent in the living areas and basements.

Caller:
Affiliation:
Telephone:

Name of Spiller: REVERE COPPER PRODUCTS
Street: ROME DIVISION
City, State, Zip: ROME, NY 13440

Name of Spiller: _____
Street: _____
City, State, Zip: _____

Region: 6 Spill Number: 8701259 Pin No: 99290

Source and cause of spill: Commercial est. (no petro for sale)

In May 1987, Revere Copper discovered a discrepancy in their inventory of mineral spirits (stoddard solvent). A subsequent investigation revealed several small holes in an underground solvent return line.

Investigation Performed

X Pictures taken
X Samples results (water, soil, air). Please circle
X Gas chromatograph tapes available
___ Witness statement/Name & Address. (If yes, identify below.)
___ Police report
X Hydrogeological report available
X Boring logs
X Letter of responsibility sent
___ Motor vehicle accident report:
License No._____ Vehicle Type_____
___ ECO ticket issued/violation _____
X Other (please describe) site assessments performed by O'Brien & Gere, Northeast Research Institute, Engineering Science, and Empire Soil Investigations.

Conclusion: Since 1987, the spiller has hired four consulting firms to perform repetitious studies of the problem. The spiller has refused to follow up on recommended corrective action of their own consultants, and has refused to admit that the spill has spread into the adjacent residential neighborhood. They refuse to take a positive, aggressive cleanup action and appear to want to study the spill until it migrates away.

X Recommendation for penalty attached.
___ Penalty is not recommended as ECL violations are pursued.
___ Penalty is not recommended.

Jack Marsch
Regional Spill Investigator
8/27/90
Date

Judy Drabicki
Regional Attorney
9/18/90
Date

Region: 6 Spill Number: 8701259 Pin No: 99290

Penalty Recommendation

Provisions of law violated:

- __X___NL #173 (Prohibition of discharge of petroleum)
- ______NL #175 and 17 NYCRR #32.3 (Failure to notify of spill)
- __X___NL #176.1 and NYCRR #32.5 (Containment of discharge required)
- __X___ECL #17-0501 (General prohibition against pollution)
- ______ECL #17-1743 (Reporting of spills)
- __X___ECL #71-1941 (Penalties for spills)
- ______ECL Article 17, Title 10 (Violation of Bulk Storage Law or regulations [specify]): __________

State facts supporting conclusion that penalty is appropriate:

While readily admitting a spill occurred, the spiller has stonewalled for three years, conducted study after study while the pollutants continue to migrate off site into a populated residential neighborhood.

If they had implemented positive aggressive cleanup in 1987, cleanup costs and environmental damage could have been reduced.

Amount of penalty: $30,000,000.00

Jack Marsh
Spill Engineer
9/20/90
Date

Judy Drabicki
Regional Attorney
9/24/90
Date

I have problems w/ the amount but it's a good place to start

REFERENCE NO. 44

Revere Copper Products, Inc.

REVERE

April 18, 1989

Mr. Jack Marsch
NYS Department of Environmental Conservation
207 Genesee Street
Utica, NY 13501-2885

Subject: Revere Copper Products, Inc.
Spill Number 87-1259

Dear Mr. Marsch:

With reference to your April 11, 1989 letter, attached are groundwater contour maps and Laboratory Analysis Reports pertaining to site investigations conducted by Engineering-Science at Revere during February and March 1989.

If you have any questions regarding this preliminary data please contact me 338-2474.

Very truly yours,

David L. Hunt
Environmental Supervisor

Attach (5)

cc: James Luz, NYS DEC
Robert D. Manfred, RCPI

TABLE 2

GROUNDWATER ANALYSIS
REVERE COPPER PRODUCTS, INC., ROME, NY

Well No.	February 20, 1989 Total[1] Hydrocarbons (ppm)	February 20, 1989 Components[2] Stoddard Solvent (ppm)	February 20, 1989 Components[2] #2 Fuel Oil (ppm)	March 20, 1989 Total Hydrocarbons (ppm)	March 20, 1989 Components[2] Stoddard Solvent (ppm)	March 20, 1989 Components[2] #2 Fuel Oil (ppm)
MW-1	No Sample, Dry Well			No Sample, Dry Well		
MW-2	14	ND	14	ND	ND	ND
MW-3	9	5	4	16	ND	16
MW-4	ND	ND	ND	ND	ND	ND
MW-5	13	11	2	15	13	2
MW-6	7	2	5	2	ND	2
MW-7	30	28	2	26	23	3

ND Not Detected

(1) Total hydrocarbon analysis by gas chromatograph using DOH Method 310-13. Detection limit of 0.2 ppm.

(2) The hydrocarbons found fell into two groups: one group had the retention time range of Stoddard solvent and one group had the retention time range of #2 fuel oil. The group falling into the Stoddard solvent retention time range were quantified using Stoddard solvent standards and the group falling into the fuel oil retention time range were quantified using #2 fuel oil standards.

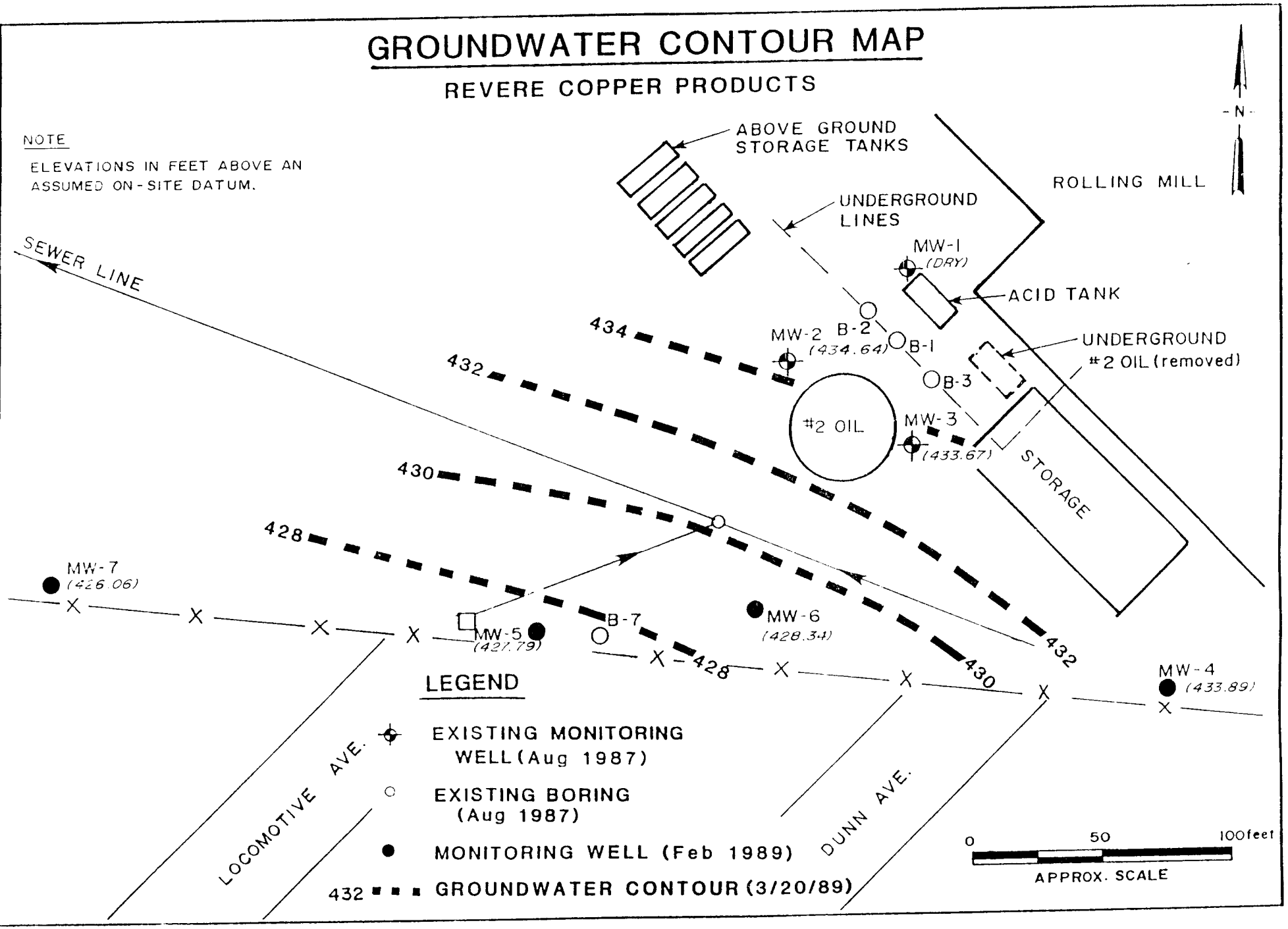

GROUNDWATER CONTOUR MAP
REVERE COPPER PRODUCTS
NOTE
ELEVATIONS IN FEET ABOVE AN ASSUMED ON-SITE DATUM.
N
ABOVE GROUND STORAGE TANKS
ROLLING MILL
UNDERGROUND LINES
MW-1 (DRY)
ACID TANK
SEWER LINE
434
MW-2 (434.64)
B-2
B-1
B-3
UNDERGROUND #2 OIL (removed)
432
#2 OIL
MW-3 (433.67)
STORAGE
430
428
MW-7 (426.06)
MW-5 (427.79)
B-7
MW-6 (428.34)
MW-4 (433.89)
LEGEND
EXISTING MONITORING WELL (Aug 1987)
EXISTING BORING (Aug 1987)
MONITORING WELL (Feb 1989)
432 GROUNDWATER CONTOUR (3/20/89)
LOCOMOTIVE AVE.
DUNN AVE.
0
50
100 feet
APPROX. SCALE

FIGURE 1

Gaison Laboratories

6601 Kirkville Road
E. Syracuse, NY 13057
Tel: (315) 432-0506
1-800-950-0506

LABORATORY ANALYSIS REPORT

Client: ENGINEERING SCIENCE, INC. Job Number: L8084
Task Number: 89032024
Location: REVERE COPPER INVESTIGATION Date Sampled: 20-MAR-1989

PETROLEUM HYDROCARBONS

Sample ID	Lab ID	MG/L	TYPE	MG/L	TYPE
MW-2	H6194A+B	<0.1	NA	NA	NA
MW-3	H6195A+B	15.8	FUEL OIL#2	NA	NA
MW-4	H6196A+B	<0.1	NA	NA	NA
MW-5	H6197A+B	2.2	FUEL OIL#2	12.8	STODDARD SOLVENT
MW-6	H6198A+B	2.3	FUEL OIL#2	NA	NA
MW-7	H6199A+B	2.9	FUEL OIL#2	22.8	STODDARD SOLVENT
LAB BLANK	H6200	<0.1	NA	NA	NA
FIELD BLANK	H6201	<0.1	NA	NA	NA

Method(s): DOH 310-13
Footnotes:

Submitted by: KN
Approved by: Dorothy Rickey
Date: 2-APR-1989

(<) - Less Than
(>) - Greater Than
NA - Not Applicable
ND - Not detectable
NS - Not specified
MG - Milligrams
L - Liters
M^3 - Cubic Meter
MG/M^3 - Milligrams Per Cubic Meter
PPM - Parts Per Million
UG - Micrograms
NG - Nanograms

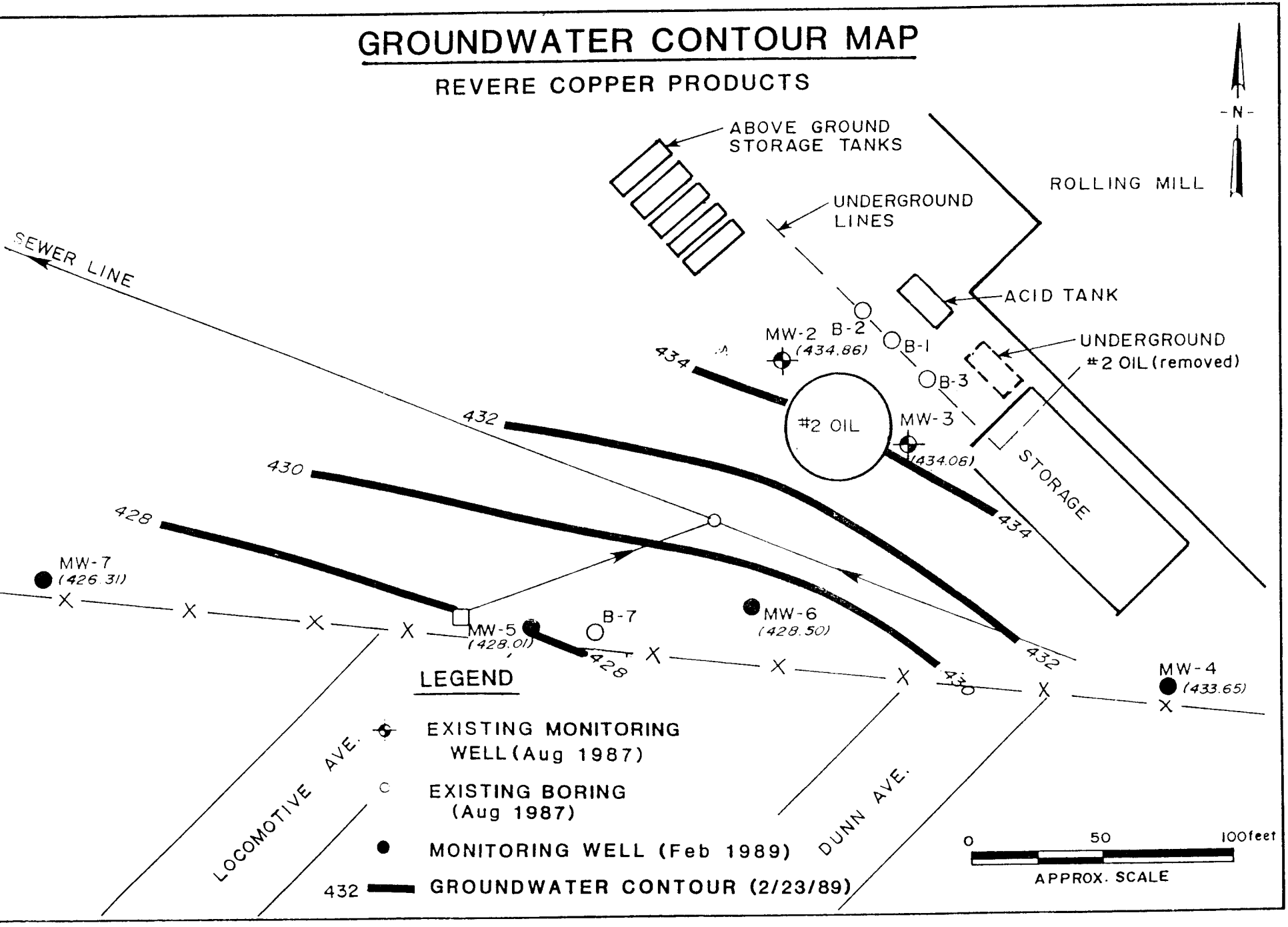

GROUNDWATER CONTOUR MAP
REVERE COPPER PRODUCTS
N
ABOVE GROUND STORAGE TANKS
UNDERGROUND LINES
ROLLING MILL
SEWER LINE
ACID TANK
MW-2 (434.86)
B-2
B-1
B-3
UNDERGROUND #2 OIL (removed)
#2 OIL
MW-3 (434.06)
STORAGE
434
432
430
428
MW-7 (426.31)
MW-5 (428.01)
B-7
MW-6 (428.50)
MW-4 (433.65)
LOCOMOTIVE AVE.
DUNN AVE.
LEGEND
EXISTING MONITORING WELL (Aug 1987)
EXISTING BORING (Aug 1987)
MONITORING WELL (Feb 1989)
GROUNDWATER CONTOUR (2/23/89)
0
50
100 feet
APPROX. SCALE

FIGURE 3

Gaison Laboratories

6601 Kirkville Road
E. Syracuse, NY 13057
Tel (315) 432-0506
1-800-950-0506

LABORATORY ANALYSIS REPORT

Client: ENGINEERING SCIENCE
Task Number: 89022109
Location: REVERE COPPER -SITE
Project# SY049.00 INVEST.

Job Number: L8084
Date Sampled: 20-FEB-1989

PETROLEUM HYDROCARBONS

Sample ID	Lab ID	MG/L	TYPE	MG/L	TYPE
MW-2	H3858A+B	14	FUEL OIL#2	NA	NA
MW-3	H3859A+B	5	STODDARD SOLVENT	4	FUEL OIL #2
MW-4	H3860A+B	<0.2	NA	NA	NA
MW-5	H3861A+B	11	STODDARD SOLVENT	2	FUEL OIL #2
MW-6	H3862A+B	2	STODDARD SOLVENT	5	FUEL OIL #2
MW-7	H3863A+B	28	STODDARD SOLVENT	2	FUEL OIL #2
WASH BLANK	H3864	<0.2	NA	NA	NA
LAB BLANK	H3865	<0.2	NA	NA	NA

Method(s): DOH 310-13
Footnotes:

Submitted by: KN
Approved by: Dorothy Richey
Date: 9-MAR-1989

(<) - Less Than
(>) - Greater Than
NA - Not Applicable
ND - Not detectable
NS - Not specified
MG - Milligrams
L - Liters
M^3 - Cubic Meter
MG/M^3 - Milligrams Per Cubic Meter
PPM - Parts Per Million
UG - Micrograms
NG - Nanograms

REFERENCE NO. 45

EMPIRE
SOILS INVESTIGATIONS INC.

HYDROGEOLOGIC INVESTIGATION
REVERE COPPER
ROME, NEW YORK
GTA-89-006C

1.0 INTRODUCTION

1.1 Purpose and Scope

Empire Soils Investigations, Inc. was requested by the NYSDEC to perform a hydrogeologic investigation near the Revere Copper Products Inc. facility (Revere Copper), in Rome, New York (Spill # 87-01259 and Pin # 9-9290). This investigation was performed under blanket contract # D100208.

The purpose of our study was to investigate the extent of contamination downgradient of the Revere Copper facility and to try to determine if any contamination was caused by the 1987 mineral spirits (stoddard solvent) spill at the Revere Copper site.

The scope of work was limited to:

- o Installing six additional monitoring wells;
- o Surveying the locations and elevations of the monitoring wells;
- o Obtaining two sets of water levels from on-site and off-site wells and preparing two water table maps based on this data;
- o Reviewing results from chemical analysis of water samples from the six monitoring wells and one on-site well;
- o Reviewing results from previous investigations at the site;
- o Preparing a report based on results of ESI field work, analysis of chemical data performed by Buck Environmental Laboratories, Inc. and review of past investigations of the site.

1.2 Location

The investigation is located in the City of Rome, Oneida County, New York (see Drawing No. 1, Appendix A). The site is located approximately 4500 feet northeast of

the confluence of the Mohawk River and the Erie Canal. Topography at the site slopes gently to the south. The site is approximately 450 feet above mean sea level (MSL).

1.3 Project History

In May 1987, Revere Copper discovered a discrepancy in their inventory of mineral spirits (stoddard solvent). A subsequent investigation revealed several small holes in an underground solvent return line. Revere Copper notified the NYSDEC that a possible product loss may have occurred at the site. Subsequently, Revere Copper began a series of investigations at the site to determine the presence and extent of the solvent contamination.

In November 1987, O'Brien & Gere Engineers, Inc. conducted a hydrogeologic investigation of the Revere Copper property associated with the suspected mineral spirits (stoddard solvent) leak. Three monitoring wells (MW-1, MW-2 and MW-3) and four borings were installed during the investigations. The study concluded that the loss of mineral spirits (stoddard solvent) had contaminated the soil and groundwater. The concentration of mineral spirits (stoddard solvent) in soil samples from the shallow sand and gravel unit ranged from 210 to 7600 mg/kg and the dissolved contamination in the groundwater in the vicinity of the leak ranged from non-detectable to 55 ppm. A petroleum hydrocarbon similar to diesel fuel or #2 fuel oil was also detected in some of the soil samples. No free phase hydrocarbons were detected. The study also concluded that groundwater flow was toward the southeast.

In August of 1988, a petrix soil gas survey was conducted in the area of the leak. The study was performed by Northeast Research Institute Inc. The study identified two areas of amomalies. Northeast Research Institute Inc. stated that these amomalies are generally associated with

subsurface sources of contamination including groundwater or areas of fresh soil contamination. The first anomaly was east-southeast of the abandoned tank crib, and the second anomaly was located at the southwest corner of the study area. Based on these anomalies Northeast Research Institute, Inc. indicated that the dominant direction of contaminant migration was to the south-southeast.

In June of 1989 Engineering-Science, Inc. (ES) submitted a Supplemental Site Investigation Report to Revere Copper. Four additional groundwater monitoring wells were installed at the site (MW-4 through MW-7) to determine the potential for off-site migration and to document the groundwater flow direction.

The study concluded that the unconsolidated soils at the site consisted of variable river deposits ranging from coarse gravel to fine clayey silt over a dense glacial till. The deposits overlying the glacial till were considered by ES to be the primary water bearing unit. Based on slug tests performed in monitoring wells MW-5 and MW-7, ES estimated the permeability of these deposits to be between 5.6 x 10-4 cm/sec. and 1.3 x 10-3 cm/sec. ES also concluded that the dominant shallow groundwater flow direction was to the southwest rather than the southeast as had been concluded by the previous investigations.

Throughout the previous investigations, which were performed at the site, measurable free product was detected only once, in well MW-7, on April 17, 1989. The product thickness was .01 feet. The existing monitoring wells were sampled on three occasions. Three separate types of hydrocarbons were identified by the chemical analyses. Mineral spirits (stoddard solvent) was identified in samples from wells MW-3, MW-5, MW-6 and MW-7. No. 2 fuel oil was identified in samples from wells MW-2, MW-3, MW-5, MW-6 and MW-7 and No. 6 fuel oil was identi-

fied in samples from MW-2, MW-4 and MW-7. Monitoring well MW-1 was dry on all three sampling events. Engineering-Science, Inc. recommended the installation of eight piezometers to determine if a free product plume existed and if so, its extent. Subsequent to Engineering-Science, Inc.'s supplemental report, the eight piezometers were installed and a monitoring program developed. All three previous reports are included in Appendix D.

On September 7, 1989, 0.5 feet of free product was detected in piezometer P-5 by Revere Copper. In response to the discovery of free product in well P-5 ESI was contacted by the NYSDEC in September, 1989, to determine the extent of any contamination migrating off-site. During ESI's investigation, a free product recovery system was installed in piezometer P-5 by Revere Copper. As of the preparation of this report, neither ESI or the NYSDEC has received any information pertaining to the recovery project.

1.4 Methodology

1.4.1 Borings

Six monitoring wells (MW-8 through MW-13) were installed off-site and in the presumed downgradient direction from the Revere Copper property (see Drawing No. 2, Appendix A). The locations of the monitoring wells were selected by Hollybeth Kaufman and Andrew Lockwood of ESI and Neil Carrier of the NYSDEC. Boring 9A and the boring for MW-8 were installed by Northstar Drilling in October 1989. Borings for monitoring wells MW-9 and MW-10 were installed by Empire Soils Investigations Inc. in November 1989. The borings for wells MW-11, MW-12 and MW-13 were installed by ESI in December of 1989. The borings for

the observation wells were advanced using a hydraulically activated drill rig using 4 1/4 inch I.D. hollow stem augers.

Soil samples were taken every five feet during drilling except in boring MW-9. No soil samples were taken from MW-9 because of its proximity to boring B-9A. Soil samples were taken using a 2-inch split barrel sample spoon in general accordance with ASTM Method D-1586. Soil samples were classified on-site by an ESI geologist.

A photoionization detector (PID) was used to analyze the soil samples for volatile organic compounds. The soil samples were placed in clean glass jars and "headspace" analysis was performed. Results of the analysis are contained in Table II.

The borings were terminated at depths ranging from 30.0 feet at MW-9 to 32.0 feet at MW-11 and MW-13. All soil borings were advanced to approximately 10 feet below the water table. The Subsurface Logs for the borings are contained in Appendix B.

1.4.2 Monitoring Well Installation

A monitoring well was installed in each of the borings except B-9A. Wells were constructed of 2-inch diameter schedule 40 PVC riser pipe with 15 feet of slotted PVC well screen. The slot size is 0.01 inches. The well screens straddle the water table and extend from between 29.0 and 30.0 feet below ground surface to between 14.0 and 15.0 feet below the ground surface. A clean quartz sand pack was placed around the well screens and extends to at least 1.5 feet above the well screen. No sand pack was placed around MW-8. A bentonite pellet seal at least 1.0 feet thick was placed above the sand pack to minimize vertical migration of contaminants into the wells. The remaining annular space was filled with a portland cement

grout. In monitoring well MW-8 the natural sand and gravel collapsed above the bentonite seal to 4.0 feet below ground surface and then a portland cement grout was placed above the sand and gravel. Locking caps were placed over all the wells, and curb boxes were mounted flush to the ground surface. Well construction details are included on the Subsurface Logs in Appendix B.

1.4.3 Site Survey

The locations and elevations of monitoring wells MW-8, MW-9 and MW-10, MW-2, MW-3 and P-2 were surveyed by ESI on November 9, 1989 and the locations and elevations of wells MW-11, MW-12 and MW-13 were surveyed on December 27, 1989. The elevations of the monitoring wells were determined by differential leveling and referenced to the top of piezometer P-6 within the Revere Copper property. The eight piezometers (P-1 through P-8) and seven monitoring wells (MW-1 through MW-7) on the Revere Copper property were surveyed on September 12, 1989, by James P. Bliss, using an assumed benchmark of 100.00 feet. The benchmark is the elevation of the concrete floor of the rolling mill at the northwest corner of the opening for the overhead door where the railroad tracks enter the south side of the building. ESI resurveyed monitoring wells MW-2, MW-3 and piezometer P-5 because these wells had been disturbed since James Bliss surveyed the site. The locations of wells MW-8 through MW-13 were determined by tape measurements using the fence line between Revere Copper and the residential properties as a baseline. Survey data is summarized on Table I.

1.4.4 Water Table Measurements

Water levels were measured in all wells on and off the Revere Copper property on November 11, 1989 and

January 16, 1990. Measurements were taken using an optical probe. The optical probe was decontaminated between each well using hexane and then a distilled water rinse. The reference elevations used for all the wells and piezometers was the top of the PVC well pipe. Water level measurements are summarized on Table I and shown on the two Water Table Maps, Drawing Nos. 3 and No. 4, in Appendix A.

1.4.5 Well Sampling and Development

All of the monitoring wells were developed by bailing after installation, except for MW-9. Between 15-20 gallons of water were removed from each well. Bailed water was disposed of on the ground surface adjacent to each respective well. Clean bailers were used to develop each well. Because free product was present in well MW-9, it was not developed until the time of sampling when drums were available to contain water bailed from the wells.

Groundwater samples were taken from wells MW-8, MW-9 and MW-10 on November 9, 1989, by ESI. All wells were purged of at least 5 well volumes (between 20 to 30 gallons) before sampling to remove stagnant water from the wells and to insure sampling of fresh formation water. Dedicated PVC bailers were used to purge each well. Chain-of-custody procedures were followed and the chain-of custody forms are included in Appendix C. Samples were hand delivered to the laboratory. Samples were analyzed by Buck Environmental Laboratories Inc. for total petroleum hydrocarbons (TPH) using NYSDOH Method 310-13. Groundwater samples were also obtained on January 12, 1990, from wells MW-8 MW-9, MW-10, MW-11, MW-12, MW-13, and P-5. Samples were obtained and analyzed by Buck Environmental Laboratories Inc. The samples were analyzed for volatile organic compounds using EPA Method 8260. Water bailed from the

wells on both sampling events was placed in 55 gallon drums and disposed of by Revere Copper. Analytical results from both sampling events are contained in Appendix C and results are summarized in Table III.

2.0 FINDINGS OF THE INVESTIGATION

2.1 Regional Geologic Setting

The City of Rome is located in the Hudson Mohawk lowlands physiographic province of New York State. The bedrock in the area is mapped as the Utica Shale of the Lorraine Group (Fisher and Rickard, 1970). The surficial geology in the area is classified as recent fluvial deposits which are 3 to 30 feet thick. The deposits vary in composition from fine sand to gravel (Cadwell et. at., 1988).

Revere Copper Products Inc. is located near the confluence of the Mohawk River and the Erie Canal. The Mohawk River generally flows to the southeast, but adjacent to the site it flows toward the southwest before discharging into the Erie Canal, approximately 4500 feet southwest of the site. The Erie Canal then flows towards the east approximately 1500 feet south of the site.

2.2 Site Specific Hydrogeology

Fill was encountered in borings MW-8, MW-11 and MW-12, to a depth of between 2.0 and 4.0 feet below ground surface. Below the fill in these borings and below topsoil in the remaining borings a sand and gravel unit was encountered. The grain size distribution of this unit was variable and ranged from predominantly fine to coarse gravel to predominantly fine sand and silt. This unit extended to the bottom of all the borings. Generally, the unconsolidated deposits became finer grained with increasing depth. The glacial till layer reported by

O'Brien & Gere Engineers, Inc. (1987) and Engineering-Science, Inc. (1989) was not encountered in any of the off-site borings.

Groundwater elevations were measured on November 9, 1989 and January 16, 1990 (see Table I). Groundwater elevations on November 16, 1989 ranged from 73.13 feet at monitoring well MW-8 to 83.54 feet at monitoring well MW-2. Groundwater elevations on January 16, 1990, ranged from 72.86 feet at monitoring well MW-8 to 83.42 feet at MW-2. Two water table maps were constructed based on the water level elevations (Drawings No. 3 and No. 4, Appendix A). Water levels in wells in which free product was measured (P-5 and MW-9) were not used to prepare the groundwater contours. Based on these elevations, the local direction of groundwater flow is to the south-southwest.

Field permeability tests were performed on monitoring wells MW-5 and MW-7 by Engineering-Science, Inc. on February 23, 1989. The permeability of the sand, silt and gravel deposits above the glacial till layer were found to be between 5.6×10^{-4} cm/sec at MW-5 and 1.3×10^{-3} cm/sec at MW-7. The results of the field permeability tests can be used to estimate the average horizontal linear velocity of groundwater flow using the equation $V=ki/n$ where V is the average horizontal linear velocity of groundwater flow, k is the average hydraulic conductivity, i is the horizontal hydraulic gradient and n is the effective porosity of the sand and gravel deposits. Using $k = 1.8 \times 10^{-3}$ ft/min (average between MW-5 and MW-7), i = .07 ft/ft (average horizontal gradients between MW-2 and MW-6) and 0.0014 ft/ft (average horizontal gradient between MW-9 and MW-12) and n = .30 (Freeze and Cherry, 1979), the velocity of groundwater flow in the sand and gravel deposits at the site is between approximately .6 ft/day and .01 ft/day or between 219 and 3.7 ft/yr.

2.3 Groundwater Contamination

Water quality information from both on-site and off-site monitoring wells is summarized in Table III. Complete water quality results from all three subsurface investigations are contained in Appendix C.

In August of 1987 the three monitoring wells installed by O'Brien & Gere Engineers, Inc. were sampled and analyzed for total petroleum hydrocarbons using EPA Method 503.1. Wells MW-1, MW-2 and MW-3 were found to contain 8.3, <0.1, and 55 ppm of mineral spirits (stoddard solvent) respectively. Well MW-3 also contained petroleum hydrocarbons similar to No. 2 fuel oil.

Engineering-Science, Inc. conducted a Supplemental Site Investigations Report in the spring of 1989. Four additional monitoring wells were installed along the Revere Copper property boundary. Three rounds of water samples were collected from the monitoring wells and analyzed by Nalson Laboratories for total petroleum hydrocarbons by NYSDOH Method 310-13. Monitoring well MW-1 was dry on all three sampling events. On the first two sampling events, both mineral spirits (stoddard solvent) and No. 2 fuel oil were identified in the monitoring wells. Concentrations of mineral spirits (stoddard solvent) on February 20, 1989 ranged from none detected (ND) at wells MW-2 and MW-4 to 28.0 ppm at well MW-7. Concentrations of No. 2 fuel oil ranged from ND at MW-4 to 14.0 ppm at MW-2. On March 20, 1989, concentrations of mineral spirits (stoddard solvent) ranged from ND at well MW-2, MW-3, MW-4 and MW-6 to 22.8 ppm at MW-7. Concentrations of No. 2 fuel oil ranged from ND at wells MW-2 and MW-4 to 15.8 ppm at well MW-3. On the third monitoring event (stoddard solvent), No. 2 fuel oil and No. 6 fuel oil were identified in samples from the monitoring wells. Concentrations

of mineral spirits (stoddard solvent) ranged from ND at wells MW-2, MW-3, MW-4 and MW-6 to 500 ppm at MW-7. No. 2 fuel oil concentrations ranged from ND at wells MW-2, MW-4 and MW-7 to 27.6 ppm at well MW-3 and concentrations of No. 6 fuel oil ranged from ND at wells MW-3, MW-5 and MW-6 to 1200 ppm at MW-7. On the third monitoring event (April 17, 1989) 0.01 feet of free product was measured in MW-7 .

On November 9, 1989, wells MW-8, MW-9 and MW-10 were sampled by Empire Soils Investigations, Inc., and samples were analyzed by Buck Environmental Laboratories for total petroleum hydrocarbons using NYSDOH Method 310-13. Monitoring well MW-9 and piezometer P-5 contained measurable free product with a thickness of at least 0.5 feet in MW-9 and 0.76 feet in P-5. The entire thickness of product in MW-9 could not be measured because the dedicated bailer in the well obstructed the probe. No dissolved hydrocarbons were identified in the sample from monitoring well MW-8, although there was visual and olfactory evidence of contamination in the water bailed from the well. Well MW-10 was found to contain 1.89 ppm of mineral spirits (stoddard solvent) and well MW-9 contained 33.5 ppm of mineral spirits (stoddard solvent). No gasoline, kerosene, or fuel oil was identified in any of the samples from the three monitoring wells. The chromatogram of MW-9 matched closely with the stoddard solvent standard (identified commercially as Exxon #31-29 Naphta). The laboratory also reported that the mineral spirits (stoddard solvent) found in MW-10 was different from the product found in MW-9.

On January 12, 1990, the six new off-site wells and piezometer P-5 were sampled and analyzed by Buck Environmental Laboratories, Inc. Samples were analyzed using EPA Method 8260 (GC/MS) in order to quantify hazardous substance list compounds that were above groundwater qual-

ity standards. No compounds on the hazardous substance list were detected in samples from monitoring wells MW-8, MW-10, MW-11 or MW-13. The sample from monitoring well MW-12 contained .0093 ppm xylenes. The sample from MW-9 contained 1.39 ppm toluene and 0.864 ppm xylenes, and the sample from piezometer P-5 contained 0.369 ppm xylenes.

"Late eluting petroleum hydrocarbons" were detected in the samples from monitoring wells MW-8, MW-9, MW-10, MW-11, MW-12 and piezometer P-5. Some of these compounds were identified by the laboratory as 2-methyl octane, nonane, 3-methyl nonane, decane, 4-methyl decane, 1,2,3 trimethyl benzene, undecane and decahydro 2-methyl napthalene. These are primarily C8-C14 alkanes. These same compounds (C_8-C_{14} alkanes) were identified in the soil gas study by Northeast Research Institute, Inc. (1988). These compounds are not found on the hazardous substance list and are not classified as priority pollutants. There are no NYSDEC groundwater standards or guidance values for these compounds. The laboratory did not quantify these individual compounds in the samples from the monitoring wells. However, they did make some general observations from the chromatograms concerning the relative extent of contamination in the individual wells. The laboratory stated that MW-13 was uncontaminated, well MW-8 had trace contamination, wells MW-10 and MW-11 were moderately contaminated, wells P-5 and MW-12 were highly contaminated, and MW-9 was grossly contaminated, with respect to the "Late Eluting Hydrocarbons".

Water level and free product measurement were again taken from all on-site and off-site monitoring wells and piezometers on January 16, 1990. MW-9 contained 1.49 feet of product and piezometer P-5 contained .03 feet of prod-

uct (P-5 had been used as a recovery well for product and was only turned off one hour before obtaining a free product measurement).

A general product identification was made by comparing total ion chromatograms with each other and standards of Exxon mineral spirits (stoddard solvent), gasoline, and No. 2 fuel oil. Chromatograms for samples from monitoring wells MW-10, MW-11 and MW-12 were found to be very good matches with each other and were categorized as mineral spirits (stoddard solvent). The chromatogram of the samples from P-5 and MW-9 were similar and matched closely with the Exxon mineral spirit (stoddard solvent) standard. Closer examination of the chromatograms led the laboratory to conclude that the product causing contamination at P-5 and MW-9 were the same and were produced by the same manufacturer. A further observation made by the laboratory was that although all wells (except MW-13) were contaminated with mineral spirits (stoddard solvent) the mineral spirit contamination in wells MW-10, MW-11 and MW-12 was different from the mineral spirit (stoddard solvent) identified in samples fron MW-9 and P-5. Chromatograms are contained in the laboratory report from Buck Environmental Laboratories, Inc. A drawing is attached showing the approximate extent of free product and dissolved contamination based on the water sample analyses (Drawing No. 5 in Appendix A).

3.0 CONCLUSIONS

Based on the subsurface investigation, analytical results and the laboratory report, the following conclusions can be made:

1) The geology at the site consists of fluvial deposits of sand and gravel. The grain size distribution of this unit ranged from predominantly fine to coarse gravel to

predominantly fine sand and silt. These fluvial deposits overlic a dense glacial till. The thickness of the sand and gravel unit at the site ranges from between 5 and over 10 meters.

2) Groundwater flow at the site is to the south-southwest with a velocity of between 3.6 ft/yr and 219 ft/yr.

3) The six new wells are downgradient of Revere Copper and the mineral spirits (stoddard solvent) spill area.

4) Based on analytical results from previous reports prepared for Revere Copper mineral spirits (stoddards solvent) has been detected in on-site wells MW-1, MW-3, MW-5,MW and MW-7. The recent results indicate that five of the six off-site wells are also contaminated with mineral spirits (stoddard solvent).

5) Revere Copper's leak in the return line is the only known source of mineral spirits (stoddard solvent) upgradient of the wells in which contamination from this product has been found.

6) Based on the ion chromatograms the laboratory concluded that the product causing contamination in piezometer P-5 and monitoring well MW-9 were the same and were produced by the same manufacturer. The laboratory was able to further conclude by comparing ion chromatograms that the mineral spirit (stoddard solvent) contamination in wells MW-9 and P-5 was different from the mineral spirit (stoddard solvent) contamination in wells MW-10, MW-11 and MW-12. The differences in the mineral spirts (stoddard solvent) which are contaminating the off-site wells could be attributed to differences in the manufacture of the mineral spirits (stoddard solvent) or changes in the mineral spirits (stoddard solvent) caused by soil absorbtion.

7) Since the mineral spirits (stoddard solvent) leak originated from a hole in the tank's product return line, the age of the spill could be much older than the May 1987

reported loss of product. The areal extent of the known contamination, over 550 feet (MW-12), coupled with the estimated ground water flow velocities, would indicate a spill older than 2.5 years.

4.0 RECOMMENDATIONS

A groundwater recovery system should be installed to recover free phase hydrocarbons and dissolved hydrocarbons from the groundwater. However, prior to installing an effective recovery system, additional information on the extent of contamination is needed. Since the contaminant plume may be migrating fairly rapidly (groundwater flow velocity could be over 200 ft/yr) it is imperative that further work be performed expeditiously so that a recovery system can be installed as soon as possible.

In order to determine the extent of the plume of contamination, additional monitoring wells and groundwater analyses are needed. ESI recommends installing two more monitoring wells at the locations shown on Drawing No. 2. After the two additional wells are installed, ESI recommends that 1) resurveying the locations and elevations of all wells both on and off the Revere Copper Property and 2) groundwater samples be taken from both on-site and off-site monitoring well locations. The water samples should be analyzed using a method by which the total concentrations of individual dissolved hydrocarbon components including (C_8-C_{14} alkanes) from the mineral spirits may be quantified.

The information obtained from the installation of the additional two monitoring wells and the subsequent analytical data from the round of sampling would be used to evaluate remedial options to recover product and groundwater contaminated with dissolved hydrocarbons.

5.0 REFERENCES

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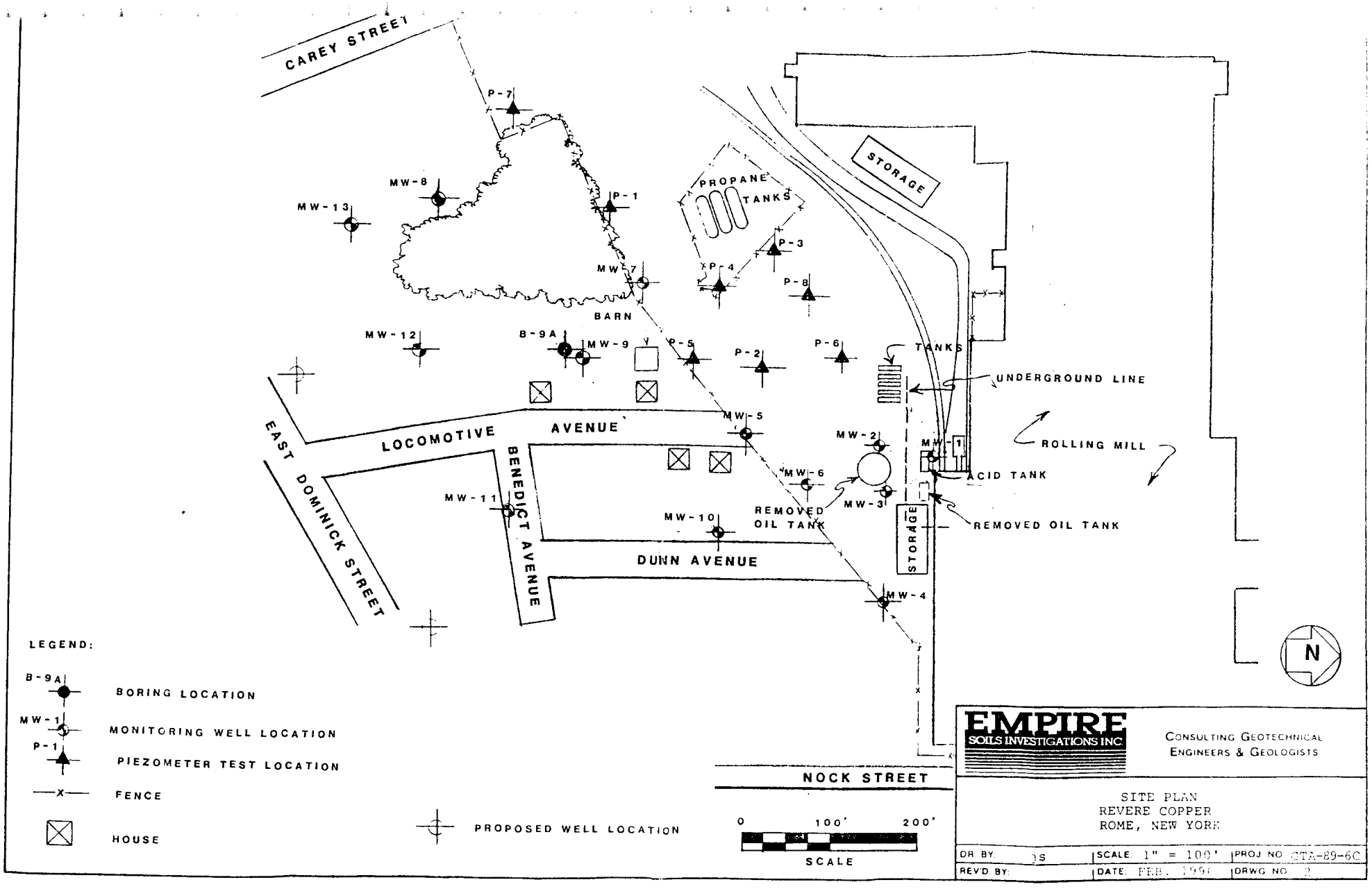
Respectfully submitted,

EMPIRE SOILS INVESTIGATIONS, INC.

Andrew Lockwood
Geologist

Marjory Rinaldo-Lee C.P.G.S.
Manager of Environmental Services

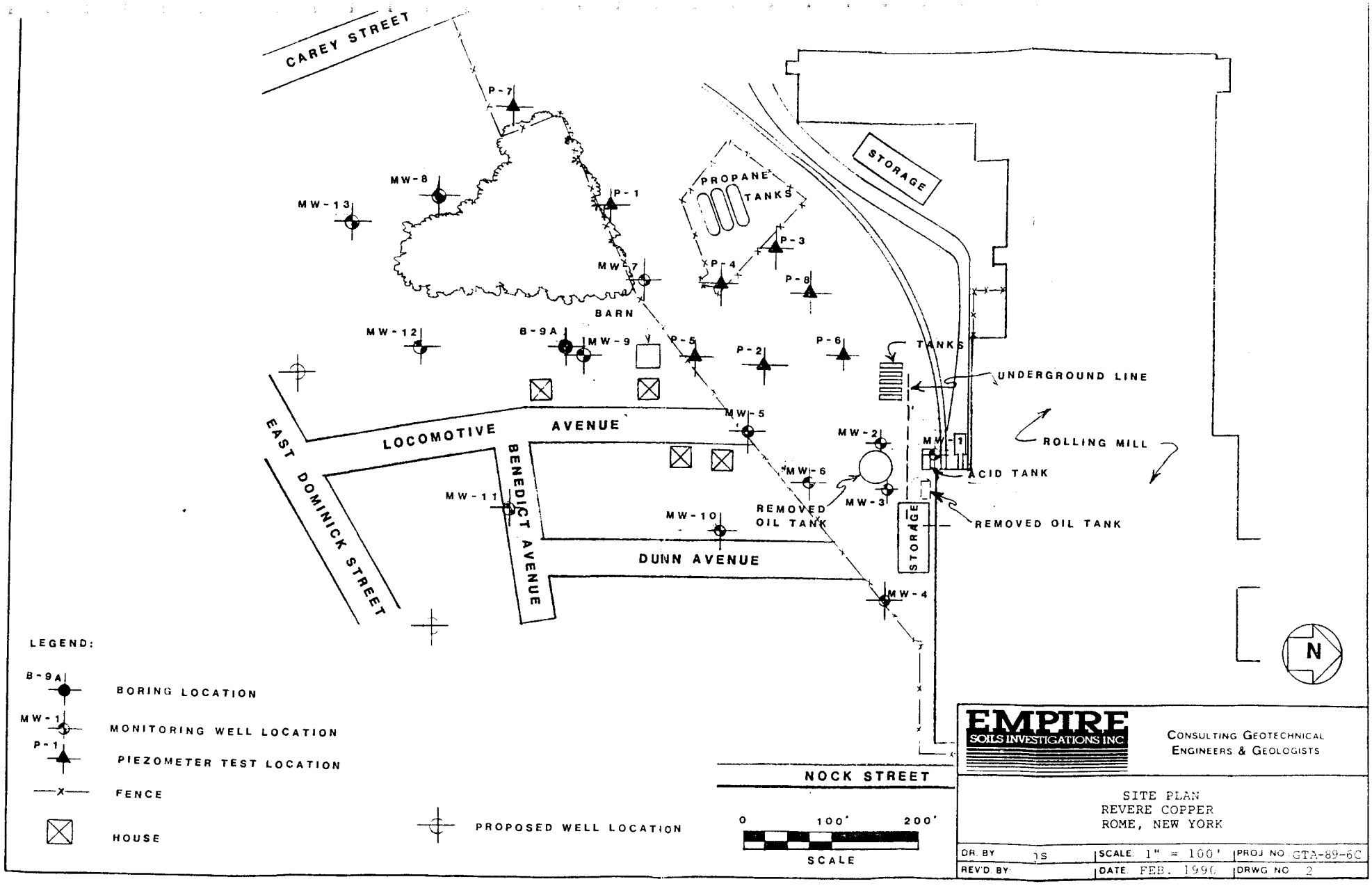


EMPIRE SOILS INVESTIGATIONS INC.

CONSULTING GEOTECHNICAL ENGINEERS & GEOLOGISTS

SITE PLAN
REVERE COPPER
ROME, NEW YORK

DR. BY: JS	SCALE: 1" = 100'	PROJ. NO. GTA-89-6C	
REV'D BY:	DATE: FEB. 1990	DRWG. NO. 2	

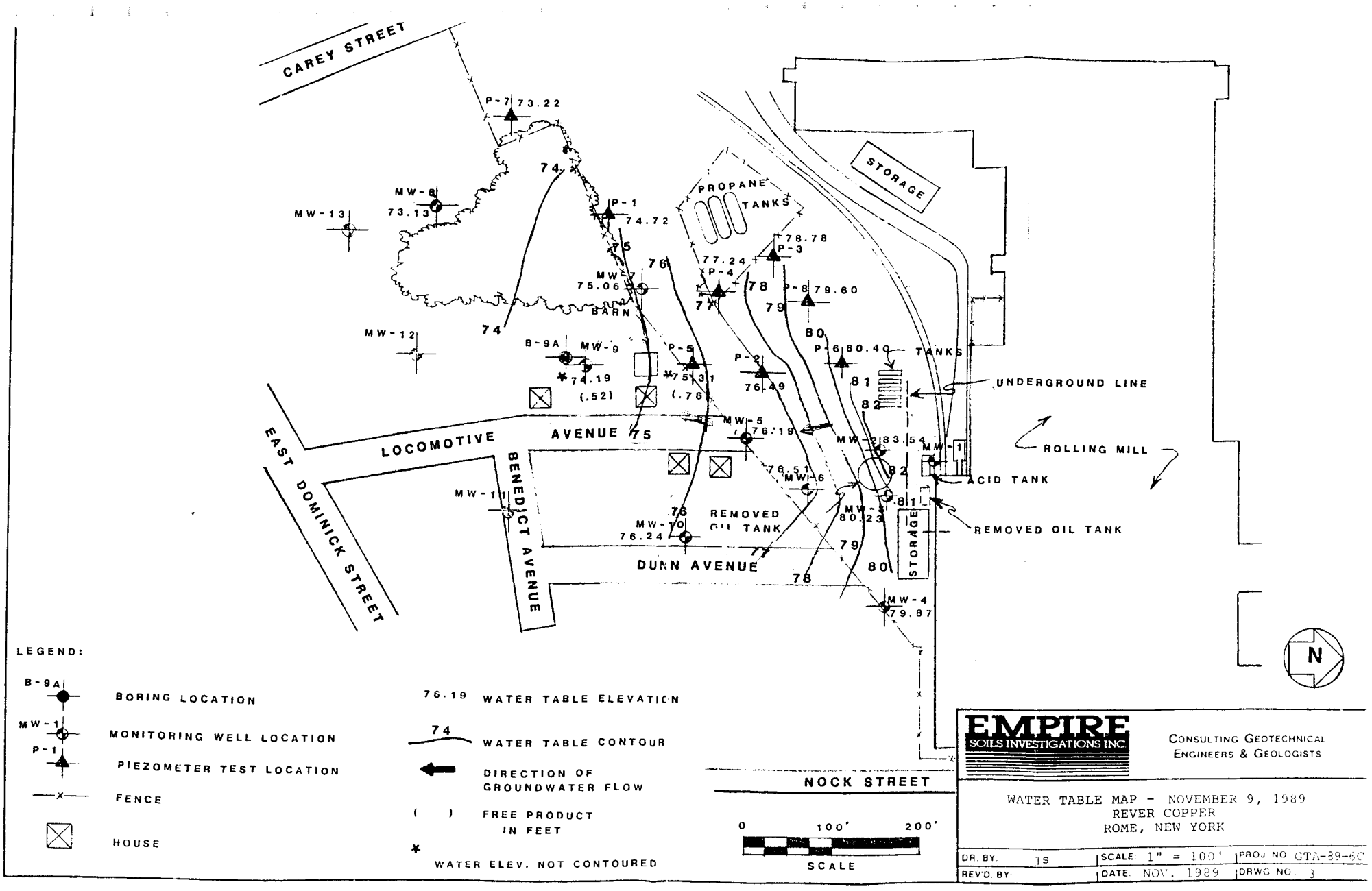


EMPIRE SOILS INVESTIGATIONS INC.

CONSULTING GEOTECHNICAL ENGINEERS & GEOLOGISTS

SITE PLAN
REVERE COPPER
ROME, NEW YORK

DR. BY: JS	SCALE: 1" = 100'	PROJ. NO. GTA-89-6C
REV'D. BY:	DATE: FEB. 1990	DRWG. NO. 2

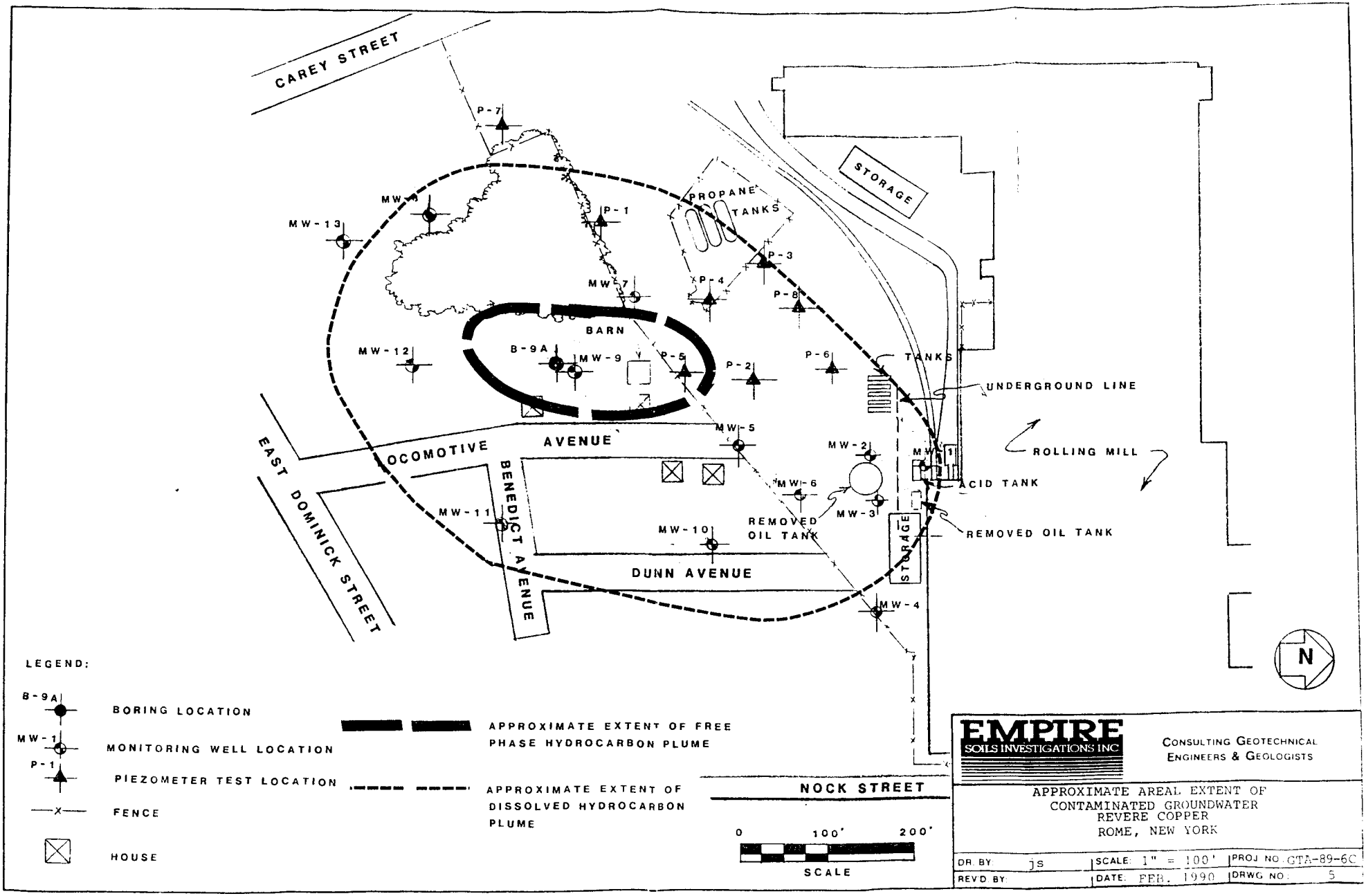


EMPIRE SOILS INVESTIGATIONS INC

CONSULTING GEOTECHNICAL ENGINEERS & GEOLOGISTS

WATER TABLE MAP - NOVEMBER 9, 1989
REVER COPPER
ROME, NEW YORK

DR. BY: JS	SCALE: 1" = 100'	PROJ NO. GTA-89-6C	
REV'D. BY:	DATE: NOV. 1989	DRWG NO. 3	



EMPIRE SOILS INVESTIGATIONS INC

CONSULTING GEOTECHNICAL ENGINEERS & GEOLOGISTS

APPROXIMATE AREAL EXTENT OF CONTAMINATED GROUNDWATER
REVERE COPPER
ROME, NEW YORK

DR. BY: JS	SCALE: 1" = 100'	PROJ. NO.: GTA-89-6C	
REV'D BY:	DATE: FEB. 1990	DRWG. NO.: 5	

TABLE I
REVERE COPPER
GTA-89-6C
SURVEY AND GROUNDWATER ELEVATIONS

	P-1	P-2	P-3	P-4	P-5	P-6	P-7	P-8	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13
Ground Elevation	-	98.91	-	-	-		-	-	-	99.2	98.92	-	-	-	-	96.01	97.59	96.61	94.9	94.04	94.71
Reference Elevation	102.64	100.57	100.93	100.9	100.12	100.88	100.82	101.11	103.1	102.32	102.25	101.91	99.78	99.71	101.42	95.44	97.21	96.24	94.65	93....	94.48
11-9-89	74.72	76.49	78.78	77.24	75.31 (.76)	80.4	73.22	79.5	Dry	83.54	80.23	79.87	76.19	76.51	75.06	73.13	74.19 (.52+)	76.24			
1-10-90	74.74	76.49	78.79	77.22	75.85 (0.03)	80.39	73.15	79.61	Dry	83.42	80.28	80.15	76.22	76.73	75.07	72.86	73.36 (1.49)	76.33	75.45	73....	1

Notes: 1) All levels to the top of the PVC well pipe
2) ( ) Free product measurements in feet

TABLE II
REVERE COPPER
GTA-89-2C
ORGANIC VAPOR READINGS

Sample Number	MW-8	BW-9A	MW-10	MW-11	MW-12	MW-13
1	<2.0	3.2	2.2	<2.0	<2.0	<2.0
2	<2.0	<2.0	2.7	3.3	<2.0	<2.0
3	<2.0	4.1	<2.0	2.0	4.7	<2.0
4	<2.0	NR	2.4	4.3	3.1	3.5
5	4.6	NR	NR	6.2	7.8	2.2
6	17.5	1051.0	21.2	19.2	27.2	9.8
7	5.0	350.2	7.8	8.5	10.1	4.5

Notes: -All readings are in ppm
-Photoionization Detector was calibrated using 100 ppm Isobutylene

-NR = No Recovery

RevrCpr:slc
2/90

Table III
Summary of Groundwater Analysis Revere Copper

Date	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13	P-5 (recovery well)	Notes
8-17-87															
Stoddard Solvent	8.3	<.1	55**	—	—	—	—	—	—	—	—	—	—	—	EPA Method 503.1(O'Brien & Gere)
2-20-89															
Stoddard Solvent	Dry	ND	5.0	ND	11.0	2.0	28.0	—	—	—	—	—	—	—	
#2 fuel oil	Dry	14.0	4.0	ND	2.0	5.0	2.0	—	—	—	—	—	—	—	Total Petroleum Hydrocarbons(TPH) by DOH 310-13(Galson Laboratories)
3-20-89															
Stoddard Solvent	Dry	ND	ND	ND	12.0	ND	22.8	—	—	—	—	—	—	—	
#2 fuel oil	Dry	ND	15.8	ND	2.2	2.3	2.9	—	—	—	—	—	—	—	TPH by DOH 310-13(Galson Laboratories)
4-17-89															
Stoddard Solvent	Dry	ND	ND	ND	8.6	ND	500	—	—	—	—	—	—	—	
#2 fuel oil	Dry	ND	27.6	ND	2.8	4.5	ND	—	—	—	—	—	—	—	TPH by DOH 310-13(Galson Laboratories)
#6 fuel oil	Dry	6.2	ND	2.7	ND	ND	1200	—	—	—	—	—	—	—	
11-9-89															
Stoddard Solvent	—	—	—	—	—	—	—	ND	33.5	1.89	—	—	—	—	TPH by DOH 310-13(Buck Environmental Laboratories)
1-12-90															
Xylene	—	—	—	—	—	—	—	ND	.86	ND	ND	.229	ND	.37	Hazardous Substance List
Toluene	—	—	—	—	—	—	—	ND	1.39	ND	ND	ND	ND	ND	Compounds(EPA 3260 GC/MS Methodology)Buck Laboratories
"Late Eluting Hydrocarbons"	—	—	—	—	—	—	—	yes	yes	yes	yes	yes	ND	yes	

- -all readings in ppm
- -** petroleum hydrocarbons similar to #2 fuel oil also present
- -- = not sampled
- ND - none detected
- "late eluting hydrocarbons" include, C8-C14 Alkanes
- Stoddard Solvent=Mineral Spirits

REFERENCE NO. 46

EMPIRE
SOILS INVESTIGATIONS INC.

June 19, 1990

Mr. Jack Marsch
NYSDEC
State Office Building
Utica, NY 13501

Reference: Revere Copper Sampling
Revere Copper
Rome, NY
GTA-89-006C

Dear Mr. Marsch:

The purpose of this letter is to provide you with the results of the April 24, 1990 sampling event at the above referenced site

On April 24, 1990 a geologist and sampling technician from Empire Soils Investigations, Inc. (ESI) obtained water level, free product measurements and groundwater samples from all on-site and off-site monitoring wells (except MW-1) and piezometers. All water levels were measured before sampling. The water levels were obtained with an optical probe. The probe was washed with soapy water and then rinsed with distilled water between each well. The groundwater samples were obtained with clean PVC bailers. The bailers used to obtain samples from the piezometers were new. Bailers used to obtain samples from the monitoring wells were prewashed with detergent (Liquinox) and tap water and then steam cleaned. All the monitoring wells and piezometers were purged of least 4 to 5 well volumes to ensure the sampling of fresh formation water. All samples were immediately placed in a cooler and packed in ice. Samples were hand delivered to Buck Environmental Laboratories on April 25, 1990 at 8:00 a.m. for analysis by NYSDOH Method 310-13 (Total Petroleum Hydrocarbons). Chain of custody procedures were followed.

A Water Table Map based on the April 24, 1990 groundwater elevations is attached. The water level elevations are summarized in table 1. The Water Table Map indicates that the direction of groundwater flow is predominately to the south. The groundwater flow direction is similar to that observed during our original Hydrogeologic Investigation Report, February, 1990.

105 CORONA AVENUE, GROTON, NY 13073, 607-898-5881

EMPIRE
SOILS INVESTIGATIONS INC.

PROPOSED SCOPE OF SERVICES

- Advance a boring at the location shown on the attached Site Plan. Obtain soil samples using a 3-inch split barrel sample spoon. Soil samples will be taken continuously from 20 feet below ground surface (approximate water table elevation) to 50 feet below ground surface. Grain size analysis will be performed on the soil samples. A recovery well will be designed based on the results of the analysis.
- Provide a ESI geologist to supervise the boring

COST ESTIMATE

Drilling Services	
- Mobilization/Demobilization CME-75 Drill Rig - Lump Sum	$ 900.00
- CME-75 Drill Rig - 12 hrs @ $90/hr	$ 1,080.00
- Driller 12 hrs @ $31.75/hr	$ 381.00
- Driller's Helper 12 hrs @ $25.45/hr	$ 305.40
- Pick-up Truck 12 hrs @ $17/hr	$ 204.00
- Steam Cleaner 4 hrs @ $18/hr	$ 72.00
- Bentonite Pellets 1 Pail @ $70/pl	$ 70.00
- Grout 5 bags @ $15/bag	$ 75.00
Subtotal	$ 3,087.40
Professional Services	
- Field Geologist 16 hrs @ $41/hr	$ 656.00
- Hydrogeologist 25 hrs @ $41/hr	$ 1,025.00
Subtotal	$ 1,681.00
Analytical Costs	
- Grain Size Analysis 15 @ $27.00/sam.	$ 405.00
Subtotal	$ 405.00
TOTAL ESTIMATED COSTS	$ 5,173.40

All work will be billed on the actual quantities of work performed and at the indicated unit rates. The total estimated cost would not be exceeded without prior authorization from NYSDEC. The scope of services and associated cost estimate for this investigation are based on our current knowledge about the site. NYSDEC and Empire Soils Investigations, Inc. agree that the discovery of unanticipated conditions mandates a renegotiation of the scope of services or termination of services.

The laboratory results of the groundwater analysis are attached and are summarized in Table 2. A Site Plan showing the approximate extent of groundwater contamination based on the April 24, 1990 sampling event is also attached. Measureable quantities of free product were present in monitoring well MW-9 and piezometer P-5, 0.47 feet and 0.45 feet respectively. The product was identified as mineral spirits. Mineral spirits were also identified in wells MW-5, MW-6, MW-7, MW-8, MW-10 and MW-12 and in piezometers P-1, P-2, P-6 and P-8. Gasoline components were identified in wells MW-3 and MW-6 and in piezometers P-1 and P-2. Wells MW-3 and MW-7 were reported to contain components of fuel and/or lubricating oils.

Concentrations of total petroleum hydrocarbons in water samples from MW-13, MW-11, MW-4, MW-2, P-7, P-4 and P-3 were all below the detection limit (5 ug/l). Based on these results it appears that the extent of the groundwater contamination has been sufficiently determined so that the installation of additional monitoring wells is not warranted at this time. We propose that the recovery system be designed in three phases: 1) The design of the recovery well, 2) Perform a pump test and the 3) Design of the treatment system. As requested by Neil Carrier of the NYSDEC, costs for the initial phase for the design of the recovery system are attached. Although we have not recommended additional monitoring wells, proposed monitoring well locations are shown on the attached Water Table Map as requested by Mr. Carrier.

Sincerely,

EMPIRE SOILS INVESTIGATIONS, INC.

Andrew Lockwood
Geologist

Patrick Mulligan
Manager Environmental Services

TABLE I

REVERE COPPER

GTA-89-6C

SURVEY AND GROUNDWATER ELEVATIONS

	P-1	P-2	P-3	P-4	P-5	P-6	P-7	P-8	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-12	MW-
round evation	-	98.91	-	-	-	-	-	-	-	99.20	98.92	-	-	-	-	96.01	97.59	96.61	94.90	94.04	94.
ference evation	102.64	100.57	100.93	100.90	100.12	100.88	100.82	101.11	103.1	102.32	102.25	101.91	99.78	99.71	101.42	95.44	97.21	96.24	94.55	93.80	94.
-9-89	74.72	76.49	78.78	77.24	75.31 (.76)	80.40	73.22	79.60	DRY	83.54	80.23	79.87	76.19	76.51	75.06	73.13	74.19 (.53+)	76.24	-	-	-
16-90	74.74	76.49	78.79	77.22	75.85 (.03)	80.39	73.15	79.61	DRY	83.42	80.28	80.15	76.32	76.73	75.07	72.86	73.36 (1.49)	76.33	73.45	73.09	72.
24-90	75.66	77.13	79.17	77.90	76.27 (.45)	80.83	74.67	79.98	DRY*	83.57	80.89	80.53	76.70	77.02	75.89	74.39	75.35 (.47)	76.64	74.77	74.62	74.

NOTES:
- All water levels are referenced to the top of the PVC well pipe
- ( ) Free product measurement in feet
- * - Well MW-1 was hit the PVC well pipe is broken and the bentonite seal has blocked access to the well
- + = bailer obstructed probe so more product was present than measured

Table 11
Summary of Groundwater Analysis Revere Copper
Revere Copper

Date	P-1	P-2	P-3	P-4	P-5	P-6	P-7	P-8	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13	NOTES
3-17-87																						
Stoddard Solvent	—	—	—	—	—	—	—	—	8.3	<.1	55**	—	—	—	—	—	—	—	—	—	—	EPA Method 503.1(O'Brien & Gere)
2-20-89																						
Stoddard Solvent	—	—	—	—	—	—	—	—	Dry	ND	5.0	ND	11.0	2.0	28.0	—	—	—	—	—	—	
#2 fuel oil	—	—	—	—	—	—	—	—	Dry	14.0	4.0	ND	2.0	5.0	2.0	—	—	—	—	—	—	Total Petroleum Hydrocarbons(TPH) by DOH 310-13(Galson Laboratories)
3-20-89																						
Stoddard Solvent	—	—	—	—	—	—	—	—	Dry	ND	ND	ND	12.8	ND	22.8	—	—	—	—	—	—	
#2 fuel oil	—	—	—	—	—	—	—	—	Dry	ND	15.8	ND	2.2	2.3	2.9	—	—	—	—	—	—	TPH by DOH 310-13(Galson Laboratories)
6-17-89																						
Stoddard Solvent	—	—	—	—	—	—	—	—	Dry	ND	ND	ND	8.6	ND	500							
#2 fuel oil	—	—	—	—	—	—	—	—	Dry	ND	27.6	ND	2.8	4.5	ND	—	—	—	—	—	—	
#6 fuel oil	—	—	—	—	—	—	—	—	Dry	6.2	ND	2.7	ND	ND	1200	—	—	—	—	—	—	TPH by DOH 310-13(Galson Laboratories)
11-9-89																						
Stoddard Solvent	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	ND	33.5	1.89	—	—	—	TPH by DOH 310-13(Buck Environmental Laboratories)
1-12-90																						
Xylene	—	—	—	—	.37	—	—	—	—	—	—	—	—	—	—	ND	.86	ND	ND	.009	ND	
Toluene	—	—	—	—	ND	—	—	—	—	—	—	—	—	—	—	ND	1.39	ND	ND	ND	ND	Hazardous Substance List Compounds(EPA 8260 GC/MS Methodology)Buck Laboratories
Late Eluting Hydrocarbons	—	—	—	—	yes	—	—	—	—	—	—	—	—	—	—	yes	yes	yes	yes	yes	ND	
4-24-90																						
Stoddard Solvent	ND	ND	ND	ND	14%	360	ND	65	Dry*	ND	ND	ND	4260	ND	4780	70	16%	140	ND	75	ND	
Toluene	40	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	TPH by DOH 310-13 (Buck Environmental Laboratories)
Fuel Oil	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1320	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Gasoline	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1070	ND	ND	ND	ND	ND	ND	ND	

NOTES:

- ALL READINGS IN ppm (EXCEPT 4-24-90 WHICH IS IN ppb)
- ** = PETROLEUM HYDROCARBONS SIMILAR TO #2 FUEL OIL ALSO PRESENT
- — = NOT SAMPLED
- ND = NONE DETECTED ABOVE THE DETECTION LIMITS
- " LATE ELUTING HYDROCARBONS" INCLUDE, C8-C14 ALKANES
- * = WELL PIPE IS BROKEN AND ACCESS TO WELL IS NO LONGER POSSIBLE
- % = THESE SAMPLES CONTAINED FREE-PRODUCT SO THEY WERE QUANTIFIED AS A PERCENT OF THE TOTAL SAMPLE

BUCK ENVIRONMENTAL LABORATORIES INC.
ACCREDITED ENVIRONMENTAL ANALYSIS
100 TOMPKINS ST. • CORTLAND, N.Y. 13045
607-753-3403

MAY 25 1990

Report Date: 5/23/90
Lab Log Number: N900823

LABORATORY REPORT

Client: **NEW YORK STATE DEC**

Site: Revere Copper

Empire Project No: GTA-89-6C

Spill #87-01259 PIN #SP9-9290

Date of Sample: 4/24/90 by A. Lockwood, Empire

Sample Descriptions: Water

Method:
- o Flame Ionization Detector, and/or GC/MS (75 degrees for 4 minutes, 8 degrees/min to 310 degrees C)
- o N2 purge at 25ml/min - calibrated against toluene standard (unless otherwise noted)
- o Adapted from NYSDOH 310-13 methodology

TOTAL PETROLEUM HYDROCARBON QUANTITATION

Blank	ND (<5 ug/L)
P-1	40 ug/L as toluene
P-2	20 ug/L as toluene
P-3	ND (<5 ug/L)
P-4	ND (<5 ug/L)
P-5	Est. 14% free product mineral spirits

PRODUCT IDENTIFICATION

P-1 and P-2 contain numerous components at trace levels throughout the range associated with mineral spirits and aged gasoline.

ND - None detected greater than detection limits noted.

This analysis is certified as conforming to generally accepted laboratory practices and requirements of the New York State Health Department ELAP program.

John H. Buck

John H. Buck, P.E.
Laboratory Director
NYS ELAP CERT 10795

BUCK ENVIRONMENTAL LABORATORIES INC.
A CERTIFIED ENVIRONMENTAL ANALYSIS
100 TOMPKINS ST. • CORTLAND, N.Y. 13045
607-753-3403

Report Date: 5/23/90
Lab Log Number: N900823

LABORATORY REPORT

Client: **NEW YORK STATE DEC**

Site: Revere Copper

Empire Project No: GTA-89-6C

Spill #87-01259 PIN #SP9-9290

Date of Sample: 4/24/90 by A. Lockwood, Empire

Sample Descriptions: Water

Method:
- o Flame Ionization Detector, and/or GC/MS (75 degrees for 4 minutes, 8 degrees/min to 310 degrees C)
- o N2 purge at 25ml/min - calibrated against toluene standard (unless otherwise noted)
- o Adapted from NYSDOH 310-13 methodology

TOTAL PETROLEUM HYDROCARBON QUANTITATION

P-6	360 ug/L as mineral spirits
P-7	ND (<5 ug/L)
P-8	65 ug/L as mineral spirits
MW-2	ND (<5 ug/L)
MW-3	1320 ug/L as fuel oil

PRODUCT IDENTIFICATION

P-6 and P-8 contain components associated with mineral spirits. The components of MW-3 suggests a mixture of aged gasoline and fuel oil origin.

ND - None detected greater than detection limits noted.

This analysis is certified as conforming to generally accepted laboratory practices and requirements of the New York State Health Department ELAP program.

John H. Buck, P.E.
Laboratory Director
NYS ELAP CERT 10795

BUCK ENVIRONMENTAL LABORATORIES INC.
ALL QUALITY ENVIRONMENTAL ANALYSIS
100 TOMPKINS ST. • CORTLAND, N.Y. 13045
607-753-3403

Report Date: 5/23/90
Lab Log Number: N900823

LABORATORY REPORT

Client: **NEW YORK STATE DEC**

Site: Revere Copper

Empire Project No: GTA-89-6C

Spill #87-01259 PIN #SP9-9290

Date of Sample: 4/24/90 by A. Lockwood, Empire

Sample Descriptions: Water

Method: o Flame Ionization Detector, and/or GC/MS
(75 degrees for 4 minutes,
8 degrees/min to 310 degrees C)
o N2 purge at 25ml/min - calibrated against toluene standard (unless otherwise noted)
o Adapted from NYSDOH 310-13 methodology

TOTAL PETROLEUM HYDROCARBON QUANTITATION

MW-4	ND (<5 ug/L)
MW-5	4260 ug/L as mineral spirits
MW-6	1070 ug/L as gasoline
MW-7	4780 ug/L as mineral spirits

PRODUCT IDENTIFICATION

The components of MW-5 are consistent with mineral spirits. MW-6 contains components associated with aged gasoline and also components associated with mineral spirits (est 10%). MW-7 predominantly contains mineral spirits (est 70%) with other components associated with lube oils (est 30%) and traces of components associated with fuel oils.

ND - None detected greater than detection limits noted.

This analysis is certified as conforming to generally accepted laboratory practices and requirements of the New York State Health Department ELAP program.

John H. Buck, P.E.
Laboratory Director
NYS ELAP CERT 10795

BUCK ENVIRONMENTAL LABORATORIES INC.
ALL PHASES ENVIRONMENTAL ANALYSIS
100 TOMPKINS ST. • CORTLAND, N.Y. 13045
607-753-3403

Report Date: 5/23/90
Lab Log Number: N900823

LABORATORY REPORT

Client: **NEW YORK STATE DEC**

Site: Revere Copper

Empire Project No: GTA-89-6C

Spill #87-01259 PIN #SP9-9290

Date of Sample: 4/24/90 by A. Lockwood, Empire

Sample Descriptions: Water

Method:
- o Flame Ionization Detector, and/or GC/MS (75 degrees for 4 minutes, 8 degrees/min to 310 degrees C)
- o N2 purge at 25ml/min - calibrated against toluene standard (unless otherwise noted)
- o Adapted from NYSDOH 310-13 methodology

TOTAL PETROLEUM HYDROCARBON QUANTITATION

MW-8	70 ug/L as mineral spirits
MW-9	Est. 16% free product - mineral spirits
MW-10	140 ug/L as mineral spirits
MW-11	ND (<5 ug/L)
MW-12	75 ug/L as mineral spirits
MW-13	ND (<5 ug/L)

PRODUCT IDENTIFICATION

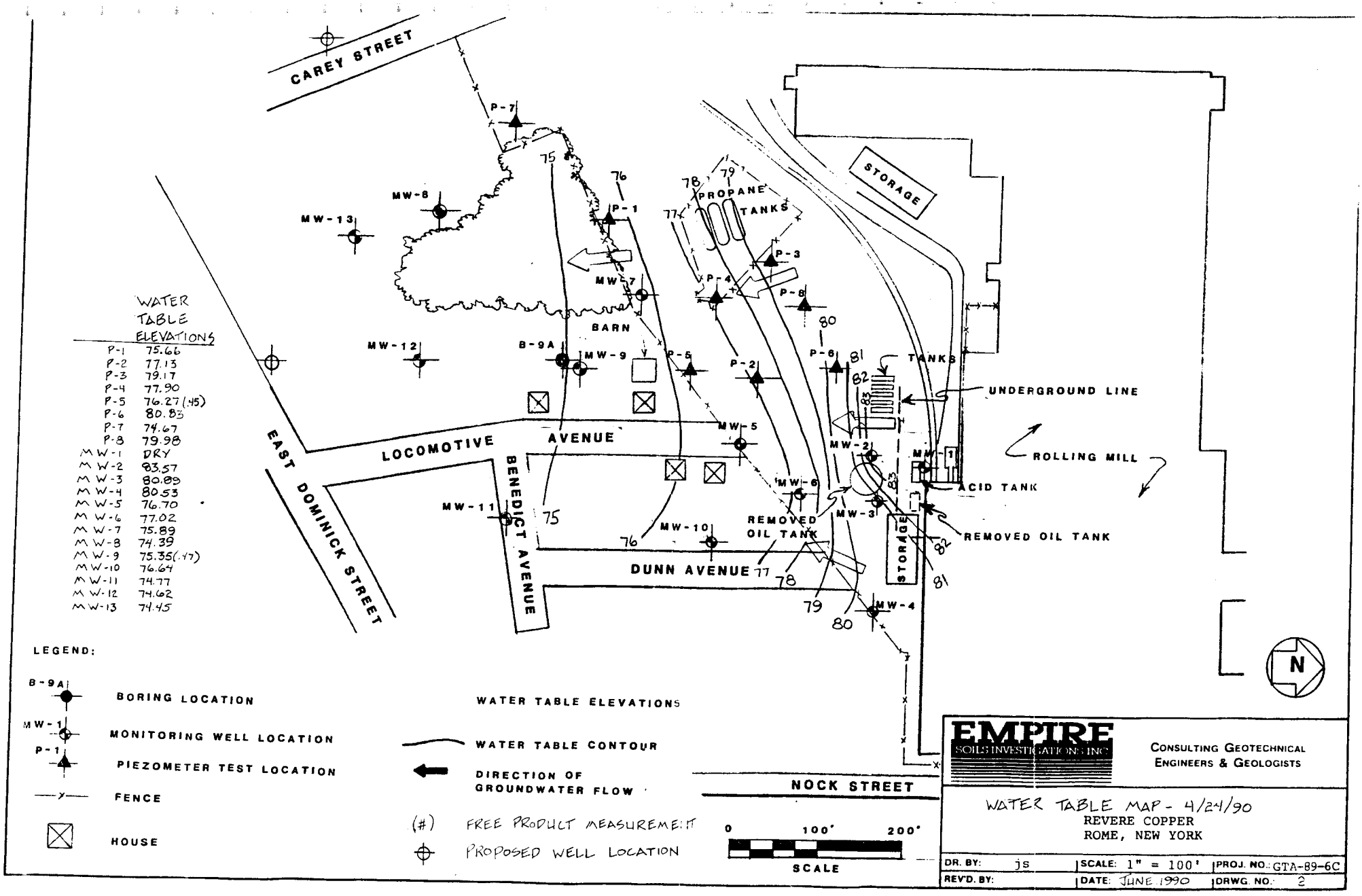
MW-8 shows low levels of components associated with mineral spirits. The components of MW-10 and MW-12 are associated with mineral spirits.

ND - None detected greater than detection limits noted.

This analysis is certified as conforming to generally accepted laboratory practices and requirements of the New York State Health Department ELAP program.

John H. Buck

John H. Buck, P.E.
Laboratory Director
NYS ELAP CERT 10795

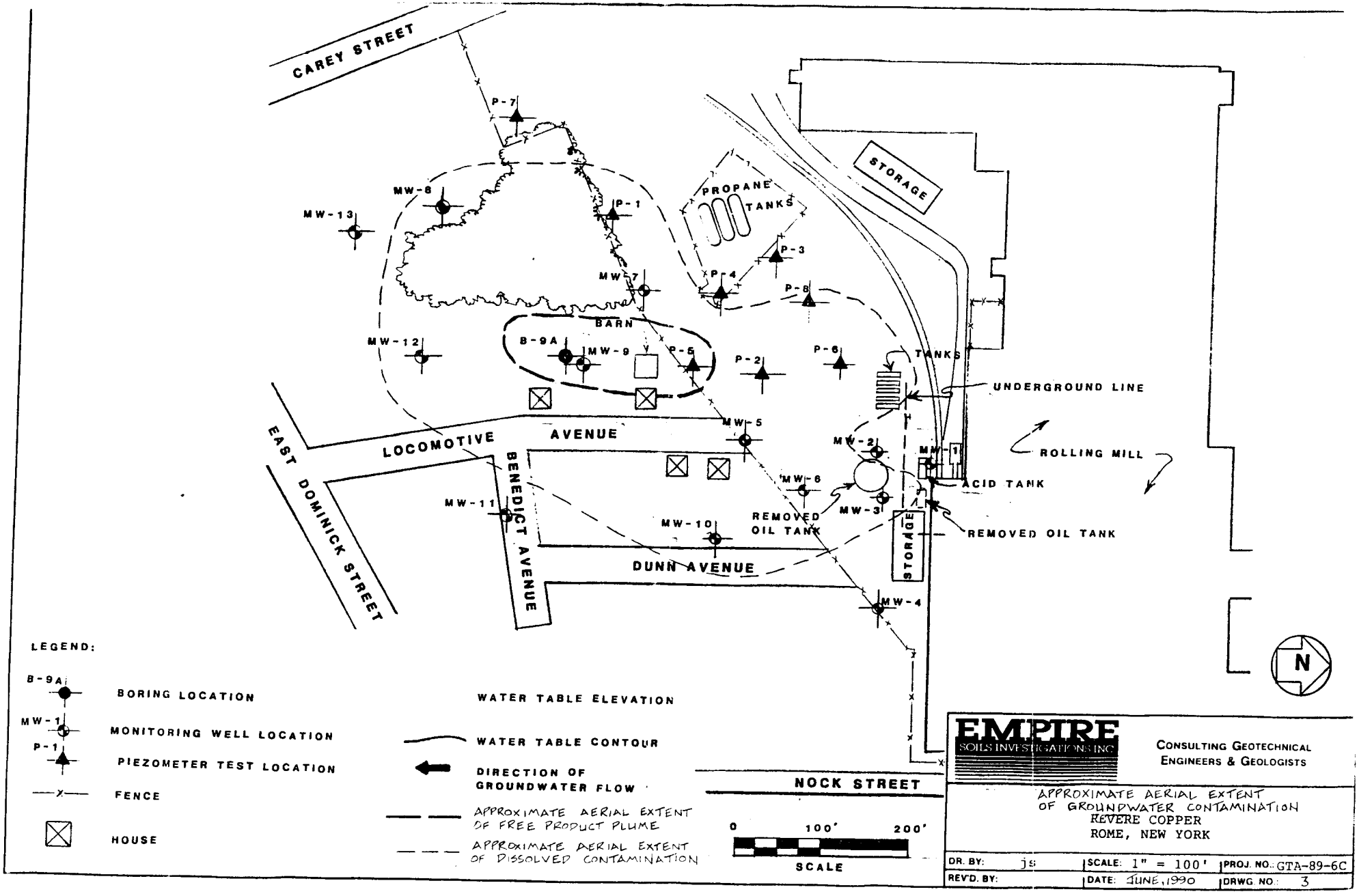


EMPIRE SOILS INVESTIGATIONS INC

CONSULTING GEOTECHNICAL ENGINEERS & GEOLOGISTS

WATER TABLE MAP - 4/24/90
REVERE COPPER
ROME, NEW YORK

DR. BY: JS	SCALE: 1" = 100'	PROJ. NO.: GTA-89-6C
REV'D. BY:	DATE: JUNE 1990	DRWG. NO.: 2



EMPIRE SOILS INVESTIGATIONS INC

CONSULTING GEOTECHNICAL ENGINEERS & GEOLOGISTS

APPROXIMATE AERIAL EXTENT OF GROUNDWATER CONTAMINATION
REVERE COPPER
ROME, NEW YORK

DR. BY: js	SCALE: 1" = 100'	PROJ. NO.: GTA-89-6C	
REV'D. BY:	DATE: JUNE, 1990	DRWG. NO.: 3	

REFERENCE NO. 47

HAZARDOUS WASTE DISPOSAL SITES REPORT
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Code: F
Site Code: 633007
Name of Site: Revere Copper and Brass, Inc. Region: 6
County: Oneida Town/City Rome
Street Address: Adjacent to Sixth Street

Status of Site Narrative:

This site is an active acid waste storage lagoon on the plant property adjacent to Sixth Street. It was built in 1971 with a capacity of 125,000 gallons and is lined, fenced and posted. The Mohawk River is the nearest body of water down gradient at a distance of 800 feet. The City Park is approximately 200 feet across the road and the nearest residence is 500 feet away. The lagoon is pumped out periodically by a scavenger waste hauler.

Type of Site: Open Dump ☐ Treatment Pond(s) ☐ Number of Ponds
Landfill ☐ Lagoon(s) ☒ Number of Lagoons 1
Structure ☐

Estimated Size 125,000 gal (0.2 acres)

Hazardous Wastes Disposed? Confirmed ☒ Suspected ☐

*Type and Quantity of Hazardous Wastes:

TYPE	QUANTITY (Pounds, drums, tons, gallons)
H_2SO_4 H_2O_2	125,000 gallons

*Use additional sheets if more space is needed.

Name of Current Owner of Site: Revere Copper and Brass, Inc.
Address of Current Owner of Site: P.O. Box 151, Rome, New York 13440

Time Period Site Was Used for Hazardous Waste Disposal:

, 19 71 To Present , 1980

Is site Active [X] Inactive [ ]
(Site is inactive if hazardous wastes were disposed of at this site and site was closed prior to August 25, 1979)

Types of Samples: Air [ ] Groundwater [ ] None [ ]
Surface Water [ ] Soil [ ]

Remedial Action: Proposed [ ] Under Design [ ]
In Progress [ ] Completed [ ]
Nature of Action:

Status of Legal Action: _____ State [ ] Federal [ ]

Permits Issued: Federal [ ] Local Government [ ] SPDES [X]
Solid Waste [ ] Mined Land [ ] Wetlands [ ] Other [ ]

Assessment of Environmental Problems:

Because the lagoon is lined with a plastic 30 mil. hypalon liner no environmental problems are suspected.

Assessment of Health Problems:

None expected.

Persons Completing this Form:

D. Sweredoski
Dave Knowles

New York State Department of Environmental Conservation
Date April 18, 1980

Ron Tramontano

New York State Department of Health
Date

REFERENCE NO. 48

REFERENCE NO. 49

NUS CORPORATION AND SUBSIDIARIES — **TELECON NOTE**

CONTROL NO.:	DATE:	TIME:
02-9010-16	March 8, 1991	9:30

DISTRIBUTION:

Revere Copper Products, Inc.

BETWEEN:	OF: NYDEC	PHONE:
Tom Koch	Hazardous Site Control Albany, New York	(518) 457-0747

AND:

Dorothy Ponte (NUS)

DISCUSSION:

I requested test results for Revere Copper and Brass Landfill NYDEC ID. Number 633008.

Tom stated the landfill was sampled in 1987. One composite sample obtained from 0-6" below soil surface from 3 seperate locations was analyzed. The landfill at the time of sampling had the appearance of an overgrown vacant lot. The sample was dry and gravely in texture.

Inorganic test results were as follows:

Analyte	mg/kg
Cu	3,840
Zn	5,180
Cd	13
Cr	23
Pb	86

ACTION ITEMS:

Semi-volatiles were also detected in the soil sample. These appear to pertain mainly to coal tar type derivatives.

Tom's team split samples with Revere Copper Products, Inc.

Tom will be sending a copy of the field book and analytical test results to NUS Corporation Region 2 FIT.

REFERENCE NO. 50

Superfund Handbook

A Guide to Managing Responses to Toxic Releases Under Superfund

September 1989

Third Edition

ENSR Corporation
(Formerly ERT)

SIDLEY & AUSTIN
Law Offices

$45.00

Legal Notice

This Handbook is intended to be an information document that generally outlines the broad elements of the legal, regulatory, and technical framework of CERCLA/SARA and the Superfund program in effect in April 1989. As such, it is not within the scope of this Handbook to analyze specific legal, policy, or technical issues that may arise in the Superfund program. Rather, it is the purpose of the authors to identify significant issues that may be faced in the Superfund area. Specific questions about particular matters should be addressed in the context of the facts that underlie them and the policies and law in effect at the time. In furnishing this Handbook, ENSR and Sidley & Austin do not make any warranty or representation, either express or implied, with respect to the accuracy, completeness, or utility of the information contained in this document; nor do ENSR or Sidley & Austin assume any liability of any kind whatsoever resulting from the use of or reliance upon any information, procedure, conclusion, or opinion contained in this Handbook.

ENSR Corporation
35 Nagog Park
Acton, MA 01720

Sidley & Austin
One First National Plaza
Chicago, IL 60603

In addition, you will forfeit your right to limitations on liability and to any defense against liability under Superfund (Section 107). There are no civil penalties for violating facility notification requirements.

Criminal penalties for violating spill reporting and record retention requirements are more stringent. It is considered a violation of the spill reporting requirement if you (1) fail to report a release you know of, or (2) report false or misleading information, or (3) fail to retain records or make records unavailable. If convicted of violating spill reporting or record retention requirements, you may face:

- imprisonment of up to 3 years for a first conviction and up to 5 years for a subsequent conviction (under the original Act the maximum prison sentence was 1 year); and/or
- as an individual, a maximum fine of $250,000; or
- as a corporation, a maximum fine of $500,000.

To help enforce these sanctions, SARA has added a new provision awarding up to $10,000 to anyone who provides information leading to the arrest and conviction of a person for a criminal violation of CERCLA.

In addition to criminal sanctions for violating spill reporting and record retention requirements, you face civil sanctions in administrative or judicial proceedings. PRPs can expect EPA to use administrative proceedings more often for its own convenience. The civil penalties are a maximum of $25,000 per violation or per day for each day during which violation continues, with a maximum penalty of $75,000 for a second or subsequent violation.

You can appeal an administrative penalty in federal court. The court is likely to review only the administrative record, so it is important for you to participate in developing that record. The administrative record consists of the information EPA uses to reach its decision and to assess a penalty against you.

Petroleum Exclusion

What is the petroleum exclusion?

Superfund excludes petroleum (including crude oil or any fraction of petroleum not listed as a hazardous substance under CERCLA/SARA) from the definition of hazardous substance, pollutant, or contaminant. Substances within the petroleum exclusion are not covered by CERCLA requirements. The major problem in interpreting the exclusion is that some listed hazardous substances, such as benzene and toluene, are present in most if not all petroleum products. Additionally, hazardous substances or heavy metals such as lead may be added during the refining process.

EPA has attempted to clarify the scope of the petroleum exclusion to dispel uncertainty about spill reporting requirements under CERCLA and whether it will use CERCLA or other environmental laws. In a 1987 memorandum, EPA interpreted the exclusion to encompass petroleum and petroleum fractions that occur naturally, even though the fractions contain listed hazardous substances. EPA has not established detailed rules governing petroleum additives. The agency's position is that hazardous substances normally added during refining are within the exclusion if they are normally mixed with or added to petroleum products during refining and if the levels of the mixed or added hazardous substances do not exceed those normally found in refined petroleum fractions. EPA has published no guidance on the exact meaning of "normal."

Both EPA and a recent court decision have interpreted the exclusion to encompass unleaded gasoline, even though it includes increased levels of benzene from the refining process. EPA also includes within the petroleum exclusion leaded gasoline, a petroleum product containing the hazardous substance lead. Another court has held cutting oils (unused) to be within the exclusion; however, used crankcase oil, containing heavy metals listed as hazardous substances, was held by a different court not to be within the exclusion.

EPA appears to be dealing on a case-by-case basis with difficult questions about when the exclusion applies. If you are uncertain about whether a substance is excluded, you can call EPA. (See Reference Section for documents providing guidance on the petroleum exclusion.)

Is waste oil excluded?

EPA has specifically stated that hazardous substances added to waste oil are not within the exclusion, although waste oil itself is excluded from regulation. Since hazardous substances are typically added to the oil during use, EPA may use CERCLA to respond to a release of contaminated waste oil. Practically speaking, not only must the hazardous substances be cleaned up, but so must the oil.

Are pesticides covered by the petroleum exclusion?

EPA has stated that there is no exception for pesticides, even though the active ingredients may be mixed with a petroleum distillate.

Are there other environmental laws for responding to a spill of petroleum products?

With regulations recently promulgated governing underground storage tanks under the Resource Conservation and Recovery Act (RCRA), Superfund may not often be the first choice for cleanup of leaks from underground storage tanks (USTs) containing petroleum products. EPA recently estimated that there may be more than 100,000 leaks of leaded gasoline from retail gas stations alone. However, the agency has also argued that Superfund, with its finite resources, is not the proper vehicle for cleaning up these leaks. Instead, EPA believes that UST regulations under RCRA

and the 1984 amendments to RCRA apply to gasoline releases even though CERCLA places them under the petroleum exclusion.

Government Inspections

When can the government obtain information from you?

The government may obtain information from you to determine the need for response to a release or to enforce provisions of the Act. SARA expanded government authority to take response action by adding the ability to obtain information from you (CERCLA 104(e)(1)). In addition, SARA added a broad provision stating that EPA can use any lawful means to obtain information.

EPA may require you to provide the following information under SARA:

- the identity, nature, and quantity of materials generated, treated, stored, or disposed of at, or transported to, a facility or vessel;
- the nature or extent of a release or threatened release of a hazardous substance, pollutant, or contaminant at or from a facility or vessel; and
- the ability to pay for or perform a cleanup.

In addition, upon reasonable notice, you may need to let a government employee inspect and copy documents relating to the above matters, or you can choose to copy the documents for the government at your own expense.

When can EPA enter and inspect your property?

SARA clearly allows EPA to enter and inspect your property to choose or take any response action (Section 104(e)(1)). SARA also explicitly authorizes EPA to enter and inspect property adjacent to a facility. However, SARA has put two limits on EPA's authority. First, EPA can enter and inspect *only for determining* the need for response, choosing or taking response action, or otherwise enforcing the Act. Second, EPA can enter and inspect your facility or property *only if* there is reasonable basis to believe there may be a release or threat of release of a hazardous substance or pollutant or contaminant.

When can you withhold information from the government because it is confidential?

EPA cannot obtain from you information that the attorney-client privilege and the work-product doctrine protect as confidential. Sampling and analysis are generally not protected and therefore must be disclosed to EPA, but you may be able to protect certain written reports and opinions about sampling and analysis.

What are the penalties for refusing to give EPA access or information?

A court may assess you $25,000 for each day of noncompliance. EPA has successfully sued noncompliant parties who ignored requests for information. If you receive a request for access or information, probably with a limited time frame for compliance, it is advisable to consult an attorney familiar with CERCLA.

Government Response Authority

When can the government take action under Superfund?

Under CERCLA, the President has broad freedom to respond to actual or threatened releases of hazardous substances, pollutants, or contaminants. It is important to remember that *threatened*, not actual, releases are enough to grant authority to act under CERCLA. Authority to abate the risk of harm even from threatened releases lies at the heart of the statute. EPA is the principal authority for responding to land, groundwater or surface water contamination, actual or threatened. The Coast Guard is responsible for spills in coastal zones or navigable waters. Generally, a PRP will be dealing with the EPA and/or the appropriate state agency. Note that "pollutant or contaminant" is defined very broadly. It includes just about any substance that, upon release into the environment, may cause death, disease, behavioral abnormalities, cancer, genetic mutation, physiological malfunctions, or physical deformities in an organism.

What government responses to a hazardous release are authorized?

Under Superfund, the government is authorized to:

- remove or arrange for removal of the substance, including removal from any contaminated natural resource (typically a short-term remedy);
- provide for remedial action (typically a long-term remedy); and
- take any other response measure needed to protect public health or welfare, including temporary relocation.

Such activity must be consistent with the NCP.

Removal and remedial actions can include a sweeping array of activities, which you as a potentially responsible party (e.g., generator, owner, operator) may be asked to finance. Removal actions can include total surface cleanup. However, remedial actions are generally longer-term solutions and can include groundwater remediation. When the government conducts a cleanup using Superfund monies, it will sue PRPs for reimbursement of *all* costs (including emergency aid, such as temporary housing assistance, litigation, experts, studies, etc.). (See Part I, Chapter 2 for detailed discussion of removal/remedial actions.)

REFERENCE NO. 51

NUS CORPORATION AND SUBSIDIARIES | TELECON NOTE

CONTROL NO.:	DATE:	TIME:
02-9010-16	3/27/91	9:30

DISTRIBUTION:

Revere Copper Products, Inc.

BETWEEN:	OF:	PHONE:
Secretary	Columbus School Rome City School District	(315) 337-9924

AND: Dorothy Ponte (NUS)

DISCUSSION:

Approximately 400 students attend Columbus School located at 112 Columbus Avenue, Rome, Oneida County, New York.

ACTION ITEMS:

REFERENCE NO. 52

NUS CORPORATION
SUPERFUND DIVISION

PROJECT NOTES

TO: File

DATE: March 28, 1991

FROM: Dorothy Ponte

COPIES:

SUBJECT: Estimated population density within a 4-mile radius of

REFERENCE: Revere Copper Products, Inc. Site.

Population density within a 4-mile radius of Revere Copper Products, Inc. Site was estimated based on the General Sciences Corporation, Graphical Exposure Modeling System (GEMS) for the site.

3-4 mile radius of site: 4,840 people / 1,458 homes ≅ 3.32 people/home

2-3 mile radius of site: 7,614 people / 2,205 homes ≅ 3.45 people/home

1-2 mile radius of site 22,983 people / 7,954 homes ≅ 2.89 people/home

½-1 mile radius of site 4,447 people / 1,823 homes ≅ 2.44 people/home

¼-½ mile radius of site 192 people / 79 homes ≅ 2.43 people/home

REFERENCE NO. 53

NUS CORPORATION AND SUBSIDIARIES **TELECON NOTE**

CONTROL NO.:	DATE:	TIME:
02-9010-16pr	Tues. April 7, 92	9:15 A.M.

DISTRIBUTION:

1. Site File
2. Pat Hastings

BETWEEN:	OF:	PHONE:
Jack Marsch	Region 6 NYSDEC	(315) 793-2554

AND:

John Cooman Environmental Scientist, Edison (NUS)

DISCUSSION:

After a brief phone call to Tom [illegible] NYSDEC Region 6, ~~[illegible]~~ he offered no further information and referred me to Jack Marsch for more specific questions. Jack Marsch said that he only knew of monitoring wells at/near Locomotive avenue, not at the alleged dumping grounds (Formerly Brown's Soap Factory). The vapor recovery program was confined to the same area and had been successful capturing large quantities of Stoddard Solvent and #2 fuel oil. To his knowledge no further investigation had ~~[illegible]~~ occurred ~~[illegible]~~ elsewhere at the site.

ACTION ITEMS:

REFERENCE NO. 54

NUS CORPORATION
1090 KING GEORGES POST ROAD
SUITE 1103
EDISON, NEW JERSEY 08837
201 225-6160

C-584-02-91-104

February 22, 1991

Ms. Amy Brochu
U. S. Environmental Protection Agency
Region 2
Edison, New Jersey 08837

Dear Ms. Brochu:

Please accept this letter in confirmation of our conversation regarding the Revere Copper site authorized under TDD 02-9010-16.

The original request for a Preliminary Assessment specified Revere Copper Products Inc. with an associated EPA identification number of NYD071586127 and an address listing in CERCLIS of Seneca Street in Rome, New York. Background information indicates that this identification number is associated with a treatment, storage, or disposal facility (TSDF).

As we discussed, we have discovered that the Revere Copper Facility encompasses a large expanse of property bordered by Culverton Road, 6th Street, and Seneca Street. There are five EPA identification numbers potentially associated with this facility. Three of these are listed in CERCLIS. Each of the three listings shows a different address (Attachment Nos. 1 and 2). However, all three can be located by map on the facility property (Attachment No. 3). Although there are "NFA" recommendations for two of the three CERCLIS listings, a review of background information did not indicate that an assessment of our designated site has been completed or other miscellaneous potential sources have been adequately addressed. Thus, we recommend that a Preliminary Assessment be completed for of the facility in total. Please call me if you require further information.

Very truly yours,

P. D. Hastings

Patricia D. Hastings

Reviewed and Approved: B M Naman

PDH/bgp

ATTACHMENT #1

NUS CORPORATION AND SUBSIDIARIES — **TELECON NOTE**

CONTROL NO.:	DATE:	TIME:
02-9010-16	January 18, 1991	9:50

DISTRIBUTION:

Revere Copper Products

BETWEEN:	OF:	PHONE:
Phil Clappen	U.S. EPA	(212)264-6143

AND:

Dorothy Ponte (NUS)

DISCUSSION:

SP 1/18/91

I asked Phil if there was any particular reason why EPA ID No. NYD071586187, associated with the Revere Copper Products Site Preliminary Assessment (EPI), had been chosen considering a total of five EPA ID numbers appear to be associated with the particular site. I provided Phil with the following EDA ID numbers and their associated waste sources:

DP 1/18/91

* NYD071586187 TSDF

NYD002206894 TSD to generator only status?

* NYD980507578 lagoon

* NYD980507560 landfill

NYD000799205 Railroad Street TSDF?

10:00 Phil returned my call and informed me the discrepancy was due to a paper error. He suggested I address each of the site's waste units in a "site wide preliminary assessment" of Revere Copper Products.

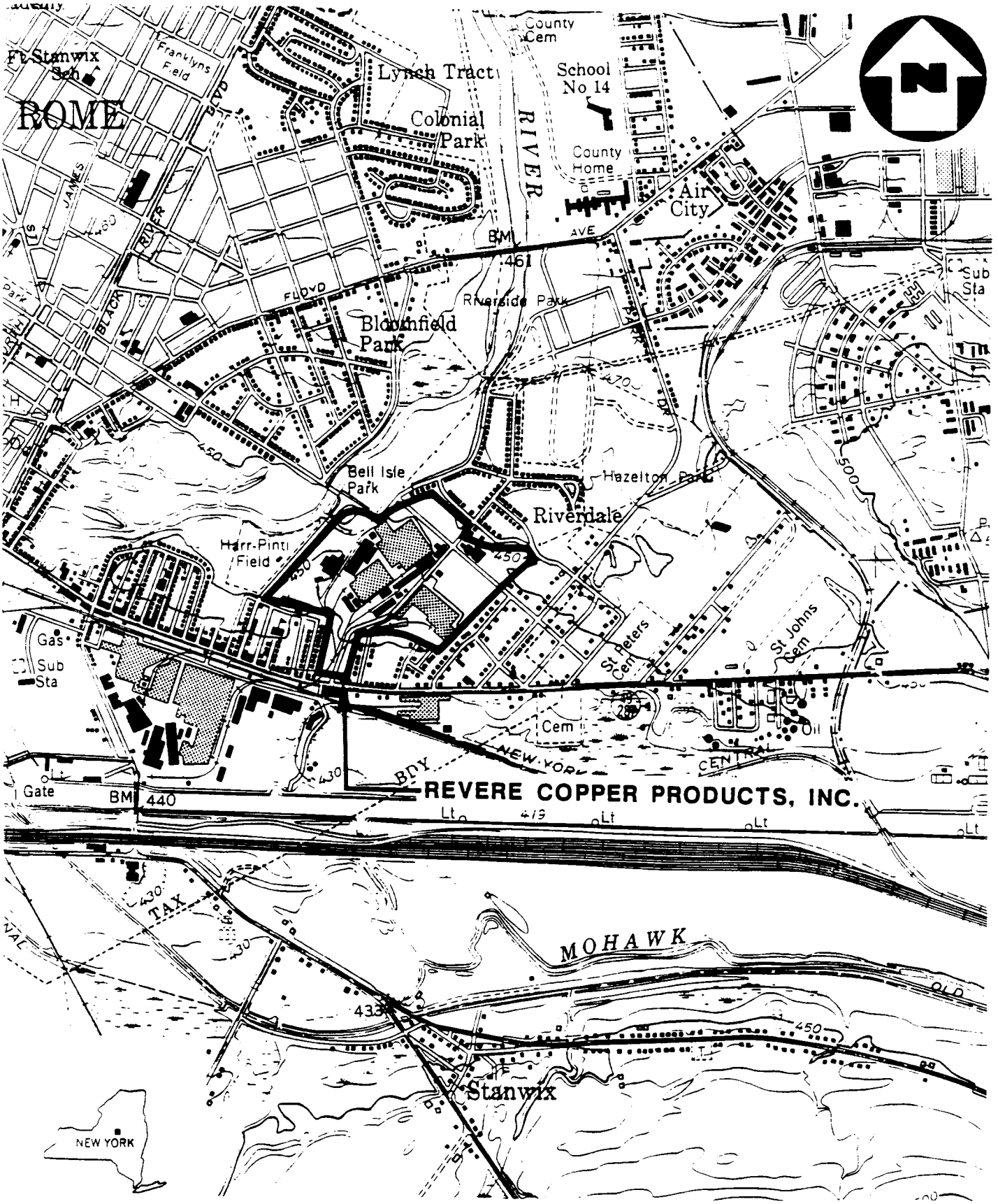
ACTION ITEMS:

NUS 067 REVISED 0685

EPA ID NO.	SITE NAME / STREET / CITY / COUNTY CODE AND NAME	STATE ZIP / CONG DIST.	NFA. FLAG	OPRBLE UNIT	EVENT TYPE	ACTUAL START DATE	ACTUAL COMPL DATE	CURRENT EVENT LEAD
NYD980507560	REVERE COPPER & BRASS		NFA	00	DS1		04/01/80	EPA (FUND)
	CULVERTON RD				PA1		09/29/86	STATE(FUND)
	ROME	NY 13440						
	065 ONEIDA							
NYD980507578	REVERE COPPER & BRASS		NFA	00	DS1		02/16/87	EPA (FUND)
	6TH ST				PA1	03/16/87	03/19/87	EPA (FUND)
	ROME	NY 13440						
	065 ONEIDA							
NYD071586127	REVERE COPPER PROD INC			00	DS1		08/24/90	EPA (FUND)
	SENECA ST							
		NY 13440						
	065 ONEIDA							
NYD002245967	REYNOLDS METALS CO			00	DS1		06/01/81	EPA (FUND)
	PO BOX 500, S GRASSE RIVER RD				PA1		08/01/83	EPA (FUND)
	MASSENA	NY 13662			SI1	08/01/83	08/01/83	STATE(FUND)
	089 ST LAWRENCE			01	CO1	12/15/89		RESP. PARTY
NYD980507735	RICHARDSON HILL SITE			00	RV1	07/29/87		RESP. PARTY
	RICHARDSON HILL RD				DS1		05/18/82	EPA (FUND)
	SIDNEY	NY 13838			PA1		04/11/86	STATE(FUND)
	025 DELAWARE				NP1		06/01/86	EPA (FUND)
					NF1		07/01/87	EPA (FUND)
					SI1	04/07/86	04/11/86	STATE(FUND)
				01	CR1	07/22/87		RESP. PARTY
					CO1	07/22/87		RESP. PARTY
					AS1		05/01/85	EPA (FUND)
NYD980762512	RIGA TOWN DUMP			00	DS1		05/01/83	EPA (FUND)
	SAVAGE RD				PA1		05/01/83	EPA (FUND)
	RIGA	NY 14428			HR1		05/01/83	OTHER
	055 MONROE				SI1	05/01/83	05/01/83	EPA (FUND)
NYD980289375	RIKERS ISLAND			00	DS1		03/01/83	EPA (FUND)
	RIKERS ISLAND				PA1		04/01/83	EPA (FUND)
	BRONX	NY 11370			HR1		05/01/83	OTHER
	081 QUEENS				SI1	07/01/90	09/25/90	EPA (FUND)

ATTACHMENT #2

ATTACHMENT # 2



(QUAD) ROME, N.Y.

FIGURE 1

SITE LOCATION MAP

REVERE COPPER PRODUCTS, INC.,

ROME, N.Y.

SCALE : 1 " = 2000'

NUS CORPORATION