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

AUBURN LANDFILL
AUBURN, CAYUGA COUNTY, NEW YORK
SITE CODE: 706001

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

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WE Project No. 01424339

April 1986

AUBURN LANDFILL

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1.0 EXECUTIVE SUMMARY

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The Auburn Landfill site, located in the northeast section of the City of Auburn, Cayuga County, is an active municipal landfill, which has been in use since the early 1960's. The 190-acre landfill receives approximately 150 tons per day, or an annual total of 46,800 tons, of primarily municipal solid waste from the City of Auburn, Towns of Fleming, Owasco, Sennett, Throop, Aurelius, Brutus, Springport, Niles and the Village of Weedsport. Thirteen private haulers also deliver refuse to the landfill. From 1974 to 1979, Auburn Landfill received 15,000 tons of baghouse dust from Austeel, Auburn Steel Co., Inc. In 1979 the site also received 8,448 cubic yards of iron oxide and dirt in powder form from Consolidated Scrap Processing, Inc. During the same period an unknown quantity of uncharacterized industrial wastes were delivered to the site by the Singer Company, Climate Control Division.

Auburn Landfill is located in the industrial district of the City of Auburn. The site is bounded on the north, south and west by city-owned property and on the east by North Division Street. Drainage is presently provided by a series of ditches that discharge to a small stream bordering the northeastern section of the site. Approximately one mile downstream the stream discharges into Owasco Outlet.

A survey of federal, state and local files, in conjunction with discussions with the City of Auburn, provided a great deal of information regarding the site. This information includes the City of Auburn 6 NYCRR Part 360 application as well as past sampling data.

A site investigation was conducted on June 13, 1985 by Wehran Engineering. Leachate seeps were noted along the eastern edge of fill. Erosion was occuring on side slopes and, in places, refuse was protruding through the intermediate cover. Standing water was observed in the area of monitoring well M2, possibly the result of a perched water table.

Past groundwater sampling revealed elevated iron levels in the monitoring wells. This data is difficult to assess due to the questionable placement and construction of the existing monitoring wells. The wells are

without protective casings and potential exists for contaminants to enter the wells from sources other than groundwater. Additionally, the upgradient well (M1) is drilled through refuse and therefore background water quality parameter levels are undetermined. Levels exceeding Class AA surface water standards of ammonia, phenol, iron and manganese have been detected in previous surface water sampling efforts.

Conversation during the site visit with Mr. Michael O'Neill, P.E., City of Auburn, revealed that the landfill is currently operating under Consent Order No. 7-0439, and the City is in the process of conducting a hydrogeologic study of the landfill area. The City has also received authorization to begin installation of a partial leachate collection system along the north and east boundaries of fill.

Past surface water sampling efforts at the site have provided inadequate data. Upstream and upgradient sampling was not undertaken and therefore background levels of water quality parameters are not available for comparison. Regardless, levels of phenol, ammonia, iron and manganese exceeding NYSDEC Class AA surface water standards have been detected in grab samples of surface water at the site. The Hazard Ranking System (HRS) score for this site, based on a review of available data and site inspection, is 5.32.

2.0 PURPOSE

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This Phase I investigation was conducted under contract to the New York State Department of Environmental Conservation Superfund Program to evaluate the potential environmental or public health hazard associated with past disposal activities at the Auburn Landfill site. Divided into two parts, this initial investigation consisted of a detailed file review of available information and an initial site investigation. The culmination of this phase is the development of a preliminary Hazard Ranking System (HRS) score.

Where information is lacking and a final score cannot be computed, recommendations will be made for a Phase II investigation designed to verify the assumptions made in the preliminary scoring and to collect the additional data needed to complete the site assessment.

3.0 SCOPE OF WORK

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To complete the preliminary HRS score for the Auburn Landfill site, the following scope of work was completed:

- A review of the following:
  - Available information from federal, state, and municipal agencies
  - Published documents from the U.S. Geological Survey, Soil Conservation Service and state agencies for geological, hydrological and topographical data
  - Available files, reports and court cases
- Interviews with individuals having knowledge of the site

Information gathered included well logs, land use data, water usage patterns, critical habitats and endangered species data, meteorological data, hydrological, geological and topographical data, waste characteristics and demographic information.

Following an initial file review a site inspection was conducted. The intent of the inspection was to verify existing file information and to conduct an HNU survey to screen for potential air releases. Items of specific interest in the site investigation were:

- Overall site environmental conditions
- The presence of disturbed areas
- Visual signs of waste materials (drums, sludges, etc.)
- The occurrence of leachate
- Site topography

A detailed analysis was performed on all data collected in preparation of a preliminary HRS score. Where information was lacking and a final HRS

score could not be computed, recommendations were made for a Phase II investigation. This investigation was designed to verify the assumptions made in the preliminary scoring and to collect the additional data needed to complete the site assessment. A summary of agencies contacted, contact person, address and information obtained follows.

SOURCES -- AUBURN LANDFILL SITE
(Page 1)

Name/Address/Phone	Type of Contact	Date	Information Provided
Mr. Robert Abrams, Attorney General New York State Attorney General Department of Law State Capitol, Room 221 Albany, New York 12224 (581) 474-7330	Letter	8-24-84	None available
Dr. David Axelrod, Commissioner New York State Department of Health Tower Building, Empire State Plaza Albany, New York 12237 (518) 474-8427	Letter	8-24-84	None available
Mr. Joseph Barry, Director New York State Northern Regional Office Syracuse Area Office New York State Department of Health 351 South Warren Street 7th Floor Syracuse, New York 13202 (315) 428-4744	Letter	8-24-85	None available
Mr. William Catto Public Health Director Cayuga County Health Department P.O. Box 219 160 Genesee Street Auburn, New York 13021 (315) 253-1405	Letter	8-24-85	None available
Mr. John Czapor, Environmental Engineer USEPA, Region II 26 Federal Plaza New York, New York 10278 (212) 264-1573	Letter	8-24-84	None available

SOURCES -- AUBURN LANDFILL SITE
(Page 2)

Name/Address/Phone	Type of Contact	Date	Information Provided
Mr. Paul Dodd, State Conservationist U.S. Department of Agriculture Soil Conservation Service James M. Hanley Federal Building 100 South Clinton Street Syracuse, New York 13260 (315) 423-5521	Letter	8-24-84	Name and address of local representative
Dr. Robert H. Fakundiny, State Geologist Geological Survey of New York State State Education Department Division of Museum Services Albany, New York 12230 (518) 474-5816	Letter	8-24-84	None available
M. A. Thomas Giannone, Manager Personnel and Purchasing Frazer and Jones Company P.O. Box 4955 Syracuse, New York 13221 (315) 468-6251	Letter	8-1-85	Verification of sand disposal
Mr. Gary G. Hayes, Executive Director Central New York Regional Planning and Development Board 700 East Water Street Syracuse, New York 13210 (315) 422-8276	Letter	8-24-84	None available
Mr. Robert Ingham District Conservationist USDA Soil Conservation Service 248 Grant Avenue Auburn, New York 13021 (315) 252-5832	Telephone	7-10-85	Regional soil information

SOURCES -- AUBURN LANDFILL SITE
(Page 3)

Name/Address/Phone	Type of Contact	Date	Information Provided
Mr. James L. Larocca, Commissioner NYSDOT 1220 Washington Avenue Albany, New York 12232 (518) 457-4422	Letter	8-24-84	None available
Mr. Edward L. Laukern, Mayor City Hall South Street Auburn, New York 13021 (315) 252-9531	Letter	8-24-85	Request referred to City Engineer
Dr. Ian Loudon, Regional Health Director New York State Northern Regional Office New York State Department of Health 9 Market Street Amsterdam, New York 12010 (518) 843-3520	Letter	8-24-84	None available
Mr. Lawrence A. Martens, District Chief U.S. Department of the Interior U.S. Geological Survey Albany District Office P.O. Box 1350 U.S. Post Office and Court House Albany, New York 12201 (518) 472-3107	Letter	8-24-84	None available
Mr. Michael O'Neill, P.E. City of Auburn Memorial City Hall Auburn, New York 13031 (315) 252-9531	Personal Communication	6-13-85	Accompanied site investigation

SOURCES -- AUBURN LANDFILL SITE
(Page 4)

Name/Address/Phone	Type of Contact	Date	Information Provided
Mr. Joseph M. Powers Regional Director NYSDOT, Region 3 333 East Washington Street Syracuse, New York 13202 (315) 428-4351	Letter	8-24-84	None available
Mr. Carl B. Sciple, Division Engineer Army Corps of Engineers New England Division 424 Trapelo Road Waltham, Massachusetts 02154 (617) 894-2400	Letter	8-24-84	None available
Mr. Frederick J. Scullin, Jr. U.S. Department of Justice U.S. Attorney Northern District of New York 369 Federal Building 100 South Clinton Street Syracuse, New York 13260 (315) 423-5165	Letter	8-24-84	None available
Mr. Richard D. Spear, Chief Surveillance & Monitoring Branch USEPA, Region II Woodbridge Avenue Edison, New Jersey 08817 (201) 321-6685	Letter	8-24-84	None available

4.0 SITE ASSESSMENT

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4.1 SITE HISTORY

The Auburn Landfill site, located in the northwest section of the City of Auburn, Cayuga County, is an active municipal landfill, which has been in use since the early 1960's. The 190-acre landfill receives approximately 150 tons per day, or an annual total of 46,800 tons, of primarily municipal solid waste from the City of Auburn, Towns of Fleming, Owasco, Sennett, Throop, Aurelius, Brutus, Springport, Niles and the Village of Weedsport. Thirteen private haulers also deliver refuse to the landfill. From 1974 to 1979, Auburn Landfill received 15,000 tons of baghouse dust from Austeel, Auburn Steel Co., Inc. In 1979 the site also received 8,448 cubic yards of iron oxide and dirt in powder form from Consolidated Scrap Processing, Inc. During the same period an unknown quantity of uncharacterized industrial wastes were delivered to the site by the Singer Company, Climate Control Division.

A great deal of information is available regarding the site, including the City of Auburn 6 NYCRR Part 360 application as well as past sampling data.

Conversation with Mr. Michael O'Neill, P.E., City of Auburn, revealed that the landfill is currently operating under Consent Order No. 7-0439, and the City is in the process of conducting a hydrogeologic study of the landfill area. The City has also received authorization to begin installation of a partial leachate collection system along the north and east boundaries of fill.

4.2 SITE TOPOGRAPHY

The Auburn area is situated in the Appalachian Plateau, in which the regional topography consists of rolling hills and uplands with large and broad stream and lake valleys lying between them. The Auburn Landfill is located in the industrial district of the City of Auburn. The site is bounded on the north, south and west by city-owned property and on the east by North Division Street. The site generally slopes from west to east with the highest natural elevations to the west. Drainage is presently provided by a series of ditches that discharge to a small stream bordering the northeastern section of the site. Approximately one mile downstream the stream discharges into Owasco Outlet.

4.3 SITE HYDROGEOLOGY

The bedrock underlying the Auburn area is the Onondaga Limestone. Carbonate rocks in the Appalachian Plateau tend to occur in massive beds (up to a few feet in thickness), and are jointed. Openings along joints generally have been enlarged through action of groundwater. Overburden consists of glacial material. Borings down to an approximate depth of 30 feet revealed medium dense silt, fine to coarse sand and fine to medium gravel. Typical soils in the area are silt loams with permeabilities of 10^{-5} cm/sec to 10^{-7} cm/sec. Limited site-specific hydrogeology exists for this site.

4.4 SITE CONTAMINATION

A site investigation was conducted on June 13, 1985 by Wehran Engineering. Leachate seeps were noted along the eastern edge of fill. Erosion was occuring on side slopes and, in places, refuse was protruding through the intermediate cover. Standing water was observed in the area of monitoring well M2, possibly the result of a perched water table. An HNU Systems PID with a 10.2 ev lamp showed no appreciable organic vapors.

Past groundwater sampling revealed elevated iron levels in the monitoring wells. This data is difficult to assess due to the questionable placement and construction of the existing monitoring wells. The wells are without protective casings and potential exists for contaminants to enter the wells from sources other than groundwater. Additionally, the upgradient well (M1) is drilled through refuse and therefore background water quality parameter levels are undetermined. Levels exceeding Class AA surface water standards of ammonia, phenol, iron and manganese have been detected in previous surface water sampling efforts.

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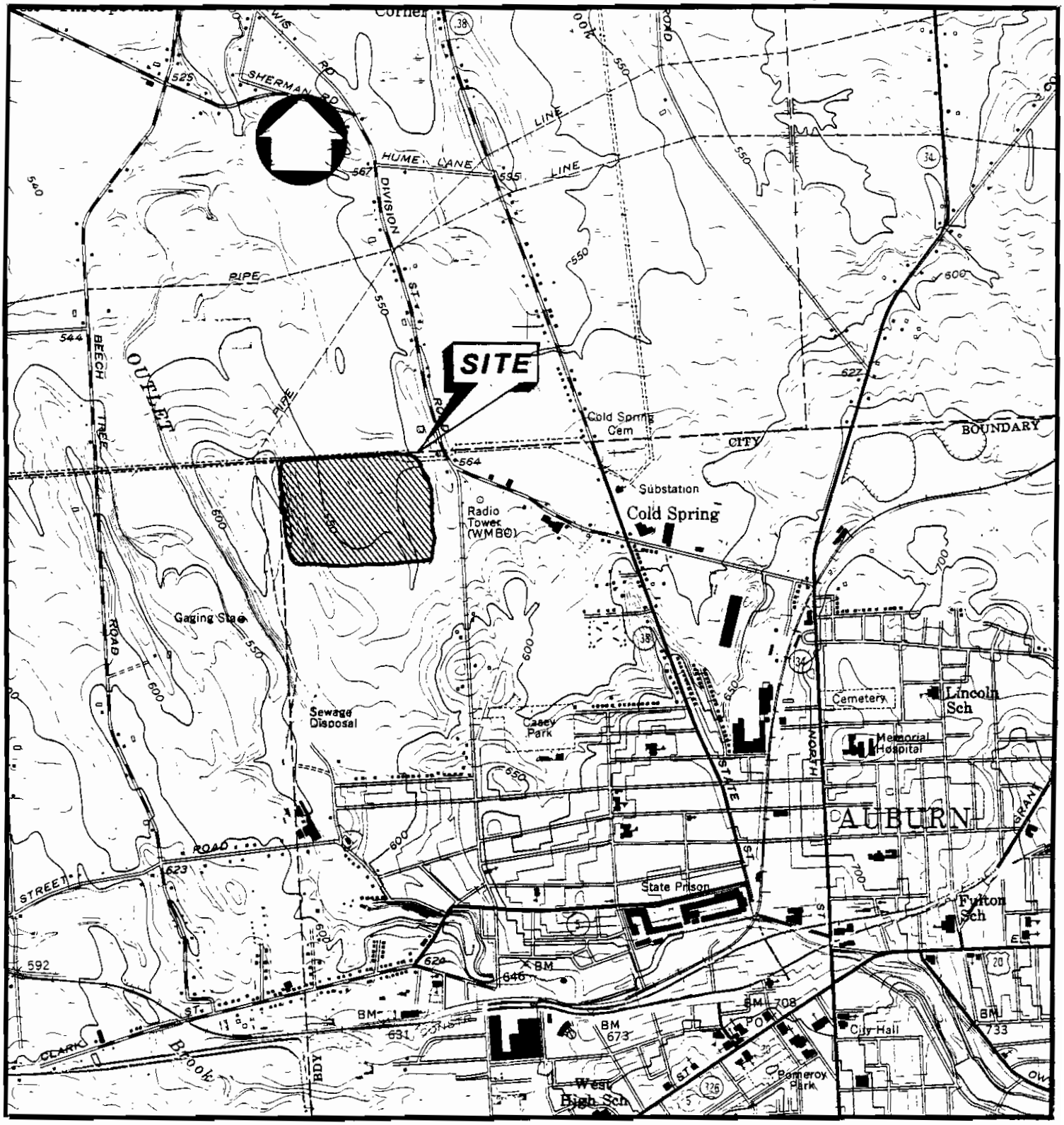
LOCATION



SCALE: 1" = 2000'

TOPOGRAPHY TAKEN FROM
1954
AUBURN, N.Y.
U.S.G.S QUADRANGLE
7.5 MIN SERIES
(PHOTOREVISED 1978)

MAP LOCATION

FIGURE 1

SITE LOCATION MAP

AUBURN LANDFILL

LAT. 76° 35' 34" N LONG. 43° 57' W

Facility Name: Auburn Landfill

Location: City of Auburn, Cayuga County, New York

EPA Region:

Person(s) in Charge of the Facility: Michael O'Neill, P.E.
City Engineer
City of Auburn

Name of Reviewer: Frances C. Geissler **Date:** 7/11/85

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.)

Municipal landfill, 190 acres in size. Monitoring wells show contamination of groundwater, several leachate seeps are visible, refuse is protruding through cover.

Scores: $S_M = 5.32$ ($S_{gw} = 1.50$ $S_{sw} = 9.09$ $S_a = 0$)

$S_{FE} = 0$

$S_{DC} = 25.0$

HRS WORKSHEETS

GROUND WATER ROUTE WORK SHEET

	Rating Factor	Assigned Value (Circle One)	Multi-plier	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	2	3	
	Permeability of the Unsaturated Zone	0 (1) 2 3	1	1	3	
	Physical State	0 1 (2) 3	1	2	3	
	Total Route Characteristics Score			11	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	18	18	
	Hazardous Waste Quantity	0 1 2 3 4 5 6 7 (8)	1	8	8	
	Total Waste Characteristics Score			26	26	
5	Targets					3.5
	Ground Water Use	0 (1) 2 3	3	1	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			1	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			858	57.330	
7	Divide line 6 by 57.330 and multiply by 100	S_{gw} = 1.50				

SURFACE WATER ROUTE WORK SHEET

Rating Factor	Assigned Value (Circle One)	Multiplier	Score	Max. Score	Ref. (Section)
1 Observed Release	0 (45)	1	45	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	3	3	
1-yr. 24-hr. Rainfall	0 1 (2) 3	1	2	3	
Distance to Nearest Surface Water	0 1 2 (3)	2	6	6	
Physical State	0 1 (2) 3	1	2	3	
Total Route Characteristics Score			13	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	18	18	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 (8)	1	8	8	
Total Waste Characteristics Score			26	26	
5 Targets					4.5
Surface Water Use	0 (1) 2 3	3	3	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			5	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			5850	64,350	
7 Divide line 6 by 64,350 and multiply by 100	S_{sw} = 9.09				

AIR ROUTE WORK SHEET

	Rating Factor	Assigned Value (Circle One)	Multiplier	Score	Max. Score	Ref. (Section)
1	Observed Release	(0) 45	1		45	5.1
	Date and Location:					
	Sampling Protocol:					
	If line 1 is 0, the S = 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				

	S	S^2
Groundwater Route Score (S_{gw})	1.50	2.25
Surface Water Route Score (S_{sw})	9.09	82.63
Air Route Score (S_a)	0	
$S_{gw}^2 + S_{sw}^2 + S_a^2$		84.88
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		9.21
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} \,/\, 1.73$		$S_M = 5.32$

WORKSHEET FOR COMPUTING S_M

FIRE AND EXPLOSION WORK SHEET N.A.

	Rating Factor	Assigned Value (Circle One)	Multi-plier	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 5 by 1,440 and multiply by 100	S_{FE} = N.A.				

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	15	15	8.4
5	Targets					8.5
	Population Within a 1-Mile Radius	0 1 (2) 3 4 5	4	8	20	
	Distance to a Critical Habitat	(0) 1 2 3	4	0	12	
	Total Targets Score			8	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			5,400	21,600	
7	Divide line 6 by 21,600 and multiply by 100	S_{DC} = 25.00				

HRS DOCUMENTATION RECORDS

June 28, 1982

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: Auburn Landfill

LOCATION: City of Auburn, Cayuga County

GROUND WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected (5 maximum): None (See below)

Rationale for attributing the contaminants to the facility:
Elevated iron levels were found in monitoring wells #2 & #3 during quarterly sampling on 7-2-84 (see appendix for analysis results) Well #1, upgradient of #2 and #3, was drilled in refuse and therefore background data is not available. Wells are without protective casings and contaminants may enter wells from sources other than groundwater.

* * *

2 ROUTE CHARACTERISTICS /

Depth to Aquifer of Concern

Name/description of aquifers(s) of concern:

Unconsolidated fine sand

Monitoring Well #3, Boring Log #B-1, Completed 5-9-78 Parratt & Wolff

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

18.5 feet

Boring Log #B-1

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

16.0 feet below grade (50-65 feet total depth of fill)

Boring log #B-2 drilled in refuse
18.5 feet - 16.0 feet = 2.5 feet <20 feet
Score=3

Net Precipitation

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

35.75 inches mean annual

Source: National Oceanic and Atomospheric Administration, Climates of the States, Vol. 2, p. 719, 1978.

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

27 inches mean annual

Source: Figure 4 EPA Document HW-10

Net precipitation (subtract the above figures):

8.75 inches
Score=2

Permeability of Unsaturated Zone

Soil type in unsaturated zone:

Fine silt

Boring Log #B-1 completed 5-9-78

Permeability associated with soil type:

$10^{-5} - 10^{-7}$ cm/sec

Score=1 EPA Document HW-10

Physical State

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

Powderediron oxide and dirt
baghouse dust
Municipal solid waste
fine material Score=2

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

No liner
No cap

Source: Site investigation, June 13, 1985, Wehran Engineering

Method with highest score:

Same as above

Score=3

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

Mercury
Lead
Zinc
Iron
Phenol

Compound with highest score:

Mercury, Lead
Score = 18

Source: NYSDEC Memo dated April 24, 1984

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):

8,448 cu yards, iron oxide powder and dirt
15,000 tons baghouse dust
unknown quantity of industrial waste Singer Company
Total=23,448 tons
Score=8

Basis of estimating and/or computing waste quantity:

File data:

1. Industrial Waste Collector Annual Report, 2-13-79
   Consolidated Scrap Processing, Inc.
2. DEC memo 4-24-84
3. K. DelPrete letter 3-13-79

* * *

5 TARGETS

Ground Water Use

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

No specific wells found, public surface water supplies service area within 3-mile radius, potential possibility of aquifer use at some future time.

Source: 1. NYS Atlas of Community Water System Sources 1982
2. Inventory - Community Water Systems - NYS Vol. 1 and 2 1984, NYSDOH
3. Verified with Cayuga DOH

Score=1

Distance to Nearest Well

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

None known

Distance to above well or building:

None Known

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:

None known

Sources: 1. NYS Atlas of Community Water System Sources 1982
2. Community Systems that Purchase All Their Water, NYSDOH, 1977
3. Inventory - Community Water Systems - NYS Vol. 1 - Municipal, 1984, NYSDOH

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):

None known

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

None known

Score=0

SURFACE WATER ROUTE

1 OBSERVED RELEASE

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

Ammonia
Phenol
Iron
Manganese

Rationale for attributing the contaminants to the facility:

Grab sample on 7-2-84 of stream. Stream originates on landfill

Source: Sample analysis 7-2-84

* * *

2 ROUTE CHARACTERISTICS

Facility Slope and Intervening Terrain

Average slope of facility in percent:

Drops 30 feet over 400 feet=7.5% slope

Source: Site plan available from City of Auburn

Name/description of nearest downslope surface water:

Unnamed tributary to Owasco Outlet, perennial stream originating as a landfill drainage ditch

Source: USGS Quad. Auburn, NY

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

7.5%

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

Yes, stream runs across landfill area.

Source: U.S.G.S. Quad. Auburn, NY

Is the facility completely surrounded by areas of higher elevation?

No

Source: USGS Quad. Auburn, NY
Score = 3

1-Year 24-Hour Rainfall in Inches

2.25 inches

EPA Document HW-10
Score = 2

Distance to Nearest Downslope Surface Water

Immediately adjacent
Score = 3

Physical State of Waste

powdered iron oxide and dirt — Score = 2
baghouse dust
industrial wastes, Singer Company
municipal solid waste

Source: File Data:
Industrial Waste Collector Annual Report 12-13-79, Consolidated Scrap Processing, Inc.
DEC letter, 4-24-84; K. DelPrete letter, 3-13-79

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

No diversion
landfill not adequately covered, erosion occuring
Source: Site inspection, Wehran Engineering 6-13-85
Score = 3

Method with highest score:

Same

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated

Mercury
Zinc
Lead
Phenol
Iron

Compound with highest score:

Mercury, lead
Score = 18

Source: NYSDEC Memo dated April 24, 1984

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):

8,448 cu. yards iron oxide powder and dirt
15,000 tons baghouse dust
unknown quantity industrial waste, Singer Company
Total=23,448 tons
Score=8

Basis of estimating and/or computing waste quantity:

File data:
1. Industrial Waste Collector Annual Report, 12-13-79, Consolidated Scrap Processing, Inc.
2. DEC memo 4-24-84
3. K. DelPrete letter 3-13-79

* * *

5 TARGETS

Surface Water Use

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

1. Unnamed tributary to Owasco Outlet and Owasco Outlet downstream to Throopsville bridge are classified as D Waters.
2. Owasco Outlet from mouth to bridge is classified as C Waters.

Class C Waters are suitable for fishing and all other uses except as a water supply for drinking, food processing and primary contact recreation.

Source: NYCRR Vol. 6(E)
Art. 14, Part 898.2(i)
Score=1

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:

1,700 feet

Source: USGS Quad. Auburn, NY

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

None noted in Part 360 application

Source: Auburn Landfill Part 360 Applications, 1982

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:

None known

Source: NYS Atlas of Community Water System Sources, 1982 and Community Systems that Purchase Their Water, NYSDOH, 1977.

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

None known

Total population served:

None known

Name/description of nearest of above water bodies:

None known

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

None known

AIR ROUTE

1 OBSERVED RELEASE

Contaminants detected:

Not applicable

Date and location of detection of contaminants:

Not applicable

Methods used to detect the contaminants:

Not applicable

Rationale for attributing the contaminants to the site:

Not applicable

2 WASTE CHARACTERISTICS

Reactivity and Incompatibility

Most reactive compound:

Not applicable

Most incompatible pair of compounds:

Not applicable

Toxicity

Most toxic compound:

Not applicable

Hazardous Waste Quantity

Total quantity of hazardous waste:

Not applicable

Basis of estimating and/or computing waste quantity:

Not applicable

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**

Not applicable

Distance to a Sensitive Environment

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

Not applicable

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

Not applicable

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

Not applicable

Land Use

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

Not applicable

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

Not applicable

Distance to residential area, if 2 miles or less:

Not applicable

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

Not applicable

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

Not applicable

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

Not applicable

FIRE AND EXPLOSION

1 CONTAINMENT

Hazardous substances present:

To score the fire and explosion hazard mode either a state or local fire marshall must have certified that the facility presents a significant fire or explosion threat to the public or to a sensitive environment, or there must be a demonstrated threat based on field observations (e.g. combustible gas indicator readings). The available records give no indication that either one of these tasks has been done. Further, the available data do not suggest any imminent threat of fire and explosion at this site. Therefore the route score cannot be completed.

Type of containment, if applicable:

Not applicable

2 WASTE CHARACTERISTICS

Direct Evidence

Type of instrument and measurements:

Not applicable

Ignitability

Compound used:

Not applicable

Reactivity

Most reactive compound:

Not applicable

Incompatibility

Most incompatible pair of compounds:

Not applicable

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility:

Not applicable

Basis of estimating and/or computing waste quantity:

Not applicable

3 TARGETS

Distance to Nearest Population

Not applicable

Distance to Nearest Building

Not applicable

Distance to Sensitive Environment

Distance to wetlands:

Not applicable

Distance to critical habitat

Not applicable

Land Use

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

Not applicable

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

Not applicable

Distance to residential area, if 2 miles or less:

Not applicable

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

Not applicable

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

Not applicable

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

Not applicable

Population Within 2-Mile Radius

Not applicable

Buildings Within 2-Mile Radius

Not applicable

DIRECT CONTACT

1 OBSERVED INCIDENT

Date, location, and pertinent details of incident:

No confirmed or documented incident which caused injury to humans or animals has been reported.

Score = 0

Source: NYSDEC Hazardous Site Investigation Reports

2 ACCESSIBILITY

Describe type of barrier(s):

Barriers do not completely surround the facility.

Score = 3

Source: Wehran Engineering, site investigation, June 13, 1985

3 CONTAINMENT

Type of containment, if applicable:

No liner

Score = 15

Source: NYSDEC Registry Forms

4 WASTE CHARACTERISTICS

Toxicity

Compounds evaluated:

Mercury
Lead
Iron
Phenol
Zinc

Source: NYSDEC Memo, April 24, 1984

Compound with highest score:

Mercury, Lead

Score = 3

5 TARGETS

Population within one-mile radius

Within one-mile radius of the site the total population = 535

Score = 2

Source: USGS Quadrangle, Auburn, NY

Distance to critical habitat (of endangered species)

There are no habitats of endangered species within one mile.

Score = 0

Source: NYSDEC Endangered Species Unit, Delmar, NY

By _____ Date _____
Chkd. by _____ Date _____
Subject

WEHRAN ENGINEERING
CONSULTING ENGINEERS

Job No. _____
Sheet No. _____ of _____

SAMPLING SUMMARY — Auburn Landfill

7-2-84 GW — Results cannot be used w/o upgradient well

	Parameter		M1 (divided ref.)	M2	M3
(50)	Chloride	mg/l	14.4	5.1	6.2
	Conductance	umhos/cm	800	2300	2500
(6.5-8.5)	pH	standard	7.8	7.6	7.8
	TOC	mg/l	48	7.0	22.5
→ (.3)	IRON	mg/l	0.11	5.12	1.7
(.025)	Lead	mg/l	<0.02	<0.02	<0.02
(5)	Zinc	mg/l	0.08	0.16	0.26

SW

See data-sheets need background levels

exceeded At waters for:

Ammonia	80 mg/l
Phenol	.034 mg/l
Iron	6.8 mg/l
Manganese	.52 mg/l

(315) 457 6711

Environmental
CS LABORATORY
Division of Calocerinos & Spina Consulting Engineers • 1020 Seventh North Street, Liverpool, NY 13088

To: AUBURN SANITATION DEPT.
285 N. DIVISION ST.
AUBURN, NY 13021

Date: Aug 07 1984

Attention: JAMES BREEZE

****
SAMPLE #4117
LABORATORY ANALYSIS REPORT
****

SAMPLE SUMMARY

CLIENT	:AUBURN SANITATION DEPT.	DATE RECEIVED	: 07/02/84
JOB #	:155.002.00	DATE COLLECTED	: 07/02/84
LOCATION	:WELL #1	TIME COLLECTED	: 1140
PRICE CODE	:STANDARD	METHOD	: GRAB

#	PARAMETER	RESULTS	UNITS
230	CHLORIDE	14.4	mg/l
255	CONDUCTANCE	800.	umhos/cm
405	pH	7.8	Standard Units
545	TOC	48.	mg/l
685	IRON	0.11	mg/l
695	LEAD	<0.02	mg/l
885	ZINC	0.08	mg/l

*Analyzed on soluble portion of sample.

All analyses were conducted in accordance with EPA "Methods for Chemical Analysis of Water and Wastes (1983)" or "Standard Methods (15th Edition)" unless otherwise specified.

MONITORING WELL
SAMPLE CHARACTERIZATION AND
CHAIN OF CUSTODY SHEET

LAB SAMPLE LOG NO. 4117 JOB NO. 155.002.00

SOURCE

CLIENT CITY OF AUBURN WELL NO. # 1

LOCATION Auburn LANDFILL WELL TYPE/SIZE 1½ PVC

BAILING

DATE 7-2-84

WELL DEPTH 29'

DEPTH TO WATER 12.6'

WELL VOLUME

METHOD PVC BAILER

NO. OF VOLUMES 3

TOTAL VOLUME 4 gals

ITEM	START	FINISH
TIME	0930	1130
pH	7	7
TEMP.	12°C	9°C
DEPTH	12.6'	DRY
COLOR	clear	
APPEAR.	DARK PARTICLES	DARK PARTICLES

SAMPLING

DATE 7-2-84

TIME 1140

METHOD PVC BAILER

CONTAINER ½ gal plastic

SAMPLED BY CDS

pH 7

TEMP 9°C

COLOR DARK

APPEAR. SOME SUSPENDED SOLIDS

Eh

PRESERVATION

DATE 7-2-84

FILTERED: YES X NO ____ TIME 1200 BY TN

PRESERVED: YES X NO ____ TIME 1200 BY TN

PRESERVATIVE: ☐ H_2SO_4 ☒ HNO_3 ☐ NaOH ☐ $H_3PO_4 + CuSO_4$ ☐ $Zn(C_2H_3O_2)_2$

☒ COOLED TO 4°C ☐ OTHER

CUSTODY

SAMPLER'S SIGNATURE Tony Nagoli

TRANSFERRED TO: #1 LAB

RECEIVED BY JLL DATE 7/2 TIME 1445

#2

RECEIVED BY DATE TIME

Environmental
LABORATORY
Division of Calocerinos & Spina Consulting Engineers • 1020 Seventh North Street, Liverpool, NY 13088
(315) 457-6711

To: AUBURN SANITATION DEPT.
285 N. DIVISION ST.
AUBURN, NY 13021

Date: Aug 07 1984

Attention: JAMES BREEZE

****

SAMPLE #4118

LABORATORY ANALYSIS REPORT

****

SAMPLE SUMMARY

CLIENT	:AUBURN SANITATION DEPT.	DATE RECEIVED	: 07/02/84
JOB #	:155.002.00	DATE COLLECTED	: 07/02/84
LOCATION	:WELL #2	TIME COLLECTED	: 1130
PRICE CODE	:STANDARD	METHOD	: GRAB

#	PARAMETER	RESULTS	UNITS
230	CHLORIDE	5.1	mg/l
255	CONDUCTANCE	2300.	umhos/cm
405	pH	7.6	Standard Units
545	TOC	7.0	mg/l
685	IRON	5.12	mg/l
695	LEAD	<0.02	mg/l
885	ZINC	0.16	mg/l

*Analyzed on soluble portion of sample.

All analyses were conducted in accordance with EPA "Methods for Chemical Analysis of Water and Wastes (1983)" or "Standard Methods (15th Edition)" unless otherwise specified.

MONITORING WELL
SAMPLE CHARACTERIZATION AND
CHAIN OF CUSTODY SHEET

LAB SAMPLE LOG NO. 4118 JOB NO. 155002.00

SOURCE

CLIENT CITY OF AUBURN WELL NO. #2

LOCATION AUBURN LANDFILL WELL TYPE/SIZE 6" STEEL

BAILING

DATE 7-2-84

WELL DEPTH 30'

DEPTH TO WATER TOP OF WELL CASING

WELL VOLUME

METHOD PVC BAILER

NO. OF VOLUMES

TOTAL VOLUME 30 gal

ITEM	START	FINISH
TIME	1000	1130
pH	~~6~~ 7	~~8~~ 7
TEMP.	13°C	9°C
DEPTH	TOP OF CASE	25'
COLOR		
APPEAR.	DARK MUDDY	

SAMPLING

DATE 7-2-84 pH ~~6~~ 7

TIME 1130 TEMP. 9°C

METHOD PVC BAILER COLOR T

CONTAINER 1/2 gal PLASTIC APPEAR. TURBID

SAMPLED BY TJN Eh

PRESERVATION

DATE 7/2/84

FILTERED: YES ✓ NO ___ TIME 1150 BY TN

PRESERVED: YES ✓ NO ___ TIME 1150 BY TN

PRESERVATIVE: ☐ H_2SO_4 ☒ HNO_3 ☐ NaOH ☐ $H_3PO_4 + CuSO_4$ ☐ $Zn(C_2H_3O_2)_2$

☒ COOLED TO 4°C ☐ OTHER

CUSTODY

SAMPLER'S SIGNATURE Tony Nagali

TRANSFERRED TO: #1 LAB

RECEIVED BY JLC DATE 7/2 TIME 1445

#2

RECEIVED BY DATE TIME

Environmental
LABORATORY
Division of Calocerinos & Spina Consulting Engineers • 1020 Seventh North Street, Liverpool, NY 13088
(315) 457-6711

To: AUBURN SANITATION DEPT.
285 N. DIVISION ST.
AUBURN, NY 13021

Date: Aug 07 1984

Attention: JAMES BREEZE

****

SAMPLE #4119

LABORATORY ANALYSIS REPORT

****

SAMPLE SUMMARY

CLIENT	:AUBURN SANITATION DEPT.	DATE RECEIVED	: 07/02/84
JOB #	:155.002.00	DATE COLLECTED	: 07/02/84
LOCATION	:WELL #3	TIME COLLECTED	: 1100
PRICE CODE	:STANDARD	METHOD	: GRAB

#	PARAMETER	RESULTS	UNITS
230	CHLORIDE	6.2	mg/l
255	CONDUCTANCE	2800.	umhos/cm
405	pH	7.8	Standard Units
545	TOC	22.5	mg/l
685	IRON	1.7	mg/l
695	LEAD	<0.02	mg/l
885	ZINC	0.26	mg/l

*Analyzed on soluble portion of sample.

All analyses were conducted in accordance with EPA "Methods for Chemical Analysis of Water and Wastes (1983)" or "Standard Methods (15th Edition)" unless otherwise specified.

MONITORING WELL
SAMPLE CHARACTERIZATION AND
CHAIN OF CUSTODY SHEET

LAB SAMPLE LOG NO. 4119 JOB NO. 155.002.00

SOURCE

CLIENT City of Auburn WELL NO. #3

LOCATION Auburn Landfill WELL TYPE/SIZE 4" PVC

BAILING

DATE 7-2-84

WELL DEPTH

DEPTH TO WATER 4.9'

WELL VOLUME

METHOD PVC Bailer

NO. OF VOLUMES 3

TOTAL VOLUME 25 gal

ITEM	START	FINISH
TIME	0930	1100
pH	7.5	7.2
TEMP.	14°C	9°C
DEPTH	4.9'	19'
COLOR		
APPEAR.		

SAMPLING

DATE 7-2-84 pH 7.2

TIME 1100 TEMP. 9°C

METHOD PVC Bailer COLOR

CONTAINER ½ gal plastic APPEAR. clear

SAMPLED BY GDS Eh

PRESERVATION

DATE 7/2/84

FILTERED: YES ✓ NO ___ TIME 1120 BY TN

PRESERVED: YES ✓ NO ___ TIME 1120 BY TN

PRESERVATIVE: ☐ H_2SO_4 ☒ HNO_3 ☐ NaOH ☐ $H_3PO_4 + CuSO_4$ ☐ $Zn(C_2H_3O_2)_2$

☐ COOLED TO 4°C ☐ OTHER

CUSTODY

SAMPLER'S SIGNATURE Tony Napoli

TRANSFERRED TO: #1 LAB

RECEIVED BY [illegible] DATE 7/2 TIME 1045

#2

RECEIVED BY DATE TIME

parratt wolff inc

FISHER ROAD
EAST SYRACUSE, N.Y. 13057

TEST BORING LOG

PROJECT: #1 West Sanitary Landfill — HOLE NO. B-1

LOCATION: Auburn, New York — SURF. ELEV.

DATE STARTED: 5/9/78 — COMPLETED: 5/9/78 — JOB NO. 7849

GROUND WATER: Depth on completion at 18.5'

MW#3

N - NO. OF BLOWS TO DRIVE 2" SAMPLER 6" W/140 LB. WEIGHT FALLING 30"

C - NO. OF BLOWS TO DRIVE CASING 12" W/300 LB. WEIGHT FALLING 24"

SHEET 1 OF 1

BORING MADE WITH HOLLOW STEM AUGER CASING

DEPTH	C	N	SAMPLE NO.	SAMPLE DEPTH	DESCRIPTION OF MATERIAL
		5/5	1	0.0'-	Brown moist medium dense fine to coarse
		6		1.5'	SAND, fine to medium GRAVEL and SILT, little organic matter and rubble fill
5.0					
		5/2	2	5.0'-	
		10		6.5'	
					9.5'
10.0					
		17/26	3	10.0'-	Brown moist dense SILT, little fine
		27		11.5'	to coarse sand, trace roots 12.0'
					Brown moist very stiff SILT and CLAY with lenses of fine sand
15.0					
		20/13	4	15.0'-	
		17		16.5'	
WL ▽					
20.0		5/9	5	19.0'-	
				20.0'	Bottom of Boring 20.0'

parratt wolff inc

FISHER ROAD
EAST SYRACUSE, N.Y. 13057

TEST BORING LOG

PROJECT: #2 East Sanitary Landfill
LOCATION: Auburn, New York
HOLE NO.: B-2
SURF. ELEV.:
DATE STARTED: 5/9/78 COMPLETED: 5/9/78
JOB NO.: 7849
GROUND WATER: Depth on completion at 4.5' after pulling casing

MW#3

N= NO. OF BLOWS TO DRIVE 2" SAMPLER 6" W/140 LB. WEIGHT FALLING 30"

C= NO. OF BLOWS TO DRIVE CASING 12" W/300 LB. WEIGHT FALLING 24"

SHEET 1 OF 1

BORING MADE WITH HOLLOW STEM AUGER CASING

DEPTH	C.	N.	SAMPLE NO.	SAMPLE DEPTH	DESCRIPTION OF MATERIAL
		3/4	1	0.0'-	Brown moist loose to medium dense SILT,
		3		1.5'	fine to coarse SAND and TRASH FILL
5.0 WL		2/2	2	5.0'-	
		5		6.5'	
10.0		6/8	3	10.0'-	
		9		11.5'	
				No re-	
				covery	
15.0		4/3	4	15.0'-	16.0'
		20		16.5'	Brown moist very stiff varved SILT and CLAY
20.0		9/14	5	19.0'-	
				20.0'	Bottom of Boring 20.0'

cc: Chuck Cheroff

CITY OF AUBURN
MEMORIAL CITY HALL
AUBURN, N.Y. 13021
Phone: (315) 252-5531

MICHAEL D. O'NEILL
City Engineer
Superintendent of Public Works

October 5, 1984

Mr. Richard Brickwedde
Regional Attorney
New York State Department of
Environmental Conservation
7481 Henry Clay Boulevard
Liverpool, New York 13088.

Re: Auburn Landfill

Dear Mr. Brickwedde:

Thankyou for your correspondence of September 28, 1984. Would you please forward the most recent N.Y.S.D.E.C. Solid Waste Management Guidelines as it was not enclosed with referenced letter? Upon receipt of this, the City will commence well site location.

Enclosed for your review are the third quarter well analyses.

Thankyou for your concern.

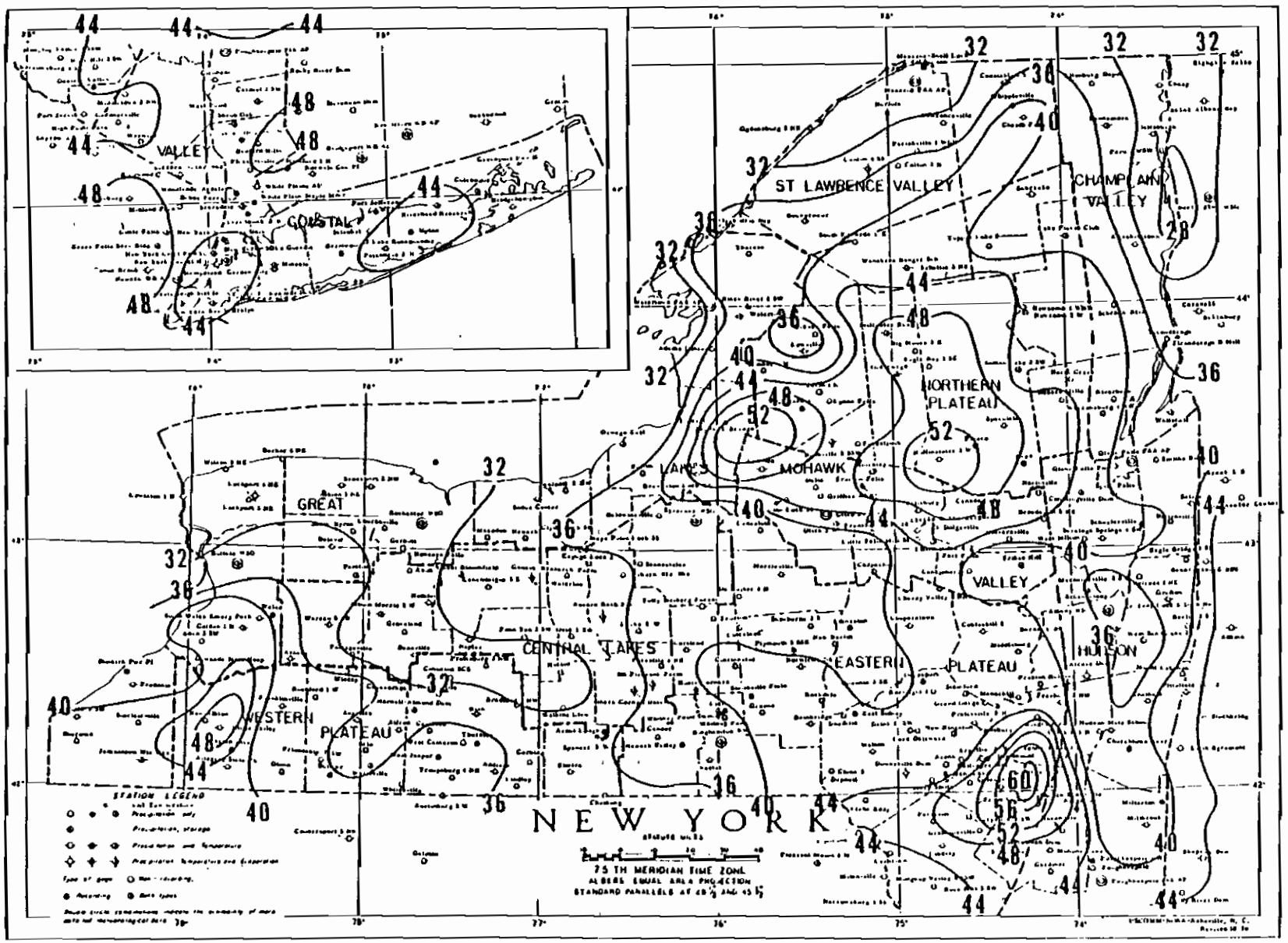
Yours truly,

Michael D. O'Neill
City Engineer
Supt. of Public Works

7-2-84

Well Sampling

MEAN ANNUAL PRECIPITATION, INCHES



Data are based on the period 1931-55. Isolines are drawn through points of approximately equal value. Caution should be used in interpolating on these maps, particularly in mountainous areas.

National Oceanic and Atmospheric Administration, Climates of the States, Vol. 2, p. 719, 1978.

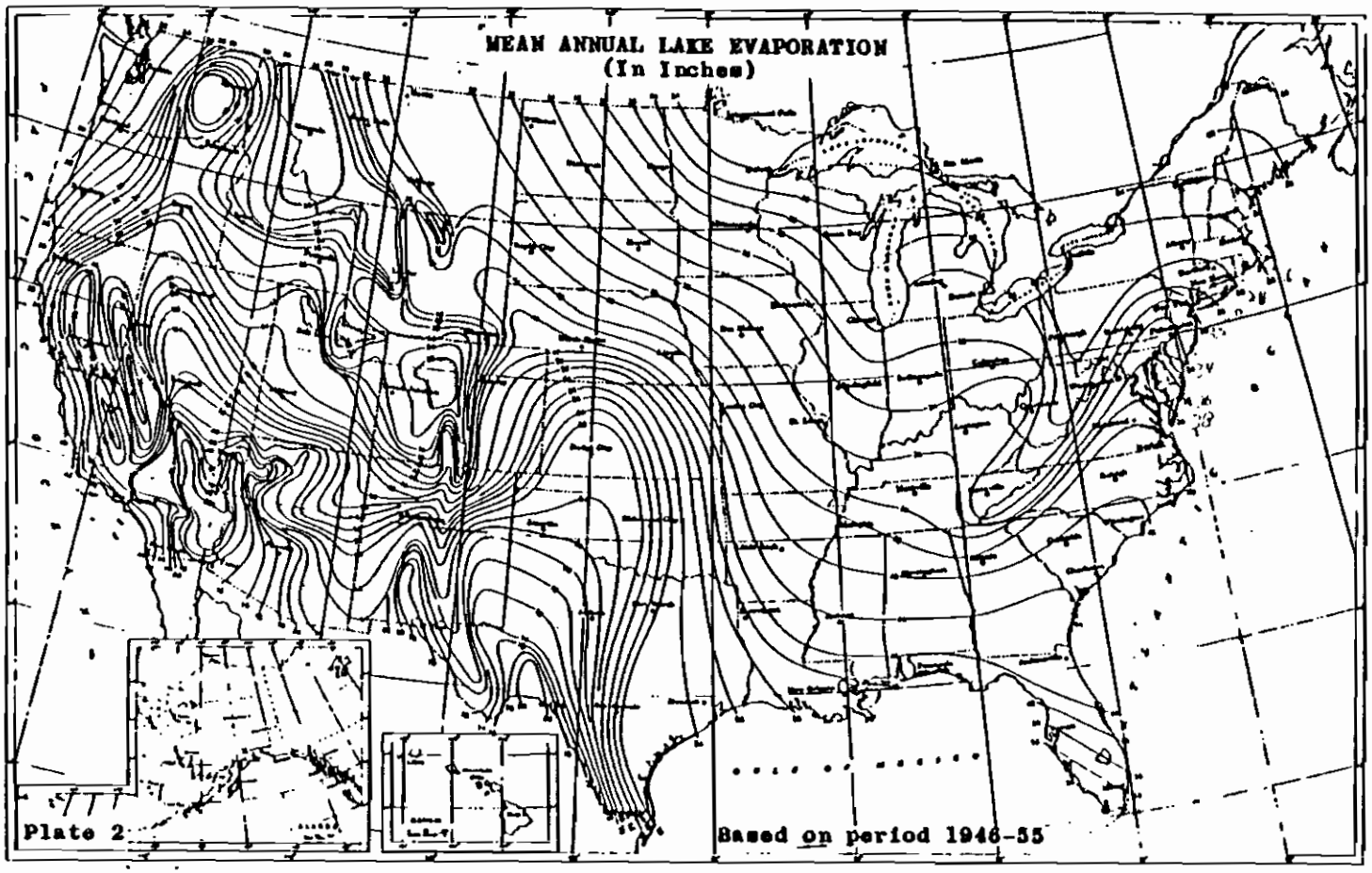
Uncontrolled Hazardous Waste Site Ranking System

A Users Manual
(HW-10)

Originally Published in
the July 16, 1982, *Federal Register*

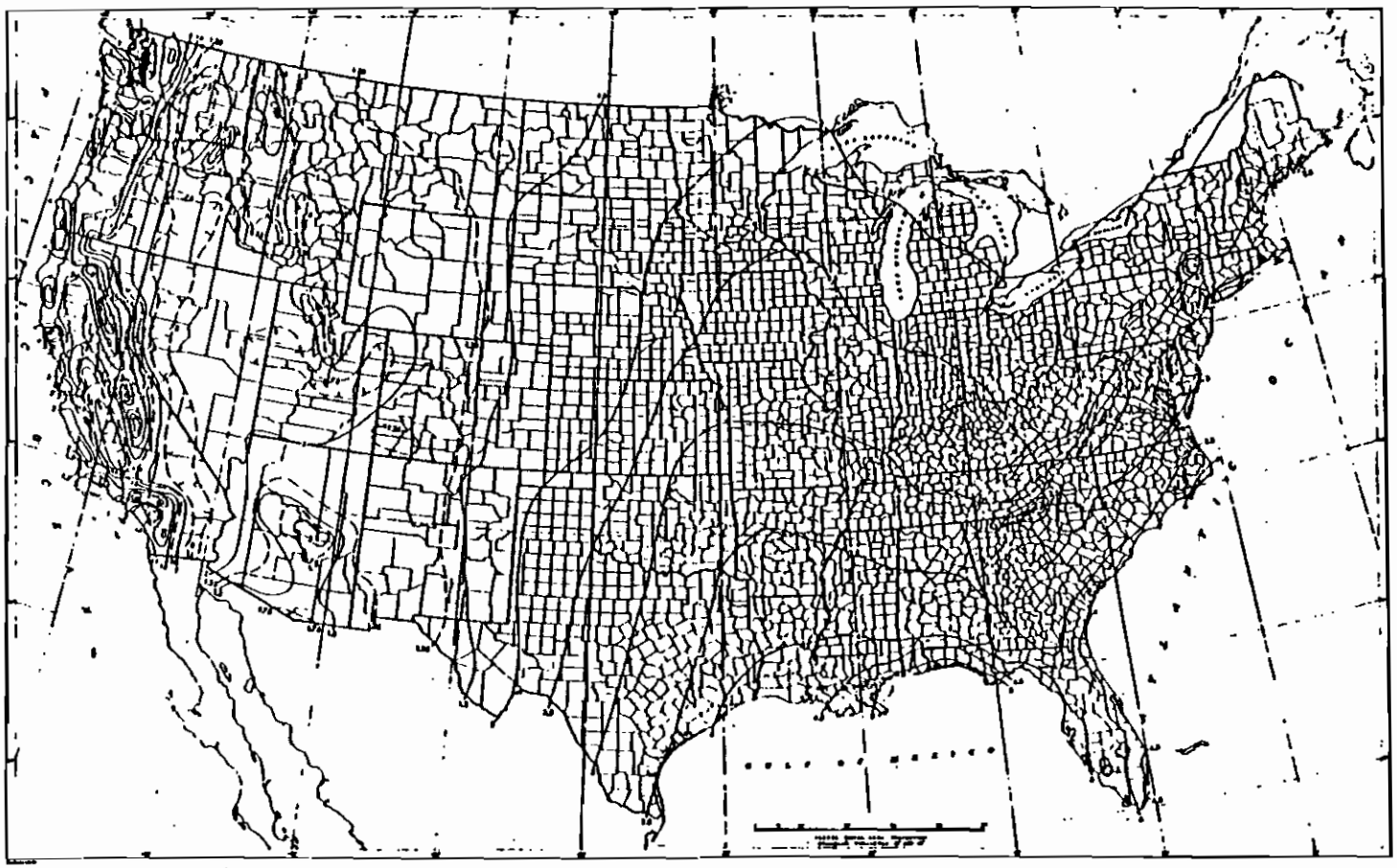
United States
Environmental Protection
Agency

1984



Source: Climatic Atlas of the United States, U.S. Department of Commerce, National Climatic Center, Ashville, N.C., 1979.

FIGURE 4
MEAN ANNUAL LAKE EVAPORATION
(IN INCHES)



Source: Rainfall Frequency Atlas of the United States, Technical Paper No. 40, U.S. Department of Commerce, U.S. Government Printing Office, Washington, D.C., 1963.

FIGURE 8
1-YEAR 24-HOUR RAINFALL
(INCHES)

TABLE 2

PERMEABILITY OF GEOLOGIC MATERIALS*

Type of Material	Approximate Range of Hydraulic Conductivity	Assigned Value
Clay, compact till, shale; unfractured metamorphic and igneous rocks	$<10^{-7}$ cm/sec	0
Silt, loess, silty clays, silty loams, clay loams; less permeable limestone, dolomites, and sandstone; moderately permeable till	$10^{-5} - 10^{-7}$ cm/sec	1
Fine sand and silty sand; sandy loams; loamy sands; moderately permeable limestone, dolomites, and sandstone (no karst); moderately fractured igneous and metamorphic rocks, some coarse till	$10^{-3} - 10^{-5}$ cm/sec	2
Gravel, sand; highly fractured igneous and metamorphic rocks; permeable basalt and lavas; karst limestone and dolomite	$>10^{-3}$ cm/sec	3

*Derived from:

Davis, S. N., Porosity and Permeability of Natural Materials in Flow-Through Porous Media, R.J.M. DeWest ed., Academic Press, New York, 1969

Freeze, R.A. and J.A. Cherry, Groundwater, Prentice-Hall, Inc., New York, 1979

TABLE 9

CONTAINMENT VALUES FOR SURFACE WATER ROUTE

Assign containment a value of 0 if: (1) all the waste at the site is surrounded by diversion structures that are in sound condition and adequate to contain all runoff, spills, or leaks from the wastes; or (2) intervening terrain precludes runoff from entering surface water. Otherwise, evaluate the containment for each of the different means of storage or disposal at the site and assign a value as follows:

A. Surface Impoundment

	Assigned Value
Sound diking or diversion structure, adequate freeboard, and no erosion evident	0
Sound diking or diversion structure, but inadequate freeboard	1
Diking not leaking, but potentially unsound	2
Diking unsound, leaking, or in danger of collapse	3

B. Containers

	Assigned Value
Containers sealed, in sound condition, and surrounded by sound diversion or containment system	0
Containers sealed and in sound condition, but not surrounded by sound diversion or containment system	1
Containers leaking and diversion or containment structures potentially unsound	2
Containers leaking, and no diversion or containment structures or diversion structures leaking or in danger of collapse	3

C. Waste Piles

	Assigned Value
Piles are covered and surrounded by sound diversion or containment system	0
Piles covered, wastes unconsolidated, diversion or containment system not adequate	1
Piles not covered, wastes unconsolidated, and diversion or containment system potentially unsound	2
Piles not covered, wastes unconsolidated, and no diversion or containment or diversion system leaking or in danger or collapse	3

D. Landfill

	Assigned Value
Landfill slope precludes runoff, landfill surrounded by sound diversion system, or landfill has adequate cover material	0
Landfill not adequately covered and diversion system sound	1
Landfill not covered and diversion system potentially unsound	2
Landfill not covered and no diversion system present, or diversion system unsound	3

Auburn Landfill Site Visit

June 17 1985

Site visit with O'Neil

Tim Roeper & Scott VOZZA

Entire area around site is served by Public water Taken from OWASCO Lake

No Asbestos ever Taken in landfill

Fill ± 50-65' Deep est. by O'Neil

45 ± Acres of fill

Have approved partial collection line to start construction This Summer

Presently going out to bid per pull Hydrogeo by order of D.E.C.

No Final impermeable cover in place

cover is spoils from road work

leachate seeps noted on east slope, stains in small stream or ditch

Soils in excavated area are Glacial Till

City owns land surrounding the landfill

Standing water near M-2 (Classicly Perched)

Communication w/ T. Roeper

receives ± 40 trucks/day

has authorization to install partial leachate Collection System

no asbestos was disposed

wells dont have protective casing / not up to standards

Mr. Brickwedde
Mr. Chernoff
INFORMATION TO DEVELOP A CONSENT ORDER FOR AUBURN CITY LANDFILL,
NORTH DIVISION STREET, AUBURN, NY
April 26, 1984

4-26-84

Violations:

The following parameters are in excess of 6 NYCRR Part 703 groundwater standards: phenol, iron, lead, manganese, zinc and mercury. Therefore, pursuant to 6 NYCRR Part 360, a permit to operate the Auburn City landfill cannot be granted.

The Auburn City landfill contains approximately 15,000 tons of air pollution baghouse dust from AnSteel in Auburn, NY. This material is defined as a hazardous waste under 6 NYCRR Part 366. The possibility for chromium contained in this waste to leach into the groundwater along with the present documented violations require that the existing facility be closed within three years after the date of the signing of this Order.

1. Within six months after the date of the signing of this Order the City will submit a closure plan in accordance with the Solid Waste Management Guidelines and Part 360. The closure plan must be developed by a licensed P.E. with experience in groundwater hydrogeology and shall contain the following:

   a. The closure plan must define groundwater flow paths as well as the vertical and areal extent of the existing leachate plumes in and around the landfill.

   b. The contaminants and quantity of each in the leachate shall be defined; the ultimate disposal of the leachate, including contingency plans must be established.

   c. An action plan, including timetable for controlling existing groundwater contamination must be included.

   d. A plan to control leachate surface discharges from the landfill.

   e. Final grades for the existing fill area will be defined. Expansion of the landfill onto any area which does not have refuse deposited is prohibited.

   f. A contingency plan that addresses hazards resulting from fires, explosions and any other hazards which might possibly occur from the landfill.

groundwater monitoring will be conducted quarterly starting at the date this Order is signed from the three monitoring wells presently located at the landfill. One new monitoring well shall be located to determine groundwater background concentrations. Samples will also be taken and analyzed from the surface water stream located adjacent to well #3 (per Calocerinos & Spina sampling well numbers).

Samples will be taken and analyzed according to EPA approved methods and results will be submitted to the N.Y.S. Department of Environmental Conservation– Regional Office in Liverpool, NY. The samples will be analyzed for: phenols, ~~boron~~, total organic halogen, iron, manganese, ~~ammonia~~, BOD, COD, ~~Kjeldahl nitrogen~~, sulfate, ~~aluminum~~, arsenic, chromium (total and hexavalent), cadmium, zinc, ~~selenium~~, copper, lead, mercury, sodium, detergent, calcium, total coliform, alkalinity, total dissolved solids, color, hardness, chlorides, odor, specific conductivity, total organic carbon, pH, ~~and [illegible]~~.

3. The location of the background well will be established by a licensed P.E. or geologist familiar with groundwater hydrogeology.

Final closure will take place no later than three years from the date of the signing of this Order or when the final grades established by #1 above are reached, whichever comes first.

Penalty: A $500,000 performance bond which, if this Order is not complied with, will result in the forfeiture of the bond to the N.Y.S. Department of Environmental Conservation.

cc: Mr. Gross
Mr. Lackey
Mr. Weiterding
Ms. March

CBC/lms

4. An alternative sanitary landfill site will be developed for future use by the City of Auburn.

a) Within 1 year from the date of signing this order an acceptable geotechnical and ground water hydrogeologic analysis will be made of this new proposed site.

b) A preliminary scope of work of the geotechnical and hydrogeologic analysis will be submitted to this Department 1 month from the date of signing this order.

c) Within 2 years of the date of signing this order an acceptable

1/76)
SW-4

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SEPTIC TANK CLEANER AND INDUSTRIAL WASTE COLLECTOR ANNUAL REPORT

RANT (Business Name)

CONSOLIDATED SCRAP PROCESSING, INC.

REGISTRATION NO.

USINESS ADDRESS

23 PERRINE STREET, AUBURN, NEW YORK 13021

UMBER OF INSTALLATIONS EMPTIED OR CLEANED DURING THE LAST CALENDAR YEAR

ONE

Fill in boxes below with the appropriate number of gallons of waste handled.

METHOD OF DISPOSAL

TYPE OF WASTE	A. Sewage Treatment Plant	B. Land Spreading	C. Sanitary Landfill	D. Lagooning	E. Incineration	F. Special Process	TOTAL
1. Septic tank or cesspool							
2. Marina holding tank or portable toilet							
3. Oil							
4. Sewage Treatment Plant Sludge							
5. Spent Chemicals							
6. Industrial Sludges							
7. Solvents							
8. Acids							
9. Animal Wastes							
10. Other (Specify)			Iron Oxide & Dirt -powder form				
11. TOTAL			8448 CU. YDS.				

12. IF SEPTIC TANK WASTES ARE DISPOSED OF AT A SEWAGE TREATMENT PLANT, IS THE WASTE INTRODUCED AT:

☐ trunk line ☐ plant influent ☐ sludge digester

13. IF SPECIAL PROCESSES (F.) ARE INDICATED, BRIEFLY DESCRIBE EACH PROCESS USED:

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.

DATE	SIGNATURE
2/13/79	

Region 7, Environmental Quality Office
7481 Henry Clay Boulevard, Liverpool, New York 13088

(315) 473-8311

March 13, 1979

Mr. David J. Fox
Supervisor Project Engineering
Singer Company, Climate Control Division
62 Columbus Street
Auburn, New York 13021

Re: "In-Place Toxics" Inspection

Dear Mr. Fox:

This will confirm my March 8, 1979 inspection of the Singer Company, Climate Control Division. This inspection was made to review Singer's practices of waste disposal, specifically a past practice of dumping waste lube oil and hydraulic oil to control weeds on Company grounds. It should be noted that this use of waste oil for weed control was practiced for only one season (e.g. 1977) and consisted of a maximum of 55 gallons of waste oil.

As a result of this inspection, this Regional Office is recommending that Singer Company, Climate Control Division be deleted from the Statewide "In Place Toxics" listing. The site of the waste oil disposal appears not to have suffered any permanent damage, and in the opinion of this writer, does not represent a serious health or environmental hazard. Of course, we discourage any future use of waste oil for weed control.

This inspection did highlight several aspects of plant operations which deserve comment. The first point involves your present practice of hauling and disposing of industrially generated wastes at the Auburn landfill. As we discussed, you will need an industrial waste hauler's permit to haul your waste materials to the City Landfill. Enclosed for your information and completion are the statutory authority (e.g. the Environmental Conservation Law, Part 364) and the permit application form. This application should be completed and forwarded to our Regional Solid Waste Engineer, Mr. Larry Gross, at the above address.

At present, the Auburn Landfill cannot accept <u>all</u> industrial wastes. Mr. Gross has indicated that the landfill <u>should not be</u> accepting waste oil. I would suggest that you contact Mr. Gross directly to determine what waste materials can properly be disposed of at the landfill and what waste materials require special treatment. A list of the "Industrial Waste Scavengers" licensed by this Department is also enclosed for your information.

The second aspect of plant operations which requires comment is the drain in the paint/-solvent/adhesive storage room. The outfall from this drain should be identified; if, as suspected, the outfall is to a stormwater sewer, provisions must be made to contain and/or cleanup any contaminated water before discharge to the stormwater sewer. Monitoring of this outfall, as mandated by a SPDES (State Pollutant Discharge Elimination System) Permit may be required. If this drain discharges to a sanitary sewer, then any contamination would be handled at the City of Auburn wastewater treatment plant. We would ask that you advise this office in writing by April 12, 1979 as to where this drain discharges and how contaminated runoff from this drain will be handled.

We want to thank you for your cooperation in our "In-Place Toxics" investigation and related environmental matters. Should you wish to discuss the inspection or any part of this letter further, please feel free to contact me.

Very truly yours,

Kathleen DelPrete
Sanitary Engineer
Pure Waters

Enc.
cc: Mr. Gross
Cayuga County Health Dept.

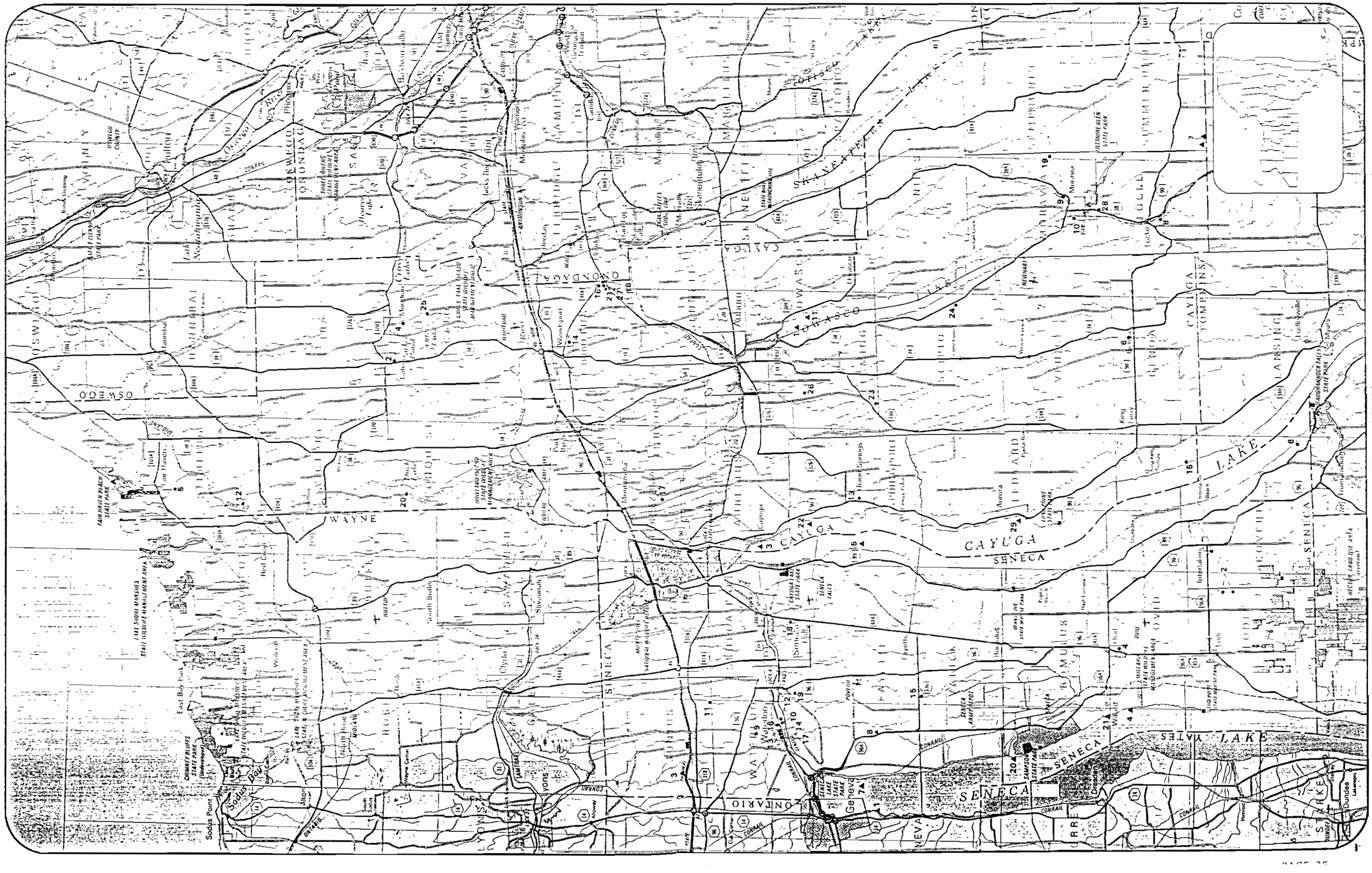
CAYUGA COUNTY

ID NO	COMMUNITY WATER SYSTEM	POPULATION	SOURCE
Municipal Community			
1	Auburn City.	32548. .	.Owasco Lake
2	Cato Village.	475. .	.Wells
3	Cayuga Village.	700. .	.Cayuga Lake
4	Dudley Water Supply.	369. .	.Wells
5	Fair Haven Village.	976. .	.Wells
6	Genoa-Kings Ferry Water District. . .	322. .	.Wells
7	Groton Village (Tompkins Co, Page 18).		.New and Old Pond Reservoirs
8	Locke Water District.	600. .	.Wells
9	Montville Public Water Supply.	35. .	.Wells
10	Moravia Village.	1875. .	.Wells
11	Owasco Water District #1.	3800. .	.Owasco Lake
12	Red Creek Village (See also No 6 Wayne Co, Page 26).		Wells
13	Union Springs Village.	1265. .	.Wells
14	Weedsport Village.	2500. .	.Wells
Non-Municipal Community			
15	Atwater Glen Park.	30. .	.Wells
16	Barnes Mobile Home Court.	66. .	.Wells
17	Bennetts Mobile Court.	60. .	.Wells
18	County Line Mobile Home Park.	162. .	.Wells
19	Dark Star Mobile Home Park.	35. .	.Wells
20	Duck Lake Trailer Part.	72. .	.Wells
21	Green Acres Mobile Home Park.	1000. .	.Wells
22	John Howard Apartments.	45. .	.Cayuga Lake
23	Karlin Manor.	50. .	.Wells
24	Lakeview Mobile Home Park.	60. .	.Wells
25	Leisure Acres Mobile Home Park.	55. .	.Wells
26	Moraine Manor Mobile Home Park.	60. .	.Wells
27	Shady Brook Mobile Home Park.	200. .	.Wells
28	Tollgate Mobile Home Park.	300. .	.Wells
29	Wells College.	400. .	.Cayuga Lake

LOCATION OF COMMUNITY WATER SYSTEM SOURCES-1982

DIVISION OF ENVIRONMENTAL PROTECTION
BUREAU OF PUBLIC WATER SUPPLY PROTECTION

CAYUGA and SENECA COUNTIES



New York State Department of Environmental Conservation

MEMORANDUM

TO: Charles Branagh, Region 7
FROM: Dennis Wolterding, Sr. Eng. Geologist
SUBJECT: Siting Downgradient Well at City of Auburn SLF, Facility # 06S01

DATE: September 17, 1979

In accordance with your request, I have suggested a possible location for the downgradient well at the Auburn facility (06S01). The location, indicated as a red dot on the accompanying map, is based on the following assumptions:

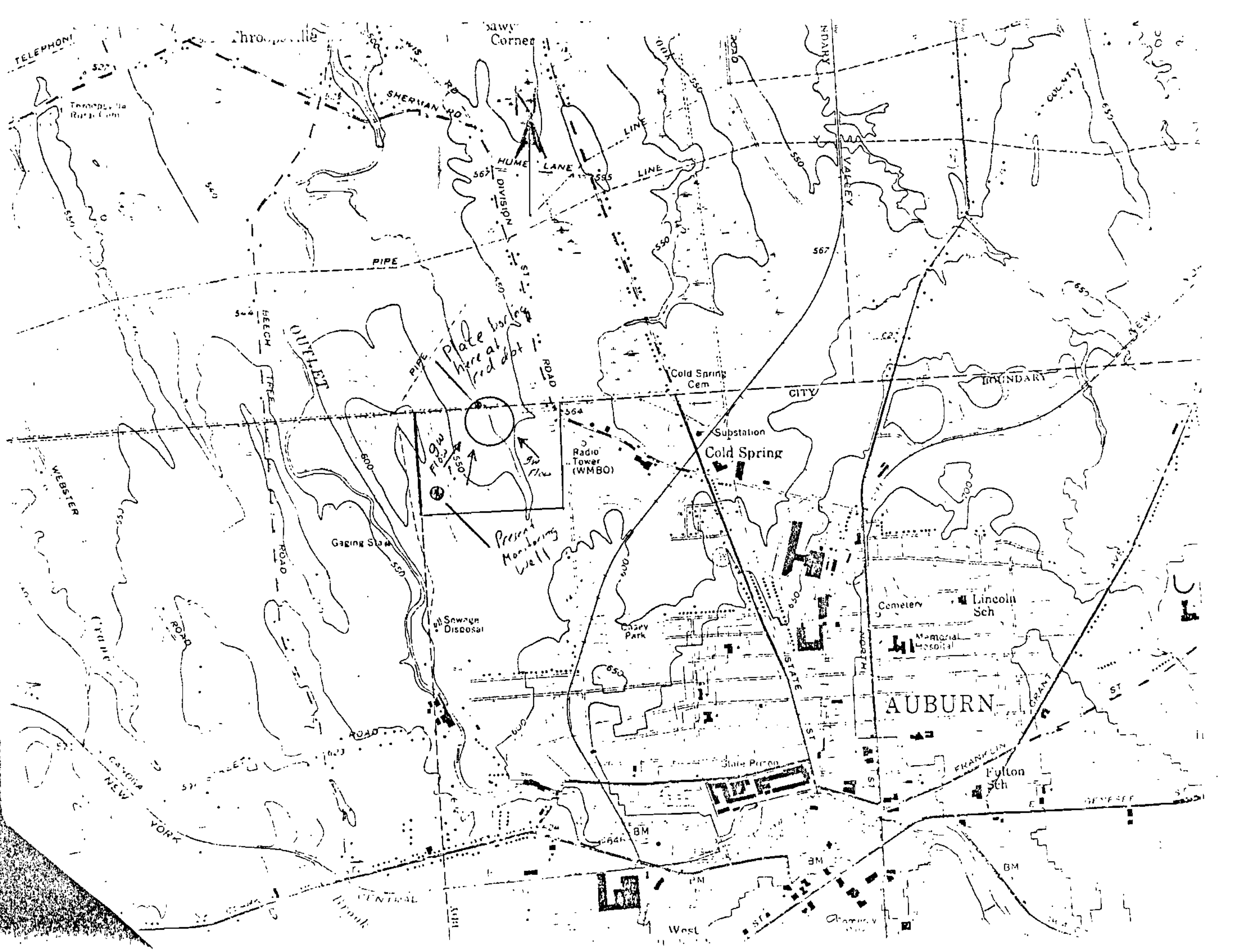
1. Groundwater flow on the western slope of the landfill is roughly northeastward toward the stream.

2. The boring is to determine if groundwater contamination attributable to the Auburn SLF is occurring within the meaning of CFR 40 Part 257 and 6NYCRR Part 360 Criteria.

I suggest that if possible the boring be placed at (or a few feet north of) the Auburn SLF property boundary and that it be no closer to the stream (see map) than 50 feet. Further, in view of the till and clay soils on site, (see logs) I strongly recommend that a 4" O.D. well, screened and gravel - packed 10' below the seasonal water table, be the minimum diameter considered. Although this may cost a bit more, it will ensure that you get a sufficient and representative sample of the groundwater.

Should you have any further questions please call me at (518) 457-6605.

DW:bw
cc: C. Sastry
E. Barcomb
L. Gross
D. Halton



AUBURN
Cold Spring
Substation
Cold Spring Cem
Radio Tower (WMBO)
Lincoln Sch
Cemetery
Memorial Hospital
Fulton Sch
State Prison
Casey Park
Sewage Disposal
Gaging Sta
OUTLET
CITY BOUNDARY
STATE ST
NORTH ST
FRANKLIN ST
GRANT AVE
GENESEE ST
VALLEY
DIVISION ST
ROAD
HUME LANE
SHERMAN RD
PIPE LINE
BEECH TREE ROAD
WEBSTER
NEW YORK
CENTRAL
Brook
West
Sawyer Corner
Throopsville
Throopsville Rural Cem
TELEPHONE
COUNTY
BM
550
567
564
600
650
Plate boring here at red dot
gw flow
gw flow
Present Monitoring Well

Public Water Supplies — Autumn Landfill

1) city of Autumn : surface H_2O Owasco L.
32,548 pop.
distance from site ≈ 4.9 miles

2) Moraine Manor Mobile Home Park : wells
60 pop.
distance from site ≈ 4.2 miles

3) Owasco Water Dist #1 : surface H_2O · Owasco L.
3,800 pop.
distance from site ≈ 5.6 miles

SOURCE : NYS Atlas of Community Water System Sources, 1982

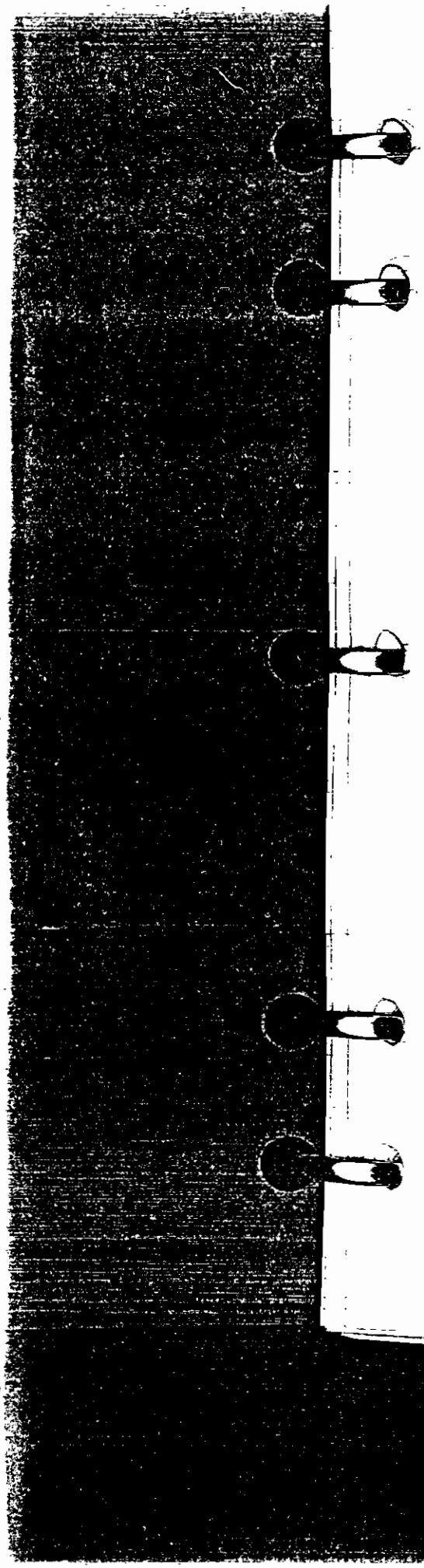
Attached is a list of community systems that purchase water from the City of Autumn system

SUPPLYNAME	SUPPLY LOCATION (TOWN OR CITY)	DR BA	POP'N. SERVED	SOURCE TYPE G	S	P	AVE. DAILY PRODUCTION (GALLONS)	AVE. DAILY CONSUMPTION (GALLONS)	DIST'N. STORAGE (GALLONS)	PERCENT METERED R	C	I
CATTARAUGUS COUNTY PROGRAM CODE 100 - MUNICIPALS												
SALAMANCA CITY TREATMENT(S): DISINFECTION SOURCE(S): SURFACE	SALAMANCA (C)	02	7000	1	1	0	850000	600000	4500000	100	100	100
SANDUSKY WATER SUPPLY TREATMENT(S): DISINFECTION	FREEDOM (T)	00	225	1	0	0	41000	32000	100	100	100	0
SKYLINE DRIVE ASSOC INC TREATMENT(S): DISINFECTION	MACHIAS (T)	01	36	1	0	0						
SOUTH DAYTON VILLAGE TREATMENT(S): DISINFECTION AERATION IRON/MANGANESE REMOVAL	DAYTON (T)	02	661	4	0	0	186000		250000	90	100	100
STEAMBURG RESETTLEMENT AREA TREATMENT(S): DISINFECTION	SALAMANCA (T)	02	200	1	0	0			200000	100	0	0
YORKSHIRE TWSP WATER DISTRICT TREATMENT(S): NONE PURCHASED FROM: ARCADE VILLAGE	YORKSHIRE	01	840	0	0	1	0		0	0	0	0
CAYUGA COUNTY PROGRAM CODE 100 - MUNICIPALS												
AUBURN CITY TREATMENT(S): DISINFECTION COAGULATION FLOCCULATION UPFLOW CLARIFICATION SLOW SAND FILTRATION RAPID SAND FILTRATION GRANULAR ACTIVATED CARBON SOURCE(S): OWASCO LAKE	AUBURN (C)	07	32548	0	1	0	10000000	8000000	12500000	100	100	100
AURELIUS WD NO1 TREATMENT(S): NONE PURCHASED FROM: AUBURN CITY	AURELIUS (T)	07	400	0	0	1	0	127000	0	100	100	100
AURELIUS WD NO2 TREATMENT(S): NONE PURCHASED FROM: AUBURN CITY	AURELIUS (T)	07	400	0	0	1	0	293000	0	100	100	100
AURELIUS WD NO3 TREATMENT(S): NONE PURCHASED FROM: CAYUGA VILLAGE	AURELIUS (T)	07	200	0	0	1	0	16000	0	100	0	0
AURORA VILLAGE TREATMENT(S): DISINFECTION DIATOMACEOUS EARTH FILTRATION PURCHASED FROM: WELLS COLLEGE	LEDYARD (T)	07	926	0	0	1	0		154444	0	0	0
CATO VILLAGE TREATMENT(S): DISINFECTION PURCHASED FROM: DUDLEY WATER SUPPLY	CATO & IRA (T'S)	07	475	4	0	1	8000	60000	200000	100	100	100

SOURCE: Inventory - Community Water Systems - NYS Vol. 1 - Municipal, 1984, NYSDOH.

SUPPLIER	SUPPLY LOCATION (TOWN OR CITY)	DRAINAGE BASIN	POPULATION SERVED	SOURCE TYPE G	SOURCE TYPE S	SOURCE TYPE P	AVG DAILY PRODUCTION (GALLONS)	MAX DAILY CONSUMPTION (GALLONS)	TOTAL STORAGE (GALLONS)	PERCENT FILTERED A	PERCENT FILTERED C	PERCENT FILTERED I
CAYUGA COUNTY PROGRAM CODE 100 - MUNICIPALS												
CAYUGA VILLAGE TREATMENT(S): DISINFECTION SOURCE(S): CAYUGA LAKE	AURELIUS (T)	07 MIXED MEDIA	603	0	1	0	154000	77000 GRANULAR ACTIVATED CARBON	300000	100	100	100
DUDLEY WATER SUPPLY TREATMENT(S): DISINFECTION	CATO (T)	07	369	3	0	0	17000		800	0	0	0
FAIR HAVEN VILLAGE TREATMENT(S): DISINFECTION	STERLING (T)	03	976	2	0	0	240000		150000	0	0	0
FLEMING WD#1 TREATMENT(S): NONE PURCHASED FROM: AUBURN CITY	FLEMING (T)	07	250	0	0	1	0	210000	0	100	100	100
FLEMING WD#2 TREATMENT(S): NONE PURCHASED FROM: AUBURN CITY	FLEMING (T)	07	120	0	0	1	0	85000	0	100	100	100
FLEMING WD#3 TREATMENT(S): NONE PURCHASED FROM: AUBURN CITY	FLEMING (T)	07	900	0	0	1	0		0	0	0	0
FLEMING WD#5 TREATMENT(S): NONE PURCHASED FROM: AUBURN CITY	FLEMING (T)	07	100	0	0	1	0	147500	0	100	100	100
GENOA-KINGS FERRY WD TREATMENT(S): DISINFECTION	GENOA (T)	07	800	3	0	0	65000	20000	75000	100	100	100
HIBISCUS HARBOR INC TREATMENT(S): NONE PURCHASED FROM: UNION SPRING VILLAGE	SPRINGPORT (T)	07	70	0	0	1	0		1000	0	0	0
LOCKE WD TREATMENT(S): DISINFECTION	LOCKE	07	600	2	0	0	50000		150000	0	0	0
MONTEZUMA WD#1 TREATMENT(S): DISINFECTION PURCHASED FROM: PORT BYRON THW SERVICE AREA	MONTEZUMA	00	400	0	0	1	0	13000	300000	100	100	0
MONTVILLE PUBLIC WATER SUPPLY TREATMENT(S): DISINFECTION	MORAVIA (T)	07	35	1	0	0			250	0	0	0
MORAVIA VILLAGE TREATMENT(S): DISINFECTION	MORAVIA	07	1875	2	0	0	450000	220000	530000	100	100	100
OWASCO WD#1 TREATMENT(S): DISINFECTION SEDIMENTATION SOURCE(S): OWASCO LAKE	OWASCO (T)	07 COAGULATION UPFLOW CLARIFICATION	3800	0	1	0	300000	270000 FLOCCULATION RAPID SAND FILTRATION	750000	100	100	100

SUPPLYNAME	SUPPLY LOCATION (TOWN OR CITY)	DR BA	POP'N. SERVED	SOURCE TYPE G	S	P	AVE. DAILY PRODUCTION (GALLONS)	AVE. DAILY CONSUMPTION (GALLONS)	DIST'N. STORAGE (GALLONS)	PERCENT METERED R	C	I
CAYUGA COUNTY												
PROGRAM CODE 100 - MUNICIPALS												
OWASCO WD#2	OWASCO (T)	07	3800	0	0	1	0	270000	750000	100	100	100
TREATMENT(S): DISINFECTION												
PURCHASED FROM: OWASCO WD#1												
PORT BYRON VILLAGE	MENTZ (T)	07	1330	0	0	1	0	127000	200000	100	100	100
TREATMENT(S): NONE												
PURCHASED FROM: AUBURN CITY												
SENNETT WD #3	SENNETT	07	100	0	0	1	0		0	0	0	0
TREATMENT(S): NONE												
PURCHASED FROM: AUBURN CITY												
SENNETT WD NO1	SENNETT	07	200	0	0	1	0	290000	0	100	100	100
TREATMENT(S): NONE												
PURCHASED FROM: AUBURN CITY												
SENNETT WD NO2	SENNETT	07	260	0	0	1	0	80000	0	100	100	100
TREATMENT(S): NONE												
PURCHASED FROM: AUBURN CITY												
THROOP WD NO1	THROOP (T)	07	450	0	0	1	0	20000	0	100	0	0
TREATMENT(S): NONE												
PURCHASED FROM: AUBURN CITY												
UNION SPRING VILLAGE	SPRINGPORT (T)	07	1265	2	0	0	145000	140000	200000	100	100	100
TREATMENT(S): DISINFECTION												
WEEDSPORT VILLAGE	BRUTUS (T)	07	1952	1	0	1	175000	176000	500000	100	100	100
TREATMENT(S): DISINFECTION												
PURCHASED FROM: SENNETT WD NO2												
CHAUTAUQUA COUNTY												
PROGRAM CODE 100 - MUNICIPALS												
BERRY ROAD WATER DISTRICT	POMFRET (T)	01	160	0	0	1	0					
TREATMENT(S): NONE												
PURCHASED FROM: FREDONIA VILLAGE												
BROCTON VILLAGE	PORTLAND (T)	01	1460	0	4	0	317440	168250	0	100	100	100
TREATMENT(S): DISINFECTION		COAGULATION					SEDIMENTATION					
AERATION		RAPID SAND FILTRATION					SAND MEDIA					
*SEQUESTRATION		TASTE/ODOR CONTROL					ALGAL CONTROL					
ACTIVATED CARBON												
SOURCE(S): SLIPPERY ROCK CR RES (NEW)		BURR RESERVOIR					RISLEY RESERVOIR					
BEAR LAKE												
BUSTI WD #2	BUSTI (T)	02		0	0	1	0					
TREATMENT(S): NONE												
PURCHASED FROM: LAKEWOOD VILLAGE												



STATE OF NEW YORK

OFFICIAL COMPILATION

OF

CODES, RULES AND REGULATIONS

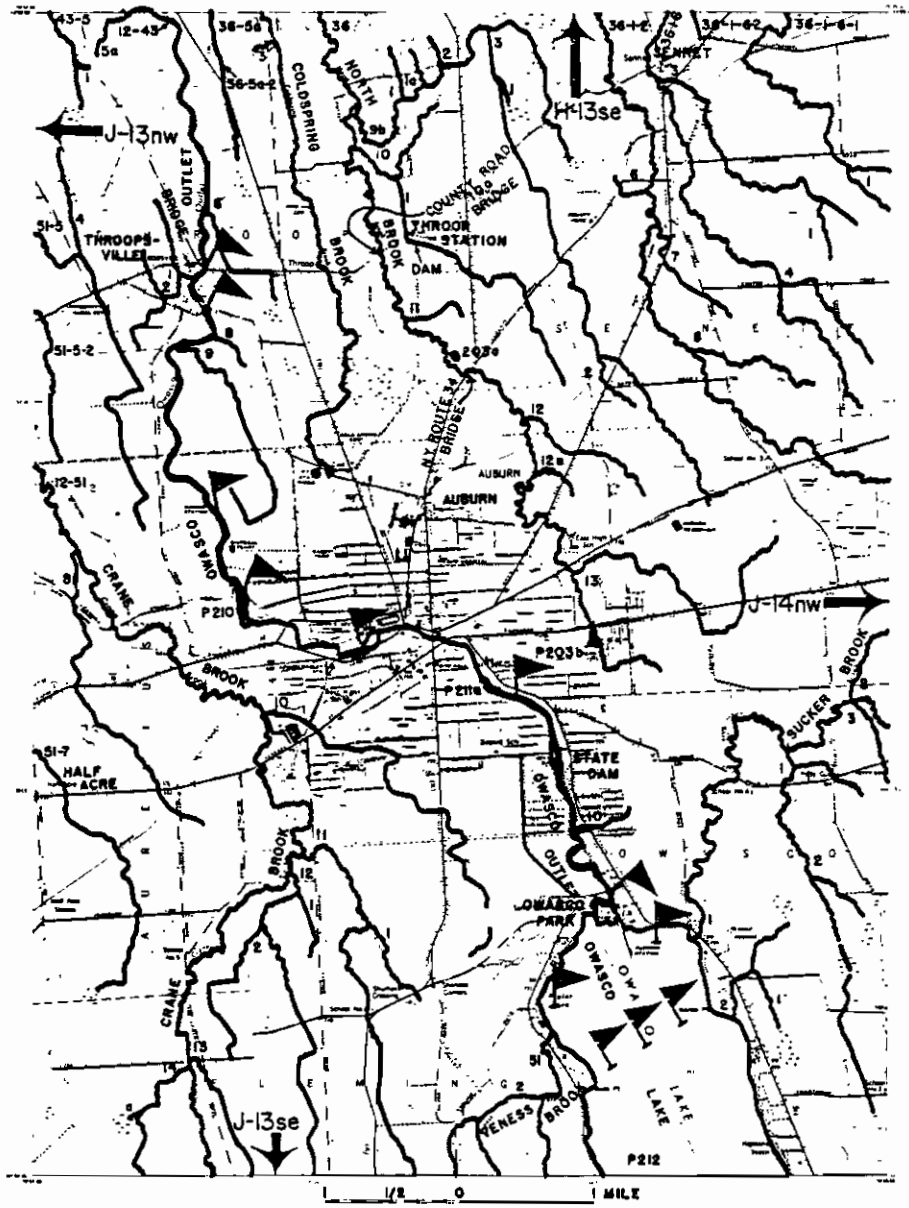
MARIO M. CUOMO
Governor

GAIL S. SHAFFER
Secretary of State

Published by
DEPARTMENT OF STATE
162 Washington Avenue
Albany, New York 12231

1/83

AUBURN QUADRANGLE



MAP J-13ne

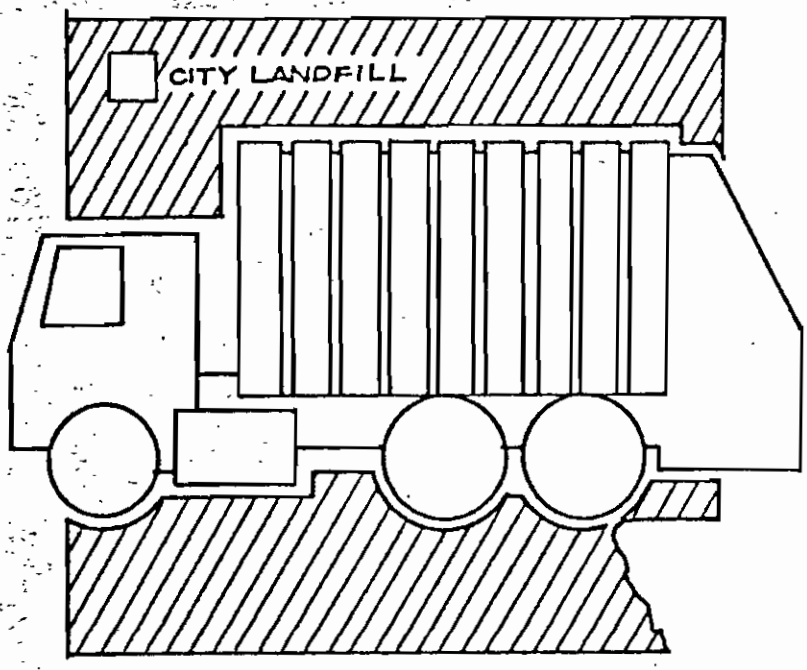
3441 CN 1-15-67

to see entire application in Appendix

AUBURN (C) CAYUGA COUNTY

6NYCRR PART 360
APPLICATION FOR APPROVAL
TO OPERATE A SOLID WASTE
MANAGEMENT FACILITY

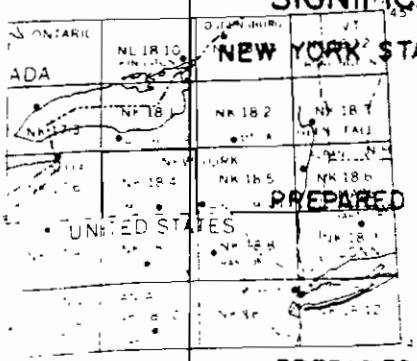
(1982)



CITY OF AUBURN NEW YORK
PAX ET LABOR

PREPARED BY:
MICHAEL D. O'NEILL, P.E.
CITY ENGINEER
SUPT. OF PUBLIC WORKS
MEMORIAL CITY HALL
AUBURN, NEW YORK 13021
(315)252-9531

LOCATION DIAGRAM



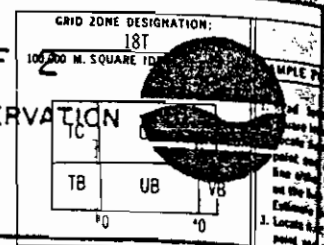
SIGNIFICANT HABITAT OVERLAY NO. 1 OF 2

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

DIVISION OF FISH AND WILDLIFE
BUREAU OF WILDLIFE

PREPARED FOR: SIGNIFICANT HABITAT UNIT
WILDLIFE RESOURCES CENTER
DELMAR, NEW YORK 12054
(518) 457-5782

PREPARED BY: HABITAT INVENTORY UNIT

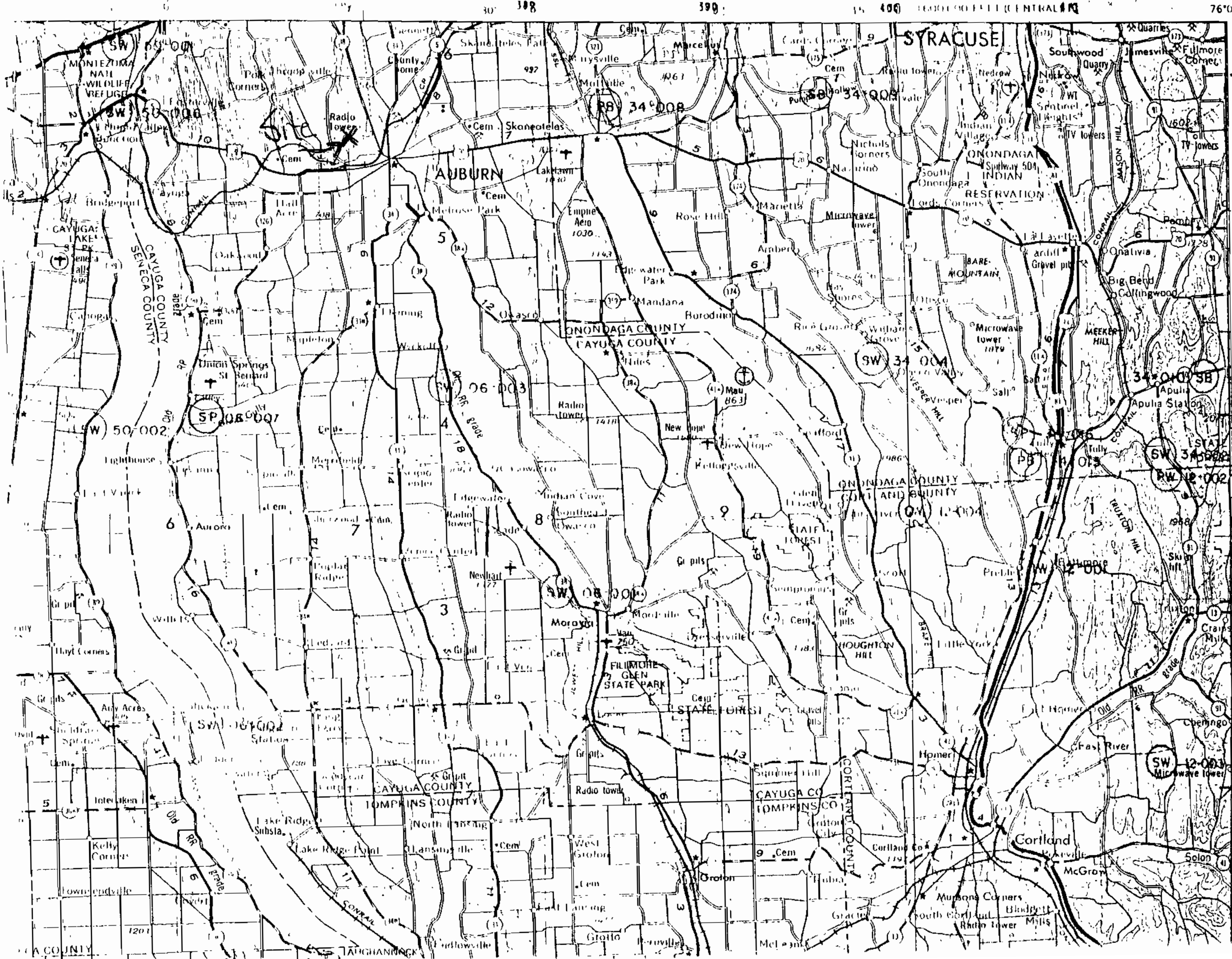


QUAD: ELMIRA

SCALE: 1:250,000

AUGUST, 1980

REVISED: 12/31/85



SYRACUSE
AUBURN
Cortland
Skaneateles
Moravia
Groton
Homer
Jamesville
Fillmore Corners
Southwood
Nichols Corners
ONONDAGA INDIAN RESERVATION
Onativia
Big Bend
Collingwood
Apulia Station
MEEKER HILL
BARE MOUNTAIN
Melrose Park
Empire Aero 1030
Owasco
Mandana
Borodino
Edgewater Park
ONONDAGA COUNTY
CAYUGA COUNTY
CORTLAND COUNTY
TOMPKINS COUNTY
SENECA COUNTY
MONTEZUMA NATL WILDLIFE REFUGE
Union Springs
Aurora
Lighthouse
Bridgeport
FILLMORE GLEN STATE PARK
STATE FOREST
HOUGHTON HILL
TRUXTON HILL
Preble
East River
Cheningo
Solon
McGraw
Munsons Corners
Blodgett Mills
Kelly Corners
Interlaken
Lake Ridge
Lake Ridge Point
North Lansing
West Groton
Lansingville
Ludlowville
Radio tower
Microwave tower
CONRAIL
RR grade
SW 34 004
SW 08 001
SW 06 003
SW 50 002
SP 08 007
RB 34 008
SB 34 008
SW 12 003
SW 34 002
RW 12 002
76°00'

EPA FORMS 2070-12 AND 2070-13

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	706001

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
Auburn Landfill	N. Division Street				
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 COUNTY**	**07 COUNTY CODE**	**08 CONG. DIST**
Auburn	NY	13021	Cayuga		
09 COORDINATES LATITUDE: 76° 35' 34"	LONGITUDE: 43° 57'				

10 DIRECTIONS TO SITE (Starting from nearest public road)

Follow Division Street North past the wastewater treatment plant, ½ mile past plant turn left onto landfill access road.

III. RESPONSIBLE PARTIES

01 OWNER (If known)	02 STREET (Business, mailing, residential)			
City of Auburn	24 South Street			
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 TELEPHONE NUMBER**	
Auburn	NY	13021	(315) 252-9531	
07 OPERATOR (If known and different from owner)	**08 STREET** (Business, mailing, residential)			
Same as Owner				
09 CITY	**10 STATE**	**11 ZIP CODE**	**12 TELEPHONE NUMBER**	
			( )	

13 TYPE OF OWNERSHIP (Check one)

☐ A. PRIVATE ☐ B. FEDERAL: _____ (Agency name) ☐ C. STATE ☐ D. COUNTY ☒ E. MUNICIPAL

☐ F. OTHER: _____ (Specify) ☐ G. UNKNOWN

14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)

☐ A. RCRA 3001 DATE RECEIVED: ___/___/___ (MONTH DAY YEAR) ☒ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: 12 / 6 / 83 (MONTH DAY YEAR) ☐ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION

☒ YES ☐ NO DATE 6 / 13 / 85 (MONTH DAY YEAR)

BY (Check all that apply)

☐ A. EPA ☐ B. EPA CONTRACTOR ☐ C. STATE ☒ D. OTHER CONTRACTOR

☐ E. LOCAL HEALTH OFFICIAL ☐ F. OTHER: _____ (Specify)

CONTRACTOR NAME(S): Wehran Engineering

02 SITE STATUS (Check one)

☒ A. ACTIVE ☐ B. INACTIVE ☐ C. UNKNOWN

03 YEARS OF OPERATION

early 1960's (BEGINNING YEAR) _____ (ENDING YEAR) ☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED

Iron oxide powder and dirt
Uncharacterized industrial wastes (Singer Co.)

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION

Potential contamination of groundwater

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents)

☐ A. HIGH (Inspection required promptly) ☒ B. MEDIUM (Inspection required) ☐ C. LOW (Inspect on time available basis) ☐ D. NONE (No further action needed, complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)			03 TELEPHONE NUMBER
Mr. Dennis G. Fenn	Wehran Engineering			(914) 343-0660
04 PERSON RESPONSIBLE FOR ASSESSMENT	**05 AGENCY**	**06 ORGANIZATION**	**07 TELEPHONE NUMBER**	**08 DATE**
Frances C. Geissler		Wehran Eng.	(914) 343-0660	8 / 23 / 85 (MONTH DAY YEAR)

EPA FORM 2070-12 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
N Y	706001

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☐ A. SOLID
- ☐ B. POWDER, FINES
- ☐ C. SLUDGE
- ☐ D. OTHER _____ (Specify)
- ☐ E. SLURRY
- ☐ F. LIQUID
- ☐ G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

- TONS 23,448
- CUBIC YARDS _____
- NO. OF DRUMS _____

03 WASTE CHARACTERISTICS (Check all that apply)

- ☒ A. TOXIC
- ☐ B. CORROSIVE
- ☐ C. RADIOACTIVE
- ☒ D. PERSISTENT
- ☒ E. SOLUBLE
- ☐ F. INFECTIOUS
- ☐ G. FLAMMABLE
- ☐ H. IGNITABLE
- ☐ I. HIGHLY VOLATILE
- ☐ J. EXPLOSIVE
- ☐ K. REACTIVE
- ☐ L. INCOMPATIBLE
- ☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS	23,448		baghouse waste and iron oxide powder

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

File data:

1. Industrial Waste Collector Annual Report, 12-13-79, Consolidated Scrap Processing, Inc.
2. 3-13-79 K. DelPrete letter - unknown amount industrial waste from Singer Co.
3. 4-24-84 DEC letter - 15,000 baghouse waste

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: NY | 02 SITE NUMBER: 706001

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ A. GROUNDWATER CONTAMINATION
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☒ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: Unknown
04 NARRATIVE DESCRIPTION
Although groundwater sampling revealed elevated levels of iron, improper well construction and lackof upgradient data precludes use of sample results.

01 ☒ B. SURFACE WATER CONTAMINATION
02 ☒ OBSERVED (DATE: 7/2/84) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: Unknown
04 NARRATIVE DESCRIPTION
Grab sample on 7/2/84 of stream originating on landfill revealed elevated levels of ammonia, phenol, iron and manganese.

01 ☐ C. CONTAMINATION OF AIR
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION
Unknown

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION
Unknown

01 ☐ E. DIRECT CONTACT
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION
Unknown

01 ☒ F. CONTAMINATION OF SOIL
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: 190 (Acres)
04 NARRATIVE DESCRIPTION
Potential exists for soils under and surrounding fill to be contaminated by leachate.

01 ☐ G. DRINKING WATER CONTAMINATION
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION
Unknown

01 ☐ H. WORKER EXPOSURE/INJURY
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION
Unknown

01 ☐ I. POPULATION EXPOSURE/INJURY
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION
Unknown

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE: NY | 02 SITE NUMBER: 706001

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Unknown

01 ☐ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include species of fauna)

Unknown

01 ☐ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Unknown

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES (Spills/runoff/standing liquids/leaking drums) — 02 ☒ OBSERVED (DATE: 6/13/85) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: Unknown
04 NARRATIVE DESCRIPTION
During visit by Wehran Engineering leachate seeps were noted on North and East slopes.

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Unknown

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Unknown

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

No suspician of illegal dumping

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

None

III. TOTAL POPULATION POTENTIALLY AFFECTED: unknown

IV. COMMENTS

V. SOURCES OF INFORMATION (Cite specific references, e. g., state files, sample analysis, reports)

NYSDEC File Data: sample analysis
Site visit: 6/13/85 Wehran Engineering

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	706001

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
Auburn Landfill	N. Division Street				
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 COUNTY**	**07 COUNTY CODE**	**08 CONG DIST**
Auburn	NY	13021	Cayuga		

09 COORDINATES LATITUDE 76° 35' 34" | LONGITUDE 43° 57' ___.__

10 TYPE OF OWNERSHIP (Check one)
☐ A. PRIVATE ☐ B. FEDERAL _____ ☐ C. STATE ☐ D. COUNTY ☒ E. MUNICIPAL
☐ F. OTHER _____ ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
6 / 13 / 85 (MONTH DAY YEAR)	☒ ACTIVE ☐ INACTIVE	Early 1960;s (BEGINNING YEAR) ____ (ENDING YEAR) ____ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)
☐ A. EPA ☐ B. EPA CONTRACTOR _____ (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)
☐ E. STATE ☒ F. STATE CONTRACTOR Wehran Engineering (Name of firm) ☐ G. OTHER _____ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Tim Roeper	Staff Geologist	Wehran Eng'g	(914) 343-0660
09 OTHER INSPECTORS	**10 TITLE**	**11 ORGANIZATION**	**12 TELEPHONE NO.**
Scott Vozza	Staff Geologist	Wehran Eng'g	(914) 343-0660
			( )
			( )
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Michael O'Neill, P.E.	City Engineer	24 South St. Auburn, NY	(315) 252-9531
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT		Summer Conditions

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
Dennis G. Fenn	Wehran Engineering	(914)343-0660

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Frances C. Geissler		Wehran Engineering	(914)343-0660	10 / 3 / 85 (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	706001

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☒ A. SOLID
- ☒ B. POWDER, FINES
- ☐ C. SLUDGE
- ☐ D. OTHER (Specify)
- ☐ E. SLURRY
- ☐ F. LIQUID
- ☐ G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

- TONS: 23,448
- CUBIC YARDS:
- NO. OF DRUMS:

03 WASTE CHARACTERISTICS (Check all that apply)

- ☒ A. TOXIC
- ☐ B. CORROSIVE
- ☐ C. RADIOACTIVE
- ☒ D. PERSISTENT
- ☒ E. SOLUBLE
- ☐ F. INFECTIOUS
- ☐ G. FLAMMABLE
- ☐ H. IGNITABLE
- ☐ I. HIGHLY VOLATILE
- ☐ J. EXPLOSIVE
- ☐ K. REACTIVE
- ☐ L. INCOMPATIBLE
- ☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS	23,448	tons	iron oxide powder and dirt and baghouse dust.

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
	Heavy Metals		Landfill	See Attached Sheets	

V. FEEDSTOCKS (See Appendix for CAS Numbers) N/A

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	706001

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ A. GROUNDWATER CONTAMINATION
02 ☐ OBSERVED (DATE: 7-2-84) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: Unknown
04 NARRATIVE DESCRIPTION

Levels of iron in two monitoring wells exceeded Groundwater Standards

01 ☒ B. SURFACE WATER CONTAMINATION
02 ☐ OBSERVED (DATE: 7-2-84) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: unknown
04 NARRATIVE DESCRIPTION

Levels of ammonia, phenol, iron and manganese exceed Class AA Surface Water Standards

01 ☐ C. CONTAMINATION OF AIR
02 ☐ OBSERVED (DATE:) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED:
04 NARRATIVE DESCRIPTION

None Suspected

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS
02 ☐ OBSERVED (DATE:) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED:
04 NARRATIVE DESCRIPTION

None Suspected

01 ☐ E. DIRECT CONTACT
02 ☐ OBSERVED (DATE:) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED:
04 NARRATIVE DESCRIPTION

None Suspected

01 ☒ F. CONTAMINATION OF SOIL
02 ☐ OBSERVED (DATE:) ☐ POTENTIAL ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: (Acres)
04 NARRATIVE DESCRIPTION

from contact with leachate

01 ☐ G. DRINKING WATER CONTAMINATION
02 ☐ OBSERVED (DATE:) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED:
04 NARRATIVE DESCRIPTION

None suspected, area drinking water supplies utilize surface water upstream from site.

01 ☐ H. WORKER EXPOSURE/INJURY
02 ☐ OBSERVED (DATE:) ☒ POTENTIAL ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: 6
04 NARRATIVE DESCRIPTION

Potential for accidental contact with leachate under normal work conditions.

01 ☐ I. POPULATION EXPOSURE/INJURY
02 ☐ OBSERVED (DATE:) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED:
04 NARRATIVE DESCRIPTION

None Suspected

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: NY | 02 SITE NUMBER: 706001

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None Known

01 ☐ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include species of animals)

None Known

01 ☐ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None Known

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES (Spills/Runoff/Standing liquids, Leaking drums) — 02 ☒ OBSERVED (DATE: 6-13-85) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: Unknown
04 NARRATIVE DESCRIPTION

No liner or cap on landfill, leachate seeps noted

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None Known

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None Known

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None Suspected

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

None Known

III. TOTAL POPULATION POTENTIALLY AFFECTED: Unknown

IV. COMMENTS

Currently authorized to install partial leachate collection system.
Currently required to submit to NYSDEC a Hydrologic Analysis Report

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

File Data

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	706001

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☐ F. SPCC PLAN				
☐ G. STATE (Specify) NY	#1550	7-31-78		Consent Order #7-0439, 5-7-85
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☐ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
☐ C. DRUMS, ABOVE GROUND		
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☒ F. LANDFILL	23,448	tons
☐ G. LANDFARM		
☐ H. OPEN DUMP		
☐ I. OTHER (Specify)		

04 TREATMENT (Check all that apply)
- ☐ A. INCINERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER (Specify)

05 OTHER
- ☒ A. BUILDINGS ON SITE

06 AREA OF SITE
190 (Acres)

07 COMMENTS

Conditions of Consent Order #7-0439 require a leachate removal plan to be submitted to DEC within one month and a Hydrogeologic Analysis Report to be submitted within six months of execution of Order.

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE ☐ B. MODERATE ☐ C. INADEQUATE, POOR ☒ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

None present, no final cover or liner, leachate seeps present

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☒ YES ☐ NO

02 COMMENTS

Erosion occurring on slopes, waste protruding through cover material

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

1. Site inspection 6-13-85 - Wehran Engineering
2. City of Auburn 6NYCRR Part 360 Application to Operate a Solid Waste Management Facility, 1982

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE: NY | 02 SITE NUMBER: 706001

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)

	SURFACE	WELL
COMMUNITY	A. ☒	B. ☐
NON-COMMUNITY	C. ☐	D. ☐

02 STATUS

ENDANGERED	AFFECTED	MONITORED
A. ☐	B. ☐	C. ☒
D. ☐	E. ☐	F. ☐

03 DISTANCE TO SITE
Upstream 4-5 miles
A. _____ (mi)
B. _____ (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

☐ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) ☒ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER: None Known

03 DISTANCE TO NEAREST DRINKING WATER WELL: None Known (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
18.5 (ft)	Northeast	18.5 (ft)	25 (gpd)	☐ YES ☒ NO

09 DESCRIPTION OF WELLS (Including number, depth, and location relative to population and buildings)

None Known

10 RECHARGE AREA		11 DISCHARGE AREA	
☐ YES ☐ NO	COMMENTS: Unknown	☐ YES ☐ NO	COMMENTS: Unknown

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

☐ A. RESERVOIR, RECREATION DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ☐ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
Unnamed tributary to Owasco Outlet	☐	On site (mi)
Owasco Outlet	☐	1 (mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. Unknown (NO. OF PERSONS)	B. Unknown (NO. OF PERSONS)	C. Unknown (NO. OF PERSONS)

02 DISTANCE TO NEAREST POPULATION: 1000 ft. (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE	04 DISTANCE TO NEAREST OFF-SITE BUILDING
Unknown	1000 ft. (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, density estimates, if known)

Total population of all towns and cities with land area falling within a three mile radius of site = 45,832

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	706001

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. 10^{-6} – 10^{-8} cm/sec ☒ B. 10^{-4} – 10^{-6} cm/sec ☐ C. 10^{-4} – 10^{-3} cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☒ B. RELATIVELY IMPERMEABLE (10^{-4} – 10^{-6} cm/sec) ☐ C. RELATIVELY PERMEABLE (10^{-2} – 10^{-4} cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH
Unknown (ft)	Unknown (ft)	Unknown

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
8.75" (in)	2.25 (in)	7.5 %	Northeast	7.5 %

09 FLOOD POTENTIAL

SITE IS IN No YEAR FLOODPLAIN

10 ☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE	OTHER
A. _____ (mi)	B. 3000' (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

_____ (mi)

ENDANGERED SPECIES: _____

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AGRICULTURAL LANDS: AG LAND
A. adj. (mi)	B. _____ (mi)	C. _____ (mi)	D. _____ (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The site located in industrial district of City of Auburn. The site is bounded on the north south and west by city-owned property and on the east by N. Division Street. Drainage is provided by a series of small ditches that discharge to a small unnamed tributary bordering the northeast section of the site. The tributary discharges to Owasco Outlet approximately one mile downstream.

VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

1. Site inspection 6-13-85 - Wehran Engineering
2. USGS Quadrangle, Auburn, NY
3. File Data: Boring Logs
4. USGS Bulletin Eastern Oswego R.B. Ground water Resources

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	706001

II. SAMPLES TAKEN None

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER			
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL			
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
HNUPID #101	No appreciable values over background

IV. PHOTOGRAPHS AND MAPS

01 TYPE ☒ GROUND ☒ AERIAL

02 IN CUSTODY OF Auburn, City of
(Name of organization or individual)

03 MAPS
☐ YES
☐ NO

04 LOCATION OF MAPS

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

None

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Site inspection 6-13-85 - wehran Engineering

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	706001

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER	08 NAME (PARENT COMPANY, if applicable)	09 D+B NUMBER
City of Auburn		NA	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE
24 South Street			
05 CITY / 06 STATE / 07 ZIP CODE		12 CITY / 13 STATE / 14 ZIP CODE	
Auburn / NY / 13021			
01 NAME	02 D+B NUMBER	08 NAME	09 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE
05 CITY / 06 STATE / 07 ZIP CODE		12 CITY / 13 STATE / 14 ZIP CODE	
01 NAME	02 D+B NUMBER	08 NAME	09 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE
05 CITY / 06 STATE / 07 ZIP CODE		12 CITY / 13 STATE / 14 ZIP CODE	
01 NAME	02 D+B NUMBER	08 NAME	09 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE
05 CITY / 06 STATE / 07 ZIP CODE		12 CITY / 13 STATE / 14 ZIP CODE	

III. PREVIOUS OWNER(S) (List most recent first) / IV. REALTY OWNER(S) (If applicable; list most recent first)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
Same			
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY / 06 STATE / 07 ZIP CODE		05 CITY / 06 STATE / 07 ZIP CODE	
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY / 06 STATE / 07 ZIP CODE		05 CITY / 06 STATE / 07 ZIP CODE	
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY / 06 STATE / 07 ZIP CODE		05 CITY / 06 STATE / 07 ZIP CODE	

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

City of Auburn

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION
01 STATE: NY | 02 SITE NUMBER: 706001

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME	02 D+B NUMBER
Michael O'Neill, P. E.	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
24 South Street	

05 CITY	06 STATE	07 ZIP CODE
Auburn	NY	13021

08 YEARS OF OPERATION	09 NAME OF OWNER
1962	City of Auburn

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME	11 D+B NUMBER
NA	

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

01 NAME	02 D+B NUMBER
Same	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION
01 STATE: NY | 02 SITE NUMBER: 706001

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
None	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
Consolidated Scrap Processing			

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
23 Perrine Street			

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
Auburn	NY	13021			

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
Austeel			

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
Quarry Street			

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
Auburn	NY	13021			

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
Consolidated Scrap Processing	7A-022		

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
23 Perrine STreet			

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
Auburn	NY	13021			

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sampling analysis, reports)

DEC File letter, 4-24-84

Industrial Waste Collector Annual report, 12-13-79, Consolidated Scrap Processing, Inc.

K. DelPrete letter 3-13-79

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE: NY | 02 SITE NUMBER: 706001

II. PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ C. PERMANENT WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ D. SPILLED MATERIAL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ E. CONTAMINATED SOIL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ F. WASTE REPACKAGED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ G. WASTE DISPOSED ELSEWHERE — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ H. ON SITE BURIAL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ I. IN SITU CHEMICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ J. IN SITU BIOLOGICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ K. IN SITU PHYSICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ L. ENCAPSULATION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ M. EMERGENCY WASTE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ N. CUTOFF WALLS — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ O. EMERGENCY DIKING/SURFACE WATER DIVERSION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ P. CUTOFF TRENCHES/SUMP — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☒ Q. SUBSURFACE CUTOFF WALL — 02 DATE _____ — 03 AGENCY NYSDEC
04 DESCRIPTION Required partial leachate collection system plan and engineering Consent Order No. 7-0439

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	706001

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☒ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE 5-7-85 — 03 AGENCY NYSDEC
04 DESCRIPTION

Consent Order No. 7-0439 requires development of leachate collection system and Hydrogeologic Analysis Report Investigation

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

NYSDEC File Data

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	706001

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☒ YES ☐ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

5-7-85 NYSDEC issued Consent Order No. 7-0439 requiring submittal of a leachate removal plan and a hydrogeologic analysis report (HAR investigation. If the HAR shows contamination of groundwater in contravention of 6 NYCRR Part 703 due to the landfill, a closure plan must be developed for the site. If the HAR satisfactorily demonstrates that the landfill is not contaminating the groundwater, DEC will proceed with the permit process.

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sampling results)

NYSDEC File Data

6.0 ASSESSMENT OF DATA ADEQUACY AND RECOMMENDATIONS

6.0 ASSESSMENT OF DATA ADEQUACY AND RECOMMENDATIONS

6.1 GROUNDWATER ROUTE

Due to the fact that the analytical data was inadequate, the preliminary groundwater route score was based on the assumptions that no observed release could be documented and that the site overlies an aquifer consisting of unconsolidated fine sand. Current use of this aquifer is unknown. These assumptions produced a preliminary score of 1.50 for the groundwater route (S_{gw}). The availability of hydrogeologic data is extremely limited and additional information is needed to accurately assess the groundwater route and its associated hazard. A Phase II hydrogeologic investigation would be designed to achieve the following objectives:

- Identify and characterize the aquifer of concern.
- Determine hydraulic gradients between the on-site overburden and the zone of saturation.
- Determine the hydraulic properties of the overburden and aquifer constituents (permeability, saturated thickness, etc.)
- Determine direction and occurrence of groundwater flow within the immediate area.
- Determine groundwater quality both upgradient and downgradient of the site.
- Determine depth of fill.

6.2 SURFACE WATER ROUTE

The preliminary surface water route score is 9.09. The information used to evaluate this route was fairly adequate. Additional information would most likely not increase the score greatly. In view of this the Phase II surface water investigation would be designed to provide the following information:

- Identify contaminants present in leachate
- Determine if migration of contaminants to the stream has occurred

- Identify present and future uses of on-site stream and Owasco Outlet

6.3 AIR ROUTE

During the Phase I site visit, an HNU Systems photoionizing organic vapor detector was used to measure the ambient air quality. The HNU did not detect any volatiles in the air and therefore the air route score is 0. The Phase II work plan will include continued air monitoring during all investigative activities.

6.4 FIRE AND EXPLOSION

To score the fire and explosion hazard mode either a state or local fire marshall must have certified that the facility presents a significant fire or explosion threat to the public or to a sensitive environment, or there must be a demonstrated threat based on field observations (e.g. combustible gas indicator readings). The available records give no indication that either one of these tasks has been done. Further, the available data do not suggest any imminent threat of fire and explosion at this site. Therefore the route score cannot be completed.

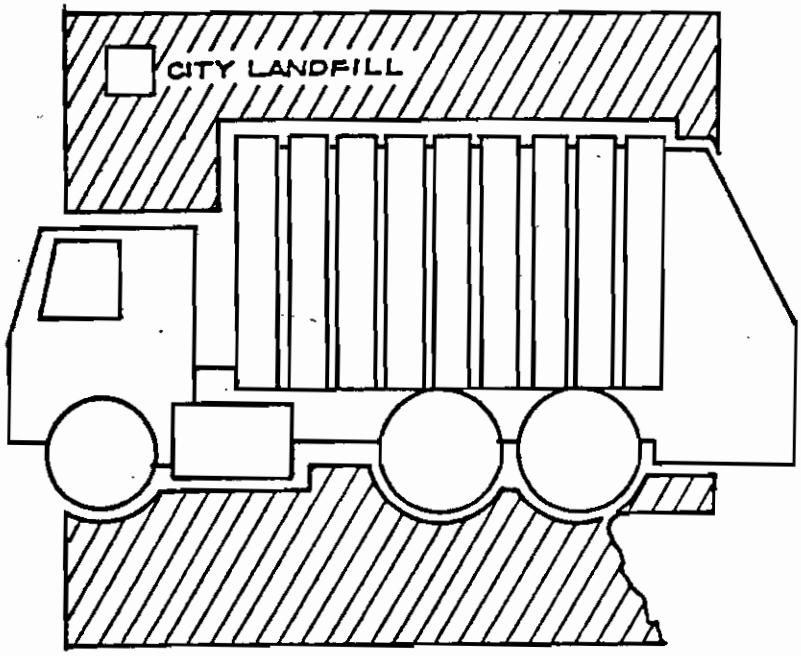
6.5 DIRECT CONTACT ROUTE

The preliminary direct contact score is 25. This score is based on inadequate cover and accessibility to the site. The objectives of the Phase II investigation should be to assess the effectiveness of the present cover and to evaluate the feasibility of restriction of access.

AUBURN (C) CAYUGA COUNTY

6NYCRR PART 360
APPLICATION FOR APPROVAL
TO OPERATE A SOLID WASTE
MANAGEMENT FACILITY

(1982)



PREPARED BY:
MICHAEL D. O'NEILL, P.E.
CITY ENGINEER
SUPT. OF PUBLIC WORKS
MEMORIAL CITY HALL
AUBURN, NEW YORK 13021
(315)252-9531

7.0 PHASE II WORK PLAN

7.0 PHASE II WORK PLAN

INTRODUCTION AND OBJECTIVES

During the Phase I investigation, it was determined that the Auburn Landfill poses a potential threat to surface and ground water. This Phase II work plan is designed to further characterize the site as follows:

- Identify subsurface hydrogeologic conditions at the site
- Determine the presence or absence of contamination in the groundwater and surface water in the vicinity of the site
- Evaluate whether or not contamination from the site poses any environmental or health concerns
- Identify uses of surface and ground water in the vicinity of the site and population potentially affected.
- Provide a final Hazard Ranking System (HRS) score
- Provide NYSDEC with a preliminary remedial cost estimate.

Procedures to be utilized for sampling and analysis, as well as health and safety, will be conducted in conformance with the consultant's generic procedures submitted to NYSDEC prior to initiation of work under this contract.

WORK PLAN

To accomplish the above mentioned objectives, the following tasks and subtasks are recommended:

Task 1 - Preparation of Site-Specific Work Plans

Wehran will prepare and submit for NYSDEC approval revised work plans for those sites NYSDEC recommends for Phase II investigation. These plans will include site-specific:

- Scope of work
- Health and safety plan

- Sampling and analytical plan
- Detailed cost estimate

All plans will conform with the contractor's previously submitted established procedures.

Task 2 - Identify, Obtain and Evaluate Additional Data

To consider the possible cost for future remedial investigations, it will be necessary to collect and evaluate additional information relating to the area surrounding the Auburn Landfill including but not limited to:

- Uses of local surface water bodies in the area, particularly the Owasco Outlet downstream from the confluence of the stream originating at the landfill
- Available regional water supply sources
- Boring logs, if available, for all wells in the immediate area

Task 3 - Hydrogeologic Investigation

Data Collection and Review

Collect and review all existing hydrogeologic data such as previous test boring logs and regional geologic reports.

Groundwater Sample Collection

The Auburn Landfill is currently operating under Consent Order No. 7-0439. The terms of the Order require the City of Auburn to submit a Hydrologic Analysis Report (HAR) by November 1985. The report is intended to define the groundwater flow paths as well as the vertical and areal extent of any existing leachate plumes in and around the landfill. The HAR scope of work as proposed by the consultant to the City of Auburn is consistent with the objectives of this work plan. Test borings and monitoring wells will be installed on site as part of the investigation. Wehran Engineering will collect groundwater samples for analysis from each of the wells installed as part of

the HAR investigation using the following procedure. (For cost estimate purposes it is assumed that samples will be taken from four wells.)

- The static water level in each well will be measured and recorded.
- Each well will be purged of at least three well volumes of water using a separate teflon bailer for each well. Each bailer will be cleaned in the laboratory prior to use.
- Samples will be collected from each well by the use of the above-mentioned bailer. Each sample will then be placed in the appropriate container, stored on ice, and transported to the lab in accordance with standard chain-of-custody protocol.

The samples will be analyzed for the Hazardous Substances List (HSL), Priority Pollutant Heavy Metals and water quality indicator parameters including: COD, pH, conductivity, chlorides, TSS, TDS, and iron.

Geophysical Survey

A terrain conductivity or earth resistivity survey will be conducted in order to obtain additional subsurface information. Both of these geophysical methods evaluate changes in the earth's resistance/conductance to an induced electrical current which may reflect changes in stratigraphy and/or groundwater quality. The survey would be implemented in areas of the site deemed appropriate based on existing geologic and water quality data.

Task 4 - Surface Water Investigation

Drainage for the Auburn Landfill flows into a stream that originates on site. Surface water and sediment samples will be collected, both on site and downstream, to verify if contaminants are migrating from the site.

Laboratory analyses of these surface water and sediment samples will be for the HSL, Priority Pollutant Heavy Metals and water quality indicator parameters (water samples only), as indicated in Task 2.

To assist in identifying the contaminants of concern at the site, a leachate sampling and analysis program is also necessary. This program will

consist of collecting one leachate sample. The sample will be collected along the boundary of the site where leachate generation appears most predominant. Samples of various seeps in the same general area may be collected and composited for single analysis. If no leachate is present, a sample of stained soil may be substituted for a leachate sample. The sample will be analyzed for HSL, Priority Pollutant Heavy Metals and water quality indicator parameters.

Task 5 - Quantitative Air Monitoring

Throughout all Phase II activities conducted at the site, air monitoring will be performed using the HNU Systems Photoionizer, both upwind and downwind of the site. If consistent, unusually high values are observed (five to ten ppm above background) with the HNU, a more quantitative air analysis may be required as an extra, subject to NYSDEC approval.

Task 6 - Laboratory Analysis

During the field investigation the following samples will be collected for analysis by a subcontractor laboratory:

- Nine water samples (four wells, two surface water, one leachate, one field blank, one trip blank) for HSL, Priority Pollutants Heavy Metals and water quality indicator parameters
- Two sediment samples for HSL and Priority Pollutants Heavy Metals

Task 7 - Preliminary Remedial Cost Estimate

The consultant will consider the possible cost for future remedial investigations, engineering plans and specifications, and the physical remediation anticipated for the site. A range of possible remedial costs will be developed using best engineering judgment and previous experience with possible feasible remedial schemes. This task is not intended to perform a cost-effectiveness analysis of feasible remedial alternatives but rather to provide a cost range estimate adequate for budget reporting purposes.

Task 8 - Phase II Report Preparation

Under this task, the engineer will compile a final report for the site. This report will contain the following:

- Phase II information developed under Tasks 1 through 7
- Final Site Assessment
- Final HRS score

Extras

This work plan has been developed based upon available site information as contained in the Phase I report. If conditions encountered during the Phase II investigation indicate the need for additional services or extras such as difficult drilling, poor access, etc., not included within the original scope of work, the costs will be negotiated with the NYSDEC. Such extra services will be performed on a time and materials basis with prior authorization by the NYSDEC project officer.

NYSDEC SUPERFUND INVESTIGATIONS
PHASE II - TOTAL PROJECT COST SUMMARY[1]
SITE: AUBURN LANDFILL

Wehran's Labor and Expenses	$ 25,000.00
Subcontractors:	
Driller	-0-
Laboratory	22,000.00
TOTAL ESTIMATED COST	$ 47,000.00*

[1]This cost estimate does not include any provisions for inflation and salary adjustments and can be considered current for approximately three months.

*Note: This cost estimate has been developed for budgeting purposes only. Should this site be selected for Phase II investigation, Wehran will develop a detailed cost estimate for NYSDEC approval.

APPENDIX

CITY OF AUBURN

MEMORIAL CITY HALL
AUBURN, N.Y. 13021
Phone: (315) 252-9531

BRUCE L. CLIFFORD
City Manager

November 4, 1982

Mr. Charles J. Branagh, P.E.
Senior Sanitary Engineer
Solid Waste Management
Region 7
New York State Department
of Environmental Conservation
Environmental Quality Office
7481 Henry Clay Boulevard
Liverpool, New York 13088

Dear Mr. Branagh:

Enclosed for your review is the City of Auburn's Sanitary Landfill Operation Application.

Should you have any questions, please feel free to call.

Yours truly,

Bruce L. Clifford
City Manager

pl
Enclosure
cc: Mr. Michael D. O'Neill
Mr. William L. Catto
File

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NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

APPLICATION FOR APPROVAL TO OPERATE A SOLID WASTE MANAGEMENT FACILITY

SEE APPLICATION INSTRUCTIONS ON REVERSE SIDE

FOR STATE USE ONLY

PROJECT NO.	DATE RECEIVED
DEPARTMENT ACTION ☐ Approved ☐ Disapproved	DATE

1. OWNER'S NAME	2. ADDRESS (Street, City, State, Zip Code)	3. Telephone No.
City of Auburn	24 South St.,Auburn, N.Y., 13021	315-252-9531
4. OPERATOR'S NAME	5. ADDRESS (Street, City, State, Zip Code)	6. Telephone No.
Bruce L. Clifford	24 South St.,Auburn, N.Y., 13021	315-252-9531
7. ENGINEER'S NAME	8. ADDRESS (Street, City, State, Zip Code)	9. Telephone No.
Michael D. O'Neill	24 South St.,Auburn, N.Y., 13021	315-252-9531
10. ON-SITE SUPERVISOR	11. ADDRESS (Street, City, State, Zip Code)	12. Telephone No.
James Brazee	24 South St.,Auburn, N.Y., 13021	315-252-9531

13. HAS THE INDIVIDUAL NAMED IN ITEM 10 ATTENDED A DEPARTMENT SPONSORED OR APPROVED TRAINING COURSE?
☒ Yes Date Course Title Location ☐ No

14. PROJECT/FACILITY NAME	15. COUNTY IN WHICH FACILITY IS LOCATED	16. ENVIRONMENTAL CONSERVATIC REGION
Auburn Sanitary Landfill	Cayuga	7

17. TYPE OF PROJECT FACILITIES: ☐ Composting ☐ Transfer ☐ Shredding ☐ Baling ☒ Sanitary Landfill ☐ Incineration ☐ Pyrolysis
☐ Resource Recovery-Energy ☐ Resource Recovery-Materials ☐ Other

18. HAS THIS DEPARTMENT EVER APPROVED PLANS AND SPECIFICATIONS AND/OR ENGINEERING REPORTS FOR THIS FACILITY? ☒ Yes Date 7-31-78 ☐ No

19. LIST WASTES NOT ACCEPTED

Corrosive Substances, Flammable Chemicals, Toxic Materials, Hazardous Wastes

20. BRIEFLY DESCRIBE OPERATION

The operation of the Auburn Sanitary Landfill is under Facility Permit Number 1550 from the New York State Department of Environmental Conservation. This disposal site consisting of sixty-eight acres is open six (6) days a week, Monday-Saturday, 7 A.M. to 4 P.M., excluding holidays, for the disposal of all solid waste collected by city trucks and private haulers. In addition, the City of Auburn contracts with the following towns and villages in sharing the cost for operation of this landfill: Towns of Fleming, Owasco, Sennett, Throop, Aurelius, Brutus, Springport, Niles, and the Villages of Weedsport for an estimated total population served of 56,761.

Permits are issued to all private haulers using the sanitary landfill. It is estimated that the landfill handles 150 tons per day, based upon 110 tons from packer trucks and 40 tons from open body trucks. These estimates produce a weekly tonnage of 900 tons and a yearly total of 46,800 tons. Equipment at the landfill includes one 25-ton bulldozer, one crawler loader, one four-wheel drive 20-ton steel wheel compactor that compacts refuse to a density of approximately 1,200 lbs. per cubic yard, and two (2) dump trucks of 20 and 10 cubic yard capacity. All refuse is compacted daily by the compactor and covered with six inches of material, and when the final finished grade for the area is reached, a two foot layer of cover material is placed over the refuse. The City of Auburn has recently acquired title to the adjoining 115 acres of land for future use as a landfill.

The expected life of the current landfill is 15-20 years.

21. IF FACILITY IS A SANITARY LANDFILL, PROVIDE THE FOLLOWING INFORMATION:

a. Total useable area: (Acres) Initially 70 Currently 190 Proposed 240

b. Distance to nearest offsite, downgradient, water supply well 2,000. Feet

c. No. of groundwater monitoring wells Upgradient one Downgradient one Proposed one

22. INDICATE WHICH ATTACHMENTS, IF ANY, ARE INCLUDED WITH THIS APPLICATION:
☐ Form 47-19-2 or SW-7 ☒ Operations Plan & Report ☒ USGS Topographic Map ☐ Record Forms ☐ Other
☐ Construction Certificate ☒ Boring Logs ☐ Water Sample Analysis ☐ None

23. CERTIFICATION:

I hereby affirm under penalty of perjury that information provided on this form and attached statements and exhibits 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.

11/5/82 Date

Michael D. O'Neill City Engineer Signature and Title

47-19-4 (6/77)

CENTRAL OFFICE COPY

PROPRIETARY INFORMATION

SITE DESCRIPTION

The City of Auburn Sanitary Landfill is located in the industrial northwest section of the City of Auburn, a community of 32,000. The City of Auburn is located in the mid-section of Cayuga County. The landfill is bounded on the north by property recently purchased by the City of Auburn, on the east by North Division Street, on the south by property owned by the City of Auburn, and on the west by property owned by the City of Auburn. The landfill proper has been in operation since the 1960's.

Access to the site is via York Street and North Division Street which lead from N.Y.S. Route 34 and U.S. Routes 5 and 20 respectively. All access highways are capable of H-20 loadings. There are no airports within regulated distances and nearby railroad lines have been abandoned.

The site characteristically slopes from west to east with surface elevations of 530 to 610 (U.S.G.S.). The highest natural elevations are to the west. The site is presently drained by a series of drainage ditches. The drainage is primarily west to east with drainage ditches

flowing to the north. There is an existing stone stockpile on the site for use of and maintained by the county. The City did enter into a water services contract with the Finger Lakes Mall and received as partial consideration some 25,000 yards of topsoil which is stockpiled at the southeast portion of the landfill. During construction of the Sewage Treatment Plant additional borrow was stockpiled at the southern boundary of the landfill.

The existing vegetation growth at the landfill is primarily weed growth, scrub trees and wild grasses (refer to soil borings and soil classification maps included in the plans for soil information). Cover material is characteristically high in clay content. Access to the site proper is controlled at the North Division Street entrance gate. The gate is locked during all non-operating hours. While on the site, two way vehicle traffic is maintained to the working face. The City does operate an inclement weather area in the event that excessive snow, frost heave, or rain creates an impassable road condition.

PERSONNEL REQUIREMENTS

Under normal operating conditions the following personnel are assigned to the landfill:

1 Sanitation Foreman
3 Heavy Equipment Operators
2 Laborers

Additional personnel are added as needed from in-house staff or part-time temporary help. Equipment maintenance and repair is provided from the Central Garage which maintains a staff of:

1 Automotive Mechanic Foreman
3 Automotive Mechanics
2 Automotive Mechanic Helpers
1 Welder

The Central Garage staff provides maintenance to all city equipment including the landfill equipment. Syracuse Supply Company performs monthly preventive maintenance on all Catepillar equipment at the landfill and also performs the "heavy" equipment repairs that City forces are unable to complete.

The Sanitation Foreman is responsible for the direct daily supervision of the landfill. The Sanitation Foreman's general responsibilities are as follows:

1. Familiarity with this Operating Plan.

2. Attend and pass N.Y.S.D.E.C. approved landfill courses.

3. Be familiar with the safety practices and safety equipment.

4. Direct and control landfilling activities.

5. Assures compliance with daily cover requirements.

6. Daily observance of completed areas to monitor leachate effluents, erosion, vegetative growth and corrects any general nonconforming occurrences.

7. Notifies Fire Department in the event of a fire.

The Sanitation Foreman, in addition to other assigned duties (see job description in appendix), assures compliance with 6NYCRR Part 360 and provides the necessary guidance and coordination in order to make daily operations efficient, safe, and in compliance with appropriate regulations.

OPERATION PLAN

RECORDS

The City maintains routine administrative records such as equipment operation maintenance records, personnel records, requisitions, purchase orders, permit records and usage records.

EXCLUDED WASTES

The City does not accept toxic or hazardous industrial waste, asbestos, discarded tires (in large quantities), 55 gallon drums containing liquid waste, no nuclear wastes nor any wastes of unknown origin or suspicious in nature. No junk cars, large vehicles, unused pesticides, chemicals, seal containers, explosives, or any material because of its character, size or shape cannot be buried in the landfill.

SANITARY LANDFILL GUIDELINES/OPERATION PLAN

The City of Auburn will primarily utilize the area or ramp method of landfilling. This method provides the most efficient use of the existing topographical features of the site. The specific widths and lengths of the fill slopes and working face depends on the nature of that immediate location, the daily volume of deposited refuse and the number of vehicles arriving at any given moment. The side slopes will be a maximum of 30 degrees and the width of fill strips and surface grades will be controlled by line poles and grade stakes. The working face will be maintained as small as practicable and dumping will be restricted to a limited area. Every effort will be made to avoid the scattering of debris and maximum advantage

will be taken of truck compaction. The cover material will be hauled from the existing on site stockpile. The stockpile will be resupplied from various city wide construction projects, sewer separation projects, 1982 Road Program, line department excavations, and a continuation of the daily onsite cover practices.

The City is currently (August, 1982) requesting bids for the hauling of 10,000 cubic yards of cover material to be stockpiled at various strategic locations. This is the second time in 1982 the City has received bids. The Button-Chittenango Corporation was the lowbidder in March, 1982 and moved approximately 10,000 cubic yards of cover material in five working days. The City will continue this practice as a supplement to daily cover practices.

The City is also utilizing composted sludge with wood chips as an admixture to the final cover material. The composted sludge from the City's Sewage Treatment Plant is an excellent organic soil and has been the most successful of final cover materials used at the landfill. The composts ability to hold moisture and its organic content create an ideal environment for the establishment of vegetative cover.

Refuse shall be spread and compacted in lifts of two feet. The accumulated tiers of two foot compacted refuse lifts will receive a 6" daily soil cover. The landfill will be operated in the direction of the prevailing wind to prevent, as is feasible, refuse from blowing back over

the completed portions of the landfill. It is anticipated that snow fencing will be required to prevent wind from scattering refuse. Experience has proven this to be the case.

The City will provide full time supervision at the refuse disposal areas controlling dumping, compaction and covering. This supervisory staff will assist in directing traffic through signage and verbal instruction as well as assuring the landfill is progressing according to plans. The days and hours of operation will be prominently displayed. A lockable gate will prevent access to the landfill while it is closed.

The supervisory staff will control the size of the working face balancing the size of the face with available cover material and vehicle deposit time.

The refuse will be spread in approximately two foot layers and compressed with a caterpillar 816 Trash Compactor. This will be a continuous operation ensuring good compaction, preventing vermin infestation and preventing fires. At the end of each day all exposed refuse will be covered with at least 6 inches of earth with a Caterpillar D-7 Dozer. Final cover will be at least two feet. Intermediate cover material of one foot will be placed in areas scheduled to receive a second lift within a year.

Salvaging interferes with the landfill operation and is discouraged by supervisory personnel. Infrequent salvaging does occur; however, as a rule it is prohibited. Area policing is accomplished at the close of a days operation. Dust can be controlled by watering, calcium chloride or oil. Equipment operators do have cabs for personal protection.

Rodent control has not been necessary at this site. Should it become necessary the following procedure would most likely be followed: Baiting would be accomplished in two stages. The first stage would be the use of a Zinc Phosphide poison applied at the rate of one-fourth pound (1% Zinc Phosphide plus bait base) per square yard of working face. The second stage would utilize an anti-coagulant bait at an application rate of one-half pound per square yard of working face.

NOISE CONTROL

The City has monitored sound levels with a General Radio Company Sound Level Meter, Model 1551-C, which meets USAS S1.4 and IEC R123 criteria. The meter is manufactured in Concord, Massachusetts, Serial #5762 with an output of 7000 ohms. Existing noise levels do not exceed the following levels:

Time	Maximum Reading
7 A.M. - 10 P.M.	Less than 60 dB (A)
10 P.M. - 7 A.M.	Less than 50 dB (A)

RECEIPT AND PROCESSING

At present the City employes a gate keeper who records the origin of vehicles entering the landfill, the type of vehicle, and if a valid permit has been issued for the vehicle. Vehicles complying with landfill regulations are sent to the dumping area.

Department of Environmental Conservation. This disposal site consisting of sixty-eight acres is open six (6) days a week, Monday-Saturday, 7 A.M. to 4 P.M., excluding holidays, for the disposal of all solid waste collected by City trucks and private haulers. In addition, the City of Auburn contracts with the following towns and villages in sharing the cost for operation of this landfill: Town of Fleming, Owasco, Sennett, Throop, Aurelius, Brutus, Springport, Niles, and the Village of Weedsport, for an estimated total population served of approximately 55,000.

Permits are issued to all private haulers using the sanitary landfill. It is estimated that the landfill handles 150 tons per day, based upon 110 tons from packer trucks and 40 tons from open body trucks. These estimates produce a weekly tonnage of 900 tons and a yearly total of 46,800 tons. Equipment at the landfill includes one 25-ton bulldozer, one crawler loader, one four-wheel drive 20-ton steel wheel compactor that compacts refuse to a density of approximately 1,200 lbs. per cubic yard, and two (2) dump trucks of 20 and 10 cubic yard capacity. All refuse is compacted daily by the compactor and covered with six inches of material, and when the final finished grade for the area is reached, a two foot layer of cover material is placed over the refuse. The City of Auburn has recently asquired title to the adjoining properties both north and south of the existing landfill for use

Existing Conditions in Serivce Area

a. Solid waste quantity - 120-150 tons per day.

b. Composition - dbmestic and limited industrial waste.

37% Paper

25% Organic Refuse

13% Metals

10% Plastic

10% Glass

5% Rubber, Leather*

*The above information is a general estimate from observation, technical trade publication information and limited field measurements.

c. Collection Practices - Solid waste delivered to the Auburn Landfill is obtained by private and public collection practices. The City of Auburn maintains a fleet of refuse packers that provide curbside pickup five days a week. In addition, several small townships provide municipal pickup services. The Auburn Landfill receives the balance of refuse from private haulers who contract with residential, commercial and industrial clients.

d. Processing Facility - The Refuse Collection Division of the Public Works Department provides a weekly refuse collection service to all residential and small commercial properties based upon curb side pick up. This

service procides for the collection of garbage, papers, cans, yard clippings, and other specified materials once each week. To provide this service, four (4) refuse packer trucks of 25 cubic yard capacity and a crew of two (2) Sanitation Men per truck collect refuse from a designated district each day with the City divided into twenty districts. Approximately one (1) trip per day during the winter months and two (2) trips per day during spring, summer, and fall are made from each district to the Sanitary Landfill which generates approximately 21,000 tons of refuse per year. All trucks are equipped with two-way radios to permit all calls pertaining to complaints or skips received at the Sanitation Office to be immediately transmitted to the proper crew. In addition, the radio equipment permits the Foreman to check the performance and progress of each crew and revise the scheduled run based upon quantity of refuse and permit all crews to complete their routes together on a task assignment basis. There are approximately 8,830 stops made per week or a daily average of 310 per refuse packer. The City of Auburn is extremely fortunate in having the Sanitary Landfill located within the City, which requires approximately twenty (20) minutes for a round trip to discharge the load of refuse.

The operation of the Auburn Sanitary Landfill is under Facility Permit Number 1550 from the New York State

as a buffer zone, proposed industrial park and possible future expansion of the landfill.

PROJECTED WASTE GENERATION

The 1982 budgeted figure of $436,572.00 produces a yearly per capita cost of $8.18 and a tonnage cost of $7.69 per ton. In comparison, the $360,073 1981 budgeted figure produced a yearly cost per capita of $6.34 or a tonnage cost of $7.69 per ton and a 1979-80 per capita cost of $5.07 and $5.85 per ton. The increases were a result of higher operating costs, amortized land acquisition, equipment repairs and increased regulatory requirements of the New York State Department of Environmental Conservation. Costs to operate resource recovery projects are double or triple current disposal rates. There are, at this time, several technological problems with the refuse burning facilities; associated air pollution and high capital costs. The City anticipates continued use of the landfill

as an adequate and environmentally acceptable method of refuse disposal. Risks to the environment are blowing papers, leachate, dust; however, the alternative of no project would be most hazardous to health and welfare of the community. "No project" is simply not feasible.

The existing Auburn Landfill location and operation appears to be, at this time, the most cost-effective method of refuse disposal. The continued operation of the site will provide a sanitary and environmentally acceptable landfill for several years.

PROJECTED WASTE GENERATION

Service area population is 56,761 people. The growth potential at this time does not appear significant in light of current economic trends. The census reveals a decrease in population. Should growth opportunity occur, the landfill has the physical and mechanical capability to accommodate any forseeable solid waste increases. The current rate of 120-150 tons per day may average 150 tons per day. The increase on overall landfill operation is not significant. The landfill has a 15-20 year life.

EMERGENCY PHONE NUMBERS

James Brazee	Home: 142 Perrine Street, 315-252-8127 Work: 24 South Street, 315-252-9531
Michael O'Neill	Home: 26½ Hockeborne Street, 315-252-8633 Work: 24 South Street, 315-252-9531
Bruce Clifford	Home: 14 N. Marvine Avenue, 315-252-5596 Work: 24 South Street, 315-252-9531

AUBURN SANITARY LANDFILL COSTS

1982 COMMUNITY PARTICIPATION

COMMUNITY	POPULATION	SHARE OF COST
City of Auburn	32,442	197,681
Town of Fleming	2,395	14,594
Town of Owasco	3,617	22,040
Town of Sennett	2,547	15,520
Town of Throop	1,786	10,883
Town of Brutus	2,267	14,304
Village of Weedsport	1,945	11,852
Town of Niles	1,125	6,855
Town of Aurelius	2,922	17,805
Town of Springport	2,205	13,436
Neat Total	53,251	324,970

EQUIPMENT LIST

1 Catepillar 816 Trash Compactor

1 Catepillar D-7 Bulldozer

1 Catepillar 977 Track Loader

1 Mack Dump Truck (off the road)

1 Ford 1977 Pickup

1 Ford 1978 Pickup

1 Trail-behind broom sweeper

1 Gate Refuse Packer

1 Catepillar D-3 Bulldozer

1 Mack Dump Truck (10 wheeler)

BACKUP EQUIPMENT

2 Trojan Street Department Loaders

1 Trojan Water Department Loader

6 Short Box Dump Trucks

1 977 Catepillar Traxcavator-Paul F. Vitale, 315-253-2360

1 Earthmover-Schooley Enterprises, 315-252-9526

1 Earthmover-Paul F. Vitale, 315-253-2360

1 D-6 Catepillar Dozer, Paul F. Vitale, 315-253-2360

1 Track Backhoe-Schooley Enterprises, 315-252-9526

4 Backhoes-City Water/Sewer Department

6 10 Wheel Dump Trucks-Vasile Trucking, 315-252-5231

4 6" Portable Pumps-City Sewer Department

10 4" Portable Pumps-City Sewer Department

15 2" Portable Pumps-City Sewer Department

BACKUP EQUIPMENT

Continued

4 Earthmovers-Button, Chittenango Corp.-315-687-7226

1 Vactor Vacuum Sewer Cleaner-City Sewer Department

1 Vac-All Vacuum Cleaner-Sewage Treatment Plant

1 Flusher-City Street Department

The City has provided a concrete block garage for storage, shelter, and routine maintenance and repair. Diesel fuel is stored on-site for use in landfill equipment. Telephone and two-way radio communications are available at the landfill.

SURVEY CONTROL

A system of permanent control points will be established around the perimeter of the site, in locations which will be outside disturbed areas at full expansion.

Survey control for development of each zone will include establishment of permanent benchmarks in undisturbed areas adjacent to the zone. These benchmarks will be tied into the system of permanent control points around the site perimeter. Benchmarks should be iron pipe or concrete monuments set by the City Engineer's Office. For each zone, a temporary grid, defined by perpendicular lines at 100 foot intervals will be established and marked in the field.

Operators should use a 12 foot stake, marked in one foot intervals to check progress against adjacent control points or benchmarks. Periodically, as cells are completed, a survey crew will be required to check grading and set new temporary markers for the operators to follow.

COVER MATERIAL

Maximum Case $.5' \times 100' \times 200 = 10{,}000\ ft^3 \div \frac{27\ ft^3}{1\ cy} = 370\ cy$

Average Case $.5' \times 100' \times 100 = 5{,}000\ ft^3 \div \frac{27\ ft^3}{1\ cy} = 185\ cy$

Minimum Case $.5' \times 100' \times 50 = 2{,}500\ ft^3 \div \frac{27\ ft^3}{1\ cy} = 93\ cy$

6 days x 370 cy = 2,220 cy/work week

6 days x 185 cy = 1,110 cy/work week

6 days x 93 cy = 558 cy/work week

4 weeks x 2,220 cy/work week = 8,880 cy/mo.

4 weeks x 1,110 cy/work week = 4,440 cy/mo.

4 weeks x 558 cy/work week = 2,232 cy/mo.

12 mos. x 8,880 cy/mo. = 106,560 cy/year

12 mos. x 4,440 cy/mo. = 53,280 cy/year

12 mos. x 2,232 cy/mo. = 26,784 cy/year

AVERAGE: 62,208 cy/year

5,184 cy/month

1,296 cy/week

216 cy/day (6 day week)

$1{,}200' \times 1{,}400' = 1{,}680{,}000\ ft^2 \div \frac{43{,}560\ ft^2}{acre} = 38.6$ acres

$1{,}680{,}000\ ft^2 \times 1'$ cover $= 1{,}680{,}000\ ft^3 \div \frac{27\ ft^3}{cy} = 62{,}222$ cy lifetime intermediate cover

*intermediate 1 foot of cover will be graded to 6" and spoil stockpiled when reactivating landfill area.

FINAL COVER

$1{,}680{,}000\ ft^2 \times 2'\ cover = 3{,}360{,}000 \div \frac{27\ ft^3}{cy} = 124{,}444\ cy$ lifetime final cover material

ANNUAL SOURCES OF COVER MATERIAL

	Maximum	Average	Minimum
Road Program	20,000	10,000	6,000
City Line Departments	2,400	2,000	1,400
Contractual (Bid)	60,000	20,000	10,000
Sewer Separation	58,000	32,000	-0-
Miscellaneous	2,700	1,800	1,200
On Site Operation	45,000	31,200	20,000
	188,100	97,000	38,600

Cover material will be either stockpiles or excavated from a borrow area on an "as needed" basis for daily, intermediate or final cover in compliance with 6NYCRR Part 360. An emergency stockpile of 20,000 cubic yards will be maintained as a source for inclement weather, equipment breakdown, berm stabilization, leachate breakout, daily cover and/or fire extinguishing. The daily operation involves the deposition of refuse in the working face by packers, pickup trucks or open box trucks. The City's Catepillar 816 Trash Compactor will spread and compact the refuse in 1-3 foot lifts until the maximum daily cell height is achieved. Six inches of daily cover material will be placed over the working face at

the close of each working day. Appropriate interim cover material will be placed as required by 6NYCRR Part 360. As final grades are reached, the final two feet of cover, including topsoil and seeding,will be placed.

The location of the daily working face will be determined by the Sanitation Foreman who will base his decision upon weather, quantity of cover material, condition of equipment, access road stability, quantity of refuse, and the condition of the landfill in general.

CONTINGENCY PLAN

CONTINGENCY PLAN

EQUIPMENT BREAKDOWN. The City compacts refuse on a daily basis with a Catepillar 816 Trash Compactor. In the event of a breakdown the City will use a Catepillar D-7 Bulldozer to compact trash in the interim. The two machines have complimentary functions. Should both machines break down the City can utilize the Catepillar 977 Track Loader to compact refuse. Should all three machines break down the City would rent/lease the appropriate piece of equipment from local contractors or equipment vendors.

The City has three loaders and a fleet of dump trucks to continue the cover material process. The City has rented earth moving equipment from Mel Garr, Schooley Enterprises, and Paul F. Vitale (all of Auburn) when extra cover material is needed. Additionally, the City has and is currently out to bid for the hauling and stockpiling of 10,000 cubic yards of cover material. This reserve of cover material allows the

City flexibility in the operation of the landfill in the event of equipment breakdown.

FIRE. Problem fires at the landfill could occur in four distinct areas:

1. Refuse in the working face.
2. Brush.
3. Equipment.
4. Refuse transported in a refuse packer.

Personnel are directed to utilize the nearest fire extinguisher (usually on the machine) to attempt initial fire extinguishing. Backup extinguishers are carried in landfill pickups as well as available for use from the landfill garage. In the event the fire is in the refuse in the working face, cover material will be utilized to smother the fire should the extinguisher fail. All rubber tired vehicles at the landfill have two-way radio communication to call the fire department in the event of an uncontrollable fire.

Brush fires and equipment fires will be handled in a manner similar to refuse fires. Fires in the refuse packer will be handled by directing the operator to discharge the "hot load" in a designated safe area where extinguishing then can take place.

The landfill is not located in a designated flood plain area nor would the landfill operation be adversely affected by severe flooding events due to rainfall. In the event of prolonged wet weather or severe snowfall, the landfilling operation would be relocated to the contingency area.

Leachate breakouts at the landfill are not severe and can be controlled by cover material or by diverting the leachate into the proposed leachate collection system.

MONITORING AND SAMPLING. The City will submit to NYSDEC on a quarterly basis the ground water analysis from the three monitoring wells (upgradient and downgradient). These reports will cover total chlorides, specific conductivity, total organic carbon, pH, total zinc, total iron, total lead, and the well water elevation for each well. The appendix provides a graphic summary of previous ground water analyses.

LEACHATE GENERATION. Leachate is a natural occurrence at the perimeter of landfills. It is difficult, if impossible, to reduce and control the leachate at landfills. Proper grading, cover, and the establishment of vegetative growth reduce leachate quantities while the construction of a leachate collection system will provide proper control of the leachate. The leachate collection system will reduce the ground water pressure within the landfill that results from an ever increasing piezometric head due to height increase of the landfill. The leachate will be collected, treated and recycled onsite. The City in an emergency condition can transport the leachate to the City's Sewage Treatment Plant for treatment. Haul distance is less than two miles and can be transported entirely on City property to the Sewage Treatment Plant in the City's Vactor Sewer Cleaner.

Environmental Inpact Statement

Costs to operate resource recovery projects are double or triple current disposal rates. There are, at this time, several technological problems with the refuse burning facilities; associated air pollution and high capital costs. The City anticipates continued use of the landfill as an adequate and environmentally acceptable method of refuse disposal. Risks to the environment are blowing papers, leachate, dust; however, the alternative of no project would be most hazardous to the health and welfare of the community. "No project" is simply not feasible.

The existing Auburn Landfill location and operation appears to be, at this time, the most cost-effective method of refuse disposal. The continued operation of the site will provide a sanitary and environmentally acceptable landfill for several years.

There are associated significant negative environmental factors that are prominent and inherent in any landfill operation. Increased surface water runoff as a result of topsoil stripping, cover material application, machinery tracks and general landfill activity. The runoff is characteristically high in sediment, silt content and turbidity. The City will reduce siltation with the completion of a sedimentation filter (see plan sheet). Mud, dust, noise and isolated malodors are prevalent at all landfills. The refuse decay process produces methane gas which is noticeable

in small water ponding areas. Gas production is normal and a function of refuse content. The production of methane gas will continue beyond the landfill closure date and will be ameliorated through the use of a gas venting system. Leachate production is a normal byproduct of landfill activity. Leachate generation can be substantially reduced by proper grading and application of daily cover, and reduction of the piezometric ground water head in the landfill. The installation of a perforated underdrain system in areas prone to leachate breakouts will provide a method of leachate collection and treatment. Leachate production at many landfills has been computed theoretically but rarely measured in the field. In 1979 the Cortland landfill pumped 5.5×10^6 gallons of leachate from a 70 acre landfill which results in 15,000 gallons per day or 79,000 gallons per acre per year. The water balance method when applied to leachate production tends to yield substantially higher results than empirical data would reliably indicate. Excess moisture calculations performed by O'Brien & Gere Engineers on the Seneca Falls landfill (see appendix OB&G for computation) indicate leachate generation could be as low as 100,000 gallons per year, average 2,100,000 gallson per year and in a worst case scenario could be 22,800,000 gallons per year. O'Brien and Gere estimated the following quantities in Table 7 of the Seneca Falls Landfill Operating Plan (January 1981):

TABLE 7

YEAR	ESTIMATED ACRES DEVELOPED	ANTICIPATED LEACHATE GENERATION
1981	55	1,200,000 gals/year
1982	58	1,300,000
1983	61	1,300,000
1984	64	1,400,000
1985	67	1,500,000
1986	70	1,500,000
1987	73	1,600,000
1988	76	1,700,000
1989	78	1,700,000
1990	81	1,800,000
1991	84	1,800,000
1992	87	1,900,000
1993	90	2,000,000
1994	93	2,000,000
1995	96	2,100,000
1996	96	2,100,000

The Auburn landfill does not produce near the magnitude of either Cortland flows or the Seneca Falls computations. The average daily flow of leachate at the Auburn landfill is less than 1,500 gallons per day peaking at perhaps 10,000 gallons which would be diluted in strength. Auburn does propose a leachate collection and treatment system with appropriate effluent monitoring. Leachate will be tested and released, recycled or collected and disposed of at the City of Auburn Sewage Treatment Plant.

There are no significant long term adverse environmental affects of landfill operation to wildlife, birds, insects, vegetation, transportation, land use, historical or archaeological structures, air, water, or the immediate ecological systems.

Permeability Standards

Gravel	up - 10^{-1}	High
Clean Sand	10^{-1} - 10^{-3}	Medium
Dirty Sand	10^{-3} - 10^{-5}	Low
Silt	10^{-5} - 10^{-7}	Very Low

CLOSURE

CLOSURE

Closure is a constant active process at the landfill. As portions of the landfill reach final grade, the 24" of final cover will be placed. This material will be high in clay content to reduce the seepage of water into the covered refuse. The final cover will include toposil and composted sludge from the City's Sewage Treatment Plant. The area will then be seeded with an appropriate mix of seed.

Name	Proportion by Wt.*	% Purity	% Germination
1. Kentucky Blue Grass	5.0	85	80
Red or Chewings Fescue	2.0	97	80
Red Top	3.0	92	90

*Applied at the rate of 5 pounds/1,000 square feet

2. Flat Areas

Lbs/Acre	Name
6	Timothy Variable Climax
5	Wild White Clover
10	Reed Canary Grass
10	Perennial Ryegrass

3. Slopes

Lbs/Acre	Name
5	Blackwell Switchgrass
15	Orchard Grass
20	Timothy
10	Broom Grass
10	Reed Canary Grass

4. Mixes of perennial rye grass, Kentucky blue grass and red fescue will be used as necessary.

Mulching will be as required.

Monitoring activities will continue subsequent to the closing of the landfill. These activities will include periodic surface inspection to detect leachate breakout and continued ground water sampling. The following activities will occur in the closure period.

1. Gas control-
    a. Monitoring, observation, inspection and maintenance of gas vents.
    b. Frequency as required.
2. Security/limited access-
    a. Fencing.
    b. Posting as required.
3. Equipment Maintenance-
    a. Maintenance equipment will be provided as needed.
    b. Repairs to equipment will be completed.
4. Leachate Monitoring-
    a. Collection and treatment as required.
    b. Maintenance of collection system.
    c. Sampling and analyses as required.
    d. Disposal as needed.
5. Cover Inspection-
    a. Cover maintenance/replacement.
    b. Topsoil/reseeding.
    c. Erosion Control.
6. Sampling-
    a. Ground water.
    b. Surface water.

6. Sampling- continued

   c. Maintenance of monitoring wells.

   d. Frequency as required.

SPECIAL OPERATING CONDITIONS

SPECIAL OPERATING CONDITIONS

A vertical separation exceeding five feet shall be maintained between solid waste and the seasonal high groundwater table or bedrock (see plans).

The required horizontal separation between deposited solid waste and any surface waters shall be 50 feet.

A minimum of three groundwater monitoring wells will be maintained on the landfill and quarterly analyses submitted to NYSDEC.

Decomposition gases generated within the sanitary landfill shall be controlled by gas venting (see detail) so as not to create hazards to health, safety or property. The concentration of explosive gases (methane) generated by the facility shall not exceed: (1) 25% of the lower explosive limit for the gases in facility structures (excluding gas control or recovery system components); and (2) the lower explosive limit for the gases at or beyond the property boundary.

Specific cover and compaction requirements:

a. Solid waste shall be spread in two foot layers or less and compacted upon deposition at the working face. The working face shall be restricted to the smallest area practicable.

b. Lift height shall not exceed ten feet.

c. Daily cover shall be placed upon all exposed solid waste prior to the end of each operating day.

d. Intermediate cover shall be placed on all surfaces of a landfill where no additional solid waste will be deposited within 30 days.

e. Final cover shall be applied in each of the following circumstances:

1. Whenever an additional lift of solid waste is not to be applied within one year;

2. To any area of a landfill attaining final elevation within 90 days after such elevation is attained;

3. To an entire landfill which is the subject of an application that is denied or a permit that terminates for any reason.

Cover material and drainage control structures are designed, graded, and maintained to prevent ponding and erosion and to reduce to a minimum infiltration of water into the solid waste cells, consistent with the operation permit.

A grass or ground cover crop shall be established and maintained on all exposed final cover material within four months after placement or season not permitting, as otherwise prescribed by the City Engineer. Seed mix (lbs./acre), 6 timothy, 5 wild white clover, 10 reed canary grass, 10 perennial ryegrass.

SPECIAL OPERATING CONDITIONS (Continued)

Soil cover integrity, slopes, cover vegetation, drainage structures, groundwater monitoring facilities and gas venting structures established pursuant to the permit shall be maintained for a period of five years beyond the date of the placement of final cover is completed.

No solid waste resulting from industrial or commercial operations, sludge, or septage, nor materials which when combined will produce hazardous waste shall be disposed of in a sanitary landfill except pursuant to specific operation permit authorization.

All fill areas or excavations at a sanitary landfill shall terminate no closer than fifty feet from the boundary lines of the property on which the sanitary landfill is operated.

A surveying bench mark is established and will be maintained on the site (see detail on plans).

Upon transfer of ownership of a sanitary landfill site, a provision will be included in the property deed indicating the period of time during which the property has been used as a landfill, a description of the wastes contained within, and the fact that the records for the facility have been filed with the Department. Said deed shall also reference a map which shall be filed in the Cayuga County Clerk's Office showing the limits of the landfilled areas within the property.

Sludge or composted sludge may be disposed of or otherwise managed at the Auburn landfill (see appendix).

A natural or artificial liner that restricts infiltration to the equivalent of five feet of soil at hydraulic conductivity of 10^{-5} cm/sec or less and a system or leachate collection and storage will be provided as shown on the plans at all new lateral extensions at the existing site.

Leachate will be recycled on top of the existing landfill (see detail of collection system) except for those facilities which recycle the leachate on top of the landfill, over an area that has been specifically designed with a liner and a collection system for the purpose of recycling the leachate.

Bird hazards to aircraft. No new facility disposing of putrescible wastes and located within 5,000 feet of any airport runway used by piston-type aircraft or within 10,000 feet of any airport runway used by turbojet aircraft shall be approved. A facility located within 10,000 feet of any airport runway used by turbojet aircraft or within 5,000 feet of any airport runway used by only piston-type aircraft shall demonstrate that the facility does not pose a bird hazard to aircraft before a permit is reissued.

SPECIAL OPERATING CONDITIONS (Continued)

There are no endangered species present at the Auburn Landfill. Facilities or practices at the Auburn Landfill will not cause or contribute to the taking of any endangered or threatened species of plants, fish or wildlife, not will the facility or practice result in the destruction or adverse modification of the critical habitat of endangered or threatened species.

GENERAL OPERATING CONDITIONS

GENERAL OPERATING CONDITIONS

Solid waste shall not be deposited in, and shall be prevented from entering, surface waters or groundwaters.

Solid waste management facilities shall not be placed on agricultural soils groups 1 and 2 (Land Classification System as Certified by the Commissioner of Agriculture and Markets) if such land is being actively used as cropland within an agricultural district formed pursuant to the Agriculture and Markets Law.

Leachate from the City of Auburn facility shall not be allowed to drain or discharge into surface waters except pursuant to a State Pollutant Discharge Elimination System permit issued pursuant to ECL Article 17, Title 8, and Parts 750 through 757 of 6NYCRR, and shall not contravene groundwater quality standards established by the Department pursuant to ECL Section 17-0301.

Salvaging is not permitted.

Access to facilities shall be permitted only when an attendant is on duty (Monday-Saturday, 7 A.M. to 4 P.M. except holidays).

Access to and use of the facility shall be through the North Division Street gate. Signs and fencing as required.

Blowing papers and litter will be confined to solid waste holding and operating areas by fencing or other suitable means. Solid waste shall not be accepted at a solid waste management facility unless the waste is appropriately covered or confined in the vehicle transporting the waste to prevent blowing papers and litter.

Vectors, dust and odors will be controlled by effective means so that they shall not constitute nuisances or hazards to health, safety or property.

On-site roads used to transport solid wastes shall be maintained passable and safe at all times (see detail).

Safety hazards to all persons on the facility shall be minimized at all times.

The operations of a solid waste management facility shall not cause excessive sound levels beyond the property line at locations either in use for residential purposes or permitted to be used for residential purposes by a zoning law or ordinance.

GENERAL OPERATING CONDITIONS (Continued)

Adequately heated and lighted shelters for operating personnel are provided for the facility. A safe drinking water supply, sanitary toilet facilities, and telephone or radio communication are provided.

Adequate numbers, types and sizes of property maintained equipment shall be available to the facility during all hours of operation including an 816 trash compactor, CAT D-7 Dozer, CAT D-3 Dozer, Mac off the road truck, CAT 977 Traxcavator, Mac 10 wheel dump truck, 2 pickup trucks, and one refuse packer at the gate.

A shelter for mobile equipment is provided for routine maintenance and repair.

Open burning is prohibited.

Solid waste will be confined to an area which can be effectively maintained, operated and controlled.

Ground water monitoring reports will be submitted quarterly for total chlorides, specific conductivity, total organic carbon, pH, total iron, total zinc, total lead, and well water elevation.

Facilities will be maintained and operated so as to function in accordance with the permit issued pursuant to this Part and the designed and intended use of the facility. Equipment in use at the facility will be maintained to operate effectively. Contingency plans approved by NYSDEC for emergency situations will be implemented in accordance with the plans' terms as needed.

The owner or operator of any active or inactive facility, either with or without a permit under this Part, shall upon permanent termination of use, properly close and maintain such facility so as to prevent adverse environmental or health impacts such as, but not limited to, contravention of surface or groundwater quality standards, gas migration, odors, and vectors. Permanent termination of use shall include those situations where a facility has not received solid waste for more than one year, where a permit has automatically expired pursuant to Subdivision 360.4(f) of 6NYCRR, and termination of use resulting from permit denial, order of the commissioner or of a court. Specific closure measures are subject to approval of the department. In the case of landfills, minimum closure measures shall include at least two feet of final cover, an established grass cover crop, and sufficient grading to direct water off the fill area so as to minimize infiltration and preclude ponding.

Requirements for specific solid waste management facilities, other than hazardous waste management facilities that are subject to Subdivision 360.8(c) of 6NYCRR. In addition to the

general requirements contained in Subdivision 360.8(a) of 6NYCRR, the requirements of this subdivision shall apply to the design, construction, maintenance and operation of the specific solid waste management facilities included herein. Where conflicting requirements exist, the more stringent shall apply.

DEFINITIONS

DEFINITIONS

1. A solid waste is any garbage, refuse, sludge or any other waste material which is not excluded under paragraph 6 below.

2. An "other waste material" is any solid, liquid, semi-solid or contained gaseous material, resulting from industrial, commercial, mining or agricultural operations, or from community activities which:

i. is discarded, or is being accumulated, stored, or physically, chemically or biologically treated prior to being discarded; or

ii. has served its original intended use and sometimes is discarded; or

iii. is a manufacturing or mining by-product and sometimes is discarded.

3. A material is "discarded" if it is abandoned by being:

i. Disposed of; or

ii. Burned or incinerated, including being burned as a fuel for the purpose of recovering usable energy; or

iii. Physically, chemically, or biologically treated (other than burned or incinerated) in lieu of or prior to being disposed of.

4. A material is "disposed of" if it is discharged, deposited, injected, dumped, spilled, leaked or placed into or on any land or water so that such material or any constituent thereof may enter the environment or be emitted into the air or discharged into ground or surface waters.

5. A "manufacturing or mining by-product" is a material that is not one of the primary products of a particular manufacturing or mining operation, is a secondary and incidental product of the particular operation, and would not be solely and separately manufactured or mined by the particular manufacturing or mining operation. The term does not include an intermediate manufacturing or mining product which results from one of the steps in a manufacturing or mining process and is typically processed through the next step of the process within a short time.

6. The following materials are not solid wastes for the purposes of the Auburn Landfill:

i. (a) domestic sewage; and

(b) any mixture of domestic sewage and other wastes that pass through the Auburn sewer system. "Domestic sewage" means untreated sanitary wastes that pass through a sewer system.

ii. Irrigation return flows.

6. Continued-

iii. Radioactive materials which are source, special nuclear, or by-product material as defined by the Atomic Energy Act of 1954, as amended, 42 U.S.C. 2011 et seq.

v. Materials are subject to in-site mining techniques which are not removed from the ground as part of the extraction process.

7. "Active portion" means that portion of a facility where treatment, storage or disposal operations are being or have been conducted and which is not a closed portion (see also "closed portion").

8. "Administrator" means the Administrator of the U.S. Environmental Protection Agency, or his/her designee.

9. "Airport" means a public-use airport open to the public without prior permission and without restrictions within the physical capabilities of available facilities.

10. "Aquifer" means a geologic formation, group of formations, or part of a formation capable of yielding a significant amount of ground water to wells or springs.

11. "Authorized Representative" means the person responsible for the overall operation of a facility or an operational unit (i.e., part of a facility), such as the plant manager, superintendent or person of equivalent responsibility.

12. "Authorized Treatment, storage or disposal facility" or "authorized facility" with respect to a particular hazardous waste means a treatment, storage or disposal facility which is authorized, under the laws and regulations of both the federal government and the state in which it is located, to accept the hazardous waste for treatment, storage or disposal.

13. "Bedrock" means cemented or consolidated earth materials exposed on earth surface or underlying unconsolidated earth materials.

14. "Bird hazard" means an increase in the likelihood of bird/aircraft collisions that may cause damage to the aircraft or injury to its occupants, attributable to the existing solid waste management facility.

15. "CFR: means the Code of Federal Regulations.

16. "Characteristic hazardous waste" means a waste means is hazardous solely because it possesses at least one of the characteristics given in Part 366.3 of 6NYCRR.

17. "Closed portion" means that portion of a facility which an owner or operator has closed in accordance with the approved facility closure plan and all applicable closure requirements. (See also "active portion".)

18. "Composting facility" means any facility used to provide aerobic, thermophilic decomposition of the solid organic constituents of solid waste to produce a stable, humus-like material.

19. "Confined aquifer" means an aquifer bounded above and below by impermeable beds or by beds of distinctly lower permeability than of the aquifer itself; an aquifer containing confined ground water.

20. "Construction and demolition debris" means wastes resulting from construction, remodeling, repair and demolition of structures, road building and land clearing. Such wasters include but are not limited to bricks, concrete and other masonry materials, soil, rock and lumber, road spoils, paving material and tree and brush stumps.

21. "Container" means any portable device in which a material is stored, transported, treated, disposed of, or otherwise handled.

22. "Contingency plan" means document setting out an organized, planned and coordinated course of action to be followed in case of a fire, explosion, or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment.

23. "Cover material" means soil and/or other suitable material acceptable to the department that is used to cover compacted solid waste including hazardous waste, in a land disposal site.

24. "Daily cover" means a compacted layer of at least six inches of cover material that is placed on all exposed solid waste, including hazardous waste in a landfill at the end of each day of operation (except for recyclable materials properly located in a salvage area).

25. "Dike" means an embankemnt or ridge of either natural or man-made materials used to prevent the movement of liquids, sludges, solids or other materials.

26. "Discharge" means the accidental or intentional spilling, leaking, pumping, pouring, emitting, emptying, or dumping of solid waste, including hazardous waste and leachate, into or on any land or water.

27. "Disposal" means the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste, including hazardous waste, into or on any land or water, so that such waste or any constituent thereof may enter the environment, or be emitted to the air, or discharged to any waters, including groundwaters, of the state.

28. "Disposal Facility" means a facility or part of a facility at which solid waste, including hazardous waste, is intentionally placed into or on any land or water, and at which waste will remain after closure.

29. "Division" means the Division of Solid Waste of the New York State Department of Environmental Conservation.

30. "ECL" means Chapter 43-B of the Consolidated Laws of New York State, entitled the Environmental Conservation Law.

31. "Endangered or threatened species" has the meaning given in Part 182.1 6NYCRR Part 360.

32. "EPA" means the United States Environmental Protection Agency.

33. "Final Cover" means a compacted layer of cover material at least twenty-four inches thick that is placed on all surfaces of a landfill where no additional refuse will be deposited within one year. The upper six inches shall be soil of a composition suitable to sustain plant growth. The lower portion shall be a material which restricts infiltration to the equivalent of that achieved by eighteen inches of soil at hydraulic conductivity (coefficient of permeability) of 10^{-5} cm/sec or less graded at a minimum slope of 2 percent.

34. "Flood plain" means the area adjoining a river, stream or lake, which would be covered by flood water from a one hundred year frequency flood.

35. "Food-chain crops" means tobacco, crops grown for human consumption, and crops grown for feed for animals whose products are consumed by humans.

36. "Freeboard" means the vertical distance between the lowest elevation of the top of a tank or surface impoundment dike, and the surface of the waste contained therein.

37. "Free liquids" means liquids which readily separate from the solid portion of a waste under ambient temperature and pressure.

38. "Garbage" means putrescible solid waste including animal and vegetable waste resulting from the handling, storage, sale, preparation, cooking or serving of foods. Garbage originates primarily in home kitchens, stores, markets, restaurants and other places where food is stored, prepared or served.

39. "Generator" means any person, by site, whose act or process produces hazardous waste as defined in Part 366 of 6NYCRR or whose act first causes a hazardous waste to become subject to regulation. For purposes of this Part, the owner and operator of a used engine lubricating oil retention facility is deemed the generator of all waste oil it accepts pursuant to Clause 360.8(b)(6)(iii)(d) of Part 360, 6NYCRR.

40. "Groundwater table" and "groundwater" mean respectively the seasonally high surface of the zone of full saturation of the soil, at which the ground water is subjected to atmospheric pressure, and water below the land surface in the zone of saturation, including perched water.

41. "Hazardous waste" means a hazardous waste as defined in Part 366 of 6NYCRR.

42. "Hazardous waste management" means the systematic control of the collection, source separation, storage, transportation, processing, treatment, recovery, and disposal of hazardous waste.

43. "Incompatible waste" means a hazardous waste which is unsuitable for:

i. placement in a particular device or facility because it may cause corrosion or decay of the containment material (e.g., container inner liners or tank walls); or

ii. commingling with other waste or material under uncontrolled conditions because the commingling might produce heat or pressure, fire or explosion, violent reaction, toxic dusts, mists, fumes, or gases, or flammable fumes or gases.

44. "Individual generation site" means the contiguous site at or on which one or more hazardous wastes are generated. An individual generation site, such as a large manufacturing plant, may have one or more sources of hazardous waste but is considered a single or individual generation site if the property on which those sources are located is contiguous.

45. "Industrial waste" means wastes in liquid, semisolid or solid form that result from industrial or commercial processes including, but not limited to, factories, processing plants, and repair and cleaning establishments, which wastes include, but are not limited to, sludges, oils, solvents, spent chemicals and acids.

46. "Injection well" means a well into which fluids are injected. (See also "underground injection".)

47. "Inner liner" means a continuous layer of material placed inside a tank or container which protects the construction materials of the tank or container from the contained waste or reagents used to treat the waste.

48. "In operation" means a facility which is treating, storing, or disposing of hazardous waste.

49. "Intermediate cover" means a compacted layer of at least twelve inches of cover material.

50. "Landfill" means a disposal facility or part of a facility where solid waste, including hazardous waste, is placed in or on land, and which is not a land treatment facility, a surface impoundment, or an injection well.

51. "Landfill cell" means a discrete volume of a landfill which uses a liner to provide isolation of wastes from adjacent cells or wastes.

52. "Leachate" means a liquid, including any suspended components in the liquid, which has been in contact with or passes through solid waste, including hazardous waste.

53. "Lift" means the vertical thickness of a compacted volume of solid waste and the cover material immediately above it.

54. "Liner" means a continuous layer of natural or man-made materials, beneath or on the sides of a surface impoundment, landfill, or landfill cell, which restricts the downward or lateral escape of solid waste including hazardous waste, any constituents of such waste, or leachate.

55. "Listed hazardous waste" means a hazardous waste that is listed in Part 366.4 of 6NYCRR.

56. "Lower explosive limit" ("LEL") means the lowest percentage by volume of a mixture of explosive gases which would propagate a flame in air at 25°C and atmospheric pressure.

57. "Movement" means that volume of hazardous waste transported to a facility in an individual vehicle.

58. "Off-site" means any property which is not on-site.

59. "On-site" means the same or geographically contiguous property. It may be divided by public or private right-of-way, provided the entrance and exit between the properties is

59. Continued-at a cross-roads intersection, and access is by crossing, as opposed to going along, the right-of-way. Noncontiguous properties owned by the same person, but connected by a right-of-way which that person controls and to which the public does not have access, are also considered on-site property.

60. "Open burning" means the combustion of any material in the absence of the following characteristics:

i. control of combustion air to maintain adequate temperature for efficient combustion;

ii. containment of the combustion reaction in an enclosed device to provide sufficient residence time and mixing for complete combustion; and

iii. control of emissions of the gaseous combustion products.

(See also "incineration" and "thermal treatment".)

61. "Operator" means the person who is responsible for the operation of a solid waste management facility.

62. "Owner" means the person who owns a facility or part of a facility.

63. "Parital closure" means the closure of a discrete part of a facility in accordance with the applicable closure requirements of this Part. For example, partial closure may include the closure of a trench, a unit operation, a landfill cell, or a pit, while other parts of the same facility continue in operation or will be placed in operation in the future.

64. "Person" means an individual, trust, firm, joint stock company, corporation (including a government corporation), partnership, association, state, federal government and any agency thereof, muncipality, commission, political subdivisions of a state, or any interstate body.

65. "Personnel" or "facility personnel" means all persons who work at, or oversee the operations of, a solid waste management facility, including a hazardous waste facility, and whose actions or failure to act may result in noncompliance with the requirements of this Part.

66. "Pile" means any noncontainerized accumulation of solid, nonflowing solid waste, including hazardous waste, that is used for treatment or storage.

67. "Point source" means any discernible, confined, and discrete conveyance, including, but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which polluntants are or

67. Continued-may be discharged. This term does not include return flows from irrigated agriculture.

68. "Reclaim", "recover" or "recycle" means any method, technique, or process utilized to separate, process, modify, convert, treat, or otherwise prepare solid waste, including hazardous waste, so its that component materials or substances may be beneficially used or re-used as raw materials or energy sources.

69. "Regional Administrator" means the Regional Administrator for the EPA region in which the facility is located, or his/her designee.

70. "Representative sample" means a sample of a universe or whole (e.g., waste pile, lagoon, ground water) which can be expected to exhibit the average properties of the universe or whole.

71. "Resource Conservation and Recovery Act (RCRA)" means 42 USCA Section 6901 et seq.

72. "Runoff" means any rainwater, leachate, or other liquid that drains over land from any part of a facility.

73. "Run-on" means any rainwater, leachate, or other liquid that drains over land onto any part of a facility.

74. "Salvage area" means a controlled, segregated area at a solid waste management facility where recyclable material is stored pending removal from the facility.

75. "Salvaging" means the controlled removal of waste materials for reuse.

76. "Sanitary landfill" means a land disposal site employing an engineered method of disposing of solid wastes on land in a manner that minimizes environmental hazards and meets the design and operation requirements of this Part.

77. "Saturated zone" or "zone of saturation" means that part of the earth's crust in which all voids are filled with water.

78. "Septage" means the contents of a septic tank, cesspool, or other individual sewage treatment facility which receives domestic sewage wastes.

79. "Sewage sludge" means the accumulated semi-solid suspension of solids deposited from wastewaters from municipal or private sewage treatment plants.

80. "Sludge" means any solid, semi-solid or liquid waste generated from a municipal, commerical, or industrail wastewater treatment plant, water supply treatment plant, or air pollution control facility. "Sludge" does not include the treated effluent from a wastewater treatment plant.

81. "Sole source aquifer" means an aquifer system that the United States Environmental Protection Agency, pursuant to 42 USCA Section 3004-3(e), has determined to be the sole or principal drinking water source for an area and which, if contaminated, would create a significant hazard to public health.

82. "Solid waste management facility" means any facility employed beyond the initial solid waste collection process including, but not limited to: storage areas or facilities; transfer stations; rail-haul or barge-haul facilities; processing facilities, including resource recovery facilities; sanitary landfills; secure landburial facilities; incinerators; landspreading facilitires; composting facilities; surface impoundments; and waste oil storage, reprocessing and rerefining facilities.

83. "Stabilized sludge" means sludge that has been treated by a process to reduce pathogenic organisms and, except for lime stabilization, reduce the volatile solids content. Acceptable stabilization processes are defined in 40 CFR Part 257.

84. "Storage" means the containment of any solid waste, either on a temporary basis, or for a period of years, in such a manner as not to constitute disposal of such waste.

85. "Surface impoundment" or "impoundment" means a facility or part of a facility which is a natural topographical depression, man-made excavation, or diked area formed primarily of earthen materials (although it may be lined with man-made materials), which is designed to hold an accumulation of solid waste in semi-solid or liquid form, and which is not an injection well. Examples of surface impoundments are holding, storage, settling, and aeration pits, ponds and lagoons.

86. "Surface water" means lakes, bays, sounds, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, marhses, inlets, canals, the Atlantic Ocean within the territorial limits of New York State and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, public or private.

87. "Taking of endangered or threatened species" means harrassing, harming, pursuing, hunting, wounding, killing, trapping, capturing or collecting or attempting to engage in such conduct.

88. "Tank" means a stationary device designed to contain as accumulation of solid waste, including hazardous waste, which is constructed primarily of non-earthen material (e.g., wood, concrete, steel, plastic) which provides structural support.

89. "Thermal treatment" means the treatment of solid waste, including hazardous waste, in a device which uses elevated temperatures as the primary means to change the chemical, physical, or biological character or composition of the waste. Examples of thermal treatment processes are incineration, molten salt, pyrolysis, calcination, wet air oxidation, and microwave discharge. (See also "incinerator" and "open burning".)

90. "Title" means Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York.

91. "Transporter" means a person engaged in the offsite transportation of solid waste, including hazardous waste, by air, rail, highway or water.

92. "Treatment" means any method, technique or process, including neutralization, designed to change the physical, chemical, or biological character or composition of any solid waste, including hazardous waste, so as to neutralize such waste, or so as to recover energy or material resources from the waste, or so as to render such waste non-hazardous or less hazardous; safer to transport, store or dispose of; or amenable for recovery, amenable for storage, or reduced in volume.

93. "Treatment, storage or disposal facility" or "facility" means all contiguous land, and structures, other appurtenances, and improvements on the land, used for treating, storing, or disposing of solid waste, incluidng hazardous waste. A facility may consist of several treatment, storage, or disposal operational units (e.g., one or more landfills, surface impoundments, or combination of them).

94. "Unsaturated zone" or "zone of aeration" means the zone between the land surface and the saturated zone.

95. "Vector" means a carrier that is capable of transmitting a pathogen from one organism to another including, but not limited to, flies and other insects, rodents, birds, and vermin.

96. "Vehicle" means any motor vehicle, water vessel, railroad car, airplane, or other means of transporting solid waste, including hazardous waste.

97. "Waste oil" has the meaning set forth in Section 360.8 (b)(6). i. 6NYCRR

98. "Wastewater treatment unit" means a device which:

i. is part of a wastewater treatment facility which is a surface water point source discharge subject to regulation under ECL Article 17;

ii. receives and treats or stores an influent wastewater which is a hazardous waste as defined in Part 366 of 6NYCRR; and

iii. meets the definition of "tank".

99. "Well" means any shaft or pit dug or bored into the earth, generally of a cylindrical form, and often walled with bricks or tubing to prevent the earth from caving in.

100. "Working face" means that portion of a sanitary landfill where waste is discharged and compacted prior to placement of cover material.

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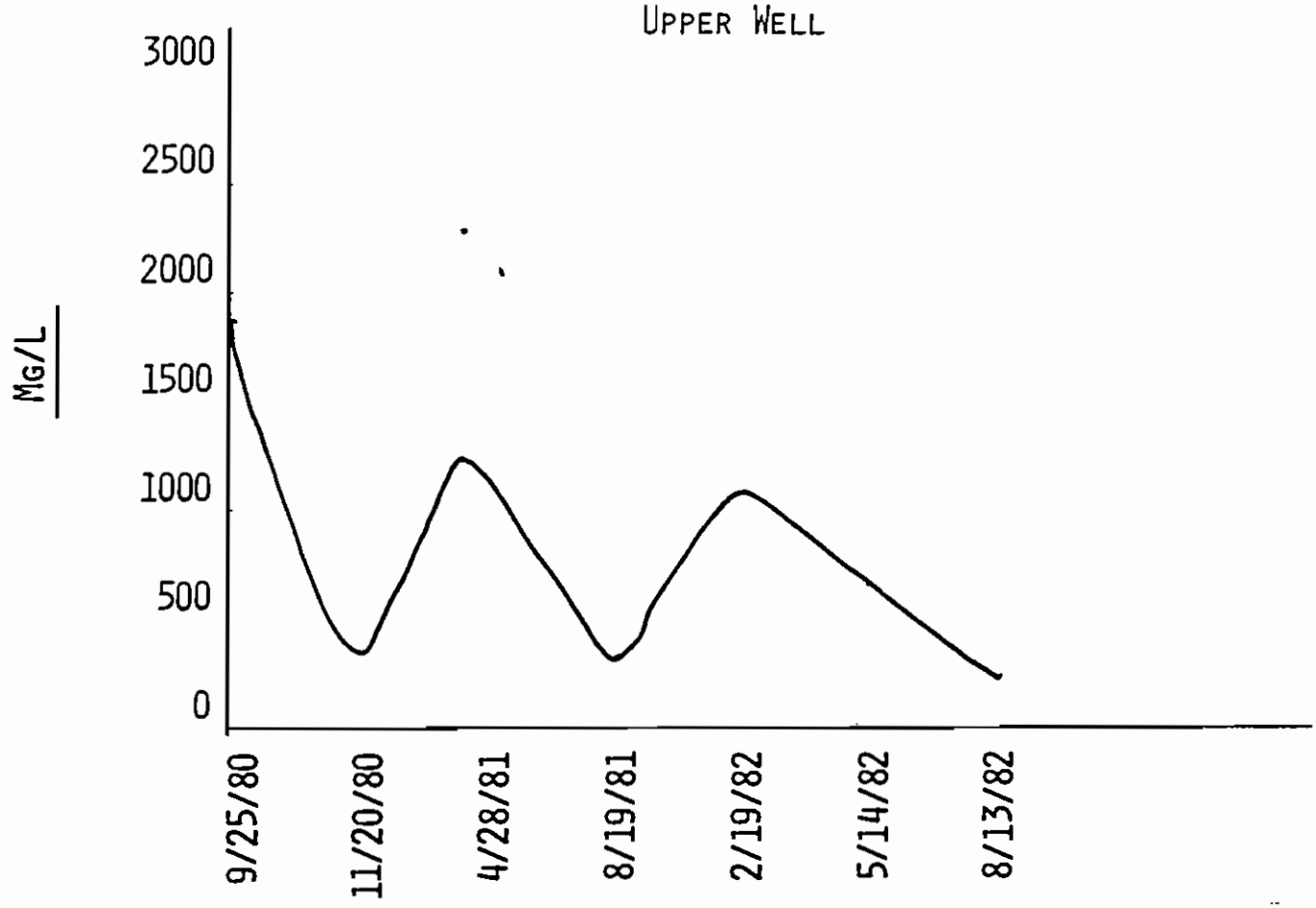
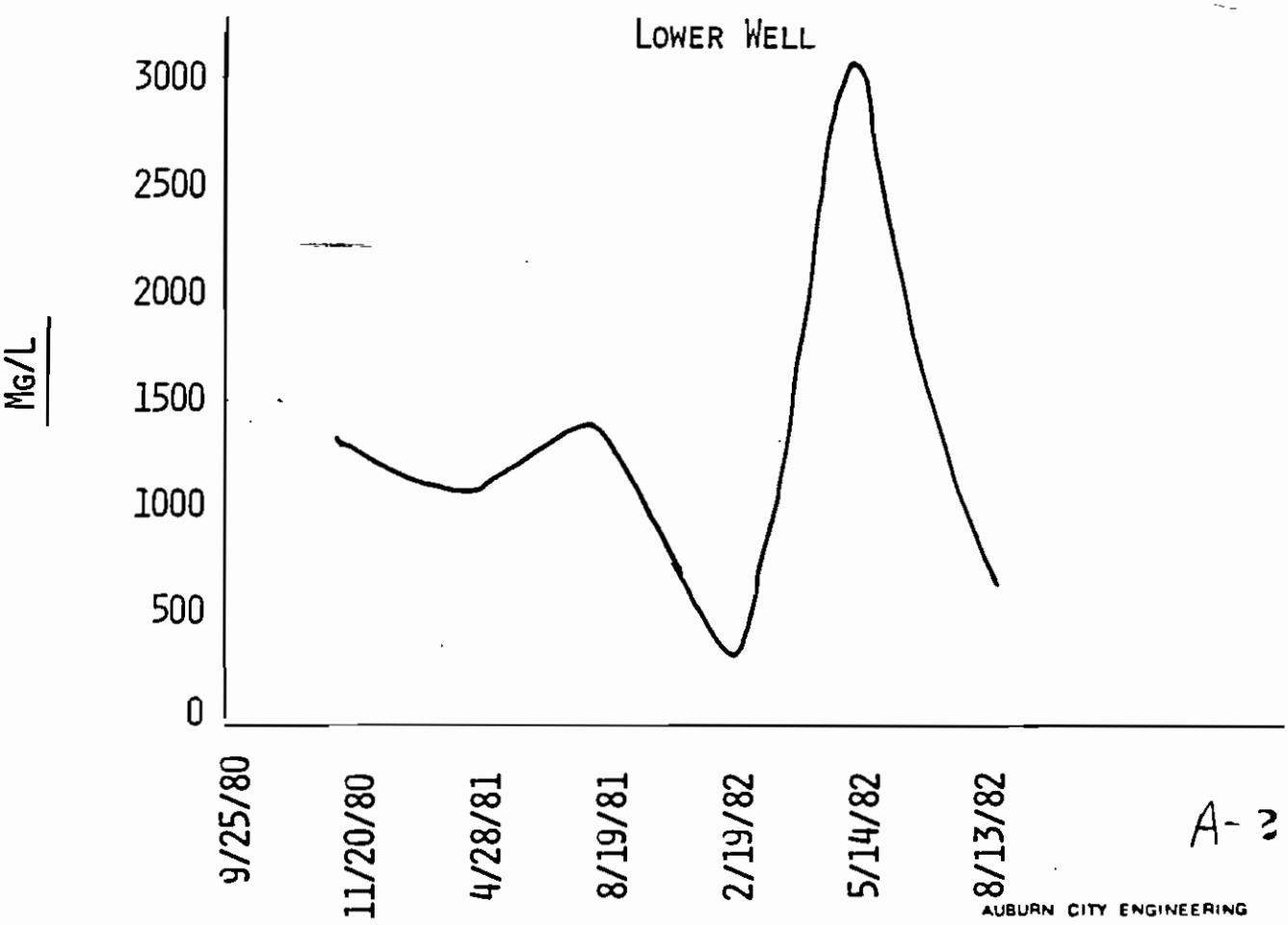
DRINKING WATER STANDARDS

Parameter	Maximum Level (mg/l)
Arsenic	0.05
Barium	1.0
Cadmium	0.01
Chromium	0.05
Fluoride	1.4-2.4
Lead	0.05
Mercury	0.002
Nitrate (as N)	10.0
Selenium	0.01
Silver	0.05
Endrin	0.0002
Lindane	0.004
Methoxychlor	0.1
Toxaphene	0.005
2,4D	0.1
2,4,5-TP Silver	0.01
Radium	5 pCl/l
Gross Alpha	5 pCl/l
Gross Beta	4 millirem/yr
Turbidity	1/TU
Coliform Bacteria	1/100 ml

HARDNESS





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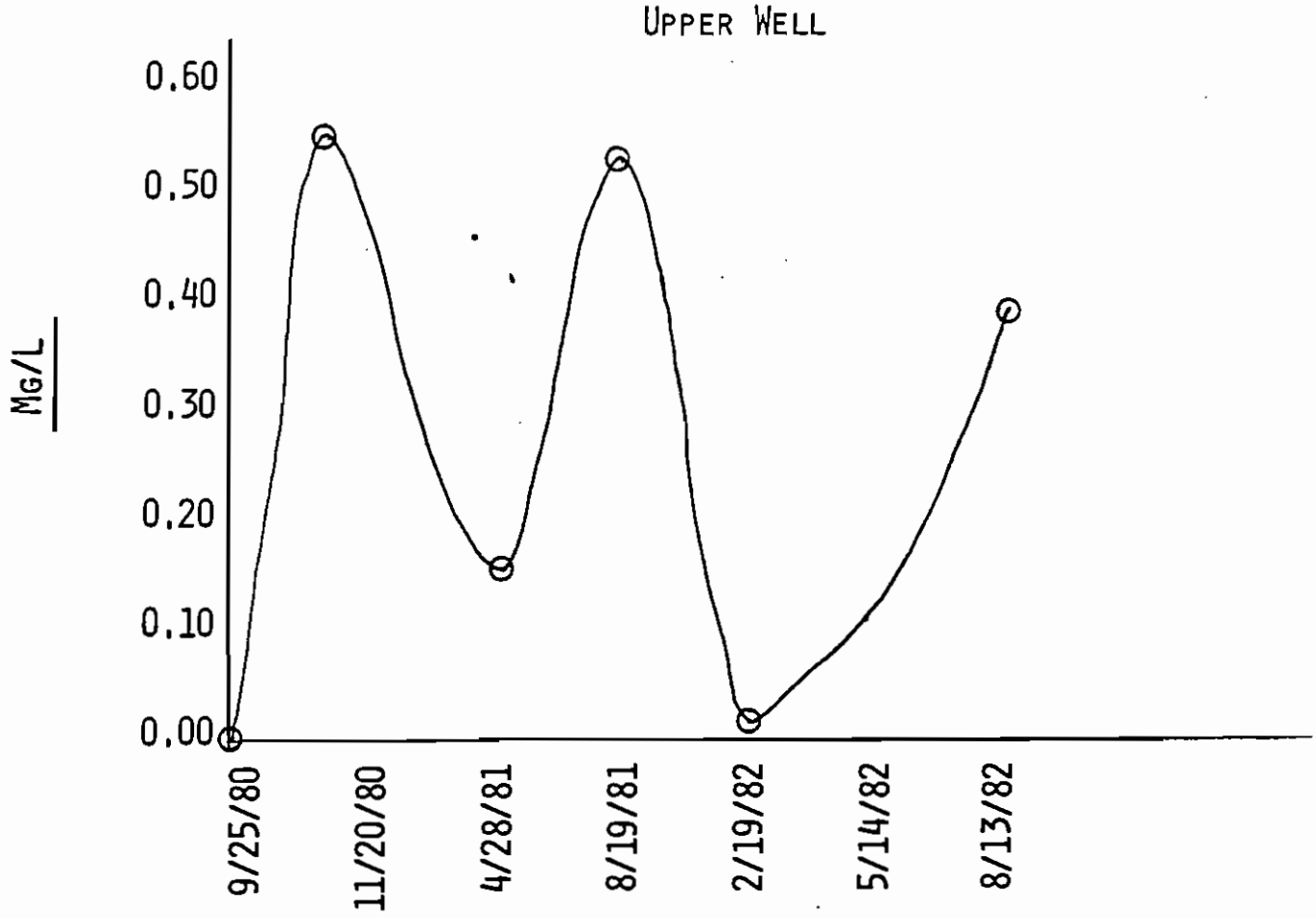
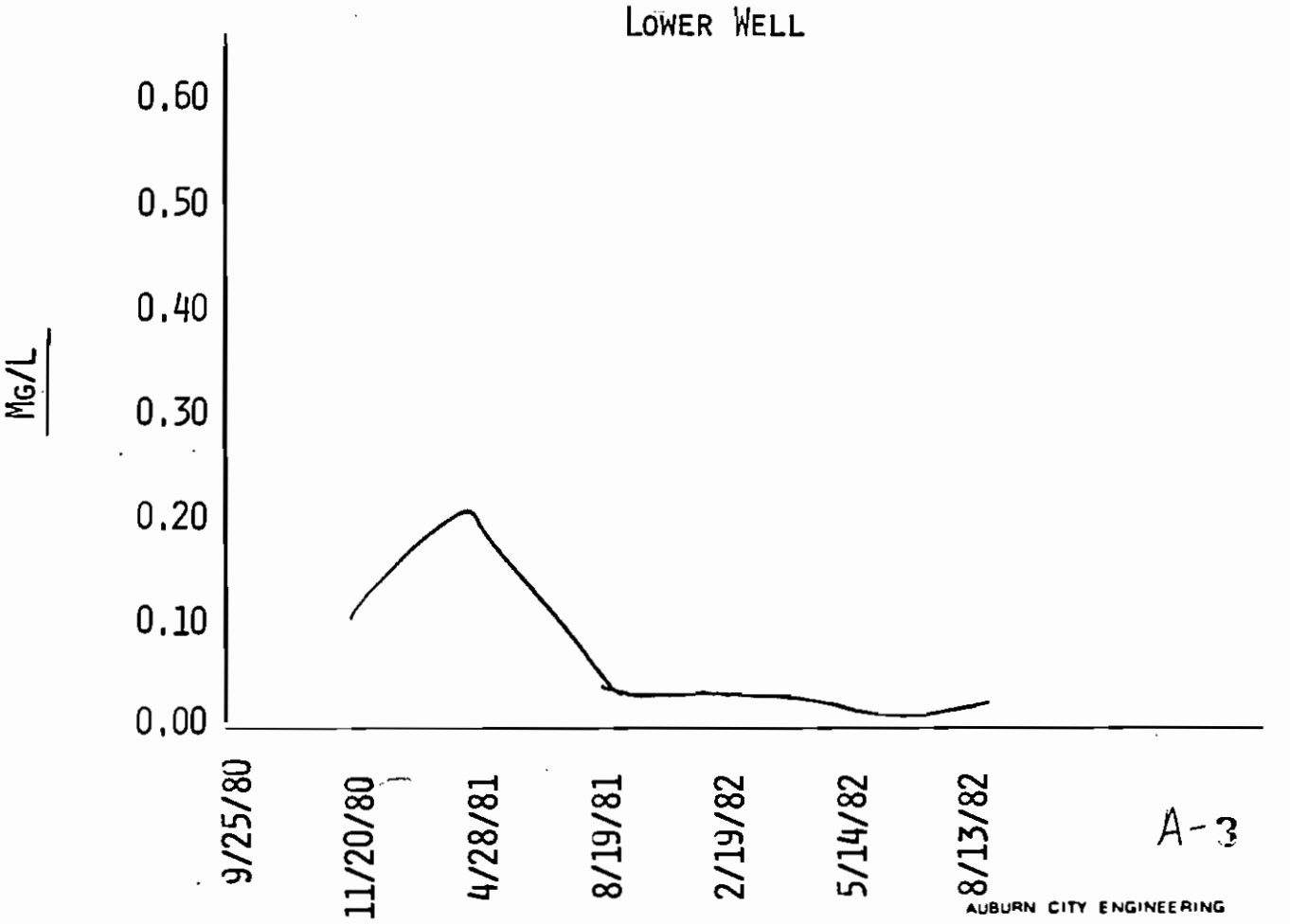
AUBURN CITY ENGINEERING

TOTAL COPPER

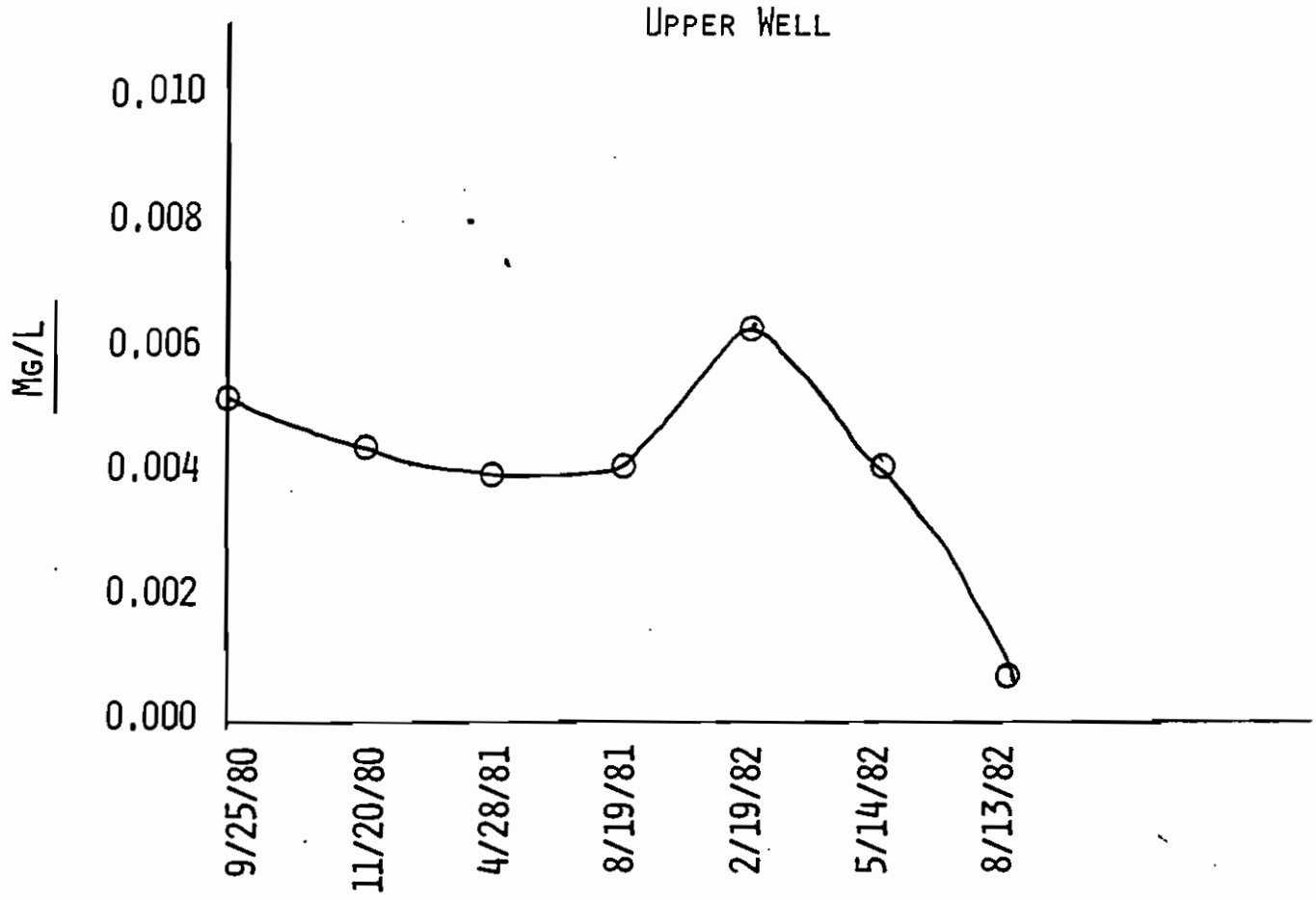




A-3

AUBURN CITY ENGINEERING

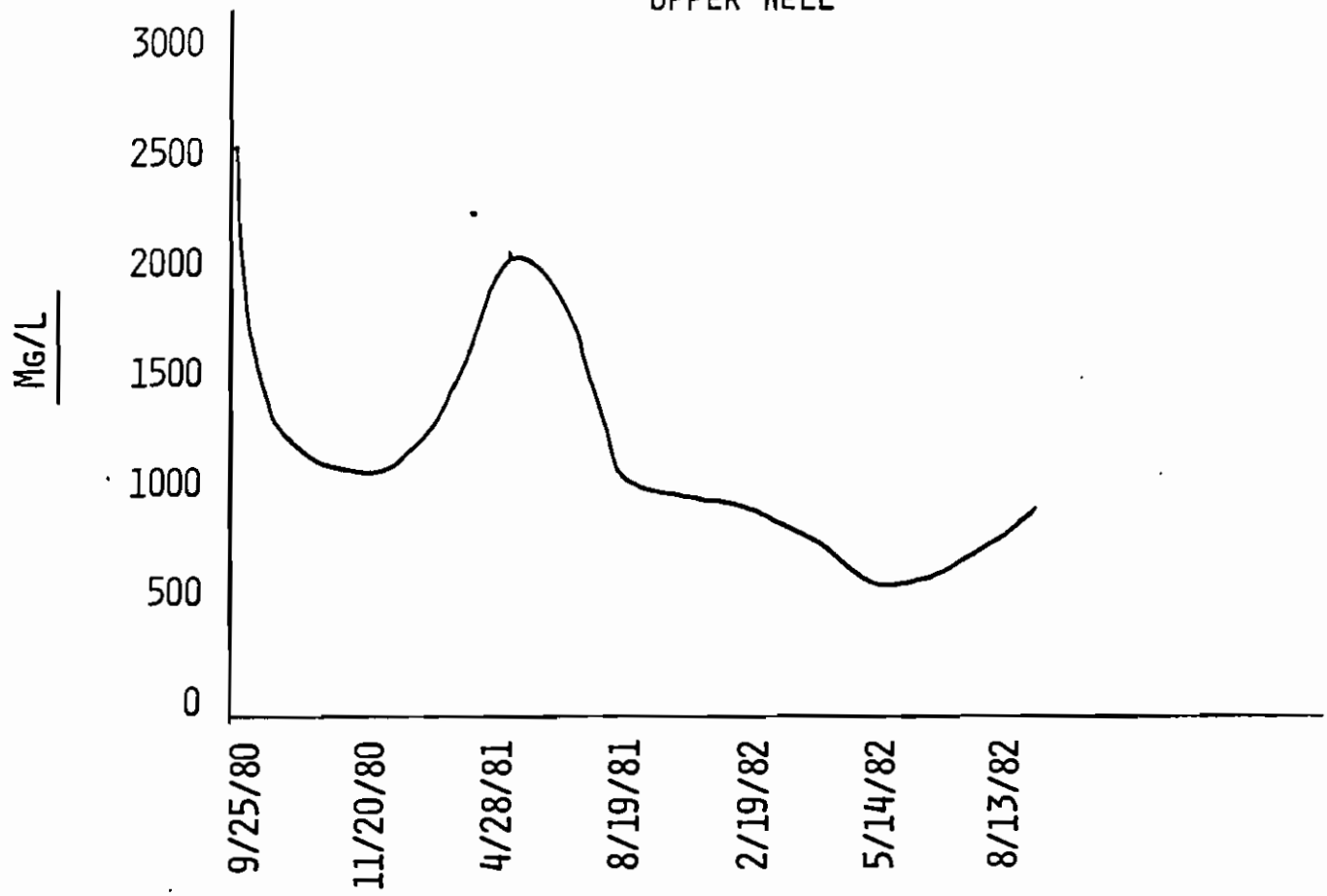
CHROMIUM-HEX

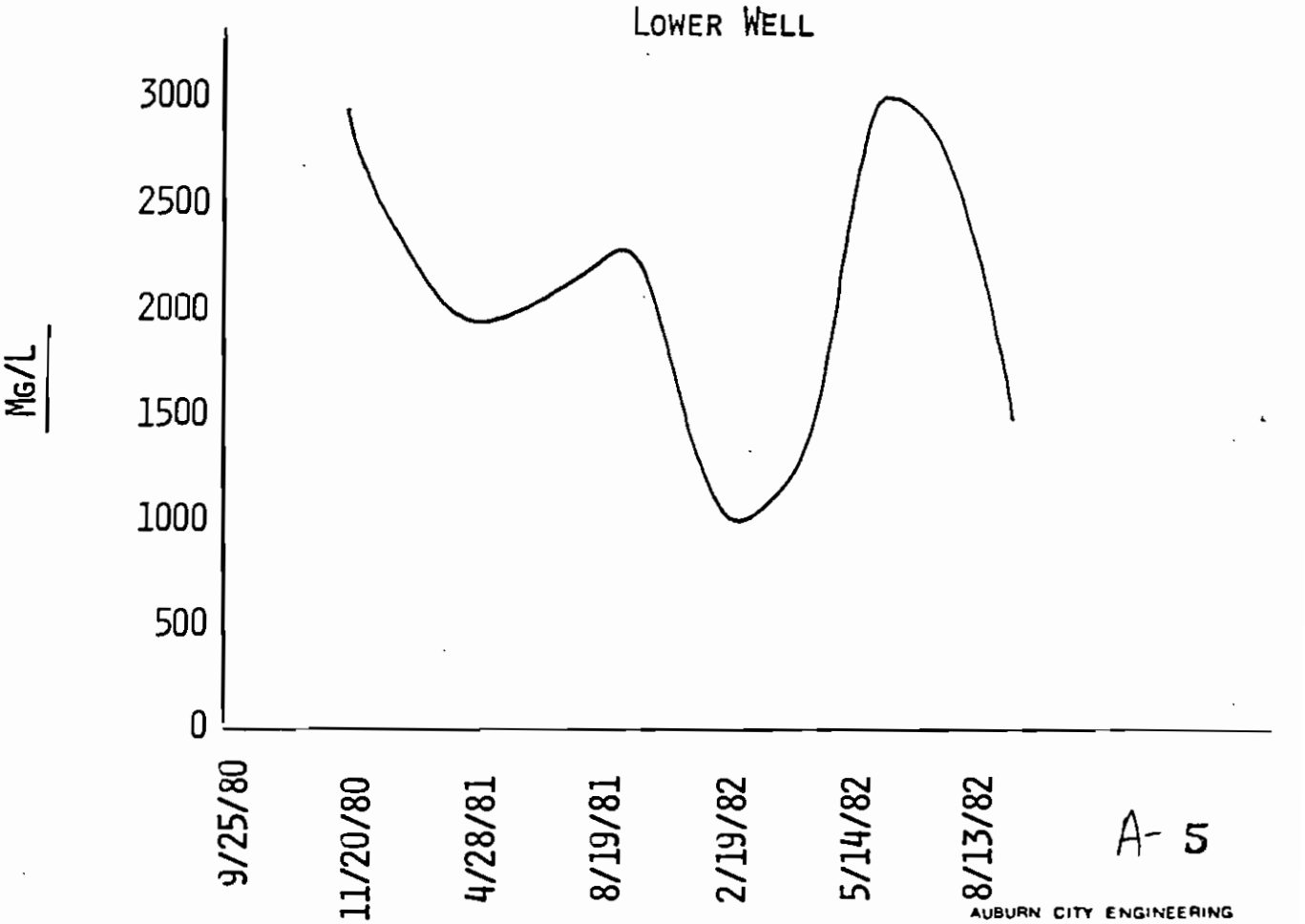


A-4

AUBURN CITY ENGINEERING

TOTAL RESIDUE
ON EVAPORATION

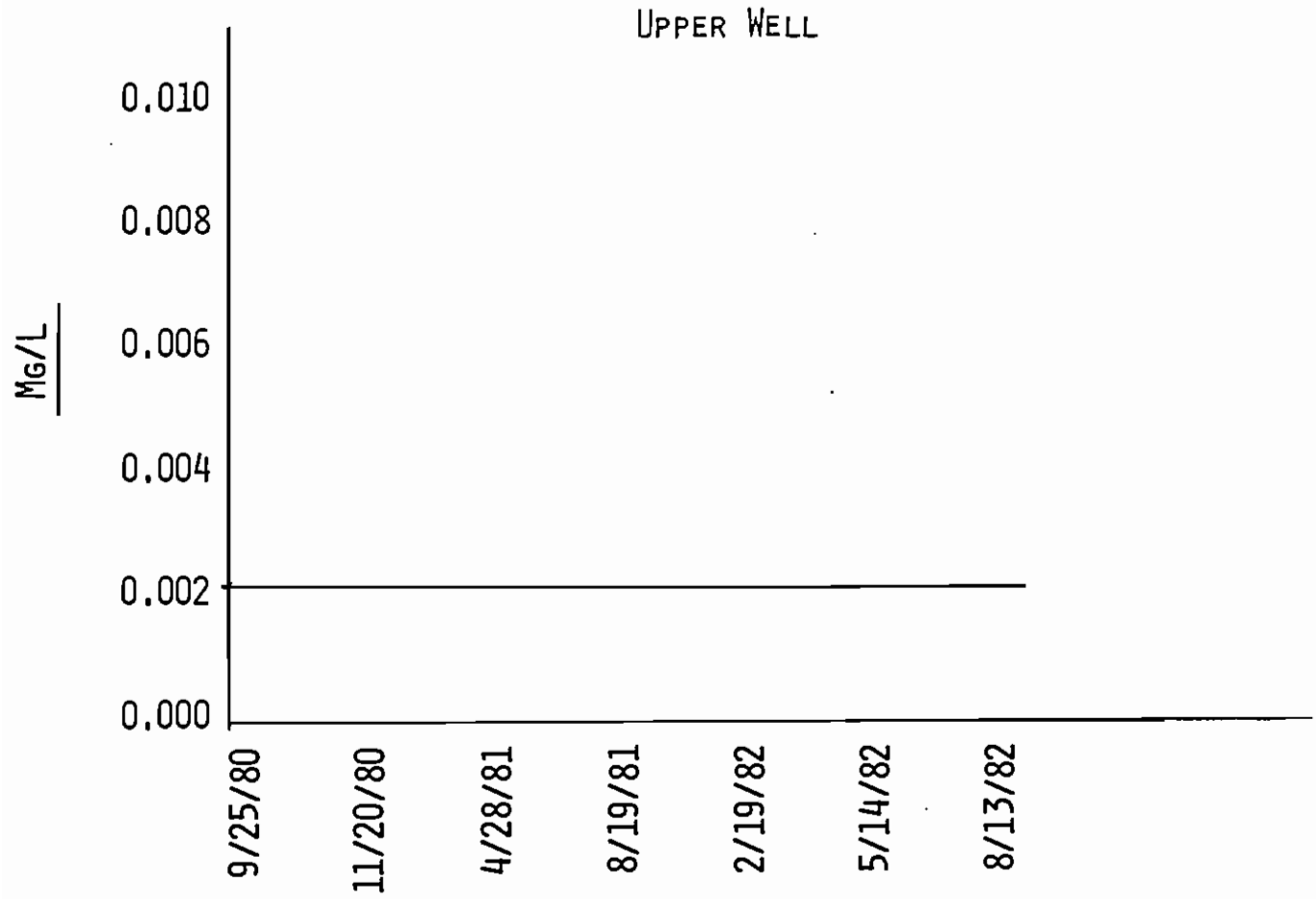


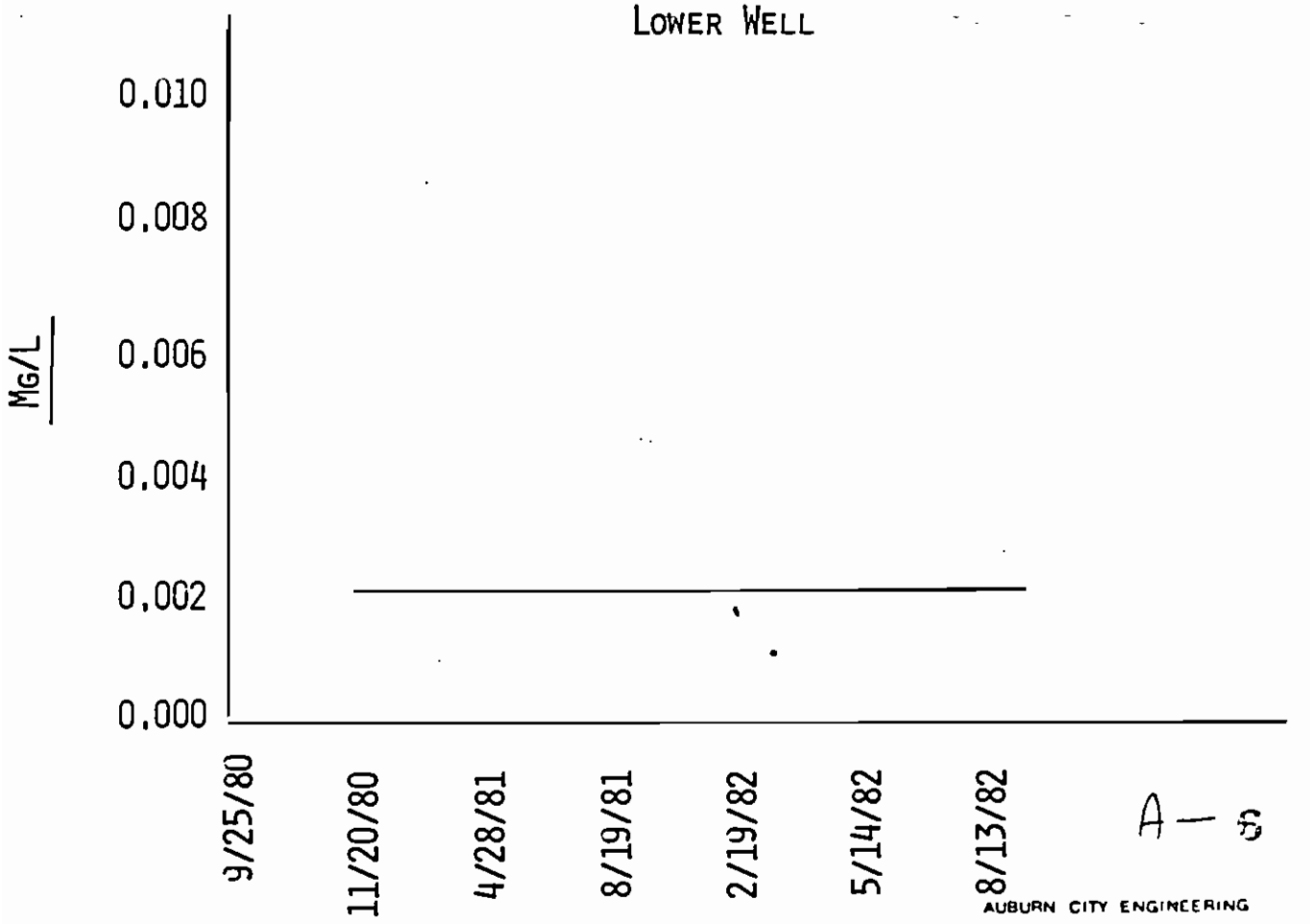


A-5

AUBURN CITY ENGINEERING

ARSENIC

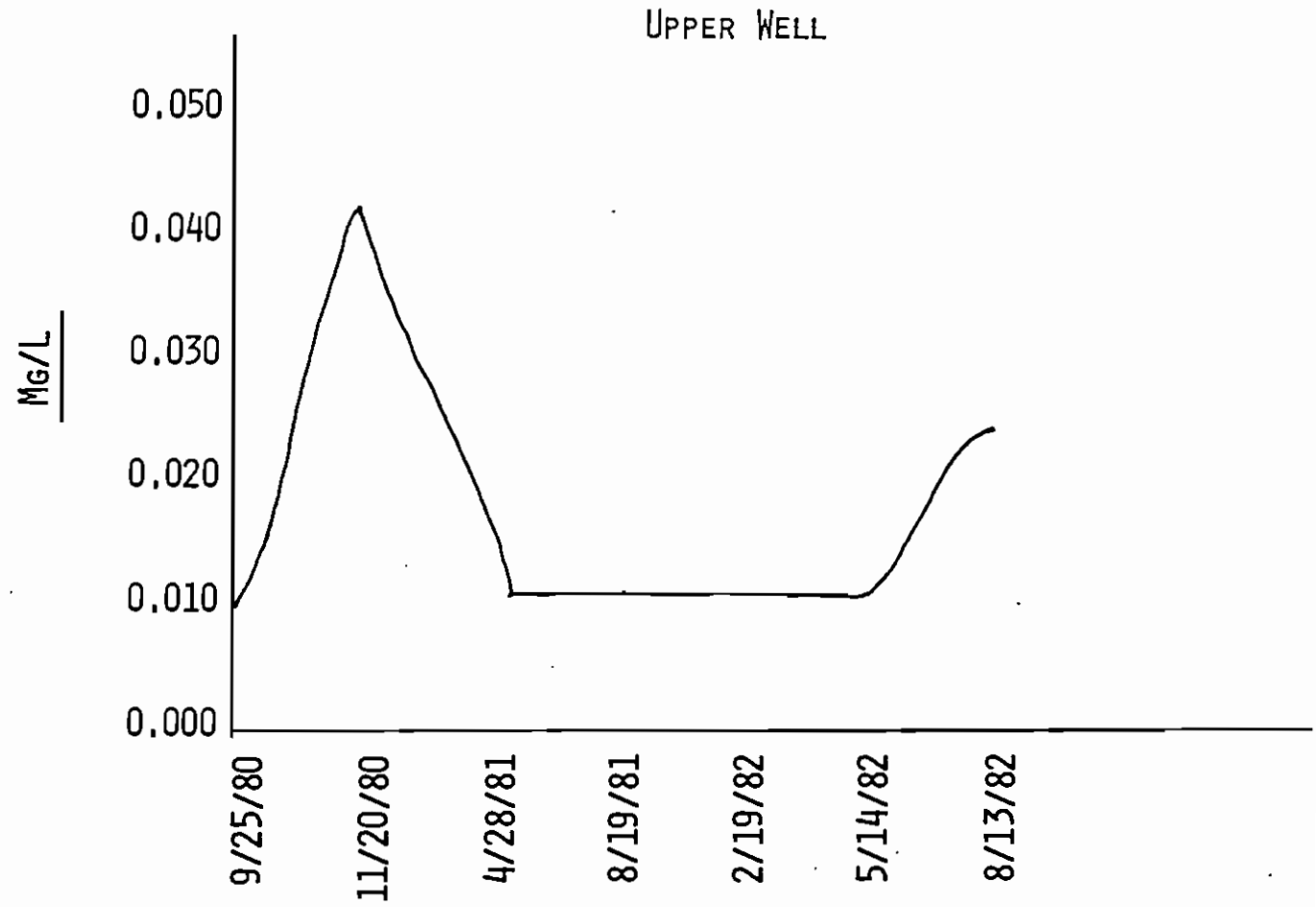


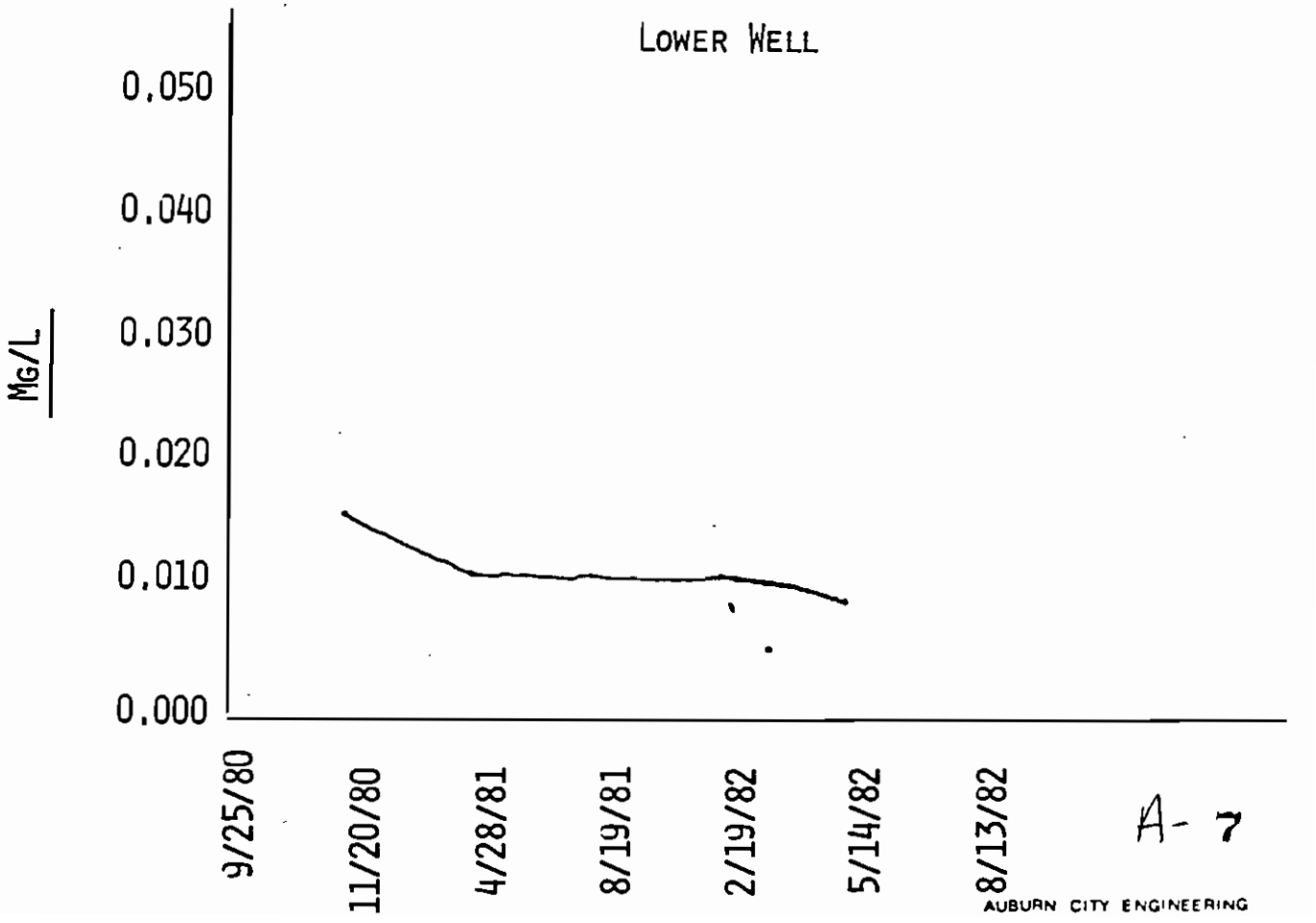


A — 5

AUBURN CITY ENGINEERING

PHENOL





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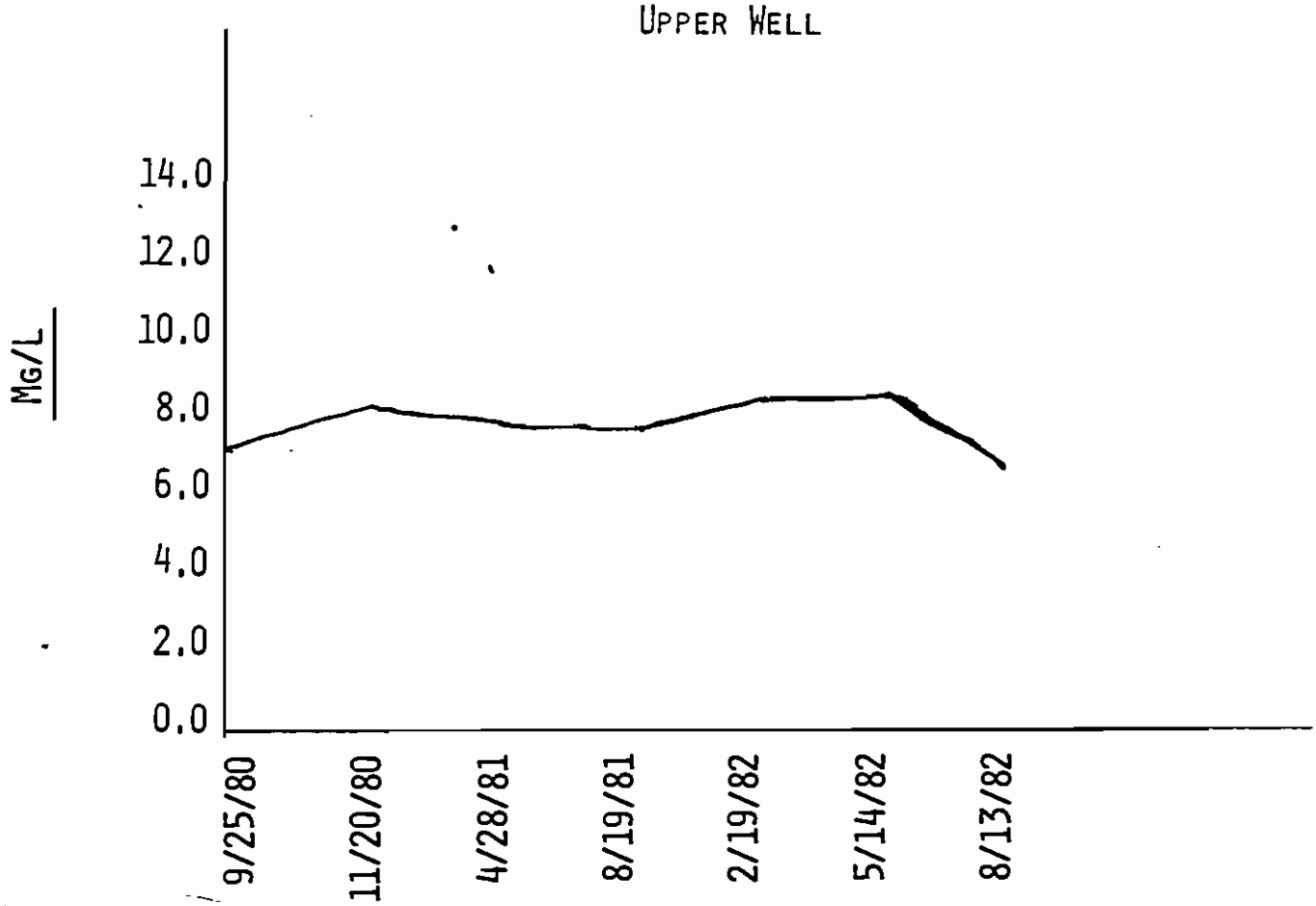
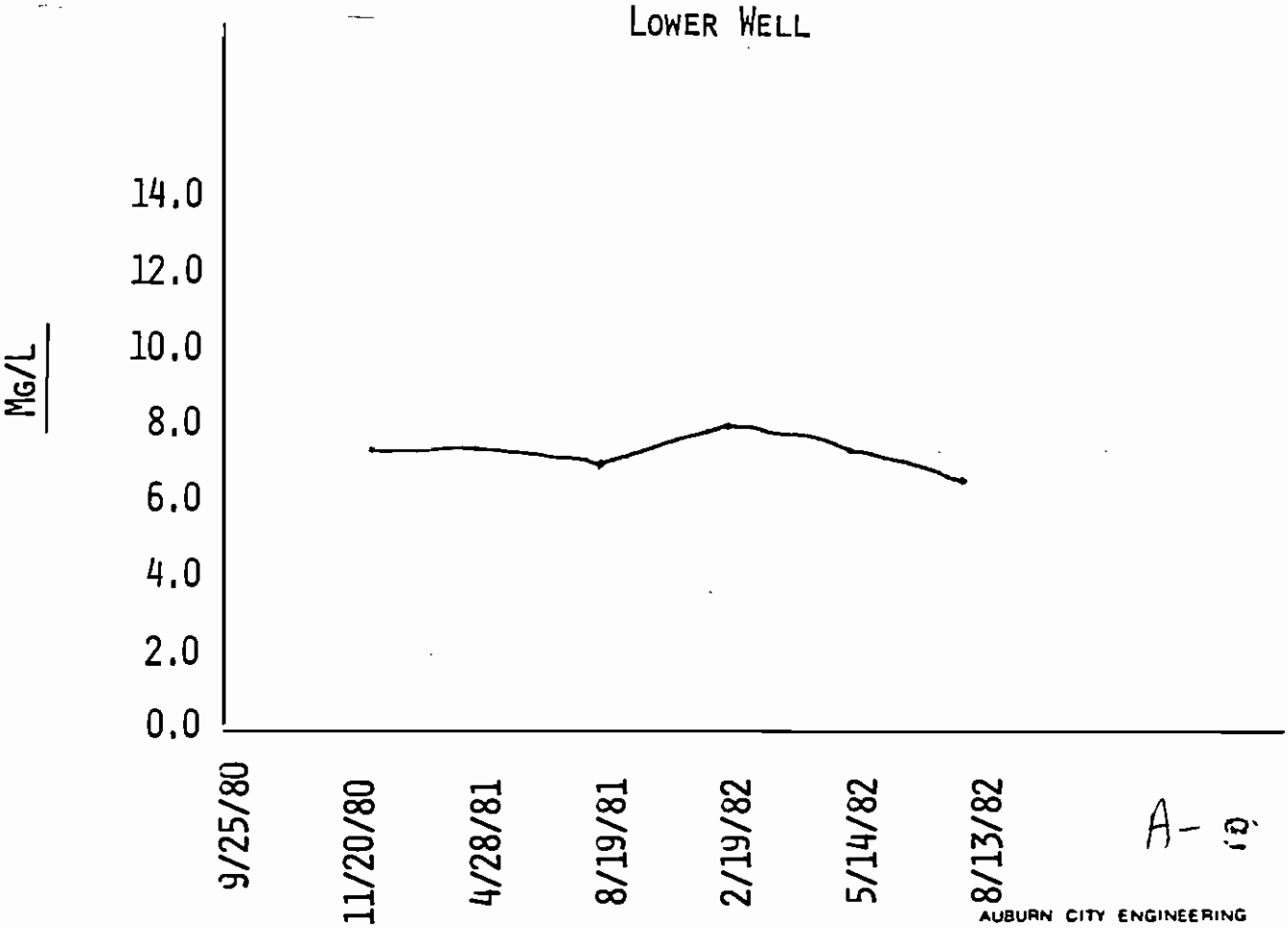
AUBURN CITY ENGINEERING

pH

Upper Well



Lower Well



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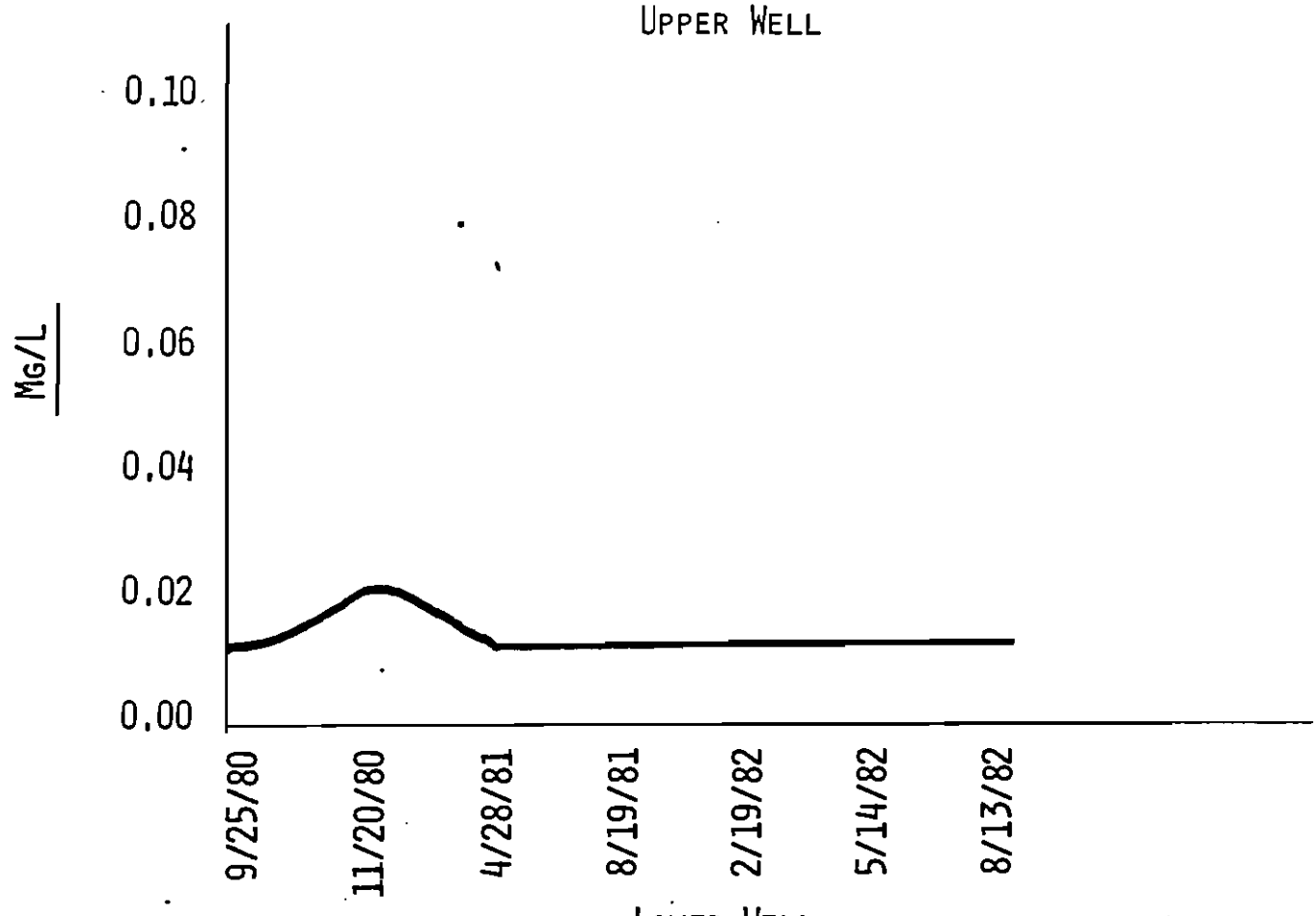
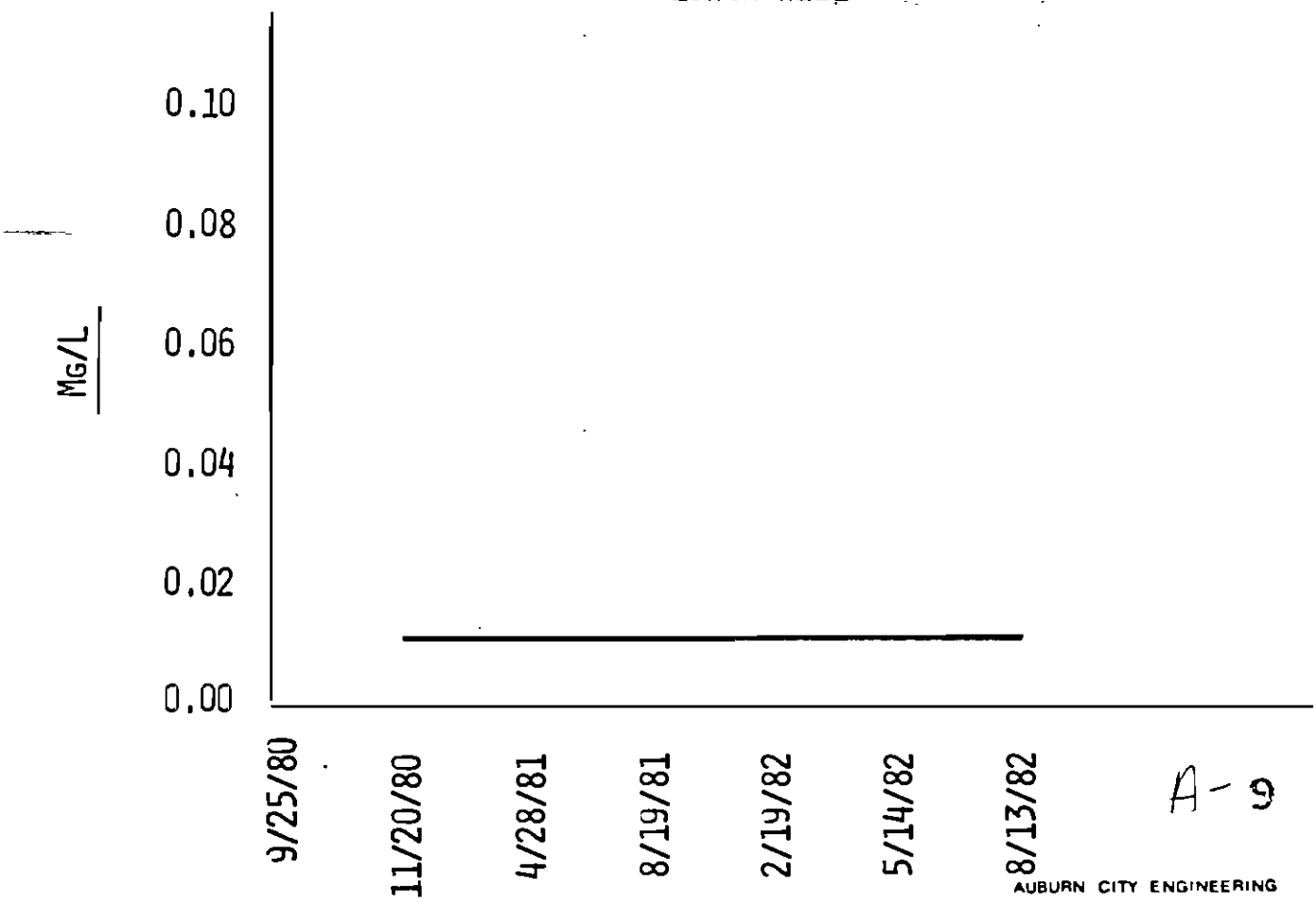
AUBURN CITY ENGINEERING

CADMIUM





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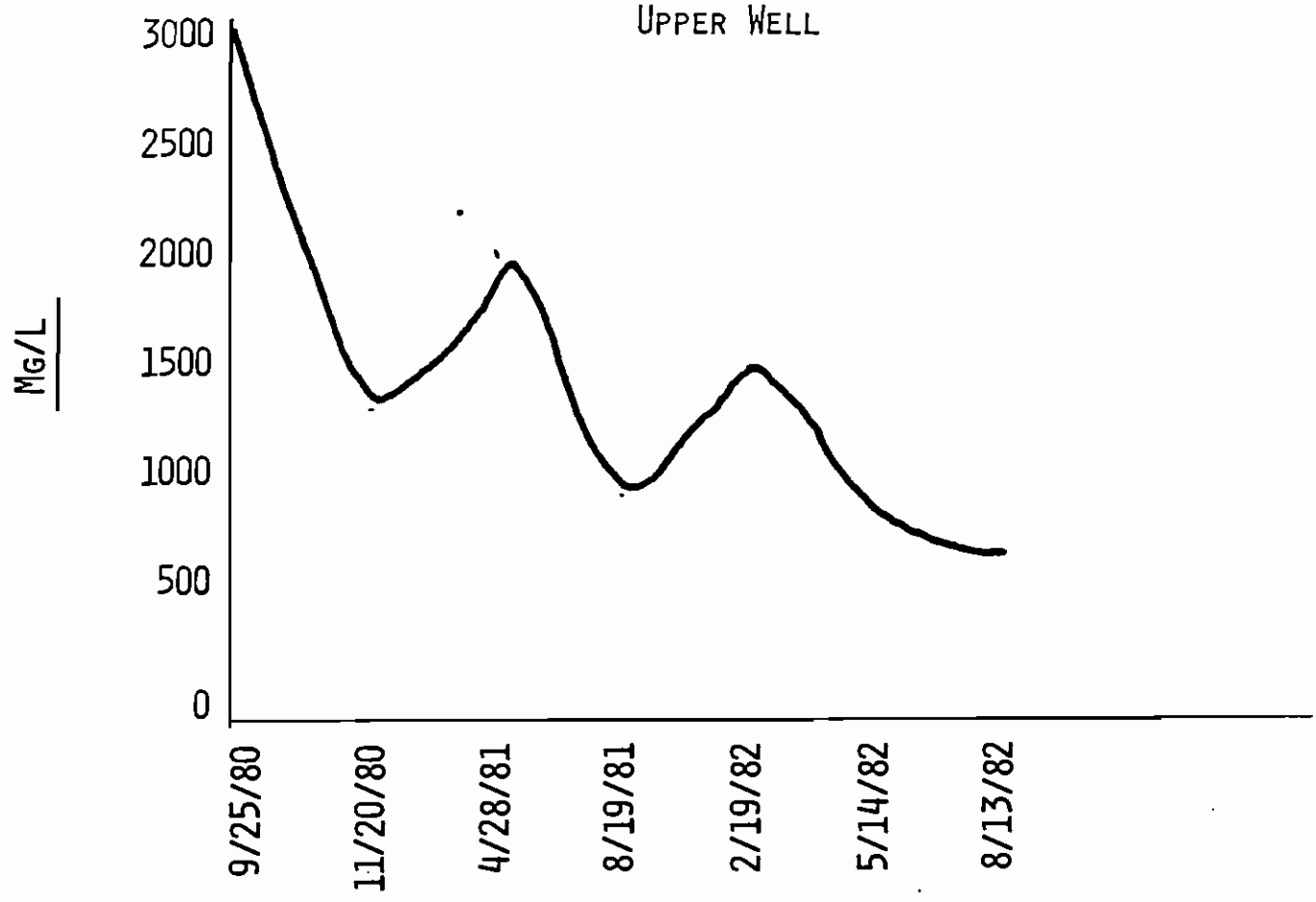
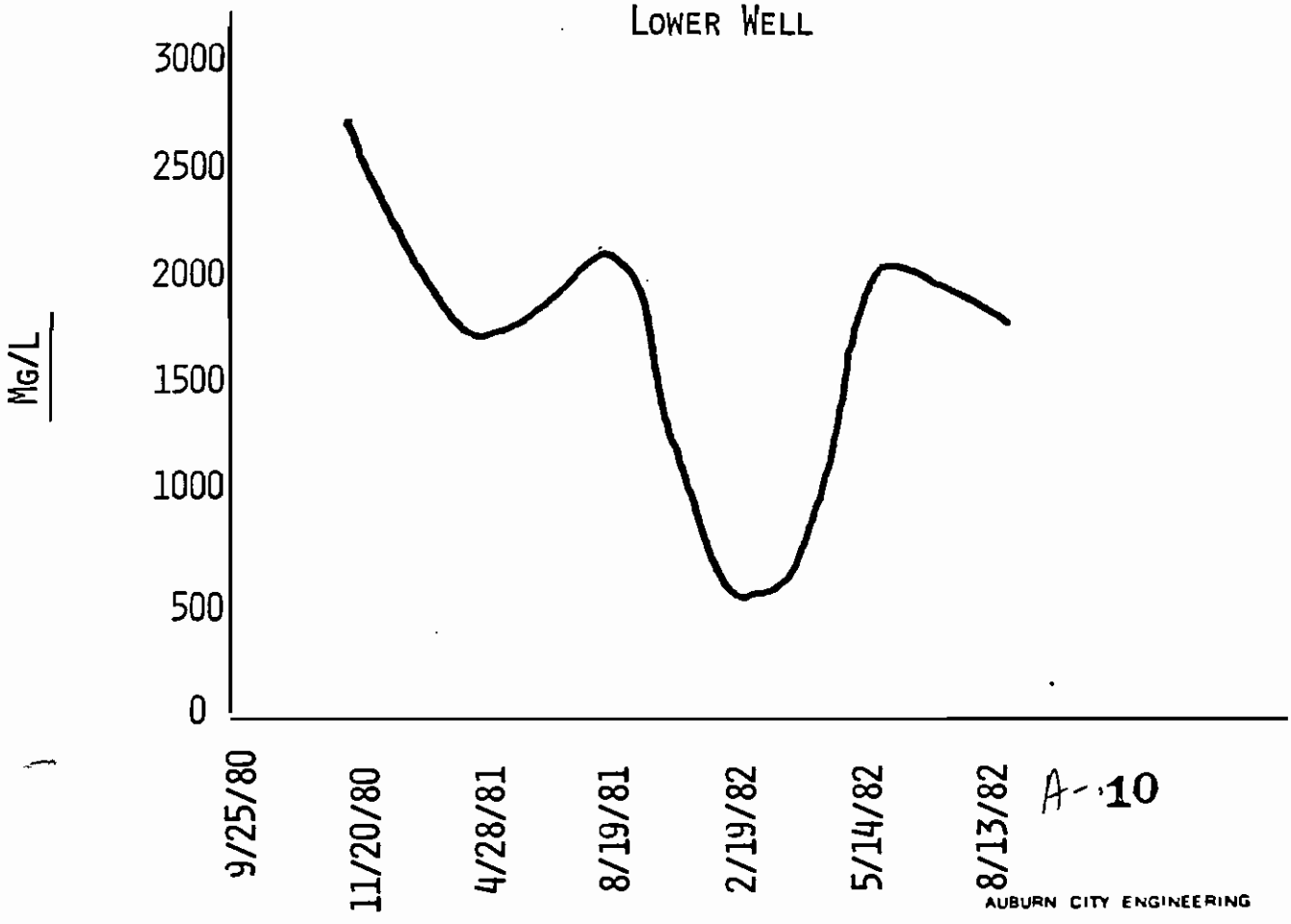
AUBURN CITY ENGINEERING

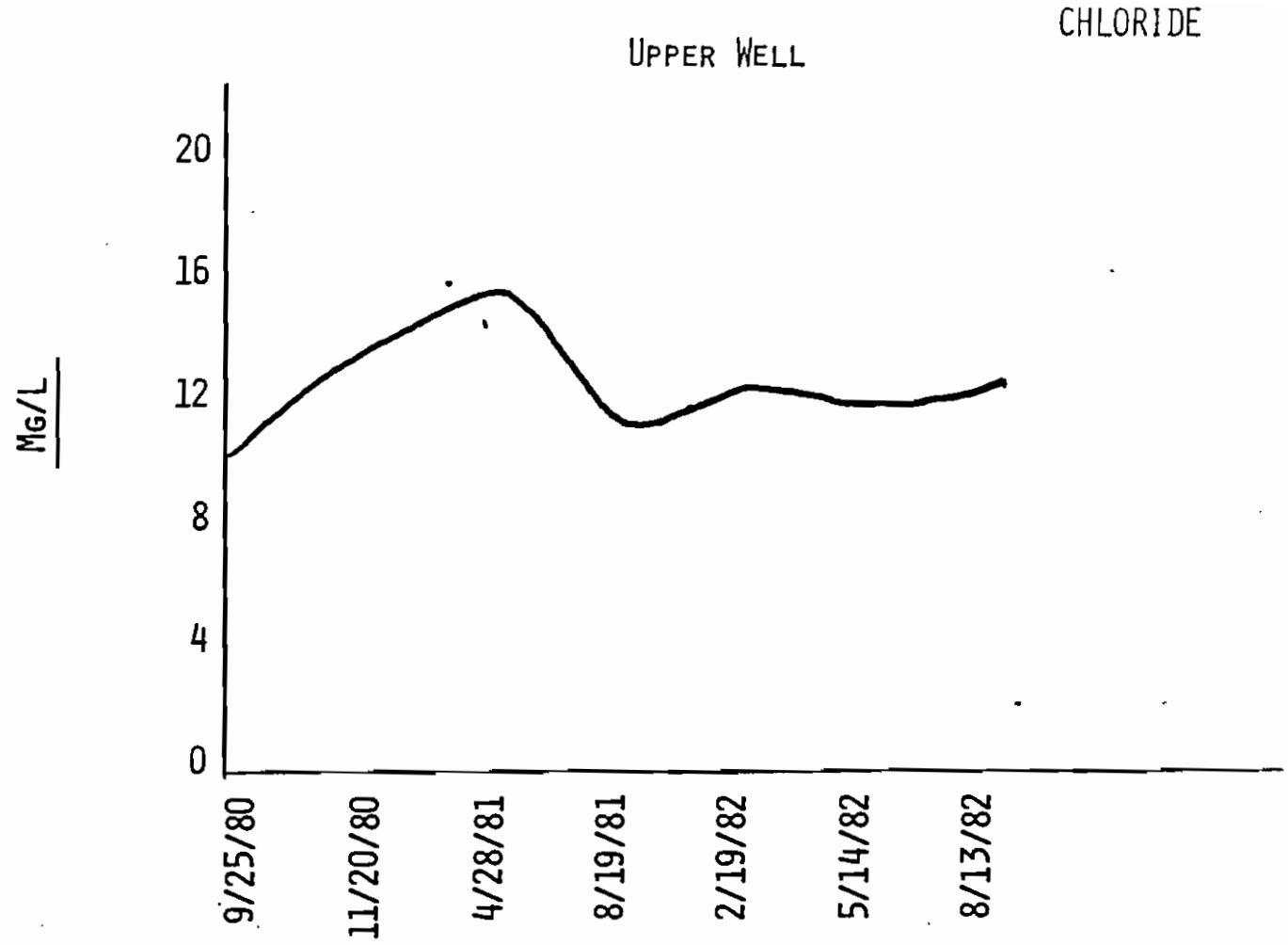
CONDUCTIVITY

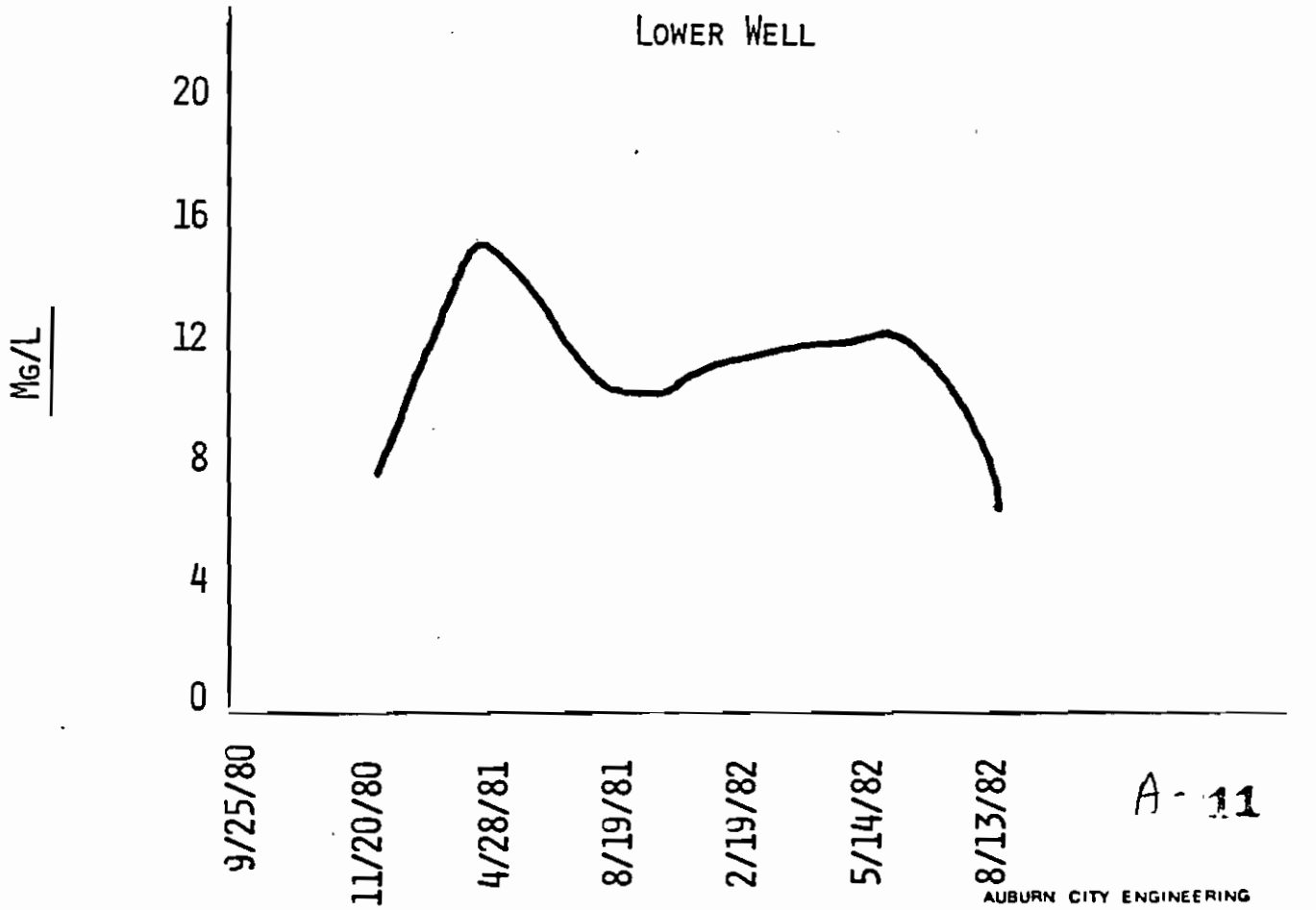




AUBURN CITY ENGINEERING

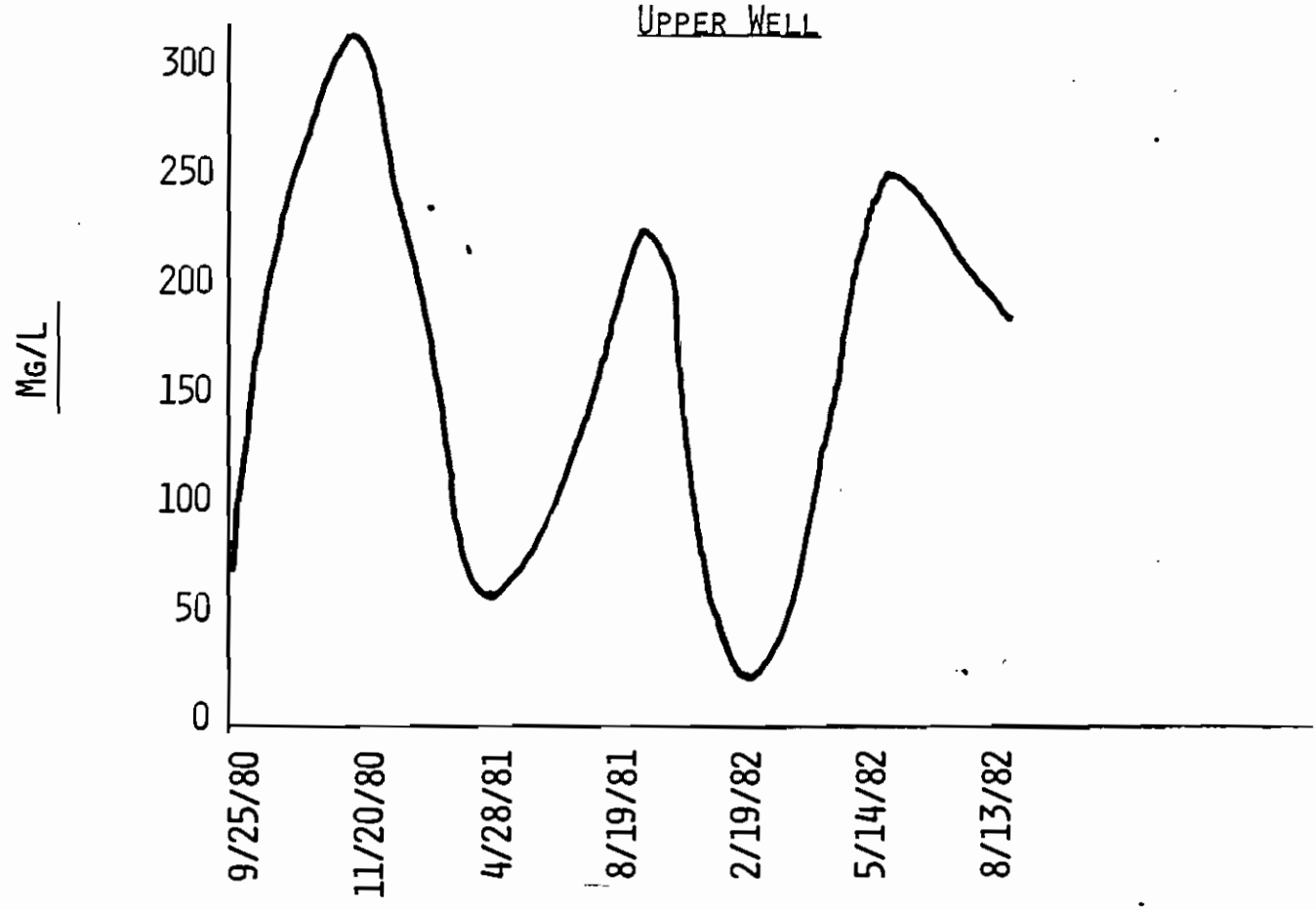
CHLORIDE

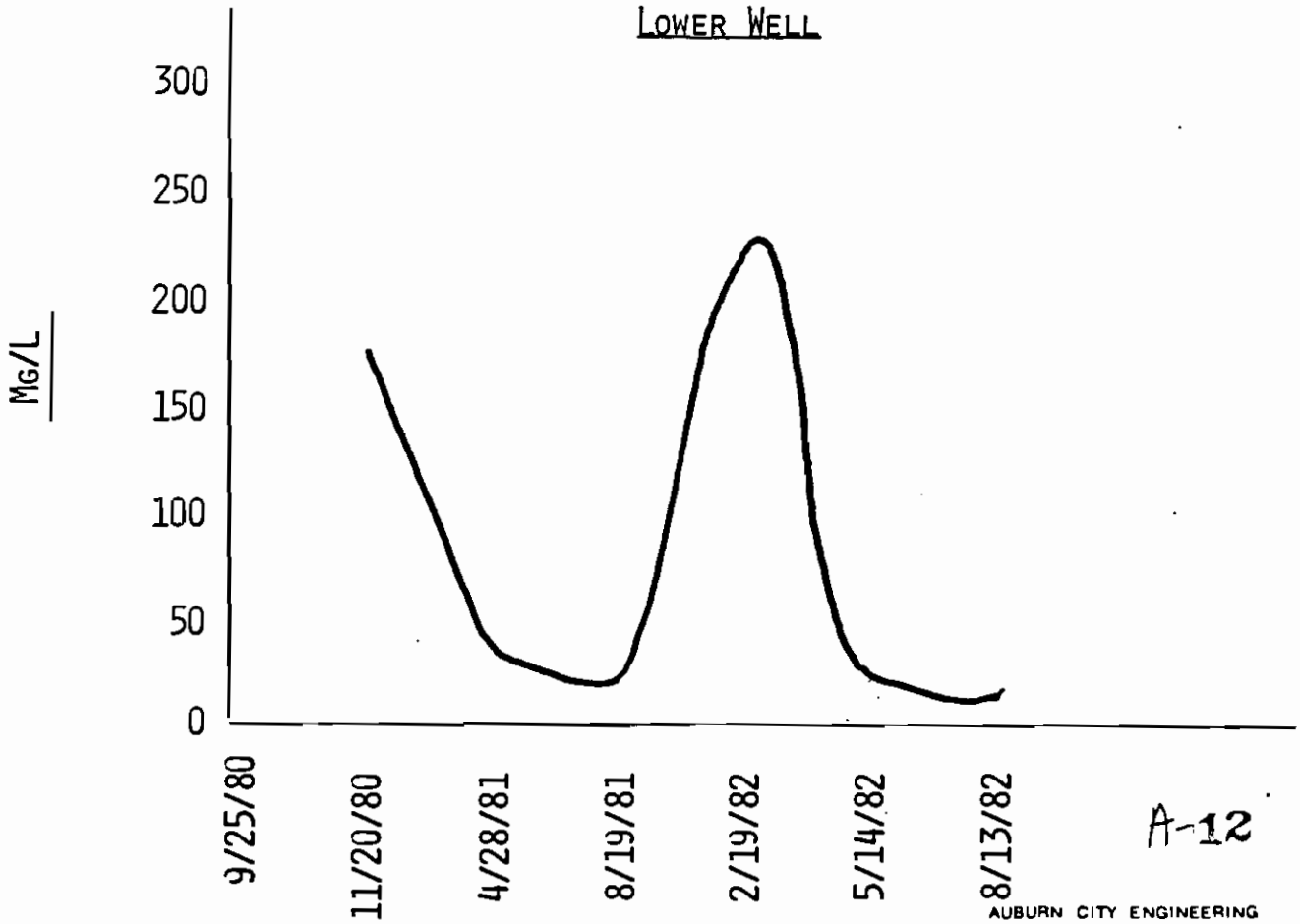




AUBURN CITY ENGINEERING

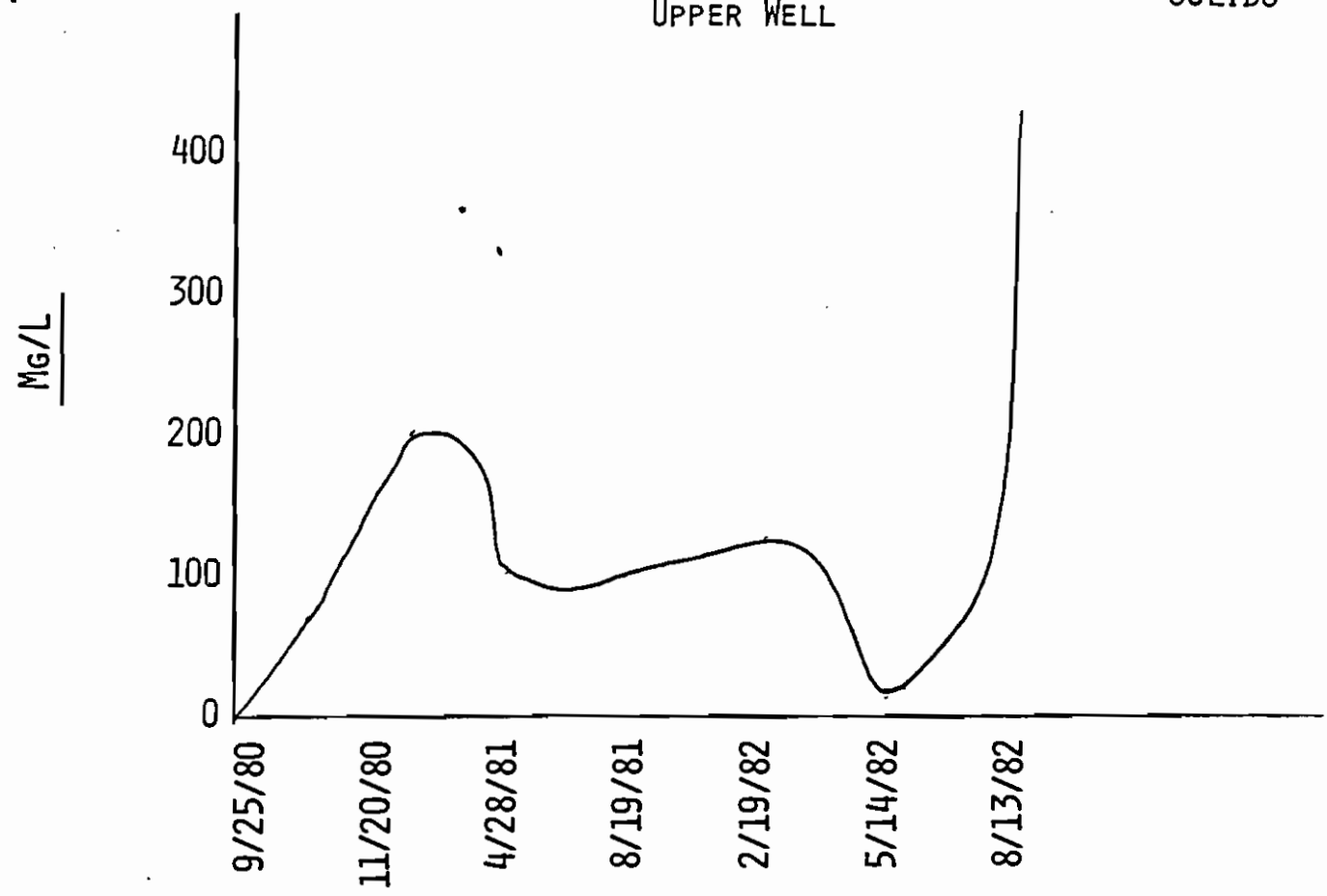
ALKALINITY

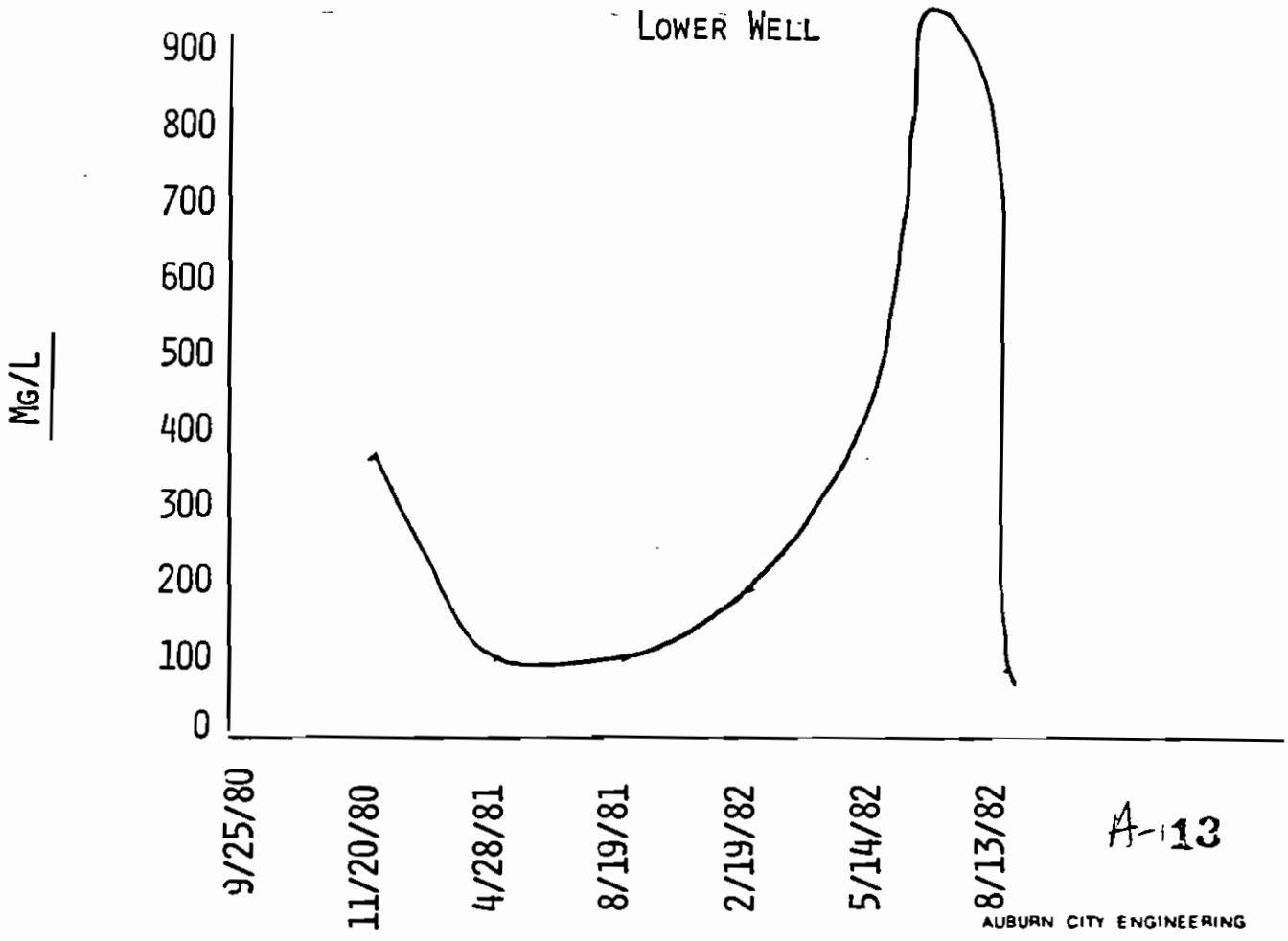




AUBURN CITY ENGINEERING

TOTAL SUSPENDED SOLIDS

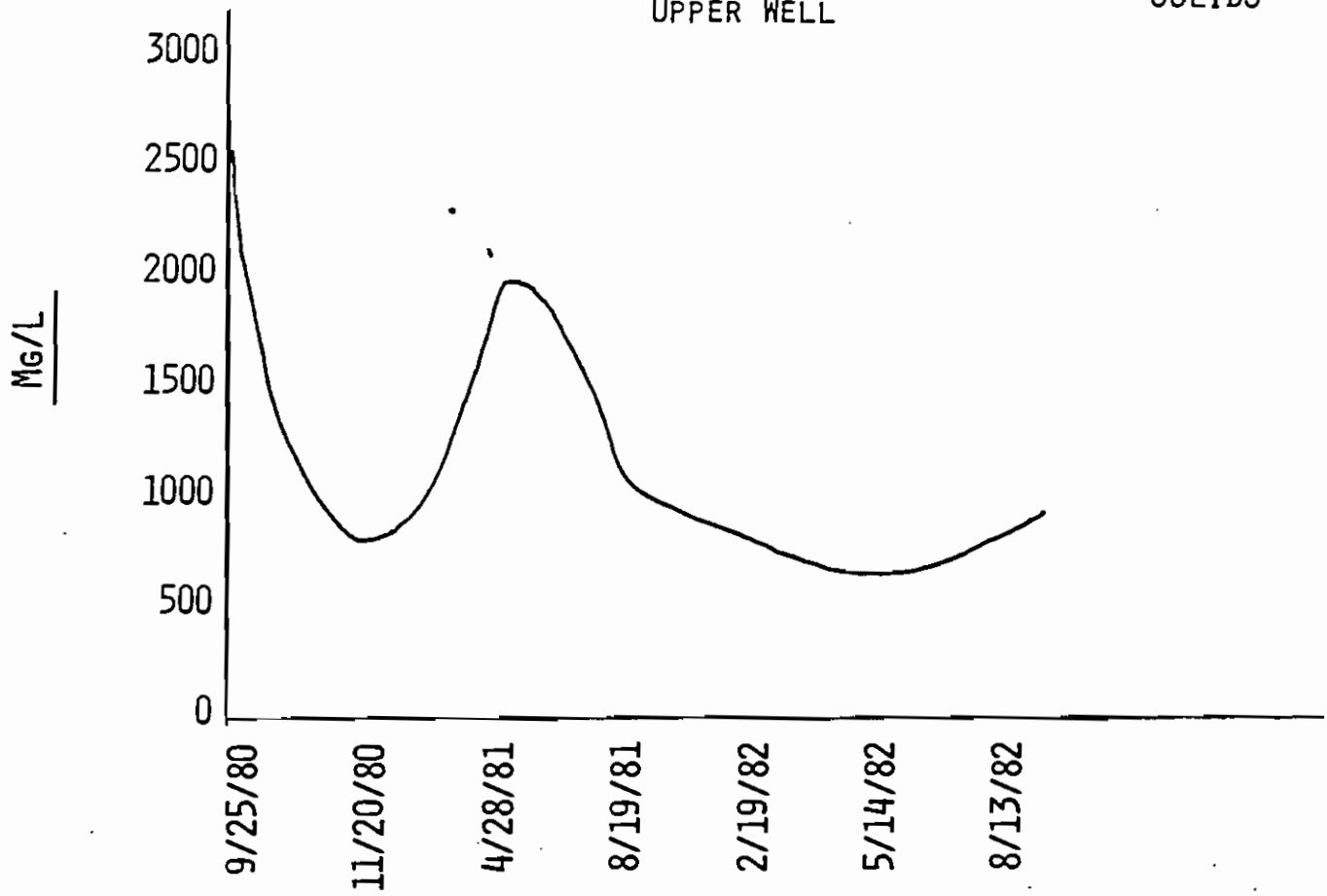




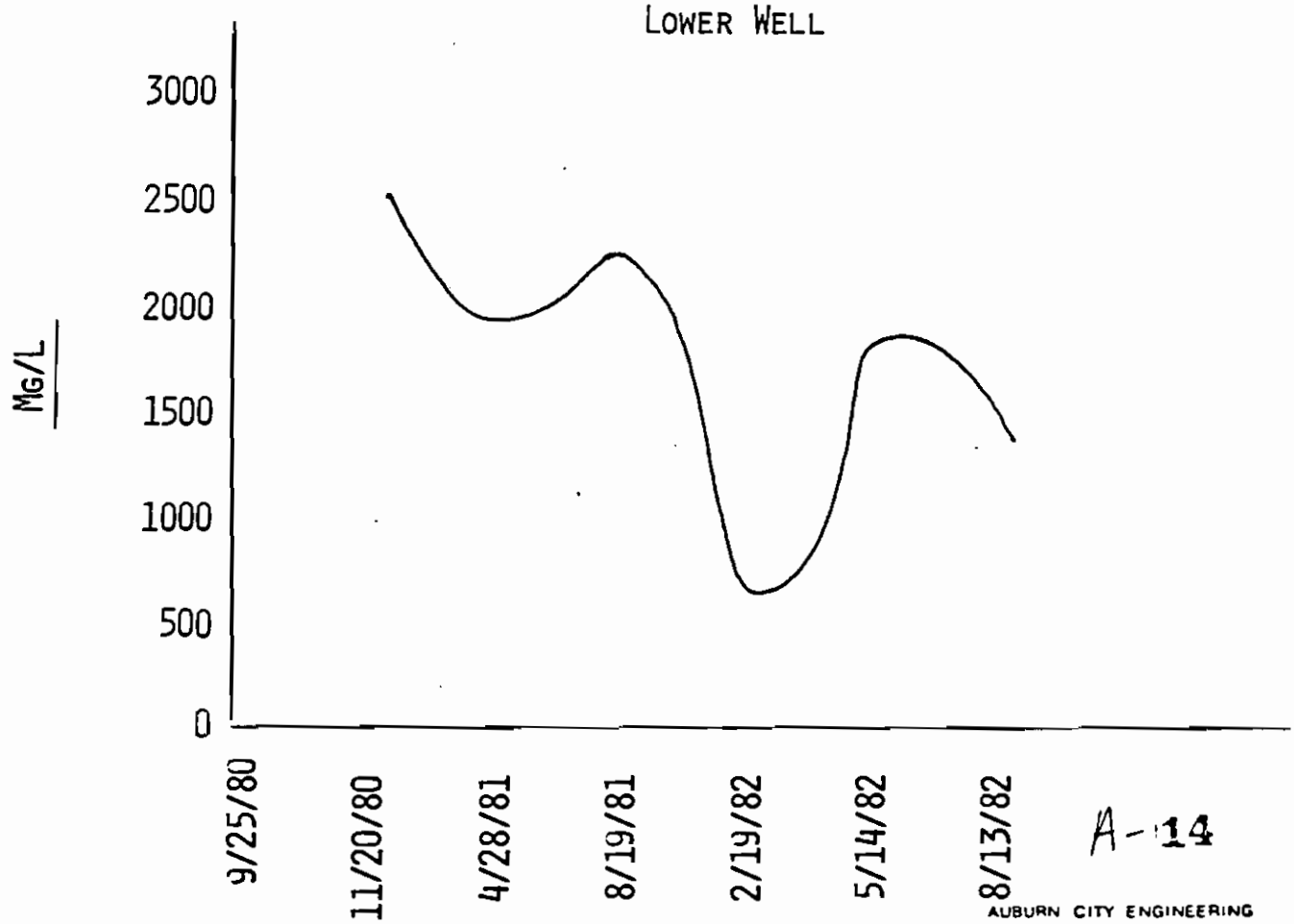
AUBURN CITY ENGINEERING

TOTAL DISSOLVED SOLIDS

UPPER WELL



LOWER WELL



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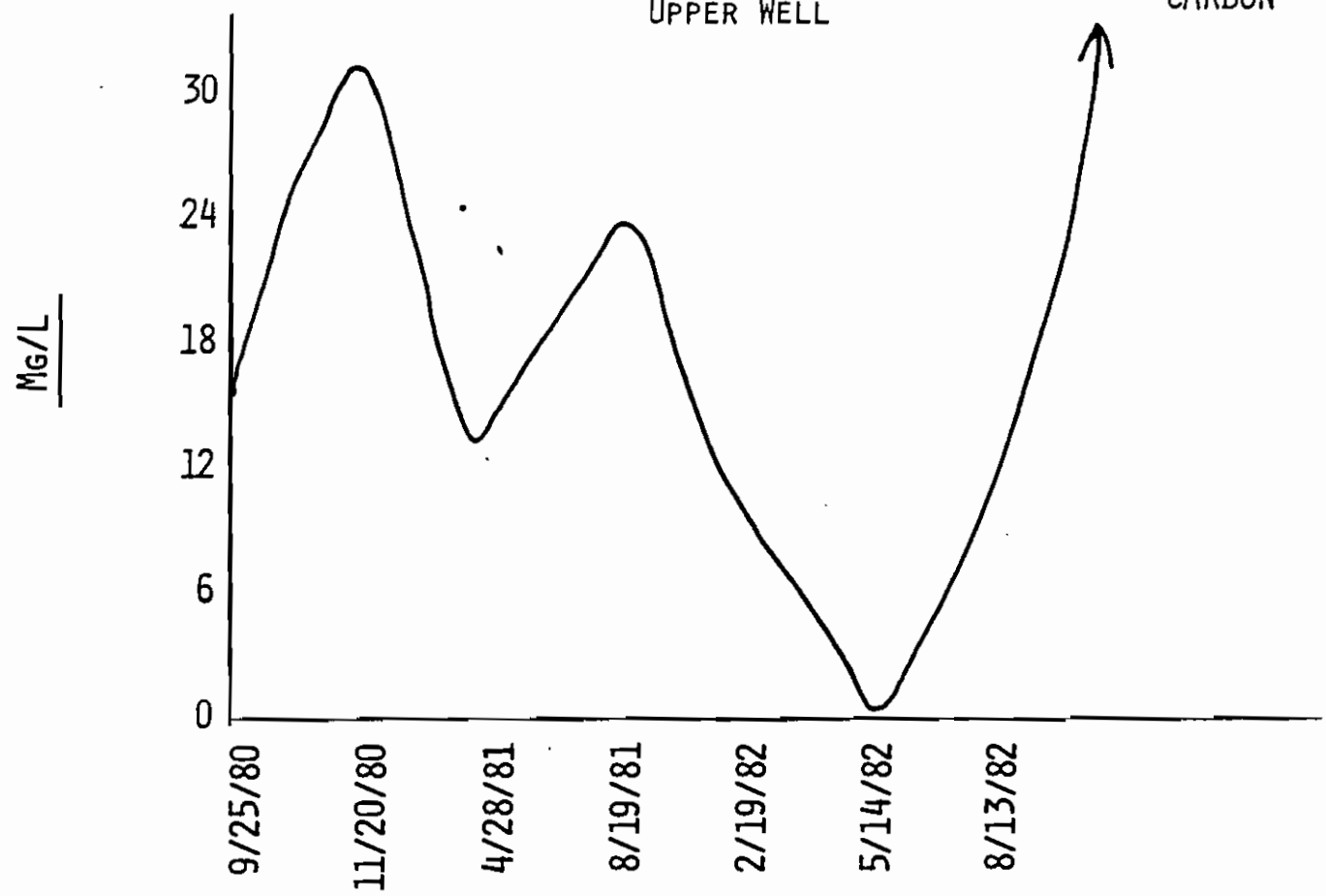
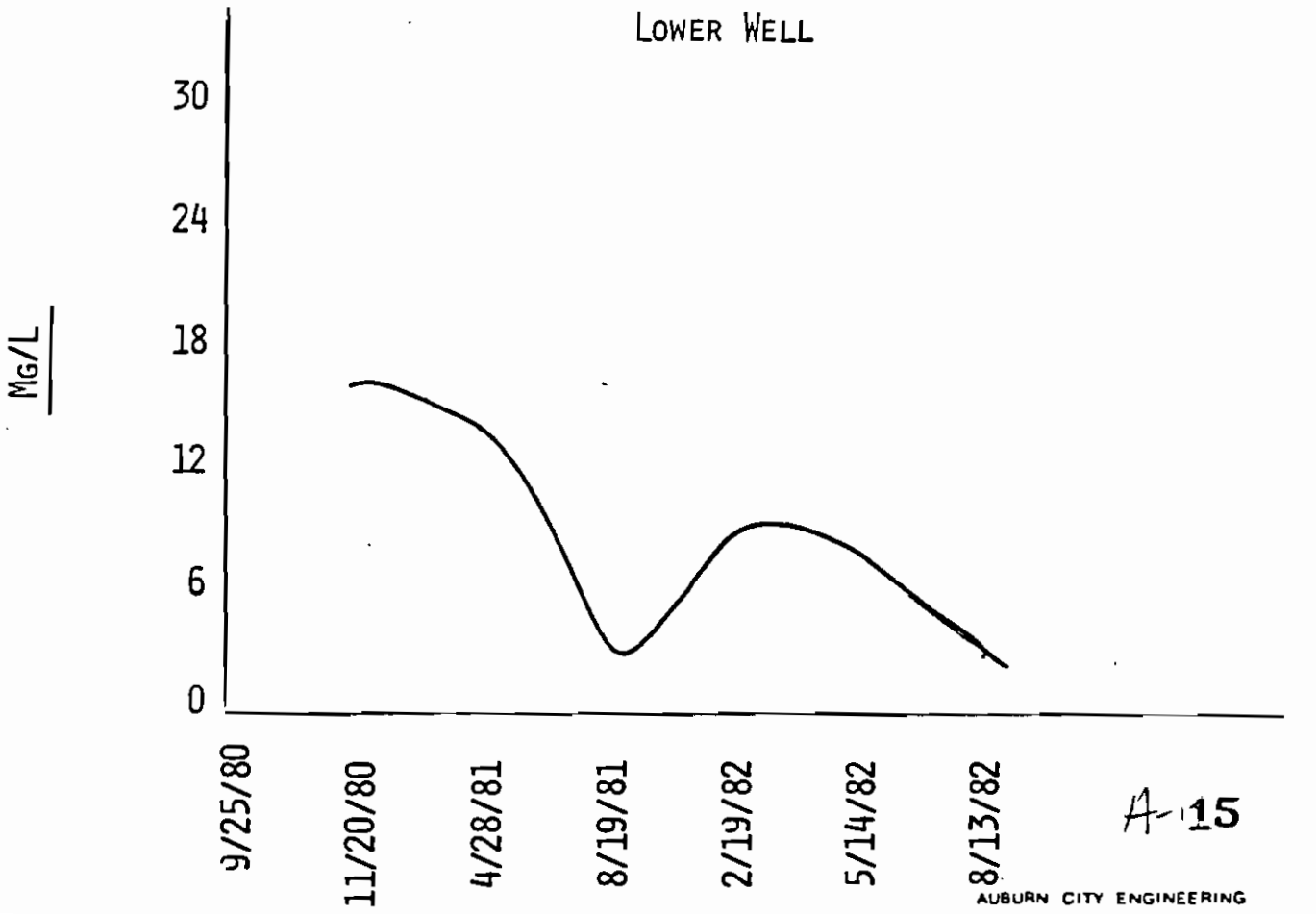
AUBURN CITY ENGINEERING

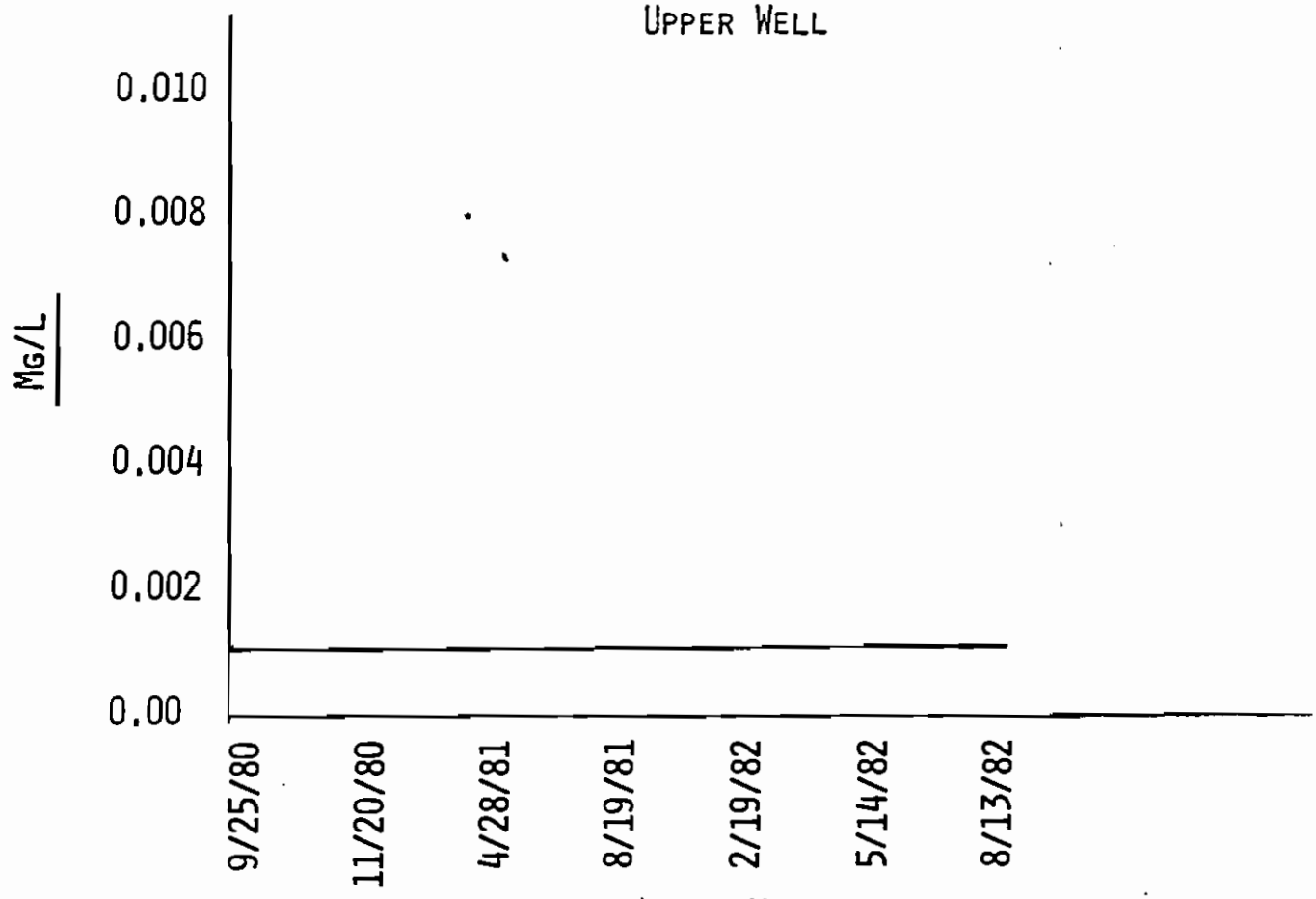
TOTAL ORGANIC CARBON

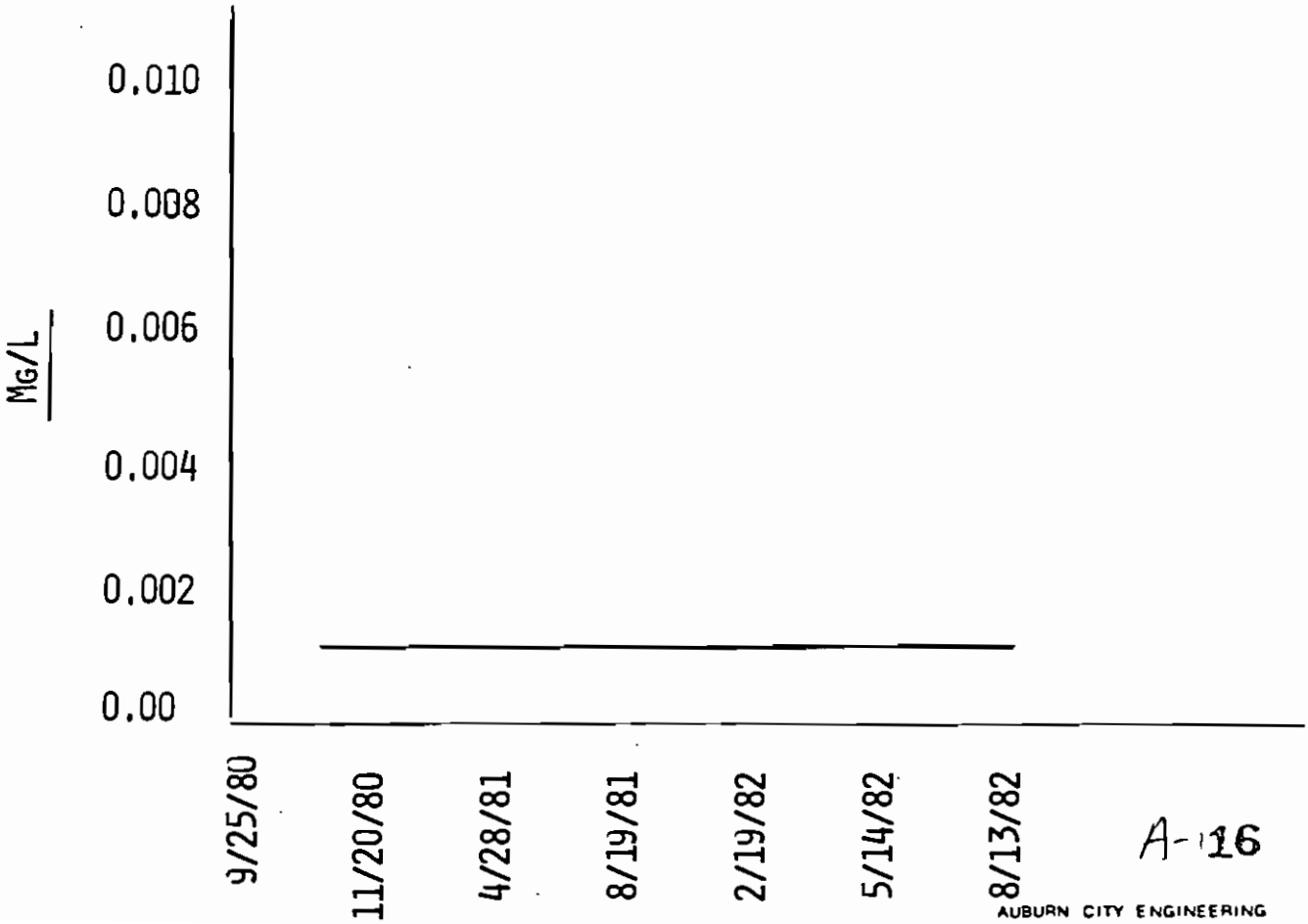




AUBURN CITY ENGINEERING

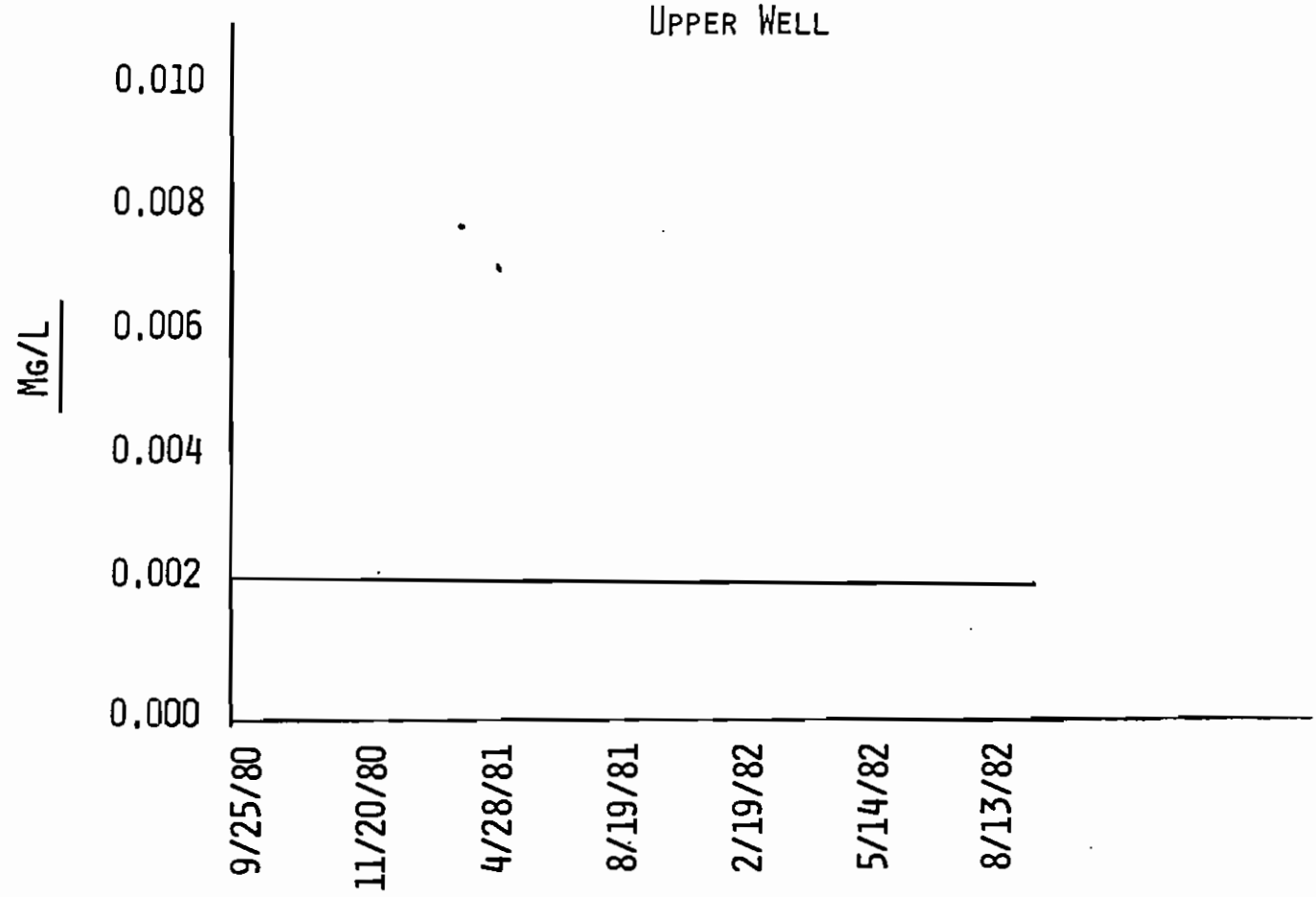
TOTAL SILVER

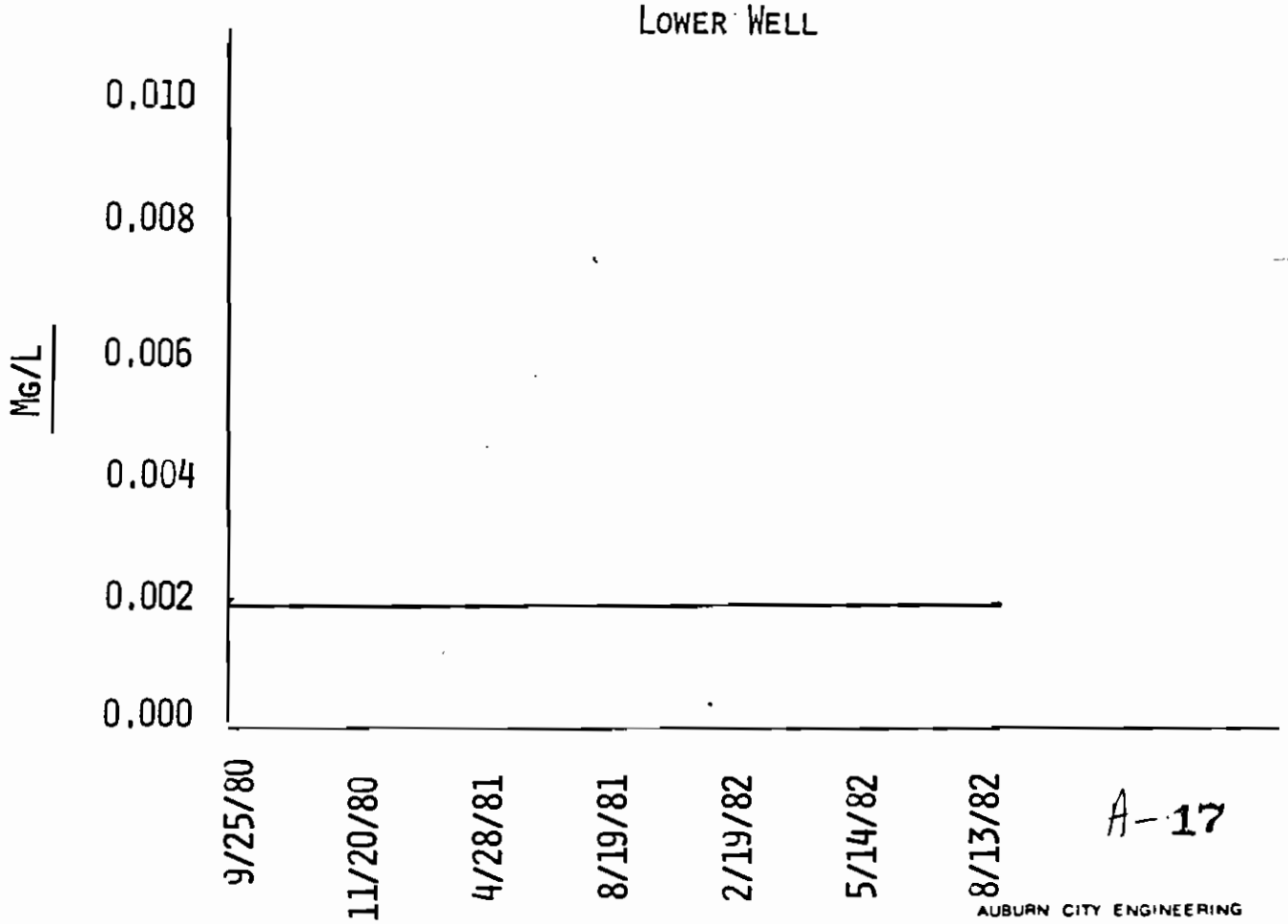




AUBURN CITY ENGINEERING

TOTAL SELENIUM

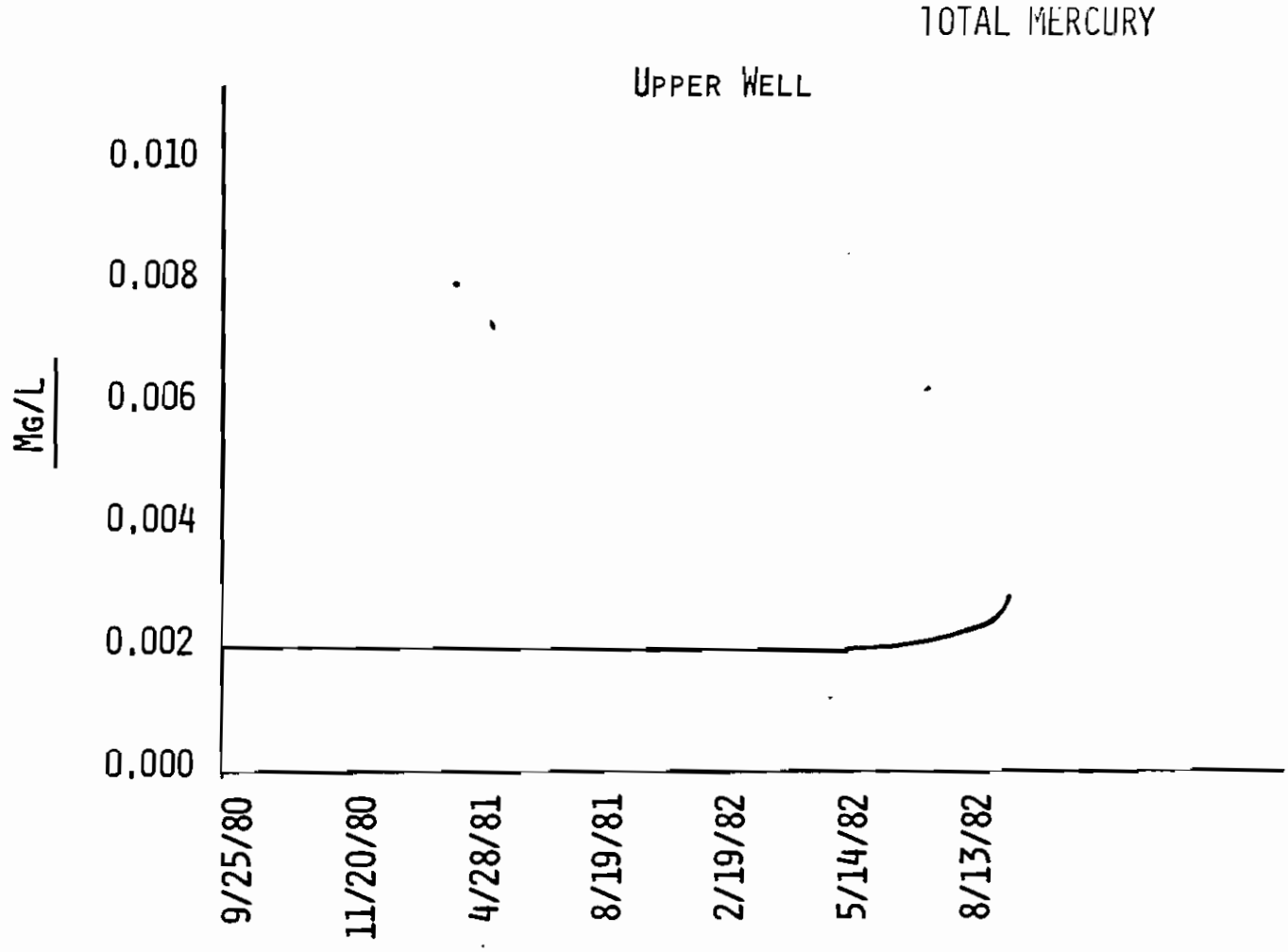


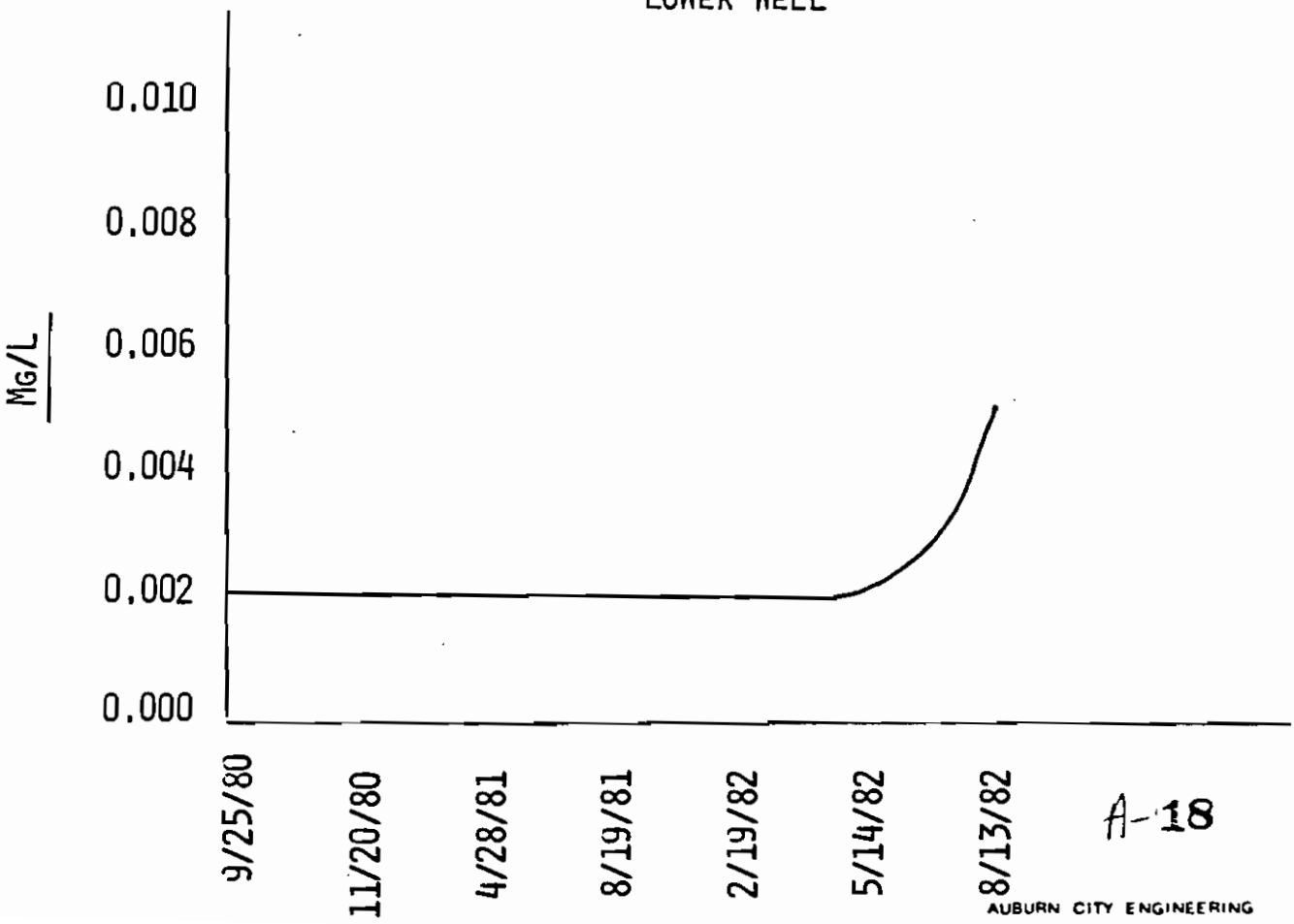


A-17

AUBURN CITY ENGINEERING

TOTAL MERCURY





AUBURN CITY ENGINEERING

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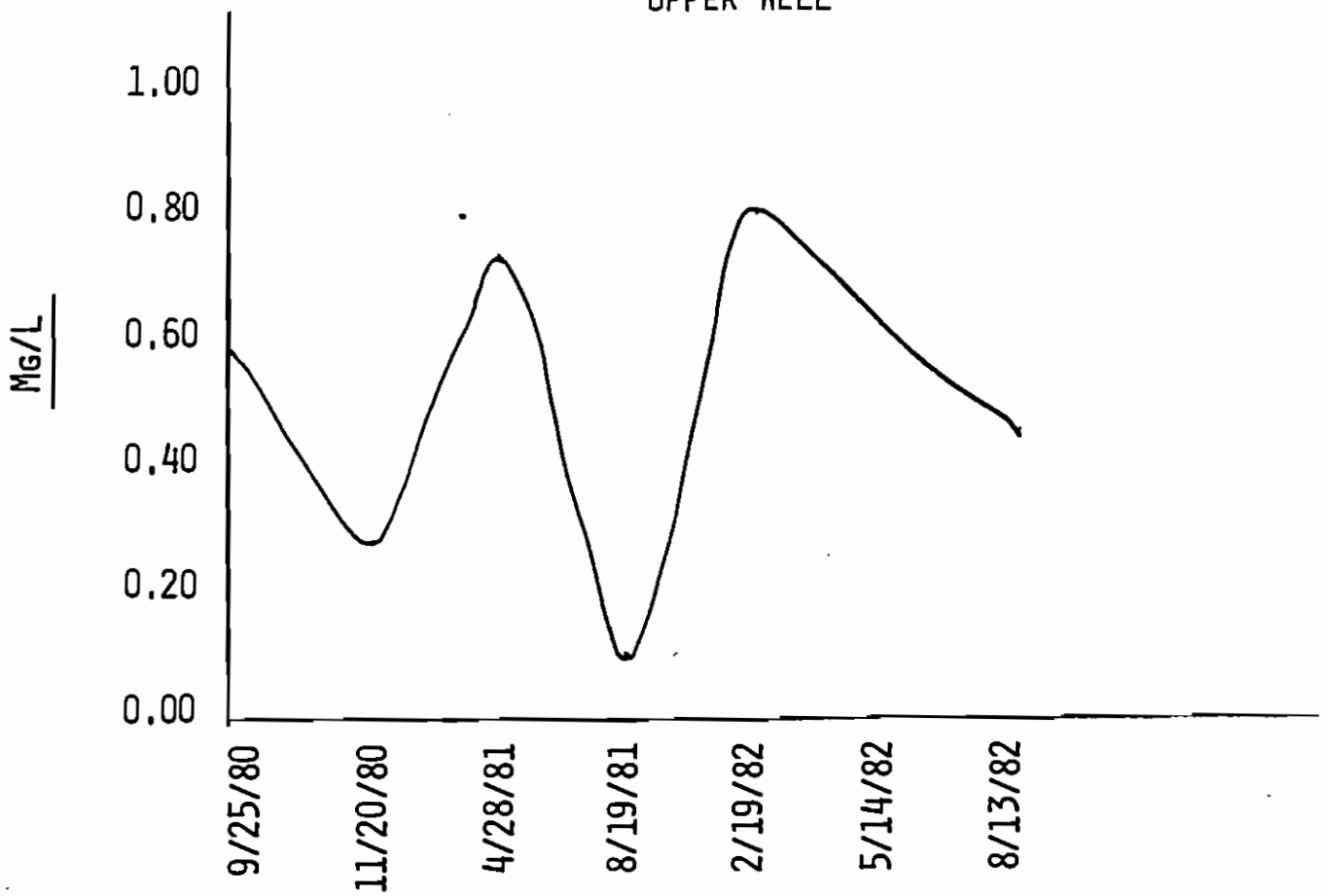
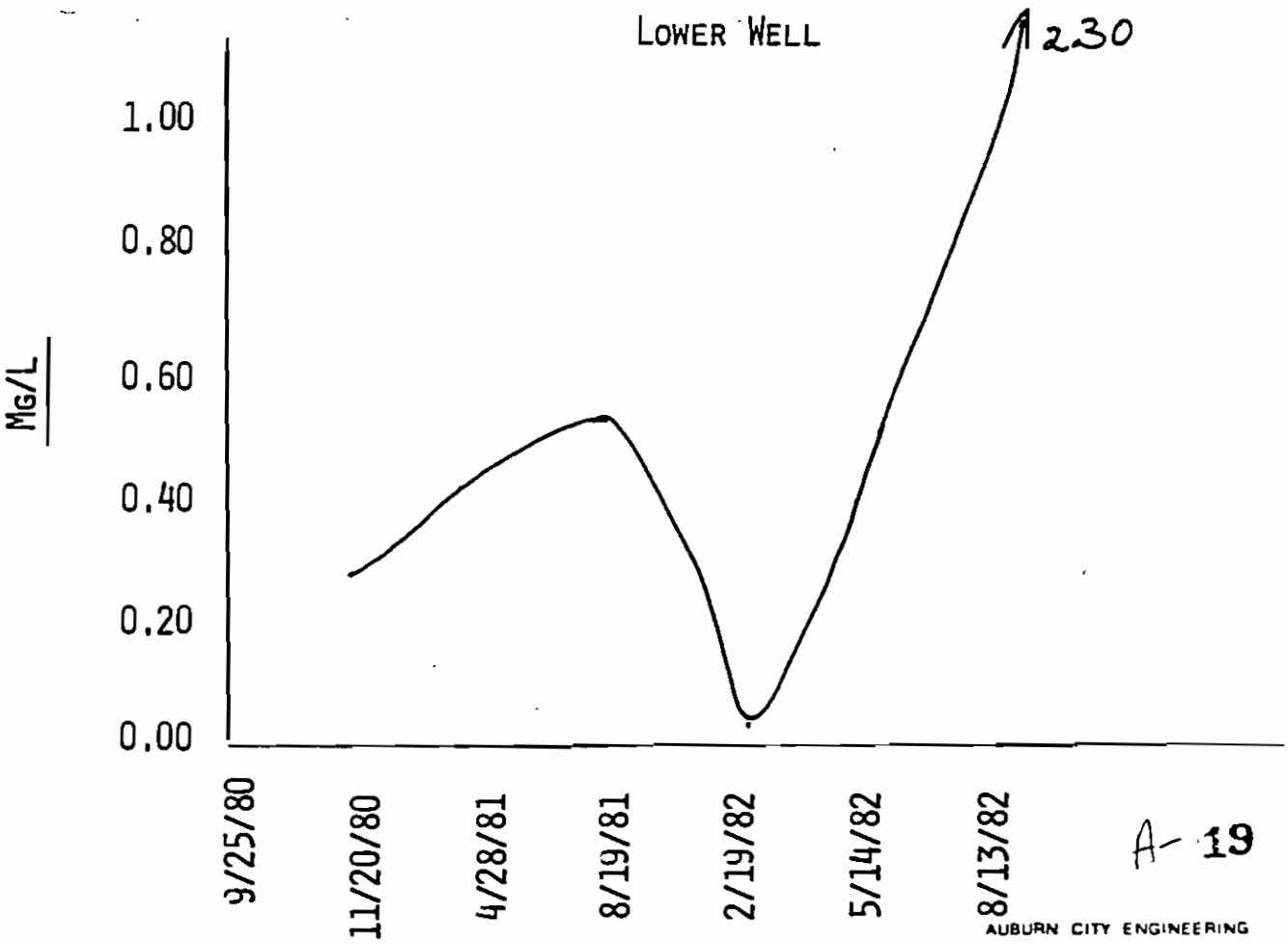
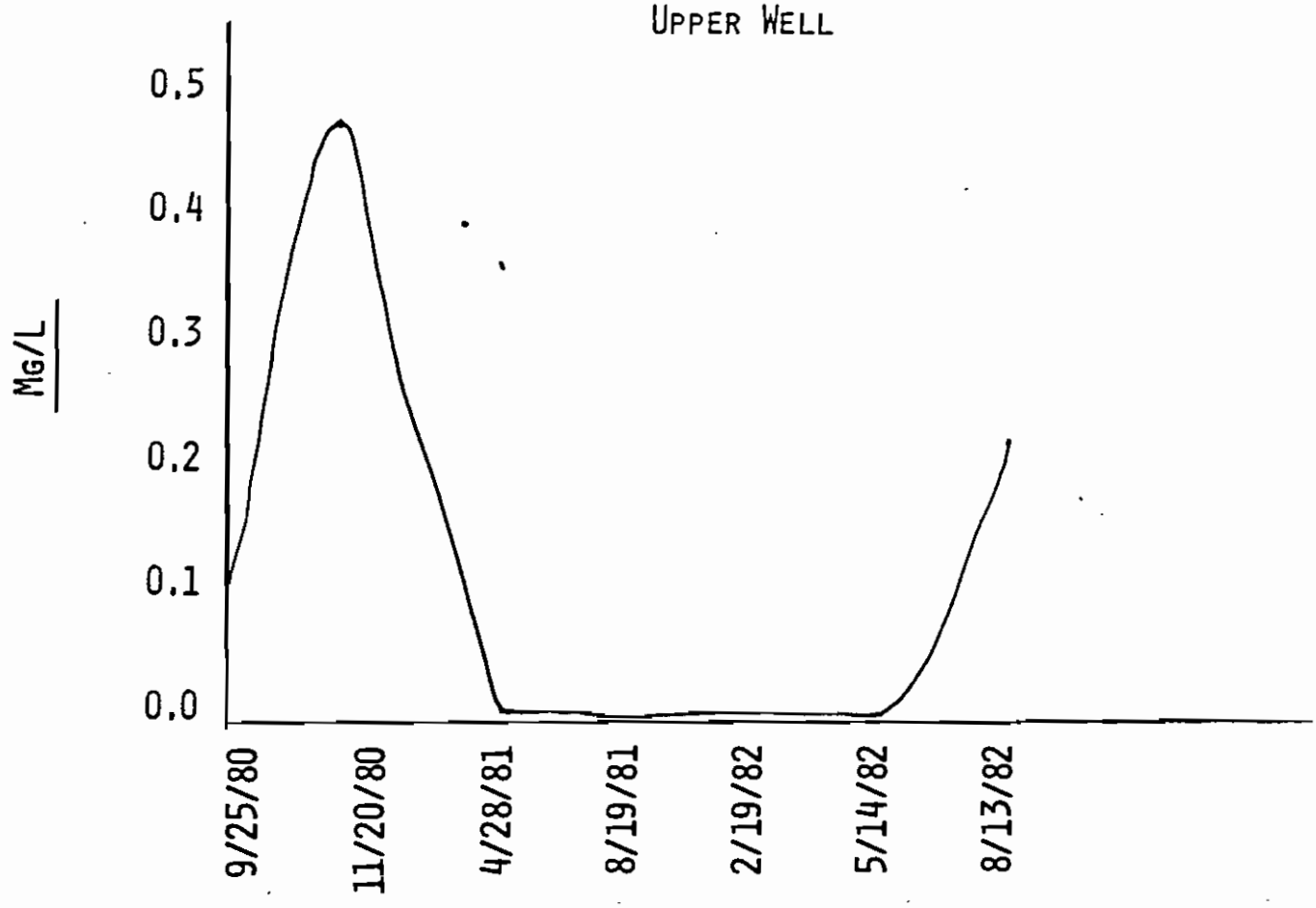


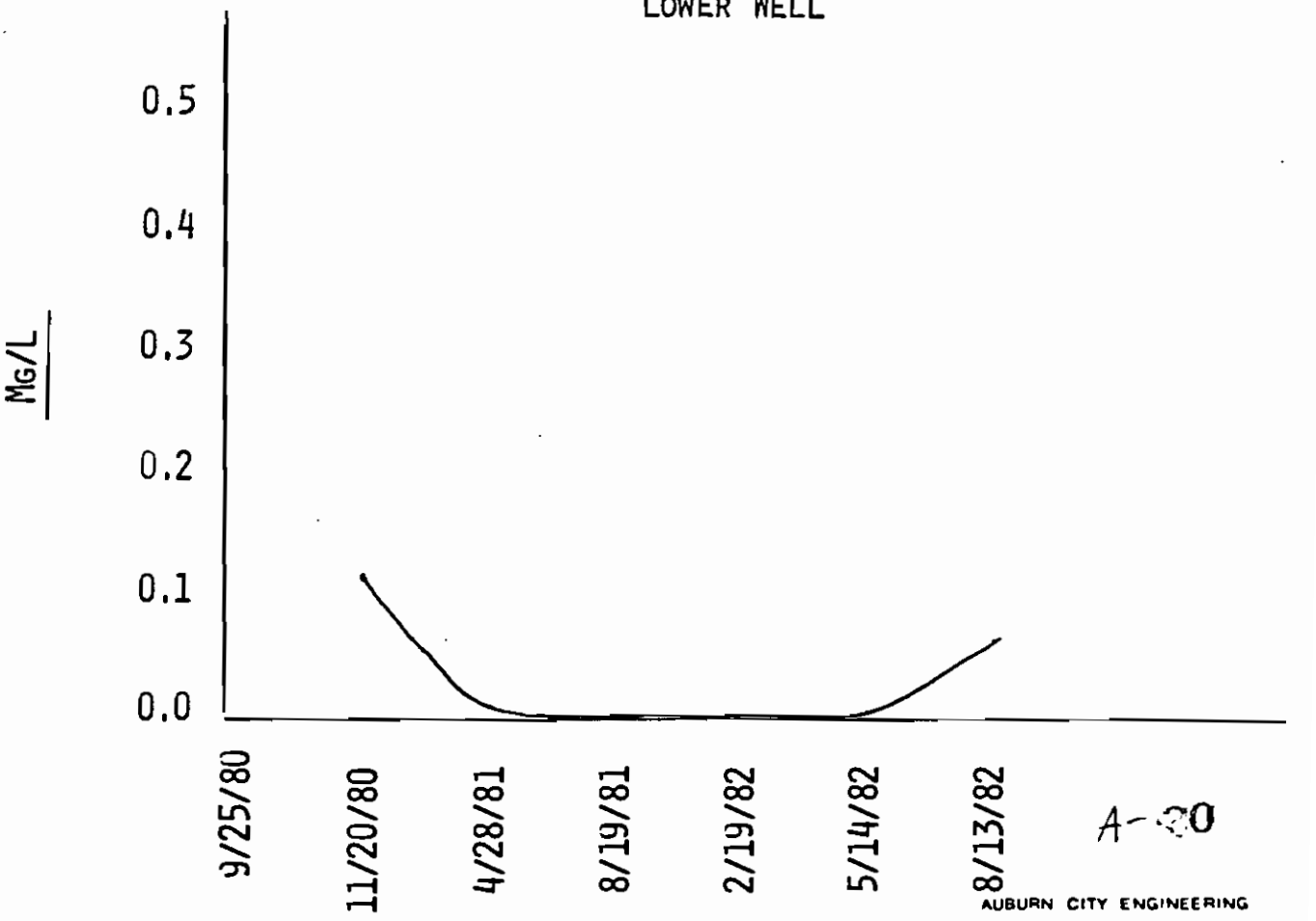


A-19

AUBURN CITY ENGINEERING

TOTAL LEAD





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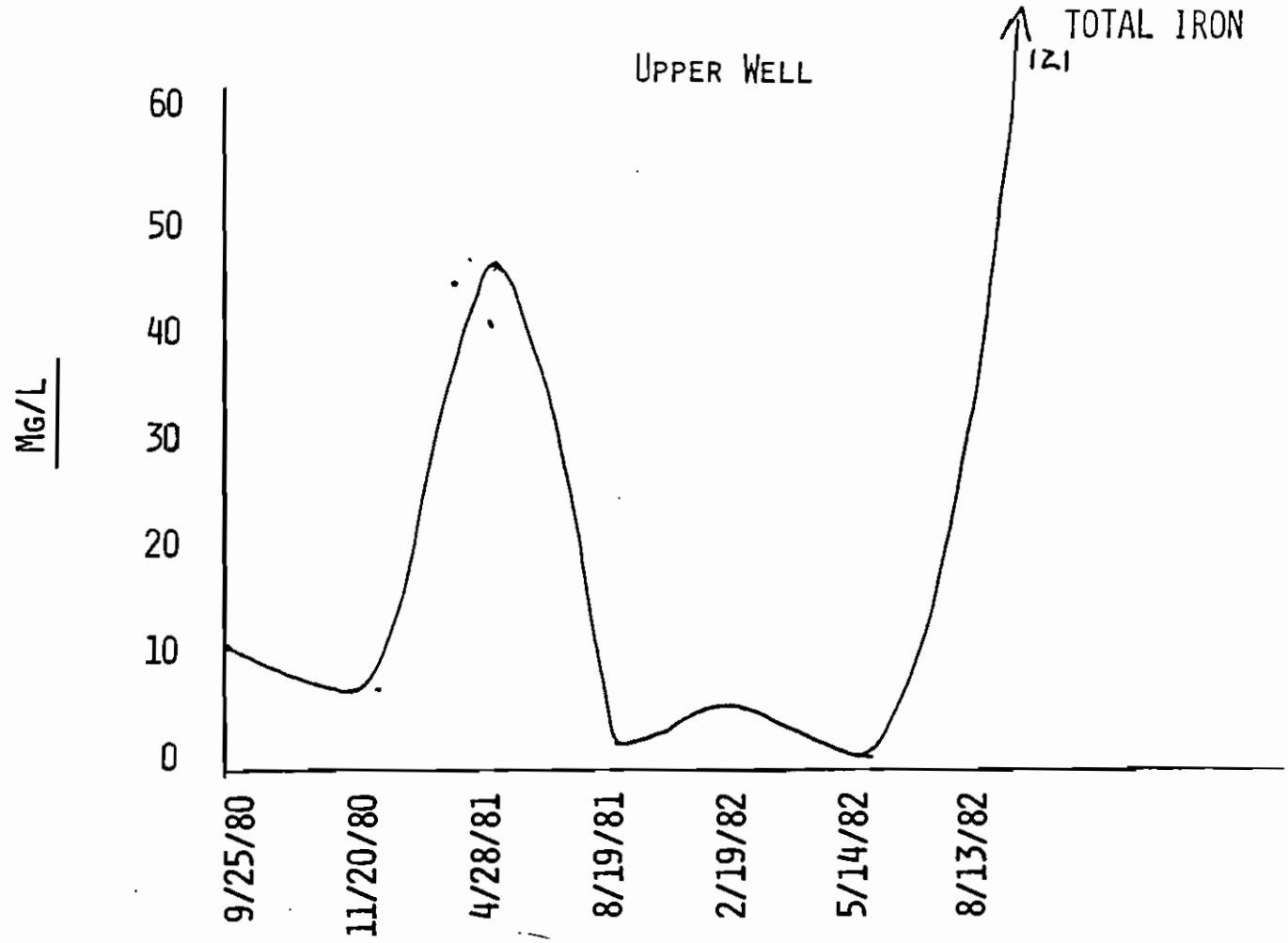
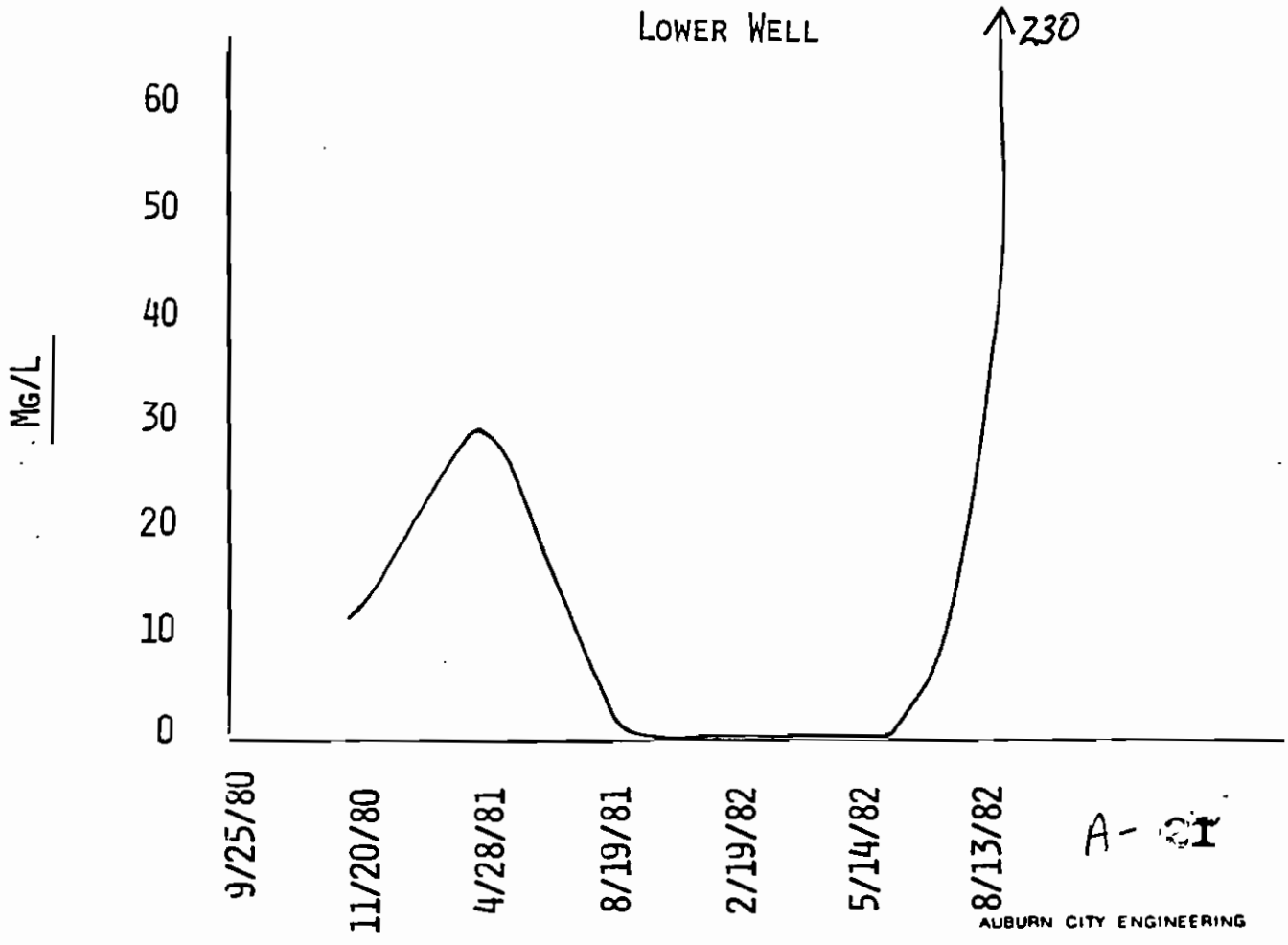
AUBURN CITY ENGINEERING





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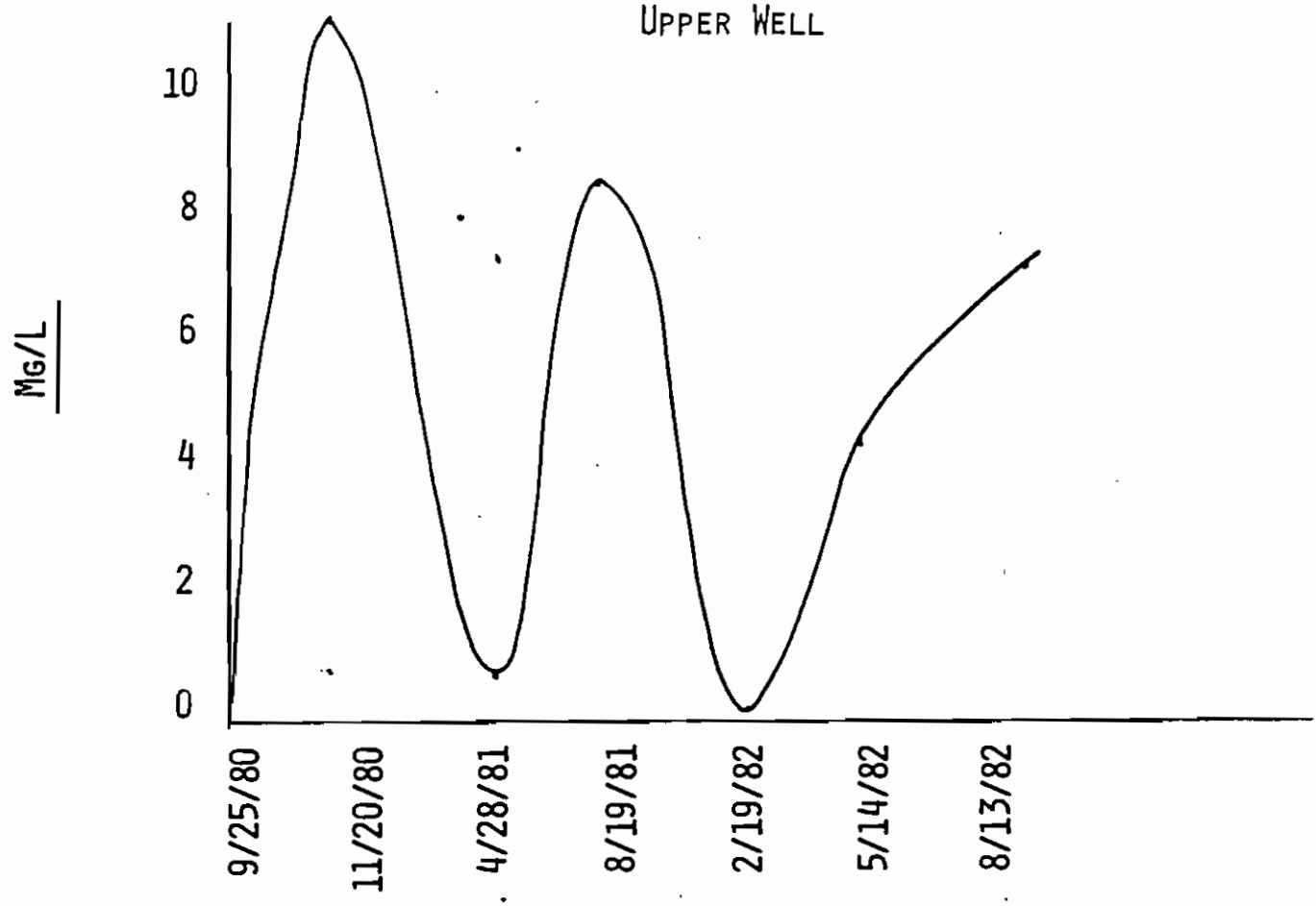
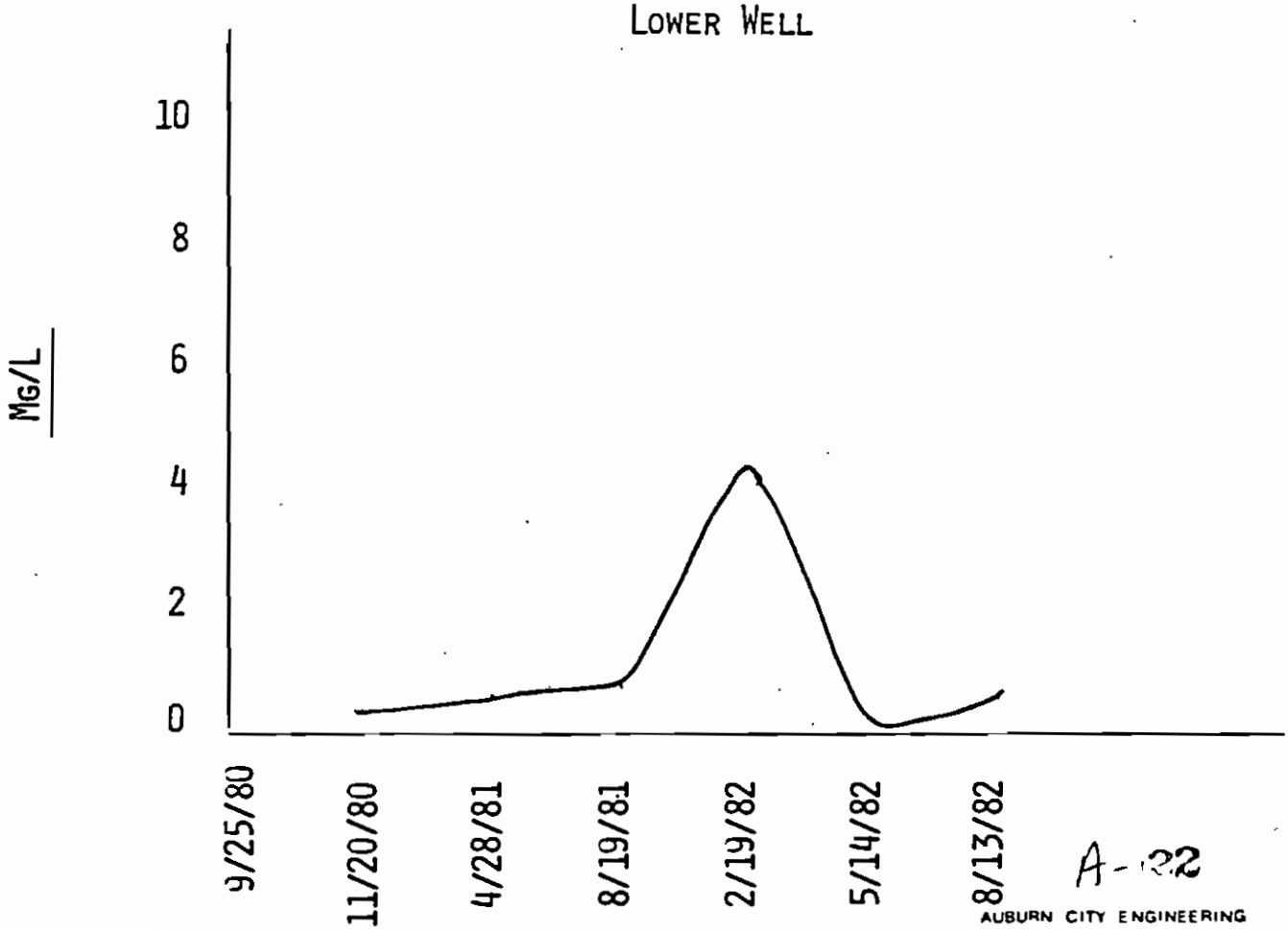
AUBURN CITY ENGINEERING

TOTAL ZINC





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AUBURN CITY ENGINEERING

New York State Department of Environmental Conservation

Region 7, Environmental Quality Office
7481 Henry Clay Boulevard
Liverpool, NY 13088

Peter A. A. Berle,
Commissioner

July 31, 1978

Mr. Michael D. O'Neill, P.E.
City Engineer
City of Auburn
City Hall
Auburn, NY 13021

Re: Facility No. Y06S01
Permit No. 1550

Dear Mr. O'Neill:

A permit for the operation of the Auburn Sanitary Landfill is enclosed. This permit will expire on August 1, 1981.

Please take note of the conditions on the permit and contact us if you have any questions.

Very truly yours,

Patrick M Snyder

Patrick M. Snyder
Assistant Solid Waste Engineer

Enc.

(8-74)(77) NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

PERMIT

Under the Environmental Conservation Law, Article 27, Title 7, Part 360

PERMIT NO. 1550

EXPIRATION DATE 8/1/81

Y06S01

☐ CONSTRUCTION ☒ INITIAL ISSUE ☐ REISSUANCE

☒ OPERATION ☐ RENEWAL ☐ MODIFICATION

ISSUED TO	ADDRESS OF PERMITTEE	TELEPHONE NO.
y of Auburn	Memorial City Hall, Auburn, NY 13021	315-252-9531

LOCATION OF PROJECT Town	County	Environmental Conservation Regional Office
Auburn	Cayuga	7

DESCRIPTION OF PROJECT	ON-SITE SUPERVISOR
anitary Landfill	Mr. Gordon Sage

GENERAL CONDITIONS

1. The permittee shall file in the office of the Environmental Conservation Region specified above, a notice on intention to commence work at least 48 hours in advance of the time of commencement and shall also notify said office promptly in writing of the completion of the work.
2. The permitted work shall be subject to inspection by an authorized representative of the Department of Environmental Conservation who may order the work suspended if the public interest so requires.
3. As a condition of the issuance of this permit, the applicant has accepted expressly, by the execution of the application, the full legal responsibility for all damages, direct or indirect, of whatever nature, and by whomever suffered, arising out of the project described herein and has agreed to indemnify and save harmless the State from suits, actions, damages and costs of every name and description resulting from the said project.
4. All work carried out under this permit shall conform to the approved plans and specifications. Any amendments must be approved by the Department of Environmental Conservation prior to their implementation.
5. The permittee is responsible for obtaining any other permits, approvals, easements and rights-of-way which may be required for this project.
6. By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with Part 360 and the special conditions. Any variances granted by the Department of Environmental Conservation to Part 360 must be in writing and attached hereto.

SPECIAL CONDITIONS

No industrial waste is to be deposited except as to requirements in 6 NYCRR 364 - "Septic Tank Cleaner and Industricl Waste Collector Registration".

An annual report is to be submitted to the Region 7 D.E.C. office showing: volume or weight processed or handled (for a landfill - remaining capacity), and data showing compliance with permit conditions.

No waste is to be placed near intermittent stream in the center of the landfill.

Access to the Auburn City landfill shall be permitted only when attendant is on duty. No exceptions to this condition may be made.

A-24

DATE	ISSUING OFFICER	SIGNATURE
3/17/3	Raymond F. Bell, P.E.	X Raymond F. Bell

PERMITTEE COPY

NOTICE OF PERMIT

for:

A-25

[ ]	CONSTRUCTION	[xx]	INITIAL ISSUE	[ ]	REISSUANCE
[xx]	OPERATION	[ ]	RENEWAL	[ ]	MODIFICATION

has been issued to: CITY OF AUBURN

address: MEMORIAL CITY HALL - AUBURN, NY 13021

for a project described as: SANITARY LANDFILL

under the Environmental Conservation Law,
Article 27, Title 5, Part 360 (Solid Waste Management Facilities)

NOTE:

- This Notice of Permit must be posted on the project site in such a manner that it is protected from weather and is in a location readily visible to the public.
- A copy of the Permit with the general and special conditions noted thereon will be shown to anyone upon request.

Raymond F. Bell, P.E. Raymond F Bell
Issuing Officer

7481 Henry Clay Boulevard, Liverpool, NY 13088
Address

1550	8/1/78	8/1/81
Permit No.	Issue Date	Expiration Date

New York State
Department of Environmental Conservation

47-12-2 (8/77)

DATE APR 01
COPY TO: B.C FORD
F. DEORIO

file copy

New York State Department of Environmental Conservation
Region 7, Environmental Quality Office
7481 Henry Clay Boulevard, Liverpool, New York 13088

(315) 473-8311

Robert F. Flacke
Commissioner

April 23, 1981

Mr. Michael O'Neill, P.E.
City Engineer
Memorial City Hall
Auburn, New York 13021

RECEIVED
APR 29 1981
CITY ENGINEER'S OFFICE
CITY OF AUBURN, N.Y.

and

Mr. Joseph Daloia
Chief Operator
Auburn Sewage Treatment Plant
Memorial City Hall
Auburn, New York 13021

Gentlemen:

This letter is to inform you that the DEC is authorizing you to proceed with the proposed sludge composting project on a conditional basis. The extent of the project will be limited to approximately 35% of the sludge generated at the Auburn Sewage Treatment Plant for one year.

As per recent conversations between yourselves and Mr. Suozzo of my staff, the program will be administered by the sewage treatment plant and will, therefore, be regulated under the City's discharge permit. The composting will therefore be subject to the same liability as any other treatment process with inadequate operation resulting in a loss of O&M aid monies. Adequate operation will be judged by the technical and procedural conditions listed on the attached pages.

Aside from the technical conditions, the City will be required to appoint one individual to be responsible for records, process operation and meeting with the DEC and Health Department on a monthly basis. The first such meeting will be after the pad construction is complete and before the composting process is started.

As stated previously, attached to this transmittal are the agreed upon procedures and other requirements that the process will be judged by.

If you should have any questions on these conditions or procedures, please contact Mr. Suozzo or myself as soon as possible to resolve any problems. It is anticipated that an approximate date to start the pilot study would be May 1, 1981.

Very truly yours,

Leland C. Flocke

Leland C. Flocke, P.E.
Regional Water Pollution Control Engineer

Att.

PROCEDURES AND CONDITIONS

Moisture Content of Sludge

All sludge to be composted shall be a minimum of 22% solids.

Mixing of Sludge & Bulking Agent

As mixing is one of the most important parameters for a successful compost operation, the following method was selected for the Auburn project.

a. Two parts by volume of wood chips are to be mixed with one part of sludge.

b. The volume will be controlled by laying down one volume of wood chips with a volume of sludge laid on top followed by the final layer of wood chips.

c. With the volume controlled the mixture will be loaded into a manure spreader and ejected onto the pile.

Pile Construction

Pile construction will be done in accordance with the EPA - "Process Design Manual, Sludge Treatment and Disposal". Briefly, the piles will be approximately 10-15 feet wide x 65 feet long x 10 feet high. The piles will be constructed next to the mixing portion of the blacktop pad and any individual pile construction will be completed within 48 hours.

Each pile will be covered with six inches of wood chips or finished compost. The filter pile shall be constructed of the same material.

Two air headers shall be installed 2½ feet off each side of the center of the pile with a bed of wood chips one foot to each side of the header. Additional headers may be required if initial results dictate. Aside from the % solids to be performed during construction a COD and TKN will be determined for the raw sludge.

Blower Size and Control

Blowers should be at least 1/3 HP 350 CFM with timer control. A stand-by blower shall always be kept on-site.

Process Control

The following information will be used for process control and will be recorded for each pile with the frequency listed below:

pH	Weekly
Temperature	Twice Daily
% Oxygen	Twice Daily
Total Coliform	Weekly

The location for monitoring points for the daily temperature and oxygen requirements are shown on 12-17 of the EPA - "Process Design Manual".

Prior to commencement of the program a log sheet will be developed for each pile. The log will include the process control information and the required monitoring which will be discussed in a latter section.

It is anticipated that each pile will take approximately 20-23 days to ~~cure~~. STABILIZE.

Pile Destruction and Curing

After indications that the composting process has run its course the pile should be dismantled, screened, if necessary, and taken to the curing area for 30 days.

The final product will then be mixed on a 50/50 basis with current landfill material and used for cover. Before any material is mixed the City should notify Mr. Charles Branagh for a suitability determination.

Required Monitoring

As the proposed project will run approximately on a three week cycle, one week compost and two weeks incineration, heavy metal and toxic analysis will be geared to pile group destruction. The following table depicts the required monitoring:

Parameter	Frequency
Nutrients	
TKN as (N)	1/Pile Group
Phosphate (Total)	1/Pile Group
Potassium	1/Pile Group
Ammonia @ N	1/Pile Group
Metals * Total (Dry Wt.)	
Cadmium	1/Pile Group
Chromium	1/Pile Group
Copper	1/Pile Group
Lead	1/Pile Group
Mercury	1/Pile Group
Nickel	1/Pile Group
Zinc	1/Pile Group

*Monitoring may be reduced after first few results are obtained.

Organics *	
PCB	1/Pile Group
TOX	1/Pile Group
RCRA Extraction	1/Six Months

All monitoring data is to be included on the log sheet discussed in the process control section. Complete log sheets shall be distributed by the City to both the DEC and the Cayuga County Health Department

Runoff & Condensate Handling

Both the condensate and area runoff shall be collected in a lagoon designed to handle a 1" rainfall over the blacktop area. The lagoons shall be emptied by the on-site vac-all unit. If at any time the number of vac-all trips become a hinderance to the process, the DEC will require a direct tie-in to the existing primaries.

The following monitoring will be required on the condensate:

Parameter	Frequency
BOD_5	1/Week
SS	1/Week
COD	1/Week
NH_3	1/Week
TKN	1/Week
Phosphorus	1/Week

Project Termination

If for whatever reason the DEC determines the project should be terminated, the City will cease all new pile construction and if deemed necessary, the existing piles will be dismantled. Final adequate disposal of existing piles will be determined by the DEC.

Region 7, Environmental Quality Office
7481 Henry Clay Boulevard
Liverpool, NY 13088

December 14, 1981

Mr. Michael D. O'Neill
City Engineer
City of Auburn
Memorial City Hall
Auburn, NY 13021

Re: Composted Sludge for Use as an Admixture for Cover at the City Landfill

Dear Mr. O'Neill:

Attached are guidelines that must be followed when using your compost for the subject purpose. Please note the monitoring and reporting requirements.

Very truly yours,

Charles J. Branagh, P.E.
Acting Regional Solid Waste Engineer

attach.

cc: Mr. Daloia
Mr. Clifford
Mr. Brazee
Mr. J. Suozzo
Mr. Flocke

CJB/lms

Case II: (Land reclamation)

Appropriate conditions for a 360 permit to compost sludge for use as described under Case II would include:

1. The compost must not be made available to the general public.

2. The compost shall all be used for a specific purpose, including publicly owned lands dedicated to non-agricultural purposes such as a golf course, industrial park, rights-of-way, land reclamation, to establish final vegetative cover on a landfill or other similar non-agricultural purposes.

3. Sludge, to be composted, must be sampled and monitored according to procedures outlined in Section i of the "Solid Waste Management Facilities Guidelines" on land application (Section 7.1). Sludges are considered to be suitable for composting if their pollutant concentrations do not exceed the following values:

Parameter	Maximum Concentration, ppm dry weight basis
Mercury (Hg)	10
Cadmium (Cd)	25
Nickel (Ni)	200
Copper (Cu)	1000
Lead (Pb)	1000
Chromium (Cr)	1000
Zinc (Zn)	2500
Total PCBs	10

i. Monitoring and Reporting

(1) Sludge Monitoring

Quality control of sludge is dependent on the period of operation, size of POTW, and industrial input to POTW. The analysis should include as a minimum:

a) Heavy metals (dry weight basis)
Cd, Hg, Pb, Cu, Zn, Ni and Total Cr.

b) Persistent organics (dry weight basis)
PCBs and total organic halogens (TOX)

c) Nitrogen Series
TKN, ammonia, nitrate and nitrite

d) Total solids content (percent)

e) Total Phosphorus (P)

f) Total Potassium (K)

g) pH

Other analysis may be required, depending on the type of industrial contribution to the POTW.

Sampling and analysis should be in accordance with the procedures defined by USEPA (Ref. 13).

All analysis must be performed by a laboratory approved by the New York State Health Department.

Frequency of analysis would be dependent on the project scope.

Large Publicly Owned Sewage Treatment Works (Over 5 MGD)

- monthly analysis of a week's composite of daily samples.

Medium Sized Sewage Treatment Works (1-5 MGD)

- quarterly analysis of a week's composite.

Small Sewage Treatment Works (under 1 MGD)

- semi-annual analysis of a week's composite.

7-1(13)

Sampling of sludge may be keyed into digester loading and discharge. Analysis of Nitrogen series should be run on grab samples only or on samples that are frozen throughout the compositing process due to the dynamic nature of nitrogen's chemistry.

Calocerinos & Spina
CONSULTING ENGINEERS
ENVIRONMENTAL LABORATORY
1020 Seventh North Street, Liverpool, NY 13088 · (315) 457-6711

To: Auburn Sewage Treatment Plant
Memorial City Hall
24 South Street
Auburn, New York 13021

Date: March 16, 1982

File No. 155.001

Attention: Mr. Joseph DeLoia

Sample No. 355

RECEIVED
MAR 19 1982
CITY ENGINEER'S OFFICE
CITY OF AUBURN, N.Y.

ANALYSIS REPORT

Source: Auburn S.T.P. | Date Collected: 2/16-18/82 | Date Received: 2/19/82

Location: Compost Sludge | Time Collected: N/A | Sample Type: Composite

Parameter	Result	MCL PPM
Total Residue on Evaporation	19.2 %	
Total Kjl. Nitrogen (as N)	5400. mg/kg	
Nitrite (as N)	LT 0.02 mg/kg	
Nitrate (as N)	LT 0.04 mg/kg	
Ammonia (as N)	630. mg/kg	
Total Phosphate (as P)	1340. mg/kg	
Total Cadmium	1.3 mg/kg	25
Chromium-Total	36.0 mg/kg	1000
Total Copper	79.0 mg/kg	1000
Total Lead	83.4 mg/kg	100
Total Mercury	0.17 mg/kg	10
Total Nickel	25.0 mg/kg	20
Total Zinc	197. mg/kg	250
pH	7.3	
Potassium	550. mg/kg	

All analyses were conducted using EPA "Methods for Chemical Analysis of Water and Wastes (1979)" or "Standard Methods (15th Edition)".

A-34

Calocerinos & Spina
CONSULTING ENGINEERS
ENVIRONMENTAL LABORATORY
1020 Seventh North Street, Liverpool, NY 13088 · (315) 457-6711

To: Auburn Seage Treatment Plant
Memorial City Hall
24 South Street
Auburn, New York 13021

Date: March 16, 1982

File No. 155.001

Attention: Mr. Joseph DeLoia

Sample No. 355

Polychlorinated Biphenyls

ANALYSIS REPORT

PCB ANALYSIS

Arochlor	Result
1016/1242	LT 50. ug/kg
1248	LT 50. ug/kg
1254	LT 50. ug/kg
1260	LT 50. ug/kg

Analysis conducted as per EPA Method #608 which utilizes a solvent extraction followed by Electron Capture Detection.

Calocerinos & Spina
CONSULTING ENGINEERS
ENVIRONMENTAL LABORATORY
1020 Seventh North Street, Liverpool, NY 13088 · (315) 457-6711

Auburn Sewage Treatment Plant
Memorial City Hall
24 South Street
Auburn, New York 13021

Date: March 16, 1982

File No. 155.001

Attention: Mr. Joseph DeLoia

Sample No. 355

Total Organic Halogen Scan (TOX)

ANALYSIS REPORT

Parameter	Result
Total Organic Halogen Scan * (TOX)	LT 50. ug/kg

Total Peak Area verses Lindane

Analysis conducted utilizing a solvent extraction followed by detection with a Hall Halide Specific Electrolytic Conductivity Detector.

Calocerinos & Spina
CONSULTING ENGINEERS
ENVIRONMENTAL LABORATORY
1020 Seventh North Street, Liverpool, NY 13088 · (315) 457-6711

To: City of Auburn Sanitation Department
285 North Division Street
Auburn, New York 13021

Date: May 14, 1982

File No. 155.002

Attention: Mr. James Breeze

Sample No. 1057

ANALYSIS REPORT

ource	Auburn Sanitation Dept.	Date Collected	N/A	Date Received	4/30/82
ocation	Landfill Leachate	Time Collected	N/A	Sample Type	Grab

Parameter	Result	Parameter	Result
otal Residue on Evaporation	9708. mg/l	Iron-Sol.	20.0 mg/l
Total Suspended Solids	2760. mg/l	Lead-Sol.	LT 0.02 mg/l
OC-Sol.	85.0 mg/l	Manganese-Sol.	8.16 mg/l
enol-Sol.	4.25 mg/l	Mercury-Sol.	LT 0.002 mg/l
Alkalinity-Sol.	5840. mg/l	Zinc-Sol.	0.16 mg/l
ardness-Sol.	N/A	Conductivity-Sol.	14000 umhos/cm
loride-Sol.	1135. mg/l	pH	7.8
Arsenic-Sol.	LT 0.002 mg/l	Total Dissolved Solids	6948. mg/l
dmium-Sol.	LT 0.01 mg/l	Selenium-Sol.	LT 0.002 mg/l
hromium-Hex. Sol.	LT 0.004 mg/l	Silver-Sol.	LT 0.01 mg/l
opper-Sol.	LT 0.01 mg/l		

l analyses were conducted using EPA ethods for Chemical Analysis of Water nd Wastes (1979)" or "Standard Methods 5th Edition)".

OBSERVATION WELL INSTALLATION

LANDFILL

YORK AND NORTH DIVISION STREETS

AUBURN, NEW YORK

parratt wolff inc
FISHER RD., EAST SYRACUSE, N Y 13057
TELEPHONE AREA CODE 315/437 1429

July 6, 1982

City of Auburn
Memorial City Hall
24 South Street
Auburn, New York 13021

Attention: Mr. Michael O'Neil
City Engineer

Re: 8283
Observation Well
Landfill - York and North
Division Streets
Auburn, New York

Gentlemen:

Enclosed is the log of an observation well installed for you for the above project.

Several similar samples from this boring will be combined and a permeability test made of the material.

The boring was made at a point located by you. Installation of the well was done in accordance with current New York State Department of Environmental Conservation specifications.

The borings reveals a hard sandy silt to a depth of ten feet below existing ground surface. Below this material is a very dense gray glacial till, consisting of a silt matrix with embedded gravel and sand. The hole was continued to thirty five feet in the till.

The well was dry on completion.

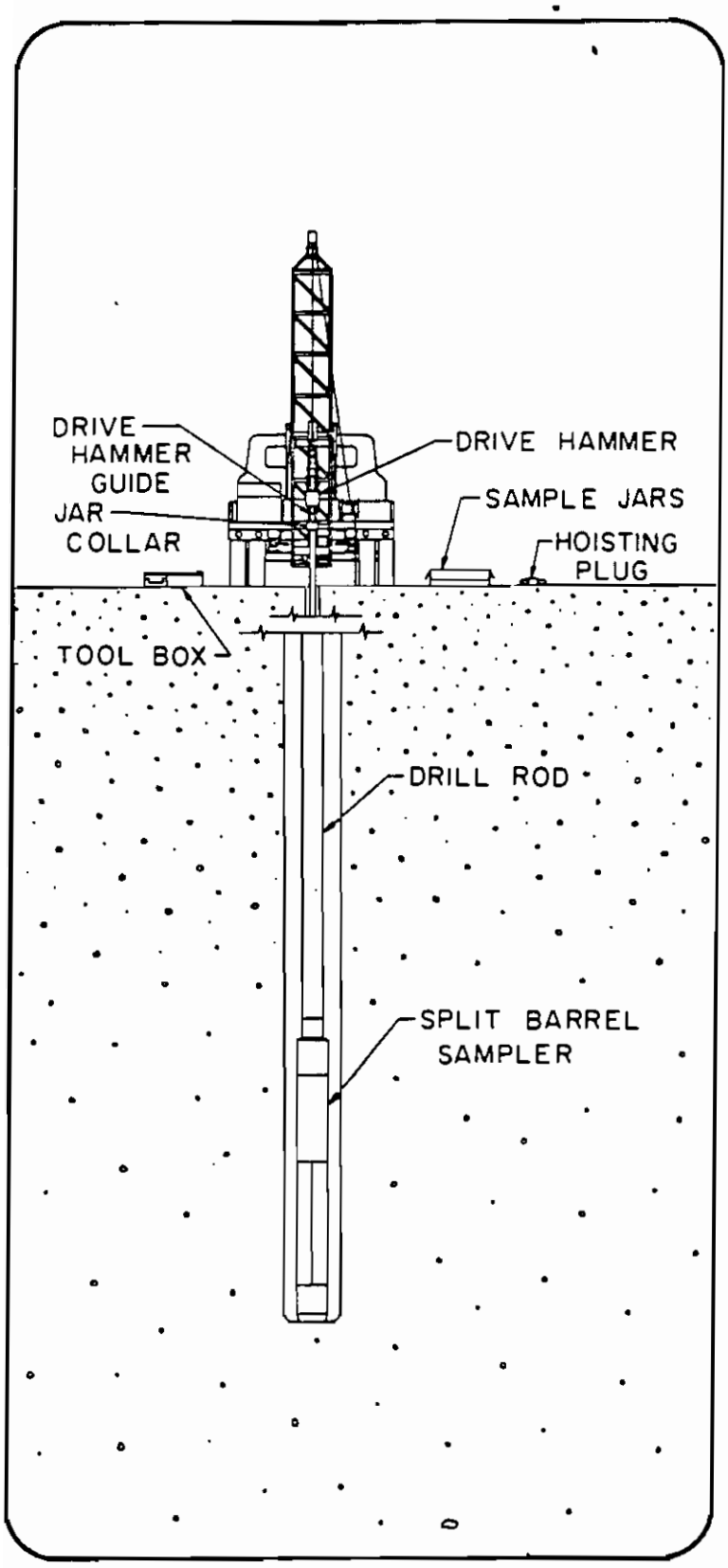
Thank you for this opportunity to work with you.

Very truly yours,

PARRATT - WOLFF, INC.

Steffen Wolff
SW/lc
encs:

parratt wolff inc
FISHER RD., EAST SYRACUSE, N.Y. 13057
TELEPHONE AREA CODE 315/437-1429



Split barrel sampling

The following excerpts are from "Standard Method for penetration test and split-barrel sampling of soils."[1] (ASTM designation: D-1586-67 AASHO Designation: T-206-70.)

1. Scope

1.1 This method describes a procedure for using a split-barrel sampler to obtain respresentative samples of soil for identification purposes and other laboratory tests, and to obtain a measure of the resistance of the soil to penetration of the sampler.

2. Apparatus

2.1 Drilling Equipment – Any drilling equipment shall be acceptable that provides a reasonably clean hole before insertion of the sampler to ensure that the penetration test is performed on undisturbed soil, and that will permit the driving of the sampler to obtain the sample and penetration record in accordance with the procedure described in 3. Procedure. To avoid "whips" under the blows of the hammer, it is recommended that the drill rod have stiffness equal to or greater than the A-rod. An "A" rod is a hollow drill rod or "steel" having an outside diameter of 1-5/8 in. or 41.2 mm and an inside diameter of 1-1/8 in. or 28.5 mm, through which the rotary motion of drilling is transferred from the drilling motor to the cutting bit. A stiffer drill rod is suggested for holes deeper than 50 ft (15m). The hole shall be limited in diameter to between 2-1/4 and 6 in. (57.2 and 152mm).

2.2 Split-Barrel Sampler – The sampler shall be constructed with the dimensions indicated (in Fig. 1.) The drive shoe shall be of hardened steel and shall be replaced or repaired when it becomes dented or distorted. The coupling head shall have four 1/2-in. (12.7-mm) (minimum diameter) vent ports and shall contain a ball check valve. If sizes other than the 2-in. (50.8-mm) sampler are permitted, the size shall be conspicuously noted on all penetration records.

2.3 Drive Weight Assembly – The assembly shall consist of a 140-lb (63.5-kg) weight, a driving head, and a guide permitting a free fall of 30 in. (0.76 m). Special precautions shall be taken to ensure that the energy of the falling weight is not reduced by friction between the drive weight and the guides.

2.4 Accessory Equipment – Labels, data sheets, sample jars, paraffin, and other necessary supplies should accompany the sampling equipment.

SOIL SAMPLING - METHODS

parratt wolff inc
FISHER RD EAST SYRACUSE N Y 13057
TELEPHONE AREA CODE 315/437 1429

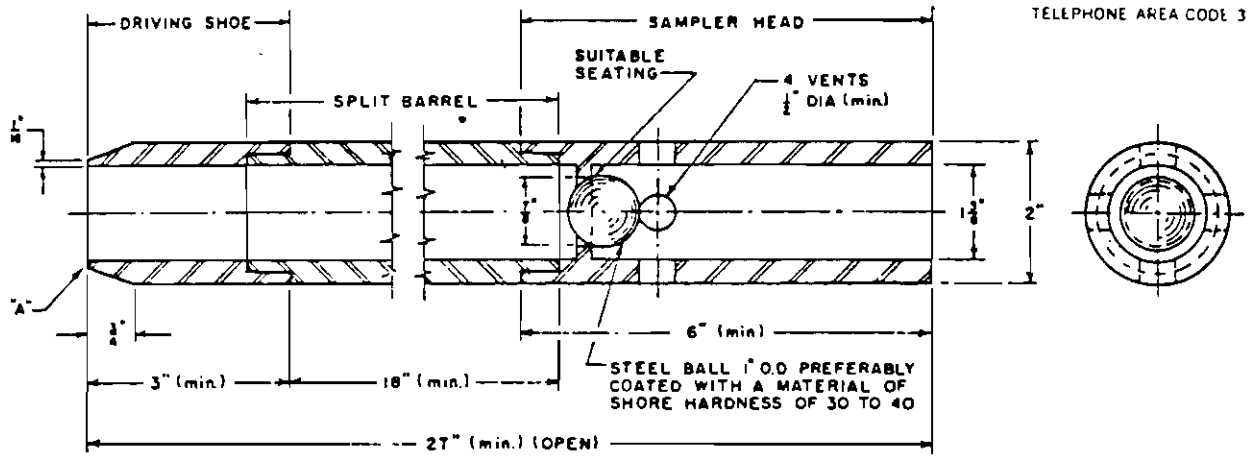


Table of Metric Equivalents.

In.	Mm	Cm	In.	Mm	Cm
1/16 (16 gage)	1.5	...	2	...	5.08
1/2	12.7	...	3	...	7.62
3/4	19.0	1.90	6	...	15.24
7/8	22.2	2.22	18	...	45.72
1-3/8	34.9	3.49	27	68.58	
1-1/2	38.1	3.81			

Fig. 1 – Standard Split Barrel Sampler Assembly

Note 1 – Split barrel may be 1-1/2 in. inside diameter provided it contains a liner of 16-gage wall thickness.

Note 2 – Core retainers in the driving shoe to prevent loss of sample are permitted.

Note 3 – The corners at A may be slightly rounded.

3. Procedure

3.1 Clear out the hole to sampling elevation using equipment that will ensure that the material to be sampled is not disturbed by the operation. In saturated sands and silts withdraw the drill bit slowly to prevent loosening of the soil around the hole. Maintain the water level in the hole at or above ground water level.

3.2 In no case shall a bottom-discharge bit be permitted. (Side-discharge bits are permissible.) The process of jetting through an open-tube sampler and then sampling when the desired depth is reached shall not be permitted. Where casing is used, it may not be driven below sampling elevation. Record any loss of circulation or excess pressure in drilling fluid during advancing of holes.

3.3 With the sampler resting on the bottom of the hole, drive the sampler with blows from the 140-lb (63.5 kg) hammer falling 30 in. (0.76 m) until either 18 in. (0.45 m) have been penetrated or 100 blows have been applied.

3.4 Repeat this operation at intervals not longer than 5 ft (1.5 m) in homogeneous strata and at every change of strata.

3.5 Record the number of blows required to effect each 6 in. (0.15 m) of penetration or fractions thereof. The first 6 in. (0.15 m) is considered to be a seating drive. The number of blows required for the second and third 6 in. (0.15 m) of penetration added is termed the penetration resistance, N. If the sampler is driven less than 18 in. (0.45 m), the penetration resistance is that for the last 1 ft (0.30 m) of penetration (if less than 1 ft (0.30 m) is penetrated, the logs shall state the number of blows and the fraction of 1 ft (0.30 m) penetrated).

3.6 Bring the sampler to the surface and open. Describe carefully typical samples of soils recovered as to composition, structure, consistency, color, and condition; then put into jars without ramming. Seal them with wax or hermetically seal to prevent evaporation of the soil moisture. Affix labels to the jar or make notations on the covers (or both) bearing job designation, boring number, sample number, depth penetration record, and length of recovery. Protect samples against extreme temperature changes.

4. Report

4.1 Data obtained in borings shall be recorded in the field and shall include the following:

4.1.1 Name and location of job,

4.1.2 Date of boring – start, finish,

4.1.3 Boring number and coordinate, if available,

4.1.4 Surface elevation, if available,

4.1.5 Sample number and depth,

4.1.6 Method of advancing sampler, penetration and recovery lengths,

4.1.7 Type and size of sampler,

4.1.8 Description of soil,

4.1.9 Thickness of layer,

4.1.10 Depth to water surface; to loss of water; to artesian head; time at which reading was made,

4.1.11 Type and make of machine,

4.1.12 Size of casing, depth of cased hole,

4.1.13 Number of blows per 6 in. (0.15 m)

4.1.14 Names of crewmen, and

4.1.15 Weather, remarks.

[1]Under the standardization procedure of the Society, this method is under the jurisdiction of the ASTM Committee D-18 on Soil and Rock for Engineering Purposes. A list of members may be found in the ASTM Year Book.

Current edition accepted October 20, 1967. Originally issued, 1958. Replaces D-1586-64T.

parratt wolff inc
FISHER RD EAST SYRACUSE, N Y 13057
TELEPHONE AREA CODE 315/437 1429

GENERAL NOTES

1. The soil logs, notes and other test data shown are the results of interpretations made by representatives of Parratt-Wolff Inc. from personal observations made during the exploration period of samples of subsurface materials recovered during exploration and records of exploration as prepared by the drill operator.

2. Explanation of the classifications and terms:

a. Bedrock - Natural solid mineral matter occurring in great thickness and extent in its natural location. It is classified according to geological type and structure (joints, bedding, etc.) and described as solid, weathered, broken, fragmented or decomposed depending on its condition.

b. Soils - Sediments or other unconsolidated accumulations of particles produced by the physical and chemical disintegration of rocks and which may or may not contain organic matter.

PENETRATION RESISTANCE

COHESIONLESS SOILS

Blows Per Ft.	Relative Density
0 to 4	Very Loose
4 to 10	Loose
10 to 30	Medium
30 to 50	Dense
Over 50	Very Dense

COHESIVE SOILS

Blows Per Ft.	Consistency
0 to 2	Very Soft
2 to 4	Soft
4 to 8	Medium
8 to 15	Stiff
15 to 30	Very Stiff
Over 30	Hard

Size Component Terms

Boulder	Larger than 8 inches
Cobble or Small Stone . .	8 inches to 3 inches
Gravel - coarse	3 inches to 3/4 inch
medium	3/4 inch to 4.76 mm
Sand - coarse	4.76 mm to 2.00 mm (#10 sieve)
medium	2.00 mm to 0.42 mm (#40 sieve)
fine	0.42 mm to 0.074 mm (#200 sieve)
Silt and Clay	Finer than 0.074 mm

Proportion by Weight

Major component is shown with all letters capitalized.

Minor component percentage terms of total sample are:

and . . .	40 to 50 percent
some . . .	20 to 40 percent
little . . .	10 to 20 percent
trace . . .	1 to 10 percent

c. Gradation Terms - The terms coarse, medium and fine are used to describe gradation of Sonds and Gravel.

d. The terms used to describe the various soil components and proportions are arrived at by visual estimates of the recovered soil samples. Other terms are used when the recovered samples are not truly representative of the natural materials, such as, soil containing numerous cobbles and boulders which cannot be sampled, thinly stratified soils, organic soils, and fills.

e. Ground Water - The measurement was made during exploration work or immediately after completion, unless otherwise noted. The depth recorded is influenced by exploration methods, the soil type and weather conditions during exploration. Where no water was found it is so indicated. It is anticipated that the ground water will rise during periods of wet weather. In addition, perched ground water above the water levels indicated (or above the bottom of the hole where no ground water is indicated) may be encountered at changes in soil strata or top of rock.

Parsons Wolff Inc

TEST BORING LOG

FISHER ROAD
EAST SYRACUSE, N.Y. 13057

PROJECT: Observation Well
LOCATION: Landfill - York and North Division Streets, Auburn, New York
DATE STARTED: 7/1/82 DATE COMPLETED: 7/1/82

HOLE NO. A
SURF. EL.
JOB NO. 8283
GROUND WATER DEPTH
WHILE DRILLING Dry
BEFORE CASING REMOVED Dry
AFTER CASING REMOVED Dry

N — NO. OF BLOWS TO DRIVE SAMPLER 12" W/140# HAMMER FALLING 30" — ASTM D-1586, STANDARD PENETRATION TEST

C — NO. OF BLOWS TO DRIVE CASING 12" W/ # HAMMER FALLING
"/OR — % CORE RECOVERY

CASING TYPE - HOLLOW STEM AUGER

SHEET 1 OF 1

DEPTH	SAMPLE DEPTH	SAMPLE NUMBER	C	SAMPLE DRIVE RECORD PER 6"	N	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
	1.0'-	1		6/7		Brown moist very stiff to hard SILT, trace clay, trace fine sand, trace fine to medium gravel	
	2.5'			10	17		
5.0							
	5.0'-	2		6/15			
	6.5'			19	34		
10.0							10.5'
	10.0'-	3		15/38		Gray dry hard SILT, trace clay with embedded fine to coarse gravel and fine to coarse sand	
	11.5'			51	89		
15.0							
	15.0'-	4		38/48			
	16.5'			53	101		
20.0							
	20.0'-	5		75			
	20.5'						
25.0						Note: Installed 4" P.V.C. slotted screen 34.0' to 24.0', 4" P.V.C. riser 24.0' to +1.0'. Sand pack from 35.0' to 6.0', bentonite and concrete seal from 6.0' to surface. Installed locking steel cover.	
	25.0'-	6		100			
	25.5'						
30.0							
	30.0'-	7		75			
	30.5'						
35.0							
	35.0'-	8		50-.3'		Bottom of Boring	35.3'
	35.3'						
40.0							

parratt wolff inc
FISHER RD. EAST SYRACUSE, N.Y. 13057
TELEPHONE AREA CODE 315/437-1429

July 26, 1982

City of Auburn
Memorial City Hall
24 South Street
Auburn, New York 13021

Attention: Mr. Michael O'Neill
City Engineer

Re: L-8248
Proposed Landfill
North Division Street
Auburn, New York

Gentlemen:

Following are the results of a permeability test performed on combined test boring jar samples from the above project:

PERMEABILITY TEST

Description	Compaction Effort	Relative Permeability
Well "A" - Samples 4,5,6, 6A,7,7A and 8	Compacted under modified proctor ASTM D-1557 At Natural Moisture Content	Impervious (less than 10^{-7}cm/sec)

Thank you for this opportunity to work with you.

Very truly yours,

PARRATT - WOLFF, INC.

Donald P. Blasland

Donald P. Blasland
Assistant Laboratory Manager
DPB/lnc
enc:

parrott wolff inc
EAST SYRACUSE, N.Y. 13057

TEST BORING LOG

PROJECT Auburn Landfill — HOLE NO. OW-#1

LOCATION Auburn, New York — SURF. ELEV.

DATE STARTED 8/15/77 • COMPLETED 8/15/77 — JOB NO. 77114

GROUND WATER Dry after completing installation

N= NO. OF BLOWS TO DRIVE 2" SAMPLER 6" W/140 LB. WEIGHT FALLING 30"

C= NO. OF BLOWS TO DRIVE CASING 12" W/300 LB. WEIGHT FALLING 24"

SHEET 1 OF 1

BORING MADE WITH HOLLOW STEM AUGER CASING

DEPTH	C.	N.	SAMPLE NO.	SAMPLE DEPTH	DESCRIPTION OF MATERIAL
					Brown dry fine SAND and fine to medium GRAVEL
5.0					
					7.0'
					Brown moist fine SAND, SILT, fine to coarse GRAVEL and BOULDERS
10.0					
					12.0'
					Brown moist SILT
15.0					
					15.0'
					Gray moist SILT, some fine to coarse gravel
20.0					
25.0					
30.0					
					Bottom of Boring 30.0'
					Note: Installed 1¼" brass wellpoint and P.V.C. riser pipe on completion of boring.

A-45

DAILY REPORT

Owner's name Dept. of Sanitation

address Auburn, N. Y

Well location 285 N. Division St.

address Auburn, N. Y. 13021

Bill to c/o James Bruzee

Time & date started Feb 21 1980

Time & date finished

bit size 6 in total depth 27 ft

pipe used back GPM very little

material gravel shoe collar

FORMATION & OTHER INFORMATION

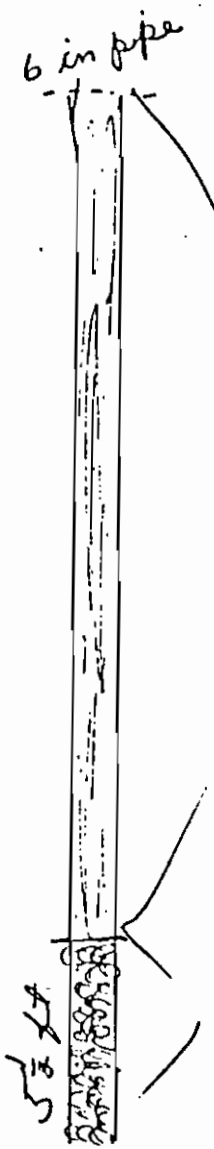
clay . 0 to 2½ ft.
Gravel 2½ ft to 27

Dick Washburn & John Moravec

Name of driller

Machine used # 3

Use other side for additional information



This is a miscellaneous land type consisting of highly variable or undifferentiated bottomland soils that are subject to frequent flooding. These soils are usually deep, range from well to very poorly drained, and vary in texture from silt loam to very gravelly or stony loam, and include rubble areas, all within short distances or within small areas. Reactions range from pH 5.0 to calcareous. Permeability of soil varies from moderate to rapid. Water available for plants from 1 to 3 inches per foot of root zone. Best suited to pasture, woodland or wildlife uses. Only a few small areas, usually garden plots, are used for crops.

L210-B-2 SeB Schoharie silt loam, 2-6% slopes

This is a deep, moderately well drained, gently sloping or undulating soil developed in lake deposited clays. The silt loam to heavy silt loam surface soil is friable to firm, becoming sticky when wet, and tends to clod. The silty clay to clay subsoil is very firm, sticky and plastic when wet, and slowly permeable. Roots occur mainly along structural cracks. Subsoil reaction ranges from pH 6.5 to calcareous. Water available for plants ranges from 1.3 to 2.0 inches per foot of root zone. This soil is slow to dry out. With good management, it is productive for many crops common to the county.

CeB (210-B-2, 213-B-2, 2110 & 2111) Cazenovia silt loam, 2-8% slopes

This is a deep, moderately well to well drained, gently sloping or undulating soil. The heavy silt loam surface soil is friable to firm, somewhat sticky when wet, and tends to clod. The silty clay loam subsoil is firm, dense, and contains cracks along which roots concentrate. Permeability is moderately slow. It is underlain by dense, slowly permeable, calcareous clay loam or loam glacial till at 30 to 40 inch depths. Subsoil reactions ranges from pH 6.5 to calcareous. Few roots extend below 4 foot depths. Water available for plants ranges from 1.4 to 2.1 inch per foot of root zone. Soil is highly productive under good management. Runoff is rapid and the erosion hazard is high on slopes over 5%.

OdA Odessa silt loam, 0 to 2% slopes III w

Woodland group 3 w

This is a deep but somewhat poorly drained, level soil developed in heavy lake-deposited clays. It is subject to seasonal wetness with short-time surface ponding. The heavy silt loam surface soil is slightly firm, becoming sticky when wet and tends to clod. The silty clay or clay loam subsoil is dense, very firm when moist, sticky and plastic when wet, and is slowly permeable. Subsoil reaction ranges from pH 6.5 to calcareous. Roots are limited mainly to the upper 2 feet of soil by seasonal wetness, unless artificially drained. Water available for plants ranges from 1.3 to 2.0 inches per foot of root zone. This soil is slow to dry out. Undrained, it is suited to short-season crops, hay, pasture or woodland. With adequate drainage, it is suited to many crops common to the county, especially shallow-rooted crops.

Mc (ML) Made land, sanitary landfill

This is a miscellaneous land type. It is man-made land consisting of dumps, uneven piles of waste rock from quarries, or very stony material from canal dredging, all of which is unsuitable for cropland. It can, however, be used for pasture, woodland or wildlife uses. Each area needs special on-site investigations to determine use, needs and treatments.

Page No. _____

CITY OF AUBURN

REFUSE STUDY

Company Name	Visible Permit (✓)	Vehicle/ License #	TYPE OF VEHICLE					Refuse Type	Origin	Estimated Cubic Yardage				
			Packer	Roll-off Container	Stake Body	Pickup Truck	Car	Industrial/ Residential		1	5	10	15	25

6-24-69

SANITATION FOREMAN

GENERAL STATEMENT OF DUTIES: Supervises and participates in municipal waste collection and disposal activities; does related work as required.

DISTINGUISHING FEATURES OF THE CLASS: Work involves responsibility for overseeing the efficient collection of ashes, trash, general refuse and garbage throughout the city and disposal at a landfill. Work is performed under general supervision but incumbent is expected to act with considerable independence in the routine operations of the work. Supervision is exercised over subordinate laborers and equipment operators.

EXAMPLES OF WORK: (Illustrative only)

Supervises and assigns men and equipment to collection routes;
Reassigns men among districts to maintain efficient operation;
Makes periodic inspections to see that refuse is collected on schedule and takes necessary measures to insure effective service;
Supervises landfill operations and plans new dumping sites;
Investigates complaints regarding the work of the collection service;
Instructs employees in care of equipment and proper work methods;
Keeps time records and prepares work reports;
Reports violations of Health and Fire Laws;
Confers with supervisor on need for special collections and other unusual problems;
Occasionally operates a truck or substitutes for crew men.

REQUIRED KNOWLEDGES, SKILLS AND ABILITIES: Good knowledge of the organization and methods of municipal refuse collection and disposal; good knowledge of modern garbage collection equipment and devices and ability to route trucks to achieve greatest efficiency; ability to lay out, direct, coordinate and supervise the work of collection crews; ability to establish and maintain effective working relationships with property owners and employees; ability to understand and follow oral and written directions; ability to keep records and make reports; reliability; good physical condition.

ACCEPTABLE TRAINING AND EXPERIENCE: Two years of experience in refuse collection work or four years of experience in general public works or related activities; or any equivalent combination of experience and training.

SPECIAL REQUIREMENT FOR ACCEPTANCE OF APPLICATIONS: Eligibility for an appropriate motor vehicle license issued by the New York State Motor Vehicle Department. Possession of license at time of appointment.

HEAVY EQUIPMENT OPERATOR

GENERAL STATEMENT OF DUTIES: Operates one or more types of specialized heavy automotive equipment and performs a variety of manual tasks in connection with such operations; does related work as required.

DISTINGUISHING FEATURES OF THE CLASS: Work involves responsibility for the efficient operation of specialized heavy automotive equipment used in maintenance or construction projects. Greater skill is required than in the operation of other types of equipment and there is greater responsibility for the safety of others. Additional responsibility is involved for making minor repairs to equipment and for ordinary servicing. Supervision is received from a supervisor who assigns tasks and inspects the work in process and upon completion.

EXAMPLES OF WORK: (Illustrative only)

Operates power shovel, bulldozer, power grader, roller, caterpillar tractor with equipment and other types of heavy equipment in the construction and maintenance of highways or streets or related public works activities;
Operates heavy snow plow (8 ton capacity trucks) in the clearing of roads;
Operates heavy equipment in connection with cutting banks, cutting and filling ditches, removing stumps, stripping gravel pits and related tasks;
Performs minor maintenance and repair work on assigned equipment;
Loads and unloads vehicles;
Performs a variety of simple manual tasks such as cleaning culverts, shovelling snow, painting and road maintenance work.

REQUIRED KNOWLEDGES, SKILLS AND ABILITIES: Good knowledge of the operation and maintenance of heavy automotive equipment; ability to service and make minor repairs and adjustments to equipment; ability to understand and carry out oral and written instructions; mechanical aptitude; dependability; good physical condition.

ACCEPTABLE EXPERIENCE AND TRAINING: One year of experience in the operation of specialized or heavy motor equipment or two years of experience in the operation of any type of automotive equipment; or any equivalent combination of experience and training.

SPECIAL REQUIREMENTS FOR ACCEPTANCE OF APPLICATIONS: Eligibility for an appropriate chauffeur's license issued by New York State.

CITY OF AUBURN

MEMORIAL CITY HALL
AUBURN, N.Y. 13021
Phone: (315) 252-9531

BRUCE L. CLIFFORD
City Manager

January 11, 1982

Please be advised that effective January 1, 1982 the fee for Dumping Permits for the calendar year 1982 will be in accordance with the following schedule:

	Up to five (5) times/week	*More than five (5) times/week
1/2 & 3/4 Ton Pickup Trucks and Trailers:	$ 56.00	$ 84.00
1-Ton and 2-Ton Stake Body Trucks:	135.00	203.00
Packer Type Enclosed Trucks	$ 18.00/cu.yd.	27.00/cu.yd.
Roll-off Container Truck Chassis	$ 30.00/cu.yd.	45.00/cu.yd.

*Those haulers using the Landfill more than five (5) times during a week will be required to pay at the rate of 1.5 times the normal rate (SEE ABOVE).

Would you kindly stop at the office of the SANITATION DIVISION, NORTH DIVISION STREET, AUBURN, N. Y. between the hours of 7:00 A.M. and 2:30 P.M. ANY WEEK DAY to renew your Dumping Permit.

All haulers not obtaining permits by January 30, 1982 will be denied the use of the City of Auburn Sanitary Landfill.

Very truly yours,

Bruce L. Clifford
City Manager

cc: Mr. Jas. Brazee, Sanitation Fman.
Mr. Robert M. Murphy, City Treasurer
Mr. Leo G. McGee, City Comptroller

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CITY OF AUBURN
SANITATION DEPARTMENT
DUMPING PERMIT

PERMIT NO.	NAME	TRUCK & LICENSE NO.	PERMIT FEE
1	Onondaga Environmental Services 4439 James Street, Syracuse 463-1890	Mack #321 72302-GB	$ 1,200.00
2	Tom Lynch 284½ Genesee Street, Auburn	1975 Chevy Pickup 9525-GK	$ 84.00
3	George Lumb 156 S. Seward Avenue, Auburn	Chevy Pickup 2607-LC	$ 84.00
4	Rainbow Rubbish R.D. #1, Union Springs	25 yd. Mack 59554-GJ	$ 288.00
5	Rainbow Rubbish R.D. #1, Union Springs	1975 Ford Pickup 33232-GB	$ 84.00
6	Lew Haggett 116 River Road, Cayuga	Chevy Pickup	$ 56.00
7	Auburn Container 23 Perrine Street, Auburn	1969 Mack Roll-off 33761-GB	$ 900.00
8	Auburn Container 23 Perrine Street, Auburn	1970 Mack Packer 66290-GC	$ 540.00
9	Rubbish Removal of Syracuse Box 6291, Syracuse	Mack Roll-off 7032-PB	$ 900.00
10	Walter Wallace Box 398, Montezuma	1971 GMC 20 yd. Packer	$ 360.00
11	Jeff Polhamus Mosher Road, Scipio Center	Chevy 20 yd. Packer	$ 360.00

PERMIT NO.	NAME	TRUCK & LICENSE NO.	PERMIT FEE
12	Joe Cardinalle Box 118, Martville	Chevy Pickup 2845-LV	$ 56.00
13	Jake Richardson 8 Chapman Avenue, Auburn	1972 Chevy Dump Truck 7940-PR	$ 203.00
14	Crandell & Spencer Meridan, New York	GMC 20 yd. Packer 1900PS	$ 414.00
15	Servin Sanitation R.D. #1, Savannah	IH 18 yd. Packer 9842-ND	$ 227.00
16	Servin Sanitation R.D. #1, Savannah	10 yd. Packer 1849-KY	$ 180.00
17	Steve Smith R.D. #4, Auburn	Ford Pickup 3639-KC	$ 56.00
18	John Byrn 48 Lexington Avenue, Auburn	Ford Dump Truck 1321-GL	$ 135.00
19	Tom Molloy Box #413, Auburn	20 yd Chevy Packer	$ 360.00
20	Lucas Manuel 85 Fitch Avenue, Auburn	Ford Pickup 9067-GK	$ 56.00

A-53

CITY OF AUBURN LANDFILL

USER SURVEY

DATE	PACKER	ROLL-OFF	STAKE BODY	PICKUP	CAR
9-13-82	20	10	11	182	133
9-14-82	16	6	10	127	143
9-15-82	15	5	6	101	74
9-16-82	13	6	10	134	81
9-17-82	18	5	13	123	140
9-18-82	5	2	12	186	265
9-20-82	17	9	15	166	136
9-21-82	16	4	9	135	139
9-22-82	19	5	15	116	120
9-23-82	16	11	3	68	55
9-24-82	18	5	9	105	142
9-25-82	6	3	11	184	281
9-27-82	21	6	10	126	86
9-28-82	16	5	10	109	106
9-29-82	14	8	12	117	110
9-30-82	13	9	22	140	89
10-1-82	21	9	21	162	138
10-2-82	6	4	19	211	274
10-4-82	18	7	14	158	144
10-5-82	19	6	18	127	110
10-6-82	17	8	13	121	118
10-7-82	16	8	19	75	129
10-8-82	20	4	21	103	129
10-9-82	4	3	10	192	289
10-11-82	18	6	10	110	106
10-12-82	20	4	8	131	119
10-13-82	16	8	19	75	129
Total One Month	418	166	350	3,584	3,785
Average Daily	15.5	6.0	13.0	133.0	140.0

AUBURN CITY ENGINEERING

CITY OF AUBURN
MEMORIAL CITY HALL
AUBURN, N.Y. 13021
Phone: (315) 252-9531

Name of Haulers and Where They Pick Up Each Day of the Week:

1. Jeff Polhamus
   - Monday - Cayuga
   - Tuesday - City of Auburn
   - Wednesday - City of Auburn
   - Thursday - Throop
   - Friday - City of Auburn
   - Saturday -

2. Tom Molloy
   - Monday - Auburn & Owasco
   - Tuesday - Auburn
   - Wednesday - Fleming & Auburn
   - Thursday - Owasco & Auburn
   - Friday - Auburn
   - Saturday - Auburn

3. Rainbow Rubbish - Packer
   - Monday -
   - Tuesday - Auburn
   - Wednesday - Auburn
   - Thursday - In Moravia - Doesn't come in Auburn
   - Friday - Auburn
   - Saturday - Auburn

   Rainbow Rubbish - Pick Up
   - Monday - Auburn, Aurelius, Springport
   - Tuesday - Auburn & Springport
   - Wednesday - Springport
   - Thursday - Auburn & Fleming
   - Friday - Fleming & Owasco
   - Saturday -

4. Serrin Sanitation (Packer #9842-ND)
   - Monday - Brutus
   - Tuesday - Brutus
   - Wednesday - Brutus
   - Thursday - Brutus
   - Friday - Brutus
   - Saturday - Brutus

5. Jake Robinson
   - Monday - Auburn
   - Tuesday - Auburn
   - Wednesday - Auburn
   - Thursday - Auburn
   - Friday - Auburn
   - Saturday - Auburn

6. Tom Lynch
   - Monday - Auburn
   - Tuesday - Auburn
   - Wednesday - Auburn
   - Thursday - Auburn
   - Friday - Auburn
   - Saturday - Auburn

7. Lew Haggett
   - Monday - Sennett
   - Tuesday - Aurelius
   - Wednesday - Union Springs & Springport
   - Thursday - Aurelius
   - Friday - Owasco
   - Saturday - City of Auburn

8. Steve Smith
   - Monday - Owasco
   - Tuesday - Owasco
   - Wednesday - Owasco
   - Thursday - Owasco
   - Friday - Owasco
   - Saturday - Owasco

9. George Lumb
   - Monday - Sennett
   - Tuesday - Sennett
   - Wednesday - Owasco
   - Thursday - Owasco
   - Friday - Sennett
   - Saturday - Owasco

10. Jim Slater
   - Monday - Auburn - Niles - Owasco
   - Tuesday -
   - Wednesday -
   - Thursday -
   - Friday - Auburn - Owasco - Niles
   - Saturday - Owasco

11. Crandell & Spencer
   - Monday - Sennett & Brutus
   - Tuesday -
   - Wednesday - Sennett & Brutus
   - Thursday -
   - Friday - Sennett & Brutus
   - Saturday -

12. Ralph Penird
   - Monday - Auburn
   - Tuesday - Auburn
   - Wednesday - Auburn
   - Thursday - Auburn
   - Friday - Auburn
   - Saturday - Auburn

13. John Byrn

Monday	- Auburn
Tuesday	-
Wednesday	- Auburn
Thursday	- Auburn
Friday	-
Saturday	-

CITY OF AUBURN

LANDFILL PERSONNEL

COLLECTION

Title of Position	Number Employed
Sanitation Foreman	.5
Motor Equipment Operator	9
Automotive Mechanic	.5

DISPOSAL

Title of Position	Number Employed
Sanitation Foreman	.5
Heavy Equipment Operator	3
Laborer	2
Automotive Mechanic	.5

CITY OF AUBURN
MEMORIAL CITY HALL
AUBURN, N.Y. 13021
Phone: (315) 252-9531

MICHAEL D. O'NEILL
City Engineer
perintendent of Public Works

The following must purchase appropriate landfill permits by the date shown or be refused entry to the landfill.

By October 1, 1982

Roll-off	Rubbish Removal	4494-MY
Roll-off	Auburn Container	59713-GJ
Pickup	Jeff Polhamus	9498-GK
Roll-off	Curtis Brooks 40 West Street	6762-TQ

By October 10, 1982

Roll-off	Rubbish Removal	1050-RQ
Pickup	Tom Molloy	66958-GC
Stake Body	Warren Juhl, RD 2, Trombley Rd, Weedsport	1220-RJ
Dump Truck	Lucas Manuel	illegible
Pickup	Jim Slayton or Slayter	1447-ML
Pickup	George Penird	33269-GB
Station Wagon	Ralph Penird	418-CYU
Stake Body	Dick Bell	71939-GD

By October 14, 1982

	Lewis Tree Service	4240-SL
Pickup	George King 118 S. Fulton St.	2122-GL
Pickup	Donald Richardson 22 Shotwell Street Port Byron	91241-GA

By October 14, 1982

Roll-off	O.E.S.I.	69318-GH
Roff-off	Rubbish Removal	67072-GH
Packer	Servin Sanitation	90300-GA

By October 25, 1982

Packer(green)	Tom Molloy	Unknown
Stake-body	Hawley's Lumber & Tree Serv.	32755-GB
Packer	Auburn Container	2614-NR
Packer	Rubbish Removal	10603-GB
Roff-off	O.E.S.I.	6917-PW
Packer	Servin Sanitation	8532-PG
Stake-body	Gene G. Lauzon Box 391, Weedsport	59784-GJ
Trailer	Ernest Clark, Box 445 Bluefield Rd., Auburn	4886-TX
Stake-body	Walter Bennett, R.D. 1 Bluefield Rd.,Auburn	71607-GD

TABLE 4

SENECA FALLS LANDFILL
EXCESS MOISTURE ANALYSIS
WORST CASE

(All values in inches)

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.
Precipitation	2.35	2.30	2.99	3.37	3.77	3.30	4.12	3.20	3.20	3.60	3.38	2.70
Less Monthly Runoff	0.71	0.69	0.90	1.01	1.13	0.99	1.24	0.96	0.96	1.08	1.01	0.81
Potential Monthly Infiltration	1.64	1.61	2.09	2.36	2.64	2.31	2.88	2.24	2.24	2.52	2.37	1.89
Less Potential Monthly Evapo-transpiration	0	0	0	2.11	2.67	3.06	3.54	3.01	1.92	1.21	0	0
Potential Infiltration - Potential Evapotranspiration	1.64	1.61	2.09	0.25	-0.03	-0.75	-0.66	-0.77	0.32	1.31	2.37	1.89
Less Moisture Storage	0	0	0	0	0	0	0	0	0.32	1.31	1.37	0
Excess	1.64	1.61	2.09	0.25	0	0	0	0	0	0	1.00	1.89

Percolation: 8.40/12 x 96 x 43,560 x 7.5 = 22,200,000 gal/yr.

Inflow: 1,600 gpd x 365 = 600,000 "

Total 22,800,000 "

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O'BRIEN & GEER

TABLE 5

SENECA FALLS LANDFILL
EXCESS MOISTURE ANALYSIS
AVERAGE CASE

(All values in inches)

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.
Precipitation	1.96	1.92	2.49	2.81	3.14	2.75	3.43	2.67	2.67	3.00	2.82	2.25
Less Monthly Runoff	0.98	0.96	1.25	1.41	1.57	1.38	1.72	1.34	1.34	1.50	1.41	1.13
Potential Monthly Infiltration	0.98	0.96	1.24	1.40	1.57	1.37	1.71	1.33	1.33	1.50	1.41	1.13
less Potential Monthly Evapo-transpiration	0	0	0.20	3.29	4.17	4.78	5.54	4.71	3.01	1.90	0.75	0
Potential Infiltration - Potential Evapotranspiration	0.98	0.96	1.04	-1.89	-2.60	-3.41	-3.83	-3.38	-1.68	-0.40	0.66	1.12
less Moisture Storage	0.98	0.96	0.28	0	0	0	0	0	0	0	0.66	1.12
Exress	0	0	0.76	0	0	0	0	0	0	0	0	0

Percolation: 0.76/12 x 96 x 43,560 x 7.5 = 2,000,000 gal/yr.

Inflow: 160 gpd x 365 100,000 "

Total 2,100,000 "

TABLE 6

SENECA FALLS LANDFILL
EXCESS MOISTURE ANALYSIS
BEST CASE

(All values in inches)

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.
Precipitation	1.57	1.54	1.99	2.25	2.51	2.20	2.74	2.14	2.14	2.40	2.26	1.80
Less Monthly Runoff	1.26	1.23	1.59	1.80	1.51	1.32	1.64	1.28	1.28	1.44	1.36	1.44
Potential Monthly Infiltration	0.31	0.31	0.40	0.45	1.00	0.88	1.10	0.86	0.86	0.96	0.90	0.36
Less Potential Monthly Evapo-transpiration	0	0	0.23	3.86	4.89	5.61	6.49	5.53	3.53	2.23	0.88	0
Potential Infiltration - Potential Evapotranspiration	0.31	0.31	-0.17	-3.41	-3.89	-4.73	-5.39	-4.67	-2.67	-1.27	0.02	0.36
Less Moisture Storage	0.31	0.31	0.17	0	0	0	0	0	0	0	0.02	0.36
Excess	0	0	0	0	0	0	0	0	0	0	0	0

Percolation: 0

Inflow: 160 x 365 100,000 gal/yr

Total: 100,000 "

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O'BRIEN & GERE

BACKGROUND INFORMATION

LAB NO.

FIELD NAME OR NO	ACRE	SAMPLE BAG NO	ASCS	COUNTY	SENT TO COUNTY	REC'D LAB DAYS		MO/DAY/YR COMPLETED	1ST COVER CROPS	2ND	3RD	LAST PAST CROPS (CODES)	2ND	3RD
LANDFILL COVERR	10	27493		CAYU	CAYU	4	9	8- 4-82	N	N	N	OTV		

SOIL NAME MG'T	MAP SYMBOL	DRAINAGE	TEXTURE	TOPOG RAPHY	ARTIF. DRAIN	PLOW DEPTH	% LEGUME	SOD PLOWED	1ST MANURE RATE (T/A)	2ND	3RD	KIND OF MANURE	DEGREE VA POT SCA
	CEB												

SOIL TEST FOR: GROWER

CITY OF AUBURN
N DIVISION ST
AUBURN
NY 13021

INDUSTRY REPRESENTATIVE

COUNTY AGENT

CHARLES F. WHITEMAN
FARM HOME AND 4-H CT
248 GRANT AVE.
AUBURN, NY 13021

315-255-1183

SOIL TEST RESULTS

		NUTRIENT LEVEL: VERY LOW / LOW / MEDIUM / HIGH / EXCESS
PH	7.8	
PHOSPHORUS (P) LBS A	1	
POTASSIUM (K) LBS A	25	
MAGNESIUM (Mg) LBS A	>400	
CALCIUM (Ca) LBS A	>9999	

LIME AND FERTILIZER RECOMMENDATIONS

CROP-1982 (CGE)
ESTAB. CLOVER-GRASS

0	0	85	50	

LIME AND FERTILIZER RECOMMENDATIONS ARE SPECIFICALLY TAILORED FOR YOU
TYPE OF SOIL. INFORMATION RELATIVE TO THE SOIL NAME OR SOIL ASSOCIATI
FOR YOUR FARM WAS MISSING OR INCORRECT. PLEASE SEE YOUR COOPERATIVE
EXTENSION AGENT FOR RECOMMENDATIONS.

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PLEASE READ MATERIAL PRINTED ON BACK OF SHEET

BACKGROUND INFORMATION

LAB NO. _____

FIELD NAME OR NO	ACRE	SAMPLE BAG NO	ASCS	COUNTY	SENT TO COUNTY	REC'D LAB DAYS	MO DAY/YR COMPLETED	1ST COVER CROPS	2ND COVER CROPS	3RD COVER CROPS	LAST PAST CROPS (CODES	2ND	3RD
LANDFILL COVERA	10	27492		CAYU	CAYU	4	9 8- 4-82	N	N	N	DTV		

SOIL NAME MGT	MAP SYMBOL	DRAINAGE	TEXTURE	TOPOG-RAPHY	ARTIF. DRAIN	PLOW DEPTH	% LEGUME	SOD PLOWED	1ST MANURE RATE (T/A)	2ND	3RD	KIND OF MANURE	DEGREE VAP POT SCAR
	CEB												

SOIL TEST FOR: GROWER

CITY OF AUBURN
N DIVISION ST
AUBURN
NY 13021

INDUSTRY REPRESENTATIVE

COUNTY AGENT

CHARLES F. WHITEMAN
FARM HOME AND 4-H CT
248 GRANT AVE.
AUBURN, NY 13021

315-255-1183

SOIL TEST RESULTS

NUTRIENT LEVEL

		VERY LOW	LOW	MEDIUM	HIGH	EXCESS
PH	7.0					
PHOSPHORUS (P) LBS/A	1					
POTASSIUM (K) LBS/A	60					
MAGNESIUM (Mg) LBS/A	>400					
CALCIUM (Ca) LBS/A	2600					

				POUNDS PER ACRE												

LIME AND FERTILIZER RECOMMENDATIONS

CROP-1982 (CGE)
ESTAB. CLOVER-GRASS

0	0	85	40	

LIME AND FERTILIZER RECOMMENDATIONS ARE SPECIFICALLY TAILORED FOR YOUR TYPE OF SOIL. INFORMATION RELATIVE TO THE SOIL NAME OR SOIL ASSOCIATIO FOR YOUR FARM WAS MISSING OR INCORRECT. PLEASE SEE YOUR COOPERATIVE EXTENSION AGENT FOR RECOMMENDATIONS.

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PLEASE READ MATERIAL PRINTED ON BACK OF SHEET

BACKGROUND INFORMATION

LAB NO. 270 [illegible]

FIELD NAME OR NO.	ACRE	SAMPLE BAG NO	ASCS	COUNTY	SENT TO COUNTY	REC'D	LAB DAYS	MO/DAY/YR COMPLETED	1ST	2ND	3RD COVER CROPS	LAST	2ND	3RD PAST CROPS (CODES)
TOPSOIL	10	27491		CAYU	CAYU	4	9	8- 4-82	N	N	N	DTV		

SOIL NAME	MGT	MAP SYMBOL	DRAINAGE	TEXTURE	TOPOG RAPHY	ARTIF. DRAIN	PLOW DEPTH	% LEGUME	SOD PLOWED	1ST	2ND	3RD MANURE RATE (T/A)	KIND OF MANURE	DEGREE VA POT SCAL
		CEB												

SOIL TEST FOR: GROWER	INDUSTRY REPRESENTATIVE	COUNTY AGENT
CITY OF AUBURN N DIVISION ST AUBURN NY 13021		CHARLES F. WHITEMAN FARM HOME AND 4-H CT 248 GRANT AVE. AUBURN, NY 13021

SOIL TEST RESULTS

315-255-1183

NUTRIENT LEVEL: VERY LOW — LOW — MEDIUM — HIGH — EXCES

		Value
PH		6.1
PHOSPHORUS	(P) LBS A	1
POTASSIUM	(K) LBS A	25
MAGNESIUM	(Mg) LBS A	>400
CALCIUM	(Ca) LBS A	4100

[illegible]	%	A	M	Z	B	NO_3 N	NH_4 N	% O M	SOL SALT K x 10[5]					

POUNDS PER ACRE

LIME AND FERTILIZER RECOMMENDATIONS

CROP-1982 (CGE)
ESTAB. CLOVER-GRASS

T/A	N LBS/A	P_2O_5 LBS/A	K_2O LBS/A	[illegible] LBS/A
0	0	85	50	

LIME AND FERTILIZER RECOMMENDATIONS ARE SPECIFICALLY TAILORED FOR YOU TYPE OF SOIL. INFORMATION RELATIVE TO THE SOIL NAME OR SOIL ASSOCIATI FOR YOUR FARM WAS MISSING OR INCORRECT. PLEASE SEE YOUR COOPERATIVE EXTENSION AGENT FOR RECOMMENDATIONS.

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PLEASE READ MATERIAL PRINTED ON BACK OF SHEET

Calocerinos & Spina
CONSULTING ENGINEERS
ENVIRONMENTAL LABORATORY
1020 Seventh North Street, Liverpool, NY 13088 • (315) 457-6711

To: AUBURN SANITATION DEPT.
285 N. DIVISION ST.
AUBURN, NY 13021

Date: Aug 13 1982

Attention: JAMES BREEZE

* *

SAMPLE #3228

LABORATORY ANALYSIS REPORT

* *

SAMPLE SUMMARY

CLIENT :AUBURN SANITATION DEPT. DATE RECEIVED : 82/07/30

JOB # :155.002.00 DATE COLLECTED : 82/07/30

LOCATION :SMITH PROPERTY WELL TIME COLLECTED : 0

PRICE CODE :1 METHOD : GRAB

#	PARAMETER	RESULTS	UNITS
102	ALKALINITY (CaCO3)	240.	mg/l
125	CHLORIDE	12.0	mg/l
130	CONDUCTANCE	2400.	umhos/cm
139	HARDNESS (as CaCO3)	1345.	mg/l
159	TOC	24.0	mg/l
161	pH	7.8	Standard Units
163	PHENOL	<0.010	mg/l
174	TSS	42.0	mg/l
175	TDS	3738.	mg/l
177	TS	3780.	mg/l
205	ARSENIC	<0.002	mg/l
213	CADMIUM	<0.01	mg/l
217	CHROMIUM-HEX	<0.004	mg/l
221	COPPER	0.02	mg/l
223	IRON	0.58	mg/l
225	LEAD	0.08	mg/l
231	MANGANESE	0.17	mg/l
233	MERCURY	0.007	mg/l
243	SELENIUM	<0.002	mg/l
247	SILVER	<0.01	mg/l

Calocerinos & Spina
CONSULTING ENGINEERS
ENVIRONMENTAL
LABORATORY
1020 Seventh North Street, Liverpool, NY 13088 · (315) 457-6711

SAMPLE #3228

LABORATORY ANALYSIS REPORT

#	PARAMETER	RESULTS	UNITS
263	ZINC	0.64	mg/l

All analyses were conducted using EPA "Methods for Chemical Analysis of Water and Wastes (1979)" or "Standard Methods (15th Edition)".

CITY OF AUBURN, N. Y. - ANNUAL BUDGET

Fund	Program	Sub-Program	Unit	Unit No.
GENERAL	HOME & COMMUNITY SERVICE	PUBLIC WORKS-SANITATION	REFUSE COLLECTION	A-8161

SUMMARY OF UNIT PROGRAM: ~~1981-1982~~ 1982-1983

This division of the Public Works Department provides a weekly refuse collection service to all residential and small commercial properties based upon curb side pick up. This service provides for the collection of garbage, papers, cans, yard clippings, and other specified materials once each week. To provide this service, four (4) refuse packer trucks of 25 cubic yard capacity and a crew of two (2) Sanitation Men per truck collect refuse from a designated district each day with the City divided into twenty districts. Approximately one (1) trip per day during the winter months and two (2) trips per day during spring, summer, and fall are made from each district to the Sanitary Landfill which generages approximately 21,000 tons of refuse per year. All trucks are equipped with two-way radios to permit all calls pertaining to complaints or skips received at the Sanitation Office be immediately transmitted to the proper crew. In addition, the radio equipment permits the Foreman to check the performance and progress of each crew and revise the scheduled run based upon quantity of refuse and permit all crews to complete their routes together on a task assignment basis. There are approximately 8,830 stops made per week or a daily average of 310 per refuse packer. The City of Auburn is extremely fortunate in having the Sanitary Landfill located within the City, which requires approximately twenty (20) minutes for a round trip to discharge the load of refuse.

Cost of this service during the 1980-81 fiscal year amounted to the following:

TOTAL COST OF OPERATION

Salaries	$ ~~148,589~~	156,806
Fringe Benefits	75,635	73,776
Supplies & Materials	42,839	51,708
Contractual Services	18,730	12,351
Equipment Replacement Schedule	22,981	27,763
Total	$ 308,774	322,904

Cost per Capita - ~~$308,774~~/32,442 = $9.52/capita
322,904/32,548 = 9.92/capita

CITY OF AUBURN, N. Y. - ANNUAL BUDGET

Fund	Program	Sub-Program	Unit	Unit No.
GENERAL	HOME & COMMUNITY SERVICE	PUBLIC WORKS-SANITATION	REFUSE COLLECTION	A-8161

Code	Objects of Expense	Actual Expenditures 1980-81	Current Budget 1981-82	Unit Head Request 1982-83	Recommended City Manager 1982-83	Adopted City Council 1982-83
.10	PERSONAL SERVICES					
.11	Salaries and Wages	127,840	139,263	146,317	146,193	146,193
.12	Longevity & Incentive		2,925	3,150	3,150	3,150
.13	Temporary & Part-time	8,935	3,800	4,500	4,500	4,500
.14	Holiday	2,582	2,900	3,123	5,200	5,200
.15	Overtime	9,231	5,800	6,800	7,300	7,300
.16	Cost of Living		2,660	3,905	6,920	6,920
	Sub-total	148,588	157,348	167,795	173,263	173,263
.20	EQUIPMENT					
.21	Furniture & Furnishings					
.22	Office					
.23	Motor Vehicle					
.24	Construction					
.25	Other		4,000	3,450	3,450	3,450
	Sub-total		4,000	3,450	3,450	3,450
.30	CAPITAL OUTLAY					
.40	CONTRACTUAL SERVICES					
.41	Supplies & Material	42,839	34,050	38,000	42,400	42,400
.42	Utilities	2,591	2,850	3,000	3,200	3,200
.43	Insurance					
.44	Services	18,596	6,000	8,000	11,500	11,500
.45	Fees (Non-Employees)					
.46	Miscellaneous	135	100	100	100	100
	Sub-total	64,161	43,000	49,100	57,200	57,200
	TOTAL	212,749	204,348	220,345	233,913	233,913

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CITY OF AUBURN, N. Y. - ANNUAL BUDGET

Fund	Program	Sub-Program	Unit	Unit No.
GENERAL	HOME & COMMUNITY SERVICE	PUBLIC WORKS - SANITATION	REFUSE COLLECTION	A-8161

PERSONAL SERVICES		Position Authorization					Current Budget 1981-82	Unit Head Request 1982-83	Recommended City Manager 1982-83		Adopted City Council 1982-83	
Code	Position Title	Grade	Actual	Budget	Propose	Pay Weeks						
.11	Sanitation Foreman	17-E	.5	.5	.5	26	8,475	8,475	.5	8,475	.5	8,475
.11	Motor Equipment Operator	13-E	8	8	8	52	116,680	116,680	8.	116,680	8.	116,680
.11	Motor Equipment Operator	13-D	1	1	1	52	14,108	14,108	1.	14,108	1.	14,108
.11	Automotive Mechanic	15-B			.5	26	0	7,054	.5	6,930	.5	6,930
	Sub-total		9.5	9.5	10		139,263	146,317	10	146,193	10	146,193
.12	Longevity						2,925	3,150		3,150		3,150
.13	Temporary & Part-time						3,800	4,500		4,500		4,500
.14	Holiday						2,900	3,123		5,200		5,200
.15	Overtime						5,800	6,800		7,300		7,300
.16	Cost of Living						2,660	3,905		6,920		6,920
	TOTAL		9.5	9.5	10		157,348	167,795	10	173,263	10	173,263

Fund	Program	Sub-Program	Unit	Unit No.
GENERAL	HOME & COMMUNITY SERVICE	PUBLIC WORKS-SANITATION	REFUSE COLLECTION	A-8161

Code	Objects of Expense	Actual Expenditures 1980-81	Current Budget 1981-82	Unit Head Request 1982-83	Recommended City Manager 1982-83	Adopted City Council 1982-83
.20	EQUIPMENT					
.25	Other					
	Small tools			2,000	2,000	2,000
	Garage lights			200	200	200
	Telephone extension			100	100	100
	Steel storeage cabinet			150	150	150
	Garage heater			1,000	1,000	1,000
	Sub-total - Equipment	-	4,000	3,450	3,450	3,450
.40	CONTRACTUAL SERVICES					
.41	Supplies & Material					
	Kerosene, soap & detergents		2,400	400	800	800
	Uniforms & gloves		1,450	1,200	1,200	1,200
	Tires & tubes		4,000	5,000	6,500	6,500
	Motor oil & grease		4,800	3,000	4,000	4,000
	Diesel fuel		12,800	15,000	16,500	16,500
	Repair parts		8,600	12,900	12,900	12,900
	Anti-freeze		-	200	200	200
	Trash receptacles		-	300	300	300
	Sub-total	42,839	34,050	38,000	42,400	42,400
.42	Utilities	2,591	2,850	3,000	3,200	3,200
.44	Services					
	Repairs to equipment		6,000	7,000	10,500	10,500
	Garage roof repairs (1/2)		-	1,000	1,000	1,000
	Sub-total	18,596	6,000	8,000	11,500	11,500
.46	Miscellaneous	135	100	100	100	100
	Sub-total - Contractual Services	64,161	43,000	49,100	57,200	57,200

CITY OF AUBURN, N. Y. - ANNUAL BUDGET

Fund	Program	Sub-Program	Unit	Unit No.
FEDERAL REVENUE SHARING	HOME & COMMUNITY SERVICE	PUBLIC WORKS - SANITATION	REFUSE COLLECTION	C-8161

Code	Objects of Expense	Actual Expenditures 1980-81	Current Budget 1981-82	Unit Head Request 1982-83	Recommended City Manager 1982-83	Adopted City Council 1982-83
.30	CAPITAL OUTLAY					
	One (1) New 25 cu. yd. Refuse Packer & Chassis	66,050	66,000	70,000	70,000	70,000

Fund	Program	Sub-Program	Unit	Unit No.
GENERAL	HOME & COMMUNITY SERVICE	PUBLIC WORKS-SANITATION	REFUSE DISPOSAL	A-8162

SUMMARY OF UNIT PROGRAM: ~~1981-1982~~ 1982-1983

This division of the Public Works Department is responsible for the operation of the Auburn Sanitary Landfill located on North Division Street and operating under Facility Permit Number 1550 from the New York State Department of Environmental Conservation. This disposal site consisting of sixty-eight active acres* is open six (6) days a week, Monday-Saturday, 7 A.M. to 4 P.M., excluding holidays, for the disposal of all solid waste collected by City trucks and private haulers. In addition, the City of Auburn contracts with the following towns and villages in sharing the cost for operation of this landfill: Towns of Fleming, Owasco, Sennett, Throop, Aurelius, Brutus, Springport, Niles, and the Villages of Weedsport ~~and Moravia~~, for an estimated total population served of ~~56,761~~ 55,196.

Permits are issued to all private haulers using the sanitary landfill. It is estimated that the landfill handles 150 tons per day, based upon 110 tons from packer trucks and 40 tons from open body trucks. These estimates produce a weekly tonnage of 900 tons and a yearly total of 46,800 tons. Equipment at the landfill includes one 25-ton bulldozer, one crawler loader, one four-wheel drive 20-ton steel wheel compactor that compacts the refuse to a density of approximately 1,200 lbs. per cubic yard, and two (2) dump trucks of 20 and 10 cubic yard capacity. All refuse is compacted daily by the compactor and covered with six inches of material, and when the final finished grade for the area is reached, a two foot layer of cover material and grass planted is placed over the refuse. ~~The City of Auburn has recently acquired title to the adjoining 115 acres of land for future use as a landfill.~~

The total projected cost for ~~Cost of~~ this service during the ~~1980-81~~ 1982-83 fiscal year amounted ~~to~~ is as ~~the~~ following:

	1982-83	
Salaries	120,720	$ 90,704
Fringe Benefits	56,675	40,105
~~Supplies & Materials~~		~~52,810~~
Contractual Services	126,800	93,631
Equipment Replacement	54,522	26,922
Land and Building	38,167	23,167
Administration	39,688	32,734
Total:	436,572	$ ~~360,073~~

These expenditures produced a yearly cost per capita of ~~$6.34~~ 8.18, or a tonnage cost of ~~$7.69~~ 9.32 per ton. This compares to a ~~1979-80~~ 1981-82 per capita cost of ~~$5.07~~ 7.39 and ~~$5.85~~ per ton. These increases were due to higher operating costs, amortized land acquisition, and equipment repairs.

* an approximate one hundred acres held in reserve

CITY OF AUBURN, N. Y. - ANNUAL BUDGET

Fund	Program	Sub-Program	Unit	Unit No.
GENERAL	HOME & COMMUNITY SERVICE	PUBLIC WORKS-SANITATION	REFUSE DISPOSAL	A-8162

Code	Objects of Expense	Actual Expenditures 1980-81	Current Budget 1981-82	Unit Head Request 1982-83	Recommended City Manager 1982-83	Adopted City Council 1982-83
.10	PERSONAL SERVICES					
.11	Salaries and Wages	78,365	83,689	90,743	90,619	90,619
.12	Longevity & Incentive		2,175	2,175	2,175	2,175
.13	Temporary & Part-time	3,404	2,268	3,100	3,500	3,500
.14	Holiday	1,809	2,120	2,120	3,600	3,600
.15	Overtime	7,127	8,200	6,800	8,200	8,200
.16	Cost of Living		1,540	2,251	4,152	4,152
	Sub-total	90,705	99,992	107,189	112,246	112,246
.20	EQUIPMENT					
.21	Furniture & Furnishings					
.22	Office					
.23	Motor Vehicle					
.24	Construction					
.25	Other			3,950	3,350	3,350
	Sub-total			3,950	3,350	3,350
.30	CAPITAL OUTLAY					
.40	CONTRACTUAL SERVICES					
.41	Supplies & Material	52,810	35,500	41,700	41,700	41,700
.42	Utilities	2,591	2,850	3,000	3,200	3,200
.43	Insurance					
.44	Services	90,914	49,000	80,600	78,450	78,450
.45	Fees (Non-Employees)					
.46	Miscellaneous	126	100	100	100	100
	Sub-total	146,441	87,450	125,400	123,450	123,450
	TOTAL	237,146	187,442	236,539	239,046	239,046

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Fund	Program	Sub-Program	Unit	Unit No.
GENERAL	HOME & COMMUNITY SERVICE	PUBLIC WORKS-SANITATION	REFUSE DISPOSAL	A-8162

PERSONAL SERVICES		Position Authorization					Current Budget 1981-82	Unit Head Request 1982-83	Recommended City Manager 1982-83		Adopted City Council 1982-83	
Code	Position Title	Grade	Actual	Budget	Propose	Pay Weeks						
.11	Sanitation Foreman	17-E	.5	.5	.5	26	8,475	8,475	.5	8,475	.5	8,475
.11	Heavy Equipment Operator	16-E	3.	3.	3.	52	48,777	48,777	3.	48,777	3.	48,777
.11	Laborer	11-E	1.	1.	1.	52	13,613	13,613	1.	13,613	1.	13,613
.11	Laborer	9-E	1.	1.	1.	52	12,824	12,824	1.	12,824	1.	12,824
.11	Automotive Mechanic	15-B	0	0	.5	26	0	7,054	.5	6,930	.5	6,930
	Sub-total		5.5	5.5	6.0		83,689	90,743	6.0	90,619	6.0	90,619
.12	Longevity						2,175	2,175		2,175		2,175
.13	Temporary & Part-time						2,268	3,100		3,500		3,500
.14	Holiday						2,120	2,120		3,600		3,600
.15	Overtime						8,200	6,800		8,200		8,200
.16	Cost of Living						1,540	2,251		4,152		4,152
	TOTAL		5.5	5.5	6.0		99,992	107,189	6.0	112,246	6.0	112,246

CITY OF AUBURN, N, Y, - ANNUAL BUDGET

Fund	Program	Sub-Program	Unit	Unit No.
GENERAL	HOME & COMMUNITY SERVICE	PUBLIC WORKS-SANITATION	REFUSE DISPOSAL	A-8162

Code	Objects of Expense	Actual Expenditures 1980-81	Current Budget 1981-82	Unit Head Request 1982-83	Recommended City Manager 1982-83	Adopted City Council 1982-83
.20	EQUIPMENT					
.25	Other					
	Small tools & hardware			2,000	2,000	2,000
	Steel storage cabinet			150	150	150
	Garage lights			200	200	200
	Soap & detergents			600	0	0
	Garage Heater (1/2)			1,000	1,000	1,000
	Sub-total - Equipment	-	-	3,950	3,350	3,350
.40	CONTRACTUAL SERVICES					
.41	Supplies & Material					
	Diesel fuel			20,000	20,000	20,000
	Oil & grease			3,000	3,000	3,000
	Tires & tubes			2,500	2,500	2,500
	Drainage pipe			1,000	1,000	1,000
	Stone & gravel			1,000	1,000	1,000
	Fencing			800	800	800
	Uniforms & gloves			600	600	600
	Anti-freeze			400	400	400
	Repair parts			12,400	12,400	12,400
	Sub-total	52,810	35,500	41,700	41,700	41,700
.42	Utilities			3,000	3,200	3,200
.44	Services					
	Repair equipment			35,650	38,000	38,000
	Water sample testing			1,650	1,650	1,650
	Garage roof repairs (1/2)			1,000	1,000	1,000
	Installation 2 monitoring wells			2,000	2,000	2,000

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CITY OF AUBURN, N. Y. - ANNUAL BUDGET

Fund	Program	Sub-Program	Unit	Unit No.
GENERAL	HOME & COMMUNITY SERVICE	PUBLIC WORKS-SANITATION	REFUSE DISPOSAL	A-8162

Code	Objects of Expense	Actual Expenditures 1980-81	Current Budget 1981-82	Unit Head Request 1982-83	Recommended City Manager 1982-83	Adopted City Council 1982-83
.44	Hydro seeding banks			1,800	3,800	3,800
	Equipment Rental			13,500	10,000	10,000
	Contract - 20,000 cu.yds.cover material			25,000	22,000	22,000
	Sub-total	90,914	49,000	80,600	78,450	78,450
.46	Miscellaneous	126	100	100	100	100
	Sub-total - Contractual Services	146,441	87,450	125,400	123,450	123,450

CITY OF AUBURN, N, Y, - ANNUAL BUDGET

Fund	Program	Sub-Program	Unit	Unit No.
FEDERAL REVENUE SHARING	HOME & COMMUNITY SERVICE	PUBLIC WORKS - SANITATION	REFUSE DISPOSAL	C-8162

Code	Objects of Expense	Actual Expenditures 1980-81	Current Budget 1981-82	Unit Head Request 1982-83	Recommended City Manager 1982-83	Adopted City Council 1982-83
.30	CAPITAL OUTLAY					
	One (1) New 4-wheel drive pickup truck			8,800	8,800	8,800
	Heavy Duty Weight Scales (for weighing vehicles entering Landfill)			20,000	22,500	22,500
	Purchase of land adjacent to Landfill (2nd payment)				30,000	30,000
	Total	55,866	138,000	28,800	61,300	61,300

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CITY OF AUBURN

MEMORIAL CITY HALL
AUBURN, N.Y. 13021
Phone: (315) 252-9531

MICHAEL D. O'NEILL
City Engineer
Superintendent of Public Works

CERTIFICATION

I certify the Auburn City Landfill boundaries to be correct as shown on Plan Sheet 2.

Michael D. O'Neill
City Engineer
Supt. of Public Works

11/5/82
Date

STATE OF NEW YORK
MICHAEL D. O'NEILL
NO. 54730
LICENSED PROFESSIONAL ENGINEER

A-80

TYPICAL RANGE OF CHEMICAL/METAL CONTENT*

	DOMESTIC WASTE WATER	LEACHATE	
		FRESH	OLD
Chloride	34-2800	742	197
Iron	.2-5500	500	1.5
Manganese	.06-1400	49	0
Zinc	0-1000	45	.16
Magnesium	16.5-15,600	277	81
Calcium	5-4000	2136	254
Potassium	2.8-3700	-	-
Sodium	0-7700	-	-
Phosphate	0-154	7.35	4.96
Copper	0-9.9	.5	.1
Total Nitrogen	0-1400	989	7.51
Conductivity (Megaohms)	6-9000	9200	1400
TDS	0-42,000	12620	1144
TSS	6-2600	327	266
pH	3.7-8.5	5.2	7.3
COD	0-89,000	22650	81

*mg/l

DISCHARGE STANDARDS

pH	6.5-8.5
Total Dissolved Solids	1,000
Iron	.6
Manganese	.6
Zinc	.6
Cadmium	.02
Lead	.1
Aluminum	2.1
Silver	.1
Copper	.1
Chrome	2.0 total
Chromium (Hex)	.1
Nickel	2.0
Selenium	.02
Sulfate	500
Chloride	500
Nitrate	1020
Phenol	.002

TYPICAL LEACHATE VALUES

	RAW LEACHATE MG/L	TREATED LEACHATE MG/L
pH	6.2	8.9
Chemical Oxygen Demand	11,000	388
Total Dissolved Solids	9,100	2,115
Iron	463	.38
Manganese	45.6	.575
Zinc	4.55	0
Cadmium	.208	.007
Lead	.561	.089
Aluminum	1.03	3.0
Silver	.448	.009
Copper	.128	.037
Chrome	.528	.064
Chromium (Hex)	.005	
Nickel	.327	.181
Selenium	.011	.011
Sulfate	44	130
Chloride	450	570
Nitrate (N)	.12	.60
Ammonia	200	63
Phosphorus	2.6	1.98
Potassium	123	162
Sodium	114	134
Magnesium	283	151
Calcium	830	9.42%
Phenol	3.85	.065

REMAINING VOLUMES

CITY OF AUBURN LANDFILL PERMIT APPLICATION
6NYCRR - 1982

Approximate volume of compacted cubic yards remaining within "zones of fill" (Z_1 through Z_4) are computed as follows (see sheet 1 of plans for zone area).

EXAMPLE

Zone #1: $(A-B)k = C$ Where: A = proposed average elevation of 100 ft. x 100 ft. grid co-ordinate.

B = existing average elevation of 100 ft. x 100 ft. grid co-ordinate.

K = conversion to CY = 100 ft.^{2}/27 = 370.37

C = Total CY per grid co-ordinate.

Σc_1 = total CY per zone bounded by co-ordinates as shown on zone of fill map.

Total CY computed:

Zone #1 = Σc_1	=	198,518
Zone #2 = Σc_2	=	108,148
Zone #3 = Σc_3	=	348,889
Zone #4 = Σc_4		38,889
		694,444 CY

Compaction Factors:

800 lbs/cy = .4 tons/cy = 2.50 cy/ton
1,000 lbs/cy = .5 tons/cy = 2.00 cy/ton
1,200 lbs/cy = .6 tons/cy = 1.67 cy/ton
1,400 lbs/cy = .7 tons/cy = 1.43 cy/ton

694,444 CY available in Zones 1-4

Compaction Factor	Total Tons in Zones 1-4
.7 tons/cy	486,110.80
.6 tons/cy	416,666.40
.5 tons/cy	347,222.00
.4 tons/cy	277,777.60

Refuse Quantity:

Tons per day x 6 days per week x 52 weeks = 312 days

@ 125 tons/day = 39,000 tons/year

@ 150 tons/day = 46,800 tons/year

@ 175 tons/day = 54,600 tons/year

@ 200 tons/day = 62,400 tons/year

Cover Material Quantities:

Depth	Area		Amount
6"	40' x 60' (1200 ft.^{3}/27 ft^3/cy)	=	44 CY
6"	60' x 80' (2400 ft.^{3}/27 ft^3/cy)	=	89 CY
6"	80' x 100' (4000 ft.^{3}/27 ft^3/cy)	=	148 CY
6"	100' x 100' (5000 ft.^{3}/27 ft^3/cy)	=	185 CY

Cover Material by Weight in Tons:

	44 CY	89 CY	148 CY	185 CY
Density Tons/CY				
.7	31	62	104	130
.6	26	53	89	111
.5	22	45	74	93
.4	18	36	59	74
.9 (90 pcf)	40	80	133	167
1.485 (110 pcf)	65	132	220	275
1.755 (130 pcf)	77	156	260	325

SAMPLE LANDFILL VOLUME AMORTIZATION

1. 125 tons of refuse per day @ 1200 lbs/cy (1.67 cy/ton)

2. 89 cy daily cover @ 90 pcf (.9 tons/cy)

39,000 tons annual refuse
24,960 tons cover
63,960 total tons

$\frac{416,666.40}{63,960}$ = 6.5 years available

The volume amortization analysis is dramatically dependent upon density of cover, density of refuse, and estimated daily quantities. These variables affect the analysis by 30% or more.

Auburn Landfill

1/1

Site History

2-29-80 Inspection report (DEC) noted leachate seeps adjacent to creek, asked depressions to be filled w/ clean cover

5-8-80 Inspection Report (DEC) noted depressions not filled in, daily cover not meeting 6" min, asked that problems be remedied or a compliance schedule would be obtained

10-28-80 Issuing Consent Order (ie compliance schedule), (DEC)

10-19-81 Odor complaint, referral from CC HD found small amount of leachate seepage

~~10-25~~

11-23 ~~12-1~~-82 Request for permission to use foundry sand ~~as Factor~~ as an admixture w/ daily cover

12-1-82 Permission given: foundry sand shown to be non hazardous ... NO 8-1-85 letter from T+C

1-3-83 Request for permission to receive 150-55-gal. drums of plaster containing 23% asbestos

11-9-83 DEC says possible ↗ did not receive waste

4-24-84 DEC requests closure of landfill based on contaminated groundwater

5-7-85 Consent Order issued ⟹ Chuck Chernoff

Auburn Landfill

Substances disposed

1) iron oxide + dirt : Consolidated Scrap Processing Inc
(8448 Cu. yards) 23 Parrine St.
Powderform Auburn NY 13021
12-29-78, Bruckner letter

2) industrial water : Singer Co. Climate Control Division
62 Columbus St.
Auburn NY 13021
3-13-79, L. DelPrete letter

3) bag house dust : Austeal, Auburn Steel Co, Inc
~~1975~~ - 1979 Box 2008
~15,000 tons Auburn, NY 13021
→ from DEC letter 4-24-84

4) 2% asbestos plaster Southern Tier Insulation Distributors
150 55 gal drums 322 Chenango Str.
Endwell NY 13760
11-3-83 letter Michael O'Neill C. Auburn

5) MSW : see permit application

NOTE: NO Frazer + Jones foundry sand was disposed Anthony Giannone letter 8-1-85

G-OP-040775

WEHRAN ENGINEERING

CONFERENCE/TELEPHONE MEMORANDUM

PROJECT: DEC Superfund Work I PROJECT NO.

SUBJECT: Auburn Landfill DATE: 7-10-85

LOCATION: TIME: 11:40

MESSAGE/DISCUSSION WITH: Bob Ingham DC
Cayuga Co SCS

- Auburn gravel landfill mapped as Odessa silt loam varying from poorly to well drained
- base map from 1964 shows area as landfill
- Soils are considered "wet" from an agricultural perspective
- is sending soil survey - see ~~p~~ sheet #1

Surface H_2O Use

(1) trib #9 to Owasco Outlet has same classification as Outlet at pt of confluence ie class D, standards D

NYCRR Vol 6(E) Art 14, Part 898.2 (i)

(2) Owasco Outlet from dam to Throopsville Bridge - class D

(3) Owasco Outlet from bridge to mouth class C

Auburn Landf-4

1980 Census

City of Auburn	32,548
T. of Owasco	3,612
T. of Sennett	2,561
T. of Throop	1,797
T. of Aurelius	2,920
T. of Fleming	2,394
TOTAL	45,832

Total population of City + Towns w/ area w/i three miles of Landf-11.

USDOC, Bureau of Census PC80-1-B34, N.Y.

G-OP-040775

WEHRAN ENGINEERING

CONFERENCE/TELEPHONE MEMORANDUM

PROJECT: DEC Phase I Auburn Landfill PROJECT NO. 4359

SUBJECT: GW water uses in area DATE: 10-1-85

LOCATION: TIME:

MESSAGE/DISCUSSION WITH: Ken White 315-253-1405

possibly some in town of Throop but doesn't think many - will send aquifer maps.

G-OP-040775

WEHRAN ENGINEERING

CONFERENCE/TELEPHONE MEMORANDUM

PROJECT: DEC Phase I PROJECT NO. 4339

SUBJECT: Auburn Landfill - update on status DATE: 7-22-85

LOCATION: TIME:

MESSAGE/DISCUSSION WITH: Chuck Clemoff DEC

1) Enforcement proceedings - want closed

2) City says no

3) proposed closing today
hydro geo & investigation

(really should be doing phase II)

4) Chuck says for many parties

Barton & Loguidice

& Olko Lafcenries

New York State Department of Environmental Conservation

7481 Henry Clay Boulevard, Liverpool, New York 13088-3595
Region 7 Headquarters
Telephone: (315) 428-4497

Henry G. Williams
Commissioner

May 7, 1985

Mike O'Neill, P.E.
City of Auburn
Memorial City Hall
Auburn, New York 13031

RE: DEC v. CITY OF AUBURN
CONSENT ORDER NO. 7-0439

Dear Mr. O'Neill:

Enclosed please find a copy of the Consent Order in the above-referenced matter which has been executed by our Regional Director.

If you have any questions, please advise.

Very truly yours,

Richard J. Brickwedde
Regional Attorney

RJB:kal

cc/enc: Larry Gross
Dan Campbell

STATE OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
----------X

In the Matter of Alleged Violations of Environmental Conservation Law Articles 17 and 27 and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State

CONSENT

CITY OF AUBURN

CASE NO. 7-0439

Respondent.

----------X

1. The Department of Environmental Conservation (the Department) is responsible for the administration and enforcement of Article 17 and 27 of the Environmental Conservation Law (ECL) and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6NYCRR) including Parts 360 and 703.

2. The City of Auburn (Respondent) is a municipal corporation in the State of New York which operates a landfill located on North Division Street in Auburn, Cayuga County, New York.

3. ECL §17-0501 makes it unlawful for any person directly or indirectly to throw, drain, run or otherwise discharge into the State's waters organic or inorganic matter that shall cause or contribute to a condition in contravention of the standards adopted by the Department.

4. 6NYCRR Part 703 describes the quality standards and effluent standards and/or limitations for groundwater.

5. Respondent furnished the Department with an application dated October 5, 1982, for a permit pursuant to 6NYCRR Part 360 for operating the

existing landfill described in paragraph 2. The application indicates that water from monitoring wells at the Auburn City Landfill contain certain pollutants in excess of the groundwater standards set forth in 6NYCRR Part 703. The 1984 test results show iron in excess of the groundwater standards set forth in 6NYCRR Part 703.

6. The Respondent, to promote the best interests of the parties, has affirmatively waived its right to a hearing on this matter as provided by law and consents to the issuing and entering of this Order and agrees to be bound by the provisions, terms and conditions of contained herein.

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

I. Within one month after the execution of this Order Respndent shall submit a leachate removal plan for approval by the Department. The plan shall include a schedule of implementation and a description of:

a. How leachate will be collected, including sizes, locations, and slopes of any collection pipes and sizes and locations of storage lagoons or tanks.

b. How leachate will be treated. If the leachate is to be transported to an existing treatment plant, an evaluation shall be made of the leachate's impacts, if any, on that plant and on the treatment plant's effluent. Testing of the leachate shall be done to determine parameters which may affect treatment plant performance and for parameters of E.P. toxicity and listed hazardous wastes (as listed in Federal Register Vol. 45, No. 98, Monday, May 19, 1980, pages 33,573-33,579 inclusive).

c. The means of transporting the leachate from the landfill to the treatment plant.

d. The frequency and schedule for leachate collection, removal and treatment.

e. A contingency plan in the case of unexpected leachate outbreaks or breakdowns in the treatment process.

III. Within six months after the execution of this Order Respondent shall submit a Hydrogeologic Analysis Report (HAR) of the current site and adjacent proposed expansion areas acceotable to the Department which shall:

a. Be prepared by a licensed professional engineer with experience in hydrogeology.

b. Define the groundwater flowpaths as well as the vertical and aeral extent of any existing leachate plumes in and around the landfill. The HAR will identify and quantify each contaminant in the leachate.

c. Include an action plan to control existing surface and subsurface contamination. This plan shall include a surface water sampling program consistent with the requirements of the Department's solid waste guidelines.

d. Provide a complete geotechnical analysis of any proposed expansion area. This segment of the HAR shall comply with the requirements for groundwater monitoring according to 6NYCRR Part 360, the Solid Waste Management Guidelines and DEC Regional and Central Office guidance.

IV. If the HAR shows contamination of the groundwater in contravention of 6NYCRR Part 703 due to the landfill, then a closure plan for the existing facility shall be submitted within six months of submittal of the HAR. The closure plan shall address remedial work necessary to abate any groundwater contamination. Receipt of waste shall cease 18 months after DEC acceptance of the HAR.

V. If the HAR satisfactorily demonstrates that the landfill is not contaminating the groundwater, then the DEC will proceed with the permit process.

VI. If the results of the HAR are in dispute between DEC and the Respondent then the DEC and Respondent will proceed to the permit hearing process.

VII. (a) The failure of Respondent to comply with any provisions of this Order shall constitute a default and a violation of this Order.

(b) In the event of a default other than one with a "de minimis" effect upon public health, welfare or the environment, the Respondent shall cease accepting solid waste no later than ninety (90) days from the date of default and close the facility in accordance with the terms of this Order and applicable law no later than 180 days after the date of the last acceptance of solid waste.

VIII. No change in this Order shall be made or become effective except as specifically set forth by a further written Order of the Department, being made either upon written application to the Department by the Respondent setting forth the grounds for the relief sought or upon the Department's own findings after an opportunity for the Respondent to be heard or pursuant to the summary abatement powers of the Department.

IX. The provisions, terms and conditions of this Order shall bind the Respondents, its agents, servants, employees, successors and assigns and all persons, firms and corporations acting under or for it.

DATED: Liverpool, New York
May 7, 1985

HENRY G. WILLIAMS, COMMISSIONER
New York State Department of
Environmental Conservation

BY _____
WILLIAM KRICHBAUM
Regional Director 5/7/85

CONSENT BY RESPONDENT

Respondent hereby consents to the issuing and entering of the foregoing Order without further notice and waives its right to a hearing herein and agrees to be bound by the provisions, terms and conditions contained therein.

CITY OF AUBURN

BY Bruce L. Clifford

TITLE City Manager

DATE 5/6/85

CORPORATE ACKNOWLEDGMENT

STATE OF New York)
: ss.:
COUNTY OF Cayuga)

On the 6th day of May in the year 1985 before me personally came Bruce L. Clifford to me known, who, being by me duly sworn did depose and say that he resides in that he is the City Manager of the CITY OF AUBURN, the municipal corporation described in and which executed the above instrument; and that he signed his name thereto as authorized by said municipal corporation.

Joan L. Patzke
NOTARY PUBLIC

JOAN L. PATZKE
NOTARY PUBLIC, STATE OF NEW YORK
Residing in Cayuga Co. at time of Appoint.
Official No. 1135
Commission Expires March 30, 1986

Auburn Landfill
Summary

Phase II - Geotechnical Analysis of Proposed Expansion Areas

Concurrent with the hydrogeologic assessment of the existing Landfill we would perform geotechnical analyses of proposed expansion areas. Inasmuch as permitting of any new areas will unquestionably require installation of a lined landfill system, regardless of the hydrogeologic regime, our proposed program would entail the following steps.

A. A review of future disposal areas and volume needs.

B. Preliminary review of existing soils maps to select optimum areas of investigation and minimize field efforts.

C. Installation of test pits in selected expansion areas to evaluate subsurface and materials conditions relative to design of new Landfill sections.

D. Installation of any additional NYSDEC required groundwater monitors to satisfy the hydrogeologic assessment requirements of a Part 360 Application.

Because the actual extent of planned expansion area was not established, we are not in a position to provide a cost estimate for this Phase II work. It is our opinion that normal Part 360 soil boring and well requirements may be minimized after discussions with NYSDEC by utilizing and keying to data derived from the hydrogeologic assessment of the existing fill area in Phase I.

Scope of Work

Phase I - Hydrogeologic Assessment of Existing Landfill

A. Preliminary Site Assessment - Consisting of a review of existing site data and published local geologic and soils surveys.

B. Geophysical Site Survey - Performed by the C&S Geophysicist consisting of terrain conductivity using an EM-34 unit. This method is rapid and provides a significant amount of data relating to the extent and nature of wastes, soil stratigraphy, location and extent of any potential contaminant (conductive leachate) plumes caused by total dissolved solids, and optimization of monitoring well locations.

C. Subsurface Investigation - Upon completion of Steps A and B, above, location and installation of approximately five soil boring converted to groundwater monitoring wells. One well would be installed upgradient of the existing fill, if an appropriate location can be determined. The remaining wells would be installed at optimum downgradient locations. Drilling supervision, logging of samples, and in-situ permeability testing would be supervised by a C&S Hydrogeologist. Selected soil samples would be submitted for soils laboratory analyses. — how selected (for what use?) what tests performed?

D. Groundwater Monitoring - Upon completion of well installations, groundwater level monitoring and two rounds of water-quality sampling would be performed on the new monitors. The analytical data would be evaluated along with that from the existing quarterly monitoring program.

E. Evaluation and Assessment Report - Utilizing data collected from field investigations, we would prepare a Report of Findings which would address the hydrologic regime beneath the site and the nature and extent of any leachate plumes emanating from the exisitng Landfill.

Should a contaminant problem be apparent, we would include a conceptual action plan within the Report to control existing surface and subsurface contamination as noted in Item C of Paragraph III. We would also prepare as part of the Report a preliminary estimate of costs for closure or remedial plan preparation in accordance with Paragraph IV which would be required by NYSDEC should contamination be determined.

SECTION 1

AUBURN LANDFILL

HYDROGEOLOGIC ANALYSIS REPORT

TECHNICAL PROPOSAL

1.01 General

The most cost-effective and timely approach to comply with the Consent Order is a phased approach to the Project. The Consent Order requires the addressing of two separate but related areas; (1) an evaluation of the existing Landfill and (2) an evaluation of proposed expansion areas. Inasmuch as two relatively large proposed expansion areas exist immediately north and south of the site, suitability of selecting and utilizing either of those sites may be contingent upon any existing groundwater contamination resulting from the presence of the existing Landfill. Thus, phasing of the Project to first determine the nature and extent of potential problems at the existing Landfill would be in order.

1.02 Phase I - Hydrogeologic Assessment of Existing Landfill

A. Objectives

The scope of work within this phase is intended to determine:

1. If any groundwater quality impairment is occurring due to the Landfill.
2. The nature and extent of any potential contaminant plumes exiting the Landfill.
3. The direction and rate of flow of any potential contaminants or surface leachate plumes.
4. Recommendations for any necessary remedial actions to abate surface water or groundwater contamination.

Inasmuch as any contaminant problems would undoubtedly require submittal of a closure plan, it is the intent of the proposed scope of work outlined herein to make that determination in the simplest possible manner. An extensive potential list of field investigations and analytical work does not appear necessary and should be reserved only for potential later closure plan evaluation.

B. Scope of Work

1. Initial Site Assessment

Prior to initiation of any field investigations, a site reconnaissance and literature search on existing soils and geology would be performed to evaluate the layout of those field investigations, determine any potential field hazards, and provide data for later correlation.

2. Geophysical Survey

In order to more satisfactorily layout a subsurface investigation and monitoring plan of the site, a geophysical survey would be conducted by our staff geophysicist. The survey would be conducted using a two-man terrain conductivity unit (Geonics EM-34). The survey would be concentrated on the perimeters of the Landfill area although several traverses of the Landfill proper would also be performed. Data from the survey would provide:

a. Detailed information as to the potential direction and extent of any contaminant plumes exiting the site.

b. Definition of waste burial boundaries.

c. Changes in subsurface stratigraphy.

d. Correlation of data plots derived from future subsurface investigations.

Upon completion of the field work a contour plot of conductivity readings would be prepared and a subsurface investigation plan layed out.

3. Detailed Subsurface Investigation Plan

Determination of existing groundwater conditions will require installation of additional soil borings and groundwater monitors. The layout and depth of these monitors will be dependent on the results of the geophysical survey. Based on our initial review of the existing monitoring network, site topography and geology, we propose that four monitoring well clusters be installed at locations optimized by the geophysical survey. Each cluster would consist of one well installed to the apparent waterbearing interface between overburden and bedrock at a depth of approximately 30 to 35 feet; and one well installed to a depth of 10 to 15 feet just into the first waterbearing horizon.

Wells would be installed using hollow-stem auger methods with continuous split-spoon sampling methods. Upon completion of each boring a 2-inch diameter PVC monitoring well with 5 feet of screen would be installed. Each well would be sand packed at the screen, cement grouted to the surface, developed to a satisfactory sand-free condition, and completed with a protective pipe and locking cap. All sampling and installation would be supervised by a geologist from C&S.

Upon well completion, in-situ permeability tests would be conducted on each well by a C&S hydrogeologist. Soil samples would be selected from the borings and grain-size distribution analyses performed to characterize the overburden deposits by the soil boring contractor.

4. Sampling and Analyses

Upon completion of well installation the C&S sampling crew would perform two rounds of sampling on each monitor. Sampling rounds would be representative of high and low groundwater events. Concurrent with well sampling, three selected surface water points would also be sampled.

Analyses of all samples will be performed by the C&S Environmental Laboratory. The parameters to be tested for would include the current list of quarterly groundwater monitoring parameters agreed upon by the City of Auburn and the NYSDEC: chloride, conductance, pH, total organic carbon, iron, lead, and zinc. In addition, we recommend testing for the following typical municipal leachate indicators: sulfide, phenol, nickel, and cadmium.

At this time it is our opinion that additional analyses including GC/MS scans to identify and quantify all potential contaminants would not be necessary.

5. Evaluation and Assessment Report

Upon completion of all field and analytical work, we will perform an hydrogeologic assessment of the Landfill including:

a. Preparation of hydrogeologic profiles

b. Presentation of drilling logs

c. Preparation of maps of:

- Terrain conductivity
- Indicator contaminant plumes (isopleth)
- Water table and surface flow directions

d. Evaluation of extent and rate of contaminant migration

e. Recommendations for any necessary remedial actions

1.03 Phase 2, Hydrogeologic Assessment of Proposed Expansion Areas

A. Objectives

The purpose of this portion of the scope of work would be to determine the suitability of using proposed expansion areas. The actual scope of work required will be dependent on discussions with the NYSDEC but may be based on the following two considerations:

1. Regardless of the hydrogeologic regime, NYSDEC will require a 10-7 cm/sec liner and cover as well as a leachate collection system for any new landfills.
2. The presence of any contaminant plume from the existing Landfill may prevent construction of a new landfill immediately adjacent to the existing area.

Based on Item 1 above, the geotechnical evaluation of the Landfill expansion area would concentrate on the depth and nature of overburden deposits as well as depth and configuration of the water table beneath the site.

B. Scope of Work

Depending upon discussions with NYSDEC, we anticipate that such a geotechnical program would consist of the following scope of work:

1. Initial review of proposed expansion area(s) to minimize the area requiring investigation including:
   a. Future disposal area/volume requirements
   b. Proximity and relationship to existing Landfill and potential contaminant problems
   c. Selection of apparent best soil and topographic locations
2. Performance of surficial soil exploration utilizing backhoe test pits across selected expansion areas to determine: