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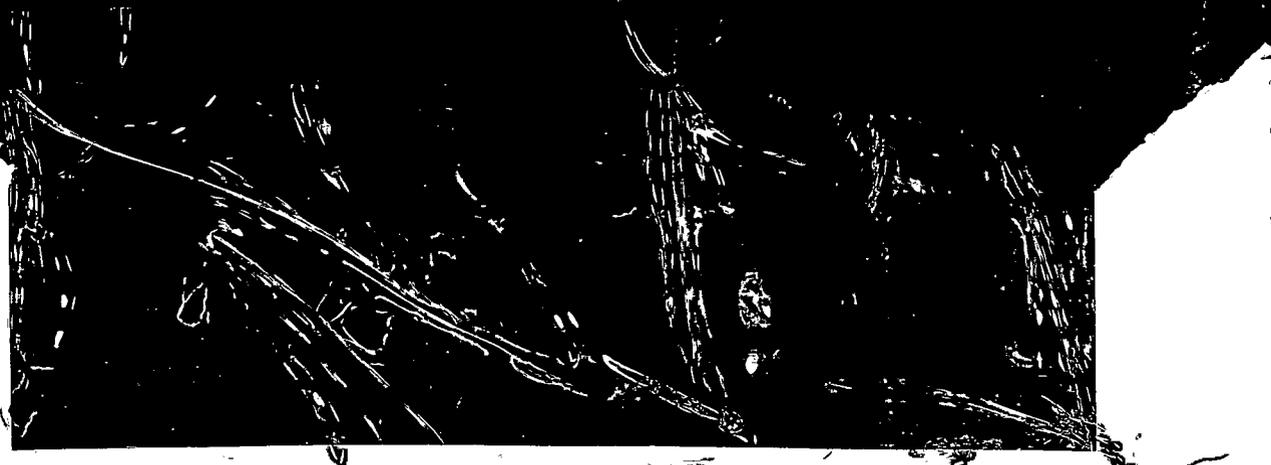
report. HW 915068 1991 -05-06 ~~FILE INVESTIGATION REPORT~~ SITE INSPECTION REPORT.pdf

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FIELD INVESTIGATION TEAM ACTIVITIES AT  
UNCONTROLLED HAZARDOUS SUBSTANCES  
FACILITIES — ZONE I

NUS CORPORATION  
SUPERFUND DIVISION

02-9007-18-SI  
REV. NO. 0

FINAL DRAFT  
SITE INSPECTION REPORT  
LANCASTER SANITARY LANDFILL  
LANCASTER, NEW YORK  
VOLUME 1 OF 2

PREPARED UNDER

TECHNICAL DIRECTIVE DOCUMENT NO. 02-9007-18-SI  
CONTRACT NO. 68-01-7346

FOR THE

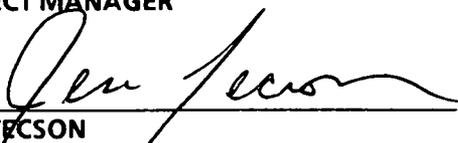
ENVIRONMENTAL SERVICES DIVISION  
U.S. ENVIRONMENTAL PROTECTION AGENCY

May 6, 1991

NUS CORPORATION  
SUPERFUND DIVISION

SUBMITTED BY:

  
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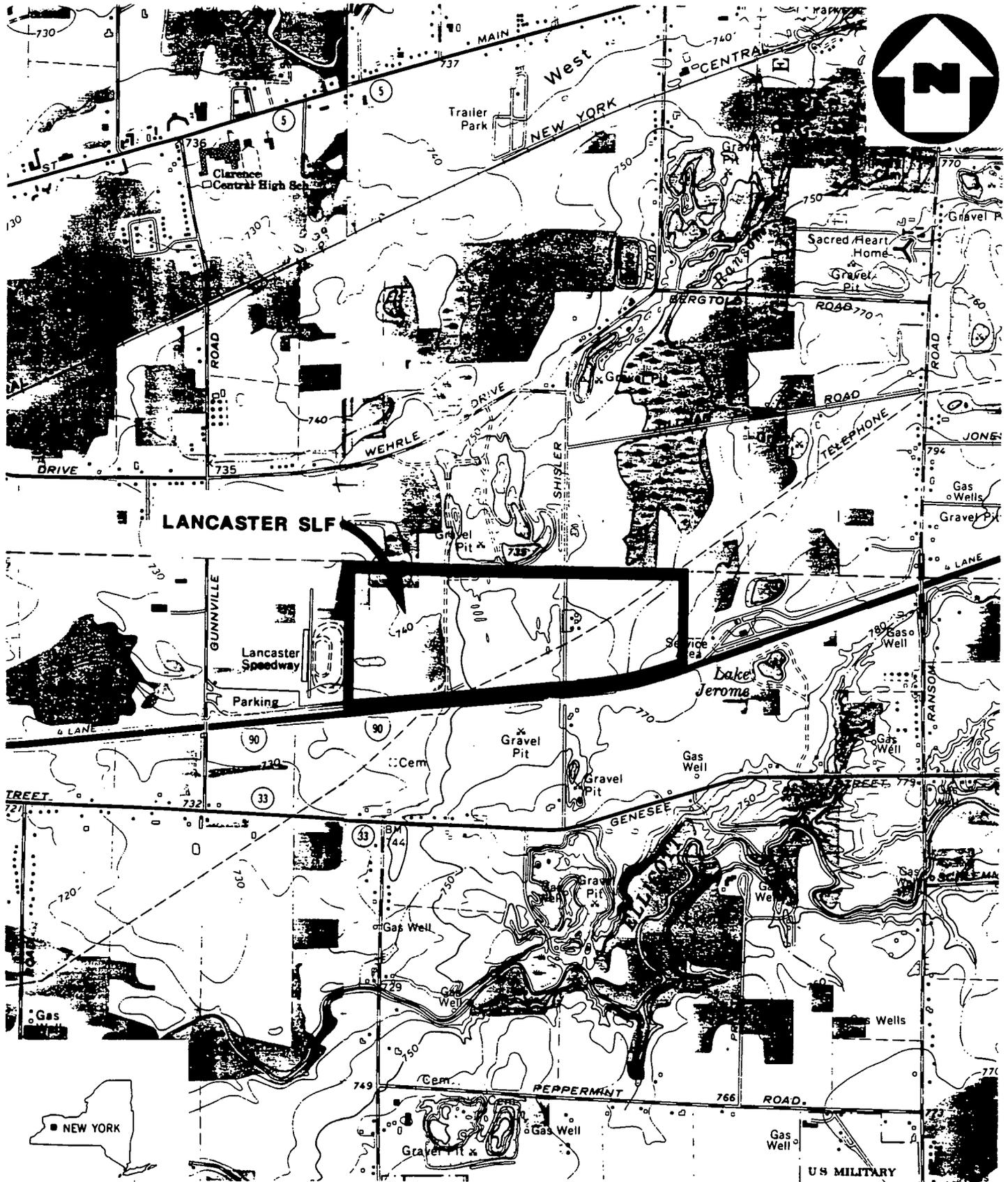
## SITE SUMMARY AND RECOMMENDATIONS

Lancaster Sanitary Landfill is located in the northeast corner of the Town of Lancaster, Erie County, New York; CERCLIS lists the mailing address of the property owner (Ref. Nos. 5, 20). The towns of Lancaster and Clarence are within 5 miles southwest and northeast, respectively, of the site; the City of Buffalo is approximately 25 miles to the west. The site is bounded to the south by the New York State (NYS) Thruway, to the west by Lancaster Speedway, to the north by Wherle Drive, Shisler Road, and Tillman Swamp and to the east by the NYS Thruway's Clarence Rest Area (Figures 1 and 2). The reportedly permitted landfill initially apportioned 100 acres for landfilling purposes and added 80 acres at a later date. Prior to landfilling, the site was formerly a gravel pit. The Lancaster SLF has been inactive since 1986. Gunnville Energy Systems, Inc., formerly known as Lancaster Sanitary Landfill, currently operates a methane recovery system atop the landfill (Ref. Nos. 1, 2, 5).

The privately owned landfill was closed under a consent order issued by the NYS Department of Environmental Conservation (DEC) Region 9, Primary Landfill Enforcements, Targets Division, in 1984. Under the order, Lancaster SLF was required to cap the landfill and initiate a groundwater monitoring program. Closure of the landfill was completed in 1986 by Wehran Engineers & Scientists. The landfill's cover consisted of a clay layer overlain by top soil. The groundwater monitoring program was overseen by the same consulting firm and has been conducted since the issuance of the order (Ref. Nos. 1, 3, 21).

Since the start of landfilling, only domestic and commercial wastes were accepted at the site. However, the landfill reportedly accepted industrial wastes from 13 or more companies from the northern Erie County area from 1961 to 1969. Industrial wastes accepted at the landfill during the period ranged from general refuse to waste sludge, waste ink, and polychlorinated biphenyls (PCB) containing capacitors. The landfill also reportedly accepted drummed chemical wastes, which were mixed in with the fill; the drums were crushed and buried along with the fill. Approximately 14 waste haulers transported wastes into the landfill (Ref. No. 1).

The groundwater monitoring program for the Lancaster SLF consisted of quarterly sampling of the groundwater monitoring wells located around the perimeter of the landfill. Samples from the wells were analyzed for a limited number of parameters. Quarterly reports provided by Wehran Engineers for each sampling round indicate that the groundwater in the vicinity of the site had been contaminated. Organic and inorganic contaminants that were detected in the sampled monitoring wells consisted of 1,1,1-trichloroethane, trichloroethene, tetrachloroethane, chlorobenzene, 1,4-dichlorobenzene chloride, cadmium, iron, and manganese (Ref. No. 4).



(QUAD) CLARENCE, N.Y.

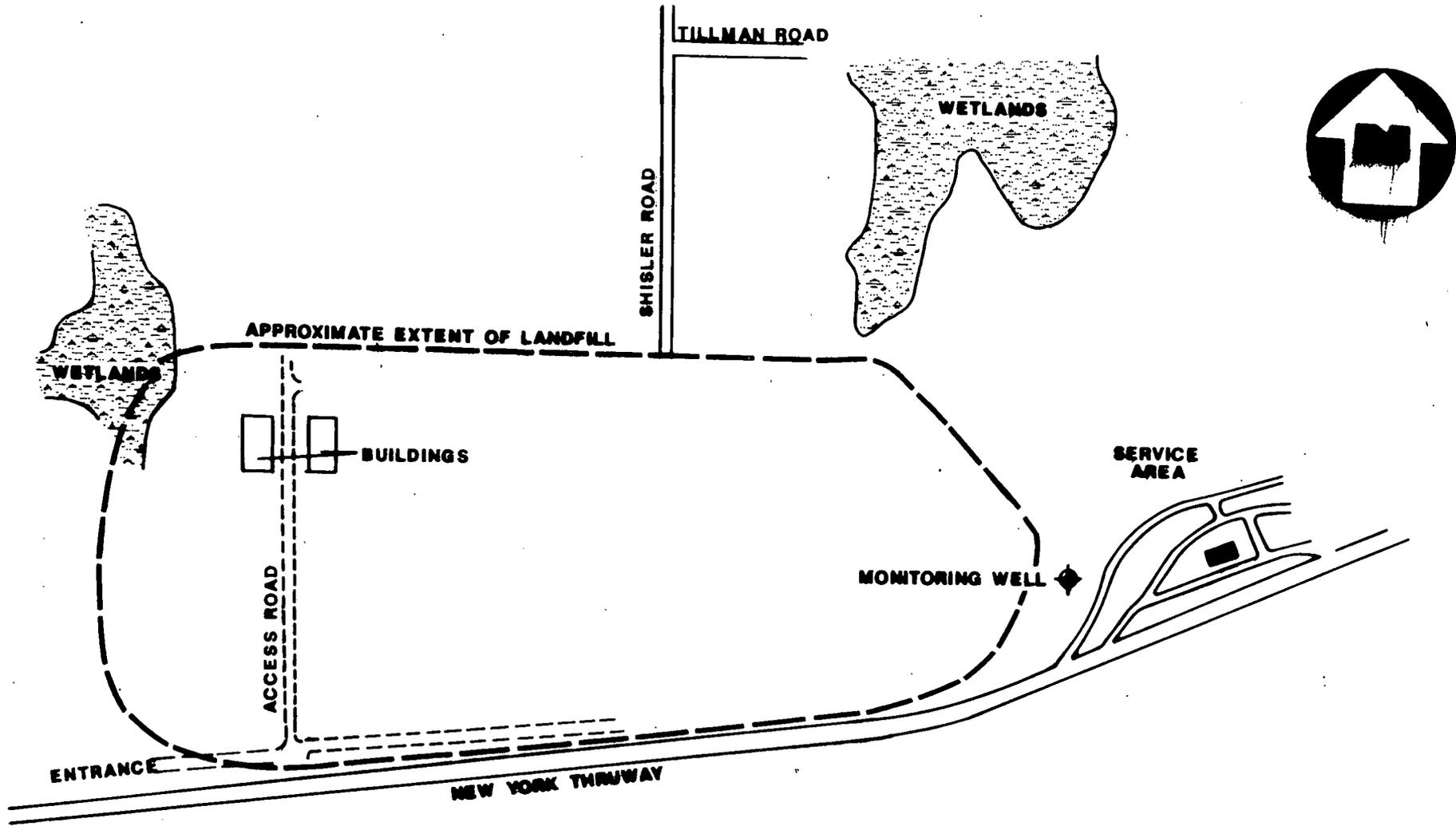
**SITE LOCATION MAP**

**LANCASTER SLF, LANCASTER, N.Y.**

SCALE 1"=2000'

**FIGURE 1**





**SITE MAP**  
**LANCASTER SLF, LANCASTER, N.Y.**  
 NOT TO SCALE



02-9007-18-S1  
 Rev. No. 0

An assessment of the effects of the Lancaster SLF on the highly permeable unconsolidated aquifer and the Onondaga Aquifer indicates that the two aquifers are highly susceptible to contamination by the landfill as groundwater in the vicinity of the landfill travels both horizontally and vertically. A report from the consulted engineering firm stated that a leachate plume from the landfill has affected the semisecure Onondaga Limestone Aquifer (Ref. Nos. 6, 7). Although the majority of the population surrounding the landfill is currently connected to the Erie County Water Authority distribution system, a small number of people still may obtain their water from wells that are tapped into the limestone aquifer. There are approximately 216 people who may be using private domestic wells within 4 miles of the landfill (Ref. Nos. 5, 24).

Tillman Swamp, a New York State designated wildlife management area, can be found on the northeast border of the landfill (Ref. No. 5). In 1985, a leachate pool was observed on the northeast portion of the landfill. The pool was shown adjacent to the swamp which is terminally connected to Ransom Creek, a major surface water pathway that flows to Tonawanda Creek (Ref. No. 9). The creeks are designated as fisheries by the NYSDEC (Ref. No. 15). In addition, wetlands exist along the surface water route (Ref. No. 18). There are no surface water intakes within 15 miles downstream along the surface water pathway of the landfill (Ref. Nos. 11, 22). A fire occurred at the landfill during installation of a methane recovery well in 1987. The fire in the well hole was reportedly smothered with snow and the hole sealed with bentonite (Ref. Nos. 16, 17).

On January 10, 1991, NUS Corporation Region 2 FIT collected soil and sediment samples from the Lancaster Sanitary Landfill Site and the Tillman Swamp Wildlife Management Area. Samples were collected to determine whether a release of contaminants from the site had occurred. The samples were analyzed for the full Target Compound List (TCL) organic and inorganic compounds. Analytical results of the collected samples show that no significant levels of volatile organic contaminants (VOCs) and inorganic contaminants were detected. No semivolatile organic contaminants (SVOCs), pesticides, and polychlorinated biphenyl (PCB) compounds were detected (Ref. No. 27).

A recommendation of **NO FURTHER REMEDIAL ACTION PLANNED (NFRAP)** is assigned to the Lancaster Sanitary Landfill site. There is little risk of exposure to or migration of contaminants in surface waters, soil or air. No significant concentrations of TCL contaminants were detected in sediment samples collected from Tillman Road Wildlife Management Area. Accordingly, Ransom and Tonawanda Creeks, including wetlands, would not be affected. There is no likelihood for contaminants to affect residential areas and wetlands surrounding the site as the landfill had been properly closed in 1986. Although TCL contaminants were detected in the groundwater by Wehran Engineers & Scientists, there is limited use of groundwater for drinking and an alternate source of drinking water supply exists for the population residing in the vicinity of the site.

# SITE ASSESSMENT REPORT: SITE INSPECTION

## PART I: SITE INFORMATION

1. Site Name/Alias Lancaster Sanitary Landfill/ Gunnville Sanitary Landfill/Gunnville Energy Systems Corp.

Street Gunnville Road

City Lancaster State New York Zip 14214

2. County Erie County Code 029 Cong. Dist. 33

3. EPA ID Nos. NYD079934170

4. Block Nos. 2; 6 Lot Nos. 1,2, 3.1; 6.1

5. Latitude 42° 57' 08" N Longitude 78° 37' 10" W

USGS Quad. Clarence, New York

6. Owner Gunnville Energy Systems Corp. Tel. No. (716) 894-2255

Street 2255 Bailey Avenue

City Buffalo State New York Zip 14211

7. Operator Gunnville Energy Systems Corp. Tel. No. Unknown

Street Gunnville Road

City Lancaster State New York Zip 14214

### 8. Type of Ownership

Private       Federal       State  
 County       Municipal       Unknown       Other \_\_\_\_\_

### 9. Owner/Operator Notification on File

RCRA 3001      Date \_\_\_\_\_       CERCLA 103c      Date \_\_\_\_\_  
 None       Unknown

### 10. Permit Information

Permit	Permit No.	Date Issued	Expiration Date	Comments
<u>Unknown</u>	_____	_____	_____	<u>Lancaster Sanitary Landfill was reportedly permitted.</u>

11. Site Status

Active       Inactive       Unknown

12. Years of Operation 1961 to 1984

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

(a) Waste Sources

Waste Unit No.	Waste Source Type	Facility Name for Unit
1	Landfill	Landfill

(b) Other Areas of Concern

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

A leachate pool was observed at the landfill in 1985. The pool was found on the northeast portion of the landfill and adjacent to Tillman Road Swamp, a state designated wildlife and game management area (Ref. No. 5, 9).

14. Information available from

Contact Amy Brochu Agency U.S. EPA Tel. No. (908) 906-6802  
Preparer Jess Tecson Agency NUS Corp. Region 2 FIT Date May 6, 1991



## **PART III: SAMPLING RESULTS**

### **EXISTING ANALYTICAL DATA**

Lancaster Sanitary Landfill was closed under the terms and conditions of a consent order issued by the New York State Department of Environmental Conservation (NYSDEC) in 1984. Closure required covering the landfill with clay and top soil, and monitoring the groundwater around the site. The consultant, Wehran Engineers & Scientists, completed the final cover construction for the Lancaster SLF in 1986 and has been managing the groundwater monitoring program for the site since late 1985 (Ref. Nos. 1, 3, 4, 7).

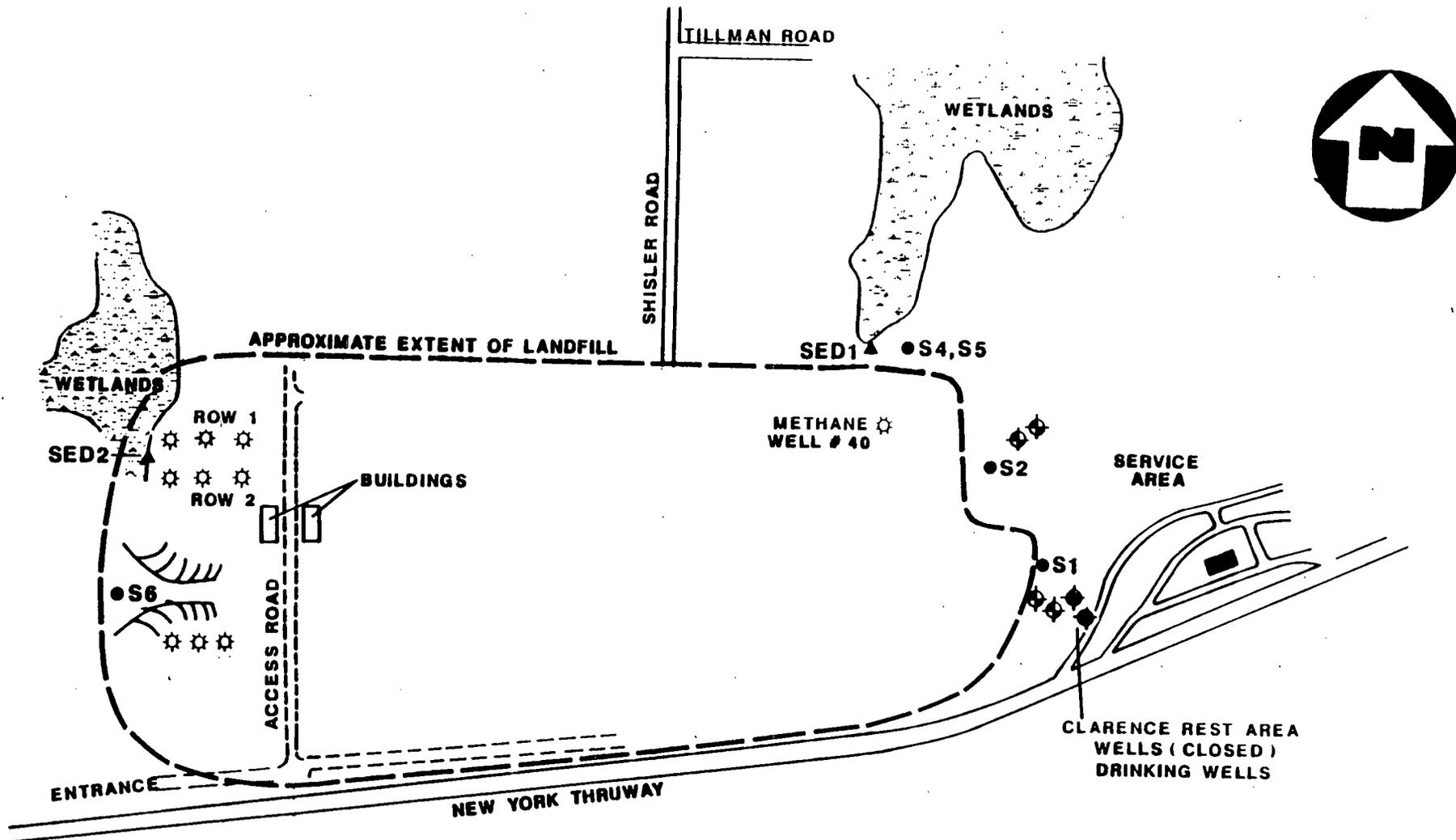
Groundwater beneath the landfill is contaminated. Early analytical results of groundwater samples collected from monitoring wells surrounding the landfill indicated the presence of organic and inorganic contaminants. According to the analytical results of samples collected on March 18, 1986, trichloroethylene, 1,1,1-trichloroethene, benzene, toluene, methylene chloride, silver, lead, mercury, arsenic, zinc, chromium, copper, and nickel were detected at significant levels (Ref. No. 4, pp.259-264). Analytical results of groundwater samples that followed months later showed a decrease in contaminant levels. However, analytical results of groundwater samples collected on March 22, 1990 continued to indicate significant levels of organic contaminants. Chloroform, 1,1,1-trichloroethane, trichloroethene, tetrachlorethene, chlorobenzene, dichlorobenzene and 1,4-dichlorobenzene were detected at concentrations ranging from 1.17 to 8.85 micrograms per liter (ug/L). Concentrations of inorganic contaminants range from 0.012 to 740 ug/L. Inorganic contaminants included chloride, cadmium, iron, and manganese. (Ref. No.4 , pp. 9-22)

Locations of the monitoring wells sampled under the groundwater monitoring program for the Lancaster SLF can be found in Reference No. 9.

### **SITE INSPECTION RESULTS**

Soil and sediment samples were collected from the Tillman Swamp Wildlife Management Area and the Lancaster Sanitary Landfill by NUS Corporation Region 2 FIT on January 10, 1991 (See Figure 3). Samples were collected to determine whether a release of contaminants had occurred from the site. The samples were analyzed for the full Target Compound List (TCL), organic and inorganic compounds, excluding cyanide. Analytical results of the samples indicate that no significant levels of volatile organic contaminants (VOCs) and inorganic contaminants were detected. No semivolatile organic contaminants (SVOCs), pesticides, and polychlorinated biphenyl (PCB) compounds were detected in any of the samples collected. Table 1 presents the analytical results of the soil and sediment samples collected on January 10, 1991 (Ref. No. 27).

Ref. Nos. 5, 27



**LEGEND**

- SOIL SAMPLE
- ▲ SEDIMENT SAMPLE
- ◆ MONITORING WELL
- ⊗ METHANE RECOVERY WELL

**SAMPLE LOCATION MAP**  
**LANCASTER SLF, LANCASTER, N.Y.**

NOT TO SCALE

**FIGURE 3**



SITE NAME: LANCASTER SANITARY LANDFILL

TDD# 02-9007-18

SAMPLING DATE: 1/10/91

EPA CASE NO.: 15651 LAB: CLAYTON

TABLE 1

VOLATILES	NYLM-SED1	NYLM-SED2	NYLM-S1(MS/MSD)	NYLM-S2	NYLM-S4	NYLM-S5(DUP)	NYLM-S6	NYLM-RIN1	NYLM-RIN2
Sample ID No.	BFT38	BFT39	BFT32	BFT33	BFT35	BFT36	BFT37	BFT40	BFT41
Traffic Report No.	SEDIMENT	SEDIMENT	SOIL	SOIL	SOIL	SOIL	SOIL	WATER	WATER
Matrix	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/L	ug/L
Units	1	1	1	1	1	1	1	1	1
Dilution Factor	39	3	6	21	39	38	19	--	--
Percent Moisture									
Chloromethane								12	J
Bromomethane									
Vinyl Chloride									
Chloroethane									
Methylene Chloride									
Acetone									
Carbon Disulfide				J					
1,1-Dichloroethane									
1,1-Dichloroethane									
Trans-1,2-Dichloroethane (total)									
Chloroform	J								
1,2-Dichloroethane									
2-Butanone									
1,1,1-Trichloroethane									
Carbon Tetrachloride									
Vinyl Acetate									
Bromodichloromethane									
1,2-Dichloropropane									
cis-1,3-Dichloropropene									
Trichloroethene									
Dibromochloromethane									
1,1,2-Trichloroethane									
Benzene									
trans-1,3-Dichloropropene									
Bromoform									
4-Methyl-2-Pentanone									
2-Hexanone									
Tetrachloroethene			J	J					
Toluene		J	8	9			J		
1,1,2,2-Tetrachloroethane									
Chlorobenzene									
Ethylbenzene									
Styrene									
Xylenes (Total)									

NOTES:

Blank space - compound analyzed for but not detected

B - compound found in lab blank as well as sample, indicates possible/probable blank contamination

E - estimated value

J - estimated value, compound present below CRQL but above IDL

R - analysis did not pass EPA QA/QC

H - Presumptive evidence of the presence of the material

NR - analysis not required

Detection limits elevated if Dilution Factor >1 and/or percent moisture >0%

SITE NAME: LANCASTER SANITARY LANDFILL

TABLE 1

TDD#: 02-9007-18

SAMPLING DATE: 1/10/91

EPA CASE NO.: 15651 LAB: CLAYTON

SEMI-VOLATILES

Sample ID No.	NYLM-SED1	NYLM-SED2	NYLM-S1(MS/MSD)	NYLM-S2	NYLM-S4	NYLM-S5(DUP)	NYLM-S6	NYLM-RIN1	NYLM-RIN2
Traffic Report No.	BFT38	BFT39	BFT32	BFT33	BFT35	BFT36	BFT37	BFT40	BFT41
Matrix	SEDIMENT	SEDIMENT	SOIL	SOIL	SOIL	SOIL	SOIL	WATER	WATER
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/L	ug/L
Dilution Factor/GPC Cleanup (Y)	1/Y	1/Y	1/Y	1/Y	1/Y	1/Y	1/Y	1	1
Percent Moisture	39	3	6	21	39	38	19	--	--

Phenol  
 bis(2-Chloroethyl)ether  
 2-Chlorophenol  
 1,3-Dichlorobenzene  
 1,4-Dichlorobenzene  
 Benzyl alcohol  
 1,2-Dichlorobenzene  
 2-Methylphenol  
 bis(2-Chloroisopropyl)ether  
 4-Methylphenol  
 N-Nitroso-di-n-dipropylamine  
 Hexachloroethane  
 Nitrobenzene  
 Isophorone  
 2-Nitrophenol  
 2,4-Dimethylphenol  
 Benzoic acid  
 bis(2-Chloroethoxy)methane  
 2,4-Dichlorophenol  
 1,2,4-Trichlorobenzene  
 Naphthalene  
 4-Chloroaniline  
 Hexachlorobutadiene  
 4-Chloro-3-Methylphenol  
 2-Methylnaphthalene  
 Hexachlorocyclopentadiene  
 2,4,6-Trichlorophenol  
 2,4,5-Trichlorophenol  
 2-Chloronaphthalene  
 2-Nitroaniline  
 Dimethylphthalate  
 Acenaphthylene  
 2,6-Dinitrotoluene  
 3-Nitroaniline  
 Acenaphthene  
 2,4-Dinitrophenol  
 4-Nitrophenol  
 Dibenzofuran  
 2,4-Dinitrotoluene  
 Diethylphthalate  
 4-Chlorophenyl-phenyl ether  
 Fluorene  
 4-Nitroaniline  
 4,6-Dinitro-2-methylphenol  
 N-nitrosodiphenylamine  
 4-Bromophenyl-phenyl ether  
 Hexachlorobenzene

SITE NAME: LANCASTER SANITARY LANDFILL

TABLE 1

TDD#: 02-9007-18

SAMPLING DATE: 1/10/91

EPA CASE NO.: 15651 LAB: CLAYTON

SEMI-VOLATILES

Sample ID No.	NYLM-SED1	NYLM-SED2	NYLM-S1(MS/MSD)	NYLM-S2	NYLM-S4	NYLM-S5(DUP)	NYLM-S6	NYLM-RIN1	NYLM-RIN2
Traffic Report No.	BFT38	BFT39	BFT32	BFT33	BFT35	BFT36	BFT37	BFT40	BFT41
Matrix	SEDIMENT	SEDIMENT	SOIL	SOIL	SOIL	SOIL	SOIL	WATER	WATER
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/L	ug/L
Dilution Factor/GPC Cleanup (Y)	1/Y	1/Y	1/Y	1/Y	1/Y	1/Y	1/Y	1	1
Percent Moisture	39	3	6	21	39	38	19	--	--

Pentachlorophenol  
 Phenanthrene  
 Anthracene  
 Di-n-butylphthalate  
 Fluoranthene  
 Pyrene  
 Butylbenzylphthalate  
 3,3'-Dichlorobenzidine  
 Benzo(a)anthracene  
 Chrysene  
 bis(2-Ethylhexyl)phthalate  
 Di-n-octylphthalate  
 Benzo(b)fluoranthene  
 Benzo(k)fluoranthene  
 Benzo(a)pyrene  
 Indeno(1,2,3-cd)pyrene  
 Dibenz(a,h)anthracene  
 Benzo(g,h,i)perylene

NOTES:

- Blank space - compound analyzed for but not detected
  - B - compound found in lab blank as well as sample, indicates possible/probable blank contamination
  - E - estimated value
  - J - estimated value, compound present below CRQL but above IDL
  - R - analysis did not pass EPA QA/QC
  - N - Presumptive evidence of the presence of the material
  - NR - analysis not required
- Detection limits elevated if Dilution Factor >1 and/or percent moisture >0%

SITE NAME: LANCASTER SANITARY LANDFILL  
 TDD#: 02-9007-18  
 SAMPLING DATE: 1/10/91  
 EPA CASE NO.: 15651 LAB: CLAYTON

TABLE 1

PESTICIDES	NYLM-SED1	NYLM-SED2	NYLM-S1(MS/MSD)	NYLM-S2	NYLM-S4	NYLM-S5(DUP)	NYLM-S6	NYLM-RIN1	NYLM-RIN2
Sample ID No.	BFT38	BFT39	BFT32	BFT33	BFT35	BFT36	BFT37	BFT40	BFT41
Traffic Report No.									
Matrix	SEDIMENT	SEDIMENT	SOIL	SOIL	SOIL	SOIL	SOIL	WATER	WATER
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/L	ug/L
Dilution Factor/GPC Cleanup (Y)	1/Y	1/Y	1/Y	1/Y	1/Y	1/Y	1/Y	1	1
Percent Moisture	39	3	6	21	35	38	19	--	--

alpha-BHC  
 beta-BHC  
 delta-BHC  
 gamma-BHC (Lindane)  
 Heptachlor  
 Aldrin  
 Heptachlor epoxide  
 Endosulfan I  
 Dieldrin  
 4,4'-DDE  
 Endrin  
 Endosulfan II  
 4,4'-DDD  
 Endosulfan sulfate  
 4,4'-DDT  
 Methoxychlor  
 Endrin ketone  
 alpha-Chlordane  
 gamma-Chlordane  
 Toxaphene  
 Aroclor-1016  
 Aroclor-1221  
 Aroclor-1232  
 Aroclor-1242  
 Aroclor-1248  
 Aroclor-1254  
 Aroclor-1260

## NOTES:

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 Detection limits elevated if Dilution Factor >1 and/or percent moisture >0%

SITE NAME: LANCASTER SANITARY LANDFILL  
 TODD: 02-9007-18  
 SAMPLING DATE: 1/10/91  
 EPA CASE NO.: 15651  
 LAB NAME: SKINNER & SHERMAN

TABLE 1

## INORGANICS

Sample ID No.	NYLM-SED1	NYLM-SED2	NYLM-S1(MS/MSD)	NYLM-S2	NYLM-S4	NYLM-SS(DUP)	NYLM-S6	NYLM-RIN1	NYLM-RIN2
Traffic Report No.	MBE807	MBE808	MBE801	MBE802	MBE804	MBE805	MBE806	MBE809	MBE810
Matrix	SEDIMENT	SEDIMENT	SOIL	SOIL	SOIL	SOIL	SOIL	WATER	WATER
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	ug/L	ug/L
Aluminum	6570	15300	7030	17100	7150	6720	6290		J
Antimony									
Arsenic	J	4.3	3.6	4.7 E	J	J	2.3		
Barium	J	106	46.7	133	J	J	51.7		
Beryllium	J	J	J	J	J	J	J		
Cadmium				J					
Calcium	23600 E	50400 E	23700 E	4700 E	15500 E	15000 E	61600 E	J	J
Chromium	8.8	17.2	9.2	20.6	9.9	8.8	8.9		
Cobalt	J	J	J	12.6	J	J	J		
Copper	11.8	20.5	13.4	10.5	9.9	9.3	13.2		
Iron	10800	21400	12400	27000	11200	10600	10600	J	J
Lead	17	24.8	19.7	18.4	18.5	17.4	8.7	J	J
Magnesium	12500 E	21100 E	14300 E	5650 E	9300 E	8830 E	26500 E	J	J
Manganese	412	543	326	856	296	336	338		
Mercury									
Nickel	J	20.5	J	20.7	J	J	9.8		
Potassium	J	2310	J	1650	J	J	1220		
Selenium									
Silver									
Sodium	J	J	J	J	J	J	J	J	J
Thallium									
Vanadium	J	27.7 E	17.4 E	32.5 E	16.1 E	15.1 E	13.7 E	J	
Zinc	68.8 E	120 E	62 E	96.2 E	64.4 E	61.2 E	64.7 E		J

## NOTES:

Blank space - compound analyzed for but not detected

E - estimated value

J - estimated value, compound present below CRDL but above IDL

R - analysis did not pass EPA QA/QC

NR - analysis not required

## **PART IV: HAZARD ASSESSMENT**

### **GROUNDWATER ROUTE**

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

There has been an observed release of contaminants to the groundwater that is attributable to the Lancaster Sanitary Landfill. The landfill reportedly accepted industrial wastes from 14 companies in the northern Erie County region from 1961 to 1969. Oil sludge, waste oil, fly ash, waste ink, chlorinated solvents, filtration sludges, and PCB containing capacitors were reportedly deposited in the landfill. Additionally, chemical wastes (reportedly drummed) were mixed in with the fill. According to the analytical results of groundwater samples collected from monitoring wells surrounding the landfill on March 22, 1990, concentrations of chloride, cadmium, iron and manganese have exceeded the Maximum Contaminant Level (MCL) and the Secondary MCL as shown in the Code of Federal Regulations (CFR). Organic contaminants were also detected at significant levels. Chlorobenzene, 1,4-dichlorobenzene, tetrachloroethene, trichloroethene, and 1,1,1-trichloroethene were detected at concentrations of 23.80, 3.23, 2.98, 2.25, and 8.85 ug/L, respectively.

Ref. Nos. 1, 4, 30

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

The aquifers of concern consist of the unconsolidated surficial sand and gravel aquifer and the Onondaga Limestone Aquifer. The U.S. Geological Survey, Water Resources Investigation Report 84-4334, Hydrogeologic Appraisal of the Five selected aquifers in Erie County, New York, 1985, states that the unconsolidated aquifer resulted from glaciation of the area through deposition of a variety of sediments on the Onondaga Limestone Aquifer. Logs of borings in the vicinity of the Lancaster Sanitary Landfill show that the overlying surficial till is underlain by 30 to 45 feet of sand with some gravel. Underlying the sand and gravel layer is a basal lodgment till ranging from 3 to 15 feet thick. In the southwestern portion of the studied area, till is underlain by a poorly defined end moraine consisting of poorly sorted silt, sand, gravel and boulders that were deposited in front of the glacier and subglacial or subaqueous outwash of sorted and stratified sand, or sand and gravel deposited by glacial meltwater at the bottom of the great ice. Borings conducted southeast of the landfill show 20 to 30 feet of well sorted stratified outwash sand and gravel underlain by 10 to 15 feet of lacustrine silt and sandy silt. This is underlain by 2 to 12 feet of lodgment till. The saturated thickness of the unconsolidated aquifer is greatest under the landfill; it is approximately 25 feet thick. West of the landfill, the aquifer ranges from 5 to 23 feet thick. The saturated zone consists of sand with some sand and gravel in the deeper zone.

The report describes the Onondaga Limestone Aquifer as a large cherty and argillaceous limestone where it has not been eroded and reaching approximately 140 feet thick. It extends from Buffalo to Albany as an east-west belt several miles wide. It is a productive aquifer. Openings in the limestone exist in the forms of joints and fractures which are widened by solutioning. There are few primary pores. Sink holes reportedly occur from the widening of joints and fractures and where overlying rocks and sediments have caved in. Holes were observed both west and east of the landfill area. Precipitation infiltrating downward into the water table recharges the unconsolidated aquifer. The Onondaga Aquifer is recharged by:

1. Precipitation infiltrating into the joints, fractures and solutioning openings at the outcrop or near land openings,
2. Downward seepage of overlying unconsolidated deposits and wetlands,
3. Seepage from storm runoffs and streams flowing back into the sink or swallets on top of the limestone, and/or
4. Possibly by water that has been pumped out of a quarry 6 miles east of the studied area and then discharged as surface flows, some of which may infiltrate back into the limestone.

The Wehran Engineering hydrogeologic report assessed the effects of landfilling in Lancaster. Borings from 1979 to 1980 along the perimeter of the landfill show that 0 to 10 feet of basal till is overlain by 20 to 50 feet of outwash and/or morainal sand and gravelly sand. Till and sand ranging in thickness from 3 to 15 feet overly the geologic sections. Beneath the basal till lies the Onondaga Limestone Aquifer. A discontinuous, semiconfining layer exists beneath the eastern portion of the landfill. This layer of relatively impermeable till overlies the limestone aquifer and separates the sand, silt, and sand and gravel layer from the limestone aquifer. Groundwater exists under water table conditions in the upper sand, silt, sand and gravel, and in the refuse. Groundwater was detected at approximately 6 feet below ground surface in one monitoring well that was being sampled on March 22, 1990. Leachate reportedly could migrate into the limestone aquifer through the overlying sand, silt, and sand and gravel as groundwater flows downward. A groundwater divide that extends northeast to southwestward through the deposits reportedly directs groundwater to the north towards Tillman Swamp while groundwater to the south is directed southwestward towards Ellicott Creek.

Ref. Nos. 1, 4, 6, 7, 8

**3. Is a designated well head protection area within 4 miles of the site?**

There are four well head protection areas within 4 miles of the site. One well head protection area lies directly beneath the site. It encompasses an unconfined aquifer with potential yields of 10 to 100 gallons per minute. Two other well head protection areas can be found east and northeast of the site. The fourth well head protection area is located south of the site.

Ref. No. 22

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

Approximately 20 to 40 feet of refuse had been deposited in the landfill that overlies the geologic formation which exists above the basal till. One monitoring well, which was sampled on March 22, 1990 showed that groundwater is approximately 6 feet below ground surface. Contaminants attributable to the site were detected in groundwater samples. Therefore, the depth from the lowest point of waste disposal/storage to the highest seasonal level of the saturated zone of the aquifer of concern is zero feet.

Ref. Nos. 4, 6, 7

**5. What is the permeability value of the least permeable continuous intervening stratum between the ground surface and the aquifer of concern?**

The permeability value of the till overlying the sand and gravel aquifer is  $10^{-5}$  to  $10^{-7}$  cm/sec.

Ref. No. 1, 6, 7, 8

6. **What is the net precipitation for the area?**

The net precipitation for the area is approximately 5 inches. It is calculated by subtracting the mean annual lake evaporation rate from the normal total annual precipitation.

Ref. No. 8

7. **What is the distance to and depth of the nearest well that is currently used for drinking purposes?**

The distance to the nearest well that is currently used for drinking purposes is unknown. The selected well inventory database from the USGS shows domestic wells within 4 miles of the landfill; however, it is not known if the wells are currently used for drinking purposes. Access to a public supply distribution system is available to these individuals.

Ref. Nos. 5, 13, 14

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

The number of wells and people cannot be determined as there have been no reports of contaminated drinking water wells within four miles of the site.

Ref. Nos. 13, 14

9. **Identify the population served by wells located within 4 miles of the site that draw from the aquifer of concern.**

<u>Distance</u>	<u>Population*</u>	
0 - $\frac{1}{4}$ mi	0	* 3.0 persons per well location. The average persons per household count in the Town of Clarence is 3.
$>\frac{1}{4}$ - $\frac{1}{2}$ mi	0	
$>\frac{1}{2}$ - 1 mi	24	
>1 - 2 mi	57	
>2 - 3 mi	81	
>3 - 4 mi	51	

Ref. Nos. 13, 14, 26

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

According to a groundwater site inventory database from the United States Geological Survey (USGS), groundwater within 4 miles of the site is used for private, commercial and irrigational purposes.

Ref. No. 13

## **SURFACE WATER ROUTE**

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

There is little likelihood of a release of contaminants to surface water. Analytical results of sediment samples collected by NUS Corporation Region 2 FIT on January 10, 1991 revealed no significant concentrations of any TCL contaminants.

Ref. Nos. 14, 27

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

The nearest downslope surface water is Ransom Creek. It is a tributary of Tonawanda Creek. The Lancaster Sanitary Landfill site drains radially. Drainage that does not percolate into the underlying strata will flow primarily to the low lying areas east and west of the site. Accumulated runoff along the site's western border will serve to recharge the underlying aquifer. Runoff to the eastern side of the site may flow overland into Tillman Swamp, which abutts the northeast corner of the site. This wetland then drains into Ransom Creek approximately 0.7 mile north of the site.

Ref. Nos. 5, 9, 14

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

The distance to Ransom Creek is approximately 0.7 mile. The northeastern portion of Lancaster SLF borders Tillman Swamp, which drains into the creek.

Ref. Nos. 5, 9, 14

14. **Determine the floodplain that the site is located within.**

The site is located outside the boundary of the 500-year flood plain.

Ref. No. 10

15. **What is the 2-year 24-hour rainfall?**

The 2-year 24-hour rainfall is approximately 2.25 inches.

Ref. No. 29

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

There are no surface water intakes within 15 miles downstream of the site. Surface waters within 15 miles downstream of the site are Ransom Creek and Tonawanda Creek.

Ref. Nos. 11, 12, 14

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

<u>Fishery</u>	<u>Water Body Type</u>	<u>Flow (cfs)</u>
Ransom Creek	Small to moderate stream	10 to 100*
Tonawanda Creek	Moderate to large stream	100 to 1000*

\*estimated

Ref. No. 14, 15

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

<u>Environment</u>	<u>Water Body Type</u>	<u>Flow (cfs)</u>
State Land designated for wildlife or game management.	Minimal stream	< 10
Wetlands	Small to moderate stream	10 to 100*

\*estimated

Ref. Nos. 5, 9, 18

19. If a release to surface water is observed or suspected, identify any intakes, fisheries, and sensitive environments from question Nos. 16-18 that are or may be located within the contamination boundary of the release.

No release to surface water is observed or suspected.

Ref. Nos. 5, 27

#### SOIL EXPOSURE PATHWAY

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

There are no residences, schools, or day care centers on or within 200 feet of the landfilled portion of the Lancaster SLF. Closure of the landfill in 1986 was completed by Wehran Engineering. The landfill was capped with a clay layer and seeded top soil layer.

Ref. Nos. 5, 14, 21

21. Determine the number of people that work on or within 200 feet of the site property.

Approximately 124 people work on or within 200 feet of the site property. Gunville Energy Systems, Inc. currently operates atop the landfill and employs approximately 10 people. The NYS Thruway Authority indicated that there are approximately 112 full time employees working at the Clarence Rest Area. Lancaster Speedway, located west of the landfill, reportedly employs two full time people.

Ref. Nos. 23, 25, 31

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

Tillman Swamp borders the northeastern portion of the landfill. It is a NYSDEC designated wildlife management area.

Ref. Nos. 5, 9, 14

AIR ROUTE

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

There is little likelihood for a release of contaminants to the air. The landfill was closed by the NYSDEC in 1986. Lancaster SLF was capped with clay and top soil layers. A methane recovery plant currently operates at the site. Analytical results of soil and sediment samples collected by NUS Coproration Region 2 FIT on January 10, 1991 indicate no significant concentrations of contaminants.

Ref. Nos. 2, 3, 5, 21, 27

24. Determine populations that reside within 4 miles of the site.

<u>Distance</u>	<u>Population</u>
0 - ¼ mi	0
>¼ - ½ mi	0
>½ - 1 mi	1,201
>1 - 2 mi	129
>2 - 3 mi	8,263
>3 - 4 mi	16,191

Ref. No. 19

25. Identify sensitive environments and wetlands acreage within ½ mile of the site.

<u>Sensitive Environment Type</u>	<u>Distance (mile)</u>	
	<u>0 to 0.25</u>	<u>0.25 to 0.50</u>
State land designated for wildlife or game management/Wetlands	36 acres	29 acres
Wetlands	39 acres	52 acres

Ref. Nos. 5, 14, 18

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

No release to air is observed or suspected.

Ref. Nos. 2, 3, 5, 21, 27

27. If a release to air is observed or suspected, identify any sensitive environments, listed in question No. 25, that are or may be located within the area of air contamination from the release.

No release to air is observed of suspected.

Ref. Nos. 2, 3, 5, 21, 27

**ATTACHMENT 1**

EXHIBIT A

PHOTOGRAPH LOG

LANCASTER SANITARY LANDFILL  
LANCASTER, NEW YORK

SITE RECONNAISSANCE: SEPTEMBER 18, 1990  
SITE INSPECTION: JANUARY 10, 1991

LANCASTER SANITARY LANDFILL  
LANCASTER, NEW YORK  
SEPTEMBER 18, 1990

PHOTOGRAPH INDEX

ALL PHOTOGRAPHS WERE TAKEN BY BOB KURKJIAN

<u>Photo Number</u>	<u>Description</u>	<u>Time</u>
1P-1	NYSDEC sign: Wildlife Management Area.	0948
1P-2	Looking east towards rest area.	1109
1P-3	Looking north across landfill.	1110
1P-4	Looking west across landfill.	1111
1P-5	Looking west towards speedway.	1140
1P-6	Looking north at pipeline for methane collection system.	1145

LANCASTER SANITARY LANDFILL, LANCASTER, NEW YORK



1P-1

September 18, 1990  
NYSDEC sign: Wildlife Management Area.

0948



1P-2

September 18, 1990  
Looking east towards rest area.

1109

LANCASTER SANITARY LANDFILL, LANCASTER, NEW YORK



1P-3

September 18, 1990  
Looking north across landfill.

1110

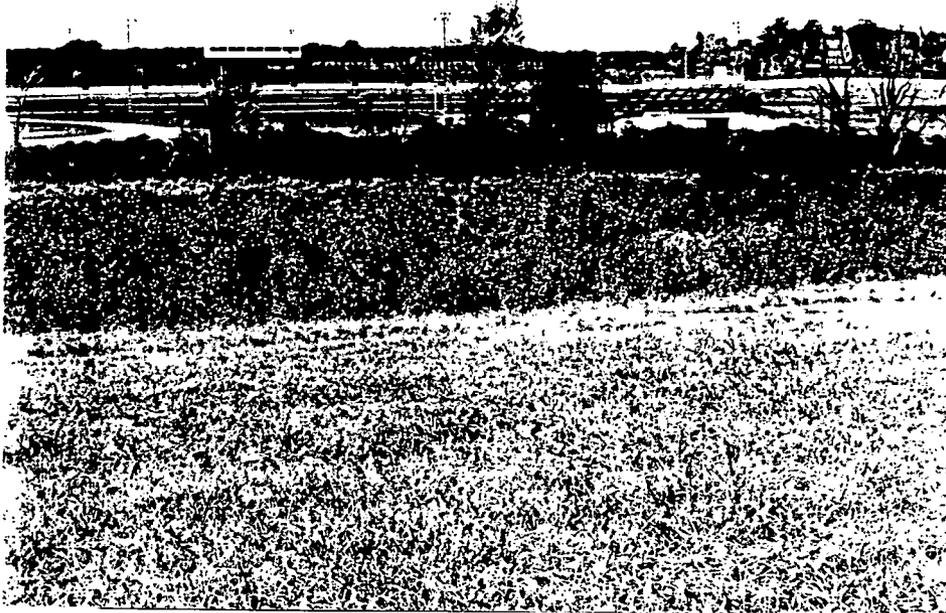


1P-4

September 18, 1990  
Looking west across landfill.

1111

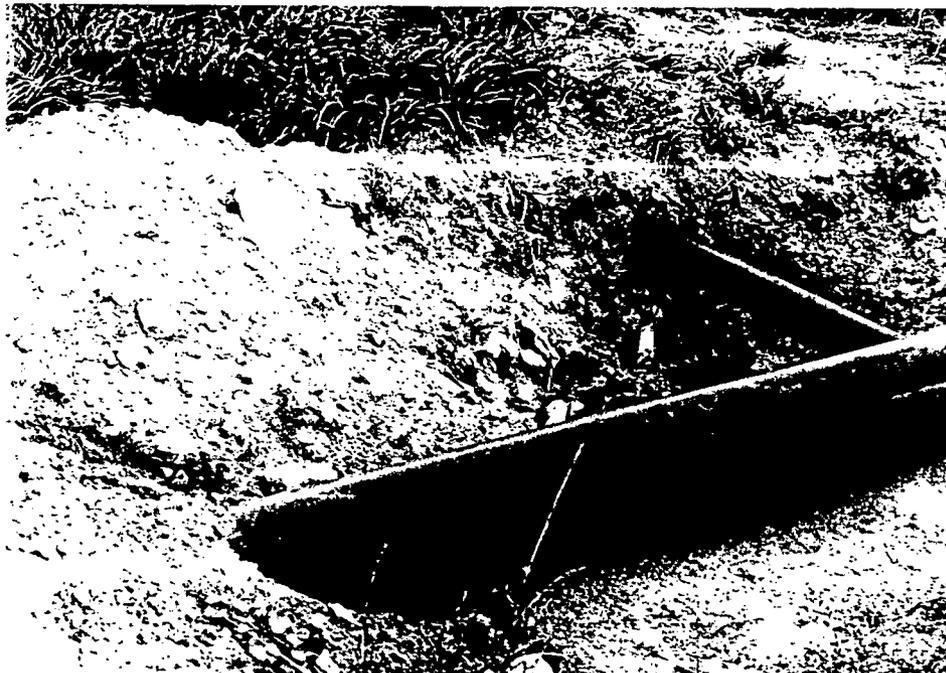
LANCASTER SANITARY LANDFILL, LANCASTER, NEW YORK



1P-5

September 18, 1990  
Looking west towards speedway.

1140



1P-6

September 18, 1990  
Looking north at pipeline for methane collection  
system.

1145

LANCASTER SANITARY LANDFILL  
LANCASTER, ERIE COUNTY, NEW YORK  
JANUARY 10, 1991

PHOTOGRAPH INDEX

ALL PHOTOGRAPHS WERE TAKEN BY J. TECSON

<u>Photo Number</u>	<u>Description</u>	<u>Time</u>
1P-1	Photograph of S. Okulewicz collecting composite surface soil samples NYLM-S4 and S5.	1024
1P-2	Photograph of B. Kurkjian collecting sediment sample NYLM-SED1.	1046
1P-3	Photograph of S. Okulewicz collecting composite surface soil sample NYLM-S2.	1110
1P-4	Photograph of B. Kurkjian collecting composite surface soil sample NYLM-S1.	1139
1P-5	Photograph of S. Okulewicz collecting composite surface soil sample NYLM-S6.	1234
1P-6	Photograph of B. Kurkjian collecting sediment sample NYLM-SED2.	1258

LANCASTER SANITARY LANDFILL, LANCASTER, ERIE COUNTY, NEW YORK



1P-1 January 10, 1991 1024  
Photograph of S. Okulewicz collecting composite surface soil samples NYLM-S4 and S5.



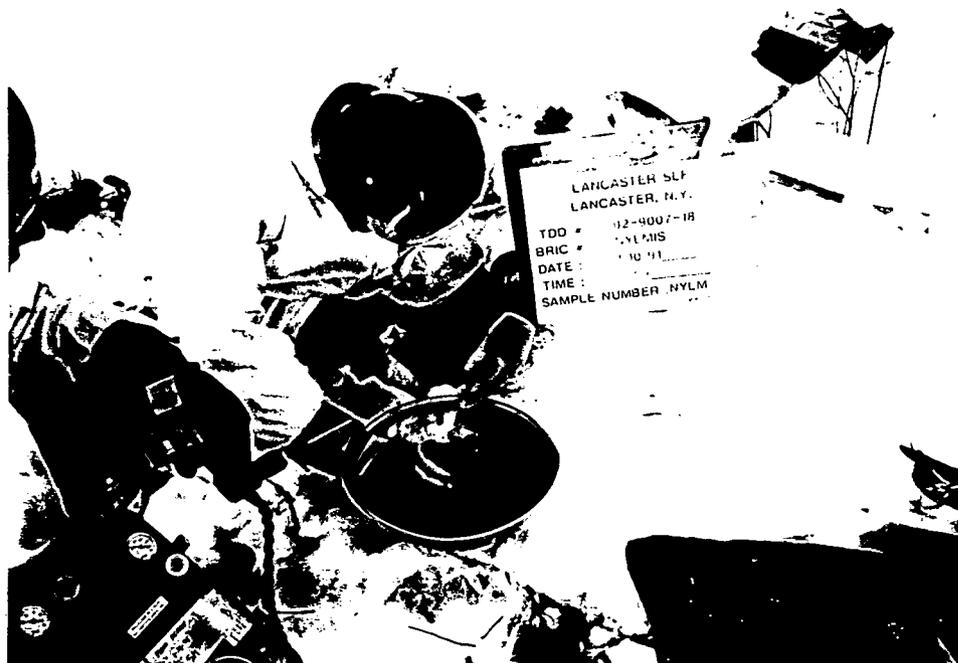
1P-2 January 10, 1991 1046  
Photograph of B. Kurkjian collecting sediment sample NYLM-SED1.



LANCASTER SANITARY LANDFILL, LANCASTER, ERIE COUNTY, NEW YORK



1P-5      January 10, 1991      1234  
Photograph of S. Okulewicz collecting composite  
surface soil sample NYLM-S6.



1P-6      January 10, 1991      1258  
Photograph of B. Kurkjian collecting sediment  
sample NYLM-SED2.

**ATTACHMENT 2**

## REFERENCES

1. U.S. EPA Potential Hazardous Waste Site, Site Inspection Report of Lancaster Sanitary Landfill, Prepared by L.R. Moriarty, U.S. EPA-II-S & A-RPSB, August 26, 1980.
2. Amendment to Lancaster Sanitary Landfill Performance and Closure Trusts, 34-459200, 34-459201. July 28, 1986.
3. New York State Department of Environmental Conservation (NYSDEC) Memorandum from John J. Spagnoli, NYSDEC Region 9 Director, to Henry G. Williams, Commissioner (both of NYSDEC), Subject: Landfill Enforcement Update. December 30, 1986.
4. Letters from Wehran Engineers & Scientists/Wehran Envirotech, WE Project Nos. 01339035, 09035 ST, 09463 ST, to Robert Mitrey, NYSDEC Region 9. March 18, 1986 to May 29, 1990.
5. Field Notebook No. 0642, Lancaster Sanitary Landfill, TDD No. 02-9007-18, On-site reconnaissance, September 18, 1990, and site inspection, January 10, 1991, performed by NUS Corporation Region 2 FIT, Edison, New Jersey.
6. Hydrogeologic Appraisal of Five Selected Aquifers in Erie County, New York. U.S. Geological Survey, Water Resources Investigations, Report 84-4334, 1985
7. Letter from William G. Soukup, Senior Geologist, Wehran Engineering, to Robert Mitrey, NYSDEC Region 9, Subject: Groundwater Monitoring Program at Lancaster Sanitary Landfill, WE Project No. 01339035-B. August 22, 1984.
8. Uncontrolled hazardous waste site ranking system, A user's manual, 40 CFR, Part 300, Appendix A, 1986.
9. Site sketch map by NYSDEC, Superfund Phase I Investigation, Lancaster Sanitary Landfill, Project No. 8C1301CC, May 1989.
10. FIRM Flood Insurance Rate Map, Town of Lancaster, New York, Erie County, Part 2 of 12. Community No. 360249 0002 B, Federal Emergency Management Agency, Federal Insurance Administration, December 1, 1981.
11. New York State Atlas of Community Water System Sources. New York State Department of Health, Division of Environmental Protection, Bureau of Public Water Supply Protection, 1982.
12. Telecon Note: Conversation between Katie Collins, Erie County Water Authority, and Bob Kurkjian, NUS Corporation, September 26, 1990.
13. Selected Information from wells in groundwater site inventory database, Water Resources Division, USGS, Request 688, May 22, 1990.
14. Four Mile Vicinity Map based on U.S. Department of the Interior, Geological Survey Topographic Maps, 7.5 minute series, Quadrangles of "Lancaster, NY," 1965; "Clarence Center, NY," 1980; "Wolcottsville, NY," 1980; and "Clarence, NY," 1965.
15. Water Quality Regulations, Surface Water and Groundwater Classifications and Standards. New York State Codes, Rules and Regulations, Title 6, Chapter X, Parts 700-705, NYSDEC.
16. Letter from Steven J. Doleski, Regional Permit Administrator, NYSDEC Region 9, Division of Regulatory Affairs, to Richard J. Sherwood, Town of Lancaster. March 10, 1987.

## REFERENCES (Cont'd)

17. Letter (handwritten) from Roy L. Davis, Project Manager, to Robert J. Mitrey, P.E., NYSDEC. February 26, 1987.
18. National Wetlands Inventory Map, Fish and Wildlife Service, U.S. Department of the Interior. Clarence, New York Quadrangle, Scale: 1:80,000, April 1981.
19. General Sciences Corporation, Graphical Exposure Modeling System (GEMs). Landover, Maryland, 1986.
20. U.S. EPA Superfund Program, Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS), List-8: Site/Event Listing, p. 315, and List-4: Site Alias Location Listing, p. 369, April 1, 1991.
21. Letter Reports: Gunville Energy Systems, Inc. (aka-Lancaster Sanitary Landfill), Final Cover Construction, WE Project No. 09035, from James A. Daigler, P.E., Regional Manager of Technical Services, Wehran Engineers & Scientists, to Mary McIntosh, NYSDEC, June 30, July 23, and September 11, 1986.
22. Miller, Todd S. Potential Yield of wells in Unconsolidated Aquifers in Upstate, New York-Niagara Sheet, Water-Resources Investigation Report 88-4076, Scale 1:250,000. United States Department of the Interior, Geological Survey.
23. Telecon Note: Conversation between Mr. Tanner, NYS Thruway Authority (Albany Office), and J. Tecson, NUS Corporation, December 5, 1990.
24. Telecon Note: Conversation between Mr. George Markle, Superintendent of Distribution, Erie County Water Authority, and J. Tecson, NUS Corporation, December 5, 1990.
25. Telecon Note: Conversation between Mr. Thomas J. Welsh, Vice-President, Finance and Administration, Pine Hill Concrete Mix, and J. Tecson, NUS Corporation, December 5, 1990.
26. Telecon Note: Conversation between Ms. Beverly Wright, Information Service Assistant, Census Bureau (NYC), Department of Commerce, and J. Tecson, NUS Corporation, April 5, 1991.
27. U.S. EPA Contract Laboratory Program, Clayton Environmental Consultants (organic analyses), and Skinner & Sherman (inorganic analyses), EPA Case No. 15651. Laboratory Analysis for NUS Corporation Region 2 FIT, Site Inspection conducted on January 10, 1991.
28. New York State Board of Elections, New York State Legislative Task Force on Demographic Research and Reapportionment, New York State Congressional Districts, 1984.
29. Hershfield, B.M. Rainfall Frequency Atlas of the United States, U.S. Weather Bureau, Technical Paper No. 40, 1961.
30. National Primary Drinking Water Regulations, and National Secondary Drinking Water Regulations, 40 CFR, Parts 141 to 143, pp. 521-588, July 1, 1986.
31. Telecon Note: Conversation between Ms. Jennifer Collier, Manager, Lancaster Speedway, and J. Tecson, NUS Corporation, April 26, 1991.

REFERENCE NO. 1

EPA

HAZARDOUS WASTE SITE  
STATE OF NEW YORK

GENERAL INSTRUCTIONS: Complete Sections I and III through XV of this form as completely as possible. Then use the information on this form to develop a Tentative Disposition (Section II). File this form in its entirety in the regional Hazardous Waste Log File. Be sure to include all appropriate Supplemental Reports in the file. Submit a copy of the forms to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force (EN-335); 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME  
LANCASTER SANITARY LANDFILL 90  
B. STREET (or other identifier)  
MIX COUP., PINE HILL CONCRETE  
2255 BAILEY AVE

C. CITY  
Buffalo  
D. STATE  
N.Y.  
E. ZIP CODE  
14214  
F. COUNTY NAME  
ERIE

G. SITE OPERATOR INFORMATION  
1. NAME  
LANCASTER SANITARY LANDFILL  
GUNNVILLE RD / NYS THRUWAY NORTH OF  
2. TELEPHONE NUMBER  
716-894-2255

3. STREET  
TRUWAY - EAST OF LANCASTER SPEEDWAY  
4. CITY  
Buffalo  
5. STATE  
N.Y.  
6. ZIP CODE  
14214

H. REALTY OWNER INFORMATION (if different from operator of site)  
1. NAME  
PINE HILL CONCRETE MIX CORP.  
2. TELEPHONE NUMBER  
716-894-2255

3. CITY  
Buffalo, N.Y.  
4. STATE  
N.Y.  
5. ZIP CODE  
14214

I. SITE DESCRIPTION  
WORKING LANDFILL / ALSO AREAS COMPLETED

J. TYPE OF OWNERSHIP  
 1. FEDERAL  2. STATE  3. COUNTY  4. MUNICIPAL  5. PRIVATE

II. TENTATIVE DISPOSITION (complete this section last)

A. ESTIMATE DATE OF TENTATIVE DISPOSITION (mo., day, & yr.)  
B. APPARENT SERIOUSNESS OF PROBLEM  
 1. HIGH  2. MEDIUM  3. LOW  4. NONE (see last page)

C. PREPARER INFORMATION  
1. NAME  
H.R. MORIARTY  
2. TELEPHONE NUMBER  
8-473-6841  
3. DATE (mo., day, & yr.)  
8/26/80

III. INSPECTION INFORMATION

A. PRINCIPAL INSPECTOR INFORMATION  
1. NAME  
H.R. MORIARTY  
2. TITLE  
SANITARY ENGINEER  
3. ORGANIZATION  
US-EPA-II-STA-RPSB  
4. TELEPHONE NO. (area code & no.)  
716-263-6841

B. INSPECTION PARTICIPANTS

1. NAME	2. ORGANIZATION	3. TELEPHONE NO.
H.R. MORIARTY	US-EPA-II-STA-RPSB	716-263-6841

C. SITE REPRESENTATIVES INTERVIEWED (corporate officials, workers, residents)

1. NAME	2. TITLE & TELEPHONE NO.	3. ADDRESS
Bob Jones	Supervisor	716-683-6205.
	(at Buffalo Sand they will page him.)	
MARK KALILE	OWNER	716-894-2255.
	(SPOKE TO MR KALILE OVER PHONE ONLY)	

**III- INSPECTION INFORMATION (continued)**

**D. GENERATOR INFORMATION (source of waste)**

1. NAME	2. TELEPHONE NO.	3. ADDRESS	4. WASTE TYPE GENERATED
RECEIVES DOMESTIC WASTE - NO INDUSTRIAL WASTE			
SHOW A NUMBER OF COMMUNITIES IN THE AREA - THE			

**E. TRANSPORTER/HAULER INFORMATION**

1. NAME	2. TELEPHONE NO.	3. ADDRESS	4. WASTE TYPE TRANSPORTED
WASTE IS RECEIVED, DELIVERED BY BOTH PRIVATE and GOVERNMENT HAULERS (see attachment)			

**F. IF WASTE IS PROCESSED ON SITE AND ALSO SHIPPED TO OTHER SITES, IDENTIFY OFF-SITE FACILITIES USED FOR DISPOSAL.**

1. NAME	2. TELEPHONE NO.	3. ADDRESS
N/A	NO SCAVENGING ALLOWED	

<b>G. DATE OF INSPECTION</b> (mo., day, & yr.) 8-12-80	<b>H. TIME OF INSPECTION</b> 5:15 AM	<b>I. ACCESS GAINED BY:</b> (credentials must be shown in all cases) <input checked="" type="checkbox"/> 1. PERMISSION <input type="checkbox"/> 2. WARRANT	
--	---	---	--

<b>J. WEATHER (describe)</b> Cool and CLEAR
--

**IV. SAMPLING INFORMATION**

A. Mark 'X' for the types of samples taken and indicate where they have been sent e.g., regional lab, other EPA lab, contractor, etc. and estimate when the results will be available.

1. SAMPLE TYPE	2. SAMPLE TAKEN (mark 'X')	3. SAMPLE SENT TO:	4. DATE RESULTS AVAILABLE
a. GROUNDWATER			
b. SURFACE WATER		No Samples Collected	
c. WASTE			
d. AIR			
e. RUNOFF			
f. SPILL			
g. SOIL			
h. VEGETATION			
i. OTHER (specify)			

**B. FIELD MEASUREMENTS TAKEN (e.g., radioactivity, explosivity, PH, etc.)**

1. TYPE	2. LOCATION OF MEASUREMENTS	3. RESULTS
None		

IV. SAMPLING INFORMATION (continued)

C. PHOTOS

1. TYPE OF PHOTOS

a. GROUND  b. AERIAL

2. PHOTOS IN CUSTODY OF:

Attached to Report - (DR. SPEAR)

D. SITE MAPPED?

YES. SPECIFY LOCATION OF MAPS:

see attachments

E. COORDINATES

1. LATITUDE (deg.-min.-sec.)

42°-57'-8" N

2. LONGITUDE (deg.-min.-sec.)

78°-37'-10" W

V. SITE INFORMATION

A. SITE STATUS

1. ACTIVE (Those industrial or municipal sites which are being used for waste treatment, storage, or disposal on a continuing basis, even if infrequently.)

2. INACTIVE (Those sites which no longer receive wastes.)

3. OTHER (specify):  
(Those sites that include such incidents like "midnight dumping" where no regular or continuing use of the site for waste disposal has occurred.)

B. IS GENERATOR ON SITE?

1. NO

2. YES (specify generator's four-digit SIC Code):

C. AREA OF SITE (in acres)

180

D. ARE THERE BUILDINGS ON THE SITE?

1. NO

2. YES (specify): one check point shack at entrance

VI. CHARACTERIZATION OF SITE ACTIVITY

Indicate the major site activity(ies) and details relating to each activity by marking 'X' in the appropriate boxes.

<input checked="" type="checkbox"/> X	A. TRANSPORTER	<input type="checkbox"/> X	B. STORER	<input type="checkbox"/> X	C. TREATER	<input type="checkbox"/> X	D. DISPOSER
	1. RAIL		1. PILE		1. FILTRATION		<input checked="" type="checkbox"/> 1. LANDFILL
	2. SHIP		2. SURFACE IMPOUNDMENT		2. INCINERATION		2. LANDFARM
	3. BARGE		3. DRUMS		3. VOLUME REDUCTION		3. OPEN DUMP
	4. TRUCK		4. TANK, ABOVE GROUND		4. RECYCLING/RECOVERY		4. SURFACE IMPOUNDMENT
	5. PIPELINE		5. TANK, BELOW GROUND		5. CHEM./PHYS./TREATMENT		5. MIDNIGHT DUMPING
	6. OTHER (specify):		6. OTHER (specify):		6. BIOLOGICAL TREATMENT		6. INCINERATION
					7. WASTE OIL REPROCESSING		7. UNDERGROUND INJECTION
					8. SOLVENT RECOVERY		8. OTHER (specify):
					9. OTHER (specify):		

E. SUPPLEMENTAL REPORTS: If the site falls within any of the categories listed below, Supplemental Reports must be completed. Indicate which Supplemental Reports you have filled out and attached to this for..

1. STORAGE  2. INCINERATION  3. LANDFILL  4. SURFACE IMPOUNDMENT  5. DEEP WELL
6. CHEM/BIO/PHYS TREATMENT  7. LANDFARM  8. OPEN DUMP  9. TRANSPORTER  10. RECYCLOR/RECLAIMER

VII. WASTE RELATED INFORMATION

A. WASTE TYPE

1. LIQUID  2. SOLID  3. SLUDGE  4. GAS

B. WASTE CHARACTERISTICS

1. CORROSIVE  2. IGNITABLE  3. RADIOACTIVE  4. HIGHLY VOLATILE

5. TOXIC  6. REACTIVE  7. INERT  8. FLAMMABLE

9. OTHER (specify):

DOMESTIC AND COMMERCIAL REFUSE

C. WASTE CATEGORIES

1. Are records of wastes available? Specify items such as manifests, inventories, etc. below.

waste checked at gate by hand - no information

Recorded as to content But only domestic and commercial refuse haulers allowed on site.

2. Estimate the amount (specify unit of measure) of waste by category; mark 'X' to indicate which wastes are present.

a. SLUDGE		b. OIL		c. SOLVENTS		d. CHEMICALS		e. SOLIDS		f. OTHER	
AMOUNT		AMOUNT		AMOUNT		AMOUNT		AMOUNT		AMOUNT	
UNIT OF MEASURE		UNIT OF MEASURE		UNIT OF MEASURE		UNIT OF MEASURE		UNIT OF MEASURE		UNIT OF MEASURE	
<input checked="" type="checkbox"/>	(1) PAINT, PIGMENTS	<input checked="" type="checkbox"/>	(1) OILY WASTES	<input checked="" type="checkbox"/>	(1) HALOGENATED SOLVENTS	<input checked="" type="checkbox"/>	(1) ACIDS	<input checked="" type="checkbox"/>	(1) FLYASH	<input checked="" type="checkbox"/>	(1) LABORATORY, PHARMACEUT.
	(2) METALS SLUDGES		(2) OTHER (specify):		(2) NON-HALOGENATED SOLVENTS		(2) PICKLING LIQUORS		(2) ASBESTOS		(2) HOSPITAL
	(3) POTW				(3) OTHER (specify):		(3) CAUSTICS		(3) MILLING/MINE TAILINGS		(3) RADIOACTIVE
	(4) ALUMINUM SLUDGE				(4) PESTICIDES		(4) FERROUS SMELTING WASTES		(4) NON-FERROUS SMELTING WASTES	<input checked="" type="checkbox"/>	(4) MUNICIPAL
	(5) OTHER (specify):				(5) DYES/INKS		(5) CYANIDE		(5) OTHER (specify):		(5) OTHER (specify):
					(6) PHENOLS		(6) HALOGENS				
			(7) PCB		(7) METALS						
			(8) OTHER (specify):		(8) OTHER (specify):						

Commercial & Municipal

D. LIST SUBSTANCES OF GREATEST CONCERN WHICH ARE ON THE SITE (place in descending order of hazard)

1. SUBSTANCE	2. FORM (mark 'X')			3. TOXICITY (mark 'X')				4. CAS NUMBER	5. AMOUNT	6. UNIT
	a. SOLID	b. LIQ.	c. VAPOR	a. HIGH	b. MED.	c. LOW	d. NONE			
(PCBs)										
(Chlorinated Solvents)										
<p>(Inter agency Task Force lists the above however in talking to Bob Jones who has been managing the landfill since the beginning - he indicates industrial waste has <sup>KNOWLEDGE</sup> come into the site in the last several years - The amounts and locations of the above on site are unknown -</p>										

VII. HAZARD DESCRIPTION

FIELD EVALUATION HAZARD DESCRIPTION: Place an 'X' in the box to indicate that the listed hazard exists. Describe the hazard in the space provided.

A. HUMAN HEALTH HAZARDS

THE ONLY POSSIBLE CONCERN THAT I SEE ON THE SITE - IS THE DEPOSIT OF WASTE - ABOUT 200' SHOW THE THROUGHWAY - WELL - THE WASTE IS UP GRADE - HOWEVER - THERE IS A HIGH WATER TABLE IN THE AREA - (POUND IN BACK OF RESTAURANT) - wetland

B. NON-WORKER INJURY/EXPOSURE

N/A

C. WORKER INJURY/EXPOSURE

N/A

D. CONTAMINATION OF WATER SUPPLY

See "A" - allowed the company to place any more silt in area and the area has been silted for about 2 years, covered and seeded. MR. Lewis claims a good clay barrier exists between silt and well - well sampled 12/27/78. (re attachment) by N.Y.S. DEC. Samples - contain ALDRIN, DDT, CHLORDANE, and Heptachlor epoxide. - No information on depth or construction of well

E. CONTAMINATION OF FOOD CHAIN

N/A

F. CONTAMINATION OF GROUND WATER

See "D" and attachment

G. CONTAMINATION OF SURFACE WATER

Surface water contained in ponds + wet area. Site also bounded on North east area by wet lands. All surface runoff is directed to the ponds with one exit or to low-diked area between Specular and landfill - north of Thruway + west of landfill.

H. DAMAGE TO FLORA/FAUNA

None - (May have some ~~thru~~ <sup>thru</sup> damage to banks along thruway) no grass greening in a few areas - looks like top soil may have also eroded - reseeding needed.

I. FISH KILL

None

J. CONTAMINATION OF AIR

None - no burning

K. NOTICEABLE ODORS

None - at time of visit

L. CONTAMINATION OF SOIL

Area where landfill have been started or completed must be contaminated.

M. PROPERTY DAMAGE

None

N. FIRE OR EXPLOSION

none - But Mr. Jones indicated these things happen once in a while -

O. SPILLS/LEAKING CONTAINERS/RUNOFF/STANDING LIQUID

none - drainage good

P. SEWER, STORM DRAIN PROBLEMS

N/A

Q. EROSION PROBLEMS

very slight - evidence of continuous control over conditions.

R. INADEQUATE SECURITY

gate locked at night - no one on site.

S. INCOMPATIBLE WASTES

Refer to tank chemicals or industrial waste.

VIII. HAZARD DESCRIPTION (continued)

T. MIDNIGHT DUMPING

None

U. OTHER (specify):

Old dump area completely has up to 40 feet of fill - some of the new or working areas will have up to 40 ft. + Jones states that when they did take in chemical Co. waste it went in with the regular fill - It is unknown how much and where such wastes are buried. Drums were crushed just like other fill.

IX. POPULATION DIRECTLY AFFECTED BY SITE

A. LOCATION OF POPULATION	B. APPROX. NO. OF PEOPLE AFFECTED	C. APPROX. NO. OF PEOPLE AFFECTED WITHIN UNIT AREA	D. APPROX. NO. OF BUILDINGS AFFECTED	E. DISTANCE TO SITE (specify units)
1. IN RESIDENTIAL AREAS	10 to 15 Houses	up to 50	10-15	1/4 to 1/2 mile
2. IN COMMERCIAL OR INDUSTRIAL AREAS	Speedway	> 2000 est	1/2 dozen	< 1/4 mile
3. IN PUBLICLY TRAVELLED AREAS	Clarence REST AREA, U.S. Turnpike	> 5000 est	one	< 1/4 mile
4. PUBLIC USE AREAS (parks, schools, etc.)				

X. WATER AND HYDROLOGICAL DATA

A. DEPTH TO GROUNDWATER (specify unit) 10' +	B. DIRECTION OF FLOW UNKNOWN	C. GROUNDWATER USE IN VICINITY DRINKING H2O *
D. POTENTIAL YIELD OF AQUIFER UNKNOWN	E. DISTANCE TO DRINKING WATER SUPPLY (specify unit of measure) 200 ft.	F. DIRECTION TO DRINKING WATER SUPPLY EAST
G. TYPE OF DRINKING WATER SUPPLY		
<input type="checkbox"/> 1. NON-COMMUNITY < 15 CONNECTIONS*	<input type="checkbox"/> 2. COMMUNITY (specify town): > 15 CONNECTIONS	
<input type="checkbox"/> 3. SURFACE WATER	<input checked="" type="checkbox"/> 4. WELL - serves Redwood outthruway	

\* Ground water is also pumped out of near by quarries to the west - These quarries are 75 to 100' deep - Ground water from handbed may flow to west.

X. WATER AND HYDROLOGICAL DATA (continued)

H. LIST ALL DRINKING WATER WELLS WITHIN A 1/4 MILE RADIUS OF SITE

1. WELL	2. DEPTH	3. LOCATION <small>(specify in relation to buildings)</small>	4. NON-COMMUNITY (mark 'X')	5. COMMUNITY (mark 'X')
REST AREA	?	200' + EAST of landfill	X	

Rest Area has been waste treat

I. RECEIVING WATER

1. NAME **RAMSON CREEK** \*  2. SEWERS **West Street**  3. STREAMS/RIVERS  
 4. LAKES/RESERVOIRS  5. OTHER (specify):

6. SPECIFY USE AND CLASSIFICATION OF RECEIVING WATERS

XI. SOIL AND VEGETATION DATA

LOCATION OF SITE IS IN:

- A. KNOWN FAULT ZONE  B. KARST ZONE  C. 100 YEAR FLOOD PLAIN  D. WETLAND (HEAR)  
 E. A REGULATED FLOODWAY  F. CRITICAL HABITAT  G. RECHARGE ZONE OR SOLE SOURCE AQUIFER

XII. TYPE OF GEOLOGICAL MATERIAL OBSERVED

Mark 'X' to indicate the type(s) of geological material observed and specify where necessary, the component parts.

'X'	A. OVERBURDEN	'X'	B. BEDROCK (specify below)	'X'	C. OTHER (specify below)
X	1. SAND		Quarries in		
X	2. CLAY		area near old		
X	3. GRAVEL		gravel pit.		

XIII. SOIL PERMEABILITY

- A. UNKNOWN  B. VERY HIGH (100,000 to 1000 cm/sec.)  C. HIGH (1000 to 10 cm/sec.)  
 D. MODERATE (10 to .1 cm/sec.)  E. LOW (.1 to .001 cm/sec.)  F. VERY LOW (.001 to .00001 cm/sec.)

G. RECHARGE AREA

1. YES  2. NO 3. COMMENTS: **More than likely drains to Quarry**

H. DISCHARGE AREA

1. YES  2. NO 3. COMMENTS:

I. SLOPE

1. ESTIMATE % OF SLOPE 2. SPECIFY DIRECTION OF SLOPE, CONDITION OF SLOPE, ETC. **Major portion excellent All directions - Small portion minor problem**

J. OTHER GEOLOGICAL DATA

None

\* THIS appears to drainage creek however ponds does appear to see flow into waste-landfill

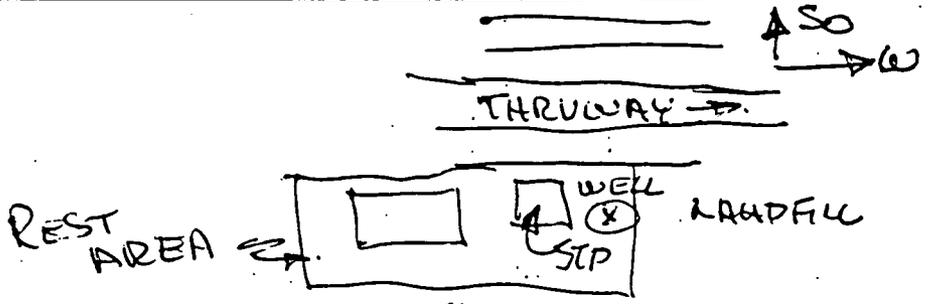
XIV. PERMIT INFORMATION

List all applicable permits held by the site and provide the related information.

A. PERMIT TYPE (e.g., RCRA, State, NPDES, etc.)	B. ISSUING AGENCY	C. PERMIT NUMBER	D. DATE ISSUED (mo., day, & yr.)	E. EXPIRATION DATE (mo., day, & yr.)	F. IN COMPLIANCE (mark 'X')		
					1. YES	2. NO	3. UNKNOWN
Reviewed by STATE (for landfill)	DEC	—	—	—			

XV. PAST REGULATORY OR ENFORCEMENT ACTIONS

NONE  YES (summarize in this space)



\* The rest area waste treatment plant is as close to the well as the landfill. The pesticides found in the analysis could also come from soil spraying on the Rest area ground and along the highway.

NOTE: Based on the information in Sections III through XV, fill out the Tentative Disposition (Section II) information on the first page of this form.

II-B - As operated this is a good landfill. Drainage is good and well controlled. The unknown is past chemical reports if anything they would be hard to find if they are draining, it is likely more to the rock Quarry than to the thruway Rest Area. - However Rest Area well is not in a good location. Also the \*

NORTH

EAST BOUND

NYS THRUWAY

WEST BOUND

WASTE TREATMENT PLANT

300' est. WELL

LANCASTER SANITARY LANDFILL

CHARENCE REST AREA

POUND

ACTIVE FACE

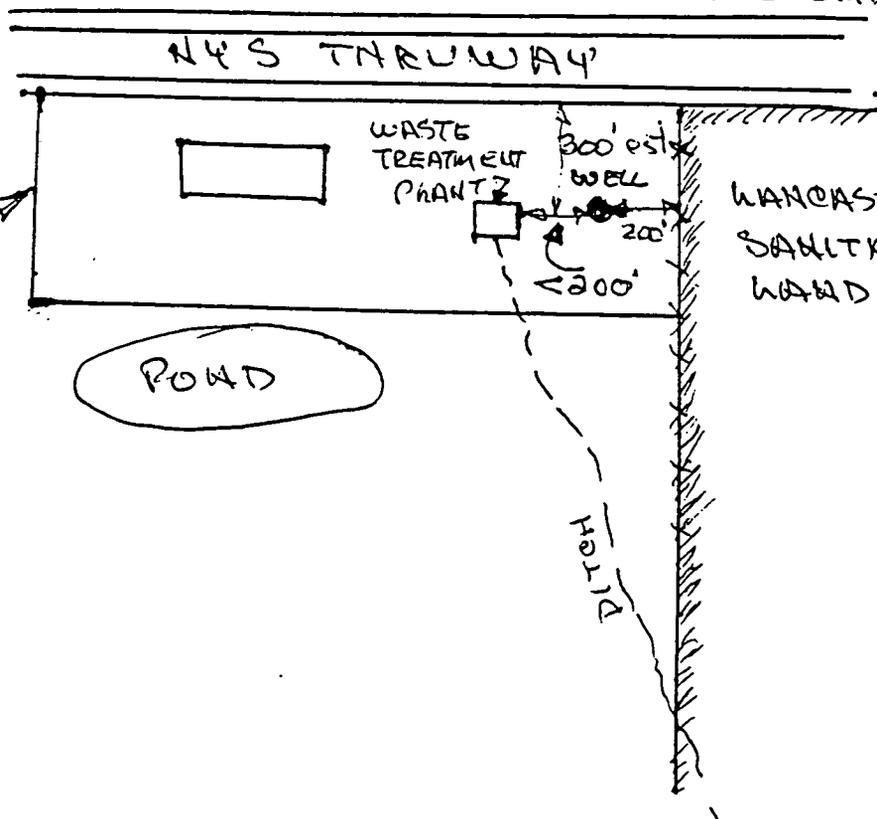
POUND

POUND

DITCH

WELL LOCATION  
CHARENCE REST  
AREA  
ERIE COUNTY  
N.Y.

8/27/80, WRM



Atchey

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NEW YORK STATE DEPARTMENT OF HEALTH  
DIVISION OF LABORATORIES AND RESEARCH  
ENVIRONMENTAL HEALTH CENTER

Lowchester  
Sanitary L.F.

RESULTS OF EXAMINATION  
(PAGE 1 OF 2)

LAB ACCESSION NO: 01761 YR/MO/DAY/HR SAMPLE REC'D: 79/12/28/08

REPORTING LAB: 17 EHC ALBANY  
PROGRAM: 151 HCSP. & INST. ENGINEERING  
STATION (SOURCE) NO:  
DRAINAGE BASIN: 01 NY GAZETTEER NO: 1456 COUNTY: ERIE  
COORDINATES: DEG ° 'N, DEG ° 'W  
COMMON NAME INCL SUBW'SHED: CLAVENCE SERVICE AREA WATER SYSTEM NYS  
THRUWAY

FILE: 15521

EXACT SAMPLING POINT: NO2 WELL TAP  
TYPE OF SAMPLE: CO PWS, RAW WATER  
MO/DAY/HR OF SAMPLING: FROM 00/00 TO 12/27/13  
REPORT SENT TO: CC (1) RG (1) LPHE (1) LHC (0) FED (0) CHEM (0)

PARAMETER	Dr. Water Std.	UNIT	RESULT	NOTATION
008209 METHOXYCHLOR	100	MCG/L	1.	LT
008409 ENDRIN	0.2	MCG/L	0.02	LT
008809 HERBICIDE 2,4-D	100	MCG/L	0.5	LT
035509 TOXAPHENE	5	MCG/L	1.	LT
042509 SILVEX 2,4,5-TP	10	MCG/L	0.1	LT
007709 ALDRIN ← Cancelled by OTS		MCG/L	0.02	LT
007809 D.D.T. TOTAL ← "		MCG/L	0.05	LT
008609 CHLORDANE ← Suspended by OTS No PWS Limit but Red Book 0.01		MCG/L	0.1	LT
008309 HEPTACHLOR EPOXIDE ← Not mentioned. Heptachlor suspended by OTS Heptachlor recommendation in Red Book 0.001		MCG/L	0.5	LT

30% Toxic Manufactured

DATE COMPLETED: 11/02/79

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NOV 9 1979

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BUFFALO REGIONAL OFFICE

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NEW YORK STATE HEALTH DEPARTMENT  
584 DELAWARE AVENUE  
BUFFALO NEW YORK 14202

0526

NEW YORK STATE DEPARTMENT OF HEALTH  
DIVISION OF LABORATORIES AND RESEARCH  
ENVIRONMENTAL HEALTH CENTER

*Loiscaites*  
*January 2, 79*

RESULTS OF EXAMINATION  
(PAGE 2 OF 2)

LAB ACCESSION NO: 01761 YR/MO/DAY/HR SAMPLE REC'D: 78/12/28/08

REPORTING LAB: 17 EHC ALBANY  
PROGRAM: 151 HOSP. & INST. ENGINEERING  
STATION (SOURCE) NO:  
DRAINAGE BASIN: 01 NY GAZETTEER NO: 1456 COUNTY: ERIE  
COORDINATES: DEG ° 'N, DEG ° 'W  
COMMON NAME INCL SUBS'D SHED: CLAVENCE SERVICE AREA WATER SYSTEM NYS  
THRUWAY

EXACT SAMPLING POINT: NO2 WELL TAP  
TYPE OF SAMPLE: 00 PMS, RAW WATER  
MO/DAY/HR OF SAMPLING: FROM 06/00 TO 12/27/13  
REPORT SENT TO: CG (1) RO (1) LPHE (1) LHO (0) FED (0) CHEN (0)

PARAMETER	UNIT	RESULT	NOTATION
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DATE COMPLETED: 11/02/79

REGIONAL DIRECTOR OF P.H. ENGINEERING  
NEW YORK STATE HEALTH DEPARTMENT  
524 DELAWARE AVENUE  
BUFFALO NEW YORK 14202

## LANCASTER SANITARY LANDFILL

The Lancaster Sanitary Landfill is located in the northeast corner of the Town of Lancaster. It is bounded by the Clarence town line on the north, Shisler Road on the east, the New York State Thruway on the south and the Lancaster Speedway on the west. The landfill is entered from Gunnville Road.

There are no homes in the vicinity of the landfill. A marsh area and a stream are located in the extreme northern area of the site. There is no flood hazard area in the vicinity of the landfill.

The site is operated by Landcaster Sanitary Landfill, Inc. which began the disposal site in 1961.

When the operation began, approximately 100 acres were devoted for land disposal and an additional 80 or more acres have since been incorporated for landburial uses. Residential waste materials are accepted from many municipalities in northern Erie County including the Towns of Tonawanda, Grand Island, Amberst and Clarence.

The following companies are among those that disposed of wastes at the landfill:

<u>Company</u>	<u>Wastes</u>
Ford Motor Company	Oil sludge, waste oil
Westinghouse	General refuse
Chevrolet Metal Casting Plant	Waste sand
Chevrolet Motor Plant	Fly ash
Trico Products	Plastic purgings
Harrison Radiator (Buffalo)	Kolene sludge, drums, cans, bands and wire, cardboard, garbage, paper, wood, rubber, plastics, other solids
Wilson Greatbatch	Liquid waste
E. I duPont (Tonawanda)	Wet "Corian"
F. N. Burt	Paperboard, cellophane, gold leaf, scrap wood, plastic, garbage, waste adhesive (animal glue, polyvinyl, acetate, dextrans) waste ink, waste cans and metal
Arcata Graphics	Paper, paper dust, wood, general refuse

Strippit

Snyder Tank  
Curtiss Wright Corp.  
(Air Force Plant 49)  
Allied Chemical Dye Plant

NYS Electric and Gas

Heat treat sludge, cutting oil  
compounds, chlorinated solvents,  
water with paint contamination,  
paint thinners and filters, cutting  
coolants, garbage  
Paper, wood, plastics, metal  
Paper, rags and sweepings

Filtration sludges, waste colors  
and solvents  
Obsolete hardware  
Rubbish  
Motor Oil  
Capacitors (with PCBs)

The following haulers have used the Lancaster Sanitary  
Landfill:

Buffalo Sanitation  
Joe Ball Sanitation  
CID Refuse Service  
Clinton Disposal Service  
Continental Transfer  
Downing Container  
Ferry Concrete  
Georgi Sanitation  
Niagara Sanitation  
Rapid Disposal  
Rural Sanitation  
San Way Service  
Ken Staub Trucking  
Booth Oil

Minor problems at the landfill concerning fly ash; fumes  
from drums, small fires and gas seepage have been reported. The  
site maintains good cover and operates test wells for monitoring  
purposes.

RESULTS OF EXAMINATION  
(PAGE 1 OF 2)

LAB ACCESSION NO: 01761 YR/MO/DAY/HR SAMPLE REC'D: 7/12/28/08

FILE: 15521

REPORTING LAB: 17 EHC ALBANY  
PROGRAM: 151 HCSP. & INST. ENGINEERING  
STATION (SOURCE) NO:  
DRAINAGE BASIN: 01 NY GAZETTEER NO: 1456 COUNTY: ERIE  
COORDINATES: DEG ' "N, DEG ' "W  
COMMON NAME INCL. SUBV. SHED: CLAVENCE SERVICE AREA HAI. ? SYSTEM NYS  
THRUWAY

EXACT SAMPLING POINT: NO2 WELL TAP  
TYPE OF SAMPLE: CO PWS, RAW WATER  
MO/DAY/HR OF SAMPLING: FROM 00/00 TO 12/27/13  
REPORT SENT TO: CC (1) RG (1) LPHE (1) LHC (0) FED (0) CHEM (0)

PARAMETER	DETERMINATION	UNIT	RESULT	NOTATION
008209	METHOXYCHLOR	100	MCG/L	1- LT
008409	ENDRIN	0.2	MCG/L	0-02 LT
008809	HERBICIDE 2,4-D	100	MCG/L	0.5 LT
035509	TOXAPHENE	5	MCG/L	1- LT
042509	SILVEX 2,4,5-TP	10	MCG/L	0.1 LT
007709	ALDRIN	100	MCG/L	0.02 LT
007809	D-D.T. TOTAL	100	MCG/L	0.05 LT
008609	CHLORDANE	100	MCG/L	0.1 LT
008309	HEPTACHLOR EPOXIDE	100	MCG/L	0.5 LT

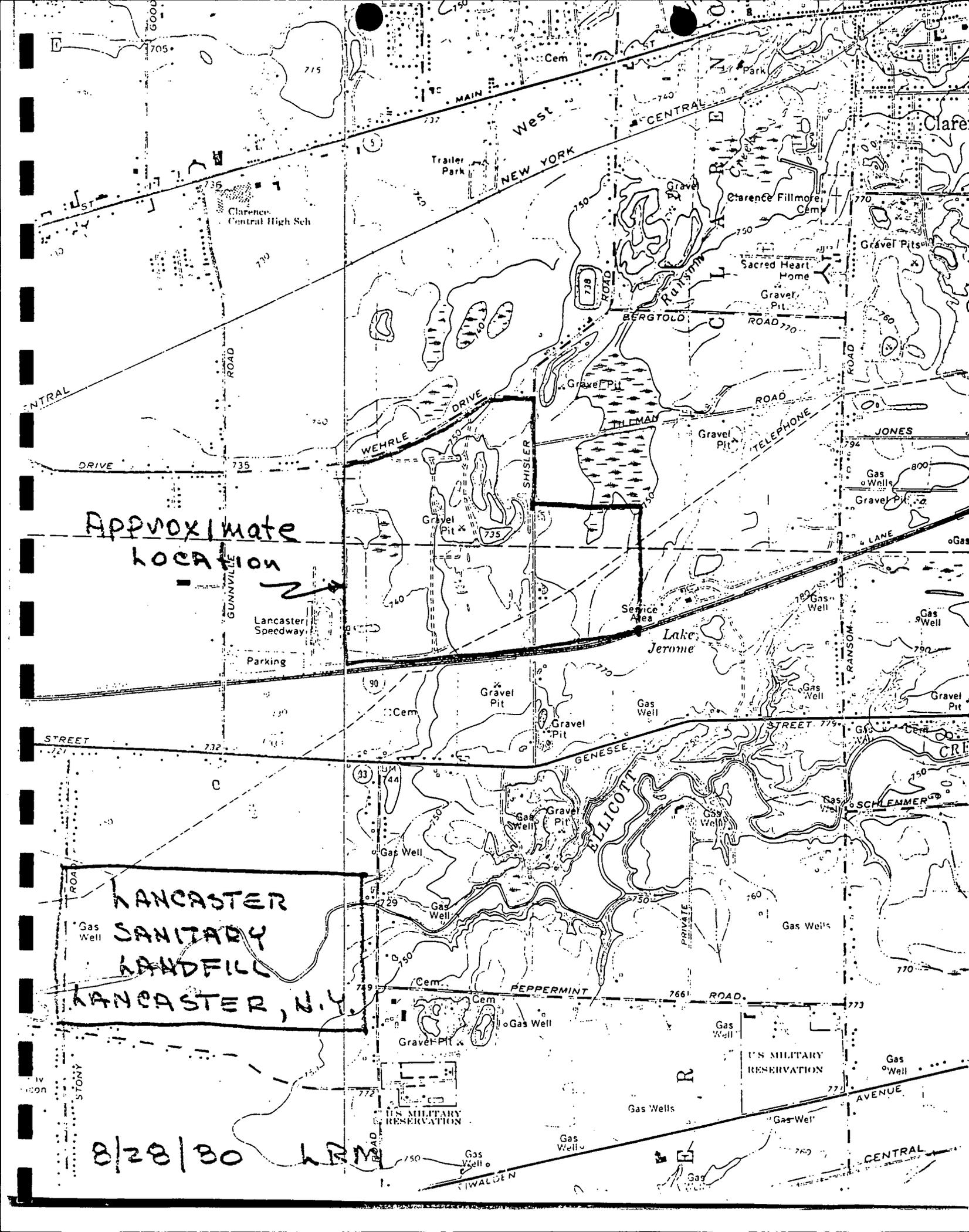
DATE COMPLETED: 11/02/79

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584 DELAWARE AVENUE  
BUFFALO NEW YORK 14202



Approximate  
Location



LANCASTER  
SANITARY  
LANDFILL  
LANCASTER, N.Y.

8/28/80 LRM

SECONDARY  
LANDFILL

LANDFILLS SITE INSPECTION REPORT  
(Supplemental Report)

INSTRUCTION  
Answer and Explain  
as Necessary.

1. EVIDENCE OF SITE INSTABILITY (Erosion, Settling, Sink Holes, etc)  
 YES  NO

2. EVIDENCE OF IMPROPER DISPOSAL OF BULK LIQUIDS, SEMI-SOLIDS AND SLUDGES INTO THE LANDFILL  
 YES  NO

3. CHECK RECORDS OF CELL LOCATION AND CONTENTS AND BENCHMARK  
 YES  NO usually on site

4. WASTES SURROUNDED BY SORBENT MATERIAL  
 YES  NO

5. DIVERSION STRUCTURES ARE EFFECTIVELY CONSTRUCTED AND PROPERLY MAINTAINED  
 YES  NO very good

6. EVIDENCE OF PONDING OF WATER ON SITE  
 YES  NO Old Sand Pit area } Ponding not on fill - But surface water goes to ponds outside but away from Sillou filled area

7. EVIDENCE OF IMPROPER/INADEQUATE DRAINING  
 YES  NO

8. ADEQUATE LEACHATE COLLECTION SYSTEM (If "Yes", specify Type)  
 YES  NO Do not have any noticeable leachate but if leachate did occur it would run to ponds see #6

8a. SURFACE LEACHATE SPRING  
 YES  NO

9. RECORDS OF LEACHATE ANALYSIS  
 YES  NO none known

10. GAS MONITORING  
 YES  NO none

11. GROUNDWATER MONITORING WELLS  
 YES  NO SEVERAL WELLS ON SITE - See photo

12. ARTIFICIAL MEMBRANE LINER INSTALLED  
 YES  NO None

13. SPECIFIC CONTAINMENT MEASURES (Clay Bottom, Sides, etc)  
 YES  NO Good organization - Coverage - Grading

14. FIXATION (Stabilization) OF WASTE  
 YES  NO

15. ADEQUATE CLOSURE OF INACTIVE PORTION OF FACILITY  
 YES  NO In process of filling in some spots - regraded

16. COVER (Type)  
CLAY - 6" intermediate - 12" + Soil - 4-6" Soil  
Soil seeding.

16a. THICKNESS  
see 16

16b. PERMEABILITY  
minimal

16c. DAILY APPLICATION  
 YES  NO

8-26-80

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NEW YORK STATE DEPARTMENT OF HEALTH  
DIVISION OF LABORATORIES AND RESEARCH  
ENVIRONMENTAL HEALTH CENTER

*Hordeaster*  
*January 2, 79*

RESULTS OF EXAMINATION  
(PAGE 2 OF 2)

LAB ACCESSION NO: 01761 YR/MO/DAY/HR SAMPLE REC'D: 78/12/28/08

REPORTING LAB: 17 EHC ALBANY  
PROGRAM: 151 HOSP. & INST. ENGINEERING  
STATION (SOURCE) NO:  
DRAINAGE BASIN: 01 NY GAZETTEER NO: 1456 COUNTY: ERIE  
COORDINATES: DEG ° 'N, DEG ° 'W  
COMMON NAME INCL SUBM'SHED: CLAVENCE SERVICE AREA WATER SYSTEM NYS  
THRUWAY

EXACT SAMPLING POINT: NO2 WELL TAP  
TYPE OF SAMPLE: 00 PWS, RAW WATER  
MO/DAY/HR OF SAMPLING: FROM 00/00 TO 12/27/13  
REPORT SENT TO: CC (1) RO (1) LPHE (1) LHO (0) FED (0) CHEN (0)

PARAMETER	UNIT	RESULT	NOTATION
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DATE COMPLETED: 11/02/79

REGIONAL DIRECTOR OF P.H. ENGINEERING  
NEW YORK STATE HEALTH DEPARTMENT  
524 DELAWARE AVENUE  
BUFFALO NEW YORK 14202

## Hazardous Waste Site Dossier

### I. Site Name

Lancaster Sanitary Landfill  
Gunnville Rd.  
Northeast Corner of the Town  
of Lancaster, New York  
Lancaster (Erie County) New York

### II. Background to Investigation and Sources of Initial Referral

EPA became aware of the site through the DEC Technical Report; Toxic Substances in New York Environment. The site is also listed in the Eckhardt Report.

### III. Site Description

This 180 acre permitted site is operated by Lancaster Sanitary Landfill, Inc., which began the disposal site in 1961. The landfill received industrial waste from thirteen (13) or more industries from 1961 to 1969. Before its use as a disposal site, it was a former gravel pit. Chemical components of waste disposed at this site include organics and miscellaneous waste materials.

Some chemical sludge was also received prior to 1969. Approximately fourteen (14) waste haulers have used the Lancaster Sanitary Landfill.

The method of disposal included mono (one waste type only) industrial waste landfill, drummed waste landfill, and landfill in which municipal waste is co-disposed. Until recently they accepted septage.

### IV. Allegations of "Imminent Hazard" Pollution

Two previously installed monitoring wells indicate ground water leachate problems. Results show high levels of organics, salts, and low levels of trace pesticides.

There are no homes in the vicinity of the landfill. A marsh area and a stream are located in the extreme northern area of the site. There is no flood hazard area in the vicinity of the landfill.

There is a potable water supply well at the Clarence Service Center Thruway. The well is used primarily for transients, and for people who work at the Thruway Center.

The well shows possible contamination from leachate in the groundwater.

New York State Dept. of Health performed an analysis of the well and found low levels of trace pesticides (see attachment 1).

Wehran Engineers, consultants for the site state: that contamination has migrated 200 feet from the Lancaster Sanitary landfill in the direction of the Clarence Center Thruway potable water supply well, and present a threat to the water supply.

V. Current Involvement

Wehran Engineers of Middletown, NY are preparing a hydrogeological study and remedial action plans.

They prepared a report on June 21, 1979.

This report highlights the leachate plume from the site. This plume has protruded into the Onondaga limestone semi secure aquifer, near the thruway center well.

Recommendations and Conclusions of the Wehran report are:

1. Development of an analytical program, for testing, evaluation, and monitoring the site.
2. Evaluating potential hazards
3. A meeting between:
  - a) New York State DEC
  - b) New York State Dept. of Health
  - c) Wehran Engineers
  - d) Lancaster Sanitary landfill

The purpose of this meeting would be to study, evaluate, and recommend possible remedial actions for the site. EPA has requested a copy of the results of the Wehran Engineers hydrogeological study.

VI. Recommendations

EPA make a site visit.

EPA split samples with the New York State Department of Health and Compare results. (NYS Dept. of Health received samples on 12/28/78 at 0800, the analysis were completed on November 2, 1979).

Dorner  
re-writes  
new style

## Summary

10/23/79

update con)

### Landcaster Sanitary Landfill

Gunnville Rd - northeast corner of the town  
of Lancaster, NY  
Lancaster, (Erie County) NY

EPA learned of the site through  
the study of: The Intragency Task  
Force Draft Report, dated March 1979.

Approximately 100 acres are devoted  
for land disposal and an additional  
80 or more acres are incorporated  
for land burial uses.

Residential waste materials are  
accepted from many municipalities  
in northern Erie County, also  
several companies have disposed  
of their waste at the landfill.

The operator of the site is  
Landcaster Sanitary Landfill, Inc.  
which began the site in 1961  
the site is still active.

A marsh area and a stream  
are located in the extreme northern  
area of the site. There is no flood  
hazard area in the vicinity of the  
landfill.

There are no homes in the  
vicinity of the landfill. The landfill  
is entered from Gunnville Rd.  
minor problems at the

landfill Concerning fly ash, fumes  
from drums, small fires and gas  
seepage have been reported. The  
site maintains good cover and  
operates test wells for monitoring  
purposes.

note!

The site is classified as  
Class "D".

Remedial action is underway  
but must be monitored



II. PRELIMINARY CRITERIA FOR SUPPORTING EVIDENCE

A. GROUNDWATER CONTAMINATION	Pts.	B. SURFACE WATER CONTAMINATION	Pts	C. ATMOSPHERIC CONTAMINATION	Pts
Groundwater Discolored/Odoriferous	4	Hazardous Wastes in Runoff	4	Evidence of Fires or Explosions	(4)
Leachate Migration	3	Leachate Outcropping	3	Improperly Stored Flammable or Reactive Wastes	(3)
Unstablized Wastes	2	Leachate or Runoff Migration	3	Improperly Stored Toxic Wastes	3
Improperly Secured Site	2	Biological Stress Evident		Health Problem Evident	3
Leachate Outcropping	2	Improperly Secured Site	2	Odor Emissions	(2)
No Monitoring System	1	Unstabilized Wastes	2	Public Accessibility	1
		No Runoff Containment System	2		
SUBTOTAL		SUBTOTAL		SUBTOTAL	9

GRAND TOTAL Pts. - 9

ADDITIONAL COMMENTS

*The site is classified as class "D" - Remedial action is underway but must be monitored.*

PRELIMINARY CRITERIA FOR INITIAL SITE EVALUATION

The following outlines the preliminary criteria which will be utilized to perform initial (desk, non-field) evaluations of hazardous waste sites. This initial screening is the first step in the overall process to identify and prioritize problem sites. Based on the results of the screening, a decision will be made on whether a preliminary site inspection is appropriate.

The initial evaluation criteria is divided into two parts. The first considers the source and nature of the reported complaint or problem. Reports and other supporting evidence (e.g. USGS maps, hydrology and topography data, etc) are evaluated in the second part. An accumulation of five (5) points in either part of the criteria would indicate that a preliminary site visit is warranted. Where appropriate, such visits will be undertaken by the Emergency Response & Inspection Branch.

Use the following tables to determine if a preliminary site visit is warranted. Simply circle applicable criteria and total points.

## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DATE: August 28, 1980

SUBJECT: Lancaster Sanitary Landfill, Erie County, New York

FROM: Lawrence R. Moriarty,  
Rochester Program Support Branch, 2 SA *LRM*

TO: Richard D. Spear, Ph.D.  
Chief, S & M Branch, 2 SA  
Edison, NJ

Enclosed find a 10-page report on the above.

The Lancaster Sanitary Landfill is strictly a domestic/commercial disposal site at this time. It is one of the better-operated landfills I have seen. Everything is organized and done with a purpose. For example, except for the steep slopes of the fill to the NYS Thruway R/W, all drainage is keyed to various ditches so that the surface runoff goes either to gravel pit ponds north of the site or to the newly-constructed diked area west of the site.

In discussing the site with Mr. Jones, the operator, chemicals in drums or bulk are not allowed on the site. At one time they were; however, Jones does not know what chemicals were deposited in the landfill nor does he know exactly where they are. The chemical was received just like any other waste. It is suspected that the drums were crushed and broken open. Much of the chemicals are under old fill and perhaps up to 40 feet in the ground. Unless something significant relative to health appears, it is suggested they be left where they are.

The Clarence rest area on the NYS Thruway is just east of the Lancaster landfill. The rest area well is between their sewage treatment plant and the landfill. The distance from the well to the landfill is about 200 feet. The well location is not good but several things should be taken into consideration.

1. There is a wet area and pond in back of the rest area that no doubt provides a head and a possible source of water for the well.
2. The sewage treatment plant units and waste stream are closer to the dump than the well.
3. Quarries west of the well, the landfill, and the Lancaster speedway, are continually lowering the groundwater table. They need to do this to work the lower levels of the quarry. Consequently, up to

5 MGD of groundwater is pumped out of one quarry. This pump age would have the tendency to draw the groundwater below the landfill to the west rather than to the east and the rest area well. A ball-park figure of 0.2 MGD well water usage indicates the major draw down is to the west rather than the east.

4. The NYS DEC collected samples of the well and found Aldrin, DDT, chlordane, and Heptachlor Epoxide in excess of state levels. While it is possible, when these samples were taken in December 1978, that the contamination came from the landfill, it is also possible that some of these chemicals could have come from spraying in and around the rest area.

5. Sampling the area could be from monitoring wells within the site, from the ponds, and the rest area well. The quarry discharge could also be sampled along with the discharge ditch from the rest area waste treatment plant. In rainy weather, the ditch between the thru-way and the landfill could also be sampled. Without leachate, which is the case at this site, it would be difficult to determine what is actually coming from the site.

6. It was not determined if the Lancaster speedway had a well or was on a public supply. If it is the former, this might be an excellent sampling point.

It would be my feeling regardless of the pollution source that consideration be given to providing a public water supply to the rest area. The 200-foot distance between the rest area and the landfill is an uncomfortable distance to live with, knowing how time and usage may have a major influence on the spread of landfill contamination. Again, it would be best to seek another water source and leave the site in competent hands for future control.

REFERENCE NO. 2

EX-11(3)

AMENDMENT TO  
LANCASTER SANITARY LANDFILL PERFORMANCE AND CLOSURE TRUSTS  
34-459200, 34-459201

Lancaster Sanitary Landfill, Inc. has changed its name to Gunville Energy Systems Corporation effective July 24, 1986. Pursuant to Section 16 of the Closure Trust dated December 20, 1984 and the Performance Trust dated December 20, 1984 between Lancaster Sanitary Landfill, Inc. and Manufacturers and Traders Trust Company for the benefit of the New York State Department of Environmental Conservation, we hereby amend said Agreements to change the Grantor's name to Gunville Energy Systems Corporation.

All terms and conditions of the Agreements remain the same.

  
\_\_\_\_\_  
Lancaster Sanitary Landfill, Inc.

  
\_\_\_\_\_  
New York State Department of Environmental Conservation

  
\_\_\_\_\_  
Manufacturers and Traders Trust Company

July 28, 1986

REFERENCE NO. 3

1  
u

M E M O R A N D U M

TO: Commissioner Henry G. Williams  
FROM: Mr. John J. Spagnoli - Regional Director (9)  
SUBJECT: LANDFILL ENFORCEMENT UPDATE  
DATE: December 30, 1986

Region 9 Primary Landfill Enforcement Targets

County: Erie                      Landfill: Lancaster (15521)

The primary target site in this Region is the Lancaster Sanitary Landfill, located in the Town of Lancaster, Erie County. A Consent Order was signed by the owners of the landfill on December 21, 1984. The Order required a special account to be established in the amount of \$120,000 plus interest, in the Department's name. This fund is to ensure that the groundwater monitoring program will continue for the next 20 years. In addition, in November 1985, six additional monitoring wells were installed and are being sampled on a quarterly basis.

With the topsoil and seeding completed this past September, the landfill has been properly closed and will be periodically inspected to ensure adequacy of the closure.

Region 9 Secondary Landfill Enforcement Targets

County: Wyoming                      Landfill: Formo Landfill (61815)

Division Comment:

All other landfill owners are either satisfactorily upgrading their landfill operations or are on schedule with final closure and hence have not been included on either the primary or secondary landfill enforcement target lists.

cc: Mr. Peter Buechi  
Mr. Robert Vitrey  
Mr. Norman Nosenchuck

**REFERENCE NO. 4**



# Wehran EnviroTech

May 29, 1990

**Wehran-New York, Inc.**  
345 Lang Boulevard  
Suite 1  
Grand Island, New York 14072  
Tel: 716-773-1801  
Fax: 716-773-1828

Mr. Robert Mitrey  
New York State Department  
of Environmental Conservation  
600 Delaware Avenue  
Buffalo, New York 14202

Re: Lancaster Sanitary Landfill  
Groundwater Monitoring  
March 1990 Quarterly Report  
WE Project No. 09463 ST

Dear Mr. Mitrey:

Enclosed are the analytical results, field data sheets, and chain of custody forms for groundwater samples collected at the Lancaster Sanitary Landfill on March 22, 1990. Sampling during this period included three on-site wells (W-3, W-5 and W-8) and eight wells (W-A through W-H) along the New York State Thruway (six southwest and essentially downgradient of the landfill and two southeast and upgradient of the landfill). All samples were collected by and delivered to the GTC laboratory in Rochester, New York on the same day.

Data from upgradient Well W-5 indicated concentrations which were within the range of the previous data for this well. Notable changes were an increased Total Iron concentration of 6.74 mg/l as compared to the September 7, 1989 results of 3.81 mg/l, an increase of Soluble Iron from 0.081 mg/l (9/7/89) to 1.26 mg/l (3/22/90), and an increase in the Total Manganese concentration from 0.041 mg/l (9/7/89) to 0.167 mg/l (3/22/90). No organic compounds were detected above the minimum detection limits (MDL) for this well.

No data is available for upgradient Well W-6A this period since a bailer has become lodged in the well as a result of purging while NYSDEC personnel were on site. The bailer, despite several attempts to remove it, still remains in place. As a result, no sample was obtained for analysis.

Two new upgradient wells, W-G and W-H (replacing W-7 and B-24D, respectively), were recently installed by another firm along the south side of the Thruway and analyzed for the baseline parameters during this quarter. Chloride (461 mg/l), Cadmium (0.012 mg/l), and Iron (8.26 mg/l) were detected above the NYSDEC Part 703 Standards for Well W-G. Likewise, Iron (8.99 mg/l) and Manganese

(0.306) were detected above the Part 703 Standards for Well W-H. No organic compounds were detected above the MDL for either well.

Monitoring Well W-3 located downgradient of the facility exhibited some notable decreases in both inorganic and organic concentrations. Chloride concentration decreased from 324 mg/l as reported in the December 19, 1989 sampling results to 37 mg/l in the March 22, 1990 results. This value falls within the range of previously reported values for Chloride concentration. All organic compound concentrations were below the MDL for this well with the exception of Formaldehyde which was detected at a concentration of 1.17 ug/l, slightly above the detection limit of 1 ug/l. The most notable change in organics was the decrease of Benzene, Ethylbenzene, and Toluene from the December 19, 1989 sampling event and this most recent sampling event. The December 1989 data indicated concentrations of 14.7, 9.8, and 8.8 ug/l for the three compounds, respectively, as compared to the March 1990 concentrations of less than 2 ug/l for each.

Monitoring Well W-8, which is also located downgradient of the landfill, exhibited slight increases in Chloride (172 mg/l) and Nitrate Nitrogen (2.43 mg/l) this period when compared to last quarter's results, although decreases in Total Iron (0.512 mg/l) and Total Manganese (0.961 mg/l) were recorded. These concentrations were all within the historical data range. Trichloroethylene (TCE) was detected above the MDL of 1 mg/l at a concentration of 2.25 ug/l demonstrating a slight decrease from the previously detected concentration of 3.0 ug/l (12/22/89).

The remaining wells located along the Thruway and downgradient of the site showed variations in parameter concentrations relative to previous monitoring data for these wells, although concentrations for Wells W-A through W-D were all within historical ranges. Monitoring Well W-A exhibited a decrease in Chloride (108 mg/l) from the previous sampling event (321 mg/l). In addition, the concentration of Soluble Iron increased to 0.806 mg/l from the previously reported 0.106 mg/l. No organic compound concentrations were detected above the MDL for this well. Monitoring Well W-B exhibited increases in Chloride (740 mg/l), Soluble Iron (0.153 mg/l), and Soluble Manganese (0.067 mg/l) for this period when compared to last quarter's results (500 mg/l, 0.078 mg/l, and <0.01 mg/l, respectively). All other parameters decreased from the previously reported concentrations. Additionally, no organic compound concentrations were detected above the MDL for Well W-B. Monitoring well W-C exhibited notable increases from the last quarter sampling in Total Iron (29.8 mg/l), Total Manganese (1.15 mg/l), and Soluble Manganese

Mr. R. Mitrey  
Page 3  
May 29, 1990

(0.154 mg/l). All of the values, however, fall within the well's historical data ranges. No organic compound concentrations were reported above the MDL. Monitoring Well W-D exhibited a significant decrease in Total Iron (3.8 mg/l) from the previous quarter's record high concentration of 72.8 mg/l. Additionally, TOC decreased (3.8 mg/l) while the Ammonia Nitrogen value increased slightly (0.186 mg/l). No organic compound concentrations were reported above the MDL.

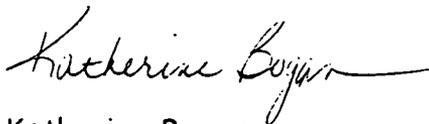
The remaining downgradient Wells W-E and W-F exhibited slight increases for several parameters from the previously reported concentrations. The most notable changes occurred in Well W-E. Concentrations for Chloride (19.4 mg/l), Soluble Iron (3.84 mg/l), and Soluble Manganese (0.154 mg/l) all increased somewhat. In addition, the Total Iron concentration for Well W-F increased to 19.9 mg/l this quarter, while pH dropped to 6.05. All other values fell within the historic data range for Well W-F. No organic compound concentrations were reported above the MDL for either wells W-E or W-F.

It appears the changes in parameter concentrations noted primarily in Monitoring Wells W-E and W-F are somewhat irregular and no pattern to changes in concentrations has been established. However, most other parameters monitored during this period were within the historical ranges reported for the wells.

If you have any questions regarding this data, please do not hesitate to call.

Very truly yours,

**WEHRAN-NEW YORK, INC.**



Katherine Bogan  
Staff Scientist



Sheldon S. Nozik  
Senior Hydrogeologist

KB/SSN/asb

cc: M. McIntosh - NYSDEC  
T. Welsh - Gunnville Energy

SUMMARY OF GROUNDWATER ELEVATIONS

PROJECT NAME: LANCASTER SANITARY LANDFILL

PROJECT NO.: 09463 ST

DATE: PRE PURGE 3/21/90 PRE SAMPLE 3/22/90

WELL NO.	T.O.C. ELEV.	GROUND ELEV.	WELL DEPTH (ft)	PRE-PURGE DEPTH (ft)	ELEV.	PRE-SAMPLE DEPTH (ft)	ELEV.
W-3	738.84	734.85	29.6	21.78	717.06	21.42	717.42
W-5	764.48	762.06	65.5	31.04	733.44	31.04	733.44
W-6A	755.91	752.91	DAMAGED	DAMAGED	DAMAGED	DAMAGED	DAMAGED
W-8	732.61	729.11	DRY	DRY	DRY	DRY	DRY
W-A	725.78	723.98	27.2	7.86	717.92	8.29	717.49
W-B	732.18	730.78	33.8	12.45	719.73	13.12	719.06
W-C	732.51	730.61	49.6	47.41	685.10	47.43	685.08
W-D	736.75	735.22	34.00	16.92	719.83	17.08	719.67
W-E	755.84	754.34	30.29	24.01	731.83	24.73	731.11
W-F	729.30	728.05	29.08	11.68	717.62	11.83	717.47
W-G	INFO NOT AVAILABLE		59.62	47.98		48.15	
W-H	INFO NOT AVAILABLE		78.43	48.75		49.21	



A Full Service Environmental Laboratory

April 24, 1990

Mr. Sheldon Nozik  
Wehran EnviroTech  
345 Lang Blvd.  
Suite 1, P. O. Box 70  
Grand Island, NY 14077

Re: Lancaster - 1990 Second Quarter

Dear Mr. Nozik:

Enclosed please find General Testing's analytical report on the samples taken from the Lancaster Landfill. On March 22, 1990 our personnel sampled twelve (12) wells, one (1) Field Blank and one (1) Trip Blank. All Analytical Data has been reviewed prior to report submittal and appear in Section A. The corresponding Quality Control appears in Section B. Sections C and D contain the Laboratory Chronology and Documentation respectively.

If any clarification is needed or any question or comments arise, please contact me directly at 454-3760. Thank you once again for allowing General Testing the opportunity to provide these services.

Sincerely,

Tracey G. Nichols  
Client Representative

Enc.

aa

## DATA AND QUALITY CONTROL QUALIFIERS

J - Indicates compound was analyzed but was not observed at a quantifiable concentration.

J - Indicates an estimated value

J Qualifiers (used in conjunction with J and/or QC page or chronology)

S - Surrogate recoveries outside of control limits

M - Matrix spike and/or matrix spike duplicate outside control limits

St - Surrogate recoveries outside of control limits, analysis repeated, same results obtained, matrix interference suspected

Mt - same as M

ORGANIC PARAMETERS: Matrix interference suspected, Organic reference standard was acceptable.

r - Laboratory replicates outside of laboratory advisory limits

INORGANIC PARAMETERS: Matrix interference suspected, Repeat analysis still unacceptable

t - Matrix interference suspected

Mr - INORGANICS PARAMETERS: Matrix interference suspected, repeat analysis not conducted due to holding time limitations

h - Holding time exceeded for analysis

B - Indicates that the analyte was found in the associated laboratory or field blank

B Qualifiers (used in conjunction with B)

l - Contamination in lab or method blank

e - Contamination in equipment blank

t - Contamination in trip blank

f - Contamination in field filtration blank

x - Contamination in two or more types of blanks (i.e. Lab or Method, Trip, Equipment, or Field Filtration Blank)

d - Results multiplied by dilution factor

## MISCELLANEOUS QC AND DATA QUALIFIERS

ND - Not Detectable

NS - No Sample

NA - Not Analyzed

\*\* - No limits currently established

\*\* - See Attached Data

I - Insufficient sample to re-analyze

D - Surrogate standard diluted out

R - Sample re-analyzed outside of holding time

UP - Unable to perform analysis due to sample matrix

V - Spiked recovery cannot be determined, sample value >4 times spike concentration

↔ - Outside Laboratory acceptance limits (Blank Spikes, Ref. Spikes)

RC - Results confirmed via repeat analysis

NC - Not Calculable

LE - Lab Error: No data available

t - Surrogate Matrix Interference

GTC REPORT# R90/877, 878, 879

REPORT INDEX

SECTION A: Analytical Data  
SECTION B: Quality Control  
SECTION C: Chronology  
SECTION D: Documentation

SECTION A

ANALYTICAL DATA

Presented in this section is analytical data for the parameters requested. The following references concerning units and analytical methodology apply to the data herein.

Units:

mg/l

Analytical Methodology Obtained From:

- 
- ( ) Federal Register, 40 CFR Part 136, Guidelines Establishing Test Procedures for the analyses of Pollutants under the Clean Water Act, 10/26/84.
  - ( X ) SW-846, Test Methods for Evaluating Solid Waste, 3rd Edition, 9/86.
  - ( ) Other

LABORATORY REPORT

Job No: R90/00877

Date: APR. 16 1990

Client:

Mr. Sheldon Nozik  
Wehran Envirotech  
2451 Baseline Road  
Grand Island, New York 14072

Sample(s) Reference:

Lancaster Landfill  
Monitoring Wells

Collected

: 03/22/90

P.O. #:

ANALYTICAL UNITS - mg/l

Sample:	-001	-002	-003	-004	-005	-006	-007	-008
Location:	W-3	W-5	W-F	W-B	W-A	W-B	W-D	W-E
Date Collected:	03/22/90	03/22/90	03/22/90	03/22/90	03/22/90	03/22/90	03/22/90	03/22/90
Time Collected:	09:20	10:30	11:15	11:40	12:10	12:45	13:10	14:30
pH	7.20	7.25	6.05	7.25	7.59	7.75	7.75	7.78
Spec. Cond. (umhos/cm)	375	515	825	655	320	1430	1850	16.5
Temperature °C	8.5	9.0	7.5	13.5	9.0	9.5	9.0	9.0
Alkalinity, Total	310	312	226	236	234	311	322	243
Chloride	37.0	4.40	284	172	108	740	891	19.4
Nitrogen, Ammonia	4.44	0.050 U	0.186	0.050 U				
Nitrogen, Nitrate	0.163	0.050 U	0.512	2.43	0.050 U	0.986	0.050 U	1.32
Nitrogen, Nitrite	0.039	0.010 U	0.027	0.010 U	0.010 U	0.010 U	0.012	0.010 U
Nitrogen, Nitrate/Nitrite	0.202	0.050 U	0.539	2.43	0.050 U	0.986	0.050 U	1.32
TOC Duplicate	11.4	1.46	3.85	2.55	2.88	2.56	3.29	1.32
Iron, Total	7.96	6.74	19.9	0.512	0.992	0.619	3.80	4.19
Iron, Soluble								
Manganese, Total	0.215	0.167	0.386	0.961	0.010	0.195	0.134	0.168
Manganese, Soluble								
Scan 601/602	**	**	**	**	**	**	**	**

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145

NJ ID# in Rochester: 73331

NJ ID# in Hackensack: 02317

NY ID# in Hackensack: 10801

\*\*See attached data

Laboratory Director

9 of 247

LABORATORY REPORT

Job No: R90/00877

Date: APR. 16 1990

Client:

Mr. Sheldon Nozik  
Wehran Envirotech  
2451 Baseline Road  
Grand Island, New York 14072

Sample(s) Reference

Lancaster Landfill  
Monitoring Wells

Collected

: 03/22/90

P.O. #:

ANALYSIS \* BY GC METHOD 601/602

ANALYTICAL RESULTS - ug/l

Sample:	-001	-002	-003	-004	-005	-006	-007	-008
Location:	W-3	W-5	W-F	W-8	W-A	W-B	W-D	W-E
Date Collected:	03/22/90	03/22/90	03/22/90	03/22/90	03/22/90	03/22/90	03/22/90	03/22/90
Time Collected:	09:20	10:30	11:15	11:40	12:10	12:45	13:10	14:30
Date Analyzed:	03/29/90	03/29/90	03/29/90	03/29/90	03/29/90	03/29/90	03/29/90	03/30/90
Chloromethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromomethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Vinyl Chloride	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Chloroethane	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Methylene Chloride	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichlorofluoromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene(Cis&Trans)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroform	1.17	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,1-Trichloroethane	1 U	1 U	1 U	1.84	1 U	1 U	1 U	1 U
Carbon Tetrachloride	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichloropropene (Trans)	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Trichloroethene	1 U	1 U	1 U	2.25	1 U	1 U	1 U	1 U
1,3-Dichloropropene (Cis)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dibromochloromethane	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,2-Trichloroethane	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
2-Chloroethylvinyl Ether	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Bromoform	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,2,2-Tetrachloroethane	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Tetrachloroethene	1 U	1 U	1 U	2.98	1 U	1 U	1 U	1 U
Chlorobenzene	2 U	2 U	2 U	2 U	2 U	2 U	3.80	2 U
1,3-Dichlorobenzene	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2-Dichlorobenzene	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,4-Dichlorobenzene	2 U	2 U	2 U	2 U	2 U	2 U	3.23	2 U
Benzene	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Toluene	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Ethylbenzene	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Total Xylene (o,m,p)	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U

LABORATORY REPORT

Job No: R90/00877

Date: APR. 16 1990

Client:

Mr. Sheldon Nozik  
Wehran Envirotech  
2451 Baseline Road  
Grand Island, New York 14072

Sample(s) Reference:

Lancaster Landfill  
Monitoring Wells

Collected

: 03/22/90

P.O. #:

ANALYSIS * BY GC METHOD 601/602				ANALYTICAL RESULTS - %				
Sample:	-001	-002	-003	-004	-005	-006	-007	-008
Location:	W-3	W-5	W-F	W-8	W-A	W-B	W-D	W-E
Date Collected:	03/22/90	03/22/90	03/22/90	03/22/90	03/22/90	03/22/90	03/22/90	03/22/90
Time Collected:	09:20	10:30	11:15	11:40	12:10	12:45	13:10	14:30
-----								
SURROGATE STANDARD RECOVERIES								
-----								
% Recovery								
Bromochloromethane (Acceptance Limits: 60-141%)	116%	95%	109%	114%	108%	95%	106%	117%
2-Bromo-1-chloropropane (Acceptance Limits: 60-132%)	118%	102%	109%	114%	112%	94%	109%	118%
a,a,a-Trifluorotoluene (Acceptance Limits: 60-134%)	113%	95%	95%	95%	110%	77%	91%	115%

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145

NJ ID# in Rochester: 73331

NJ ID# in Hackensack: 02317

NY ID# in Hackensack: 10801

Laboratory Director

LABORATORY REPORT

Job No: R90/00877

Date: APR. 16 1990

Client:

Mr. Sheldon Nozik  
Wehran Envirotech  
2451 Baseline Road  
Grand Island, New York 14072

Sample(s) Reference:

Lancaster Landfill  
Monitoring Wells

Collected

: 03/22/90

P.O. #:

ANALYTICAL UNITS - mg/l

Sample:	-009	-010	-011	-012	-013	-014	-015	-016
Location:	W-C	W-3	W-5	W-F	W-8	W-A	W-B	W-D
Date Collected:	03/22/90	03/22/90	03/22/90	03/20/90	03/22/90	03/22/90	03/22/90	03/22/90
Time Collected:	14:45	09:20	10:30	11:15	11:40	12:10	12:45	13:10
pH	7.37							
Spec. Cond. (umhos/cm)	1210							
Temperature °C	9.5							
Alkalinity, Total	872							
Chloride	222							
Nitrogen, Ammonia	1.03							
Nitrogen, Nitrate	0.249							
Nitrogen, Nitrite	0.114							
Nitrogen, Nitrate/Nitrite	0.363							
TOC Duplicate	14.1							
Iron, Total	29.8							
Iron, Soluble		0.354	1.26	0.050 U	0.050 U	0.806	0.153	0.457
Manganese, Total	1.15							
Manganese, Soluble		0.015	0.024	0.018	0.010 U	0.014	0.067	0.140
Scan 601/602	**							

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145

NJ ID# in Rochester: 73331

NJ ID# in Hackensack: 02317

NY ID# in Hackensack: 10801

\*\*See attached data

Laboratory Director

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LABORATORY REPORT

Job No: R90/00877

Date: APR. 16 1990

Client:

Mr. Sheldon Nozik  
Wehran Envirotech  
2451 Baseline Road  
Grand Island, New York 14072

Sample(s) Reference

Lancaster Landfill  
Monitoring Wells

Collected

: 03/22/90

P.O. #:

ANALYSIS \* BY GC METHOD 601/602

ANALYTICAL RESULTS - ug/l

Sample:	-009	-010	-011	-012	-013	-014	-015	-016
Location:	W-C	W-3	W-5	W-F	W-8	W-A	W-B	W-D
Date Collected:	03/22/90	03/22/90	03/22/90	03/20/90	03/22/90	03/22/90	03/22/90	03/22/90
Time Collected:	14:45	09:20	10:30	11:15	11:40	12:10	12:45	13:10
Date Analyzed:	03/30/90							
Chloromethane	5 U							
Bromomethane	5 U							
Vinyl Chloride	2 U							
Chloroethane	2 U							
Methylene Chloride	1 U							
Trichlorofluoromethane	1 U							
1,1-Dichloroethene	1 U							
1,1-Dichloroethane	1 U							
1,2-Dichloroethene(Cis&Trans)	1 U							
Chloroform	1 U							
1,2-Dichloroethane	1 U							
1,1,1-Trichloroethane	8.85							
Carbon Tetrachloride	1 U							
Bromodichloromethane	1 U							
1,2-Dichloropropane	1 U							
1,3-Dichloropropene (Trans)	2 U							
Trichloroethene	1 U							
1,3-Dichloropropene (Cis)	1 U							
Dibromochloromethane	2 U							
1,1,2-Trichloroethane	2 U							
2-Chloroethylvinyl Ether	2 U							
Bromoform	2 U							
1,1,2,2-Tetrachloroethane	2 U							
Tetrachloroethene	1 U							
Chlorobenzene	2 U							
1,3-Dichlorobenzene	2 U							
1,2-Dichlorobenzene	2 U							
1,4-Dichlorobenzene	2 U							
Benzene	2 U							
Toluene	2 U							
Ethylbenzene	2 U							
Total Xylene (o,m,p)	2 U							

LABORATORY REPORT

Job No: R90/00877

Date: APR. 16 1990

Client:

Mr. Sheldon Nozik  
Wehran Envirotech  
2451 Baseline Road  
Grand Island, New York 14072

Sample(s) Reference:

Lancaster Landfill  
Monitoring Wells

Collected

: 03/22/90

P.O. #:

ANALYSIS * BY GC METHOD 601/602				ANALYTICAL RESULTS - %				
Sample:	-009	-010	-011	-012	-013	-014	-015	-016
Location:	W-C	W-3	W-5	W-F	W-8	W-A	W-B	W-D
Date Collected:	03/22/90	03/22/90	03/22/90	03/20/90	03/22/90	03/22/90	03/22/90	03/22/90
Time Collected:	14:45	09:20	10:30	11:15	11:40	12:10	12:45	13:10
-----								
SURROGATE STANDARD RECOVERIES								
-----								
% Recovery								
Bromochloromethane	115%							
(Acceptance Limits: 60-141%)								
2-Bromo-1-chloropropane	112%							
(Acceptance Limits: 60-132%)								
a,a,a-Trifluorotoluene	107%							
(Acceptance Limits: 60-134%)								

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145  
NJ ID# in Rochester: 73331  
NJ ID# in Hackensack: 02317  
NY ID# in Hackensack: 10801

Laboratory Director

14 of 268

Job No: R90/00877

Date: APR. 16 1990

Client:

Mr. Sheldon Nozik  
Wehran Envirotech  
2451 Baseline Road  
Grand Island, New York 14072

Sample(s) Reference:

Lancaster Landfill  
Monitoring Wells

Collected

: 03/22/90

P.O. #:

ANALYTICAL UNITS - mg/l

Sample:	-017	-018	-019					
Location:	W-E	W-C	Trip					
Date Collected:	03/22/90	03/22/90	03/22/90					
Time Collected:	14:30	14:45	09:00					
pH								
Spec. Cond. (umhos/cm)								
Temperature °C								
Alkalinity, Total								
Chloride								
Nitrogen, Ammonia								
Nitrogen, Nitrate								
Nitrogen, Nitrite								
Nitrogen, Nitrate/Nitrite								
TOC Duplicate								
Iron, Total								
Iron, Soluble	3.84	2.34						
Manganese, Total								
Manganese, Soluble	0.154	0.297						
Scan 601/602			**					

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145  
NJ ID# in Rochester: 73331  
NJ ID# in Hackensack: 02317  
NY ID# in Hackensack: 10801

\*\* See attached data

Laboratory Director

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LABORATORY REPORT

Job No: R90/00877

Date: APR. 16 1990

Client:

Mr. Sheldon Nozik  
Wehran Envirotech  
2451 Baseline Road  
Grand Island, New York 14072

Sample(s) Reference

Lancaster Landfill  
Monitoring Wells

Collected

: 03/22/90

P.O. #:

ANALYSIS \* BY GC METHOD 601/602

ANALYTICAL RESULTS - ug/l

Sample:	-017	-018	-019						
Location:	W-E	W-C	Trip						
			Blank						
Date Collected:	03/22/90	03/22/90	03/22/90						
Time Collected:	14:30	14:45	09:00						
-----									
Date Analyzed:			03/30/90						
Chloromethane			5 U						
Bromomethane			5 U						
Vinyl Chloride			2 U						
Chloroethane			2 U						
Methylene Chloride			1 U						
Trichlorofluoromethane			1 U						
1,1-Dichloroethene			1 U						
1,1-Dichloroethane			1 U						
1,2-Dichloroethene(Cis&Trans)			1 U						
Chloroform			3.90						
1,2-Dichloroethane			1 U						
1,1,1-Trichloroethane			1 U						
Carbon Tetrachloride			1 U						
Bromodichloromethane			1 U						
1,2-Dichloropropane			1 U						
1,3-Dichloropropene (Trans)			2 U						
Trichloroethene			1 U						
1,3-Dichloropropene (Cis)			1 U						
Dibromochloromethane			2 U						
1,1,2-Trichloroethane			2 U						
2-Chloroethylvinyl Ether			2 U						
Bromoform			2 U						
1,1,2,2-Tetrachloroethane			2 U						
Tetrachloroethene			1 U						
Chlorobenzene			2 U						
1,3-Dichlorobenzene			2 U						
1,2-Dichlorobenzene			2 U						
1,4-Dichlorobenzene			2 U						
Benzene			2 U						
Toluene			2 U						
Ethylbenzene			2 U						
Total Xylene (o,m,p)			2 U						

LABORATORY REPORT

Job No: R90/00877

Date: APR. 16 1990

Client:

Mr. Sheldon Nozik  
Wehran Envirotech  
2451 Baseline Road  
Grand Island, New York 14072

Sample(s) Reference:

Lancaster Landfill  
Monitoring Wells

Collected

: 03/22/90

P.O. #:

ANALYSIS * BY GC METHOD 601/602				ANALYTICAL RESULTS - %			
Sample:	-017	-018	-019				
Location:	W-E	W-C	Trip				
			Blank				
Date Collected:	03/22/90	03/22/90	03/22/90				
Time Collected:	14:30	14:45	09:00				
SURROGATE STANDARD RECOVERIES							
-----							
% Recovery							
Bromochloromethane (Acceptance Limits: 60-141%)			113%				
2-Bromo-1-chloropropane (Acceptance Limits: 60-132%)			110%				
a,a,a-Trifluorotoluene (Acceptance Limits: 60-134%)			100%				

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145

NJ ID# in Rochester: 73331

NJ ID# in Hackensack: 02317

NY ID# in Hackensack: 10801

Laboratory Director

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LABORATORY REPORT

Job No: R90/00878

Date: MAY 1 1990

Client:

Mr. Sheldon Nozik  
Wehran Envirotech  
2451 Baseline Road  
Grand Island, NY 14072

Sample(s) Reference:

Lancaster Landfill  
New Wells/FB

Collected

: 03/22/90

P.O. #:

ANALYTICAL UNITS - mg/l

Sample:	-001	-002	-003	-004	-005	-006
Location:	W-G	W-H	Field	W-G	W-H	Field
Date Collected:	03/22/90	03/22/90	03/22/90	03/22/90	03/22/90	03/22/90
Time Collected:	PQL 13:40	14:30	13:35	13:40	14:30	13:35

pH		6.64	8.21			
Spec. Cond. (umhos/cm)		230	175			
Temperature °C		9.5	11.0			
Alkalinity, Total	2.0	512	153	3.1		
BOD5	2.0	4.4	2.0 U	2.0 U		
Chloride	1.0	461	5.97	1.0 U		
COD, Dichromate	5.0	16.9	8.91	5.0 U		
Color, Apparent (APHA)	5			5 U		
Color, True (APHA)	5	>70	>70			
Cyanide, Total	0.010	0.010 U	0.010 U	0.010 U		
Dissolved Oxygen	1.0	1.0 U	7.9	8.6		
Hardness, Total	2.0	1020	770	2.0 U		
Nitrogen, Ammonia	0.05	0.056	0.061	0.050 U		
Nitrogen, Kjeldahl	0.20	0.40 U	0.404	0.40 U		
Nitrogen, Nitrate	0.05	0.050 U	0.050 U	0.050 U		
Nitrogen, Nitrite	0.010	0.010 U	0.010 U	0.010 U		
Nitrogen, Nitrate/Nitrite	0.05	0.050 U	0.050 U	0.050 U		
Phenol, Total	0.005	0.0050 U	0.0050 U	0.0050 U		
Redox Potential, mv		221	249	267		
Solids, Dissolved @180 C	10.0	1090	144	10 U		
Sulfate	5.0	65.4	47.1	5.0 U		
Total Organic Carbons	1.0	3.23	2.76	1.00 U		
TOC Duplicate	1.0	3.41	2.47	1.00 U		
Turbidity, ntu		38	35	.07		
Metals, Total		**	**	**	**	**
601/602 Scan		**	**	**	**	**

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145

NJ ID# in Rochester: 73331

NJ ID# in Hackensack: 02317

NY ID# in Hackensack: 10801

\*\* See Attached Data

Laboratory Director

**LABORATORY REPORT**

Job Number: R90/00878 Date: 1 MAY, 1990

Client:  
Mr. Sheldon Nozik  
Wehran Envirotech  
2451 Baseline Road  
Grand Island, NY 14072

Sample(s) Reference  
Lancaster Landfill  
New Wells/FB

Collected : 03/22/90

**TOTAL METALS**

**ANALYTICAL RESULTS - mg/l**

Sample:	-001	-002	-003	-004	-005	-006
Location:	W-G	W-H	Field	W-G	W-H	Field
Date Collected:	03/22/90	03/22/90	03/22/90	03/22/90	03/22/90	03/22/90
Time Collected:	PQL 13:40	14:30	13:35	13:40	14:30	13:35
Aluminum	0.10	5.18	20.5	0.25		
Antimony	0.010	0.010 U	0.010 U	0.010 U		
Arsenic	0.0020	0.0020 U	0.0038	0.0020 U		
Barium	0.10	0.64	0.45	0.10 U		
Beryllium, Total	0.010	0.010 U	0.010 U	0.010 U		
Boron, Total	10.0	0.768	0.805	0.933		
Cadmium, Total	0.010	0.012	0.010	0.010 U		
Calcium, Total	0.50	352	275	0.67		
Chromium, Total	0.050	0.050 U	0.050 U	0.050 U		
Chromium, Hex	0.010	0.010 U	0.010 U	0.010 U		
Copper, Total	0.020	0.032	0.020	0.020		
Iron, Total	0.050	8.26	8.99	0.050 U		
Iron, Soluble	0.050					
Lead, Furnace	0.0050	0.0050 U	0.0076	0.0061	1.11	0.050 U 0.061
Magnesium, Total	0.250	91.4	21.2	0.25 U		
Manganese, Total	0.010	0.216	0.306	0.010 U		
Manganese, Soluble	0.010					
Mercury, Total	0.00020	0.00020 U	0.00020 U	0.00020 U	0.064	0.010 U 0.010 U
Nickel, Total	0.040	0.040 U	0.040 U	0.040 U		
Potassium, Total	0.25	3.88	3.45	0.25 U		
Selenium, Total	0.002	0.0020 U	0.0020 U	0.0020 U		
Silver, Total	0.010	0.010 U	0.010 U	0.010 U		
Sodium, Total	0.100	98.3	3.96	0.10 U		
Thallium, Total	0.250	0.250 U	0.250 U	0.250 U		
Zinc, Total	0.010	0.029	0.048	0.048		

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145  
NJ ID# in Rochester: 73331  
NJ ID# in Hackensack: 02317  
NY ID# in Hackensack: 10801

Laboratory Director

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LABORATORY REPORT

Job No: R90/00878

Date: MAY 1 1990

Client:

Mr. Sheldon Nozik  
Wehran Envirotech  
2451 Baseline Road  
Grand Island, NY 14072

Sample(s) Reference

Lancaster Landfill

Collected

: 03/22/90

P.O. #:

ANALYSIS \* BY GC METHOD 601/602

ANALYTICAL RESULTS - ug/l

Sample:	-001	-002	-003	-004	-005	-006
Location:	W-G	W-M	Field	W-G	W-M	Field
Date Collected:	03/22/90	03/22/90	03/22/90	03/22/90	03/22/90	03/22/90
Time Collected:	13:40	14:30	13:35	13:40	14:30	13:35

Date Analyzed:	04/02/90	04/03/90	04/03/90			
Chloromethane	5 U	5 U	5 U			
Bromomethane	5 U	5 U	5 U			
Vinyl Chloride	2 U	2 U	2 U			
Chloroethane	2 U	2 U	2 U			
Methylene Chloride	1.23 Bl	1 U	1 U			
Trichlorofluoromethane	1 U	1 U	1 U			
1,1-Dichloroethene	1 U	1 U	1 U			
1,1-Dichloroethane	1 U	1 U	1 U			
1,2-Dichloroethene(Cis&Trans)	1 U	1 U	1 U			
Chloroform	1 U	1 U	1.94			
1,2-Dichloroethane	1 U	1 U	1 U			
1,1,1-Trichloroethane	1 U	1 U	1 U			
Carbon Tetrachloride	1 U	1 U	1 U			
Bromodichloromethane	1 U	1 U	1 U			
1,2-Dichloropropane	1 U	1 U	1 U			
1,3-Dichloropropane (Trans)	2 U	2 U	2 U			
Trichloroethene	1 U	1 U	1 U			
1,3-Dichloropropane (Cis)	1 U	1 U	1 U			
Dibromochloromethane	2 U	2 U	2 U			
1,1,2-Trichloroethane	2 U	2 U	2 U			
2-Chloroethylvinyl Ether	2 U	2 U	2 U			
Bromoform	2 U	2 U	2 U			
1,1,2,2-Tetrachloroethane	2 U	2 U	2 U			
Tetrachloroethene	1 U	1 U	1 U			
Chlorobenzene	2 U	2 U	2 U			
1,3-Dichlorobenzene	2 U	2 U	2 U			
1,2-Dichlorobenzene	2 U	2 U	2 U			
1,4-Dichlorobenzene	2 U	2 U	2 U			
Benzene	2 U	2 U	2 U			
Toluene	2 U	2 U	2 U			
Ethylbenzene	2 U	2 U	2 U			
Total Xylene (o,m,p)	2 U	2 U	2 U			

LABORATORY REPORT

Job No: R90/00878

Date: MAY 1 1990

Client:

Mr. Sheldon Nozik  
Wehran Envirotech  
2451 Baseline Road  
Grand Island, NY 14072

Sample(s) Reference:

Lancaster Landfill

Collected

: 03/22/90

P.O. #:

ANALYSIS * BY GC METHOD 601/602				ANALYTICAL RESULTS - %			
Sample:	-001	-002	-003	-004	-005	-006	
Location:	W-G	W-H	Field	W-G	W-H	Field	
Date Collected:	03/22/90	03/22/90	03/22/90	03/22/90	03/22/90	03/22/90	
Time Collected:	13:40	14:30	13:35	13:40	14:30	13:35	
-----							
SURROGATE STANDARD RECOVERIES							
-----							
% Recovery							
Bromochloromethane (Acceptance Limits: 60-141%)	94%	103%	82%				
2-Bromo-1-chloropropane (Acceptance Limits: 60-132%)	96%	97%	100%				
a,a,a-Trifluorotoluene (Acceptance Limits: 60-134%)	92%	93%	90%				

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145

NJ ID# in Rochester: 73331

NJ ID# in Hackensack: 02317

NY ID# in Hackensack: 10801

Laboratory Director

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LABORATORY REPORT

Job No. R90/00879

Date APR. 6 1990

Client:

Mr. Sheldon Nozik  
Wehran Envirotech  
2451 Baseline Road  
Grand Island, NY 14072

Sample(s) Reference

Lancaster Landfill

Collected

: 03/22/90

P.O. #:

ANALYTICAL RESULTS - mg/l

Sample:	-001								
Location:	W-E								
Date Collected:	03/22/90								
Time Collected:	14:30								
-----									
Lead, Furnace	0.0053								

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.  
 NY ID# in Rochester: 10145  
 NJ ID# in Rochester: 73331  
 NJ ID# in Hackensack: 02317  
 NY ID# in Hackensack: 10801

*Michael A. Perry*

Laboratory Director

SECTION 8

LABORATORY QUALITY CONTROL

Presented in this section is Quality Control associated with the data provided in Section A of this report.

Quality Control Explanations:  
-----

- (1) RUN QUALITY CONTROL - Selected QC data from the analytical run in which your sample(s) were involved.
- (2) JOB SPECIFIC QUALITY CONTROL - QC data specific to your set of samples.
- (3) DUPLICATES - Replicate analyses of a given sample used to monitor precision. Relative Percent Difference is calculated as the difference divided by the average x 100.
- (4) MATRIX SPIKES - Addition of a known amount of analyte to a sample. Recovery is calculated by subtracting original value attributable to the sample from the combined value. The difference is the divided by the amount added to calculate % recovery. Poor recoveries may indicate analytical interference due to the matrix of the sample. Any other samples of this matrix may also have been affected, high or low as indicated by the % recovery.
- (5) LABORATORY CONTAMINANTS - Laboratory De-ionized water used to monitor for contamination during analysis.
- (6) BLANK SPIKES - Same as item #4 but analyte is added to laboratory de-ionized water. This indicates the accuracy of analysis.
- (7) REFERENCE CHECK SAMPLES - Samples from an outside source having a known concentration of analyte. Used as a measure of analytical accuracy.

When possible, all components of the above listed QC protocol are performed during an analytical run. The resulting data is compared to historical records when evaluating the quality of analytical runs. The data provided in your report has passed our Quality Assurance review.

Quality Control Notes:  
-----

GTC LABORATORY QUALITY CONTROL REPORT

CUSTOMER: Mehran Envirotech

JOB # : R90/00877

UNITS: mg/l

REPORT TYPE: Job Specific

PARAMETER	SAMPLE	ORIGINAL RESULT	DUPLICATE RESULT	% REL. ERROR	ACCEPT. LIMIT %	AVERAGE RESULT	SPIKE ADDED	PERCENT RECOVERY	ACCEPT. LIMIT %	METHOD BLANK	SPIKE ADDED	PERCENT RECOVERY	ACCEPT. LIMITS %	REFERENCE #	KNOWN VALUE	PERCENT RECOVERY	ACCEPT. LIMITS %
//////////		* PRECISION				* MATRIX SPIKING				BLANK SPIKES				REFERENCE STANDARD			
pH	-005	7.58	7.59	0.1%	*+	7.59	NA			NA				NA			
Spec Cond	-005	315	325	3.1%	*+	320	NA			NA				NA			
Temp.	-005	9.0	9.0	0.0%	*+	9.0	NA			NA				NA			
Alkalinity	-005	237	231	2.6%	10	234	50.0	124%	79-124	2.00 U	50.0	115%	87-121	REF STD	143	106%	90-117
Chloride	-005	108	108	0.0%	10.0	108	125	99%	73-130	1.0 U	25.0	98%	86-120	REF STD	65.0	100%	90-110
Ammonia	-005	0.050 U	0.050 U	NC	11	0.050 U	0.500	77%	67-128	0.050 U	0.250	105%	83-126	REF STD	1.80	100%	88-107
Nitrite	-005	0.010 U	0.010 U	NC	10	0.010 U	0.250	98%	73-132	0.010 U	0.250	104%	87-117	REF STD	0.900	101%	94-109
NO3/NO2	-005	0.050 U	0.050 U	NC	10.0	0.050 U	0.500	106%	76-122	0.050 U	0.500	99%	88-115	REF STD	1.80	99%	90-109
TOC	-005	2.88	2.69	6.8%	10	2.78	10.0	103%	71-125	1.0 U	10.0	101%	90-120	REF STD	20.0	102%	70-130
Iron, Total	-005	1.00	0.980	2.0%	24	0.990	0.250	108%	59-149	0.050 U	0.250	94%	70-130	REF STD	0.250	100%	80-120
Iron, Sol.	-014	0.795	0.816	2.6%	24	0.806	0.250	106%	59-149	0.050 U	0.250	94%	70-130	REF STD	0.250	100%	80-120
Manganese	-005	0.010	0.011	9.5%	20	0.0105	0.050	99%	57-144	0.010 U	0.050	100%	70-130	REF STD	0.050	106%	80-120
Mang, Sol	-014	0.014	0.013	7.4%	20	0.0135	0.050	105%	57-144	0.010 U	0.050	100%	70-130	REF STD	0.050	106%	80-120

\* Analytical results previous to accounting for dilutions. \*\* Reference Check samples are not available for all analyses. \*\* Outside of Quality Control Limits.

\*+ Limits currently not established

292  
40  
52

3A - WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: General Testing Corp. Contract: \_\_\_\_\_

Lab Code: \_\_\_\_\_ Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: \_\_\_\_\_

Matrix Spike - EPA Sample No. : R90/00877 -005

COMPOUND	SPIKE ADDED (ug/l)	SAMPLE CONCENTRATION (ug/l)	MS CONCENT. (ug/l)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	20.2	1 U	20.8	103%	28-167
Trichloroethene	20.8	1 U	22.3	107%	35-146
Benzene	21.6	2 U	17.5	81%	39-150
Toluene	20.8	2 U	17.5	84%	46-148
Chlorobenzene	21.4	2 U	20.1	94%	55-135

COMPOUND	SPIKE ADDED (ug/l)	MSD CONCENT. (ug/l)	MSD % REC #	% RPD #	QC LIMITS RPD	REC.
1,1-Dichloroethene	20.2	20.0	99%	4.0%	30	28-167
Trichloroethene	20.8	21.0	101%	6.3%	30	35-146
Benzene	21.6	18.6	86%	6.0%	30	39-150
Toluene	20.8	19.2	92%	8.9%	30	46-148
Chlorobenzene	21.4	21.5	101%	6.8%	30	55-135

# Columns to be used to flag recovery and RPD values with an asterik

\* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS: \_\_\_\_\_

LABORATORY REPORT

Client:

Mr. Sheldon Nozik  
Wehran Envirotech  
2451 Baseline Road  
Grand Island, New York 14072

Job No: R90/00877

Date: 16 APR., 199

EPA METHOD 601/602	REFERENCE CHECK		ACCEPTANCE LIMITS (%)
	TRUE VALUE	% RECOVERY	
Date Analyzed: 03/29/90			
Chloromethane	19.4	22%	D - 193
Bromomethane	19.4	60%	D - 144
Vinyl Chloride	19.4	120%	28 - 163
Chloroethane	19.4	86%	46 - 137
Methylene Chloride	19.4	94%	25 - 162
Trichlorofluoromethane	19.4	74%	21 - 156
1,1-Dichloroethene	19.4	98%	28 - 167
1,1-Dichloroethane	19.4	102%	47 - 132
Total 1,2-Dichloroethene	19.4	106%	38 - 155
Chloroform	19.4	108%	49 - 133
1,2-Dichloroethane	19.4	90%	51 - 147
1,1,1-Trichloroethane	19.4	109%	41 - 138
Carbon Tetrachloride	19.4	111%	43 - 143
Bromodichloromethane	19.4	104%	42 - 172
1,2-Dichloropropane	19.4	103%	44 - 156
1,3-Dichloropropene-Tran	--	--	22 - 178
Trichloroethene	19.4	121%	35 - 146
1,3-Dichloropropene(Cis)	19.4	85%	22 - 178
Dibromochloromethane	58.2	100%	24 - 191
1,1,2-Trichloroethane	--	--	39 - 136
2-Chloroethylvinyl Ether	--	--	14 - 186
Bromoform	19.4	97%	13 - 159
1,1,2,2-Tetrachloroethane	19.4	115%	8 - 184
Tetrachloroethene	19.4	114%	26 - 162
Chlorobenzene	39.4	112%	38 - 150
1,3-Dichlorobenzene	39.4	104%	7 - 187
1,2-Dichlorobenzene	39.4	82%	0 - 208
1,4-Dichlorobenzene	39.4	112%	42 - 143
Benzene	20.0	86%	39 - 150
Toluene	20.0	91%	46 - 148
Ethylbenzene	20.0	91%	32 - 160
Total Xylene (o,m,p)	60.0	91%	59 - 127

LABORATORY REPORT

Job No: R90/00877

Date: APR. 16 1990

Client:

Mr. Sheldon Nozik  
Wehran Envirotech  
2451 Baseline Road  
Grand Island, New York 14072

Sample(s) Reference

Lancaster Landfill  
Monitoring Wells

Collected

: 03/22/90

P.O. #:

ANALYSIS \* BY GC METHOD 601/602

ANALYTICAL RESULTS - ug/l

Sample:	-020	-021							
Location:	Lab Meth.	Lab Meth.							
	Blank	Blank							
Date Collected:	--	--							
Time Collected:	--	--							
-----									
Date Analyzed:	03/28/90	03/29/90							
Chloromethane	5 U	5 U							
Bromomethane	5 U	5 U							
Vinyl Chloride	2 U	2 U							
Chloroethane	2 U	2 U							
Methylene Chloride	1.16	1 U							
Trichlorofluoromethane	1 U	1 U							
1,1-Dichloroethene	1 U	1 U							
1,1-Dichloroethane	1 U	1 U							
1,2-Dichloroethene(Cis&Trans)	1 U	1 U							
Chloroform	1 U	1 U							
1,2-Dichloroethane	1 U	1 U							
1,1,1-Trichloroethane	1 U	1 U							
Carbon Tetrachloride	1 U	1 U							
Bromodichloromethane	1 U	1 U							
1,2-Dichloropropane	1 U	1 U							
1,3-Dichloropropene (Trans)	2 U	2 U							
Trichloroethene	1 U	1 U							
1,3-Dichloropropene (Cis)	1 U	1 U							
Dibromochloromethane	2 U	2 U							
1,1,2-Trichloroethane	2 U	2 U							
2-Chloroethylvinyl Ether	2 U	2 U							
Bromoform	2 U	2 U							
1,1,2,2-Tetrachloroethane	2 U	2 U							
Tetrachloroethene	1 U	1 U							
Chlorobenzene	2 U	2 U							
1,3-Dichlorobenzene	2 U	2 U							
1,2-Dichlorobenzene	2 U	2 U							
1,4-Dichlorobenzene	2 U	2 U							
Benzene	2 U	2 U							
Toluene	2 U	2 U							
Ethylbenzene	2 U	2 U							
Total Xylene (o,m,p)	2 U	2 U							



A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R90/00877

Date: APR. 16 1990

Client:

Mr. Sheldon Nozik  
 Wehran Envirotech  
 2451 Baseline Road  
 Grand Island, New York 14072

Sample(s) Reference:

Lancaster Landfill  
 Monitoring Wells

Collected : 03/22/90

P.O. #:

ANALYSIS * BY GC METHOD 601/602		ANALYTICAL RESULTS - %					
Sample:	-020	-021					
Location:	Lab Meth.	Lab Meth.					
	Blank	Blank					
Date Collected:	--	--					
Time Collected:	--	--					
<b>SURROGATE STANDARD RECOVERIES</b>							
-----							
% Recovery							
Bromochloromethane (Acceptance Limits: 60-141%)	115%	98%					
2-Bromo-1-chloropropane (Acceptance Limits: 60-132%)	118%	105%					
a,a,a-Trifluorotoluene (Acceptance Limits: 60-134%)	123%	98%					

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.  
 NY ID# in Rochester: 10145  
 NJ ID# in Rochester: 73331  
 NJ ID# in Hackensack: 02317  
 NY ID# in Hackensack: 10801

Laboratory Director

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GTC LABORATORY QUALITY CONTROL REPORT

CUSTOMER: Wehran Envirotech

JOB # : R90/00878

UNITS: mg/l

REPORT TYPE: Job Specific

PARAMETER	SAMPLE	ORIGINAL RESULT	DUPLICATE RESULT	% REL. ERROR	ACCEPT. LIMIT %	AVERAGE RESULT	SPIKE ADDED	PERCENT RECOVERY	ACCEPT. LIMIT %	METHOD BLANK	SPIKE ADDED	PERCENT RECOVERY	ACCEPT. LIMITS %	REFERENCE #	KNOWN PMVAL	PERCENT RECOVERY	ACCEPT. LIMITS %
//////////		* PRECISION				* MATRIX SPIKING				BLANK SPIKES				REFERENCE STANDARD			
pH	-001	6.65	6.63	0.3%	**	6.64	NA			NA				NA			
Spec. Cond.	-001	250	225	10.5%	**	238	NA			NA				NA			
Temperature	-001	9.5	9.5	0.0%	**	9.5	NA			NA				NA			
Alkalinity	-001	510	514	0.8%	10	512	100	V	79-124	2.00 U	50.0	115%	87-121	REF STD	143	106%	90-117
BOD5	-001	4.4	4.4	0.0%	11	4.4	4.0	V	50-150	NA				REF STD	200	103%	70-122
Chloride	-001	463	458	1.1%	10.0	461	250	102%	73-130	1.0 U	25.0	98%	86-120	REF STD	65.0	100%	90-110
COD	-001	18.4	15.3	18.4%	20	16.9	50.0	92%	70-150	5.0 U	50.0	109%	80-147	REF STD	25.0	102%	70-137
Color	-001	>70	>70	NC	**	>70	NA			NA				NA			
Cyanide	-001	0.020 U	0.020 U	NC	15	0.020 U	0.080	90%	50-150	0.020 U	0.080	91%	64-133	REF STD	0.345	112%	66-130
Dis. Oxygen	-001	1.0 U	1.0 U	NC	10	1.0 U	NA			NA				NA			
Hard. Total	-001	1020	1020	0.0%	10.0	1020	500	106%	70-128	2.0 U	20.0	98%	89-116	REF STD	289	98%	76-124
Ammonia	-001	0.056	0.051	9.3%	11	0.054	0.500	97%	67-128	0.050	0.250	103%	83-126	REF STD	1.80	100%	88-107
TKN	-001	0.40 U	0.40 U	NC	30	0.40 U	2.00	114%	50-150	0.20 U	1.00	83%	70-128	REF STD	4.00	103%	81-117
Nitrite	-001	0.010 U	0.010 U	NC	10	0.010 U	0.250	100%	73-132	0.010 U	0.250	104%	87-117	REF STD	0.900	101%	94-109

\* Analytical results previous to accounting for dilutions.    \*\* Reference Check samples are not available for all analyses.    ++ Outside of Quality Control Limits.

\*\*+ No limits Currently Established

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GTC LABORATORY QUALITY CONTROL REPORT

CUSTOMER: Wehran Envirotech

JOB # : R90/00878

UNITS: mg/l

REPORT TYPE: Job Specific

PARAMETER	SAMPLE	ORIGINAL RESULT	DUPLICATE RESULT	% REL. ERROR	ACCEPT. LIMIT %	AVERAGE RESULT	SPIKE ADDED	PERCENT RECOVERY	ACCEPT. LIMIT X	METHOD BLANK	SPIKE ADDED	PERCENT RECOVERY	ACCEPT. LIMITS X	REFERENCE #	KNOWN PMVAL	PERCENT RECOVERY	ACCEPT. LIMITS X
//////////		* PRECISION				* MATRIX SPIKING				BLANK SPIKES				REFERENCE STANDARD			
NO3_NO2	-001	0.050 U	0.050 U	NC	10.0	0.050 U	0.500	92%	76-122	0.050 U	0.500	99%	88-115	REF STD	1.80	99%	90-109
Phenols	-001	0.0050 U	0.0050 U	NC	10.0	0.0050 U	0.025	88%	76-136	0.005 U	0.025	101%	84-129	REF STD	0.04	98%	83-127
Redox	-001	224	218	2.7%	**	221	NA			NA				REF STD	268	108%	**
Dis. Solids	-001	1090	1090	0.0%	10	1090	NA			NA				REF STD	980	99.3%	89-106
Sulfate	-001	66.5	64.4	3.2%	11	65.5	250	85%	64-121	5.00 U	25.0	92%	83-119	REF STD	128	88%	77-120
TOC	-001	3.23	3.41	5.4%	10	3.32	10.0	103%	71-125	1.0 U	10.0	104%	90-120	REF STD	20.0	106%	84-112
Turbidity	-001	38	37	2.6%	**	38	NA			NA				NA			
Aluminum	-003	0.23	0.27	16.0%	25	0.25	0.500	76%	73-143	0.10 U	0.50	100%	70-130	REF STD	0.50	100%	80-120
Antimony	-001	0.010 U	0.010 U	NC	30	0.010 U	0.050	90%	52-145	0.010 U	0.050	91%	70-130	REF STD	0.050	89%	80-120
Arsenic	-001	0.0020 U	0.0020 U	NC	30	0.0020 U	0.010	112%	45-158	0.0020 U	0.010	99%	54-160	REF STD	0.010	99%	64-157
Barium	-003	0.10 U	0.10 U	NC	30	0.10 U	0.500	92%	68-141	0.10 U	0.50	92%	70-125	REF STD	0.50	94%	80-118
Beryllium	-003	0.010 U	0.010 U	NC	30	0.010 U	0.050	97%	74-123	0.010 U	0.050	100%	81-118	REF STD	0.050	99%	84-117
Boron	-001	0.773	0.763	1.4%	25	0.768	0.500	90%	77-123	0.050 U	0.500	117%	75-130	REF STD	0.500	111%	81-120

\* Analytical results previous to accounting for dilutions. \*\* Reference Check samples are not available for all analyses. ++ Outside of Quality Control Limits.

\*+ No limits currently established

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GTC LABORATORY QUALITY CONTROL REPORT

CUSTOMER: Wehran Envirotech

JOB # : R90/00878

UNITS: mg/l

REPORT TYPE: Job Specific

PARAMETER	SAMPLE	ORIGINAL RESULT	DUPLICATE RESULT	% REL. ERROR	ACCEPT. LIMIT %	AVERAGE RESULT	SPIKE ADDED	PERCENT RECOVERY	ACCEPT. LIMIT %	METHOD BLANK	SPIKE ADDED	PERCENT RECOVERY	ACCEPT. LIMITS %	REFERENCE #	KNOWN PMVAL	PERCENT RECOVERY	ACCEPT. LIMITS %
//////////		* PRECISION				* MATRIX SPIKING				BLANK SPIKES				REFERENCE STANDARD			
Cadmium	-001	0.012	0.012	0.0%	30	0.012	0.050	94%	61-135	0.010 U	0.050	104%	70-130	REF STD	0.050	102%	80-120
Calcium	-001	367	337	8.5%	20	352	12.5	V	69-116	0.50 U	2.50	101%	70-130	REF STD	2.50	96%	80-120
Chromium	-001	0.050 U	0.050 U	NC	20	0.050 U	0.250	112%	74-149	0.050 U	0.250	98%	70-130	REF STD	0.250	100%	80-120
Chrom. Hex.	-002	0.010 U	0.010 U	NC	20	0.010 U	0.10	89%	65-126	0.010 U	0.10	105%	70-130	REF STD	0.10	96%	77-123
Copper	-001	0.033	0.030	9.5%	20	0.032	0.100	98%	61-145	0.020 U	0.100	103%	70-130	REF STD	0.100	106%	80-120
Iron	-001	8.57	7.95	7.5%	24	8.26	0.250	V	59-149	0.050 U	0.250	106%	70-130	REF STD	0.250	102%	80-120
Iron Sol.	-004	1.06	1.16	9.0%	24	1.11	0.250	V	59-149	0.050 U	0.250	94%	70-130	REF STD	0.250	100%	80-120
Lead Furn.	-001	0.0050 U	0.0050 U	NC	30	0.0050 U	0.020	138%	50-159	0.0050 U	0.020	112%	78-141	REF STD	0.020	122%	73-143
Magnesium	-001	91.7	91.1	0.7%	12	91.4	6.25	V	63-132	0.250 U	1.25	98%	80-116	REF STD	1.25	100%	90-110
Manganese	-001	0.215	0.216	0.5%	13	0.216	0.050	V	57-144	0.010 U	0.050	110%	70-130	REF STD	0.050	96%	80-120
Mangan. Sol	-004	0.061	0.066	7.9%	13	0.064	0.050	107%	57-144	0.010 U	0.050	110%	70-130	REF STD	0.050	96%	80-120
Mercury	-001	0.00020 U	0.00020 U	NC	20	0.00020U	0.001	79%	64-132	0.00020U	0.001	102%	70-130	REF STD	0.001	109%	70-127
Nickel	-001	0.040 U	0.040 U	NC	30	0.040 U	0.200	125%	60-140	0.040 U	0.200	110%	70-130	REF STD	0.200	106%	80-120

\* Analytical results previous to accounting for dilutions. \*\* Reference Check samples are not available for all analyses. ++ Outside of Quality Control Limits.

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1/90

GTC LABORATORY QUALITY CONTROL REPORT

CUSTOMER: Wehran Envirotech

JOB # : R90/00878

UNITS: mg/l

REPORT TYPE: Job Specific

PARAMETER	SAMPLE	ORIGINAL RESULT	DUPLICATE RESULT	% REL. ERROR	ACCEPT. LIMIT X	AVERAGE RESULT	SPIKE ADDED	PERCENT RECOVERY	ACCEPT. LIMIT X	METHOD BLANK	SPIKE ADDED	PERCENT RECOVERY	ACCEPT. LIMITS X	REFERENCE #	KNOWN PMVAL	PERCENT RECOVERY	ACCEPT. LIMITS X
//////////		* PRECISION				* MATRIX SPIKING				BLANK SPIKES				REFERENCE STANDARD			
Potassium	-001	3.90	3.86	1.0%	20	3.88	6.25	76%	61-135	0.250	1.25	100%	70-130	REF STD	1.25	100%	81-118
Selenium	-001	0.0020 U	0.0020 U	NC	30	0.0020 U	0.025	90%	25-142	0.0020 U	0.025	102%	63-139	REF STD	0.025	91%	67-140
Silver	-001	0.010 U	0.010 U	NC	20	0.010 U	0.050	92%	71-125	0.010 U	0.050	90%	70-130	REF STD	0.050	90%	80-120
Sodium	-001	97.9	98.8	0.9%	20	98.4	0.50	V		NA				NA			
Thallium	-003	0.250 U	0.250 U	NC	30	0.250 U	NA			0.250 U	1.25	101%	79-124	REF STD	1.25	100%	80-120
Zinc	-001	0.028	0.030	6.9%	30	0.029	0.050	94%	60-140	0.010 U	0.050	98%	70-128	REF STD	0.050	102%	80-120

\* Analytical results previous to accounting for dilutions.    \*\* Reference Check samples are not available for all analyses.    \*\* Outside of Quality Control Limits.  
 +\* No limits currently established.

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3A - WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: General Testing Corp. Contract: \_\_\_\_\_

Lab Code: \_\_\_\_\_ Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: \_\_\_\_\_

Matrix Spike - EPA Sample No. : R90/00878 -001

COMPOUND	SPIKE ADDED (ug/l)	SAMPLE CONCENTRATION (ug/l)	MS CONCENT. (ug/l)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	20.2	1 U	17.3	86%	28-167
Trichloroethene	20.8	1 U	18.1	87%	35-146
Benzene	21.6	2 U	15.6	72%	39-150
Toluene	20.8	2 U	15.1	73%	46-148
Chlorobenzene	21.4	2 U	18.3	85%	38-150

COMPOUND	SPIKE ADDED (ug/l)	MSD CONCENT. (ug/l)	MSD % REC #	% RPD #	QC LIMITS RPD	REC.
1,1-Dichloroethene	20.2	17.7	88%	2.3%	30	28-167
Trichloroethene	20.8	18.7	90%	3.4%	30	35-146
Benzene	21.6	15.4	71%	1.4%	30	39-150
Toluene	20.8	14.9	72%	1.2%	30	46-148
Chlorobenzene	21.4	20.1	94%	10%	30	38-150

# Columns to be used to flag recovery and RPD values with an asterik

\* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS: \_\_\_\_\_

LABORATORY REPORT

Job No: R90/00878

Date: MAY 1 1990

Client:

Mr. Sheldon Nozik  
Wehran Envirotech  
2451 Baseline Road  
Grand Island, NY 14072

Sample(s) Reference

Lancaster Landfill

Collected

: 03/22/90

P.O. #:

ANALYSIS \* BY GC METHOD 601/602

ANALYTICAL RESULTS - ug/l

Sample:	-007	-008						
Location:	Lab Meth.	Lab Meth.						
	Blank	Blank						
Date Collected:	--	--						
Time Collected:	--	--						

Date Analyzed:	04/02/90	04/02/90						
Chloromethane	5 U	5 U						
Bromomethane	5 U	5 U						
Vinyl Chloride	2 U	2 U						
Chloroethane	2 U	2 U						
Methylene Chloride	3.03	1 U						
Trichlorofluoromethane	1 U	1 U						
1,1-Dichloroethene	1 U	1 U						
1,1-Dichloroethane	1 U	1 U						
1,2-Dichloroethene(Cis&Trans)	1 U	1 U						
Chloroform	1 U	1 U						
1,2-Dichloroethane	1 U	1 U						
1,1,1-Trichloroethane	1 U	1 U						
Carbon Tetrachloride	1 U	1 U						
Bromodichloromethane	1 U	1 U						
1,2-Dichloropropane	1 U	1 U						
1,3-Dichloropropene (Trans)	2 U	2 U						
Trichloroethene	1 U	1 U						
1,3-Dichloropropene (Cis)	1 U	1 U						
Dibromochloromethane	2 U	2 U						
1,1,2-Trichloroethane	2 U	2 U						
2-Chloroethylvinyl Ether	2 U	2 U						
Bromoform	2 U	2 U						
1,1,2,2-Tetrachloroethane	2 U	2 U						
Tetrachloroethene	1 U	1 U						
Chlorobenzene	2 U	2 U						
1,3-Dichlorobenzene	2 U	2 U						
1,2-Dichlorobenzene	2 U	2 U						
1,4-Dichlorobenzene	2 U	2 U						
Benzene	2 U	2 U						
Toluene	2 U	2 U						
Ethylbenzene	2 U	2 U						
Total Xylene (o,m,p)	2 U	2 U						



A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R90/00878

Date: MAY 1 1990

Client:

Mr. Sheldon Nozik  
 Wehran Envirotech  
 2451 Baseline Road  
 Grand Island, NY 14072

Sample(s) Reference:

Lancaster Landfill

Collected

: 03/22/90

P.O. #:

ANALYSIS * BY GC METHOD 601/602			ANALYTICAL RESULTS - %			
Sample:	-007	-008				
Location:	Lab Meth.	Lab Meth.				
	Blank	Blank				
Date Collected:	--	--				
Time Collected:	--	--				
-----						
SURROGATE STANDARD RECOVERIES						
-----						
% Recovery						
Bromochloromethane	93%	92%				
(Acceptance Limits: 60-141%)						
2-Bromo-1-chloropropane	102%	99%				
(Acceptance Limits: 60-132%)						
a,a,a-Trifluorotoluene	100%	84%				
(Acceptance Limits: 60-134%)						

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145  
 NJ ID# in Rochester: 73331  
 NJ ID# in Hackensack: 02317  
 NY ID# in Hackensack: 10801

Laboratory Director

35 of 264

SECTION C

ANALYTICAL CHRONOLOGY

Presented in this section is a Laboratory Chronology listing the dates of all preparations and analyses performed on the samples covered in this report. Holding times, (the maximum times in which to analyze a sample) are derived from the referenced methodology.

Chronology Notes:  
-----

LABORATORY REPORT

Job No. R90/00877

Date APR. 16 1990

Client:

Wehran Envirotech

Sample(s) Reference

Lancaster Landfill  
Monitoring Wells

Date Received: 03/22/90

Date Sample Taken: 03/22/90

LABORATORY CHRONICLE  
DATE ANALYZED

Sample: Location:	-001 W-3	-002 W-5	-003 W-F	-004 W-B	-005 W-A	-006 W-B	-007 W-D	-008 W-E	-009 W-C
pH	03/22/90	03/22/90	03/22/90	03/22/90	03/22/90	03/22/90	03/22/90	03/22/90	03/22/90
Spec. Cond. (umhos/cm)	03/22/90	03/22/90	03/22/90	03/22/90	03/22/90	03/22/90	03/22/90	03/22/90	03/22/90
Temperature °C	03/22/90	03/22/90	03/22/90	03/22/90	03/22/90	03/22/90	03/22/90	03/22/90	03/22/90
Alkalinity, Total	03/26/90	03/26/90	03/26/90	03/26/90	03/26/90	03/26/90	03/26/90	03/26/90	03/26/90
Chloride	03/29/90	03/29/90	03/29/90	03/29/90	03/29/90	03/29/90	03/29/90	03/29/90	03/29/90
Nitrogen, Ammonia	03/27/90	03/27/90	03/27/90	03/27/90	03/27/90	03/27/90	03/27/90	03/27/90	03/27/90
Nitrogen, Nitrate	Calc								
Nitrogen, Nitrite	03/23/90	03/23/90	03/23/90	03/23/90	03/23/90	03/23/90	03/23/90	03/23/90	03/23/90
Nitrogen, Nitrate/Nitrite	03/28/90	03/28/90	03/28/90	03/28/90	03/28/90	03/28/90	03/28/90	03/28/90	03/28/90
TOC Duplicate	04/09/90	04/09/90	04/09/90	04/09/90	03/26/90	04/09/90	04/09/90	04/09/90	04/09/90
Iron, Total	04/02/90	04/02/90	04/02/90	04/02/90	04/02/90	04/02/90	04/02/90	04/02/90	04/02/90
Iron, Soluble									

LABORATORY REPORT

Job No. R90/00877

Date APR. 16 1990

Client:

Wehran Envirotech

Sample(s) Reference

Lancaster Landfill  
Monitoring Wells

Date Received: 03/22/90

Date Sample Taken: 03/22/90

LABORATORY CHRONICLE  
DATE ANALYZED

Sample: Location:	-010 W-3	-011 W-5	-012 W-F	-013 W-8	-014 W-A	-015 W-B	-016 W-D	-017 W-E	-018 W-C
pH									
Spec. Cond. (umhos/cm)									
Temperature °C									
Alkalinity, Total									
Chloride									
Nitrogen, Ammonia									
Nitrogen, Nitrate									
Nitrogen, Nitrite									
Nitrogen, Nitrate/Nitrite									
TOC Duplicate									
Iron, Total									
Iron, Soluble	04/02/90	04/02/90	04/02/90	04/02/90	04/02/90	04/02/90	04/02/90	04/02/90	04/02/90







LABORATORY REPORT

Job No. R90/00878

Date MAY 1 1990

Client:

Wehran Envirotech

Sample(s) Reference

Lancaster Landfill  
New Wells/FB

Date Received: 03/22/90

Date Sample Taken: 03/22/90

LABORATORY CHRONICLE  
DATE ANALYZED

Sample: Location:	-001	-002	-003	-004	-005	-006			
	W-G	W-H	Field Blank	W-G	W-H	Field Blank			
pH	03/22/90	03/22/90							
Spec. Cond. (umhos/cm)	03/22/90	03/22/90							
Temperature °C	03/22/90	03/22/90							
Alkalinity, Total	03/26/90	03/26/90	03/26/90						
BOD5	03/23/90	03/23/90	03/23/90						
Chloride	03/29/90	03/29/90	03/29/90						
COD, Dichromate	04/06/90	04/05/90	04/05/90						
Color, Apparent (APHA)			03/23/90						
Color, True (APHA)	03/23/90	03/23/90							
Cyanide, Total	03/27/90	03/27/90	03/27/90						
Dissolved Oxygen	03/23/90	03/23/90	03/23/90						
Hardness, Total	03/29/90	03/29/90	03/29/90						

LABORATORY REPORT

Job No. R90/00878

Date MAY 1 1990

Client:

Wehran Envirotech

Sample(s) Reference

Lancaster Landfill  
New Wells/FB

Date Received: 03/22/90

Date Sample Taken: 03/22/90

Overwriting existing file

LABORATORY CHRONICLE  
DATE ANALYZED

Sample:	-001	-002	-003	-004	-005	-006			
Location:	W-G	W-H	Field Blank	W-G	W-H	Field Blank			
Nitrogen, Ammonia	03/27/90	03/27/90	03/27/90						
Nitrogen, Kjeldahl	04/04/90	03/27/90	04/04/90						
Nitrogen, Nitrate	Calc	Calc	Calc						
Nitrogen, Nitrite	03/23/90	03/23/90	03/23/90						
Nitrogen, Nitrate/Nitrite	03/28/90	03/28/90	03/28/90						
Phenol, Total	03/29/90	03/29/90	03/29/90						
Redox Potential, mv	04/16/90	04/16/90	04/16/90						
Solids, Dissolved @180 C	03/26/90	03/26/90	03/26/90						
Sulfate	03/27/90	03/27/90	03/27/90						
TOC Duplicate	03/27/90	04/09/90	04/09/90						
Turbidity, ntu	03/23/90	03/23/90	03/23/90						
Aluminum	04/02/90	04/02/90	04/02/90						

LABORATORY REPORT

Job No. R90/00878

Date MAY 1 1990

Client:

Wehran Envirotech

Sample(s) Reference

Lancaster Landfill  
New Wells/FB

Date Received: 03/22/90

Date Sample Taken: 03/22/90

LABORATORY CHRONICLE  
DATE ANALYZED

Sample: Location:	-001	-002	-003	-004	-005	-006			
	W-G	W-H	Field Blank	W-G	W-H	Field Blank			
Antimony	04/19/90	04/19/90	04/19/90						
Arsenic	04/07/90	04/07/90	04/07/90						
Barium	04/02/90	04/02/90	04/02/90						
Beryllium, Total	04/16/90	04/16/90	04/16/90						
Boron, Total	03/30/90	03/30/90	03/30/90						
Cadmium, Total	03/27/90	03/27/90	03/27/90						
Calcium, Total	03/27/90	03/27/90	03/27/90						
Chromium, Total	03/29/90	03/29/90	03/29/90						
Chromium, Hex	03/23/90	03/23/90	03/23/90						
Copper, Total	03/28/90	03/28/90	03/28/90						
Iron, Total	04/02/90	04/02/90	04/02/90						
Iron, Soluble				04/02/90	04/02/90	04/02/90			

LABORATORY REPORT

Job No. R90/00878

Date MAY 1 1990

Client:

Wehran Envirotech

Sample(s) Reference

Lancaster Landfill  
New Wells/FB

Date Received: 03/22/90

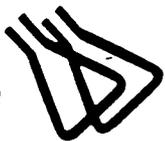
Date Sample Taken: 03/22/90

LABORATORY CHRONICLE  
DATE ANALYZED

Sample:	-001	-002	-003	-004	-005	-006			
Location:	W-G	W-H	Field Blank	W-G	W-H	Field Blank			
Lead, Furnace	03/31/90	03/31/90	03/31/90						
Magnesium, Total	03/27/90	03/27/90	03/27/90						
Manganese, Total	03/29/90	03/29/90	03/29/90						
Manganese, Soluble				03/29/90	03/29/90	03/29/90			
Mercury, Total	03/28/90	03/28/90	03/28/90						
Nickel, Total	03/28/90	03/28/90	03/28/90						
Potassium, Total	03/27/90	03/27/90	03/27/90						
Selenium, Total	03/31/90	03/31/90	03/28/90						
Silver, Total	03/30/90	03/30/90	03/30/90						
Sodium, Total	03/27/90	03/27/90	03/27/90						
Thallium, Total	04/16/90	04/16/90	04/16/90						
Zinc, Total	04/02/90	04/02/90	04/02/90						







GTC REPORT# R90/877, 878, 879

SECTION D  
DOCUMENTATION

Presented in this section is all support documentation requested.

Documentation Provided:  
-----

- ( x ) Chain of Custody Forms
- ( ) Analytical Request Forms
- ( ) Shipping Receipts
- ( ) Laboratory Receipt Log
- ( x ) Other: Field Forms

# GENERAL TESTING CORPORATION/CHAIN-OF-CUSTODY RECORD

710 Exchange Street    85 Trinity Place  
 Rochester, NY 14608    Hackensack, NJ 07601

GTC Job No. 1190/877  
 Client Project No. \_\_\_\_\_

**Sample Origination & Shipping Information**

Collection Site LANCASTER LANDFILL  
 Address GUNNVILLE RD LANCASTER NY  
Street City State  
 Collector R.E. PICKEL RE Pickel (Zip)  
Print Signature

Bottles Prepared by GTC Rec'd by \_\_\_\_\_  
 Bottles Shipped to Client via GTC Seal/Shipping # \_\_\_\_\_  
 Samples Shipped via GTC Seal/Shipping # \_\_\_\_\_

Sample(s) Relinquished by:	Received by:	Date/Time
1. Sign for _____	1. Sign for _____	/ /
2. Sign for _____	2. Sign for _____	/ /
3. Sign for _____	3. Sign for _____	/ /

Sample(s) Received in Laboratory by J. J. [Signature] 3/22/90 @ 18:11

Client I.D.# Lab#	Sample Location Date/Time	*	Analyte or Analyte Group(s) Required (see below for additional)	Sample Prep				Bottle Set(s) (see below)	Rec at: G
				Preserved Y N	Filtered Y N				
1 1 + 12 <sup>TH</sup>	W-3 3/22/90 9:20	W	See Analytical Request	/	/	Soil metals	1, 2, 4, 5, 6		
2 2 + 12 <sup>TH</sup>	W-5 3/22/90 10:30	W	"	/	/		1, 2, 4, 5, 6		
3 3 + 12	W-F 3/22/90 11:15	W	"	/	/		1, 2, 4, 5, 6		
4 4 + 12	W-8 3/22/90 11:40	W	"	/	/		1, 2, 4, 5, 6		
5 5 + 12 QC	W-A 3/22/90 12:10	W	"	/	/		QC		

Use Bottle No. for indicating type bottles used in each bottle set and fill in box with # of bottles used for each type.

Bottle No.	1	2	3	4	5	6	7	8	9	10	11
Bottle Type	40 ml Vial	Pint Glass	Qt. Glass	4 oz. Plastic	8 oz. Plastic	16 oz. Plastic	Qt. Pl.	Gal. Pl.	Steril. Pl.		
# of each	2	1		1	2	2					

Additional Analytes \_\_\_\_\_

Shaded area for Lab use only; bottom copy for client; maximum of 5 samples per page.  
 \* Source Codes: Monitoring Well (W), Soil (S), Treatment Plant (T), Drinking Water (D), Leachate (L), Hazardous Waste (H)  
 River or Stream (R), Pond (P), Industrial Discharge (I), \_\_\_\_\_ (X), \_\_\_\_\_ (Y).

**GENERAL TESTING CORPORATION/CHAIN-OF-CUSTODY RECORD**

710 Exchange Street    85 Trinity Place    435 Lawrence Bell Drive    GTC Job No. 1290/877  
 Rochester, NY 14608    Hackensack, NJ 07601    Amherst, NY 14221-7077    Client Project No. \_\_\_\_\_

Sample Origination & Shipping Information

Collection Site LANCASTER LANDFILL  
 Address GUNNVILLE RD LANCASTER NY  
Street City State Zip  
 Collector R.E. PICKEL R.E. Pickel  
Print Signature

Bottles Prepared by GTC    Rec'd by \_\_\_\_\_  
 Bottles Shipped to Client via GTC    Seal/Shipping # \_\_\_\_\_  
 Samples Shipped via GTC    Seal/Shipping # \_\_\_\_\_

Sample(s) Relinquished by:	Received by:	Date/Time
1. Sign _____	1. Sign _____	1 / 1
for _____	for _____	
2. Sign _____	2. Sign _____	1 / 1
for _____	for _____	
3. Sign _____	3. Sign _____	1 / 1
for _____	for _____	

Sample(s) Received in Laboratory by W. A. ... 3/22/90 @ 10:11

Client I.D.#	Sample Location	★	Analyte or Analyte Group(s) Required (see below for additional)	Sample Prep		Bottle Set(s) (see below)
				Preserved Y N	Filtered Y N	
1	<del>Lot 16 Field BLANK</del> 3/22/90 12:05	<del>W</del> X	<del>See Analytical Request</del>	/	/	<del>1, 2, 4, 5, 6</del>
2	<del>8+18</del> W-B 3/22/90 12:45	W	"	/	/	1, 2, 4, 5, 6
3	<del>8+18</del> W-D 3/22/90 13:10	W	"	/	/	1, 2, 4, 5, 6
4	<del>8+18</del> W-E 3/22/90 14:30	W	"	/	/	1, 2, 4, 5, 6
5	<del>10+20</del> W-E 3/22/90 2:45	W	"	/	/	1, 2, 4, 5, 6

Use Bottle No. for indicating type bottles used in each bottle set and fill in box with # of bottles used for each type.

Bottle No.	1	2	3	4	5	6	7	8	9	10	11
Bottle Type	40 ml Vial	Pint Glass	Qt. Glass	4 oz. Plastic	8 oz. Plastic	16 oz. Plastic	Qt. Pl.	Gal. Pl.	Steril. Pl.		
# of each	2	1		1	2	2					

Additional Analytes \_\_\_\_\_

Shaded area for Lab use only; bottom copy for client; maximum of 5 samples per page.

★ Source Codes: Monitoring Well (W), Soil (S), Treatment Plant (T), Drinking Water (D), Leachate (L), Hazardous Waste (H), River or Stream (R), Pond (P), Industrial Discharge (I), \_\_\_\_\_ (X), D.F. FINSE

# GENERAL TESTING CORPORATION/CHAIN-OF-CUSTODY RECORD

710 Exchange Street    85 Trinity Place    435 Lawrence Bell Drive    GTC Job No. 1096/87-  
 Rochester, NY 14608    Hackensack, NJ 07601    Amherst, NY 14221-7077    Client Project No. \_\_\_\_\_

**Sample Origination & Shipping Information**

Collection Site LANCASTER LANDFILL  
 Address \_\_\_\_\_  
 Collector R. E. PICKEL    Street \_\_\_\_\_    City \_\_\_\_\_    State \_\_\_\_\_    Zip \_\_\_\_\_  
 Print \_\_\_\_\_    Signature \_\_\_\_\_

Bottles Prepared by GTC    Rec'd by \_\_\_\_\_  
 Bottles Shipped to Client via GTC    Seal/Shipping # \_\_\_\_\_  
 Samples Shipped via GTC    Seal/Shipping # \_\_\_\_\_

Sample(s) Relinquished by:		Received by:		Date/Time
1. Sign	for	1. Sign	for	/ /
2. Sign	for	2. Sign	for	/ /
3. Sign	for	3. Sign	for	/ /

Sample(s) Received in Laboratory by [Signature]    3/22/90 @ 18:1

Client I.D.#	Sample Location	Date/Time	*	Analyte or Analyte Group(s) Required (see below for additional)	Sample Prep				Bottle Set(s) (see below)
					Preserved	Filtered	Y	N	
1	TRIP BLANK	3/22/90 9:00	X	601/602	/	/			1
2		/ / :							
3		/ / :							
4		/ / :							
5		/ / :							

Use Bottle No. for indicating type bottles used in each bottle set and fill in box with # of bottles used for each type.

Bottle No.	1	2	3	4	5	6	7	8	9	10	11
Bottle Type	40 ml Vial	Pint Glass	Qt. Glass	4 oz. Plastic	8 oz. Plastic	16 oz. Plastic	Qt. Pl.	Gal. Pl.	Steril. Pl.		
# of each	2										

Additional Analytes \_\_\_\_\_

Shaded area for Lab use only; bottom copy for client; maximum of 5 samples per page.

\* Source Codes: Monitoring Well (W), Soil (S), Treatment Plant (T), Drinking Water (D), Leachate (L), Hazardous Waste (H), River or Stream (R), Pond (P), Industrial Discharge (I), \_\_\_\_\_ (X) \_\_\_\_\_





**GENERAL TESTING CORPORATION  
GROUNDWATER MONITORING FIELD FORM**

Site Location LANCASTER LANDFILL Job Number 1290/877  
 Well I.D. W-3 Lab Number 1-12

SAMPLE TO SPLIT WITH DEC.

**PURGE INFORMATION**

Purge Method PVC Bailer 3"

Well Depth (ft) 29.64  
 Static Water Level (ft) 21.78  
 Depth of Water Column (gal/ft)x 7.86  
 Well Constant (gal/ft)x .16 3" PVC  
 Volume standing in well .48 gallons  $1.44 = 3 \text{ vols}$   
 Start of Purge: Date 3/21/90 Time 13:15  
 Purge Observations Clear at first, then brownish w/ heavy sedi's  
 Total Volume Purged 4 gallons # of Volume Casings Purged 10

**SAMPLING INFORMATION**

Sample Method STAINLESS STEEL BAIER

Sample Date: 3/22/90 Time: 9:20 Sample Depth: 21.42 ft.  
 Sample Appearance: Slightly yellowish tint, Good recharge  
NO ODOUR

**FIELD MEASUREMENTS**

Meter Number	Parameter	Unit Stnd.	Replicates	
			1	2
<u>7.00 / 6.99</u>	<u>pH</u>	<u>std</u>	<u>7.31</u>	<u>7.08</u>
<u>4.00 / 4.20</u>	<u>Spec. Cond.</u>	<u>umhos/cm</u>	<u>375</u>	<u>375</u>
<u>10.00 / 10.06</u>	<u>Temp</u>	<u>°Celsius</u>	<u>8.5</u>	<u>8.5</u>
<u>1413</u>	<u>Spec. Grav.</u>		<u>1.000</u>	<u>1.000</u>

Field Filtered Y/N    Date/Time               

Meter Calibration: Date/Time 3/22/90 9:30

FIELD OBSERVATIONS: Weather 55° Sunny, Wind 15MPH,  
Well in good condition, Conductivity Meter  
not working properly, reading 450, 500,

I certify that sampling procedures were in accordance with all applicable EPA, state and corporate protocols.

Sampler (Print): R. E. PICKEL

Date: 3, 22, 90 Signature RE Pickel 54 of 264

**GENERAL TESTING CORPORATION  
GROUNDWATER MONITORING FIELD FORM**

Site Location LANCASTER LANDFILL Job Number R90/877  
Well I.D. W-5 Lab Number 2-11

**PURGE INFORMATION**

Purge Method 3 1/2" PVC BAILER

Well Depth (ft) 65.45  
Static Water Level (ft) 31.04  
Depth of Water Column (gal/ft)x 34.41  
Well Constant (gal/ft)x .65

Volume standing in well 22.36 gallons 67.08 = 3 vols.

Start of Purge: Date 3, 21, 90 Time 11:15

Purge Observations Clear to turbid for 1 vol. then Clear, Good Recharge

Total Volume Purged \_\_\_\_\_ gallons # of Volume Casings Purged \_\_\_\_\_

**SAMPLING INFORMATION**

Sample Method STAINLESS STEEL BAILER

Sample Date: 3, 22, 90 Time: 10:30 Sample Depth: 31.04 ft.

Sample Appearance: Clear

**FIELD MEASUREMENTS**

Meter Number	Parameter	Unit Stnd.	Replicates	
			1	2
	pH	std	7.25	7.25
	Spec. Cond.	umhos/cm	570	515
	Temp	°Celsius	9.0	9.0
	Spec. Grav.		1.000	1.000

Field Filtered  N Date/Time 3, 22, 90 11:45

Meter Calibration: Date/Time 3, 22, 90 9:30

**FIELD OBSERVATIONS:** Weather 55° Sunny, Windy 15 MPH.  
Well in Good shape,

I certify that sampling procedures were in accordance with all applicable EPA, state and corporate protocols.

Sampler (Print): R.E. PICKEL

Date: 3, 22, 90 Signature R.E. Pickel 55 of 264

**GENERAL TESTING CORPORATION  
GROUNDWATER MONITORING FIELD FORM**

Site Location LANCASTER LANDFILL Job Number 290/877  
Well I.D. WF Lab Number 3+13

**PURGE INFORMATION**

Purge Method 1 1/2" PVC BAILER

Well Depth (ft) 29.08  
Static Water Level (ft) 11.68  
Depth of Water Column (gal/ft)x 17.40  
Well Constant (gal/ft)x .16  
Volume standing in well 2.78 gallons 8.35 = 3 vols,  
Start of Purge: Date 3, 21, 90 Time 13:28  
Purge Observations Clear all thru purge, NO ODCOR, Good Recharge  
Total Volume Purged 9 gallons # of Volume Casings Purged 3+

**SAMPLING INFORMATION**

Sample Method STAINLESS STEEL BAILER

Sample Date: 3, 22, 90 Time: 11:15 Sample Depth: 11.83 ft.  
Sample Appearance: Clear

**FIELD MEASUREMENTS**

Meter Number	Parameter	Unit Std.	Replicates	
			1	2
	pH	std	6.05	6.05
	Spec. Cond.	umhos/cm	825	820
	Temp	°Celsius	7.5	7.5
	Spec. Grav.		1.000	1.000

Field Filtered  Y/N Date/Time 3, 22, 90 12:50

Meter Calibration: Date/Time 3, 22, 90 9:30

**FIELD OBSERVATIONS:** Weather 55° Sunny, Wind 15 M.P.H.  
Well in good condition,

I certify that sampling procedures were in accordance with all applicable EPA, state and corporate protocols.

Sampler (Print): R.E. PICKEL

Date: 3, 22, 90 Signature RE Pickel 56 of 264

**GENERAL TESTING CORPORATION  
GROUNDWATER MONITORING FIELD FORM**

Site Location LANCASTER LANDFILL Job Number 190/877  
Well I.D. W-8 Lab Number 4-14

**PURGE INFORMATION**

Purge Method N/A  
CASCADING WELL

Well Depth (ft) \_\_\_\_\_  
Static Water Level (ft) \_\_\_\_\_  
Depth of Water Column (gal/ft)x N/A  
Well Constant (gal/ft)x \_\_\_\_\_  
Volume standing in well \_\_\_\_\_ gallons  
Start of Purge: Date 3/22/90 Time \_\_\_\_\_  
Purge Observations \_\_\_\_\_  
Total Volume Purged \_\_\_\_\_ gallons # of Volume Casings Purged \_\_\_\_\_

**SAMPLING INFORMATION**

Sample Method STAINLESS STEEL BAUER  
Sample Date: 3,22,90 Time: 11:40 Sample Depth: \_\_\_\_\_ ft.  
Sample Appearance: Clear

**FIELD MEASUREMENTS**

Meter Number	Parameter	Unit Stnd.	Replicates	
			1	2
	pH	std	7.25	7.25
	Spec. Cond.	umhos/cm	655	650
	Temp	°Celsius	13.5	13.5
	Spec. Grav.		1.000	1.000

Field Filtered Y/N Date/Time 3,22,90 13:15  
Meter Calibration: Date/Time 3,22,90 17:45

**FIELD OBSERVATIONS:** Weather \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

I certify that sampling procedures were in accordance with all applicable EPA, state and corporate protocols.  
Sampler (Print): R.F. PICKEL

Date: 3,22,90 Signature R.F. Pickel 57 of 264

**GENERAL TESTING CORPORATION  
GROUNDWATER MONITORING FIELD FORM**

Site Location LANCASTER LANDFILL Job Number R90/877

Well I.D. W-A Lab Number 5+15, QC

**PURGE INFORMATION** Purge Method 1 1/2" PVC Bailer

Well Depth (ft) 27.21  
~~28.79~~

Static Water Level (ft) 7.86

Depth of Water Column (gal/ft)x 19.35

Well Constant (gal/ft)x 16

Volume standing in well 3.00 gallons = 9.29 = 3 vols

Start of Purge: Date 3/21/90 Time 14:38 Good Recharge

Purge Observations Clear at first then to turbid, Clear after 1 1/2 vol.

Total Volume Purged 10 gallons # of Volume Casings Purged 3+

**SAMPLING INFORMATION** Sample Method STAINLESS STEEL BAILER

Sample Date: 3/22/90 Time: 12:10 Sample Depth: 8.29 ft.

Sample Appearance: Clear

**FIELD MEASUREMENTS**

Meter Number	Parameter	Unit Stnd.	Replicates	
			1	2
	pH	stnd	7.58	7.59
	Spec. Cond.	umhos/cm	315	325
	Temp	°Celsius	9.0	9.0
	Spec. Grav.		1.000	1.000

Field Filtered  Date/Time 3/22/90 13:40

Meter Calibration: Date/Time 3/22/90 11:45

**FIELD OBSERVATIONS:** Weather 55° Sunny, Wind 15 mph

Well in good condition, Need lock and gate at  
Gunnville Rd. entrance to access Rd.

I certify that sampling procedures were in accordance with all applicable EPA, state and corporate protocols.

Sampler (Print): R.E. PICKEL

Date: 3/22/90 Signature R.E. Pickel ST-4 268

**GENERAL TESTING CORPORATION  
GROUNDWATER MONITORING FIELD FORM**

Site Location LANCASTER LANDFILL Job Number 1290/877  
Well I.D. W-B Lab Number 6+16

**PURGE INFORMATION**

Purge Method 1 1/2" PVC BAULER

Well Depth (ft) 33.84  
Static Water Level (ft) 12.45  
Depth of Water Column (gal/ft)x 21.39  
Well Constant (gal/ft)x 16  
Volume standing in well 3.42 gallons

10.27 GALS. = 3 vols.

Start of Purge: Date 3, 21, 90 Time 15:12

Purge Observations Clear thru Purge, Good Recharge, NO ODOR,

Total Volume Purged 11.0 gallons # of Volume Casings Purged 3+

**SAMPLING INFORMATION**

Sample Method STAINLESS STEEL BAULER

Sample Date: 3, 22, 90 Time: 12:45 Sample Depth: 13.12 ft.

Sample Appearance: Clear,

**FIELD MEASUREMENTS**

Meter Number	Parameter	Unit Stnd.	Replicates	
			1	2
	pH	std	7.75	7.75
	Spec. Cond.	umhos/cm	1,425	1,450
	Temp	°Celsius	9.5	9.5
	Spec. Grav.		1.000	1.000

Field Filtered /N Date/Time 3, 22, 90 13:25

Meter Calibration: Date/Time 3, 22, 90 12:10

FIELD OBSERVATIONS: Weather 55° sunny, Wind 15 m.p.h.  
Well in Good Condition.

I certify that sampling procedures were in accordance with all applicable EPA, state and corporate protocols.

Sampler (Print): R.E. PICKEL

Date: 3, 22, 90 Signature RE Pickel 57 of 264

**GENERAL TESTING CORPORATION  
GROUNDWATER MONITORING FIELD FORM**

Site Location LANCASTER W/F Job Number R90/877  
 Well I.D. W-D Lab Number 7-18

**PURGE INFORMATION**

Purge Method PVC BAILER

Well Depth (ft) 34.00  
 Static Water Level (ft) 16.92  
 Depth of Water Column (gal/ft) x 17.08  
 Well Constant (gal/ft) x .66

Volume standing in well 2.73 gallons x 3 vols. = 8.19 GALS

Start of Purge: Date 03, 22, 90 Time 12:25

Purge Observations ORANGE IN COLOR GOOD RECHARGE

Total Volume Purged 9 gallons # of Volume Casings Purged 3

**SAMPLING INFORMATION**

Sample Method STAINLESS STEEL BAILER

Sample Date: 3, 22, 90 Time: 13:10 Sample Depth: 17.08 ft.

Sample Appearance: Clear

**FIELD MEASUREMENTS**

Meter Number	Parameter	Unit Strid.	Replicates	
			1	2
	pH	std	7.24	7.22
	Spec. Cond.	umhos/cm	1,875	1,850
	Temp	°Celsius	9.0	9.0
	Spec. Grav.		1.001	1.001

Field Filtered  Y/N Date/Time 3, 22, 90 14:15

Meter Calibration: Date/Time 3, 22, 90 13:15

FIELD OBSERVATIONS: Weather 9/8, 53°, STRONG SOUTH WIND

L. Kellogg, C. Thompson, R. Pickel

I certify that sampling procedures were in accordance with all applicable EPA, state and corporate protocols.

Sampler (Print): R.E. PICKEL

Date: 3, 22, 90 Signature R.E. Pickel 60 of 264

**GENERAL TESTING CORPORATION  
GROUNDWATER MONITORING FIELD FORM**

Site Location LANCASTER LANDFILL Job Number 1290/877  
Well I.D. U-E Lab Number 8 + 18

**PURGE INFORMATION**

Purge Method PVC BAILER

Well Depth (ft) 30.24

Static Water Level (ft) 24.01

Depth of Water Column (gal/ft)x 628

Well Constant (gal/ft)x .16

Volume standing in well 1.00 gallons X 3 Vols. = 3 GALS

Start of Purge: Date 03/22/90 Time 12:39

Purge Observations CLEAR GOOD RECHARGE

Total Volume Purged 3 gallons # of Volume Casings Purged 3

**SAMPLING INFORMATION**

Sample Method STAINLESS STEEL BAILER

Sample Date: 3/22/90 Time: 2 Sample Depth: 24.73 ft.

Sample Appearance: Clear, 14 30

**FIELD MEASUREMENTS**

Meter Number	Parameter	Unit Std.	Replicates	
			1	2
	pH	std	7.78	7.77
	Spec. Cond.	umhos/cm	16.45	16.50
	Temp	°Celsius	9.0	9.0
	Spec. Grav.		.999	.999

Field Filtered  Date/Time 3/22/90 15:05

Meter Calibration: Date/Time 3/22/90 14:25

FIELD OBSERVATIONS: Weather 9/c, 53°, STRONG SOUTH WIND

L. Kellogg, C. Thompson, R. Pickel

I certify that sampling procedures were in accordance with all applicable EPA, state and corporate protocols.

Sampler (Print): R.E. PICKEL

Date: 3/22/90 Signature R.E. Pickel 61 of 264

**GENERAL TESTING CORPORATION  
GROUNDWATER MONITORING FIELD FORM**

Site Location LANCASTER LANDFILL Job Number 190/877  
Well I.D. W-C Lab Number 10-20 9-19

**PURGE INFORMATION**

Purge Method 1 1/2" PVC BAILER

Well Depth (ft) 49.58  
Static Water Level (ft) 47.41  
Depth of Water Column (gal/ft)x 2.17  
Well Constant (gal/ft)x .16  
Volume standing in well .35 gallons 1.04 = 3 vols  
Start of Purge: Date 3, 21, 90 Time 15:40 NO RECHARGE  
Purge Observations one clear bailer, and then black with seds and pebble.  
Total Volume Purged .35 gallons # of Volume Casings Purged 1 vol to Dry

**SAMPLING INFORMATION**

Sample Method STAINLESS STEEL BAILER

Sample Date: 3, 22, 90 Time: 14:45 Sample Depth: 47.43 ft.  
Sample Appearance: Blackish tint, some seds,

**FIELD MEASUREMENTS**

Meter Number	Parameter	Unit Std.	Replicates	
			1	2
	pH	std	7.35	7.37
	Spec. Cond.	umhos/cm	1210	1210
	Temp	°Celsius	9.5	9.5
	Spec. Grav.		1.000	1.000

Field Filtered  Y/N Date/Time 3, 22, 90 15:00  
Meter Calibration: Date/Time 3, 22, 90 14:30

**FIELD OBSERVATIONS:** Weather 55° Sunny, Wind 15 M.P.H.  
Well in Good Condition, may need to clear Bottom

I certify that sampling procedures were in accordance with all applicable EPA, state and corporate protocols.

Sampler (Print): RE. PICKEL

Date: 3, 22, 90 Signature RE Pickel 62 of 264

**GENERAL TESTING CORPORATION  
GROUNDWATER MONITORING FIELD FORM**

Site Location LANCASTER LANDFILL Job Number 1290/878  
 Well I.D. W-6 QC Lab Number 1+4, QC

**PURGE INFORMATION** Purge Method S.S. BAUER  
 Well Depth (ft) 59.62  
 Static Water Level (ft) 47.98  
 Depth of Water Column (gal/ft)x 11.64  
 Well Constant (gal/ft)x .16  
 Volume standing in well 1.86 gallons  $\times 3.14 / 5 = 5.58$  cals.  
 Start of Purge: Date 03, 22, 90 Time 12:55  
 Purge Observations clear mod. turb.  
 Total Volume Purged 6 gallons # of Volume Casings Purged 3

**SAMPLING INFORMATION** Sample Method STAINLESS STEEL BAUER  
 Sample Date: 3/22/90 Time: 13:40 Sample Depth: 48.15 ft.  
 Sample Appearance: GREYISH TINT some sus. solids

**FIELD MEASUREMENTS**

Meter Number	Parameter	Unit Stnd.	Replicates	
			1	2
	pH	stnd	6.65	6.63
	Spec. Cond.	umhos/cm	250	225
	Temp	°Celsius	9.5	9.5
	Spec. Grav.		1.000	1.000

Field Filtered  Y  N Date/Time 3, 22, 90 14:25  
 Meter Calibration: Date/Time 3, 22, 90 13:50

**FIELD OBSERVATIONS:** Weather 53°, STRONG SOUTH WIND  
CONCRETE BASE CRACKED, .13 RISER TO CASING, 2.35 FT. RISER HEIGHT.  
L. KULLIG, C. THOMPSON R. PICKEL

I certify that sampling procedures were in accordance with all applicable EPA, state and corporate protocols.  
 Sampler (Print): R.E. PICKEL  
 Date: 3, 22, 90 Signature R.E. Pickel 63 of 264

**GENERAL TESTING CORPORATION  
GROUNDWATER MONITORING FIELD FORM**

Site Location LANCASTER LANDFILL Job Number R90/878

Well I.D. W-4 Lab Number 2+5

**PURGE INFORMATION**

Purge Method S.S. BAILER

Well Depth (ft) 78.43

Static Water Level (ft) 48.75

Depth of Water Column (gal/ft)x 29.68

Well Constant (gal/ft)x .16

Volume standing in well 4.74 gallons  $\times 3 \text{ vols.} = 14.25 \text{ GALS}$

Start of Purge: Date 03, 22, 90 Time 13:55

Purge Observations BROWN GOOD RECHARGE

Total Volume Purged 15 gallons # of Volume Casings Purged 3

**SAMPLING INFORMATION**

Sample Method S.S. BAILER

Sample Date: 03, 22, 90 Time: 14:30 Sample Depth: 49.21 ft.

Sample Appearance: BROWN IN COLOR

**FIELD MEASUREMENTS**

Meter Number	Parameter	Unit Stnd.	Replicates	
			1	2
	pH	stnd	8.22	8.20
	Spec. Cond.	umhos/cm	175	175
	Temp.	°Celsius	11°	11.0
	Spec. Grav.		1.000	1.000

Field Filtered  Y/N Date/Time 3, 22, 90 14:55

Meter Calibration: Date/Time 3, 22, 90 14:20

**FIELD OBSERVATIONS:** Weather o/c 53° STRONG SOUTH WIND  
SANDY BASE, CASING IS 2.40', 1" RISER TO CASING

C. THOMPSON, L. KELLOGG

Sampling procedures were in accordance with all applicable EPA, state and corporate protocols.  
C. THOMPSON

Date: 03, 22, 90 Signature C. Thompson 64 of 264

mm



# Wehran EnviroTech

February 12, 1990

**Wehran-New York, Inc.**  
2451 Baseline Road  
Grand Island, New York 14072  
Tel. 716-773-1801  
Fax 716-773-1828

Mr. Robert Mitrey  
New York State Department  
of Environmental Conservation  
600 Delaware Avenue  
Buffalo, New York 14202

Re: Lancaster Sanitary Landfill  
Groundwater Monitoring  
December 1989 Quarterly Report  
WE Project No. 09463 ST

Dear Mr. Mitrey:

Enclosed are the analytical results, field data sheets and chain of custody forms for groundwater samples collected at the Lancaster Sanitary Landfill on December 19, 1989. Sampling during this period included three on-site wells (W-3, W-6 and W-8) and six wells (W-A through W-F) along the New York State Thruway, southwest and essentially downgradient of the landfill. All samples were collected by and delivered to the GTC laboratory in Rochester, New York on the same day.

Upgradient well W-6A data indicated concentrations which were within a reasonable range of the previous data for this well. The only exceptions to this were an elevated total iron concentration of 12.3 mg/l as compared to the September 7, 1989 results of 3.81 mg/l and a decrease of soluble iron from 0.561 mg/l (9/17/89) to 0.172 mg/l (12/19/89). No organic compounds were detected above the minimum detection limits (MDL) for this well.

Monitoring Well W-3 located downgradient of the facility exhibited some notable variations in both inorganic and organic concentrations. Chloride concentration as reported in the June 20, 1989 sampling results when compared to the December 19, 1989 results indicated an increase from 55.3 mg/l, to 324 mg/l respectively. This value still falls within the range of previously reported values for chloride concentration. The data exhibit slight variations in organic concentrations, however all values fall within the range of historic data for W-3. The most notable change in organics was the increase of Toluene from the September 7, 1989 sampling event and this most recent sampling event. The September 1989 data indicate less than 2 ug/l of Toluene as compared to the December 1989 concentration of 8.8 ug/l. This increase can be considered rather insignificant when

compared to the historical high concentration of 75 ug/l recorded from the October 1986 sampling event.

Monitoring Well W-8 also located downgradient exhibited slight increases in Chlorides (111 mg/l) and TOC (6.89 mg/l) this period when compared to last quarter's results. In addition, decreases in total iron (5.26 mg/l) and total manganese (9.21 mg/l) were also recorded. All of these concentrations were well within the historical data range. TCE was detected at a concentration of 3.0 ug/l demonstrating little change from the previously detected concentrations.

The remaining wells located along the Thruway and downgradient of the site showed no major changes in parameter concentrations relative to previous monitoring well data for these wells. Monitoring Well W-A had slight increases in chlorides (321 mg/l) and TOC (3.02 mg/l). This most recently reported concentration of chlorides at W-A is to date the highest recorded value and is potentially a result of road salting. No organic compound concentrations were detected above the MDL. Monitoring Well W-B exhibited increases in both Ammonia Nitrogen (0.071 mg/l) and Nitrate Nitrogen (1.42 mg/l) for this period when compared to last quarter's results. The Ammonia Nitrogen value falls within the historic date range for W-B however, the Nitrate Nitrogen value is the highest concentration reported to date. Methylene Chloride was the only organic compound detected in W-B above the MDL (5.5 ug/l). This is however a common laboratory contaminant especially at the reported concentration and is therefore not considered (at this low level) to be of any significance. Monitoring well W-C exhibited notable increases from the last quarter sampling in TOC (19.6 mg/l), total iron (19.1) and soluble iron (10.7 mg/l). Due to an insufficient volume of sample, water from W-C was not analyzed for alkalinity or chlorides. All other values fall within the wells historical data ranges. No organic compound concentrations were reported above the MDL. Monitoring Well W-D exhibited a significant change in total iron concentration only. This concentration of 72.8 mg/l is the highest value of total iron reported to date. As reported in the field form, the sample was rust colored and turbid. No organic compound concentrations were reported above the MDL.

The remaining downgradient Wells W-E and W-F exhibited relatively little change in groundwater chemistry. The only notable change in either of these wells was an increase of total iron in Well W-F (5.84 mg/l). This value still falls well within the historical total iron concentration values for W-F. No organic compound concentrations were reported above the MDL for wells, W-E or W-F.

Mr. R. Mitrey  
Page 3  
February 12, 1990

As indicated by the data in previous reports, it appears the changes in parameter concentrations noted primarily in Monitoring Well W-3 and to some degree Monitoring Well W-8 are somewhat irregular and no pattern to changes in concentrations has been established. However, most other parameters monitored during this period were within the historical ranges reported for the wells.

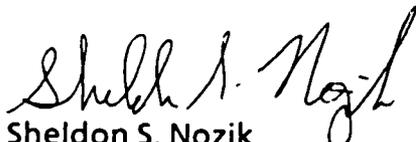
If you have any questions please call.

Very truly yours,

WEHRAN-NEW YORK, INC.



Glenn O. Combes  
Staff Hydrogeologist



Sheldon S. Nozik  
Senior Hydrogeologist

GOC/SSN/asb  
cc: M. McIntosh - NYSDEC  
T. Welsh - Gunville Energy

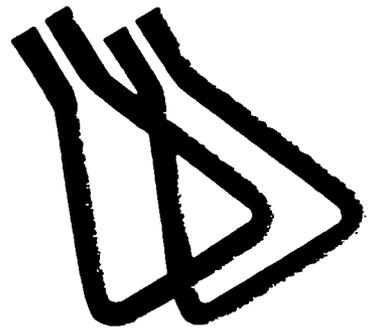
SUMMARY OF GROUNDWATER ELEVATIONS  
 PROJECT NAME: LANCASTER SANITARY LANDFILL

PROJECT NO.: 09463 ST

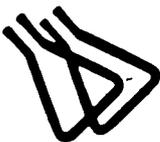
DATE: PRE PURGE 12/18/89 PRE SAMPLE 12/19/89

WELL NO.	T.O.C. ELEV.	GROUND ELEV.	WELL DEPTH (ft)	PRE-PURGE DEPTH (ft)	ELEV.	PRE-SAMPLE DEPTH (ft)	ELEV.
-3	738.84	734.85	28.0	25.22	713.62	27.22	711.62
W-5	764.48	762.06					
-6A	755.91	752.91	96.0	81.47	674.44	81.62	674.29
W-8	732.61	729.11	68.0	DRY	DRY	25.09	707.52
W-A	725.78	723.98	27.0	11.53	714.25	11.52	714.26
W-B	732.18	730.78	32.1	15.08	717.10	14.96	717.22
W-C	732.51	730.61	49.6	47.61	684.90	48.51	684.00
W-D	736.75	735.22	34.00	19.46	717.29	19.59	717.16
W-E	755.84	754.34	30.00	26.13	729.71	26.21	729.63
W-F	729.30	728.05	29.00	13.64	715.66	13.31	715.99

**General  
Testing  
Corporation**



General  
Testing  
Corporation



A Full Service Environmental Laboratory

RECEIVED JAN 31 1990

January 29, 1990

Mr. Sheldon Nozik  
Wehran Envirotech  
2451 Baseline Road  
Grand Island, NY 14072

Re: Lancaster Landfill - Fourth Quarter Monitoring

Dear Mr. Nozik:

On December 19, 1989, General Testing sampled the nine quarterly monitoring wells at Lancaster Landfill. As you will note, all analytical data appears in Section A, with it's corresponding quality control in Section B. All data has been reviewed prior to report submission. The analytical chronology is shown in Section C. All pertinent documentation to this analysis appears in Section D.

Should any questions or comments arise, please contact me directly at (716) 454-3760.

Thank you for allowing General Testing to provide these services.

Sincerely,

GENERAL TESTING CORP.

Tracey G. Nichols  
Client Representative

Enc.

aa

## DATA AND QUALITY CONTROL QUALIFIERS

U - Indicates compound was analyzed but was not observed at a quantifiable concentration.

J - Indicates an estimated value

J Qualifiers (used in conjunction with J and/or QC page or chronology)

S - Surrogate recoveries outside of control limits

M - Matrix spike and/or matrix spike duplicate outside control limits

St - Surrogate recoveries outside of control limits, analysis repeated, same results obtained, matrix interference suspected

Mt - same as M

ORGANIC PARAMETERS: Matrix interference suspected, Organic reference standard was acceptable.

r - Laboratory replicates outside of laboratory advisory limits

INORGANIC PARAMETERS: Matrix interference suspected, Repeat analysis still unacceptable

t - Matrix interference suspected

Mr - INORGANICS PARAMETERS: Matrix interference suspected, repeat analysis not conducted due to holding time limitations

h - Holding time exceeded for analysis

B - Indicates that the analyte was found in the associated laboratory or field blank

B Qualifiers (used in conjunction with B)

l - Contamination in lab or method blank

e - Contamination in equipment blank

t - Contamination in trip blank

f - Contamination in field filtration blank

x - Contamination in two or more types of blanks (i.e. Lab or Method, Trip, Equipment, or Field Filtration Blank)

d - Results multiplied by dilution factor

## MISCELLANEOUS QC AND DATA QUALIFIERS

ND - Not Detectable

NS - No Sample

NA - Not Analyzed

\*+ - No limits currently established

\*\* - See Attached Data

I - Insufficient sample to re-analyze

D - Surrogate standard diluted out

R - Sample re-analyzed outside of holding time

UP - Unable to perform analysis due to sample matrix

V - Spiked recovery cannot be determined, sample value >4 times spike concentration

++ - Outside Laboratory acceptance limits (Blank Spikes, Ref. Spikes)

RC - Results confirmed via repeat analysis

NC - Not Calculable

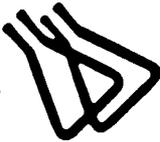
LE - Lab Error: No data available

t - Surrogate Matrix Interference

GTC REPORT# R89/4876

REPORT INDEX

SECTION A: Analytical Data  
SECTION B: Quality Control  
SECTION C: Chronology  
SECTION D: Documentation



SECTION A

ANALYTICAL DATA

Presented in this section is analytical data for the parameters requested. The following references concerning units and analytical methodology apply to the data herein.

Units:

Inorganics - mg/l

Organics - ug/l

Analytical Methodology Obtained From:

- 
- ( ) Federal Register, 40 CFR Part 136, Guidelines Establishing Test Procedures for the analyses of Pollutants under the Clean Water Act, 10/26/84.
  - ( x ) SW-846, Test Methods for Evaluating Solid Waste, 3rd Edition, 9/86.
  - ( ) Other

**LABORATORY REPORT**

Job No: R89/04876

Date: JAN. 24 1990

**Client:**

Mr. Sheldon Nozik  
Wehran Envirotech  
2451 Baseline Road  
Grand Island, NY 14072

**Sample(s) Reference:**

Lancaster Landfill

Collected

: 12/19/89

P.O. #:

**ANALYTICAL UNITS - mg/l**

Sample:	-001	-002	-003	-004	-005	-006	-007	-008
Location:	W-F	W-3	W-8	W-6A	W-A	W-B	W-C	W-D
Date Collected:	12/19/89	12/19/89	12/19/89	12/19/89	12/19/89	12/19/89	12/19/89	12/19/89
Time Collected:	09:45	10:02	10:35	11:53	13:40	14:02	14:28	15:00
pH	6.75	6.34	6.55	6.83	6.92	6.89	6.93	6.91
Spec. Cond. (umhos/cm)	1080	1840	730	850	1110	1600	1820	2010
Alkalinity, Total	337	904	275	305	214	396		355
Chloride	278	324	111	182	321	500		920
Nitrogen, Ammonia	0.055 JMt	23.9 JMt	0.050 UJM	0.068 JMt	0.050 UJM	0.071 JMt	0.259 JMt	0.121
Nitrogen, Nitrate	0.050 U	0.050 U	2.20	0.050 U	0.050 U	1.42	0.050 U	0.050 U
Nitrogen, Nitrite	0.010 UJh	0.086 Jh	0.014 Jh					
Nitrogen, Nitrate/Nitrite	0.050 U	0.050 U	2.20	0.050 U	0.050 U	1.42	0.050 U	0.050 U
Total Organic Carbons	6.88	19.6	6.89	3.46	3.02	4.22	19.6	6.10
Iron, Total	5.84	32.9	5.26	12.3	1.02	1.60	19.1	72.8
Iron, Soluble								
Lead, Furnace		0.0050 U						
Manganese, Total	0.165	1.50	9.21	0.060	0.015	2.19	0.794	0.248
Manganese, Soluble								
Scan 601/602	**	**	**	**	**	**	**	**

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145

NJ ID# in Rochester: 73331

NJ ID# in Hackensack: 02317

NY ID# in Hackensack: 10801

\*\*See attached data

*Michael K. Perry*

Laboratory Director

**LABORATORY REPORT**

Job No: R89/04876

Date: JAN. 24 1990

**Client:**

Mr. Sheldon Nozik  
Wehran Envirotech  
2451 Baseline Road  
Grand Island, NY 14072

**Sample(s) Reference:**

Lancaster Landfill

Collected

: 12/19/89

P.O. #:

ANALYSIS * BY GC METHOD 601/602				ANALYTICAL RESULTS - ug/l				
Sample:	-001	-002	-003	-004	-005	-006	-007	-008
Location:	W-F	W-3	W-8	W-6A	W-A	W-B	W-C	W-D
Date Collected:	12/19/89	12/19/89	12/19/89	12/19/89	12/19/89	12/19/89	12/19/89	12/19/89
Time Collected:	09:45	10:02	10:35	11:53	13:40	14:02	14:28	15:00
Date Analyzed:	12/28/89	12/29/89	12/29/89	12/29/89	12/29/89	12/28/89	12/29/89	12/29/89
Vinyl Chloride	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Methylene Chloride	1 U	1.3 Bl	1 U	1 U	1 U	5.5 Bl	1 U	1 U
Trichloroethene	1 U	1 U	3.0	1 U	1 U	1 U	1 U	1 U
Benzene	2 U	14.7	2 U	2 U	2 U	2 U	2 U	2 U
Toluene	2 U	8.8	2 U	2 U	2 U	2 U	2 U	2 U
Ethylbenzene	2 U	9.8	2 U	2 U	2 U	2 U	2 U	2 U
SURROGATE STANDARD RECOVERIES								
% Recovery								
Bromochloromethane (Acceptance Limits: 60-141%)	106%	102%	105%	103%	97%	100%	95%	100%
2-Bromo-1-chloropropane (Acceptance Limits: 60-132%)	101%	105%	109%	93%	93%	108%	95%	99%
a,a,a-Trifluorotoluene (Acceptance Limits: 60-134%)	105%	95%	99%	96%	94%	101%	96%	90%

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145

NJ ID# in Rochester: 73331

NJ ID# in Hackensack: 02317

NY ID# in Hackensack: 10801

*Michael K Perry*

Laboratory Director

**LABORATORY REPORT**

Job No: R89/04876

Date: JAN. 24 1990

**Client:**

Mr. Sheldon Nozik  
Wehran Envirotech  
2451 Baseline Road  
Grand Island, NY 14072

**Sample(s) Reference:**

Lancaster Landfill

**Collected**

: 12/19/89

P.O. #:

**ANALYTICAL UNITS - mg/l**

Sample:	-009	-010	-011	-012	-013	-014	-015	-016
Location:	W-E	Field	Trip	W-F	W-3	W-8	W-6A	W-A
Date Collected:	12/19/89	12/19/89	12/19/89	12/19/89	12/19/89	12/19/89	12/19/89	12/19/89
Time Collected:	15:13	14:50	09:30	09:45	10:02	10:35	11:53	13:40
pH	6.89	8.21						
Spec. Cond. (umhos/cm)	360	7						
Alkalinity, Total	275	2.0 U						
Chloride	7.75	1.0 U						
Nitrogen, Ammonia	0.050 U	0.528						
Nitrogen, Nitrate	0.688	0.050 U						
Nitrogen, Nitrite	0.010 UJh	0.010 UJh						
Nitrogen, Nitrate/Nitrite	0.688	0.050 U						
Total Organic Carbons	1.98	1.00 U						
Iron, Total	1.39	0.087						
Iron, Soluble				0.050 U	0.080	0.119	0.172	0.106
Lead, Furnace	0.0050 U							
Manganese, Total	0.084	0.010 U						
Manganese, Soluble				0.101	1.45	0.043	0.049	0.013
Scan 601/602	**	**						

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145

NJ ID# in Rochester: 73331

NJ ID# in Hackensack: 02317

NY ID# in Hackensack: 10801

\*\*See attached data

*Michael K. Perry*

Laboratory Director

Job No: R89/04876

Date: JAN. 24 1990

**Client:**

Mr. Sheldon Nozik  
 Wehran Envirotech  
 2451 Baseline Road  
 Grand Island, NY 14072

**Sample(s) Reference:**

Lancaster Landfill

Collected

: 12/19/89

P.O. #:

ANALYSIS * BY GC METHOD 601/602				ANALYTICAL RESULTS - ug/l				
Sample:	-009	-010	-011	-012	-013	-014	-015	-016
Location:	W-E	Field	Trip	W-F	W-3	W-8	W-6A	W-A
Date Collected:	12/19/89	12/19/89	12/19/89	12/19/89	12/19/89	12/19/89	12/19/89	12/19/89
Time Collected:	15:13	14:50	09:30	09:45	10:02	10:35	11:53	13:40
Date Analyzed:	12/29/89	12/29/89	12/28/89					
Vinyl Chloride	2 U	2 U	2 U					
Methylene Chloride	1 U	1 U	1 U					
Trichloroethene	1 U	1 U	1 U					
Benzene	2 U	2 U	2 U					
Toluene	2 U	2 U	2 U					
Ethylbenzene	2 U	2 U	2 U					
SURROGATE STANDARD RECOVERIES								
-----								
% Recovery								
Bromochloromethane (Acceptance Limits: 60-141%)	101%	102%	105%					
2-Bromo-1-chloropropane (Acceptance Limits: 60-132%)	93%	91%	99%					
a,a,a-Trifluorotoluene (Acceptance Limits: 60-134%)	92%	85%	99%					

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145  
 NJ ID# in Rochester: 73331  
 NJ ID# in Hackensack: 02317  
 NY ID# in Hackensack: 10801

*Michael K Perry*  
 Laboratory Director

**LABORATORY REPORT**

Job No: R89/04876

Date: JAN. 24 1990

**Client:**

Mr. Sheldon Nozik  
Wehran Envirotech  
2451 Baseline Road  
Grand Island, NY 14072

**Sample(s) Reference:**

Lancaster Landfill

Collected

: 12/19/89

P.O. #:

**ANALYTICAL UNITS - mg/l**

Sample:	-017	-018	-019	-020	-021		
Location:	W-B	W-C	W-D	W-E	Field		
Date Collected:	12/19/89	12/19/89	12/19/89	12/19/89	12/19/89	Blank	
Time Collected:	14:02	14:28	15:00	15:13	14:50		
pH							
Spec. Cond. (umhos/cm)							
Alkalinity, Total Chloride							
Nitrogen, Ammonia							
Nitrogen, Nitrate							
Nitrogen, Nitrite							
Nitrogen, Nitrate/Nitrite							
Total Organic Carbons							
Iron, Total							
Iron, Soluble	0.078 Jr	10.7	0.427	0.050 U	0.050 U		
Lead, Furnace							
Manganese, Total							
Manganese, Soluble	0.010 U	0.010	0.156	0.010 U	0.010 U		
Scan 8010/8020							

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

- NY ID# in Rochester: 10145
- NJ ID# in Rochester: 73331
- NJ ID# in Hackensack: 02317
- NY ID# in Hackensack: 10801

*Michael K. Perry*

Laboratory Director



# Wehran EnviroTech

AMC

November 6, 1989

Wehran-New York, Inc.  
2451 Baseline Road  
Grand Island, New York 14072  
Tel: 716-773-1801  
Fax: 716-773-1828

Mr. Robert Mitrey  
New York State Department of  
Environmental Conservation  
600 Delaware Avenue  
Buffalo, NY 14202

RE Lancaster Sanitary Landfill  
Groundwater Monitoring  
September Semi-annual Report  
WE Project No. 09463 ST

Dear Mr. Mitrey:

Transmitted under the cover of this letter are the analytical results, supporting field data, and the chain of custody forms for samples collected at the above-referenced site on September 7, 1989. Also included is the tabulated groundwater elevation data.

Sampling during this quarter was performed for three of the on-site wells (W-3, W-5, and W-6A) and six wells located along the New York State Thruway to the southwest and essentially downgradient of the landfill (W-A through W-F). Monitoring well W-8 (normally sampled) was dry this sampling round. Purging and sampling were conducted by General Testing Corporation (GTC) personnel. At the completion of the field sampling, all samples were delivered to the GTC laboratory in Rochester, New York. The current analytical results were compared to previously submitted analyses; a discussion of the findings is provided below.

Upgradient well W-5 exhibited concentrations within the historical range for this well. A slight increase in the total iron concentration was noted this round compared to the last sampling (3/30/89). The concentrations of the parameters (including organics) monitored for this well have been relatively consistent during all sampling rounds.

Upgradient well W-6A exhibited similar concentrations of the indicator parameters as those seen in the last sampling round for this well (6/20/89). Only a minor increase in the total iron concentration was noted. No organic parameters were detected above the minimum detection limit (MDL) for this monitoring point.

Mr. R. Mitrey  
Page 2  
November 6, 1989

As reported in the field sampling report (attached) W-3 provided only minuscule recharge hence an insufficient sample volume was obtained from the well for the analysis of alkalinity, chloride, nitrate nitrogen, and soluble metal concentrations. A slight increase in the TOC and ammonia concentrations were noted when data was compared to last quarter's results. The total iron concentration also exhibited an increase this round. Although five of the six organic parameters monitored this round were detected above the MDL, the concentrations were actually lower than the concentrations noted from the March 1989 sampling round.

The remaining wells (W-A through W-F) located along the NYS Thruway and downgradient of the landfill consistently exhibited no apparent changes in parameter concentrations relative to historical data. The total iron concentration was below detection limits in monitoring well W-B; and the concentration of soluble iron remained at 0.05 mg/l which is consistent with past results. Monitoring wells W-C and W-D showed small increases and/or decreases in parameter concentrations although they remained within the historical ranges for these wells. W-E, an overburden monitoring well located south of the NYS Thruway, exhibited generally minor changes in parameter concentrations with lead concentrations undetectable this period. Significant parameter changes were again not noted in W-F in this quarter.

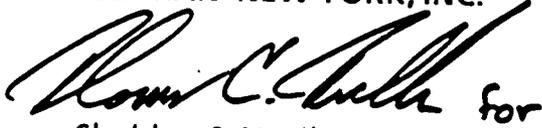
As exhibited consistently in the quarterly reports submitted for the site, the relative changes in concentrations of the parameters monitored at the well locations discussed above, appear to be cyclical in nature. The only well exhibiting major fluctuations in parameter concentrations is monitoring well W-3. No organic parameters were detected above the MDL in any other well monitored at the facility during the sampling period.

Regarding the comments and requests made by Mary McIntosh in her September 15, 1989 letter, a review of the groundwater elevation data at the landfill is currently underway. We anticipate submitting the results of this review by November 30, 1989. Additionally, the added organic parameters (ethyl benzene, methylene chloride, toluene and vinyl chloride) will be reported each quarter for monitoring well W-3. The annual monitoring conducted in March will also include a full volatile organics scan utilizing EPA methods 601 and 602.

Mr. R. Mitrey  
Page 3  
November 6, 1989

Should you have any questions or require further information, please do not  
hesitate to call.

Very truly yours,  
WEHRAN-NEW YORK, INC.

 for

Sheldon S. Nozik  
Staff Hydrogeologist

SSN/jikp  
cc: T. Welsh, Gunnville Energy  
M. McIntosh, NYSDEC

app. 

SUMMARY OF GROUNDWATER ELEVATIONS

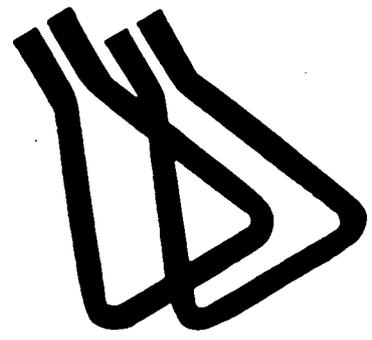
PROJECT NAME: LANCASTER SANITARY LANDFILL

PROJECT NO.: 09463 ST

DATE: PRE PURGE 09/06/89 PRE SAMPLE 09/07/89

WELL NO.	F.O.C. ELEV.	GROUND ELEV.	WELL DEPTH (ft)	PRE-PURGE DEPTH (ft)	ELEV.	PRE-SAMPLE DEPTH (ft)	ELEV.
W-3	738.84	734.85	27.3	27.50	711.34	27.60	711.24
W-5	764.48	762.06	66.2	35.32	729.16	37.88	726.60
W-6A	755.91	752.91	92.2	75.85	680.06	81.98	673.93
W-8	732.61	729.11	68.0	DRY	DRY	DRY	DRY
W-A	725.78	723.98	26.8	12.98	712.80	13.18	712.60
W-B	732.18	730.78	34.4	17.11	715.07	17.65	714.53
W-C	732.51	730.61	49.4	47.73	684.78	47.98	684.53
W-D	736.75	735.22	33.70	21.15	715.60	21.75	715.00
W-E	755.84	754.34	30.00	25.52	730.32	25.95	729.89
W-F	729.30	728.05	31.80	13.28	716.02	13.30	716.00

**General  
Testing  
Corporation**



general  
testing g t c  
corporation

water and wastewater testing specialists

710 Exchange Street  
Rochester, NY 14608  
(716) 454-3760

85 Trinity Place  
Hackensack, NJ 07601  
(201) 488-5242

October 11, 1989

Mr. Sheldon Nozik  
Wehran New York, Inc.  
2451 Baseline Road  
Grand Island, NY 14072

Re: Lancaster Landfill Quarterly Monitoring

Dear Mr. Nozik:

Enclosed please find the analytical results from the quarterly monitoring at Lancaster Landfill. As you will note, there are a few results missing from Well W-3, this is due to low volume recharge in this well. All analyses possible were conducted on this well.

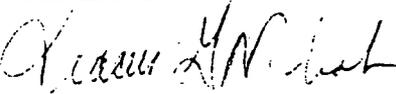
All analytical data appears in Section A with its corresponding quality control in Section B. Sections C and D contain the chronology and field documentation respectively.

All samples were taken on September 7, 1989. If you should have any questions or comments on this analysis, please contact me at 454-3760.

Thank you for allowing General Testing to provide these services.

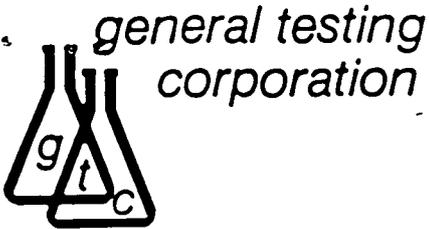
Sincerely,

GENERAL TESTING CORP.

  
Tracey G. Nichols  
Client Representative

Enc.

aa



DATA AND QUALITY CONTROL QUALIFIERS

U - Indicates compound was analyzed but was not observed at a quantifiable concentration.

J - Indicates an estimated value due to failure of QA/QC requirements

J Qualifiers (used in conjunction with J eng/gr QC page or chronology)

S - Surrogate recoveries outside of control limits

M - Matrix spike and/or matrix spike duplicate outside control limits

St - Surrogate recoveries outside of control limits, analysis repeated, same results obtained, matrix interference suspected

Mt - same as M

ORGANIC PARAMETERS: Matrix interference suspected, Organic reference standard was acceptable.

r - Laboratory replicates outside of laboratory advisory limits

INORGANIC PARAMETERS: Matrix interference suspected, Repeat analysis still unacceptable

t - Matrix interference suspected

Mr - INORGANICS PARAMETERS: Matrix interference suspected, repeat analysis not conducted due to holding time limitations

h - Holding time exceeded for analysis

B - Indicates that the analyte was found in the associated laboratory or field blank

B Qualifiers (used in conjunction with B)

l - Contamination in lab or method blank

e - Contamination in equipment blank

t - Contamination in trip blank

f - Contamination in field filtration blank

x - Contamination in two or more types of blanks (i.e. Lab or Method, Trip, Equipment, or Field Filtration Blank)

MISCELLANEOUS QC AND DATA QUALIFIERS

ND - Not Detectable

NS - No Sample

NA - Not Analyzed

\*\* - No limits currently established

\*\* - See Attached Data

I - Insufficient sample to re-analyze

D - Surrogate standard diluted out/ Matrix Interference

R - Sample re-analyzed outside of holding time

UP - Unable to perform analysis due to sample matrix

V - Spiked recovery cannot be determined, sample value >4 times spike concentration

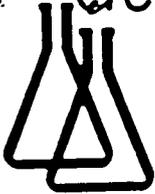
++ - Outside Laboratory acceptance limits (Blank Spikes, Ref. Spikes)

RC - Results confirmed via repeat analysis

NC - Not Calculable

LE - Lab Error: No data available

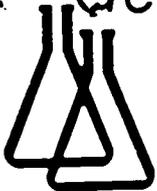
> - Indicates Greater Than



GTC REPORT# R89/3392, 3393

REPORT INDEX  
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SECTION A: Analytical Data  
SECTION B: Quality Control  
SECTION C: Chronology  
SECTION D: Documentation



SECTION A

Presented in this section is analytical data for the parameters requested. The following references concerning units and analytical methodology apply to the data provided herein.

Units:

- Inorganics - mg/l
- Organics - ug/l

Analytical Methodology Obtained From:  
-----

- ( ) Federal Register, 40 CFR Part 136, Guidelines Establishing Test Procedures for the analyses of Pollutants under the Clean Water Act, 10/26/84.
- ( x ) SW-846, Test Methods for Evaluating Solid Waste, 3rd Edition, 9/86.
- ( ) Other

**LABORATORY REPORT**

Job No: R89/03392

Date: OCT. 5 1989

**Client:**

Mr. Sheldon Nozik  
Wehran, New York Inc.  
2451 Baseline Road  
Grand Island, New York 14072

**Sample(s) Reference:**

Lancaster Landfill

Received

: 09/07/89

P.O. #:

**ANALYTICAL UNITS - mg/l**

Sample:	-001	-002	-003	-004	-005	-006	-007	-008
Location:	W-8	W-F	W-3	W-5	W-6A	W-A	W-B	W-C
Date Collected:	09/07/89	09/07/89	09/07/89	09/07/89	09/07/89	09/07/89	09/07/89	09/07/89
Time Collected:	--	09:30	09:45	10:10	10:35	11:30	11:55	12:10

pH	No Sample -	6.89	6.42	7.09	7.17	7.17	6.77	7.13
Spec. Cond. (umhos/cm)	Well Dry	1150	2470	570	840	950	3500	2510
Alkalinity, Total		397	IS	281	294	237	458	747
Chloride		148	IS	6.26	115	167	900	241
Nitrogen, Ammonia		0.060	33.0	0.058	0.053	0.064	0.050 U	1.10
Nitrogen, Nitrate		0.045	IS	0.174	0.050 U	0.050 U	0.883	0.476
Nitrogen, Nitrite		0.013	IS	0.010 U	0.010 U	0.010 U	0.010 U	0.036
Nitrogen, Nitrate/Nitrite		0.058	0.050 U	0.174	0.050 U	0.050 U	0.883	0.512
Total Organic Carbons		6.15	35.0	1.00 U	2.55	2.12	3.18	10.1
Iron, Total		0.866	69.0	0.832	3.81	1.81	0.050 U	5.48
Iron, Soluble								
Lead, Furnace								
Manganese, Total		0.170	2.04	0.041	0.054	0.014	0.076	0.334
Manganese, Soluble								
Scan 8010/8020		**	**	**	**	**	**	**

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145

NJ ID# in Rochester: 73331

NJ ID# in Hackensack: 02317

NY ID# in Hackensack: 10801

\*\*See attached data

IS - Insufficient sample to analyze

*Michael A. Perry*

Laboratory Director

**LABORATORY REPORT**

Job No: R89/03392

Date: OCT. 10 1989

Client:

Mr. Sheldon Nozik  
 Wehran, New York Inc.  
 2451 Baseline Road  
 Grand Island, New York 14072

Sample(s) Reference:

Lancaster Landfill

Received

: 09/07/89

P.O. #:

**ANALYTICAL UNITS - mg/l**

Sample:	-009	-010	-011	-012	-013	-014	-015	-016
Location:	W-D	W-E	W-7	B-240	Field	W-8	W-F	W-3
					Blank			
Date Collected:	09/07/89	09/07/89	09/07/89	09/07/89	09/07/89	09/07/89	09/07/89	09/07/89
Time Collected:	12:30	12:45	--	--	13:00	--	09:30	09:45
pH	6.87	7.47	No Sample -	No Sample -	7.07	No Sample -		No Sample -
Spec. Cond. (umhos/cm)	4120	530	Dry Well	Dry Well	3.1	Dry Well		Dry Well
Alkalinity, Total	432	250			2.0 U			
Chloride	1074	7.28			1.0 U			
Nitrogen, Ammonia	0.050 U	0.050 U			0.050 U			
Nitrogen, Nitrate	0.169	0.587			0.050 U			
Nitrogen, Nitrite	0.010 U	0.010 U			0.010 U			
Nitrogen, Nitrate/Nitrite	0.169	0.587			0.050 U			
Total Organic Carbons	2.65	1.21			1.00 U			
Iron, Total	2.83	1.90			0.050 U			
Iron, Soluble							0.218	
Lead, Furnace		0.0050 U						
Manganese, Total	0.327	0.070			0.010 U			
Manganese, Soluble							0.191	
Scan 8010/8020								

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145  
 NJ ID# in Rochester: 73331  
 NJ ID# in Hackensack: 02317  
 NY ID# in Hackensack: 10801

\*\*See attached data

*Michael K Perry*  
 Laboratory Director

LABORATORY REPORT

Job No: R89/03392

Date: OCT. 5 1989

Client:

Mr. Sheldon Nozik  
Wehran, New York Inc.  
2451 Baseline Road  
Grand Island, New York 14072

Sample(s) Reference:

Lancaster Landfill

Received

: 09/07/89

P.O. #:

ANALYTICAL UNITS - mg/l

Sample:	-017	-018	-019	-020	-021	-022	-023	-024
Location:	W-5	W-6A	W-A	W-B	W-C	W-D	W-E	W-7
Date Collected:	09/07/89	09/07/89	09/07/89	09/07/89	09/07/89	09/07/89	09/07/89	09/07/89
Time Collected:	10:10	10:35	11:30	11:55	12:10	12:30	12:45	--
pH								No Sample - Dry Well
Spec. Cond. (umhos/cm)								
Alkalinity, Total								
Chloride								
Nitrogen, Ammonia								
Nitrogen, Nitrate								
Nitrogen, Nitrite								
Nitrogen, Nitrate/Nitrite								
Total Organic Carbons								
Iron, Total								
Iron, Soluble	0.081	0.561	0.092	0.050 U	1.37	0.050 U	0.050 U	
Lead, Furnace								
Manganese, Total								
Manganese, Soluble	0.044	0.051	0.010 U	0.010 U	0.326	0.328	0.010 U	
Scan 8010/8020								

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145

NJ ID# in Rochester: 73331

NJ ID# in Hackensack: 02317

NY ID# in Hackensack: 10801

*Michael K Perry*

Laboratory Director

90 of 264

**LABORATORY REPORT**

Job No: R89/03392

Date: OCT. 5 1989

Client:

Mr. Sheldon Nozik  
Wehran, New York Inc.  
2451 Baseline Road  
Grand Island, New York 14072

Sample(s) Reference:

Lancaster Landfill

Received

: 09/07/89

P.O. #:

**ANALYTICAL UNITS - mg/l**

Sample:	-025	-026					
Location:	B-240	Field					
		Blank					
Date Collected:	09/07/89	09/07/89					
Time Collected:	--	13:00					

pH	No Sample -						
Spec. Cond. (umhos/cm)	Dry Well						
Alkalinity, Total							
Chloride							
Nitrogen, Ammonia							
Nitrogen, Nitrate							
Nitrogen, Nitrite							
Nitrogen, Nitrate/Nitrite							
Total Organic Carbons							
Iron, Total							
Iron, Soluble		0.050 U					
Lead, Furnace							
Manganese, Total							
Manganese, Soluble		0.010 U					
Scan 8010/8020							

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145  
NJ ID# in Rochester: 73331  
NJ ID# in Hackensack: 02317  
NY ID# in Hackensack: 10801

*Michael K. Perry*

Laboratory Director

91 of 264

**LABORATORY REPORT**

Job No: R89/03392

Date: OCT. 5 1989

**Client:**

Mr. Sheldon Nozik  
Wehran, New York Inc.  
2451 Baseline Road  
Grand Island, New York 14072

**Sample(s) Reference:**

Lancaster Landfill

**Received**

: 09/07/89

P.O. #:

ANALYSIS * BY GC METHOD 8010/8020				ANALYTICAL RESULTS - ug/l				
Sample:	-001	-002	-003	-004	-005	-006	-007	-008
Location:	W-8	W-F	W-3	W-5	W-6A	W-A	W-B	W-C
Date Collected:	09/07/89	09/07/89	09/07/89	09/07/89	09/07/89	09/07/89	09/07/89	09/07/89
Time Collected:	--	09:30	09:45	10:10	10:35	11:30	11:55	12:10
Date Analyzed:		09/16/89	09/16/89	09/16/89	09/16/89	09/15/89	09/16/89	09/16/89
Vinyl Chloride	No Sample	2 U	18.8	2 U	2 U	2 U	2 U	2 U
Methylene Chloride	Dry Well	1 U	1.9 Bl	1 U	1 U	1 U	1 U	1 U
Trichloroethene		1 U	2.5	1 U	1 U	1 U	1 U	1 U
Benzene		2 U	16.7	2 U	2 U	2 U	2 U	2 U
Toluene		2 U	2 U	2 U	2 U	2 U	2 U	2 U
Ethylbenzene		2 U	6.5	2 U	2 U	2 U	2 U	2 U
SURROGATE STANDARD RECOVERIES								
-----								
% Recovery								
Bromochloromethane (Acceptance Limits: 63-132%)		69%	69%	84%	67%	69%	67%	66%
2-Bromo-1-chloropropane (Acceptance Limits: 60-134%)		75%	80%	97%	65%	78%	81%	68%
a,a,a-Trifluorotoluene (Acceptance Limits: 60-132%)		86%	106%	75%	61%	98%	86%	61%

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145

NJ ID# in Rochester: 73331

NJ ID# in Hackensack: 02317

NY ID# in Hackensack: 10801

*Michael K. Perry*

Laboratory Director

**LABORATORY REPORT**

Job No: R89/03392

Date: OCT. 5 1989

**Client:**

Mr. Sheldon Nozik  
Wehran, New York Inc.  
2451 Baseline Road  
Grand Island, New York 14072

**Sample(s) Reference:**

Lancaster Landfill

Received

: 09/07/89

P.O. #:

ANALYSIS * BY GC METHOD 8010/8020				ANALYTICAL RESULTS - ug/l				
Sample:	-009	-010	-011	-012	-013	-014	-015	-016
Location:	W-D	W-E	W-7	B-240	Field	W-8	W-F	W-3
Date Collected:	09/07/89	09/07/89	09/07/89	09/07/89	09/07/89	09/07/89	09/07/89	09/07/89
Time Collected:	12:30	12:45	--	--	13:00	--	09:30	09:45
-----								
Date Analyzed:	09/16/89	09/17/89			09/17/89			
Vinyl Chloride	2 U	2 U	No Sample	No Sample	2 U	No Sample		
Methylene Chloride	1 U	1 U	Dry Well	Dry Well	1 U	Dry Well		
Trichloroethene	1 U	1 U			1 U			
Benzene	2 U	2 U			2 U			
Toluene	2 U	2 U			2 U			
Ethylbenzene	2 U	2 U			2 U			
SURROGATE STANDARD RECOVERIES								
-----								
% Recovery								
Bromochloromethane (Acceptance Limits: 63-132%)	69%	65%			60%			
2-Bromo-1-chloropropane (Acceptance Limits: 60-134%)	85%	77%			73%			
a,a,a-Trifluorotoluene (Acceptance Limits: 60-132%)	71%	62%			64%			

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

- NY ID# in Rochester: 10145
- NJ ID# in Rochester: 73331
- NJ ID# in Hackensack: 02317
- NY ID# in Hackensack: 10801

*Michael K. Perry*

Laboratory Director



A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R89/03392

Date: OCT. 5 1989

Client:

Mr. Sheldon Nozik  
 Wehran, New York Inc.  
 2451 Baseline Road  
 Grand Island, New York 14072

Sample(s) Reference:

Lancaster Landfill

Received

: 09/07/89

P.O. #:

ANALYSIS * BY GC METHOD 8010/8020				ANALYTICAL RESULTS - ug/l				
Sample:	-017	-018	-019	-020	-021	-022	-023	-024
Location:	W-5	W-6A	W-A	W-B	W-C	W-D	W-E	W-7
Date Collected:	09/07/89	09/07/89	09/07/89	09/07/89	09/07/89	09/07/89	09/07/89	09/07/89
Time Collected:	10:10	10:35	11:30	11:55	12:10	12:30	12:45	--
-----								
Date Analyzed:								
Vinyl Chloride								No Sample -
Methylene Chloride								Dry Well
Trichloroethene								
Benzene								
Toluene								
Ethylbenzene								
-----								
SURROGATE STANDARD RECOVERIES								
-----								
% Recovery								
Bromochloromethane								
(Acceptance Limits: 63-132%)								
2-Bromo-1-chloropropane								
(Acceptance Limits: 60-134%)								
a,a,a-Trifluorotoluene								
(Acceptance Limits: 60-132%)								

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

- NY ID# in Rochester: 10145
- NJ ID# in Rochester: 73331
- NJ ID# in Hackensack: 02317
- NY ID# in Hackensack: 10801

*Michael K. Perry*  
 Laboratory Director

**LABORATORY REPORT**

Job No: R89/03392

Date: OCT. 5 1989

**Client:**

Mr. Sheldon Nozik  
Wehran, New York Inc.  
2451 Baseline Road  
Grand Island, New York 14072

**Sample(s) Reference:**

Lancaster Landfill

Received

: 09/07/89

P.O. #:

ANALYSIS • BY GC METHOD 8010/8020			ANALYTICAL RESULTS - ug/l			
Sample:	.025	.026				
Location:	B-240	Field				
		Blank				
Date Collected:	09/07/89	09/07/89				
Time Collected:	--	13:00				
-----						
Date Analyzed:						
Vinyl Chloride	No Sample					
Methylene Chloride	Dry Well					
Trichloroethene						
Benzene						
Toluene						
Ethylbenzene						
-----						
SURROGATE STANDARD RECOVERIES						
-----						
X Recovery						
-----						
Bromochloromethane						
(Acceptance Limit: 65-132%)						
-----						
2-Bromo-1-chloropropane						
(Acceptance Limit: 68-134%)						
-----						
a,o,o-Trifluorotoluene						
(Acceptance Limit: 68-132%)						

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

- NY ID# in Rochester: 10145
- NJ ID# in Rochester: 73331
- NJ ID# in Westchester: 62317
- NY ID# in Westchester: 10801

*Michael K Perry*

Laboratory Director



# WehranEnviroTech

MM

*letter 9/22/89  
MM*

**Wehran-New York, Inc.**  
2451 Baseline Road  
Grand Island, New York 14072  
Tel: 716-773-1801  
Fax: 716-773-1828

*file Lancaster  
gw monitoring file*

August 21, 1989

Mr. Robert Mitrey  
New York State Department  
of Environmental Conservation  
600 Delaware Avenue  
Buffalo, NY 14202

RE: Lancaster Sanitary Landfill  
Groundwater Monitoring  
June Quarterly Report  
WE Project No. 09463 ST

Dear Mr. Mitrey:

Transmitted under the cover of this letter are the analytical results, supporting field data, and the chain of custody forms for samples collected at the above-referenced site in June 1989. Also included is the tabulated groundwater elevation data.

Sampling during this quarter was performed in three of the on-site wells (W-3, W-6A, W-8) and six wells located along the New York State Thruway to the southwest and essentially downgradient of the landfill (W-A through W-F). Purging and sampling were conducted by General Testing Corporation (GTC) personnel. At the completion of the field sampling, all samples were delivered to the GTC laboratory in Rochester, New York. The current analytical results were compared to previously submitted analyses and a discussion of the findings is provided below.

Upgradient well W-6A exhibited concentrations within the historical range for most parameters; however, significant decreases were indicated for TOC (2.75 ppm) and soluble iron (.364 ppm) from last quarter's results (649 mg/l and 4.59 mg/l, respectively). No readily definable causes for the decrease in TOC or soluble iron can be identified at this time.

Monitoring well W-3, located just downgradient of the landfill, indicated some concentration variation relative to last quarter's results. The chloride, ammonia, and TOC concentrations (55.3, 13.3 and 18.2 mg/l, respectively) decreased from the last quarter's results (206, 25.1 and 218 mg/l, respectively). As apparent in the analytical results, the present soluble iron concentration (11.9 mg/l) was approximately twice

20.8/89.09463.G

96 of 264

Mr. Robert Mitrey  
August 21, 1989  
Page 2

the total iron concentration (6.62 mg/l) recorded this period. The samples were retested with similar results obtained. No cause for this apparent anomaly can be presently determined. Consequently, results from next quarter's sampling will be reviewed in detail. It should be noted that the values obtained may be related to seasonal variations in groundwater quality since they are not substantially dissimilar to historical concentrations found in this well.

Monitoring well W-8, also located downgradient, showed some fluctuation in parameter concentrations monitored in this period. Most parameter concentrations were within historical ranges; however, total iron and total manganese showed some increases in concentration from historical results.

The remaining wells (W-A through W-F) located along the NYS Thruway and downgradient of the landfill indicated no apparently significant changes in parameter concentrations relative to historical data. Monitoring well W-A showed a slight increase in nitrate nitrogen concentration (to .258 mg/l) compared to below detection limits measured last quarter. This may be due, in part, to the occurrence of rain during the sample collection. A concentration of 8.18 mg/l total iron was detected in monitoring well W-B; however, the concentration of soluble iron remained <0.05 mg/l which is consistent with past results. Monitoring wells W-C and W-D showed small increases and/or decreases in parameter concentrations, although they remained within the historical ranges for these wells. W-E, an overburden monitoring well located south of the NYS Thruway, exhibited generally minor changes in parameter concentrations. The lead concentration in W-E of 0.0068 mg/l is below the NYSDEC Part 703 standard (0.025 mg/l). Significant parameter changes were not noted in W-F in this quarter.

It should be noted that the samples were collected in the nine wells while it was raining and that, in some wells, the recharge after purging of the well brought the static water level (sampling depth) above the level measured before purging. The recharge observed in these wells may explain in part the decrease in concentration observed at W-3 and W-6A. Additionally, the changes in parameter concentrations noted primarily within monitoring wells W-3 and W-8 appear to be somewhat cyclic in nature as stated in previous reports.

Mr. Robert Mitrey  
August 21, 1989  
Page 3

Should you have any questions or require further information, please do not  
hesitate to call.

Very truly yours,

WEHRAN-NEW YORK, INC.



Sheldon S. Nozik  
Staff Hydrogeologist

SSN:kmg

cc: T. Welsh, Gunville Energy  
M. McIntosh, NYSDEC

app. 

20.8/89.09463.G

GROUNDWATER ELEVATIONS

LANCASTER SANITARY LANDFILL

09463 SI

PRE PURGE 06/19/89 PRE SAMPLE 06/20/89

WELL NO.	F.O.C. ELEV.	GROUND ELEV.	WELL DEPTH (Ft)	PRE-PURGE DEPTH (Ft)	ELEV.	PRE-SAMPLE DEPTH (Ft)	ELEV.
4-3	738.84	734.85	27.3	20.65	718.19	18.28	720.56
4-5	764.48	762.06	66.2	NA	NA	NA	NA
4-6A	755.91	752.91	92.2	72.12	683.79	72.84	683.07
4-7	763.26	761.36	64.5	NA	NA	NA	NA
W-8	732.61	729.11	68.0	NA		CASCADING	
W-A	725.78	723.98	26.8	9.74	716.04	4.83	720.95
W-B	732.18	730.78	34.4	11.90	720.28	11.28	720.90
W-C	732.51	730.61	49.4	42.26	690.25	47.88	684.63
W-D	736.75	735.22	33.70	16.60	720.15	9.60	727.15
W-E	755.84	754.34	30.00	26.37	729.47	24.34	731.50
W-F	729.30	728.05	31.80	8.58	720.72	3.29	726.01
W-824D	787.42	784.82	81.90	NA	NA	NA	NA

NOTES  
 WELL 7 APPEARS TO BE BLOCKED  
 WELL 8 IS CASCADING AND NO WATER LEVEL IS OBTAINABLE  
 WELL 824D CANNOT BE SAMPLED  
 NA= DATA NOT AVAILABLE

RECEIVED JUL 26 1989

general  
testing  
corporation

water and wastewater testing specialists

710 Exchange Street  
Rochester, NY 14608  
(716) 454-3760

85 Trinity Place  
Hackensack, NJ 07601  
(201) 488-5242

July 19, 1989

Mr. Sheldon Nozik  
Wheran, New York  
2451 Baseline Road  
Grand Island, NY 14072

RE: Lancaster Landfill

Dear Mr. Nozik:

Enclosed please find the quarterly analysis of the Lancaster Landfill.

All data has been approved prior to report submission. The analytical data should be found in Section A with its corresponding Quality Control and Chronology appearing in Sections B and C respectively. Pertinent field documentation and laboratory chain of custodies appear in Section D.

If any questions or comments should arise, please contact me directly at 454-3760. Thank you for allowing General Testing to provide this service.

Sincerely,

GENERAL TESTING CORPORATION

  
Tracey G. Nichols  
Client Representative

msw

Enc.

RECEIVED JUL 12 1989

**general  
testing  
corporation** g t c

water and wastewater testing specialists

710 Exchange Street  
Rochester, NY 14608  
(716) 454-3760

85 Trinity Place  
Hackensack, NJ 07601  
(201) 488-5242

JULY 7 1989

Mr. Sheldon Nozik  
Wehran, New York Inc.  
2451 Baseline  
Grand Island, NY 14072

Re: Lancaster Landfill

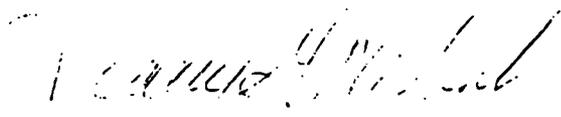
Dear Mr. Sheldon Nozik

Enclosed are the results of the analysis requested. All data has been reviewed prior to report submission. Should you have any questions please contact me at 454-3760.

Thank you for letting us provide this service.

Sincerely,

GENERAL TESTING CORPORATION



Tracey G. Nichols  
Client Representative

aa

Enc.



GTC REPORT# R89/2344

REPORT INDEX

SECTION A: Analytical Data  
SECTION B: Quality Control  
SECTION C: Chronology  
SECTION D: Documentation

RECEIVED AUG 04 1989

## DATA AND QUALITY CONTROL QUALIFIERS

- Indicates compound was analyzed but was not observed at a quantifiable concentration.
- Indicates an estimated value due to failure of QA/QC requirements

### A Qualifiers (used in conjunction with J and/or QC page or chronology)

- |  |  |
|--|--|
| S - Surrogate recoveries outside of control limits   | M - Matrix spike and/or matrix spike duplicate outside control limits  |
| St - Surrogate recoveries outside of control limits, analysis repeated, same results obtained, matrix interference suspected | Mt - same as M<br>ORGANIC PARAMETERS: Matrix interference suspected, Organic reference standard was acceptable.<br>INORGANIC PARAMETERS: Matrix interference suspected, Repeat analysis still unacceptable |
| r - Laboratory replicates outside of laboratory advisory limits  | Mr - INORGANICS PARAMETERS: Matrix interference suspected, repeat analysis not conducted due to holding time limitations   |
| t - Matrix interference suspected  |  |
| h - Holding time exceeded for analysis   |  |
- B - Indicates that the analyte was found in the associated laboratory or field blank

### B Qualifiers (used in conjunction with B)

- |   |   |
|---|---|
| l - Contamination in lab or method blank  | e - Contamination in equipment blank        |
| t - Contamination in trip blank   | f - Contamination in field filtration blank |
| x - Contamination in two or more types of blanks (i.e. Lab or Method, Trip, Equipment, or Field Filtration Blank) |   |

### MISCELLANEOUS QC AND DATA QUALIFIERS

- |   |  |  |
|---|--|--|
| ND - Not Detectable   | NS - No Sample   | NA - Not Analyzed                                    |
| ** - No limits currently established  | ** - See Attached Data   | I - Insufficient sample to re-analyze                |
| D - Surrogate standard diluted out/ Matrix Interference                             | R - Sample re-analyzed outside of holding time                       | UP - Unable to perform analysis due to sample matrix |
| V - Spiked recovery cannot be determined, sample value >4 times spike concentration | ↔ - Outside Laboratory acceptance limits (Blank Spikes, Ref. Spikes) | RC - Results confirmed via repeat analysis           |
| NC - Not Calculable   | LE - Lab Error: No data available                                    | > - Indicates Greater Than                           |



CASE NARRATIVE

R89/2344

On Sample 003 for both Fe and Mn tests, the soluble results came out double the total results. The metals were repeated for both total and soluble metals, and the same results were obtained. This would indicate that the sample was improperly split in the field or that the sample point is not consistent in concentration of these metals throughout.

SECTION A

Presented in this section is analytical data for the parameters requested. The following references concerning units and analytical methodology apply to the data provided herein.

Units:

Inorganics reported in mg/l

Organics reported in ug/l

unless otherwise specified

Analytical Methodology Obtained From:

- 
- ( ) Federal Register, 40 CFR Part 136, Guidelines Establishing Test Procedures for the analyses of Pollutants under the Clean Water Act, 10/26/84.
  - ( x ) SW-846, Test Methods for Evaluating Solid Waste, 3rd Edition, 9/86.
  - ( ) Other

# General Testing Corporation

A FULL SERVICE ENVIRONMENTAL LABORATORY

710 Exchange Street  
Rochester, NY 14608  
(716) 454-3760  
FAX (716) 454-1245

85 Trinity Place  
Hackensack, NJ 07601  
(201) 488-5242  
FAX (201) 488-6386

LABORATORY REPORT Job No: R89/02344 Date: JULY 19 1989

Client:  
Mr. Sheldon Nozik  
Wehran, New York Inc.  
2451 Baseline  
Grand Island, NY 14072

Sample(s) Reference:  
Lancaster Landfill

Collected : 06/20/89 P.O. #: 88-37MS

## ANALYTICAL UNITS - mg/l

Sample:	-001	-002	-003	-004	-005	-006	-007	-008
Location:	W-8	W-F	W-3	W-6A	W-A	W-B	W-C	W-D
Date Collected:	06/20/89	06/20/89	06/20/89	06/20/89	06/20/89	06/20/89	06/20/89	06/20/89
Time Collected:	09:00	09:20	10:00	11:40	13:30	12:15	12:25	12:45
pH	7.61	6.96	6.55	6.98	6.95	6.88	7.13	7.19
Spec. Cond. (umhos/cm)	765	1110	660	1090	810	2950	2250	2990
Alkalinity, Total	219	306	383	386	240	357	821	362
Chloride	87.8	198	55.3	122	79.6	802	321	715
Nitrogen, Ammonia	0.050 U	0.050 U	13.3	0.074	0.050 U	0.050 U	0.792	0.050 U
Nitrogen, Nitrate	1.33	0.138	0.050 U	0.050 U	0.050 U	0.258	0.159	0.067
Nitrogen, Nitrite	0.010 U	0.040	0.010 U					
Nitrogen, Nitrate/Nitrite	1.33	0.138	0.050 U	0.050 U	0.050 U	0.258	0.199	0.067
Total Organic Carbons	3.61	7.78	18.2	2.75	2.54	2.35	11.4	4.82
Iron, Total	15.3	0.327	6.62	1.52	0.860	0.818	17.0	0.585
Iron, Soluble								
Manganese, Total	30.2	0.053	0.333	0.043	0.010 U	0.720	0.516	0.042
Manganese, Soluble								
Scan 8010/8020	**	**	**	**	**	**	**	**

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145  
NJ ID# in Rochester: 73331  
ID# in Hackensack: 02317  
ID# in Hackensack: 10801

See attached data

*Michael K Perry*

Laboratory Director

# General Testing Corporation

710 Exchange Street  
Rochester, NY 14608  
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FAX (716) 454-1245

85 Trinity Place  
Hackensack, NJ 07601  
(201) 488-5242  
FAX (201) 488-6386

LABORATORY REPORT Job No: R89/02344 Date: JULY 19 1989

Client:  
Mr. Sheldon Nozik  
Wehran, New York Inc.  
2451 Baseline  
Grand Island, NY 14072

Sample(s) Reference:  
Lancaster Landfill

Collected : 06/20/89 / / P.O. #: 88-37MS /

ANALYSIS \* BY GC METHOD 8010/8020

ANALYTICAL RESULTS - ug/l

Sample:	-001	-002	-003	-004	-005	-006	-007	-008
Location:	W-8	W-F	W-3	W-6A	W-A	W-B	W-C	W-D
Date Collected:	06/20/89	06/20/89	06/20/89	06/20/89	06/20/89	06/20/89	06/20/89	06/20/89
Time Collected:	09:00	09:20	10:00	11:40	13:30	12:15	12:25	12:45
Date Analyzed:	06/23/89	06/23/89	06/26/89	06/25/89	06/25/89	06/23/89	06/25/89	06/25/89
Trichloroethene	1.3	1.0 U						
Benzene	2.0 U							
SURROGATE STANDARD RECOVERIES								
% Recovery								
Bromochloromethane (Acceptance Limits: 63-132%)	93%	105%	98%	96%	99%	105%	90%	97%
2-Bromo-1-chloropropane (Acceptance Limits: 60-134%)	84%	95%	99%	90%	94%	99%	91%	100%
a,a,a-Trifluorotoluene (Acceptance Limits: 60-132%)	77%	82%	97%	84%	89%	85%	89%	92%

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145  
NJ ID# in Rochester: 73331  
ID# in Hackensack: 02317  
ID# in Hackensack: 10801

*Michael K Perry*

Laboratory Director

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Hackensack, NJ 07601  
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FAX (201) 488-6386

LABORATORY REPORT Job No: R89/02344 Date: JULY 19 1989

Client:  
Mr. Sheldon Nozik  
Wehran, New York Inc.  
2451 Baseline  
Grand Island, NY 14072

Sample(s) Reference:  
Lancaster Landfill

Collected : 06/20/89 P.O. #: 88-37MS

ANALYTICAL UNITS / - mg/l

Sample:	-009	-010	-011	-012	-013	-014	-015	-016
Location:	W-E	Field	Trip	W-B	W-F	W-3	W-6A	W-A
Date Collected:	06/20/89	06/20/89	--	06/20/89	06/20/89	06/20/89	06/20/89	06/20/89
Time Collected:	13:05	13:20	--	09:00	09:20	10:00	11:40	13:30
pH	7.46	8.23						
Spec. Cond. (umhos/cm)	600	3.3						
Alkalinity, Total	216	2.0 U						
Chloride	17.8	1.0 U						
Nitrogen, Ammonia	0.050 U	0.050 U						
Nitrogen, Nitrate	2.29	0.050 U						
Nitrogen, Nitrite	0.010 U	0.010 U						
Nitrogen, Nitrate/Nitrite	2.29	0.050 U						
Total Organic Carbons	1.51	1.00 U						
Iron, Total	4.98	0.050 U						
Iron, Soluble				0.050 U	0.050 U	11.9	0.364	0.090
Manganese, Total	0.166	0.010 U						
Manganese, Soluble				0.010 U	0.043	0.740	0.078	0.012
Scan 8010/8020	**	**	**					

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145  
NJ ID# in Rochester: 73331  
NJ ID# in Hackensack: 02317  
NY ID# in Hackensack: 10801

\*\* See attached data

*Michael K. Perry*

Laboratory Director

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LABORATORY REPORT Job No: R89/02344 Date: JULY 19 1989

Client:  
Mr. Sheldon Nozik  
Wehran, New York Inc.  
2451 Baseline  
Grand Island, NY 14072

Sample(s) Reference:  
Lancaster Landfill

Collected : 06/20/89

P.O. #: 88-37MS

ANALYSIS \* BY GC METHOD 8010/8020

ANALYTICAL RESULTS - ug/l

Sample:	-009	-010	-011	-012	-013	-014	-015	-016
Location:	W-E	Field	Trip	W-B	W-F	W-3	W-6A	W-A
Date Collected:	06/20/89	06/20/89	--	06/20/89	06/20/89	06/20/89	06/20/89	06/20/89
Time Collected:	13:05	13:20	--	09:00	09:20	10:00	11:40	13:30

Date Analyzed:	06/25/89	06/25/89	06/25/89					
Trichloroethene	1.0 U	1.0 U	1.0 U					
Benzene	2.0 U	2.0 U	2.0 U					
SURROGATE STANDARD RECOVERIES								
-----								
% Recovery								
Bromochloromethane (Acceptance Limits: 63-132%)	101%	102%	106%					
2-Bromo-1-chloropropane (Acceptance Limits: 60-134%)	90%	100%	101%					
a,a,a-Trifluorotoluene (Acceptance Limits: 60-132%)	86%	91%	98%					

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145  
NJ ID# in Rochester: 73331  
NJ ID# in Hackensack: 02317  
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*Michael K. Perry*

Laboratory Director

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LABORATORY REPORT Job No: R89/02344 Date: JULY 19 1989

Client:  
Mr. Sheldon Nozik  
Wehran, New York Inc.  
2451 Baseline  
Grand Island, NY 14072

Sample(s) Reference:  
Lancaster Landfill

Collected : 06/20/89 P.O. #: 88-37MS

ANALYTICAL UNITS - mg/l

Sample:	-017	-018	-019	-020	-021		
Location:	W-B	W-C	W-D	W-E	Field		
Date Collected:	06/20/89	06/20/89	06/20/89	06/20/89	06/20/89	Blank	
Time Collected:	12:15	12:25	12:45	13:05	13:20		
pH							
Spec. Cond. (umhos/cm)							
Alkalinity, Total							
Chloride							
Nitrogen, Ammonia							
Nitrogen, Nitrate							
Nitrogen, Nitrite							
Nitrogen, Nitrate/Nitrite							
Total Organic Carbons							
Iron, Total							
Iron, Soluble	0.050 U	0.050 U	0.122	0.050 U	0.050 U		
Manganese, Total							
Manganese, Soluble	0.040	0.109	0.054	0.010 U	0.010 U		
Scan 8010/8020							

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145

NY ID# in Rochester: 73331

NY ID# in Hackensack: 02317

NY ID# in Hackensack: 10801

*Michael K. Perry*

Laboratory Director

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LABORATORY REPORT Job No: R89/02344 Date: JULY 19 1989

Client:  
Mr. Sheldon Nozik  
Wehran, New York Inc.  
2451 Baseline  
Grand Island, NY 14072

Sample(s) Reference:  
Lancaster Landfill

Collected : 06/20/89

P.O. #: 88-37MS

ANALYSIS \* BY GC METHOD 8010/8020

ANALYTICAL RESULTS - ug/l

Sample:	-017	-018	-019	-020	-021		
Location:	W-B	W-C	W-D	W-E	Field		
Date Collected:	06/20/89	06/20/89	06/20/89	06/20/89	06/20/89		
Time Collected:	12:15	12:25	12:45	13:05	13:20		

Date Analyzed:

Trichloroethene

Benzene

SURROGATE STANDARD RECOVERIES

Recovery

Bromochloromethane  
Acceptance Limits: 63-132%

2-Bromo-1-chloropropane  
Acceptance Limits: 60-134%

1,1,1-Trifluorotoluene  
Acceptance Limits: 60-132%

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145

NJ ID# in Rochester: 73331

NJ ID# in Hackensack: 02317

NY ID# in Hackensack: 10801

*Michael K. Perry*

Laboratory Director

# General Testing Corporation

710 Exchange Street  
 Rochester, NY 14608  
 (716) 454-3760  
 FAX (716) 454-1245

85 Trinity Place  
 Hackensack, NJ 07601  
 (201) 488-5242  
 FAX (201) 488-6386

LABORATORY REPORT Job No. R89/02345 Date JULY 7 1989

Client:  
 Mr. Sheldon Nozik  
 Wehran, New York Inc.  
 2451 Baseline  
 Grand Island, NY 14072

Sample(s) Reference  
 Lancaster Landfill

Collected : 06/20/89 P.O. #: 88-37MS

ANALYTICAL RESULTS - mg/l

Sample:	-001							
Location:	W-E							
Date Collected:	06/20/89							
Time Collected:	13:05							
-----								
Lead, Furnace	0.0068							

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 and #261.

NY ID # in Rochester: 10145  
 NJ ID # in Rochester: 73331  
 NJ ID # in Hackensack: 02317

*Michael K Perry*  
 Laboratory Director



# Wehran EnviroTech

MEM

May 31, 1989

**Wehran-New York, Inc.**  
2451 Baseline Road  
Grand Island, New York 14072  
Tel: 716-773-1801  
Fax: 716-773-1828

Mr. Robert Mitrey  
New York State Department  
of Environmental Conservation  
600 Delaware Avenue  
Buffalo, New York 14202

Re: Lancaster Sanitary Landfill  
Groundwater Monitoring  
March Semi-Annual Report  
WE Project No. 09035 ST

Dear Mr. Mitrey:

Transmitted under the cover of this letter are the analytical results, supportive field data and chain of custody forms for samples collected at the above referenced site in March 1989. Also included is the tabulated groundwater elevation data.

Sampling during this period was performed on four on-site wells (W-3, W-5, W-6A and W-8) and six wells (W-A through W-F) along the NYS Thruway, southwest and essentially downgradient of the landfill. Monitoring wells W-7 and B-24D, located south of the Thruway and downgradient of the landfill are still unable to be sampled. As recently communicated to Ms. Mary McIntosh by Mr. Rick Kennedy (counsel for Gunville Energy), these wells will be replaced in the very near future. Based on field observations, these wells are apparently obstructed and cannot be repaired. Purging and sampling were conducted by General Testing Corporation (GTC) personnel. All samples were delivered at the end of the day to the GTC laboratory in Rochester, NY.

The current analytical results were compared to the previously submitted data and a discussion of the findings is provided below.

Upgradient wells, W-5 and W-6A, exhibited concentrations which were generally within the range of previous data for these wells. Monitoring well W-5 indicated no significant changes relative to the last semi-annual results. Monitoring well W-6A exhibited concentrations within historical range for most parameters; however, an increase in the TOC concentration (649 mg/l) and the detection of Trichloroethene (TCE) were evident this round. No readily definable cause(s) for this increase in TOC concentration or the detection of TCE can be identified at this time.

Monitoring well W-3, located just downgradient of the landfill, showed a slight increase in the TOC and ammonia concentrations (218 and 25.1 mg/l, respectively) relative to last quarter's results (48.1 and 8.72 mg/l, respectively). Total iron (69.3 mg/l) and soluble iron (61.0 mg/l) concentrations as well as the total manganese (2.83 mg/l) and soluble manganese (2.26 mg/l) concentrations also appear to be slightly elevated. These concentrations, are not remarkably dissimilar to historical concentrations noted for this well. The values obtained may be related to seasonal variations in groundwater quality considering the recently obtained samples were collected during a low recharge period. The TOC concentration exhibited this round (218 mg/l) may be reflective of the organic compounds detected this period. Each of the organic parameters monitored this period were detected within this well sample above the MDL (see attached analytical results).

Monitoring well W-8, also located downgradient, exhibited a general decrease in most parameters monitored this period. Trichloroethelene (TCE) was detected just above the detection limit (1.6 ug/l) and is within range of previous concentrations noted in this well.

The remaining wells located along the NYS Thruway and downgradient of the landfill indicated no apparent significant changes in parameter concentrations relative to previous data. Monitoring well W-A exhibited no apparent changes in water quality and there were no organic parameters detected above the minimum detection limit (MDL). No organic parameters were detected in monitoring well W-B above the MDL and only a slight increase in the chloride concentration was noted. Similarly, no organic parameters were noted for W-C and only small increases in the chloride and nitrate concentrations were noted for this well. Results for monitoring well W-D indicated no changes other than a slight increase in chloride concentration, which remains within the range of previous data for this well. No organics were detected above the MDL in W-D. Monitoring well W-E, an overburden monitoring well located south of the NYS Thruway, exhibited generally minor changes in parameter concentrations, although no organic parameters were detected above the MDL. The lead concentration observed this period, (0.012 mg/l) (below the NYSDEC Part 703 standard, 0.025 mg/l) is notably lower than historical data for this well. No significant changes in parameter concentrations were noted for W-F this period other than the detection of methylene chloride (a common laboratory contaminant) just above the detection limit (1.2 ug/l).

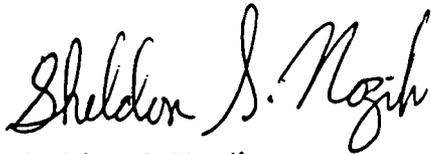
Mr. R. Mitrey  
Page 3  
May 31, 1989

As indicated in previous monitoring reports, the changes in parameter concentrations (noted primarily within monitoring well W-3 and to some degree monitoring well W-8) appear to be cyclic in nature. Most other parameters monitored this period were within historical ranges exhibited for the wells.

Should you have any questions, or require further information, please do not hesitate to call.

Very truly yours,

WEHRAN-NEW YORK, INC.



Sheldon S. Nozik  
Staff Hydrogeologist

SSN/asb

cc: M. McIntosh - NYSDEC  
T. Welsh - Gunville Energy

app. *PF*

SUMMARY OF GROUNDWATER ELEVATIONS

PROJECT NAME: LANCASTER SANITARY LANDFILL

PROJECT NO.: 09035 ST

DATE: PRE PURGE 03/29/89 PRE SAMPLE 03/30/89

WELL NO.	T.O.C. ELEV.	GROUND ELEV.	WELL DEPTH (ft)	PRE-PURGE DEPTH (ft)	ELEV.	PRE-SAMPLE DEPTH (ft)	ELEV.
W-3	738.84	734.85	27.3	21.0	717.84	21.00	717.84
W-5	764.48	762.06	66.2	35.2	729.28	31.1	733.38
W-6A	755.91	752.91	92.2	77.3	678.60	77.41	678.50
W-7	763.26	761.36	64.5	NA	NA	NA	NA
W-8	732.61	729.11	68.0	NA		CASCADING	
W-A	725.78	723.98	26.8	8.1	717.68	8.10	717.68
W-B	732.18	730.78	34.4	12.9	719.28	13.00	719.18
W-C	732.51	730.61	49.4	47.6	684.95	47.70	684.81
W-D	736.75	735.22	33.70	17.8	718.95	17.90	718.85
W-E	755.84	754.34	30.00	26.0	729.84	26.00	729.84
W-F	729.30	728.05	31.80	9.3	719.98	9.34	719.96
W-B24D	787.42	784.82	81.90	NA	NA	NA	NA

NOTES

WELL 7 APPEARS TO BE BLOCKED  
 WELL 8 IS CASCADING AND NO WATER LEVEL IS OBTAINABLE  
 WELL B24D CANNOT BE SAMPLED  
 NA= DATA NOT AVAILABLE

general  
testing  
corporation



RECEIVED MAY 01 1989

water and wastewater testing specialists

710 Exchange Street  
Rochester, NY 14608  
(716) 454-3760

85 Trinity Place  
Hackensack, NJ 07601  
(201) 488-5242

April 26, 1989

Mr. Sheldon Nozik  
Wheran New York, Inc.  
2451 Baseline Rd.  
Grand Island, NY 14072

Re: Quarterly Monitoring of Lancaster Landfill

Dear Mr. Nozik:

Enclosed, please find the analytical data on the Lancaster Landfill. On March 30, 1989, General Testing sampled twelve (12) wells and made one field blank at the landfill. Section A of this package contains the analytical data with it's quality control appearing in Section B. Sections C and D contain the chronology and documentation respectively.

If you should need any assistance or if any questions should arise, please contact me directly at 454-3760.

Thank you for allowing General Testing to provide this service.

Sincerely,

GENERAL TESTING CORPORATION

Tracey G. Nichols  
Client Representative

Enc.

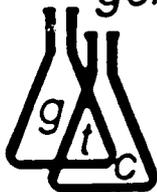
aa



GTC REPORT # R89/1093

REPORT INDEX

SECTION A: Analytical Data  
SECTION B: Quality Control  
SECTION C: Chronology  
SECTION D: Documentation



SECTION A

Presented in this section is analytical data for the parameters requested. The following references concerning units and analytical methodology apply to the data provided herein.

Units:

Inorganics reported in mg/l  
Organics reported in ug/l

Analytical Methodology Obtained From:

- 
- ( ) Federal Register, 40 CFR Part 136, Guidelines Establishing Test Procedures for the analyses of Pollutants under the Clean Water Act, 10/26/84.
  - ( x ) SW-846, Test Methods for Evaluating Solid Waste, 3rd Edition, 9/86.
  - ( ) Other

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(201) 488-5242

## LABORATORY REPORT

Job No: R89/01093

Date: APR. 26 1989

**Client:**

Mr. Sheldon Nozik  
Wehran, New York Inc.  
2451 Baseline  
Grand Island, New York 14072

**Sample(s) Reference:**

Lancaster Landfill  
Quarterly Monitoring

Collected

: 03/30/89

P.O. #:

### ANALYTICAL UNITS - mg/l

Sample:	-001	-002	-003	-004	-005	-006	-007	-008
Location:	W-8	W-F	W-3	W-6A	W-5	W-A	W-8	W-C
Date Collected:	03/30/89	03/30/89	03/30/89	03/30/89	03/30/89	03/30/89	03/30/89	03/30/89
Time Collected:	09:50	10:00	10:10	10:30	11:00	11:30	11:45	11:55
pH	7.93	7.35	6.37	7.54	7.47	7.45	7.03	7.23
Spec. Cond. (umhos/cm)	1050	1250	1450	1210	730	870	1880	1580
Chloride	180	383	206	168	3.91	84.6	908	437
Alkalinity, Total	205	221	854	512	284	256	396	495
Total Organic Carbons	2.44	4.82	218	649	1.32	1.94	2.17	11.0
Nitrogen, Ammonia	<0.050	<0.050	25.1	<0.050	<0.050	<0.050	<0.050	0.382
Nitrogen, Nitrate	1.57	0.41	<0.05	<0.05	<0.05	<0.05	0.12	13.1
Nitrogen, Nitrite	<0.05	<0.05	0.07	<0.05	<0.05	<0.05	<0.05	0.20
Nitrogen, Nitrate/Nitrite	1.57	0.41	<0.05	<0.05	<0.05	<0.05	0.12	13.3
Iron, Total	0.410	0.644	69.3	6.92	0.695	1.02	<0.050	4.87
Iron, Soluble	<0.050	<0.050	61.0	4.59	0.087	0.362	<0.050	0.055
Manganese, Total	1.68	0.024	2.83	0.139	0.013	<0.010	0.097	0.353
Manganese, Soluble	<0.010	0.012	2.26	0.114	<0.010	<0.010	<0.010	0.067
Scan 8010/8020	**	**	**	**	**	**	**	**

\*\*See attached data

Analytical procedures in accordance with Standard Methods for the Examination of Water and Wastewater, 15th Edition and Methods for Chemical Analysis of Water and Wastes, EPA. (<) indicates lowest detectable concentration with procedure used. Data on quality control performed with above sample(s) is available upon request.

Laboratory Director

# general testing corporation

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(201) 488-5242

## LABORATORY REPORT

Job No: R89/01093

Date: APR. 26 1989

**Client:**

Mr. Sheldon Nozik  
Wehran, New York Inc.  
2451 Baseline  
Grand Island, New York 14072

**Sample(s) Reference:**

Lancaster Landfill  
Quarterly Monitoring

Collected

: 03/30/89

P.O. #:

### ANALYTICAL UNITS - mg/l

Sample:	-009	-010	-011	-012	-013	-027
Location:	W-D	W-E	W-7	B-24D	Field	Trip
Date Collected:	03/30/89	03/30/89	03/30/89	03/30/89	03/30/89	03/30/89
Time Collected:	12:10	12:20	--	--	12:30	07:30
pH	7.78	7.51	No	No	8.35	
Spec. Cond. (umhos/cm)	1870	730	Sample	Sample	5.4	
Chloride	762	8.34	Dry	Dry	<1.00	
Alkalinity, Total	331	232	Well	Well	<2.0	
Total Organic Carbons	1.85	1.42			<1.00	
Nitrogen, Ammonia	<0.050	<0.050			<0.050	
Nitrogen, Nitrate	0.25	1.23				
Nitrogen, Nitrite	<0.05	<0.05			<0.05	
Nitrogen, Nitrate/Nitrite	0.25	1.23			0.062	
Iron, Total	0.281	5.08			0.088	
Iron, Soluble	<0.050	<0.050				
Manganese, Total	0.011	0.299			<0.010	
Manganese, Soluble	<0.010	<0.010				
Scan 8010/8020	**	**			**	**

Analytical procedures in accordance with Standard Methods for the Examination of Water and Wastewater, 15th Edition and Methods for Chemical Analysis of Water and Wastes, EPA. (<) indicates lowest detectable concentration with procedure used. Data on quality control performed with above sample(s) is available upon request.

*Michael K Perry*

Laboratory Director

# general testing corporation

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(201) 488-5242

## LABORATORY REPORT

Job No. R89/01094

Date APR. 19 1989

**Client:**

Mr. Sheldon Nozik  
Wehran New York, Inc.  
2451 Baseline  
Grand Island, New York 14072

**Sample(s) Reference**

Lancaster Landfill

Collected

: 03/30/89

P.O. #:

### ANALYTICAL RESULTS - mg/l

Sample:	-001							
Location:	W-E							
Date Collected:	03/30/89							
Time Collected:	12:20							
Lead, Furnace	0.0120							

*Michael K Perry*

Laboratory Director

Analytical procedures in accordance with Standard Methods for the Examination of Water and Wastewater, 15th Edition and Methods for Chemical Analysis of Water and Wastes, EPA. (s) indicates lowest detectable concentration with procedure used. Data on quality control performed with above sample(s) is available upon request.

# general testing corporation

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Hackensack, NJ 07601  
(201) 488-5242

## LABORATORY REPORT

Job No: R89/01093

Date: APR. 26 1989

**Client:**

Mr. Sheldon Nozik  
Wehran, New York Inc.  
2451 Baseline  
Grand Island, New York 14072

**Sample(s) Reference:**

Lancaster Landfill  
Quarterly Monitoring

**Collected**

: 03/30/89

P.O. #:

**ANALYSIS \* BY GC METHOD 8010/8020**

**ANALYTICAL RESULTS - ug/l**

Sample:	-001	-002	-003	-004	-005	-006	-007	-008
Location:	W-8	W-F	W-3	W-6A	W-5	W-A	W-B	W-C
Date Collected:	03/30/89	03/30/89	03/30/89	03/30/89	03/30/89	03/30/89	03/30/89	03/30/89
Time Collected:	09:50	10:00	10:10	10:30	11:00	11:30	11:45	11:55
Date Analyzed:	04/05/89	04/05/89	04/05/89	04/05/89	04/05/89	04/05/89	04/05/89	04/05/89
Vinyl Chloride	<2	<2	41.0	<2	<2	<2	<2	<2
Methylene Chloride	<1	1.2***	96.9	<1	<1	<1	<1	<1
Trichloroethene	1.6	<1	14.7	44.9	<1	<1	<1	<1
Benzene	<2	<2	38.2	<2	<2	<2	<2	<2
Toluene	<2	<2	521	<2	<2	<2	<2	<2
Ethylbenzene	<2	<2	34.5	<2	<2	<2	<2	<2
<b>SURROGATE STANDARD RECOVERIES</b>								
-----								
Recovery								
Bromochloromethane	101%	95%	73%	76%	86%	105%	104%	96%
Acceptance Limits: 63-132%								
2-Bromo-1-chloropropane	104%	90%	79%	90%	92%	110%	103%	99%
Acceptance Limits: 60-134%								
a,a,a-Trifluorotoluene	103%	99%	72%	83%	77%	89%	86%	72%
Acceptance Limits: 60-132%								

\*SW-846, Test Methods for Evaluating Solid Waste, 3rd Edition, 11/86

NY LABORATORY CERTIFICATION ID#: 10145

NJ ID#: 73331 in Rochester;

NJ ID#: 02317 in Hackensack

\*\*\*Common laboratory contaminant

*Michael K. Perry*

Laboratory Director

# corporation

## LABORATORY REPORT

Job No: R89/01093

Date: APR. 26 1989

Client:

Mr. Sheldon Nozik  
Wehran, New York Inc.  
2451 Baseline  
Grand Island, New York 14072

Sample(s) Reference:

Lancaster Landfill  
Quarterly Monitoring

Collected

: 03/30/89

P.O. #:

### ANALYSIS \* BY GC METHOD 8010/8020

### ANALYTICAL RESULTS - ug/l

Sample:	-009	-010	-011	-012	-013	-027
Location:	W-D	W-E	W-7	B-24D	Field	Trip
Date Collected:	03/30/89	03/30/89	03/30/89	03/30/89	03/30/89	03/30/89
Time Collected:	12:10	12:20	--	--	12:30	107:30
Date Analyzed:	04/06/89	04/06/89	No Sample	No Sample	04/06/89	04/05/89
Vinyl Chloride	<2	<2	Dry	Dry	<2	<2
Methylene Chloride	<1	<1	Well	Well	<1	<1
Trichloroethene	<1	<1			<1	<1
Benzene	<2	<2			<2	<2
Toluene	<2	<2			<2	<2
Ethylbenzene	<2	<2			<2	<2
SURROGATE STANDARD RECOVERIES						
% Recovery						
Bromochloromethane (Acceptance Limits: 63-132%)	102%	95%			92%	76%
2-Bromo-1-chloropropane (Acceptance Limits: 60-134%)	107%	84%			90%	87%
a,a,a-Trifluorotoluene (Acceptance Limits: 60-132%)	77%	64%			67%	102%

\*SW-846, Test Methods for Evaluating Solid Waste, 3rd Edition, 11/86

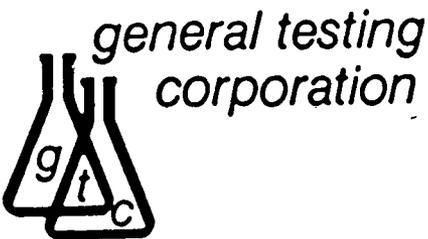
NY LABORATORY CERTIFICATION ID#: 10145

NJ ID#: 73331 in Rochester;

NJ ID#: 02317 in Hackensack

*Michael K. Perry*

Laboratory Director



SECTION B

LABORATORY QUALITY CONTROL

Presented in this section is Quality Control associated with the data provided in Section A of this report.

Quality Control Explanations:  
-----

- (1) RUN QUALITY CONTROL - Selected QC data from the analytical run in which your sample(s) were involved.
- (2) JOB SPECIFIC QUALITY CONTROL - QC data specific to your set of samples.
- (3) DUPLICATES - Replicate analyses of a given sample used to monitor precision. Relative Percent Difference is calculated as the difference divided by the average x 100.
- (4) MATRIX SPIKES - Addition of a known amount of analyte to a sample. Recovery is calculated by subtracting original value attributable to the sample from the combined value. The difference is then divided by the amount added to calculate % recovery. Poor recoveries may indicate analytical interference due to the matrix of the sample. Any other samples of this matrix may also have been affected, high or low as indicated by the % recovery.
- (5) LABORATORY CONTAMINANTS - Laboratory De-ionized water used to monitor for contamination during analysis.
- (6) BLANK SPIKES - Same as item #4 but analyte is added to laboratory de-ionized water. This indicates the accuracy of analysis.
- (7) REFERENCE CHECK SAMPLES - Samples from an outside source having a known concentration of analyte. Used as a measure of analytical accuracy.

When possible, all components of the above listed QC protocol are performed during an analytical run. The resulting data is compared to historical records when evaluating the quality of analytical runs. The data provided in your report has passed our Quality Assurance review.

Quality Control Notes:  
-----

GTC LABORATORY QUALITY CONTROL REPORT

CUSTOMER: Wehran, New York Inc.

JOB # : R89/01093

UNITS: mg/l

REPORT TYPE: Job Specific

PARAMETER	SAMPLE	ORIGINAL RESULT	DUPLICATE RESULT	% REL. ERROR	ACCEPT. LIMIT %	AVERAGE RESULT	SPIKE ADDED	PERCENT RECOVERY	ACCEPT. LIMIT %	METHOD BLANK	SPIKE ADDED	PERCENT RECOVERY	ACCEPT. LIMITS %	REFERENCE #	KNOWN VALUE	PERCENT RECOVERY	ACCEPT. LIMITS %
//////////		* PRECISION				* MATRIX SPIKING				BLANK SPIKES				REFERENCE STANDARD			
pH	-002	7.34	7.35	0.1%	**	7.35	NA			NA				NA			
Spec Cond	-002	1240	1250	0.8%	**	1255	NA			NA				NA			
Chloride	-002	382	384	0.52%	10.0	383	52.2	92%	81-119	<1.00	5.2	112%	80-124	REF STD	65	104%	90-110
Alkalinity	-002	222	220	0.9%	10.0	221	133	104%	77-128	<2.0	40	100%	79-134	REF STD	143	104%	79-120
TOC	-002	4.83	4.82	0.2%	14.8	4.82	10.0	94%	71-133	<1.00	10.0	103%	89-123	REF STD	25.0	93%	87-113
NH3	-002	<0.05	<0.05	NC	10.0	<0.05	0.25	92%	73-127	<0.05	0.25	100%	84-121	REF STD	1.80	100%	86-110
NO2	-002	<0.05	<0.05	NC	10.0	<0.05	0.25	96%	84-118	<0.05	0.25	100%	90-110	NA			
NO3/NO2	-002	0.40	0.41	2.4%	26.0	0.41	0.25	112%	86-112	<0.050	0.25	100%	84-111	REF STD	1.80	98%	88-108
Iron, Total	-002	0.668	0.599	11%	39	0.644	0.250	60%	55-153	<0.050	0.250	100%	67-137	REF STD	0.250	87%	80-120
Iron, Sol.	-015	<0.050	<0.050	NC	39	<0.050	0.250	79%	55-153	<0.050	0.250	100%	67-137	REF STD	0.100	98%	80-120
Manganese	-009	0.012	0.011	8.7%	17	<0.010	0.050	92%	62-148	<0.010	0.050	110%	75-127	REF STD	0.100	89%	80-120
MN Soluble	-015	0.012	0.012	0.0%	17	0.012	0.050	80%	62-148	<0.010	0.050	102%	76-127	REF STD	0.10	96%	80-120

\* Analytical results previous to accounting for dilutions.

\*\* Reference Check samples are not available for all analyses.

\*\* Outside of Quality Control Limits.

\*\* Limits currently not established

136 of 264

# general testing corporation

710 Exchange Street  
Rochester, NY 14608  
(716) 454-3760

85 Trinity Place  
Hackensack, NJ 07601  
(201) 488-5242

## LABORATORY REPORT

Job No: R89/01093

Date: APR. 19 1989

Client:

Mr. Sheldon Nozik  
Wehran, New York Inc.  
2451 Baseline  
Grand Island, New York 14072

Sample(s) Reference:

Lancaster Landfill  
Quarterly Monitoring

Collected

: 03/30/89

P.O. #:

ANALYSIS \* BY GC METHOD 8010/8020

ANALYTICAL RESULTS - ug/l

Sample:	-028	-029					
Location:	Lab	Lab					
	Blank	Blank					
Date Collected:	--	--					
Time Collected:	--	--					

Date Analyzed:	04/05/89	04/06/89					
Vinyl Chloride	<2	<2					
Methylene Chloride	<1	1.2***					
Trichloroethene	<1	<1					
Benzene	<2	<2					
Toluene	<2	<2					
Ethylbenzene	<2	<2					

SURROGATE STANDARD RECOVERIES

% Recovery

Bromochloromethane (Acceptance Limits: 63-132%)	111%	75%					
2-Bromo-1-chloropropane (Acceptance Limits: 60-134%)	116%	90%					
a,a,a-Trifluorotoluene (Acceptance Limits: 60-132%)	112%	87%					

\*SW-846, Test Methods for Evaluating Solid Waste, 3rd Edition, 11/86  
NY LABORATORY CERTIFICATION ID#: 10145  
NJ ID#: 73331 in Rochester;  
NJ ID#: 02317 in Hackensack

\*\*\*Common laboratory contaminant.

*Michael K. Perry*  
Laboratory Director

3A - WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: General Testing Corp. Contract: \_\_\_\_\_

Lab Code: \_\_\_\_\_ Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: \_\_\_\_\_

Matrix Spike - EPA Sample No. : R89/1093-002

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/l)	MS CONCENT. (ug/L)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethane	31.1	<1	37.3	120%	51-147
Trichloroethene	18.0	<1	15.5	86%	35-146
Benzene	21.0	<2	18.4	88%	39-150
Toluene	20.4	<2	17.2	84%	46-148
Chlorobenzene	20.9	<2	23.7	113%	55-135

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENT. (ug/l)	MSD % REC #	% RPD #	QC LIMITS RPD REC.
1,1-Dichloroethane	31.1	43.7	140%	15.8%	30 51-147
Trichloroethene	18.0	16.1	90%	3.8%	30 35-146
Benzene	21.0	20.0	95%	8.3%	30 39-150
Toluene	20.4	19.0	93%	9.9%	30 46-148
Chlorobenzene	20.9	25.7	123%	8.1%	30 55-135

# Columns to be used to flag recovery and RPD values with an asterik

\* Values outside of QC limits

0 out of 5 outside limits  
 Spike Recovery: 0 out of 5 outside limits

COMMENTS: \_\_\_\_\_



# WehranEnviroTech

April 3, 1989

Mr. Robert Mitrey  
New York State Department  
of Environmental Conservation  
600 Delaware Avenue  
Buffalo, New York 14202

Re: Lancaster Sanitary Landfill  
Groundwater Monitoring  
December Quarterly Report  
WE Project No. 09035 ST

Dear Mr. Mitrey:

Enclosed are the analytical results, field data sheets, and chain of custody forms for groundwater samples collected at the Lancaster Sanitary Landfill on February 2, 1989. Sampling during this period included three on-site wells (W-3, W-6A, and W-8) and six wells W-A through W-F) along the New York State Thruway, southwest and essentially downgradient of the landfill. The purging and sampling was conducted by General Testing Corporation (GTC) personnel. All samples were delivered to the GTC laboratory in Rochester, NY at the end of the day.

Upgradient well W-6A exhibited concentrations which were within range of previous data for this well. The TOC concentration in W-6A (3.38 mg/l) significantly decreased this period compared to the last semi-annual round (280 mg/l). Additionally, no organic compounds were detected above the minimum detection limits (MDL) for this well.

Monitoring well W-3 located downgradient of the facility, exhibited some concentration variations. The TOC and ammonia concentrations (48.1 and 8.72 mg/l, respectively) increased somewhat relative to last quarters results. However, these concentrations were within range of previous concentrations noted in this well. Benzene (10.6 <sup>u</sup>mg/l) and Trichloroethelene (TCE) (1.6 <sup>u</sup>mg/l) were both detected this round in this well, and have been detected previously within this well.

Monitoring well W-8 also located downgradient, exhibited slight increases in both total iron (5.19 mg/l) and total manganese (20.3 mg/l). However, these concentrations are also within range of historical data for this well. TCE was also

**Wehran-New York, Inc.**  
2451 Baseline Road  
Grand Island, New York 14072  
Tel: 716-773-1801  
Fax: 716-773-1828

*4/5/89  
MM  
Pls. review  
by comment  
J*

*file for you man  
repl file*

129 of 264

20 000-0000-0

detected (2.6 mg/l) within this well sample, and has also been detected previously at this location.

The remaining wells located along the Thruway and downgradient of the facility exhibited no major changes in parameter concentrations relative to previous monitoring data for these wells. Monitoring well W-A exhibited a soluble iron concentration (0.733 mg/l) which was slightly elevated compared to past concentrations for this well. No organic compounds were detected above the MDL for this well. Monitoring well W-B exhibited a decrease in the chloride concentration (72.8 mg/l), and no organic compound concentrations were detected above the MDL. Monitoring well W-C exhibited a decrease in the chloride concentration (32.6 mg/l). The TOC concentration dropped to 16.7 mg/l compared to 22.5 mg/l last quarter. The total iron concentration (25.7 mg/l) exhibited this round for this well was within historical ranges as well. Benzene was not detected above the MDL this period in W-C.

The remaining downgradient wells W-D, W-E, and W-F exhibited relatively little change in the groundwater chemistry. Monitoring well W-D exhibited a decrease in the chloride concentration (62.4 mg/l) relative to last quarter, and no organic compounds were detected above the MDL. Monitoring well W-E, an overburden monitoring well located south of the New York State Thruway, also exhibited generally minor changes in parameter concentrations. Trichloroethene (TCE) was not detected above the MDL this period. The parameter concentrations in monitoring well W-F were within historical ranges, and no organic parameters were observed in samples from this well.

As indicated in previous reports, it appears the changes in parameter concentrations noted primarily within monitoring well W-3 and to some degree monitoring well W-8 appear to be cyclic in nature. Most other parameters monitored this period were within historical ranges exhibited for the wells.

Mr. R. Mitrey  
Page 3  
April 3, 1989

Should you have any questions or wish to discuss these analytical results in more detail, please do not hesitate to call.

Very truly yours,

WEHRAN-NEW YORK, INC.



Sheldon S. Nozik  
Staff Hydrogeologist

SSN/asb  
Enclosures

cc: T. Welsh - Gunville Energy  
M. McIntosh - NYSDEC

app. *SEA*

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20 4/89 09035 B

SUMMARY OF GROUNDWATER ELEVATIONS

PROJECT NAME: LANCASTER SANITARY LANDFILL

PROJECT NO.: 09035 ST

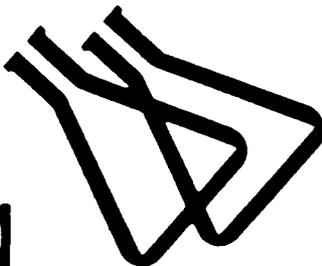
DATE: PRE PURGE 02/01/89 PRE SAMPLE 02/02/89

WELL NO.	T. O. C. ELEV.	GROUND ELEV.	WELL DEPTH (ft)	PRE-PURGE DEPTH (ft)	ELEV.	PRE-SAMPLE DEPTH (ft)	ELEV.
W-3	738.84	734.85	27.3	19.5	719.34	19.50	719.34
W-5	764.48	762.06	66.2	NS	NA	NA	NA
W-6A	755.91	752.91	92.2	72.4	683.47	72.45	683.46
W-7	763.26	761.36	64.5	NA	NA	NA	NA
W-8	732.61	729.11	68.0	NA		CASCADING	
W-A	725.78	723.98	26.8	8.9	716.85	8.95	716.83
W-B	732.18	730.78	34.4	13.4	718.82	13.40	718.78
W-C	732.51	730.61	49.4	47.6	684.95	48.58	683.93
W-D	736.75	735.22	33.70	18.6	718.20	18.78	717.97
W-E	755.84	754.34	30.00	26.3	729.52	26.92	728.92
W-F	729.30	728.05	31.80	10.3	718.98	10.33	718.97
W-B24D	787.42	784.82	81.90	NA		NS	NA

NOTES

WELL 7 APPEARS TO BE BLOCKED  
 WELL 8 IS CASCADING AND NO WATER LEVEL IS OBTAINABLE  
 WELL B24D CANNOT BE SAMPLED  
 NA= DATA NOT AVAILABLE  
 NS= NOT SAMPLED

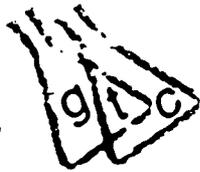
general  
testing  
corporation



rochester, n.y.

133 of 264  
hackensack, n.j.

general  
testing  
corporation



RECEIVED MAR 03 1989

water and wastewater testing specialists

710 Exchange Street  
Rochester, NY 14608  
(716) 454-3760

85 Trinity Place  
Hackensack, NJ 07601  
(201) 488-5242

March 1, 1989

Mr. Sheldon Nozik  
Wehran New York Inc.  
2451 Baseline Rd.  
Grand Island, NY 14072

Re: Lancaster Landfill

Dear Mr. Nozik:

Enclosed please find our report #R89/00299. In Section A the analytical data appears with it's corresponding QC in Section B. In Section C please find an analytical chronology of dates analyzed. Section D contains all pertinent documentation to the previous sections.

If any questions should arise please contact me directly at 454-3760. Thank you for allowing General Testing to provide this service.

Sincerely,

GENERAL TESTING CORPORATION

Tracey G. Nichols  
Client Representative

Enc.

aa



GTC REPORT# R89/00299

REPORT INDEX  
-----

SECTION A:        Analytical Data  
SECTION B:        Quality Control  
SECTION C:        Chronology  
SECTION D:        Documentation



GTC REPORT # R89/00299

SECTION A

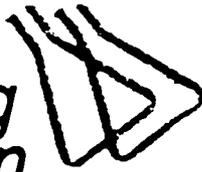
Presented in this section is analytical data for the parameters requested. The following references concerning units and analytical methodology apply to the data provided herein.

Units: Inorganics reported in mg/L Organics reported in ug/l

Analytical Methodology Obtained From:

- Federal Register, 40 CFR Part 136, Guidelines Establishing Test Procedures for the analyses of Pollutants under the Clean Water Act, 10/26/84.
- SW-846, Test Methods for Evaluating Solid Waste, 3rd Edition, 9/86.
- Other

# general testing corporation



water and wastewater testing specialists

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Rochester, NY 14608  
(716) 454-3780

85 Trinity Place  
Hackensack, NJ 07601  
(201) 488-5242

## LABORATORY REPORT

Job No: R89/00299

Date: FEB. 28 1989

Client:

Mr. Sheldon Nozik  
Wehran Engineering  
2451 Baseline Rd.  
Grand Island, NY 14072

Sample(s) Reference:

Lancaster Landfill

Collected

: 2/2/89

P.O. #:

### ANALYTICAL UNITS - mg/l

Sample:	-001	-002	-003	-004	-005	-006	-007	-008
Location:	W-8	W-F	W-3	W-6A	W-A	W-B	W-C	W-D
Date Collected:	2/2/89	2/2/89	2/2/89	2/2/89	2/2/89	2/2/89	2/2/89	2/2/89
Time Collected:	09:45	10:00	10:25	10:45	11:05	11:20	11:30	11:55
pH	6.97	7.07	6.29	7.18	7.17	6.89	7.22	7.05
Spec. Cond. (umhos/cm)	790	1140	1280	940	885	3000	2600	2800
Chloride	110	247	128	138	13.9	72.8	32.6	62.4
Alkalinity, Total	245	245	521	299	238	387	1160	318
Total Organic Carbons	3.30	6.76	48.1	3.38	2.24	3.03	16.7	3.10
Nitrogen, Ammonia	0.14	0.17	8.72	0.16	0.09	<0.05	1.06	0.26
Nitrogen, Nitrate	1.83	0.33	1.46	<0.05	<0.05	0.71	NC	<0.05
Nitrogen, Nitrite	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.16	<0.05
Nitrogen, Nitrate/Nitrite	1.83	0.33	1.46	<0.05	<0.05	0.71	0.12	<0.05
Iron, Total	5.19	2.98	30.3	4.41	1.83	0.974	25.7	1.34
Iron, Soluble	0.055	0.208	28.8	2.03	0.733	<0.05	2.03	0.130
Manganese, Total	20.3	0.096	1.13	0.076	0.009	0.444	0.663	0.070
Manganese, Soluble	<0.010	0.083	1.08	0.118	0.013	0.070	0.339	0.061
Scan 8010/8020	**	**	**	**	**	**	**	**

\*\*See attached data

Analytical procedures in accordance with Standard Methods for the Examination of Water and Wastewater, 15th Edition and Methods for Chemical Analysis of Water and Wastes, EPA. (<) indicates lowest detectable concentration with procedure used. Data on quality control performed with above sample(s) is available upon request.

*Michael K. Perry*

Laboratory Director

RECEIVED APR 03 1989

# general testing corporation

water and wastewater testing specialists

710 Exchange Street  
Rochester, NY 14608  
(716) 454-3760

85 Trinity Place  
Hackensack, NJ 07601  
(201) 488-5242

Job No: R89/00299

Date: MAR. 30 1989

## LABORATORY REPORT

Client:

Mr. Sheldon Nozik  
Wehran Engineering  
2451 Baseline Rd.  
Grand Island, NY 14072

Sample(s) Reference:

Lancaster Landfill

\*\*\*\*\*CORRECTED COPY\*\*\*\*\*

Collected

: 2/2/89

P.O. #:

### ANALYTICAL UNITS - mg/l

Sample:	-009	-010					
Location:	W-E	Field					
		Blank					
Date Collected:	2/2/89	2/2/89					
Time Collected:	12:10	12:30					
-----							
pH	7.25	6.99					
Spec. Cond. (umhos/cm)	540	2.8					
Chloride	7.53	<1.00					
Alkalinity, Total	276	<2.0					
Total Organic Carbons	1.31	<1.00					
Nitrogen, Ammonia	<0.05	<0.05					
Nitrogen, Nitrate	1.46	<0.05					
Nitrogen, Nitrite	<0.05	<0.05					
Nitrogen, Nitrate/Nitrite	1.46	<0.05					
Iron, Total	3.86	0.110					
Iron, Soluble	0.325	<0.050					
Manganese, Total	0.115	<0.010					
Manganese, Soluble	<0.010	<0.010					
Lead, Furnace	0.0071						
Scan 8010/8020	**	**					

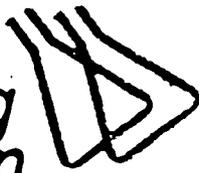
\*\*See attached data

Analytical procedures in accordance with Standard Methods for the Examination of Water and Wastewater, 15th Edition and Methods for Chemical Analysis of Water and Wastes, EPA. (<) indicates lowest detectable concentration with procedure used. Data on quality control performed with above sample(s) is available upon request.

*Michael K. Perry*

Laboratory Director

# general testing corporation



water and wastewater testing specialists

710 Exchange Street  
Rochester, NY 14608  
(716) 454-3760

85 Trinity Place  
Hackensack, NJ 07601  
(201) 488-5242

## LABORATORY REPORT

Job No: R89/00299

Date: FEB. 24 1989

**Client:**

Mr. Sheldon Nozik  
Wehran Engineering  
2451 Baseline Rd.  
Grand Island, NY 14072

**Sample(s) Reference:**

Lancaster Landfill

Collected

: 2/2/89

P.O. #:

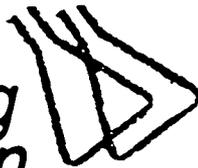
ANALYSIS * BY GC METHOD 8010/8020				ANALYTICAL RESULTS - ug/l				
Sample:	-001	-002	-003	-004	-005	-006	-007	-008
Location:	W-8	W-F	W-3	W-6A	W-A	W-B	W-C	W-D
Date Collected:	2/2/89	2/2/89	2/2/89	2/2/89	2/2/89	2/2/89	2/2/89	2/2/89
Time Collected:	09:45	10:00	10:25	10:45	11:05	11:20	11:30	11:55
Date Analyzed:	02/13/89	02/13/89	02/15/89	02/13/89	02/13/89	02/15/89	02/15/89	02/15/89
Benzene	<2	<2	10.6	<2	<2	<2	<2	<2
Trichloroethene	2.6	<1	1.6	<1	<1	<1	<1	<1
SURROGATE STANDARD RECOVERIES								
-----								
% Recovery								
Bromochloromethane (Acceptance Limits: 63-132%)	86%	93%	81%	95%	91%	96%	92%	85%
2-Bromo-1-chloropropane (Acceptance Limits: 60-134%)	75%	78%	79%	83%	84%	83%	78%	75%
a,a,a-Trifluorotoluene (Acceptance Limits: 60-132%)	64%	70%	63%	76%	75%	68%	97%	92%

\*SW-846, Test Methods for Evaluating Solid Waste, 3rd Edition, 11/86  
 NY LABORATORY CERTIFICATION ID#: 10145  
 NJ ID#: 73331 in Rochester;  
 NJ ID#: 02317 in Hackensack

*Michael K. Perry*

Laboratory Director

# general testing corporation



water and wastewater testing specialists

710 Exchange Street  
Rochester, NY 14608  
(716) 454-3760

85 Trinity Place  
Hackensack, NJ 07601  
(201) 488-5242

## LABORATORY REPORT

Job No: R89/00299

Date: FEB. 24 1989

**Client:**

Mr. Sheldon Nozik  
Wehran Engineering  
2451 Baseline Rd.  
Grand Island, NY 14072

**Sample(s) Reference:**

Lancaster Landfill

**Collected**

/ : 2/2/89

P.O. #:

ANALYSIS * BY GC METHOD 8010/8020			ANALYTICAL RESULTS - ug/l			
Sample:	-009	-010				
Location:	W-E	Field				
		Blank				
Date Collected:	2/2/89	2/2/89				
Time Collected:	12:10	12:30				
-----						
Date Analyzed:	02/15/89	02/15/89				
Benzene	<2	<2				
Trichloroethene	<1	<1				
SURROGATE STANDARD RECOVERIES						
-----						
% Recovery						
Bromochloromethane (Acceptance Limits: 63-132%)	79%	84%				
2-Bromo-1-chloropropane (Acceptance Limits: 60-134%)	68%	77%				
a,a,a-Trifluorotoluene (Acceptance Limits: 60-132%)	87%	83%				

\*SW-846, Test Methods for Evaluating Solid Waste, 3rd Edition, 11/86

NY LABORATORY CERTIFICATION ID#: 10145

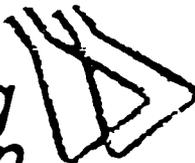
NJ ID#: 73331 in Rochester;

NJ ID#: 02317 in Hackensack

*Michael K. Perry*

Laboratory Director

# general testing corporation



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Rochester, NY 14608  
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85 Trinity Place  
Hackensack, NJ 07601  
(201) 488-5242

## LABORATORY REPORT

Job No: R89/00299

Date: FEB. 24 1989

Client:

Mr. Sheldon Nozik  
Wehran Engineering  
2451 Baseline Rd.  
Grand Island, NY 14072

Sample(s) Reference:

Lancaster Landfill

Collected

: 2/2/89

P.O. #:

ANALYSIS * BY GC METHOD 8010/8020		ANALYTICAL RESULTS - ug/l					
Sample:	-021	-022					
Location:	Lab	Lab					
	Blank	Blank					
Date Collected:	--	--					
Time Collected:	--	--					
Date Analyzed:	02/13/89	02/15/89					
Benzene	<2	<2					
Trichloroethene	<1	<1					
SURROGATE STANDARD RECOVERIES							
-----							
% Recovery							
Bromochloromethane (Acceptance Limits: 63-132%)	94%	97%					
2-Bromo-1-chloropropane (Acceptance Limits: 60-134%)	86%	89%					
a,a,a-Trifluorotoluene (Acceptance Limits: 60-132%)	77%	86%					

\*SW-846, Test Methods for Evaluating Solid Waste, 3rd Edition, 11/86

NY LABORATORY CERTIFICATION ID#: 10145

NJ ID#: 73331 in Rochester;

NJ ID#: 02317 in Hackensack

*Michael K Perry*

Laboratory Director

141 of 264

GENERAL TESTING CORPORATION  
GROUNDWATER MONITORING FIELD FORM  
(CONTINUED)

1+11

Field Measurements:

Well Number	Parameter	Unit	Replicate 1	Replicate 2	Replicate 3	Replicate 4
BECKMAN	pH	Std.	6.96	6.98	/	/
GTC08	Spec. Cond.	umhos/cm	780	790	/	/
	Spec. Grav.				/	/
BECKMAN	Temperature	°C	5.5	5.5	/	/

SAMPLING HANDLING PROCEDURES

Number of Bottles Taken  Field Filtered (Y or N), Date/Time 2/2/89 12:20  
 Field Preservation (Y or N)  Field Meter Calibrations Date/Time 2/2/89 09:30

METER CALIBRATIONS

Buffer 7.00 - 6.99 set      Cond: Standard 1 = 1413 umhos/cm  
 Buffer 4.00 - 4.01 set/read      Standard 2 = \_\_\_\_\_ umhos/cm  
 Buffer 10.0 - 10.00 set/read      Cond. Meter Reads ≈ 1400 for Std. 1  
 Buffer 7.00 - 6.99 read      Cond. Meter Reads \_\_\_\_\_ for Std. 2

Thermometer: Date and Time 1/11 : \_\_\_\_  
 Standard - Reading: \_\_\_\_\_ Therm. Reading: \_\_\_\_\_ Correction Factor: \_\_\_\_\_

Field Observations:

WELL LOCKED AND IN GOOD CONDITION

---



---



---



---

GTC Crew Members: BOB URBAN BOB TUNNINGLEY

B Maer  
Supervisors Signature

GENERAL TESTING CORPORATION  
GROUNDWATER MONITORING FIELD FORM

Site Location: LANCASTER Job Number: 289/299 = 10+2

Weather: OVERCAST

Well ID: FIELD BLANK

PURGE INFORMATION

Purge Method: \_\_\_\_\_

-Volume Calculation-

-Groundwater Elevation Calculation-

Well Depth (ft) \_\_\_\_\_

Well Elevation (ft) MSL \_\_\_\_\_

Static Water Level (ft) - \_\_\_\_\_

Static Water Level (ft) - \_\_\_\_\_

Depth of Water Column (ft) \_\_\_\_\_

Groundwater Elev. MSL \_\_\_\_\_ ft

X, Well Constant (gal/ft) X \_\_\_\_\_

Volume Standing in Well \_\_\_\_\_ gallons

[Well Constants-

[0.16 gal/ft = 2" OD well, 0.65 gal/ft = 4" OD well, Calc. to Determine Constant: ]

$$\left[ \text{Constant } x = \frac{0.7854 \times (\text{casing diameter in inches})^2 \times 12}{231} \right]$$

Start Purge: Date   /  /  , Time   :  :  , Purging Observation/Measurements

Total Volume Purged: \_\_\_\_\_ gallons

# of Volume Casings purged: \_\_\_\_\_

Sampling Information: Sample Method 1 3/4" STAINLESS STEEL BAULER

Sample Date: 2/2/89 Time: 12:30

Sample Depth \_\_\_\_\_ ft; Time Elapsed \_\_\_\_\_ hours

Sample Appearance: CLEAR, NO APPARENT ODOR

GENERAL TESTING CORPORATION  
GROUNDWATER MONITORING FIELD FORM  
(CONTINUED)

10 #20

Field Measurements:

Meter Number	Parameter	Unit	Replicate 1	Replicate 2	Replicate 3	Replicate 4
BECKMAN	pH	Std.	6.98	7.00		
LITCOB	Spec. Cond.	umhos/cm	27	28		
	Spec. Grav.					
BECKMAN	Temperature	°C	9.3	9.3		

SAMPLING HANDLING PROCEDURES

Number of Bottles Taken  Field Filtered (Y or N), Date/Time 2/2/89 13:05  
 Field Preservation (Y or N)  Field Meter Calibrations Date/Time 2/2/89 09:30

METER CALIBRATIONS

pH: Buffer 7.00 - 6.99 set      Cond: Standard 1 = 1413 umhos/cm  
 Buffer 4.00 - 4.01 set/read      Standard 2 = \_\_\_\_\_ umhos/cm  
 Buffer 10.0 - 10.00 set/read      Cond. Meter Reads = 1400 for Std. 1  
 Buffer 7.00 - 6.99 read      Cond. Meter Reads \_\_\_\_\_ for Std. 2

Thermometer: Date and Time 1/1 : \_\_\_\_  
 Standard - Reading: \_\_\_\_\_ Therm. Reading: \_\_\_\_\_ Correction Factor: \_\_\_\_\_

Field Observations:

SAMPLE TAKEN BY POURING DI INTO A 1 3/4" STAINLESS STEEL BAILER THEN INTO EACH SAMPLE BOTTLE

GTC Crew Members: BOB URBAN BOB TONKINLEY

B. Martin  
Supervisors Signature

GENERAL TESTING CORPORATION

GROUNDWATER MONITORING FIELD FORM

Site Location: LANCASTER Job Number: 889/299:9+19

Weather: OVERCAST 40°F LIGHT WINDS

Well ID: W-E

PURGE INFORMATION

Purge Method: 2" PVC BAILER

-Volume Calculation-

-Groundwater Elevation Calculation-

Well Depth (ft) 30.00

Well Elevation (ft) MSL \_\_\_\_\_

Static Water Level (ft) 26.32

Static Water Level (ft) \_\_\_\_\_

Depth of Water Column (ft) 3.68

Groundwater Elev. MSL \_\_\_\_\_ ft

X, Well Constant (gal/ft) X 0.16

Volume Standing in Well 0.59 gallons

[ Well Constants- ]  
 0.16 gal/ft = 2" OD well, 0.65 gal/ft = 4" OD well, Calc. to Determine Constant: ]  
 Constant x =  $\frac{0.7854 \times (\text{casing diameter in inches})^2 \times 12}{231}$  ]

Start Purge: Date 2/1/89, Time 12:45, Purging Observation/Measurements

Total Volume Purged: 1.0 gallons CLEAR

# of Volume Casings purged: 2 TO DRY

Sampling Information: Sample Method 3/4" STAINLESS STEEL BAILER

Sample Date: 2/2/89 Time: 12:10

Sample Depth 26.92 ft; Time Elapsed \_\_\_\_\_ hours

Sample Appearance: BROWN TINT, TURBID, NO APPARENT ODOR

GENERAL TESTING CORPORATION  
GROUNDWATER MONITORING FIELD FORM

(CONTINUED)

9+19

Field Measurements:

Meter Number	Parameter	Unit	Replicate 1	Replicate 2	Replicate 3	Replicate 4
BECKMAN	pH	Std.	7.24	7.25	/	/
GTECO	Spec. Cond.	umhos/cm	530	540		
	Spec. Grav.					
BECKMAN	Temperature	°C	6.2	6.2		

SAMPLING HANDLING PROCEDURES

Number of Bottles Taken  
 Field Preservation (Y or N)
  Field Filtered (Y or N), Date/Time 2/2/89 13:00  
 Field Meter Calibrations Date/Time 2/2/89 09:30

METER CALIBRATIONS

pH: Buffer 7.00 - 6.99 set      Cond: Standard 1 = 1413 umhos/cm  
 Buffer 4.00 - 4.01 set/read      Standard 2 = \_\_\_\_\_ umhos/cm  
 Buffer 10.0 - 10.00 set/read      Cond. Meter Reads ≈ 1400 for Std. 1  
 Buffer 7.00 - 6.99 read      Cond. Meter Reads \_\_\_\_\_ for Std. 2

Thermometer: Date and Time 2/2/89 : \_\_\_\_\_  
 Standard - Reading: \_\_\_\_\_ Therm. Reading: \_\_\_\_\_ Correction Factor: \_\_\_\_\_

Field Observations:

WELL LOCKED AND IN GOOD CONDITION

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GTC Crew Members: BOB URBAN BOB TUNNINGLEY

B Macken  
Supervisors Signature

GENERAL TESTING CORPORATION

GROUNDWATER MONITORING FIELD FORM

Site Location: LANCASTER Job Number: R89/299:8+18

Weather: OVERCAST 40°F MODERATE WINDS

Well ID: W-D

PURGE INFORMATION

Purge Method: 2" PVC BAILER

-Volume Calculation-

-Groundwater Elevation Calculation-

Well Depth (ft) 33.78

Well Elevation (ft) MSL \_\_\_\_\_

Static Water Level (ft) 18.55

Static Water Level (ft) \_\_\_\_\_

Depth of Water Column (ft) 15.15

Groundwater Elev. MSL \_\_\_\_\_ ft

X, Well Constant (gal/ft) X 0.16

Volume Standing in Well 2.42 gallons

[Well Constants-

0.16 gal/ft = 2" OD well, 0.65 gal/ft = 4" OD well, Calc. to Determine Constant:

[ Constant x =  $\frac{0.7854 \times (\text{casing diameter in inches})^2 \times 12}{231}$

Start Purge: Date 2/1/89, Time 12:30, Purging Observation/Measurements

Total Volume Purged: 7.5 gallons CLEAR

# of Volume Casings purged: 3

Sampling Information: Sample Method 1 3/4" STAINLESS STEEL BAILER

Sample Date: 2/2/89 Time: 11:55

Sample Depth 18.78 ft; Time Elapsed \_\_\_\_\_ hours

Sample Appearance: CLEAR, NO APPARENT ODOR

GENERAL TESTING CORPORATION  
GROUNDWATER MONITORING FIELD FORM

(CONTINUED)

8+18

Field Measurements:

Meter Number	Parameter	Unit	Replicate 1	Replicate 2	Replicate 3	Replicate 4
BECKMAN	pH	Std.	7.04	7.05		
GTC 08	Spec. Cond.	umhos/cm	2700	2800		
	Spec. Grav.					
BECKMAN	Temperature	°C	6.3	6.2		

SAMPLING HANDLING PROCEDURES

Number of Bottles Taken       Field Filtered (Y or N), Date/Time 2/2/89 12:55  
 Field Preservation (Y or N)       Field Meter Calibrations Date/Time 2/2/89 09:30

METER CALIBRATIONS

pH: Buffer 7.00 - 6.99 set      Cond: Standard 1 = 1413 umhos/cm  
 Buffer 4.00 - 4.01 set/read      Standard 2 = \_\_\_\_\_ umhos/cm  
 Buffer 10.0 - 10.00 set/read      Cond. Meter Reads ≈ 1400 for Std. 1  
 Buffer 7.00 - 6.99 read      Cond. Meter Reads \_\_\_\_\_ for Std. 2

Thermometer: Date and Time 1/1 : \_\_\_\_  
 Standard - Reading: \_\_\_\_\_ Therm. Reading: \_\_\_\_\_ Correction Factor: \_\_\_\_\_

Field Observations:

WELL LOCKED AND IN GOOD CONDITION

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GTC Crew Members: BOB URBAN BOB TONNINGLEY

B. Mack  
Supervisors Signature

GENERAL TESTING CORPORATION

GROUNDWATER MONITORING FIELD FORM

Site Location: LANCASTER Job Number: 889/299 = 7+17

Weather: OVERCAST 40°F LIGHT WINDS

Well ID: W-C

PURGE INFORMATION

Purge Method: 2" PVC BAILER

-Volume Calculation-

-Groundwater Elevation Calculation-

Well Depth (ft) 49.40

Well Elevation (ft) MSL \_\_\_\_\_

Static Water Level (ft) - 47.56

Static Water Level (ft) - \_\_\_\_\_

Depth of Water Column (ft) 1.84

Groundwater Elev. MSL \_\_\_\_\_ ft

X, Well Constant (gal/ft) X 0.16

Volume Standing in Well 0.29 gallons

[Well Constants-

0.16 gal/ft = 2" OD well, 0.65 gal/ft = 4" OD well, Calc. to Determine Constant: ]

[ Constant x =  $\frac{0.7854 \times (\text{casing diameter in inches})^2 \times 12}{231}$  ]

Start Purge: Date 2/1/89, Time 12:15, Purging Observation/Measurements

Total Volume Purged: 0.90 gallons CLEAR

# of Volume Casings purged: 3

Sampling Information: Sample Method 1 3/4" STAINLESS STEEL BAILER

Sample Date: 2/2/89 Time: 11:30

Sample Depth 48.58 ft; Time Elapsed \_\_\_\_\_ hours

Sample Appearance: BLACK, TURBID, NO APPARENT ODOR

GENERAL TESTING CORPORATION  
GROUNDWATER MONITORING FIELD FORM  
(CONTINUED)

747

Field Measurements:

Meter Number	Parameter	Unit	Replicate 1	Replicate 2	Replicate 3	Replicate 4
BECKMAN	pH	Std.	7.21	7.23		
GTC 08	Spec. Cond.	umhos/cm	2500	2600		
	Spec. Grav.					
BECKMAN	Temperature	°C	5.0	5.0		

SAMPLING HANDLING PROCEDURES

- Number of Bottles Taken       Field Filtered (Y or N), Date/Time 2/2/89 12:50  
 Field Preservation (Y or N)       Field Meter Calibrations Date/Time 2/2/89 09:30

METER CALIBRATIONS

Buffer 7.00 - 6.99 set      Cond: Standard 1 = 1413 umhos/cm  
 Buffer 4.00 - 4.01 set/read      Standard 2 = \_\_\_\_\_ umhos/cm  
 Buffer 10.0 - 10.00 set/read      Cond. Meter Reads ~1400 for Std. 1  
 Buffer 7.00 - 6.99 read      Cond. Meter Reads \_\_\_\_\_ for Std. 2

Thermometer: Date and Time 1/1 : \_\_\_\_ : \_\_\_\_  
 Standard - Reading: \_\_\_\_\_ Therm. Reading: \_\_\_\_\_ Correction Factor: \_\_\_\_\_

Field Observations:

WELL LOCKED AND IN GOOD CONDITION

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GTC Crew Members: BOB URBAN BOB TUNNINGLET

B. Mack

Supervisors Signature

GENERAL TESTING CORPORATION  
GROUNDWATER MONITORING FIELD FORM

Site Location: LANCASTER Job Number: R89/299 : 6+16

Weather: OVERCAST 40°F LIGHT WINDS

Well ID: W-B

PURGE INFORMATION

Purge Method: 2" PUC BAILER

Volume Calculation-

Well Depth (ft) 34.40  
Static Water Level (ft) 13.36  
Depth of Water Column (ft) 21.04  
Well Constant (gal/ft) x 0.16  
Volume Standing in Well 3.36 gallons

-Groundwater Elevation Calculation-

Well Elevation (ft) MSL \_\_\_\_\_  
Static Water Level (ft) \_\_\_\_\_  
Groundwater Elev. MSL \_\_\_\_\_ ft

Well Constants-

0.16 gal/ft = 2" OD well, 0.65 gal/ft = 4" OD well, Calc. to Determine Constant:  
Constant x =  $\frac{0.7854 \times (\text{casing diameter in inches})^2 \times 12}{231}$

Start Purge: Date 2/1/89, Time 12:00, Purging Observation/Measurements  
Total Volume Purged: 10.0 gallons CLEAR  
of Volume Casings purged: 3

Sampling Information: Sample Method 1 3/4" STAINLESS STEEL BAILER  
Sample Date: 2/2/89 Time: 11:20  
Sample Depth 13.40 ft; Time Elapsed \_\_\_\_\_ hours  
Sample Appearance: CLEAR, NO APPARENT ODOR

GENERAL TESTING CORPORATION  
GROUNDWATER MONITORING FIELD FORM  
(CONTINUED)

6+16

Field Measurements:

Meter Number	Parameter	Unit	Replicate 1	Replicate 2	Replicate 3	Replicate 4
BECKMAN	pH	Std.	6.88	6.90	/	/
GTC 08	Spec. Cond.	umhos/cm	2900	3000	/	/
	Spec. Grav.				/	/
BECKMAN	Temperature	°C	5.2	5.2	/	/

SAMPLING HANDLING PROCEDURES

Number of Bottles Taken       Field Filtered (Y or N), Date/Time 2/2/89 12:45  
 Field Preservation (Y or N)       Field Meter Calibrations Date/Time 2/2/89 09:30

METER CALIBRATIONS

pH: Buffer 7.00 - 6.99 set      Cond: Standard 1 = 1413 umhos/cm  
 Buffer 4.00 - 4.01 set/read      Standard 2 = \_\_\_\_\_ umhos/cm  
 Buffer 10.0 - 10.00 set/read      Cond. Meter Reads ~1400 for Std. 1  
 Buffer 7.00 - 6.99 read      Cond. Meter Reads \_\_\_\_\_ for Std. 2

Thermometer: Date and Time 1/1 \_\_\_\_\_ : \_\_\_\_\_  
 Standard - Reading: \_\_\_\_\_ Therm. Reading: \_\_\_\_\_ Correction Factor: \_\_\_\_\_

Field Observations:

WELL LOCKED AND IN GOOD CONDITION

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GTC Crew Members: BOB URBAN BOB TUNWINGLEY

B. Mackin  
 Supervisors Signature  
 152 of 264

GENERAL TESTING CORPORATION  
GROUNDWATER MONITORING FIELD FORM

Site Location: LANCASTER Job Number: R89/299 : S+K + QC

Weather: OVERCAST 40°F MODERATE WINDS

Well ID: W-A

PURGE INFORMATION

Purge Method: 2" PVC BAILER

-Volume Calculation-

Well Depth (ft) 26.80

Static Water Level (ft) - 8.93

Depth of Water Column (ft) 17.87

X, Well Constant (gal/ft) X 0.16

Volume Standing in Well 2.85 gallons

-Groundwater Elevation Calculation-

Well Elevation (ft) MSL \_\_\_\_\_

Static Water Level (ft) - \_\_\_\_\_

Groundwater Elev. MSL \_\_\_\_\_ ft

Well Constants-

0.16 gal/ft = 2" OD well, 0.65 gal/ft = 4" OD well, Calc. to Determine Constant: ]

$$\text{Constant } x = \frac{0.7854 \times (\text{casing diameter in inches})^2 \times 12}{231}$$

Start Purge: Date 2/1/89, Time 11:50, Purging Observation/Measurements

Total Volume Purged: 8.5 gallons SLIGHT REDISH TINT TURNING

# of Volume Casings purged: 3 CLEAR

Sampling Information: Sample Method 1 3/4" STAINLESS STEEL BAILER

Sample Date: 2/2/89 Time: 11:05

Sample Depth 8.95 ft; Time Elapsed \_\_\_\_\_ hours

Sample Appearance: CLEAR, NO APPARENT ODOR

GENERAL TESTING CORPORATION  
 GROUNDWATER MONITORING FIELD FORM  
 (CONTINUED)

5 + 15

Field Measurements:

Meter Number	Parameter	Unit	Replicate 1	Replicate 2	Replicate 3	Replicate 4
BECKMAN	pH	Std.	7.16	7.17		
GTC C-5	Spec. Cond.	umhos/cm	880	890		
	Spec. Grav.					
BECKMAN	Temperature	°C	5.6	5.7		

SAMPLING HANDLING PROCEDURES

Number of Bottles Taken  Field Filtered (Y or N), Date/Time 2/2/89 12:40  
 Field Preservation (Y or N)  Field Meter Calibrations Date/Time 2/2/89 09:30

METER CALIBRATIONS

Buffer 7.00 - 6.99 set      Cond: Standard 1 = 1413 umhos/cm  
 Buffer 4.00 - 4.01 set/read      Standard 2 = \_\_\_\_\_ umhos/cm  
 Buffer 10.0 - 10.00 set/read      Cond. Meter Reads ≈ 1400 for Std. 1  
 Buffer 7.00 - 6.99 read      Cond. Meter Reads \_\_\_\_\_ for Std. 2

Thermometer: Date and Time 1/1 \_\_\_\_\_ : \_\_\_\_\_  
 Standard - Reading: \_\_\_\_\_ Therm. Reading: \_\_\_\_\_ Correction Factor: \_\_\_\_\_

Field Observations:  
WELL LOCKED AND IN GOOD CONDITION  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

GTC Crew Members: BOB URBAN BOB TUNNINGLEY \_\_\_\_\_

B. Walker  
 Supervisors Signature 154 of 264

GENERAL TESTING CORPORATION  
GROUNDWATER MONITORING FIELD FORM

Site Location: LANCASTER Job Number: RB9/299 :A+14

Weather: OVERCAST 40°F MODERATE WINDS

Well ID: W-6A

PURGE INFORMATION

Purge Method: 3" PVC BAILEY

-Volume Calculation-

-Groundwater Elevation Calculation-

Well Depth (ft) 92.20

Well Elevation (ft) MSL \_\_\_\_\_

Static Water Level (ft) - 72.44

Static Water Level (ft) - \_\_\_\_\_

Depth of Water Column (ft) 19.76

Groundwater Elev. MSL \_\_\_\_\_ ft

X, Well Constant (gal/ft) X 0.50 (3.5")

Volume Standing in Well 9.8 gallons

[Well Constants-

[0.16 gal/ft = 2" OD well, 0.65 gal/ft = 4" OD well, Calc. to Determine Constant: ]

$$\text{Constant } x = \frac{0.7854 \times (\text{casing diameter in inches})^2 \times 12}{231}$$

Start Purge: Date 2/1/89, Time 11:00, Purging Observation/Measurements

Total Volume Purged: 30 gallons CLEAR, STRONG ODOR, WELL VENTING

# of Volume Casings purged: 3 GWS

Sampling Information: Sample Method 1 3/4" STAINLESS STEEL BAILEY

Sample Date: 2/2/89 Time: 10:45

Sample Depth 72.45 ft; Time Elapsed \_\_\_\_\_ hours

Sample Appearance: CLEAR, BLACK SUSPENDED PARTICLES

GENERAL TESTING CORPORATION  
GROUNDWATER MONITORING FIELD FORM

(CONTINUED)

4+14

Field Measurements:

Meter Number	Parameter	Unit	Replicate 1	Replicate 2	Replicate 3	Replicate 4
BECKMAN	pH	Std.	7.17	7.19		
GTC 09	Spec. Cond.	umhos/cm	930	940		
	Spec. Grav.					
BECKMAN	Temperature	°C	7.0	7.1		

SAMPLING HANDLING PROCEDURES

Number of Bottles Taken  Field Filtered (Y or N), Date/Time 2/2/89 12:35  
 Field Preservation (Y or N)  Field Meter Calibrations Date/Time 2/2/89 09:30

METER CALIBRATIONS

pH: Buffer 7.00 - 6.99 set Cond: Standard 1 = 1413 umhos/cm  
 Buffer 4.00 - 4.01 set/read Standard 2 = \_\_\_\_\_ umhos/cm  
 Buffer 10.0 - 10.00 set/read Cond. Meter Reads 31400 for Std. 1  
 Buffer 7.00 - 6.99 read Cond. Meter Reads \_\_\_\_\_ for Std. 2

Thermometer: Date and Time 1/1 : \_\_\_\_\_  
 Standard - Reading: \_\_\_\_\_ Therm. Reading: \_\_\_\_\_ Correction Factor: \_\_\_\_\_

Field Observations:

WELL LOCKED AND IN GOOD CONDITION  
WELL OFF-GASSING, STRONG ODOR,  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

GTC Crew Members: BOB URBAN BOB TONNINGER

B. Walsh  
 Supervisors Signature

GENERAL TESTING CORPORATION  
GROUNDWATER MONITORING FIELD FORM

Site Location: LANCASTER Job Number: R89/299 : 3+13

Weather: OVERCAST 40°F, MODERATE WINDS

Well ID: W-3

PURGE INFORMATION

Purge Method: 2" PVC BAILER

-Volume Calculation-

-Groundwater Elevation Calculation-

Well Depth (ft) 27.30

Well Elevation (ft) MSL \_\_\_\_\_

Static Water Level (ft) - 19.50

Static Water Level (ft) - \_\_\_\_\_

Depth of Water Column (ft) 7.80

Groundwater Elev. MSL \_\_\_\_\_ ft

X, Well Constant (gal/ft) X 0.16

Volume Standing in Well 6.25 gallons

Well Constants-

[ 0.16 gal/ft = 2" OD well, 0.65 gal/ft = 4" OD well, Calc. to Determine Constant: ]

$$\text{Constant } x = \frac{0.7854 \times (\text{casing diameter in inches})^2 \times 12}{231}$$

Start Purge: Date 2/1/89, Time 10:35, Purging Observation/Measurements

Total Volume Purged: 3.75 gallons CLEAR

# of Volume Casings purged: 3

Sampling Information: Sample Method 1 3/4" STAINLESS STEEL BAILER

Sample Date: 2/2/89 Time: 10:25

Sample Depth 19.50 ft; Time Elapsed \_\_\_\_\_ hours

Sample Appearance: SLIGHT BLACK TINT, SLIGHTLY TURBID

GENERAL TESTING CORPORATION  
GROUNDWATER MONITORING FIELD FORM

(CONTINUED)

3+13

Field Measurements:

Meter Number	Parameter	Unit	Replicate 1	Replicate 2	Replicate 3	Replicate 4
BECKMAN	pH	Std.	6.28	6.30	/	/
GTC-O.P.	Spec. Cond.	umhos/cm	1270	1280	/	/
	Spec. Grav.				/	/
BECKMAN	Temperature	°C	5.0	5.0	/	/

SAMPLING HANDLING PROCEDURES

Number of Bottles Taken       Field Filtered (Y or N), Date/Time 2/2/89 12:30  
 Field Preservation (Y or N)       Field Meter Calibrations Date/Time 2/2/89 09:30

METER CALIBRATIONS

pH: Buffer 7.00 - 6.99 set      Cond: Standard 1 = 1413 umhos/cm  
 Buffer 4.00 - 4.01 set/read      Standard 2 = \_\_\_\_\_ umhos/cm  
 Buffer 10.0 - 10.00 set/read      Cond. Meter Reads 2140 for Std. 1  
 Buffer 7.00 - 6.99 read      Cond. Meter Reads \_\_\_\_\_ for Std. 2

Thermometer: Date and Time 2/1 : \_\_\_\_\_  
 Standard - Reading: \_\_\_\_\_ Therm. Reading: \_\_\_\_\_ Correction Factor: \_\_\_\_\_

Field Observations:

WELL LOCKED AND IN GOOD CONDITION

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

GTC Crew Members: BOB URBAN BOB TUNNINGLEY

B. Macle  
Supervisors Signature 158 J-264

GENERAL TESTING CORPORATION  
GROUNDWATER MONITORING FIELD FORM

Site Location: LANE HOLE R Job Number: R89/299 : 2+12

Weather: OVERCAST 40°F, MODERATE WINDS

Well ID: W-1F

PURGE INFORMATION

Purge Method: 3" PVC BAILER

-Volume Calculation-

-Groundwater Elevation Calculation-

Well Depth (ft) 31.80

Well Elevation (ft) MSL \_\_\_\_\_

Static Water Level (ft) - 10.32

Static Water Level (ft) - \_\_\_\_\_

Depth of Water Column (ft) 21.48

Groundwater Elev. MSL \_\_\_\_\_ ft

X, Well Constant (gal/ft) X 0.16

Volume Standing in Well 3.44 gallons

[Well Constants-

[0.16 gal/ft = 2" OD well, 0.65 gal/ft = 4" OD well, Calc. to Determine Constant: ]

[ Constant x =  $\frac{0.7854 \times (\text{casing diameter in inches})^2 \times 12}{231}$  ]

Start Purge: Date 2/1/89, Time 10:15, Purging Observation/Measurements

Total Volume Purged: 1063 gallons CLEAR

# of Volume Casings purged: 3

Sampling Information: Sample Method 1 3/4" STAINLESS STEEL BAILER

Sample Date: 2/2/89 Time: 10:00

Sample Depth 10.33 ft; Time Elapsed \_\_\_\_\_ hours

Sample Appearance: TAN TINT, ORANGE SUSPENDED PARTICLES

GENERAL TESTING CORPORATION  
GROUNDWATER MONITORING FIELD FORM  
(CONTINUED)

2+12

Field Measurements:

Meter Number	Parameter	Unit	Replicate 1	Replicate 2	Replicate 3	Replicate 4
BECKMAN	pH	Std.	7.06	7.07	/	/
GTCGE	Spec. Cond.	umhos/cm	1130	1140	/	/
	Spec. Grav.				/	/
BECKMAN	Temperature	°C	4.7	4.7	/	/

SAMPLING HANDLING PROCEDURES

Number of Bottles Taken       Field Filtered (Y or N), Date/Time 2/2/89 12:25  
 Field Preservation (Y or N)       Field Meter Calibrations Date/Time 2/2/89 09:30

METER CALIBRATIONS

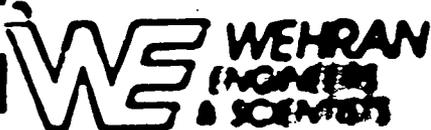
pH: Buffer 7.00 - 6.99 set      Cond: Standard 1 = 1413 umhos/cm  
 Buffer 4.00 - 4.01 set/read      Standard 2 = \_\_\_\_\_ umhos/cm  
 Buffer 10.0 - 10.00 set/read      Cond. Meter Reads 21400 for Std. 1  
 Buffer 7.00 - 6.99 read      Cond. Meter Reads \_\_\_\_\_ for Std. 2

Thermometer: Date and Time 1 : \_\_\_\_\_  
 Standard - Reading: \_\_\_\_\_ Therm. Reading: \_\_\_\_\_ Correction Factor: \_\_\_\_\_

Field Observations:  
WELL LOCKED AND IN GOOD CONDITION  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

GTC Crew Members: BOB URBAN BOB TUNNING-LEY \_\_\_\_\_

B Macken  
 Supervisors Signature 160 of 264



February 9, 1989

Mr. Robert Murray  
New York State Department  
of Environmental Conservation  
600 Delaware Avenue  
Buffalo, New York 14202

*Logged in nb  
MMI 2/21/88*

**Re Lancaster Sanitary Landfill  
Groundwater Monitoring  
WE Project No. 9035 ST**

*File Lancaster Sanitary LF  
Groundwater Monitoring  
Data 1988*

Dear Mr. Murray:

Enclosed are the analytical results, field data sheets, and chain of custody forms for groundwater samples collected at the Lancaster Sanitary Landfill on November 22, 1988. Sampling during this period included the four on-site wells (W-3, W-5, W-6A, and W-8) and six wells (W-A through W-F) along the New York State Thruway, southwest and essentially downgradient of the landfill. A total depth measurement was obtained for monitoring well W-7, which apparently indicates an 11.6 foot discrepancy between the total depth recorded on the drilling log (64.5 ft) and the total depth measurement recently obtained (52.9 ft). It appears that an obstruction is blocking the well and preventing sampling. As indicated in the attached analytical report, the sampling personnel indicate that possible cave-in has occurred blocking the well. Additionally, a final attempt was made to retrieve the bailer in monitoring well B-24D, however, the bailer was not retrieved and prevents further sampling of this well. The purging and sampling was conducted by General Testing Corporation (GTC) personnel. All samples were delivered to the GTC laboratory in Rochester, NY at the end of the day.

Regarding the two upgradient wells W-6A, and W-5, most parameters were within range of previous data for these wells. However, the TOC concentration in W-6A (280 mg/l) significantly increased this period compared to the last semi-annual round (3.56 mg/l). It is unknown at this time what may be the cause for this elevated concentration, though all other parameters were within acceptable limits. Additionally, the soluble iron concentration in W-5 (0.328 mg/l) increased relative to the past several rounds of testing for this well. No organic compounds were detected above the minimum detection limits (MDL) for either well.

The two on-site downgradient wells, W-3 and W-8, exhibited slight variations in parameter concentrations relative to historical data. Monitoring well W-3 exhibited relatively unchanged concentrations of the water quality parameters and a general decrease in the metal concentrations was noted. The chloride

*161 of 264*

20.2/89.9035.B

February 9, 1989

concentration in W-8 (66.2 mg/l) exhibited a marked decrease relative to the last semi-annual event (906 mg/l). There were no organic parameters detected above the MDL in either well.

The remaining wells located downgradient of the facility exhibited no major changes in parameter concentrations relative to previous monitoring data for these wells. Monitoring well W-A exhibited slight changes, a soluble iron concentration (0.582 mg/l) which was slightly elevated compared to past concentrations for this well. No organic compounds were detected above the MDL for this well. Monitoring well W-B exhibited no changes and no organic compound concentrations above the MDL. Monitoring well W-C exhibited an overall decrease in many of the parameters tested. The TOC concentration dropped to 22.5 mg/l compared to 83.5 mg/l last quarter. The metal concentrations (both total and soluble) generally decreased as well, compared to previous quarters. Benzene was the only organic compound detected this period in W-C (2.1 ug/l).

The remaining downgradient wells W-D, W-E, and W-F exhibited relatively little change in the groundwater chemistry. Monitoring well W-D exhibited some minor decreases in the metal concentrations relative to last quarter, and no organic compounds were detected above the MDL. Monitoring well W-E, an overburden monitoring well located south of the New York State Thruway, also exhibited some minor decreases in the metal parameters. Trichloroethene (TCE) was however, detected at a concentration of 2.5 mg/l. No other organic compounds were detected above the MDL for this well. The metal concentrations in Monitoring well W-F decreased slightly and all other parameters were within historical ranges. No organic parameters were observed in samples from this well.

Should you have any questions or wish to discuss these analytical results in more detail, please do not hesitate to call.

Very truly yours,

WEHRAN-NEW YORK, INC.

*Sheldon S. Nozik*  
Sheldon S. Nozik  
Staff Hydrogeologist

SSN/asb  
Enclosures

cc: T. Welsh - Gunville Energy  
M. McIntosh - NYSDEC

app. *RF*

162 of 264

PROJECT NAME: LANCASTER SANITARY LANDFILL

PROJECT NO.: 09035 S\*

DATE: PRE PURGE 11/21/88 PRE SAMPLE 11/22/88

WELL NO.	T.O.C. ELEV.	GROUN ELEV.	WELL DEPTH (ft)	PRE-PURGE DEPTH (ft)	ELEV.	PRE-SAMPLE DEPTH (ft)	ELEV.
W-3	738.84	734.85	27.3	20.7	718.14	20.70	718.14
W-5	764.46	762.06	66.2	36.3	728.18	36.30	726.18
W-6A	753.91	752.91	92.2	82.6	673.31	82.60	673.31
W-7	763.26	761.36	64.5	NA	763.26	NA	NA
W-8	732.61	729.11	68.0	NA	732.61	CASCADING	
W-A	723.78	723.98	25.8	7.8	717.98	8.00	717.78
W-B	732.18	730.78	34.4	12.3	719.88	13.00	719.18
W-C	732.51	730.61	49.4	47.4	685.11	47.50	685.01
W-D	736.75	735.22	33.70	18.0	718.75	18.10	718.65
W-E	755.84	754.34	30.00	26.1	729.74	26.10	729.74
W-F	729.30	728.05	31.80	6.9	722.40	8.00	721.30
W-B24D	787.42	784.82	81.90	NA	787.42	NS	

NOTES

WELL 7 APPEARS TO BE BLOCKED

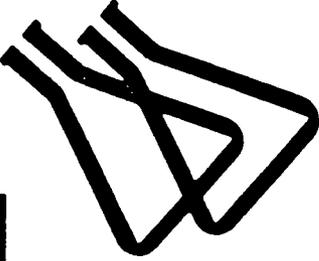
WELL 8 IS CASCADING AND NO WATER LEVEL IS OBTAINABLE

WELL B24D CANNOT BE SAMPLED

NA= DATA NOT AVAILABLE

NS= NOT SAMPLED

general  
testing  
corporation



rochester, n.y.

164 of 264  
hackensack, n.j.

RECEIVED JAN 9 1989

general  
testing  
corporation

water and wastewater testing specialists

710 Exchange Street  
Rochester, NY 14608  
(716) 454-3780

85 Trinity Place  
Hackensack, NJ 07601  
(201) 488-5242

January 9, 1989

Mr. Sheldon Mosk  
Mehron Engineers  
2541 Roseline Rd.  
Grand Island, NY 14072

Re: Lancaster Sanitary Landfill

Dear Mr. Mosk:

Enclosed please find Analytical results for the quarterly monitoring of the Lancaster Sanitary Landfill. On November 22, 1988, our laboratory sampled thirteen (13) groundwater monitoring wells which were analyzed for all parameters specified in the contract.

All Analytical results for laboratory numbers R88/4080 and R88/4081 are presented in Section A. Quality Control data specific to these projects is given in Section B. Analytical Chronology and pertinent Documentation to be given in Sections C and D, respectively.

Please review the enclosed package and call if any questions should arise.

Sincerely,

GENERAL TESTING CORPORATION



Tracey G. Nichols  
Client Representative

TGN/lg

Encs.

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general testing  
corporation

GTC REPORT# R88/4080 & R88/4081

REPORT INDEX  
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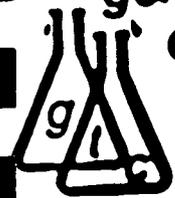
SECTION A: Analytical Results

SECTION B: Quality Control Data

SECTION C: Analytical Chronology

SECTION D: Documentation

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corporation

GTC REPORT #R88/4080 & R88/4081

SECTION A  
ANALYTICAL RESULTS

Presented in this section is analytical data for the parameters requested. The following references concerning units and analytical methodology apply to the data provided herein.

Units: Inorganics - all results reported in mg/L unless otherwise specified  
Organics - All results reported in ug/L

Analytical Methodology Obtained From:

( ) Federal Register, 40 CFR Part 136, Guidelines Establishing Test Procedures for the analyses of Pollutants under the Clean Water Act, 10/26/84.

(x) SW-846, Test Methods for Evaluating Solid Waste, 3rd Edition, 11/86.

( ) Other

# general testing corporation

water and wastewater testing specialists

710 Exchange Street  
Rochester, NY 14608  
(716) 454-3760

88 Trinity Place  
Hackensack, NJ 07601  
(201) 488-5242

Job No: R88/04080

Date: DEC. 30 1988

## LABORATORY REPORT

Sample(s) Reference:

Lancaster Landfill

Client:

Mr. Sheldon Nozik  
Wehran Engineers  
2451 Baseline Road  
Grand Island, NY 14072

P.O. #:

: 11/22/88

Collected

ANALYTICAL UNITS - mg/l

Sample Location	-001 W-6A	-002 W-5	-003 W-3	-004 W-3 Dup	-005 W-F	-006 W-8	-007 W-A	-008 W-8
Date Collected	11/22/88	11/22/88	11/22/88	11/22/88	11/22/88	11/22/88	11/22/88	11/22/88
Time Collected	09:00	09:25	09:50	09:50	10:00	10:20	10:50	10:58
pH	7.29	7.68	7.13	7.15	7.26	7.82	7.41	6.97
Spec. Cond. (umhos/cm)	1095	545	450	460	875	695	875	2550
Temperature °C	8.0	10.0	7.0	7.0	8.0	13.8	14.0	13.8
Chloride	206	1.88	25.6	24.3	127	66.2	139	425
Alkalinity, Total	293	217	150	180	233	227	203	323
Total Organic Carbon	280	1.63	10.1	10.1	5.66	3.07	4.08	5.38
Nitrogen, Ammonia	0.228	0.416	0.378	0.269	0.323	0.920	0.950	0.195
Nitrogen, Nitrate	<0.05	<0.05	0.11	0.09	0.18	2.2	<0.05	0.11
Nitrogen, Nitrite	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrogen, Nitrate/Nitrite	<0.05	<0.05	0.11	0.09	0.18	2.2	<0.05	0.11
Iron, Total	4.19	0.544	6.34	3.76	0.461	0.849	0.866	0.130
Iron, Soluble								
Manganese, Total	0.067	<0.010	0.035	0.024	0.087	1.43	0.011	0.096
Manganese, Soluble								
Scan 8010/8020	**	**	**	**	**	**	**	**

\*\*See attached data

Analytical procedures in accordance with Standard Methods for the Examination of Water and Wastewater, 15th Edition and Methods for Chemical Analysis of Water and Wastes, EPA. (<) indicates lowest detectable concentration with procedure used. Data on quality control performed with above sample(s) is available

*Michael K Perry*

Laboratory Director

168 of 264

# general testing corporation

water and wastewater testing specialists

710 Exchange Street  
Rochester, NY 14608  
(716) 454-3760

85 Trinity Place  
Hackensack, NJ 07601  
(201) 488-5242

## LABORATORY REPORT

Job No: R88/04080

Date: DEC. 30 1988

**Client:**

Mr. Stephen Beck  
Urban Engineers  
3000 Rosaline Road  
Grand Island, NY 14072

Sample(s) Reference:

Lancaster Landfill

Collected

: 11/22/88

P.O. #:

ANALYTICAL UNITS - mg/l

Sample	-017	-018	-019	-020	-021	-022	-023	-024
Location	W-3	W-F	W-8	W-A	W-B	W-C	W-D	W-E
Date Collected	11/22/88	11/22/88	11/22/88	11/22/88	11/22/88	11/22/88	11/22/88	11/22/88
Time Collected	09:50	10:00	10:20	10:50	10:58	11:05	11:20	11:22
pH								
Spec. Cond. (estimated)								
Temperature °F								
Chloride								
Alkalinity, Total								
Total Organic Carbon								
Nitrogen, Ammonia								
Nitrogen, Nitrate								
Nitrogen, Nitrite								
Nitrogen, Ammonia/Nitrite/Nitrate								
Iron, Total								
Iron, Soluble	0.132	0.061	0.061	0.582	<0.050	2.99	0.086	<0.050
Manganese, Total								
Manganese, Soluble	0.048	0.075	0.013	0.010	0.033	0.424	0.042	<0.010
Scan 0014/0010								

\*\*See attached data

Analytical procedures in accordance with Standard Methods for the Examination of Water and Wastewater, 15th Edition and Methods for Chemical Analysis of Water and Wastes, EPA. (<) indicates lowest detectable concentration with procedure used. Data on quality control performed with above sample(s) is available upon request.

*Michael K. Perry*  
Laboratory Director

169 of 264

# general testing corporation

water and wastewater testing specialists

710 Exchange Street  
Rochester, NY 14608  
(716) 454-3760

85 Trinity Place  
Hackensack, NJ 07601  
(201) 488-5242

## LABORATORY REPORT

Job No: R88/04080

Date: DEC. 30 1988

**Client:**

Mr. William Mosk  
Water Engineers  
3511 Cassin Road  
Grand Island, NY 14072

**Sample(s) Reference:**

Lancaster Landfill

**Collected**

: 11/22/88

P.O. #:

**ANALYTICAL UNITS - mg/l**

Sample Location	-009 ✓	-010 ✓	-011 ✓	-012 ✓	-013 ✓	-014 ✓	-015 ✓	-016 ✓
	W-C	W-D	W-E	Field Blank	Trip Blank	W-6A	W-5	W-3
Date Collected	11/22/88	11/22/88	11/22/88	11/22/88	11/22/88	11/22/88	11/22/88	11/22/88
Time Collected	11:05	11:22	11:20	12:00	07:15	09:00	09:25	09:50

pH	7.38	7.14	7.14	7.56				
Spec. Cond. (µmhos/cm)	2590	2550	565	0.14				
Temperature °C	15.3	14.3	14.3	14.0				
Chloride	303	516	6.63	<1.00				
Alkalinity, Total	300	277	197	<2.0				
Total Organic Carbon	22.5	5.07	2.45	<1.00				
Nitrogen, Ammonia	0.856	0.195	0.919	0.811				
Nitrogen, Nitrate	<0.05	0.18	0.56	<0.05				
Nitrogen, Nitrite	<0.05	<0.05	<0.05	<0.05				
Nitrogen, Orthophosphate	<0.05	0.18	0.56	<0.05				
Iron, Total	0.19	0.720	0.613	0.052				
Iron, Soluble						1.61	0.328	0.156
Manganese, Total	0.954	0.027	0.061	<0.010				
Manganese, Soluble						0.076	0.019	0.021
Scan 0112/0110	**	**	**	**	**			

\*\*See attached data

Analytical procedures in accordance with Standard Methods for the Examination of Water and Wastewater, 15th Edition and Methods for Chemical Analysis of Water and Wastes, EPA. (<) indicates lowest detectable concentration with procedure used. Data on quality control performed with above sample(s) is available upon request.

*Michael K. Perry*  
Laboratory Director

170 of 264

710 Exchange Street  
Rochester, NY 14608  
(718) 454-3760

85 Trinity Place  
Hackensack, NJ 07601  
(201) 488-5242

# general testing corporation

Job No: R88/04081

Date: DEC. 9 1988

## LABORATORY REPORT

Sample(s) Reference:

Lancaster Landfill

Client:

Mr. Sheldon Nozik  
Wehran Engineering  
2451 Baseline Road  
Grand Island, NY 14072

P.O. #:

Collected

: 11/22/88

ANALYTICAL UNITS - mg/l

Sample:	-001 ✓	-002 ✓						
Location:	W-E	W-E						
Date Collected:	11/22/88	11/22/88						
Time Collected:	11:22	11:22						
Lead, Furnace	<0.0050							
Lead, Soluble-Furnace		<0.0050						

Michael K. Perry  
Laboratory Director

Analytical procedures in accordance with Standard Methods for the Examination of Water and Wastewater, 15th Edition and Methods for Chemical Analysis of Water and Wastes, EPA. (<) indicates lowest detectable concentration with procedures used. Data on quality control performed with above sample(s) is available upon request.

# general testing corporation

710 Exchange Street  
Rochester, NY 14608  
(716) 454-3760

85 Trinity Place  
Hackensack, NJ 07601  
(201) 488-5242

## LABORATORY REPORT

Job No: R88/04080

Date: DEC. 30 1988

**Client:**

Mr. Sheldon Nozik  
Mehran Engineers  
2451 Baseline Road  
Grand Island, NY 14072

**Sample(s) Reference:**

Lancaster Landfill

Collected

: 11/22/88

P.O. #:

ANALYTICAL UNITS - mg/l

Sample:	-026						
Location:	Field						
	Blank						
Date Collected:	11/22/88						
Time Collected:	12:00						

pH							
Spec. Cond. (uS/cm)							
Temperature °C							
Chloride							
Alkalinity, Total							
Total Organic Carbon							
Nitrogen, Ammonia							
Nitrogen, Nitrate							
Nitrogen, Nitrite							
Nitrogen, Nitrate/Nitrite							
Iron, Total							
Iron, Soluble	<0.050						
Manganese, Total							
Manganese, Soluble	<0.010						
Scan 8010/8020							

Analytical procedures in accordance with Standard Methods for the Examination of Water and Wastewater, 15th Edition and Methods for Chemical Analysis of Water and Wastes, EPA. (<) indicates lowest detectable concentration with procedure used. Data on quality control performed with above sample(s) is available upon request.

*Michael K. Perry*

Laboratory Director

172 of 264

# general testing corporation



water and wastewater testing specialists

710 Exchange Street  
Rochester, NY 14608  
(716) 454-3760

85 Trinity Place  
Hackensack, NJ 07601  
(201) 488-8242

## LABORATORY REPORT

Job No: R88/04080

Date: JAN. 18 1989

**Client:**

Mr. Sheldon Berk  
Urban Engineers  
3011 Casselino Road  
Great Neck, NY 11072

**Sample(s) Reference:**

Lancaster Landfill  
\*\*\*CORRECTED COPY\*\*\*

Collected

: 11/22/88

P.O. #:

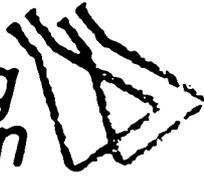
ANALYSIS • BY GC METHOD 8010/8020	ANALYTICAL UNITS - ug/l							
	-001	-002	-003	-004	-005	-006	-007	-008
Sample	W-4	W-5	W-3	W-3	W-F	W-8	W-A	W-B
Location				Dup				
Date Collected	11/22/88	11/22/88	11/22/88	11/22/88	11/22/88	11/22/88	11/22/88	11/22/88
Time Collected	09:00	09:25	09:50	09:50	10:00	10:20	10:50	10:58
Date Analyzed	11/28/88	11/28/88	11/28/88	11/29/88	11/28/88	11/28/88	11/28/88	11/28/88
Vinyl Chloride	<2	<2	<2	<2	<2	<2	<2	<2
Methylene Chloride	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	<1	<1	<1	<1	<1	<1	<1	<1
Benzene	<2	<2	<2	<2	<2	<2	<2	<2
Toluene	<2	<2	<2	<2	<2	<2	<2	<2
Ethylbenzene	<2	<2	<2	<2	<2	<2	<2	<2

*Michael K. Perry*  
Laboratory Director

Analytical procedures in accordance with Standard Methods for the Examination of Water and Wastewater, 15th Edition and Methods for Chemical Analysis of Water and Wastes, EPA. (<) indicates lowest detectable concentration with procedures used. Data on quality control performed with above sample(s) is available upon request.

173 of 264

# general testing corporation



water and wastewater testing specialists

710 Exchange Street  
Rochester, NY 14608  
(716) 454-3760

85 Trinity Place  
Hackensack, NJ 07601  
(201) 488-5242

## LABORATORY REPORT

Job No: R88/04080

Date: JAN. 18 1989

**Client:**

Mr. Sheldon Beak  
Sheldon Engineers  
2000 Beechline Road  
Grand Island, NY 14072

**Sample(s) Reference:**

Lancaster Landfill  
\*\*\*CORRECTED COPY\*\*\*

**Collected**

: 11/22/88

P.O. #:

**ANALYSIS • BY GC METHOD 8010/8020 ANALYTICAL UNITS - ug/l**

Sample Location	-009 P-C	-010 W-D	-011 W-E	-012 Field Blank	-013 Trip Blank		
Date Collected	11/22/88	11/22/88	11/22/88	11/22/88	11/22/88		
Time Collected	11:05	11:20	11:20	12:00	07:15		
-----							
Date Analyzed	11/28/88	11/29/88	11/29/88	11/30/88	11/30/88		
Vinyl Chloride	<2	<2	<2	<2	<2		
Methylene Chloride	<1	<1	<1	<1	<1		
Trichloroethene	<1	<1	2.5	<1	<1		
Benzene	2.1	<2	<2	<2	<2		
Toluene	<2	<2	<2	<2	<2		
Ethylbenzene	<2	<2	<2	<2	<2		

*Michael K. Perry*

Laboratory Director

Analytical procedures in accordance with Standard Methods for the Examination of Water and Wastewater, 15th Edition and Methods for Chemical Analysis of Water and Wastes, EPA. (<) indicates lowest detectable concentration with procedures used. Data on quality control performed with above sample(s) is available upon request.

# general testing corporation

710 Exchange Street  
Rochester, NY 14608  
(716) 454-3760

85 Trinity Place  
Hackensack, NJ 07601  
(201) 488-5242

## LABORATORY REPORT

Job No: R88/04080

Date: DEC. 30 1988

**Client:**

Dr. Stephen Smith  
Water Engineers  
1014 Mountain Road  
Orangetown, NY 14072

Sample(s) Reference:

Lancaster Landfill

Collected

: 11/22/88

P.O. #:

ANALYSIS • BY GC METHOD 8010/8020		ANALYTICAL RESULTS - %						
Sample	-001	-002	-003	-004	-005	-006	-007	-008
Label	W-6A	W-5	W-3	W-3 Dup	W-F	W-8	W-A	W-B
Date Collected	11/22/88	11/22/88	11/22/88	11/22/88	11/22/88	11/22/88	11/22/88	11/22/88
Time Collected	09:00	09:25	09:50	09:50	10:00	10:20	10:50	10:58
<b>SUBSTRATE (GRANULES) RECOVERY</b>								
<b>2 Recovery</b>								
Bromochloroethane (Acceptance Limit: 60-127%)	114%	108%	104%	123%	105%	105%	91%	101%
2-Bromo-1-chloropropane (Acceptance Limit: 60-124%)	108%	101%	101%	117%	96%	101%	87%	88%
1,1,1-Trifluoroethane (Acceptance Limit: 60-122%)	99%	91%	97%	99%	91%	85%	73%	81%

\*SW-846, Test Methods for Evaluating Solid Waste, 3rd Edition, 11/86

NY LABORATORY CERTIFICATION ID#: 10145

NJ ID#: 73331 in Rochester;

NJ ID#: 02317 in Hackensack

*Michael K. Perry*

Laboratory Director

# general testing corporation

710 Exchange Street  
Rochester, NY 14608  
(716) 454-3760

85 Trinity Place  
Hackensack, NJ 07601  
(201) 488-5242

## LABORATORY REPORT

Job No: R88/04080

Date: DEC. 30 1988

**Client:**

Mr. Sheldon Mosk  
Mosk Engineers  
3451 Baseline Road  
Grand Island, NY 14072

**Sample(s) Reference:**

Lancaster Landfill

**Collected**

: 11/22/88

P.O. #:

ANALYSIS • BY GC METHOD 8010/8020	ANALYTICAL RESULTS - %				
	-009	-010	-011	-012	-013
Sample	W-C	W-D	W-E	Field	Trip
Label				Blank	Blank
Date Collected	11/22/88	11/22/88	11/22/88	11/22/88	11/22/88
Time Collected	11:05	11:20	11:22	12:00	07:15
<b>SUBSTITUTE STANDARD CONCENTRATIONS</b>					
<b>2 Recovery</b>					
1-Bromochloroethane (Acceptance Limits: 63-137%)	98%	115%	117%	121%	120%
2-Bromo-1-chloroethane (Acceptance Limits: 68-134%)	87%	112%	105%	116%	109%
1,1,1-Trifluoroethane (Acceptance Limits: 60-132%)	76%	100%	87%	102%	99%

\*SW-846, Test Methods for Evaluating Solid Waste, 3rd Edition, 11/86  
 NY LABORATORY CERTIFICATION ID#: 10145  
 NJ ID#: 73331 in Rochester;  
 NJ ID#: 02317 in Hackensack

*Michael K. Peiny*  
 Laboratory Director

September 30, 1988

Mr. Robert Mitrey  
New York State Department  
of Environmental Conservation  
600 Delaware Avenue  
Buffalo, NY 14202

*logged in nb  
NO  
letter 10/14/88*

RE: Lancaster Sanitary Landfill  
Groundwater Monitoring  
WE Project No. 9035 ST

Dear Mr. Mitrey:

Enclosed are the analytical results, field data sheets, and chain of custody forms for groundwater samples collected at the Lancaster Sanitary Landfill on August 8, 1988. Sampling during this period was performed for three on-site wells (W-3, W-6A, and W-8) and six wells (W-A through W-F) along the New York State Thruway, southwest and essentially downgradient of the landfill. Monitoring well W-7 continues to be dry. Monitoring well W-C did not fully recharge following purging and therefore all parameters were not able to be analyzed. All samples were delivered to General Testing Corporation (GTC) in Rochester, NY at the end of the day.

The results of the semi-annual analyses indicate that there were generally minor concentration variations for most conventional parameters. The alkalinity values were generally within the range of historical values for most wells. The most significant changes in alkalinity values were exhibited in wells W-3 and W-D. The alkalinity value in W-3 increased to 716 mg/l this round compared to 145 mg/l last round. The alkalinity value for W-D rose to 670 mg/l this round compared to 288 mg/l last sampling period. The ammonia concentrations also remained generally unchanged except for W-3 which exhibited an increase in concentration (19.5 mg/l) relative to recent sampling rounds. A decrease in ammonia concentration was exhibited for W-B this round (<0.05 mg/l). The chloride concentrations remained within the range of past values for all wells with the exception of W-8 which exhibited an increase in concentration to 906 mg/l this round. Nitrate values remained relatively low during this round of monitoring. An increase in TOC values were exhibited for wells W-3 and W-C, this round (13.9 mg/l and 83.5 mg/l, respectively).

It should be noted that the sample obtained from W-3 was from the bottom of the well as indicated on the field sampling data sheet. Additionally, monitoring well W-C did not fully recharge during the sampling event and therefore, an insufficient amount of sample was available which precluded all of the analyses being performed. This sample was also obtained near the bottom of the well.

The metal analyses indicated that the concentration values of both total iron and soluble iron remained within the range of the historical analytical results for most wells. However, monitoring well W-3 exhibited an increase in concentration of total iron this round (47.4 mg/l) compared to the last round of testing (2.11 mg/l). Monitoring well W-C also exhibited an increase in total iron to 69.5 mg/l. Generally, values for both total manganese and soluble manganese were also within range of historical data for most wells. W-B indicated increases in levels of total manganese (2.3 mg/l) and soluble manganese (1.47 mg/l) relative to historical data. This was also evident for W-3 for soluble iron (21.3 mg/l). The concentration of total lead in W-E this round was 0.0072 mg/l.

With regard to the organic parameter analyses, benzene, and trichloroethylene were below detection limits this round in monitoring wells W-A, W-B, W-D, W-F, and W-6A. Benzene was detected in wells W-3 and W-C. The concentrations of benzene within the samples from these wells were 0.0187 mg/l and 0.0063 mg/l, respectively. Trichloroethene (TCE) was detected in W-3 (0.0082 mg/l), W-8 (0.0025 mg/l), W-C (0.0019 mg/l) and W-E (0.0010 mg/l). The concentrations of TCE exhibited within these samples are within range of historical values obtained for this compound at the site. Additionally, the detection of TCE appears to be sporadic and has not been found consistently during each sampling episode. This compound will be monitored closely in future sampling periods. The benzene concentrations, although elevated compared to historical data, also appear to be sporadic in nature. Previous detection of benzene has also not been consistent in each sampling period. This compound will also be closely monitored during future monitoring periods.

Mr. R. Mitrey

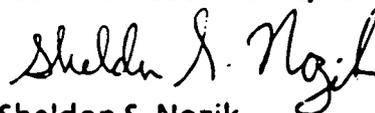
-3-

September 30, 1988

Should you have any questions or wish to discuss these analytical results in more detail, please do not hesitate to contact me.

Very truly yours,

WEHRAN NEW YORK, INC.



Sheldon S. Nozik  
Staff Geologist

SSN/asb  
Enclosures

cc: T. Welsh - Gunville Energy  
M. McIntosh - NYSDEC ✓

general  
testing  
corporation

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water and wastewater testing specialists

710 Exchange Street  
Rochester, NY 14608  
(716) 454-3780

85 Trinity Place  
Hackensack, NJ 07601  
(201) 488-5242

September 14, 1988

Mr. Sheldon Nozik  
Wehran Engineers  
2451 Baseline Road  
Grand Island, NY 14072

Re: Lancaster Sanitary Landfill

Dear Mr. Nozik:

Enclosed are analytical results for the quarterly monitoring of the Lancaster Sanitary Landfill. On August 4, 1988, our laboratory received nine groundwater samples which were analyzed for all parameters specified in the contract.

All analytical results are presented in Section A. Quality Control data specific to this project is given in Section B. Additional sections include a chronology (Section C) and pertinent documentation (Section D).

Please review the enclosed package and call if any questions should arise.

Sincerely,

GENERAL TESTING CORPORATION

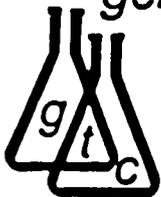
*Julie A Warner*

Julie A. Warner  
Client Representative

JAW:cms

Enc

180 of 264



general testing  
corporation

GTC REPORT # R88/02504

REPORT INDEX

Section A: Analytical Results

Section B: Quality Control

Section C: Chronology

Section D: Documentation



GTC REPORT # R88/02504

SECTION A

Presented in this section is analytical data for the parameters requested. The following references concerning units and analytical methodology apply to the data provided herein.

Units: Inorganics - mg/l  
Organics - ug/l

Analytical Methodology Obtained From:

- 
- ( ) Federal Register, 40 CFR Part 136, Guidelines Establishing Test Procedures for the analyses of Pollutants under the Clean Water Act, 10/26/84.
  - (X) SW-846, Test Methods for Evaluating Solid Waste, 3rd Edition, 9/86.
  - ( ) Other

# general testing corporation

710 Exchange Street  
Rochester, NY 14608  
(716) 454-3760

85 Trinity Place  
Hackensack, NJ 07601  
(201) 488-5242

## LABORATORY REPORT

Job No: R88/02504

Date: SEPT 16 1988

Client:

Mr. Sheldon Nozik  
Wehran Engineers  
2451 Baseline Road  
Grand Island, NY 14072

Sample(s) Reference:

Lancaster Sanitary Land

Received

: 8/4/88

P.O. #: 09035-ST

	ANALYTICAL UNITS - mg/l							
Sample:	-001	-002	-003	-004	-005	-006	-007	-008
Location:	W-D	W-E	W-F	W-8	W-A	W-B	W-C	W-3
Date Collected:	880804	880804	880804	880804	880804	880804	880804	880804
Time Collected:	1250	1330	1025	1350	1110	1148	1210	0910
pH	6.95	7.42	6.90	7.35	7.25	6.84	INS	6.06
Spec. Cond. (umhos/cm)	4580	561	1573	700	920	3800	INS	2600
Temperature °C	15.5	16.5	19.0	15.5	16.0	16.0	INS	16
Chloride	369	10.2	108	906	138	218	INS	204
Alkalinity, Total	670	323	236	296	220	396	INS	716
Total Organic Carbons	2.83	<1.00	6.22	1.63	1.50	2.76	83.5	13.9
Nitrogen, Ammonia	0.90	<0.05	0.91	<0.05	0.071	<0.05	0.78	19.5
Nitrogen, Nitrate/Nitrite	<0.05	1.87	<0.05	3.34	<0.05	0.10	<0.05	0.14
Iron, Total	4.42	1.99	0.968	0.335	1.32	0.178	69.5	47.4
Iron, Soluble	0.914	0.066	0.367	0.101	<0.050	<0.050		21.3
Manganese, Total	0.291	0.103	0.191	1.20	0.014	2.30	2.53	2.51
Manganese, Soluble	0.255	0.011	0.189	<0.010	0.012	1.47		2.37
EPA 8010/8020								
Benzene ug/l	<2	<2	<2	<2	<2	<2	6.3	18.7
Trichloroethene ug/l	<1	1.0	<1	2.5	<1	<1	1.9	8.2
Surrogate Recovery								
% Recovery								
Bromochloromethane	92%	101%	99%	75%	92%	84%	78%	108%
(Acceptance Limits 63-132%)								
2-Bromo-1-chloropropane	85%	94%	94%	67%	85%	77%	78%	101%
(Acceptance Limits 60-134%)								
a,a,a-Trifluorotoluene	100%	107%	91%	60%	88%	73%	66%	84%
(Acceptance Limits 60-132%)								

NA - Not analyzed due to insufficient sam  
INS - Insufficient sample volume to conduct analyses.

*Michael K. Perry*  
Laboratory Director

# general testing corporation

710 Exchange Street  
Rochester, NY 14608  
(716) 454-3780

85 Trinity Place  
Hackensack, NJ 07601  
(201) 488-5242

## LABORATORY REPORT

Job No: R88/02504

Date: SEPT 14 1988

Client:

Mr. Sheldon Nozik  
Wehran Engineers  
2451 Baseline Road  
Grand Island, NY 14072

Sample(s) Reference:

Lancaster Sanitary Landfill

Received

: 8/4/88

P.O. #: 09035-ST

ANALYTICAL UNITS - mg/l

Sample: -009 ✓  
Location: W-6A  
Date Collected: 8/4/88  
Time Collected: 09:45

pH 6.50  
Spec. Cond. (umhos/cm) 1600  
Temperature °C 16.5  
Chloride 143  
Alkalinity, Total 73.3  
Total Organic Carbons 3.56  
Nitrogen, Ammonia <0.05  
Nitrogen, Nitrate/Nitrite <0.05  
Iron, Total 2.15  
Iron, Soluble 0.818  
Manganese, Total 0.076  
Manganese, Soluble 0.084

EPA 8010/8020

Benzene ug/l <2  
Trichloroethene ug/l <1

Surrogate Recovery

% Recovery  
Bromochloromethane 117%  
(Acceptance Limits 63-132%)  
2-Bromo-1-chloropropane 113%  
(Acceptance Limits 60-134%)  
a,a,a-Trifluorotoluene 93%  
(Acceptance Limits 60-132%)

NA - Not analyzed due to insufficient sample

*Michael K. Perry*

Laboratory Director

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SECTION B

LABORATORY QUALITY CONTROL

Presented in this section is Quality Control associated with the data provided in Section A of this report.

Quality Control Explanations:

- 1) Run Quality Control- Selected QC data from the analytical run in which your sample(s) were involved.
- 2) Job Specific Quality Control- QC data specific to your set of samples.
- 3) Duplicates- Replicate analyses of a given sample used to monitor precision. Relative Percent Difference is calculated as the difference divided by the average x 100.
- 4) Matrix Spikes- Addition of a known amount of analyte to a sample. Recovery is calculated by subtracting original value attributable to the sample from the combined value. The difference is then divided by the amount added to calculate % recovery. Poor recoveries may indicate analytical interference due to the matrix of the sample. Any other samples of this same matrix may also have been affected, high or low as indicated by the % recovery.
- 5) Laboratory Blanks- Laboratory De-ionized water used to monitor for contamination during analysis.
- 6) Blank Spikes- Same as item #4 but analyte is added to laboratory de-ionized water. This indicates the accuracy of analysis.
- 7) Reference Check Samples- Samples from an outside source having a known concentration of analyte. Used as a measure of analytical accuracy.

When possible, all components of the above listed QC protocol are performed during an analytical run. The resulting data is compared to historical records when evaluating the quality of analytical runs. The data provided in your report has passed our Quality Assurance review.

Quality Control Notes:

GTC LABORATORY QUALITY CONTROL REPORT

REPORT TYPE: Job Specific

JOB # : R88/02504

UNITS: mg/l

CUSTOMER: Mehran Engineers

PARAMETER	SAMPLE	ORIGINAL	DUPLICATE	% REL.	ACCEPT.	AVERAGE	SPIKE	PERCENT	ACCEPT.	METHOD	SPIKE	PERCENT	ACCEPT.	REFERENCE	KNOWN	PERCENT	ACCEPT.	
		RESULT	RESULT	ERROR	LIMIT %	RESULT	ADDED	RECOVERY	LIMIT %	LIMIT %	BLANK	ADDED	RECOVERY	LIMITS %	#	VALUE	RECOVERY	LIMITS %
//////////		* PRECISION				* MATRIX SPIKING				BLANK SPIKES				REFERENCE STANDARD				
Alkalinity	-005	220	223	1.3%	10.0	222	100	91%	77-128	<2.0	20.0	100%	79-134	9917	184	106%	79-120	
Chloride	-005	138	136	1.5%	10.0	137	50	94%	81-119	<1.00	5.00	103%	80-124	REF STD	65.0	101%	90-110	
TOC	-005	1.50	1.47	2%	9.2	1.485	10.0	93%	72-125	<1.00	10.0	102%	93-122	REF CK	25.0	98%	85-111	
NH3	-005	0.071	0.069	2.9%	10.0	0.070	0.250	99%	73-127	<0.05	0.250	100%	84-121	REF STD	1.80	100%	86-110	
NO3/NO2	-005	<0.05	<0.05	NC	26.0	<0.05	0.250	108%	86-112	<0.05	0.250	98%	84-111	REF STD	1.80	101%	88-108	
Iron	-005	1.32	1.31	1.5%	21.2	<0.050	0.250	141%	51-143	<0.050	0.250	102%	67-137	CHK STD	0.250	99%	80-120	
Iron, Sol.	-005	<0.050	<0.050	NC	39.9	<0.050	0.250	126%	51-143	<0.050	0.250	102%	67-137	CHK STD	0.250	99%	80-120	
Manganese	-005	0.014	0.012	15%	24.2	0.014	0.050	78%	63-136	<0.010	0.050	100%	76-129	CK STD	0.050	92%	81-120	
Manganese Sol.	-005	0.012	0.012	0.0%	24.2	0.012	0.050	94%	63-136	<0.010	0.050	100%	76-129	CK STD	0.050	92%	81-120	
Benzene	-005	<2	<2	NC	30	<2	22.1	77%	63-123	<2				REF CHK	20.0	108%	39-150	
TCE	-005	<1	<1	NC	30	<1	23.1	86%	54-133	<1				REF CHK	20.0	88%	35-146	

\* Analytical results previous to accounting for dilutions.

\*\* Reference Check samples are not available for all analyses.

++ Outside of Quality Control Limits.

NC - Not Calculable

Benzene, TCE - ug/l

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EPC LABORATORY QUALITY CONTROL REPORT  
 .....

CUSTOMER: Mahran Engineers

JOB #: 808/82306

UNITS: ug/l

REPORT TYPE: Job Specific

PARAMETER	SAMPLE	ORIGINAL RESULT	DUPLICATE RESULT	% REL. ERROR	ACCEPT. LIMIT %	AVERAGE RESULT	SPIKE ADDED	PERCENT RECOVERY	ACCEPT. LIMIT %	METHOD BLANK	SPIKE ADDED	PERCENT RECOVERY	ACCEPT. LIMITS %	REFERENCE #	KNOWN VALUE	PERCENT RECOVERY	ACCEPT. LIMITS %
////////////////////		* PRECISION				* MATRIX SPIKING				BLANK SPIKES				REFERENCE STANDARD			
Benzene	-010									<2	( 8/10/88)						
Benzene	-011									<2	( 8/11/88)						
Benzene	-012									<2	( 8/12/88)						
Benzene	-013									<2	( 8/13/88)						
TCE	-010									<1	( 8/10/88)						
TCE	-011									<1	( 8/11/88)						
TCE	-012									<1	( 8/12/88)						
TCE	-013									<1	( 8/13/88)						

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 264

\* Analytical results previous to accounting for dilutions.    \*\* Reference Check samples are not available for all analyses.    ↔ Outside of Quality Control Limits.



October 6, 1988

*logged in by  
mm  
NO*

Mr. Robert Mitrey  
New York State Department  
of Environmental Conservation  
600 Delaware Avenue  
Buffalo, NY 14202

RE: Addendum to  
Quarterly Analytical Report  
Lancaster Sanitary Landfill  
WE Project No. 9035 ST

Dear Mr. Mitrey:

Enclosed please find an Addendum to the Quarterly Analytical Monitoring Report recently submitted to you for the above referenced site. This report represented analytical data from samples collected on August 4, 1988. The attached addendum includes the lead analysis for monitoring well W-E which was inadvertently omitted from the original submission. As indicated the total lead concentration (0.0072 mg/l) was below the 703 standard for Class GA groundwater (0.025 mg/l).

Should you have any questions please contact the undersigned.

Sincerely,  
WEHRAN-NEW YORK, INC.

*Sheldon A. Nozik*  
Sheldon Nozik  
Staff Geologist

SN/ab  
Enclosure  
cc: Mary McIntosh - DEC  
Tom Welsh - Gunville Energy

# general testing corporation

710 Exchange Street  
Rochester, NY 14608  
(716) 454-3760

85 Trinity Place  
Hackensack, NJ 07601  
(201) 488-5242

RECEIVED OCT 06 1988

## LABORATORY REPORT

Job No: R88/02504

Date: OCT. 4 1988

Client:

Mr. Sheldon Nozik  
Wehran Engineers  
2451 Baseline Road  
Grand Island, NY 14072

Sample(s) Reference:

Lancaster Sanitary Landfill  
\*\*\*CORRECTED COPY\*\*\*

Received

: 8/4/88

P.O. #: 09035-ST

ANALYTICAL UNITS - mg/l

Sample:	-001	-002	-003	-004	-005	-006	-007	-008
Location:	W-0	W-E	W-F	W-8	W-A	W-B	W-C	W-3
Date Collected:	8/4/88	8/4/88	8/4/88	8/4/88	8/4/88	8/4/88	8/4/88	8/4/88
Time Collected:	12:50	13:30	10:25	13:50	11:10	11:48	12:10	09:10
pH	6.95	7.42	6.90	7.35	7.25	6.84	INS	6.06
Spec. Cond. (umhos/cm)	4580	561	1573	700	920	3800	INS	2600
Temperature °C	15.5	16.5	19.0	15.5	16.0	16.0	INS	16
Chloride	369	10.2	108	906	138	218	INS	204
Alkalinity, Total	670	323	236	296	220	396	INS	716
Total Organic Carbons	2.83	<1.00	6.22	1.63	1.50	2.76	83.5	13.9
Nitrogen, Ammonia	0.90	<0.05	0.91	<0.05	0.071	<0.05	0.78	19.5
Nitrogen, Nitrate/Nitrite	<0.05	1.87	<0.05	3.34	<0.05	0.10	<0.05	0.14
Iron, Total	4.42	1.99	0.968	0.335	1.32	0.178	69.5	47.4
Iron, Soluble	0.914	0.066	0.367	0.101	<0.050	<0.050		21.3
Lead, Furnace		0.0072						
Lead, Soluble-Furnace		<0.0050						
Manganese, Total	0.291	0.103	0.191	1.20	0.014	2.30	2.53	2.51
Manganese, Soluble	0.255	0.011	0.189	<0.010	0.012	1.47		2.37
EPA 8010/8020								
Benzene ug/l	<2	<2	<2	<2	<2	<2	6.3	18.7
Trichloroethene ug/l	<1	1.0	<1	2.5	<1	<1	1.9	8.2
Surrogate Recovery								
-----								
% Recovery								
Bromochloromethane	92%	101%	99%	75%	92%	85%	78%	108%
(Acceptance Limits 63-132%)								
2-Bromo-1-chloropropane	85%	94%	94%	67%	85%	77%	78%	101%
(Acceptance Limits 60-134%)								
a,a,a-Trifluorotoluene	100%	107%	91%	60%	88%	73%	66%	84%
(Acceptance Limits 60-132%)								

INS - Insufficient sample volume to conduct analyses.

*Michael K. Perry*

Laboratory Director





mm  
extra copy  
file  
Forecasters

July 11, 1988

Mr. Robert Mitrey  
New York State Department  
of Environmental Conservation  
600 Delaware Avenue  
Buffalo, NY 14202

RE: Lancaster Sanitary Landfill  
Groundwater Monitoring  
WE Project No. 9035-ST

Dear Mr. Mitrey:

Enclosed are the analytical results, field data sheets, and chain of custody forms for groundwater samples collected at the Lancaster Sanitary Landfill on April 6, 1988. Sampling during this period was performed for four (4) on-site wells (W-3, W-5, W-6A, and W-8) and six (6) wells (W-A through W-F) along the New York State Thruway, southwest and essentially downgradient of the landfill. Monitoring well W-7 continues to be dry. All samples were delivered to Acts Testing Labs, Inc. in Buffalo at the end of the day.

The results of the semi-annual analyses indicate that there were minor concentration variations for most conventional parameters. The alkalinity values remained generally unchanged and were within the range of historical values for most wells. The most significant changes in alkalinity values were exhibited in wells W-3 and W-B. The alkalinity value in W-3 dropped to 145 mg/l this round compared to 640 mg/l last round. The alkalinity value for W-B rose to 698 mg/l this round compared to 407 mg/l last sampling period. The ammonia concentrations also remained

generally unchanged except for W-C which exhibited a decrease in concentration relative to recent sampling rounds. A slight increase in ammonia concentration was exhibited for W-B this round (5.3 mg/l). The chloride concentrations remained within the range of past values for all wells with the exception of W-3 which exhibited a marked decrease in concentration to 10.5 mg/l this round. Nitrate values remained relatively low during this round of monitoring, and TOC values generally exhibited a decrease for all wells this round.

The metal analyses indicated that the concentration values of both total iron and soluble iron remained within range of the historical analytical results for most wells. Concentrations of soluble iron for all wells were below the 703 standards. Monitoring well W-3 exhibited a marked decrease in concentration of total iron this round (2.11 mg/l) compared to the last round of testing (21.6 mg/l). Generally, values for both total manganese and soluble manganese were also within range of historical data for most wells. W-8 showed a significant decrease in levels of total manganese (2.3 mg/l) and soluble manganese (below detection limit) relative to historical data. The concentration of lead in W-E this round was below detection limits.

With regard to the organic parameter analyses, toluene, ethylbenzene, vinyl chloride, and trichloroethylene were all below detection limits this round. Methylene chloride was not detected in wells W-3, W-6A, W-A, W-F or in the blank field, and

was detected at slightly above the detection limits in the remaining wells. Benzene was below detection limits in wells W-3, W-6A, W-A and W-F. The highest concentration of benzene which was detected, occurred in well W-D (0.531 mg/l). The concentration of benzene detected in the remaining wells (W-5, W-B, W-C, W-D and W-E) ranged from 0.003 mg/l to 0.018 mg/l.

Should you have any questions or wish to discuss these analytical results in more detail, please do not hesitate to contact me.

Very truly yours,

WEHRAN ENGINEERING



Sheldon S. Nozik  
Staff Geologist

SSN/jmv

Enclosures

cc: T. Welsh-Gunville Energy  
M. McIntosh-NYSDEC ✓

# ACTS TESTING LABS, INC.

25 Anderson Road • Buffalo, N.Y. 14225-4906 • Tel: (716) 897-3300 • Fax: (716) 897-0876

TECHNICAL REPORT 8-0842E

May 6, 1988

Mr. Robert R. Henschel  
Senior Geologist  
WEHRAN ENGINEERING

RECEIVED MAY 20 1988

## OBJECT:

Analyses of eleven (11) well samples for various parameters. The samples were received on April 6 and 7, 1988 from Mr. David Mahiques and identified as semi-annual groundwater monitoring from the Lancaster Landfill.

## RESULTS:

See Table I.

## EXPERIMENTAL:

Total Organic Carbon (TOC) results were determined according to United States Environmental Protection Agency (EPA) Method 415.1 from "Methods for Chemical Analyses of Water and Waste".

The Volatile Halocarbons were determined using approved United States Environmental Protection Agency methodology (EPA Method 601: Purge and Trap Gas Chromatography with Electrolytic Conductivity Detection).

The Volatile Aromatics were determined using approved United States Environmental Protection Agency methodology (EPA Method 602: Purge and Trap Gas Chromatography with Photo Ionization Detection).

The remaining analyses were conducted according to procedures listed in "Standard Methods for the Examination of Water and Wastewater", 16th Edition, 1985.

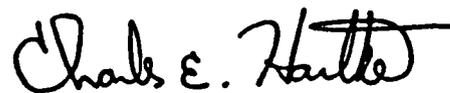
ACTS TESTING LABS, INC.



Elmer K. Gerbracht  
Technical Director

/sms

ACTS TESTING LABS, INC.



Charles E. Hartke  
Chemistry Laboratory Manager

Our reports and letters are for the exclusive use of the client to whom/which they are addressed. Communication of ACTS Testing Labs, Inc. reports and letters to any others and/or use of the name of ACTS Testing Labs, Inc. requires our prior written approval. Our letters and reports are limited solely (i) to standards and procedures identified in them and (ii) to the sample (s) tested. Test results are not necessarily indicative nor representative (i) of the quality of the lot from which the sample was taken or (ii) of apparently similar or identical products. Unless otherwise stated, it is the responsibility of the client to insure the representativeness of the samples submitted to ACTS Testing Labs, Inc. for testing.

New York City Laboratory: 120 West 41st Street, 3rd Floor • New York, N.Y. 10036 • Tel: (212) 302-6780 • Fax: (212) 302-5424

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Mr. Robert R. Henschel  
Senior Geologist  
WEHRAN ENGINEERING

May 6, 1988  
TECHNICAL REPORT 8-0842E  
Page Two

CTS TESTING LABS, INC.

TABLE I

LANCASTER					
	4/6/88 W-B	4/6/88 W-C	4/6/88 W-D	4/6/88 W-E	4/6/88 W-3
pH Units	7.50	7.10	7.10	7.70	7.50
Conductivity, umhos/cm	3,950	3,550	3,600	1,600	1,900
Alkalinity as CaCO <sub>3</sub>	698	318	288	225 (223)*	145
Chloride	247	642 (621)*	715	6.9 (6.9)*	10.5
Total Organic Carbon	26	5.8	8.0	2.9	9.2
Ammonia Nitrogen	5.3	0.60	3.0 (2.9)*	LT 0.10	LT 0.10
Nitrate Nitrogen	0.33 (0.33)*	0.65	0.58	0.90	0.19
Total Iron	1.06 (95%)**	5.86	2.29 (2.30)*	2.60	2.11
Soluble Iron	LT 0.01	LT 0.01	0.02	LT 0.01	0.05
Total Manganese	0.23	0.40	0.16	0.11	0.04
Soluble Manganese	0.02	0.28	0.08	0.01	0.01
Lead	-	-	-	LT 0.05	-
Benzene	0.018	0.005	0.531	0.022	LT 0.003
Toluene	LT 0.003				
Ethylbenzene	LT 0.003				
Vinyl Chloride	LT 0.001	LT 0.005	LT 0.001	LT 0.001	LT 0.001
Methylene Chloride	0.002	LT 0.005	0.002	0.004	0.001
Trichloroethylene	LT 0.001	LT 0.005	LT 0.001	LT 0.001	LT 0.001

Unless otherwise indicated, the results are reported as milligrams per liter (mg/l).

\* = Duplicate Analyses

\*\* = Spike Recovery

LT = Less Than

Note: Alkalinity taken to a pH of 4.5

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Mr. Robert R. Henschel  
Senior Geologist  
WEHRAN ENGINEERING

May 6, 1988  
TECHNICAL REPORT 8-0842E  
Page Three

TABLE I (cont.)

	LANCASTER					
	4/6/88 W-5	4/6/88 W-6A	4/7/88 W-A	4/7/88 W-F	4/7/88 W-8	4/7/88 BLANK
pH Units	7.55	7.50	7.40	7.35	7.80	8.00
Conductivity, umhos/cm	1,350	1,800	3,000	2,500	1,650 (1,700)*	1,100
Alkalinity as CaCO <sub>3</sub>	331	318	241	223	212	26.5
Chloride	LT 1.0	8.0	42.1	295	168	4.6
Total Organic Carbon	2.4	4.7	5.0	4.7	12	2.6
Ammonia Nitrogen	LT 0.10	0.30	0.10	1.7	0.45	LT 0.10
Nitrate Nitrogen	0.96	0.13	0.50	0.38 (111.8%)**	0.83	0.43
Total Iron	0.86	0.32 (0.29)*	6.04	1.84	2.98	0.05
Soluble Iron	0.02	0.02	LT 0.01	0.02	0.01	0.02
Total Manganese	0.04	0.07 (0.07)*	0.05	0.05	2.30	0.01
Soluble Manganese	0.01	LT 0.01	0.01	LT 0.01	LT 0.01	LT 0.01
Benzene	0.003(96%)**	LT 0.003	LT 0.003	LT 0.003	0.005	LT 0.003
Toluene	LT 0.003(87.7%)**	LT 0.003	LT 0.003	LT 0.003	LT 0.003	LT 0.003
Ethylbenzene	LT 0.003(86.8%)**	LT 0.003	LT 0.003	LT 0.003	LT 0.003	LT 0.003
Vinyl Chloride	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001
Methylene Chloride	0.002	0.001	0.002	0.001	LT 0.001	0.002
Trichloroethylene	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001

Unless otherwise indicated, the results are reported as milligrams per liter (mg/l).

\* = Duplicate Analyses

\*\* = Spike Recovery

LT = Less Than

Note: Alkalinity taken to a pH of 4.5

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### CHAIN OF CUSTODY RECORD

PROJECT: LANCASTER SEMI ANNUAL SAMPLING

CLIENT: LANCASTER LANDFILL

JOB No.: 09035 ST

#### SAMPLE IDENTIFICATION:

LOCATION No.	LAB SAMPLE No.	CONTAINERS - NUMBER/TYPE	CONTAINER CONDITION
W-B		2 QT JARS 2 PLASTIC 2 VILES	GOOD
W-C		" " "	"
W-D		" " "	"
W-E		" 3 PLASTIC "	"
W-F		" 2 PLASTIC "	"
W-G		" " "	"
W-6A		" " "	"
W-B		" " "	"
W-F		" " "	"
W-A		" " "	"

#### CHAIN OF CUSTODY CHRONICLE:

COLLECTED BY:

1 NAME: DAVID MAHIQUES DATE: 4/6/88  
 SIGNATURE: [Signature] SEALS PLACED ON CONTAINERS?  YES  NO

CUSTODY TRANSFERRED TO:

2 NAME: James M. Trainor DATE: 4.6.88 TIME: 4:38  
 SIGNATURE: [Signature] ARE SEALS INTACT?  YES  NO  N/A

RECEIVED IN LABORATORY BY:

3 NAME: James M. Trainor DATE: 4.6.88 TIME: 4:38  
 SIGNATURE: [Signature] ARE SEALS INTACT?  YES  NO  N/A

DISPOSED BY:

4 NAME: \_\_\_\_\_ DATE: \_\_\_\_\_  
 SIGNATURE: \_\_\_\_\_

REFER TO "WATER QUALITY SAMPLING FIELD DATA SHEET" FOR SPECIFIC SAMPLING DETAILS.

REMARKS:

May 2, 1988

*MLC has copy -  
this copy to file  
NS 21*

Mr. Robert Mitrey  
New York State Department  
of Environmental Conservation  
600 Delaware Avenue  
Buffalo, NY 14202

RE: Lancaster Sanitary Landfill  
Groundwater Monitoring  
WE Project No. 9035-ST

Dear Mr. Mitrey:

Enclosed are the analytical results, field data sheets, and chain of custody forms for groundwater samples collected at the Lancaster Sanitary Landfill on January 7, 1988. Sampling during this period was performed for three (3) on-site wells (W-3, W-6A, and W-8) and six (6) wells (W-A through W-F) along the New York State Thruway, southwest and essentially downgradient of the landfill. All samples were delivered to Acts Testing Labs, Inc. in Buffalo at the end of the day.

The results of the recent analyses indicate that there were minor concentration variations for most conventional parameters. The alkalinity values remained generally unchanged and were generally within the range of historical values. The ammonia concentrations also remained unchanged except for W-C which exhibited a slight increase in concentration relative to recent sampling rounds. The chloride concentrations remained within the range of past values for all wells with W-B having a concentration of 405 mg/l and W-D with a concentration of 650 mg/l. Nitrate values remained relatively unchanged during this round of monitoring, and TOC values generally increased with the exception of W-A, W-B, and W-D. However, after reviewing

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the historical water quality data for the wells, no indication of increasing trends can be observed.

The metal analyses indicated that the concentration values of both total iron and soluble iron remained within range of the historical analytical results for most wells. Concentrations of soluble iron for all wells were below the 703 standards. However, W-3 exhibited a slightly elevated concentration of total iron this round (21.6 mg/l) compared to the last several rounds of testing. Generally, values for both total manganese and soluble manganese were also within range of historical data for most wells. W-8 continues to show consistently elevated levels of total manganese (14.9 mg/l) relative to historical data.

Trichloroethylene was detected in all wells, however, these concentrations are below the 703 standard of 10 ug/l. Benzene was below detection limits in wells W-6A, W-8, W-D, and W-F. Benzene was, however, detected in W-3 (0.008 mg/l), W-A (0.003 mg/l), W-B (0.002 mg/l), W-C (0.033 mg/l) and W-E (0.004 mg/l).

Should you have any questions or wish to discuss these analytical results in more detail, please do not hesitate to contact me.

Very truly yours,  
WEHRAN ENGINEERING

  
Sheldon Nozik  
Staff Geologist

SN/jmv

Enclosures

cc: T. Welsh-Gunville Energy  
M. McIntosh-NYSDEC

# ACTS TESTING LABS, INC.

25 Anderson Road • Buffalo, N.Y. 14225-4906 • Tel: (716) 897-3300 • Fax: (716) 897-0876

TECHNICAL REPORT 8-0036E

February 12, 1988

Mr. Robert R. Henschel  
Senior Geologist  
WEHRAN ENGINEERING

RECEIVED FEB 18 1988

OBJECT:

Analyses of nine (9) well samples for various parameters. The samples were received on January 7, 1988 from Mr. David Mahiques and identified as quarterly groundwater monitoring from the Lancaster Landfill.

RESULTS:

See Table I.

EXPERIMENTAL:

Total Organic Carbon (TOC) results were determined according to United States Environmental Protection Agency (EPA) Method 415.1 from "Methods for Chemical Analyses of Water and Waste".

The Volatile Halocarbons were determined using approved United States Environmental Protection Agency methodology (EPA Method 601: Purge and Trap Gas Chromatography with Electrolytic Conductivity Detection).

The Volatile Aromatics were determined using approved United States Environmental Protection Agency methodology (EPA Method 602: Purge and Trap Gas Chromatography with Photo Ionization Detection).

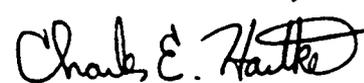
The remaining parameters were analyzed in accordance with "Standard Methods for the Examination of Water and Wastewater", 16th Edition, 1985.

ACTS TESTING LABS, INC.



Elymer K. Gerbracht  
Technical Director

ACTS TESTING LABS, INC.



Charles E. Hartke  
Chemistry Laboratory Manager

/sms

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Our reports and letters are for the exclusive use of the client to whom/which they are addressed. Communication of ACTS Testing Labs, Inc. reports and letters to any others and/or use of the name of ACTS Testing Labs, Inc. requires our prior written approval. Our letters and reports are limited solely (i) to standards and procedures identified in them and (ii) to the sample(s) tested. Test results are not necessarily indicative nor representative (i) of the quality of the lot from which the sample was taken or (ii) of apparently similar or identical products. Unless otherwise stated, it is the responsibility of the client to insure the representativeness of the samples submitted to ACTS Testing Labs, Inc. for testing.

New York City Laboratory: 120 West 41st Street, 3rd Floor • New York, N.Y. 10036 • Tel: (212) 302-6780 • Fax: (212) 302-5424

Mr. Robert R. Henschel  
Senior Geologist  
WEHRAN ENGINEERING

February 12, 1988  
TECHNICAL REPORT 8-0036E  
Page Two

TABLE I

## LANCASTER

	<u>W-3</u>	<u>W-6A</u>	<u>W-8</u>	<u>W-A</u>
pH Units	6.55	7.45	7.95	7.55
Temperature, °C	5.4	4.5	6.9	6.4
Conductivity, umhos/cm	3,300	940	835	590
Alkalinity as CaCO <sub>3</sub>	640	403 (399)*	263	269
Chloride	416 (416)*	116	116	40.3
Total Organic Carbon	53	74	72	58
Ammonia Nitrogen	11.0 (8.9)*	LT 0.10	0.25	LT 0.10
Nitrate Nitrogen	0.15	LT 0.1	1.6	0.33
Total Iron	21.6	1.80 (1.77)*	5.46	2.48
Soluble Iron	LT 0.01	LT 0.01	LT 0.01	LT 0.01
Total Manganese	1.78	0.08 (0.08)*	14.9	0.03
Soluble Manganese	1.38	0.06	0.02	0.01
Benzene	0.008	LT 0.001 (93.1%)**	LT 0.001	0.003
Trichloroethylene	0.006	0.004	0.005	0.005

Unless otherwise indicated, the results are reported as milligrams per liter (mg/l).

\* = Duplicate Analyses

\*\* = Spike Recovery

LT = Less Than

Note: Alkalinity taken to a pH of 4.5.

RECEIVED FEB 18 1988

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Mr. Robert R. Henschel  
Senior Geologist  
WEHRAN ENGINEERING

February 12, 1988  
TECHNICAL REPORT 8-0036E  
Page Three

TABLE I

LANCASTER

	<u>W-B</u>	<u>W-C</u>	<u>W-D</u>	<u>W-E</u>	<u>W-F</u>
pH Units	7.15	7.45	7.40	7.65	7.40
Temperature, °C	7.4	8.1	9.0	9.5	6.0
Conductivity, umhos/cm	2,750	2,850	2,900	550 (540)*	2,100
Alkalinity as CaCO3	407	886	360	273	263
Chloride	426	305	537	5.6 (6.1)*	347
Total Organic Carbon	99	89	78	93	83
Ammonia Nitrogen	LT 0.10	0.94	0.40	LT 0.10	LT 0.10
Nitrate Nitrogen	0.47	0.14 (0.13)*	0.30	2.2	0.13
Total Iron	0.76	28.3	1.58	20.4	6.76
Soluble Iron	LT 0.01	0.03	LT 0.01	LT 0.01	LT 0.01
Total Manganese	0.49	1.07	0.18	0.66	0.24
Soluble Manganese	0.21	0.54	0.11	0.01	0.03
Benzene	0.002	0.033	LT 0.001	0.004	LT 0.001
Trichloroethylene	0.004	0.005	0.004	0.012	0.004

Unless otherwise indicated, the results are reported as milligrams per liter (mg/l).

\* = Duplicate Analyses

LT = Less Than

Note: Alkalinity taken to a pH of 4.5.

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RECEIVED FEB 18 1988



RECEIVED... 18 1988

**CHAIN OF CUSTODY RECORD**

PROJECT: LANCASTER SANITARY LANDFILL QUARTERLY MONITORING

CLIENT: LANCASTER LANDFILL

JOB No.: 09035 ST

**SAMPLE IDENTIFICATION:**

LOCATION No.	LAB SAMPLE No.	CONTAINERS: NUMBER/TYPE	CONTAINER CONDITION
W-3		2/GS JARS, 2/102 PLASTIC, 2/VIALS	
W-6A		"	
W-B		"	
W-A		"	
W-B		"	
W-C		"	
W-D		"	
WE		"	
W-F		"	

**CHAIN OF CUSTODY CHRONICLE:**

COLLECTED BY:

1 NAME: DAVID MANIQUES DATE: 1/7/88  
 SIGNATURE: [Signature] SEALS PLACED ON CONTAINERS?  YES  NO

CUSTODY TRANSFERRED TO:

2 NAME: Susan M Schurb DATE: 1/7/88 TIME: 1:05 pm  
 SIGNATURE: [Signature] ARE SEALS INTACT?  YES  NO  N/A

RECEIVED IN LABORATORY BY:

3 NAME: \_\_\_\_\_ DATE: \_\_\_\_\_ TIME: \_\_\_\_\_  
 SIGNATURE: \_\_\_\_\_ ARE SEALS INTACT?  YES  NO  N/A

DISPOSED BY:

4 NAME: \_\_\_\_\_ DATE: \_\_\_\_\_  
 SIGNATURE: \_\_\_\_\_

REFER TO "WATER QUALITY SAMPLING FIELD DATA SHEET" FOR SPECIFIC SAMPLING DETAILS.

REMARKS:

LANCASTER SANITARY LANDFILL  
LANCASTER WELLS  
SUMMARY OF GROUNDWATER ELEVATIONS

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WE PROJECT #: 09035 ST

WELL NO.	T. O. C. ELEV.	GROUND ELEV.	WELL DEPTH (ft)	1/6/88		1/7/88	
				PRE-PURGE DEPTH (ft)	ELEV.	PRE-SAMPLE DEPTH (ft)	ELEV.
3	738.84	734.85	28.3	25.87	712.97	25.98	712.86
6A	755.91	752.91	32.2	72.85	683.06	73.21	682.70
B	732.61	729.11	68.0	*	*	*	*
A	725.78	723.98	26.8	11.93	713.85	11.93	713.85
B	732.18	730.78	34.4	14.68	717.50	15.73	716.45
C	732.51	730.61	49.4	48.90	683.61	48.90	683.61
D	736.75	735.22	33.7	18.72	718.03	18.85	717.90
E	755.84	754.34	30.0	26.02	729.82	26.20	729.64
F	729.30	728.05	31.8	11.16	718.14	11.31	717.99

\* WELL IS CASCADING WATER LEVEL CANNOT BE OBTAINED

By DWM Date 1/6/87Job No. 09035 ST

Chkd. by \_\_\_\_\_ Date \_\_\_\_\_

Sheet No. 1 of 1Subject PURGE VOLUME FOR LANCASTER WELLS

WELL NO. (1)	WATER DEPTH (WD) IN FT. FROM T.O.C. (2)	ONE VOLUME IN WELL IN GAL. * (3)	BAILER SIZE USED (4)	BAILER		NO. OF BAILS FOR THREE VOLUMES (7) (7) = (3) ÷ (6) X 3
				LENGTH (FT) (5)	VOLUME (GAL) (6)	
W-3	25.87	$(28.29 - WD) \times .367 = 0.89$	2"	3	.45	5.92
W-5		$(66.2 - WD) \times .653 =$	3"	3	1.02	
W-6A	72.85	$(92.2 - WD) \times .500 = 9.68$	2"	3	.45	64.5
W-7		$(51.75 - WD) \times .653 =$	2"	3	.45	
W-8	—	WATER FLOWING IN WELL	2"	—	—	—
B-24D		$(84.4 - WD) \times .064 =$	3/4"	3	.06	
W-A	11.93	$(26.8 - WD) \times .163 = 2.42$	1 1/4"	3	.18	<del>75.77</del> 40.39
W-B	14.68	$(34.4 - WD) \times .163 = 3.21$	1 1/4"	3	.18	53.57
W-C	48.9	$(49.4 - WD) \times .163 = 0.08$	1 1/4"	3	.18	1.35
W-D	18.72	$(33.7 - WD) \times .163 = 2.44$	1 1/4"	3	.18	40.60
W-E	26.02	$(30.0 - WD) \times .163 = .698$	1 1/4"	3	.18	10.81
W-F	11.16	$(31.8 - WD) \times .163 = 3.36$	1 1/4"	3	.18	36

NOTES:

T.O.C. - TOP OF CASING

\* FORMULA

$$\text{WELL VOLUME IN GAL.} = (\text{CASING DIAMETER} \div 2)^2 \times (\text{BOTTOM OF WELL FROM T.O.C.} - \text{WATER DEPTH FROM T.O.C.}) \times (\pi \times 7.48 \div 144)$$

- W-6A - PINK CASING WITH 3' STICKUP
- W-7 - OBSTRUCTION AT 12.7' AND 51.75'
- W-8 - BOTTOM OF WELL IS 71.5' FROM T.O.C.
- B-24D - 2'-1" STICKUP

*cc: M. Magtash*

*extra copy  
file  
Lancaster*

February 29, 1988

Mr. Robert Mitrey  
New York State Department  
of Environmental Conservation  
600 Delaware Avenue  
Buffalo, NY 14202

RE: Lancaster Sanitary  
Landfill  
Groundwater Monitoring  
WE Project No. 9035-ST

Dear Mr. Mitrey:

Enclosed are the analytical results, field data sheets, and chain of custody forms for groundwater samples collected at the Lancaster Sanitary Landfill on October 13, 1987. Sampling during this period was performed for five (5) on-site wells (W-3, W-5, W-6A, W-8 and W-B24D) and six (6) wells (W-A through W-F) along the New York State Thruway, southwest and essentially downgradient of the landfill.

Attempts were made to sample well W-7, however, this well was dry and could not be sampled during this sampling event. An attempt will be made to obtain samples from this well for analysis during the next sampling episode. All samples were delivered to Acts Testing Labs, Inc. in Buffalo at the end of the day.

The results of the recent analyses indicate that there were minor concentration variations for most conventional parameters. The alkalinity values remained generally unchanged with some slight increases in some wells. These values, however, remained within the range of

historical values. The ammonia concentrations also remained unchanged except for W-3 which exhibited an increase in concentration relative to previous sampling rounds. The chloride concentrations remained within the range of past values for all wells with W-B having a concentration of 405 mg/l and W-D with a concentration of 650 mg/l. Nitrate values declined during this round of monitoring as opposed to TOC concentrations which exhibited some increase this period.

The metal analyses indicated that the concentration values of both total iron and soluble iron remained within range of the historical analytical results for most wells. However, W-3 exhibited an elevated concentration of total iron this round (11.3 mg/l) compared to the last several rounds of testing. W-A exhibited a concentration of <1.79 mg/l for soluble iron which appears to be an increase over past results. Generally, values for both total manganese and soluble manganese were also within range of historical data for most wells. W-8 continues to show consistently elevated levels of total manganese (15.1 mg/l) relative to historical data. The concentration of lead in W-E (0.034 mg/l) decreased relative to last quarter's results (0.1 mg/l), and remains within the historical range of values for this well. Lead will continue to be monitored in W-E semi-annually.

Ethylbenzene and vinyl chloride were both below detection limits in all wells. Toluene was below detection limits in all wells except W-8 (0.003 mg/l). Trichloroethylene was also below detection limits in all wells except W-8 (0.005 mg/l) and W-C (0.002 mg/l). Benzene was below detection limits in most wells, however, it was detected in W-3 (0.006 mg/l), W-8 (0.004 mg/l) and in W-B24D (0.023 mg/l). Methylene chloride was detected in W-6A (0.005 mg/l), W-A (0.005 mg/l), W-C (0.003 mg/l) and W-D (0.005 mg/l). It should be noted that methylene chloride was detected in both field blanks prepared during this

sampling period. Blank-1 was prepared in the vicinity of W-A and indicated a concentration of 0.012 mg/l. Blank-2 was prepared in the vicinity of W-8 and indicated a concentration of 0.017 mg/l. No other organic parameters were detected in the blanks.

Should you have any questions or wish to discuss these analytical results in more detail, please do not hesitate to contact me.

Very truly yours,  
WEHRAN ENGINEERING

*Sheldon J. Nozik*  
Sheldon Nozik  
Staff Geologist

SN/jv

Enclosures "

cc: T. Welsh-Gunville Energy  
M. McIntosh-NYSDEC

2.2/88.9035

**Table 1**  
**Acts Testing Labs, Inc.**  
**Summary of Lancaster Sanitary Landfill Results**  
**October 13, 1987**

B	W-C	W-D	W-E	W-F	W-24D	Blank 1	Blank 2	W-3	W-5	W-6	W-8
0	1,270	928	341	341	199 (196)*	6.3	4.2	571	307	397	309
5	300	650	3.2 (2.2)*	140	10.2	LT 1.0	LT 1.0	260	4.5	155 (155)*	50.0
0	71	110	14	67	360	17	210	40	180	43	12
10	LT 0.10	LT 0.10	LT 0.10	LT 0.10	LT 0.10	LT 0.10	LT 0.10	11.3	LT 0.10 (LT 0.10)*	LT 0.10	LT 0.10
3	LT 0.10	LT 0.10	0.51	LT 0.10	LT 0.10	LT 0.10	LT 0.10	0.42	LT 0.10 (LT 0.10)*	0.37	1.5
3	16.9	2.96	22.2	2.49	18.3	0.10	0.10	18.6	1.68 (1.65)*	7.30	2.46
01	0.01	0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.01	5.75	LT 0.01	0.08	LT 0.01
3	1.11	0.35	0.66	0.20	0.15	0.01	0.05	1.02	0.05 (98%)**	0.08	15.1
	0.25	0.03	0.02	0.02	0.04	0.01	0.01	0.86	0.03	0.06	0.01
	-	-	0.034	-	-	-	-	-	-	-	-
01	LT 0.001	LT 0.001	LT 0.001	LT 0.001	0.023	LT 0.001	LT 0.01	0.006	LT 0.001	LT 0.001	0.004
01	0.003	0.005	LT 0.001	LT 0.001	LT 0.001	0.012	0.017	LT 0.001	LT 0.001	0.005	LT 0.001
01	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	0.003
01	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001
1	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001
1	0.002	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001
											0.005

195  
F 600

\*\* = % Spike Recovery  
 reported as milligrams per liter (mg/l)

**Table 1**  
**Acts Testing Labs, Inc.**  
**Summary of Lancaster Sanitary Landfill Results**  
**October 13, 1987**

	W-A	W-B	W-C	W-D	W-E	W-F	W-24D	Blank 1	Blank 2	W-3
Alkalinity as CaCO <sub>3</sub>	265	470	1,270	928	341	341	199 (196)*	6.3	4.2	571
Chloride	90.0	405	300	650	3.2 (2.2)*	140	10.2	LT 1.0	LT 1.0	260
Total Organic Carbon	190	150	71	110	14	67	360	17	210	40
Ammonia Nitrogen	LT 0.10	LT 0.10	LT 0.10	LT 0.10	LT 0.10	11.3				
Nitrate Nitrogen	0.13	0.13	LT 0.10	LT 0.10	0.51	LT 0.10	LT 0.10	LT 0.10	LT 0.10	0.42
Total Iron	0.63	0.63	16.9	2.96	22.2	2.49	18.3	0.10	0.10	18.6
Soluble Iron	LT 1.79	LT 0.01	0.01	0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.01	5.75
Total Manganese	0.02	1.03	1.11	0.35	0.66	0.20	0.15	0.01	0.05	1.02
Soluble Manganese	0.01	0.90	0.25	0.03	0.02	0.02	0.04	0.01	0.01	0.86
Lead	-	-	-	-	0.034	-	-	-	-	-
Benzene	LT 0.001	LT 0.001	0.023	LT 0.001	LT 0.01	0.006				
Methylene Chloride	0.005	LT 0.001	0.003	0.005	LT 0.001	LT 0.001	LT 0.001	0.012	0.017	LT 0.001
Toluene	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001				
Ethylbenzene	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001				
Vinyl Chloride	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001				
Trichloroethylene	LT 0.001	LT 0.001	0.002	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001

LT = Less Than \* = Duplicate Analyses \*\* = % Spike Recovery

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GUNVILLE ENERGY SYSTEMS INC.  
LANCASTER WELLS  
SUMMARY OF GROUNDWATER ELEVATIONS

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WE PROJECT #: 09035 ST

WELL NO.	T. O. C. ELEV.	GROUND ELEV.	WELL DEPTH (ft)	10/12/87		10/13/87	
				PRE-PURGE DEPTH (ft)	ELEV.	PRE-SAMPLE DEPTH (ft)	ELEV.
3	737.85	734.85	27.3	26.88	710.97	26.98	710.87
5	764.48	762.06	66.2	35.81	728.67	35.91	728.57
6A	755.91	752.91	32.2	81.01	674.90	81.15	674.76
7	763.26	761.36	64.5	DRY	ERR	DRY	ERR
8	732.61	729.11	68.0	*	ERR	*	ERR
B-24D	787.42	784.82	81.9	66.53	720.89	66.55	720.87
A	725.78	723.98	26.8	9.33	716.45	10.38	715.40
B	732.18	730.78	34.4	14.08	718.10	14.22	717.96
C	732.51	730.61	49.4	49.35	683.16	49.35	683.16
D	736.75	735.22	33.7	18.85	717.90	19.15	717.60
E	755.84	754.34	30.0	25.62	730.22	26.21	729.63
F	729.30	728.05	31.8	9.15	720.15	10.32	718.98

\* WELL IS CASCADING WATER LEVEL CANNOT BE OBTAINED

By DWM Date 10/12/87



Job No. 09035 ST

Chkd. by \_\_\_\_\_ Date \_\_\_\_\_

Sheet No. 1 of 1

Subject PURGE VOLUME FOR LANCASTER WELLS

WELL NO. (1)	WATER DEPTH (WD) IN FT. FROM T.O.C. (2)	ONE VOLUME IN WELL IN GAL. * (3)	BAILER SIZE USED (4)	BAILER		NO. OF BAILS FOR THREE VOLUMES (7) (7) = (3) ÷ (6) x 3
				LENGTH (FT) (5)	VOLUME (GAL) (6)	
W-3	26.88	(2782 - WD) x .367 = .35	2"	3	.45	0.175
W-5	35.81	(6612 - WD) x .653 = 14.79	3"	3	1.02	58.21
W-6A	81.01	(92.2 - WD) x .500 = 5.59	2"	3	.45	37.29
W-7	DRY	(51.65 - WD) x .653 = -	2"	3	.45	-
W-8	-	WATER FLOWING IN WELL	2"	-	-	-
B-24D	66.53	(84.4 - WD) x .064 = 1.14	3/4"	3	.06	57.18
W-A	9.33	(26.8 - WD) x .163 = 2.85	1 1/4"	3	.18	47.46
W-B	14.08	(34.4 - WD) x .163 = 3.31	1 1/4"	3	.18	55.20
W-C	49.35	(49.4 - WD) x .163 = 0.01	1 1/4"	3	.18	0.13
W-D	18.85	(33.7 - WD) x .163 = 2.42	1 1/4"	3	.18	40.34
W-E	25.62	(30.0 - WD) x .163 = 0.71	1 1/4"	3	.18	11.89
W-F	9.15	(31.8 - WD) x .163 = 3.69	1 1/4"	3	.18	61.53

NOTES:

T.O.C. - TOP OF CASING

\* FORMULA

$$\text{WELL VOLUME IN GAL.} = \left( \frac{\text{CASING DIAMETER}}{2} \right)^2 \times (\text{BOTTOM OF WELL FROM T.O.C.} - \text{WATER DEPTH FROM T.O.C.}) \times \left( \pi \times 7.48 \div 144 \right)$$

- W-6A - PINK CASING WITH 3' STICKUP
- W-7 - OBSTRUCTION AT 12.7' AND 51.75'
- W-8 - BOTTOM OF WELL IS 71.5' FROM T.O.C.
- B-24D - 2-1" STICKUP



March 23, 1987

*Handwritten notes:*  
K H (circled)  
MM  
pl. review  
& comments  
f

Mr. Robert Mitrey  
New York State Department of  
Environmental Conservation  
600 Delaware Avenue  
Buffalo, NY 14202

RE: Lancaster Sanitary Landfill  
Groundwater Monitoring  
WE Project No. 09035ST

Dear Mr. Mitrey:

Attached please find the analytical results, field data sheets and chain of custody forms for groundwater samples collected at the Lancaster Sanitary Landfill on December 19, 1986. Sampling during this period was performed in three (3) of the existing wells (W-3, 6A, and 8) plus the six (6) new wells (W-A, B, C, D, E, and F) which were installed during November of 1985 along the New York State Thruway, southwest and essentially downgradient of the landfill. A field blank was also taken during this sampling round and submitted to the lab for analysis.

In accordance with our groundwater monitoring program dated March, 1986, all wells were sampled for the routine indicator parameters which are normally scheduled for analysis during this quarterly period (Table 1). In addition, as recommended in our letter of October 16, 1986 and as agreed with the NYSDEC, the analysis for lead in well W-E and mercury in well W-F was repeated.

The results of the recent analysis indicates that there  
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was a general decrease in the level of contaminants in most wells, with well W-3 showing the most significant reductions. It is to be noted that concentrations of most parameters, in all the wells, were below detectable levels and/or the minimum reportable concentrations for Class GA waters as defined by the NYSDEC, Title 6, Part 703.5, effective September 1, 1978. Total iron and manganese concentrations were still elevated in most wells which may be reflective of abnormally high concentrations within the Onondaga Limestone. Soluble iron, remained below the minimum reportable level in all wells. Soluble manganese levels which were elevated in wells W-3 and W-C during the October round; decreased, and are now within acceptable levels. Chloride concentrations in well W-B, C, and D were still above the minimum reportable levels during this period, and is most likely due to their location and the use of salt on the highway during winter months. The pH values remained relatively unchanged in most wells. However, a slight increase was noted in well W-3, with the level now being well within acceptable limits. The levels of TOC increased noticeable in wells W-3, W-B, W-D, W-E and W-F during this period and should be watched in future sampling rounds. It should be noted, however, that the TOC levels in wells W-A and W-C which were elevated during the previous sampling round decreased significantly this round.

Results from well W-3, which is located southwest and immediately downgradient of the landfill showed significant improvement in water quality, with the levels of most of the routine indicator parameters being at the lowest concentrations ever recorded in this well. In addition, the levels of methylene chloride, trichloroethylene, benzene and toluene which were

elevated during the previous round, decreased significantly and are now below the minimum reportable level and/or detectable limits. The organic levels remained unchanged in the other wells, and are at or below detectable levels in all cases, with the exception of well W-6A which showed an increase in the level of methylene chloride to above detectable limits.

The results of the selected priority pollutants metals scan showed that the level of mercury in Well W-F is still below detectable levels and that the level of lead in well W-E decreased significantly, but is still slightly above the minimum reportable limit. Based on the results of the sampling, it is recommended that analysis for lead in well W-E be repeated during the next quarterly sampling period. However, considering that the level of mercury in well W-F has been below detection levels for the last three sampling rounds, it is recommended that the metal analysis in this well be discontinued.

Should you have any questions or wish to discuss the sampling results in more detail, please do not hesitate to call.

Yours very truly,

WEHRAN ENGINEERING, P.C.



Robert R. Herschel  
Senior Geologist

RH/jik

cc: M. Kanle/T. Welsh  
M. McIntosh

# ACTS TESTING LABS, INC.

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120 West 41st Street • New York, N.Y. 10036 • (212) 302-6780

TECHNICAL REPORT 6-0688E

January 21, 1987

Mr. Robert R. Henschel  
Senior Geologist  
WEHRAN ENGINEERING

## OBJECT:

Analyses of ten well samples for various parameters. The samples were received on December 19, 1986 from Mr. David Mahiques and identified as quarterly groundwater monitoring from the Lancaster Landfill (Job No. 09035ST).

## RESULTS:

See Table I.

## EXPERIMENTAL:

Total Organic Carbon (TOC) results were determined according to United States Environmental Protection Agency (EPA) Method 415.1 from "Methods for Chemical Analyses of Water and Waste".

The Volatile Organic concentrations were determined using EPA Methods 601 and 602: Purge and Trap Gas Chromatography with Photo Ionization and Electrolytic Conductivity detection.

The remaining parameters were analyzed in accordance with "Standard Methods for the Examination of Water and Wastewater", 16th Edition, 1985.

ACTS TESTING LABS, INC.

  
Elmer K. Gerbracht  
Technical Director

/sms

ACTS TESTING LABS, INC.

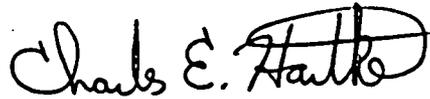
  
Charles E. Hartke  
Chemistry Laboratory Manager

TABLE I

LANCASTER

	<u>W-3</u>	<u>W6-A</u>	<u>W-8</u>	<u>W-A</u>	<u>W-B</u>
pH Units	6.95	7.30	7.70	7.00	7.00
Conductance umhos/cm	410	820	832 (840)*	1120	1840
Alkalinity as CaCO3	149	284	234 (239)*	221	312
Chloride	20.3	109	120	226	404
Total Organic Carbon	76.3	4.72	9.00	4.36	7.45
Ammonia Nitrogen	0.30 (0.25)*	LT 0.10	0.20	0.30	0.25
Nitrate Nitrogen	0.36	LT 0.1 (LT 0.1)*	0.88	0.16	0.13(94%)**
Total Iron	2.53	2.12	8.00	43.2	1.01
Soluble Iron	0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.01
Total Manganese	0.14 (0.14)*	0.07	26.4 (26.0)*	0.09(98%)**	1.00 (1.01)*
Soluble Manganese	0.11	0.01	0.01	0.02	0.04
Lead	-	-	-	-	-
Mercury	-	-	-	-	-
<u>EPA 601</u>					
Methylene Chloride	0.003	0.023	LT 0.001	LT 0.001	LT 0.001
Trichloroethylene	LT 0.001	LT 0.001	0.003	LT 0.001	LT 0.001
Vinyl Chloride	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001
<u>EPA 602</u>					
Benzene	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001
Toluene	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001
Ethylbenzene	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001

Unless otherwise indicated, the results are reported as milligrams per liter (mg/l).

\* = Duplicate Analyses

\*\* = % Spike Recovery

LT = Less Than

Note: Alkalinity taken to a pH of 4.5.

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TABLE I

LANCASTER

	<u>W-C</u>	<u>W-D</u>	<u>W-E</u>	<u>W-F</u>	<u>Blank</u>
pH Units	7.10	7.10	7.35	7.20	8.30
Conductance umhos/cm	2300	2160	520	1160	15
Alkalinity as CaCO3	624	290	115	232	8.6
Chloride	255	502	9.4	228	LT 1.0
Total Organic Carbon	27.9	118	22.9	53.0	57.5
Ammonia Nitrogen	0.35(106%)**	LT 0.10	0.20	0.15	LT 0.10
Nitrate Nitrogen	LT 0.1	0.29(108%)**	3.5	0.32(96%)**	LT 0.1
Total Iron	17.7	1.91	8.80	1.45	0.12
Soluble Iron	LT 0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.01
Total Manganese	0.87	0.08(0.07)*	0.33(97%)**	0.04	0.01
Soluble Manganese	0.02	0.05	0.01	0.02	0.01
Lead	-	-	0.034	-	-
Mercury	-	-	-	LT 0.002	-
<u>EPA 601</u>					
Methylene Chloride	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001
Trichloroethylene	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001
Vinyl Chloride	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001
<u>EPA 602</u>					
Benzene	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001
Toluene	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001
Ethylbenzene	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001

Unless otherwise indicated, the results are reported as milligrams per liter (mg/l).

\* = Duplicate Analyses

\*\* = % Spike Recovery

LT = Less Than

Note: Alkalinity taken to a pH of 4.5.

44.7

1987 10 8/10

GUNVILLE ENERGY SYSTEMS INC.  
LANCASTER WELLS  
SUMMARY OF GROUNDWATER ELEVATIONS

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WE PROJECT #: 09035 ST

WELL NO.	T.O.C. ELEV.	GROUND ELEV.	WELL DEPTH (ft)	12/18/86		12/19/86	
				PRE-PURGE DEPTH (ft)	ELEV.	PRE-SAMPLE DEPTH (ft)	ELEV.
3	737.85	734.85	27.3	20.20	717.65	20.20	717.65
5	764.56	762.06	66.2	N/A	ERR	N/A	ERR
6A	755.91	752.91	92.2	69.40	686.51	68.40	687.51
7	763.36	761.36	64.5	N/A	ERR	N/A	ERR
8	732.61	729.11	68.0	*	ERR	*	ERR
B-24D	787.42	784.82	81.9	N/A	ERR	N/A	ERR
A	725.78	723.98	26.8	8.00	717.78	8.20	717.58
B	732.18	730.78	34.4	13.50	718.68	13.40	718.78
C	732.51	730.61	49.4	49.35	683.16	49.35	683.16
D	736.75	735.22	33.7	18.10	718.65	18.00	718.75
E	755.84	754.34	30.0	26.20	729.64	27.70	728.14
F	729.30	728.05	31.8	10.80	718.50	7.30	722.00

• WELL 18 CASCADING WATER LEVEL CANNOT BE OBTAINED

September 9, 1987

Mr. Robert Mitrey  
New York State Department of  
Environmental Conservation  
600 Delaware Avenue  
Buffalo, New York 14202

*MMc MM  
per. review  
comment  
y  
duplicate  
file*

RE: Lancaster Sanitary Landfill  
Ground Water Monitoring  
WE Project No. 09035 ST

Dear Mr. Mitrey:

Enclosed are the analytical results, field data sheets, and chain of custody forms for ground water samples collected at the Lancaster Sanitary Landfill on July 17, 1987. Sampling during this period was performed for the four on-site wells (W-5, W-6A, W-8 and W-B-24D) in addition to the six wells (W-A through W-F) installed along the New York State Thruway, southwest and essentially downgradient of the landfill. The analytical results for all wells tested can be found in Table 1.

In accordance with your letter dated June 15, 1987, attempts were made to sample wells W-3, W-5, W-7 and W-B-24D. Wells W-3 and W-7 however were dry and could not be sampled during this sampling event. Attempts will be made during the September sampling event to obtain samples from these wells, W-3 and W-7, for analysis. Additionally, as you requested, the sample collected from well W-E was analyzed for lead.

### ON-SITE WELLS

The analytical results indicated only minor concentration variations with a few increases. The additional organic testing which was performed on samples obtained from wells W-5 and W-B-24D indicated non-detectable concentrations for all parameters.

Ground water obtained from well W-6A indicated a decrease, relative to the previous quarter, in methylene chloride (0.023 ug/l to non-detectable) and a decrease in total organic carbon (4.72 mg/l to 3.4 mg/l). Elevated levels of total iron (2.12 mg/l in the previous quarter to 13.9 mg/l) and nitrate nitrogen (non-detectable to 1.8 mg/l) indicate the need for continued observation in subsequent sampling events. The analytical results for well W-8 exhibited decreased total iron (8 mg/l in the previous quarter to 2.03 mg/l). Trichloroethylene was detected at a concentration of 0.004 mg/l as opposed to non-detectable in the previous quarter. The elevated concentration of nitrate nitrogen is expected to be a temporary phenomenon based on the historical record. Generally, the parameters analyzed indicated acceptable ground water quality from the on-site wells.

### DOWNGRAIDENT WELLS

The analytical results of ground water samples collected from the wells adjacent to the New York State Thruway exhibited only minor variations (increases/decreases) in contaminant concentrations. Well W-A exhibited decreases in conductance

(1120 uhmos/cm in the previous quarter to 765 uhmos/cm), total iron (43.2 mg/l to 2.72 mg/l), chloride (226 mg/l to 78.9 mg/l), and total manganese (0.09 mg/l to 0.02 mg/l), which brought these parameters back within acceptable levels.

Well W-B showed lower total iron (1.01 mg/l in the previous quarter to 0.24 mg/l), ammonia nitrogen (0.25 mg/l to non-detectable levels), and total organic carbon (7.45 mg/l to 2.9 mg/l) concentrations. Elevated concentrations of chloride (404 mg/l to 747 mg/l), and nitrate nitrogen (0.13 to 1.1) were observed.

The analytical results for well W-C indicated the presence of benzene (0.008 mg/l) and trichloroethylene (0.002 mg/l), whereas previously these have not been detected. Total iron and total organic carbon both decreased, 17.7 mg/l in the previous quarter to 13.6 mg/l and 27.9 to 3.2 mg/l, respectively. In addition to the organics, higher concentrations of nitrate nitrogen (from non-detectable to 1.0 mg/l) and manganese (0.87 mg/l to 1.11 mg/l) were evident.

Well W-D indicated a lower total organic carbon (118 mg/l in the previous quarter to 4.0 mg/l) concentration. Slight increases in ammonia and nitrate nitrogen, non-detectable to 0.44 mg/l and 0.29 mg/l to 1.1 mg/l, respectively were reported. Total iron and specific conductance exhibited increases, 1.91 to 5.6 mg/l and 2160 to 3400 uhmos/cm, respectively. The organic compounds were all non-detectable.

The lead analysis performed on the sample collected from

well W-E indicated the presence of 0.1 mg/l of lead. Decreases in chloride (9.4 mg/l in the previous quarter to 5.5 mg/l) and total organic carbon (22.9 to 2.1 mg/l) were also evident, however, nitrate nitrogen levels increased (3.5 mg/l to 6.1 mg/l).

Well W-F exhibited lower total organic carbon (53 mg/l in the previous quarter to 1.9 mg/l) and soluble manganese became non-detectable again. Elevated concentrations of total and soluble iron (1.45 mg/l to 4.48 mg/l and non-detectable 0.22 mg/l, respectively) were reported. Nitrogen values fluctuated with ammonia nitrogen decreasing to non-detectable concentrations and nitrate nitrogen increasing (0.32 mg/l to 2.0 mg/l).

Should you have any questions or wish to discuss the sampling results in more detail, please do not hesitate to contact me.

Very truly yours,

WEHRAN ENGINEERING, P.C.



Robert R. Henschel

Senior Geologist

RRH/jik

Enclosures

cc: T. Welsh - Gunville Energy

M. McIntosh - NYSDEC

# ACTS TESTING LABS, INC. RECEIVED AUG 11

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120 W. 41st St., 3rd Floor • New York, N.Y. 10036 • (212) 302-6780

TECHNICAL REPORT 7-2132E

August 5, 1987

Mr. Robert R. Henschel  
Senior Geologist  
WEHRAN ENGINEERING

OBJECT:

Analyses of ten (10) well samples for various parameters. The samples were received on July 17, 1987 from Mr. David Mahiques and identified as quarterly groundwater monitoring from the Lancaster Landfill.

RESULTS:

See Table I.

EXPERIMENTAL:

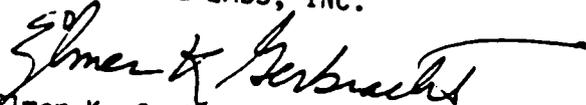
Total Organic Carbon (TOC) results were determined according to United States Environmental Protection Agency (EPA) Method 415.1 from "Methods for Chemical Analyses of Water and Waste".

The Volatile Halocarbons were determined using approved United States Environmental Protection Agency methodology (EPA Method 601: Purge and Trap Gas Chromatography with Electroconductivity Detection).

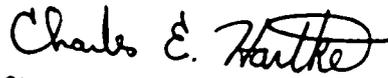
The Volatile Aromatics were determined using approved United States Environmental Protection Agency methodology (EPA Method 602: Purge and Trap Gas Chromatography with Photo Ionization Detection).

The remaining parameters were analyzed in accordance with "Standard Methods for the Examination of Water and Wastewater", 16th Edition, 1985.

ACTS TESTING LABS, INC.

  
Elmer K. Gerbracht  
Technical Director

ACTS TESTING LABS, INC.

  
Charles E. Hartke  
Chemistry Laboratory Manager

/sms

TABLE I

LANCASTER

	<u>S-1</u> W-8 ✓	<u>S-2</u> W-F	<u>S-4</u> W-GA ✓	<u>S-5</u> W-A ✓
pH Units	7.30	7.10	7.25	7.30
Alkalinity as CaCO3	285	365	287	266
Conductance uhmos/cm	728	1,550	915	765
Chloride	68.4 (73.7)*	231	116	78.9
Total Organic Carbon	2.7	1.9	3.4	2.4
Ammonia Nitrogen	0.15	LT 0.10	LT 0.10 (98.5%)**	LT 0.10
Nitrate Nitrogen	5.9	2.0	1.8	1.6
Total Iron	2.03	4.48	13.9	2.72 (2.68)*
Soluble Iron	0.02 (0.02)*	0.06	LT 0.01	0.03
Total Manganese	7.00	0.22	0.06	0.02 (102%)**
Soluble Manganese	LT 0.01 (LT 0.01)*	LT 0.01	0.01	LT 0.01
Benzene	LT 0.001	LT 0.001	LT 0.001	LT 0.001
Ethylbenzene	LT 0.001	LT 0.001	LT 0.001	LT 0.001
Methylene Chloride	LT 0.001	LT 0.001	LT 0.001	LT 0.001
Toluene	LT 0.001	LT 0.001	LT 0.001	LT 0.001
Vinyl Chloride	LT 0.001	LT 0.001	LT 0.001	LT 0.001
Trichloroethylene	0.004	LT 0.001	LT 0.001	LT 0.001

Unless otherwise indicated, the results are reported as milligrams per liter (mg/l).

\* = Duplicate Analyses

\*\* = % Spike Recovery

LT = Less Than

Note: Alkalinity taken to a pH of 4.5.

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TABLE I

LANCASTER

	S-6 W-B	S-7 W-C	S-8 W-D ✓	S-9 W-E ✓
pH Units	6.80	7.10	7.10	7.50
Alkalinity as CaCO <sub>3</sub>	496	1,020	386	281 (283)*
Conductance uhmos/cm	3,450	2,750	3,400	490
Chloride	747	216	726	5.5
Total Organic Carbon	2.9	3.2	4.0	2.1
Ammonia Nitrogen	LT 0.10	0.44	0.44	LT 0.10
Nitrate Nitrogen	1.1	1.0 (0.95)*	1.1	6.1
Total Iron	0.24	13.6	5.60	8.50
Soluble Iron	0.03	0.04	0.02	LT 0.01
Total Manganese	1.68	1.11	0.27	0.30
Soluble Manganese	LT 0.01	1.05	0.01	LT 0.02
Lead	-	-	-	0.1
Benzene	LT 0.001	0.008	LT 0.001	LT 0.001
Ethylbenzene	LT 0.001	LT 0.001	LT 0.001	LT 0.001
Methylene Chloride	LT 0.001	LT 0.001	LT 0.001	LT 0.001
Toluene	LT 0.001	LT 0.001	LT 0.001	LT 0.001
Vinyl Chloride	LT 0.001	LT 0.001	LT 0.001	LT 0.001
Trichloroethylene	LT 0.001	0.002	LT 0.001	LT 0.001
	S-3 ✓ W-5	S-10 ✓ W-32A-D		
Benzene	LT 0.001	LT 0.001		
Ethylbenzene	LT 0.001	LT 0.001		
Methylene Chloride	LT 0.001	LT 0.001		
Toluene	LT 0.001	LT 0.001		
Vinyl Chloride	LT 0.001	LT 0.001		
Trichloroethylene	LT 0.001	LT 0.001		

Unless otherwise indicated, the results are reported as milligrams per liter (mg/l).

\* = Duplicate Analyses

\*\* = % Spike Recovery

LT = Less Than

Note: Alkalinity taken to a pH of 4.5.

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June 8, 1987

Mr. Robert Mitrey  
New York State Department of  
Environmental Conservation  
600 Delaware Avenue  
Buffalo, NY 14202

*AMC* *MM* *letter written 6/15/87*  
*NO* *File: Lancaster Sanitary Landfill  
Groundwater Monitoring  
Reports  
1987*

RE: Lancaster Sanitary Landfill  
Ground Water Monitoring  
WE Project No. 09035ST

Dear Mr. Mitrey:

Attached please find the analytical results, field data sheets and chain of custody forms for ground water samples collected at the Lancaster Sanitary Landfill on March 18, 1987. Sampling during this period was performed in all six on-site wells (W-3, 5, 6A, 7, 8 and B-24D) plus the six wells (W-A, B, C, D, E, and F) installed along the New York State Thruway, southwest and essentially downgradient of the landfill.

In accordance with our ground water monitoring program dated March, 1986, all wells were sampled for the routine indicator parameters which are normally scheduled for analysis during this quarterly period (Table 1).

The results of the recent analysis indicated that there were only minor variations in the level of contaminants in most wells, although several significant decreases in conductivity, TOC and Total Iron were observed. Well W-3 on

the other hand, showed significant increases in alkalinity, TOC, ammonia nitrogen, and total iron. It is to be noted that concentrations of most parameters, in all the wells with the exception of W-3, were below detectable levels and/or the minimum reportable concentrations for Class GA waters as defined by the NYSDEC, Title 6, Part 703.5, effective September 1, 1978. Total iron and manganese concentrations were still elevated in most wells which may be reflective of abnormally high concentrations within the Onondaga Limestone. Soluble iron, remained below the minimum reportable level in all wells with the exception of Well W-3. Soluble manganese levels which have been elevated in some of the previous sampling rounds, remained within acceptable levels this period. Chloride concentrations in wells W-B, C, D, and F were still above the minimum reportable levels during this period, and is most likely due to their location and the use of salt on the highway during winter months. The pH values which showed minor changes, are within acceptable limits in all the wells, with the values generally being between 7.0 and 7.6. The level of TOC which increased noticeably in wells W-3, W-8, W-D, W-E and W-F during the last period decreased significantly in wells W-D, W-E and W-F, and slightly in well W-8 during this period. Well W-3, however, showed a very significant increase. It should also be noted that the TOC levels in wells W-5 and B-24D which were elevated during the October, 1986 sampling round decreased significantly this round.

Results from well W-3, which had shown a marked improvement in water quality during the last period, showed significant increases in alkalinity, TOC, ammonia nitrogen, total and soluble iron and manganese, with levels of soluble iron and manganese now being above the minimum reportable levels. It should be noted that no associated increases were recorded in well W-8 which is located downgradient of well W-3. In fact, most parameters in W-8 remained unchanged or decreased slightly.

A general increase in the levels of ammonia nitrogen and nitrate nitrogen were noted in most wells, although the levels are all within acceptable limits with the exception of well W-3.

As recommended in our letter of March 23, 1987, the scan for mercury in Well W-F was eliminated during this round. Analysis of lead in well W-E was omitted during this round, but will be included in the next quarterly round (June, 1987).

Should you have any questions or wish to discuss the sampling results in more detail, please do not hesitate to call.

Yours very truly,

WEHRAN ENGINEERING, P.C.



Robert R. Henschel  
Senior Geologist

RRH/jik

cc: M. Kahle/T. Welsh  
M. McIntosh

2.6/87.9035ST

# ACTS TESTING LABS, INC.

3916 Broadway • Buffalo, N.Y. 14227-1192 • (716) 684-3300  
120 West 41st Street • New York, N.Y. 10036 • (212) 302-6780

TECHNICAL REPORT 7-0718E

April 6, 1987

Mr. Robert R. Henschel  
Senior Geologist  
WEHRAN ENGINEERING

## OBJECT:

Analyses of twelve (12) well samples for various parameters. The samples were received on March 18, 1987 from Mr. David Mahiques and identified as quarterly groundwater monitoring from the Lancaster Landfill.

## RESULTS:

See Table I.

## EXPERIMENTAL:

Total Organic Carbon (TOC) results were determined according to United States Environmental Protection Agency (EPA) Method 415.1 from "Methods for Chemical Analyses of Water and Waste".

The remaining parameters were analyzed in accordance with "Standard Methods for the Examination of Water and Wastewater", 16th Edition, 1985.

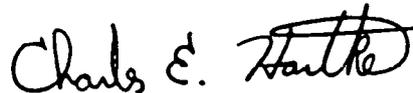
ACTS TESTING LABS, INC.



Eimer K. Gerbracht  
Technical Director

/sms

ACTS TESTING LABS, INC.



Charles E. Hartke  
Chemistry Laboratory Manager

TABLE I

	LANCASTER				
	W-5 #1	W-6A #2	B-241 #3	W-7 #4	W-8 #5
Alkalinity as CaCO3	300	335	164	178	329
Chloride	4.1	105	2.3	28.4	LT 1.0
Total Organic Carbon	2.04	4.89	34.2	3.95	9.43
Ammonia Nitrogen	LT 0.10	4.5 (90.9)**	0.98	0.41 (0.36)*	0.10
Nitrate Nitrogen	7.4	0.50 (0.55)*	0.94	6.9	2.4
Total Iron	2.11 (2.09)*	0.44 (0.39)*	38.00	0.98	3.38
Soluble Iron	LT 0.01 (98)**	0.02	LT 0.01	LT 0.01	LT 0.01
Total Manganese	0.06 (0.06)*	0.08 (0.07)*	0.30	0.03	0.15
Soluble Manganese	0.02	0.03	0.08	0.01	0.03
	W-D #6	W-C #7	W-B #8	W-A #9	W-8 #10
Alkalinity as CaCO3	315	662	275	240	218
Chloride	663	263 (274)*	405	94.7	174
Total Organic Carbon	4.08	12.6	5.98	1.78	6.50
Ammonia Nitrogen	0.36	0.41	0.26	LT 0.10	0.16
Nitrate Nitrogen	0.42	0.47 (88.2)**	0.53	0.40	1.4
Total Iron	8.50	17.70	0.58 (0.51)*	6.75	10.35
Soluble Iron	LT 0.01	0.09	LT 0.01	0.01	LT 0.01
Total Manganese	0.13	1.08	0.23 (0.22)*	0.03	20.80
Soluble Manganese	0.03	0.01	0.01	0.02	0.01

Unless otherwise indicated, the results are reported as milligrams per liter (mg/l).

\* = Duplicate Analyses

\*\* = % Spike Recovery

LT = Less Than

Note: Alkalinity taken to a pH of 4.5.

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TCE  
 Analyzed  
 4/15/87  
 [Signature]

Mr. Robert R. Henschel  
 Senior Geologist  
 WEHRAN ENGINEERING

April 6, 1987  
 TECHNICAL REPORT 7-0718E  
 Page Three

TABLE I

	LANCASTER	
	<u>W-F</u> # 11	<u>W-3</u> # 12
Alkalinity as CaCO <sub>3</sub>	266	1,190 (1,230)*
Chloride	289	14.2
Total Organic Carbon	10.6	636
Ammonia Nitrogen	LT 0.10	62.6
Nitrate Nitrogen	1.2	1.30
Total Iron	8.80	87.20
Soluble Iron	LT 0.01	18.20
Total Manganese	0.21	4.60
Soluble Manganese	0.03	2.30

Unless otherwise indicated, the results are reported as milligrams per liter (mg/l).

\* = Duplicate Analyses

\*\* = % Spike Recovery

LT = Less Than

Note: Alkalinity taken to a pH of 4.5.

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GUNVILLE ENERGY SYSTEMS INC.  
LANCASTER WELLS  
SUMMARY OF GROUNDWATER ELEVATIONS

---

WE PROJECT #: 09035 ST

WELL NO.	T.O.C. ELEV.	GROUND ELEV.	WELL DEPTH (ft)	3/17/87		3/18/87	
				PRE-PURGE DEPTH (ft)	ELEV.	PRE-SAMPLE DEPTH (ft)	ELEV.
3	737.85	734.85	27.3	16.46	721.39	26.95	710.90
5	764.56	762.06	66.2	30.50	734.06	31.20	733.36
6A	755.91	752.91	92.2	70.90	685.01	72.60	683.31
7	763.36	761.36	64.5	49.88	713.48	50.73	712.63
8	732.61	729.11	68.0	*	ERR	*	ERR
B-24D	787.42	784.82	81.9	64.00	723.42	66.92	720.50
A	725.78	723.98	26.8	10.75	715.03	12.55	713.23
B	732.18	730.78	34.4	14.67	717.51	16.30	715.88
C	732.51	730.61	49.4	49.35	683.16	49.35	683.16
D	736.75	735.22	33.7	18.83	717.92	20.65	716.10
E	755.84	754.34	30.0	24.73	731.11	24.85	730.99
F	729.30	728.05	31.8	9.25	720.05	12.00	717.30

\* WELL IS CASCADING WATER LEVEL CANNOT BE OBTAINED

LOCATION No.: W-3  
LAB SAMPLE No.: 12

PROJECT: QUARTERLY GROUNDWATER MONITORING/SAMPLING DATE: 3/18/87 TIME: 3:30 pm  
CLIENT: GUNNVILLE ENERGY SYSTEMS INC WEATHER CONDITIONS: SUNNY, COOL  
JOB No: 69035 ST AIR TEMPERATURE: 45° F  
APPLICATOR: DAVID MANIQUES TYPE OF SAMPLE:  GROUND-WATER  
 SURFACE-WATER  OTHER

WELL DATA:  
APPROXIMATE DIAMETER: 4"  PVC  STEEL  OTHER: \_\_\_\_\_  
SCREEN DIAMETER: 3"  PVC  GALVANIZED STEEL  STAINLESS STEEL  OPEN ROCK  
STATIC WATER LEVEL: 16.46' BOTTOM DEPTH: 27.3'  
DATUM:  TOP OF PROTECTIVE CASING  TOP OF WELL CASING  OTHER: \_\_\_\_\_  
GROUND SURFACE TO DATUM: 3' WATER VOLUME IN WELL: 3.90 GALS.  
CONDITION OF WELL: OBSTRUCTION 15.7' BELOW T.D.C., CONCRETE BASE LOOKS GOOD BUT MOVES WHEN STICKUP IS PUSHED ON

SAMPLING DATA:  
METHOD:  SUBMERSIBLE PUMP  PERISTALTIC PUMP  DIAPHRAGM PUMP  BAILER  
 OTHER: \_\_\_\_\_  
IS PUMPING EQUIPMENT DEDICATED TO SAMPLE LOCATION?  YES  NO  
PUMPING RATE: \_\_\_\_\_ ELAPSED TIME: \_\_\_\_\_ VOLUME PUMPED: \_\_\_\_\_  
WAS WELL EVACUATED?  YES  NO WELL VOLUMES PUMPED: 2 1/4 VOLUMES

SAMPLING DATA:  
METHOD:  SUBMERSIBLE PUMP  PERISTALTIC PUMP  BAILER  
 OTHER: \_\_\_\_\_  
IS SAMPLING EQUIPMENT DEDICATED TO SAMPLE LOCATION?  YES  NO  
DEPTH OF SAMPLE: 26.95'  
CONTAINERS: NUMBER/TYPE: 1/ 200 PLASTIC, 2/ QT. GLASS

PHYSICAL & CHEMICAL DATA:  
APPEARANCE:  CLEAR  TURBID  COLOR: \_\_\_\_\_  CONTAINS SEDIMENT: GREY SILT  
 CONTAINS IMMISCIBLE LIQUID  OTHER: \_\_\_\_\_  
SMELL:  YES VERY MILD  NO  
FIELD DETERMINATIONS:  
TEMPERATURE: 10°C PH: 6.77 SPEC. COND: 234  
OTHER: \_\_\_\_\_

REMARKS: COULD HEAR WATER MOVING THROUGH WELL, IT ALSO HAS A LOT OF SEDIMENT & SMALL STONE ON THE BOTTOM OF THE WELL

December 23, 1986

*1/5/87  
MM pl. review  
Comments  
J*

Mr. Robert Mitrey  
New York State Department of  
Environmental Conservation  
600 Delaware Avenue  
Buffalo, New York 14202

Re: Lancaster Sanitary Landfill  
Groundwater Monitoring  
WE Proj. No. 09035ST

Dear Mr. Mitrey:

Attached please find the analytical results and field data sheets for groundwater samples collected at the Lancaster Sanitary Landfill on October 15 and 16, 1986. Sampling during this period was performed in six (6) of the existing wells (W-3, 5, 6A, 7, 8 and B-24) plus the six (6) new wells (W-A, B, C, D, E and F) which were installed during November of 1985 along the New York State Thruway, southwest and essentially downgradient of the landfill. A field blank was also taken during this sampling round and submitted to the lab for analysis.

In accordance with our groundwater monitoring program dated March, 1986, all wells were sampled for the routine indicator parameters which are normally scheduled for analysis during this semi-annual period (Table 1). In addition, as recommended in our letter of October 16, 1986 and as agreed with the NYSDEC, the analysis of silver and mercury in Wells W-3 and W-5 has been eliminated, and the analysis for lead in well W-E and mercury in well W-F was repeated.

The results of the recent analysis indicates that concentrations of most parameters, with the exception of well W-3, were below detectable levels and/or the minimum reportable concentrations for Class GA waters as defined by the NYSDEC, Title 6, Part 703.5, effective September 1, 1978. Total iron and manganese concentrations were still elevated in most wells which

may be reflective of abnormally high concentrations within the Onondaga Limestone. Soluble iron, which was high during July in Well W-3, decreased and is now below the minimum reportable level. Soluble manganese levels increased in wells W-3 and W-C and are now slightly above acceptable levels. Chloride concentrations which decreased in wells W-B and C, and increased in well W-D, were still above the minimum reportable levels in these wells. The chloride level decreased in well W-7 and is now within acceptable limits. The high levels in the new wells is most likely due to their location and the use of salt on the highway during winter months. The pH values remained unchanged in most wells. However, an increase was noted in well W-3 and a decrease in well B-24, with the level now being within acceptable limits in both wells. The levels of TOC increased in wells W-5, B-24, W-A and W-C and should be watched in future sampling rounds.

Results from well W-3, which is located southwest and immediately downgradient of the landfill, showed minor changes in the routine indicator parameters, although the levels of methylene chloride, trichloroethylene, benzene and toluene increased noticeably, and are now above the minimum reportable level. On the other hand, the organic levels, and in particular, methylene chloride, which was first noted during the previous sampling round, decreased or remained unchanged in the other wells, and are at or below detectable levels in all cases. As indicated in the NYSDEC letter, the detectable levels of methylene chloride in the July samples, with the exception of Well W-3, may have been due to laboratory contamination.

The results of the selected priority pollutant metals scan showed that the level of mercury in Well W-F is still below detectable levels and that the level of lead in well W-E remained relatively unchanged and is still slightly above the minimum reportable limit. Based on the results of the June and October sampling, it is recommended that analysis for lead in well W-E be repeated during the next quarterly sampling period. However, considering that the levels of mercury in well W-F has been below detection levels for the last two sampling rounds, it is recommended that the metal analysis in this well be discontinued.

Should you have any questions or wish to discuss the sampling results in more detail, please do not hesitate to call.

Yours very truly,

WEHRAN ENGINEERING, P.C.

*Robert R. Henschel*

Robert R. Henschel

Senior Geologist

RH:lc

cc: M. Kahle/T. Welsh

M. McIntosh

# ACTS TESTING LABS, INC.

3916 Broadway • Buffalo, N.Y. 14227-1192 • (716) 684-3300  
120 West 41st Street • New York, N.Y. 10036 • (212) 302-6780

TECHNICAL REPORT 6-0003E

November 19, 1986

Mr. Robert R. Henschel  
Senior Geologist  
WEHRAN ENGINEERING

## OBJECT:

Analysis of thirteen well samples for various parameters. The samples were received on October 15 and 16, 1985 from Mr. David Mahiques and identified as quarterly groundwater monitoring from the Lancaster Landfill (Job No. 09035ST).

## RESULTS:

See Table I.

## EXPERIMENTAL:

Total Organic Carbon (TOC) results were according to United States Environmental Protection Agency (EPA) Method 415.1 from "Methods for Chemical Analyses of Water and Waste".

The organics concentrations were determined using EPA Methods 601 and 602: Purge and Trap Gas Chromatography with Photo Ionization and Electrolytic Conductivity detection.

The remaining parameters were analyzed in accordance with "Standard Methods for the Examination of Water and Wastewater", 16th Edition, 1985.

ACTS TESTING LABS, INC.



Elmer K. Gerbracht  
Technical Director

/sms

ACTS TESTING LABS, INC.



Connie A. Finocchi  
Chemistry Laboratory Manager

TABLE I

	LANCASTER				
	W-3 # 1	W-8 # 2	W-5 # 3	W-6A # 4	W-F # 5
pH Units	6.75	7.65	7.55	7.35	7.10
Alkalinity as CaCO3	299	264	284(288)*	344	254
Chloride	103	72.3	1.1	106(99.2%)**	133
Total Organic Carbon	9.93	5.41	54.4	6.57	6.70
Ammonia Nitrogen	1.6	0.65(105%)**	LT 0.10	0.10	0.45
Nitrate Nitrogen	0.84	2.1	3.7	0.12(110)**	0.61(0.63)*
Total Iron	6.28	2.85(107%)**	1.72	5.62	5.50
Soluble Iron	0.04	LT 0.01	0.01	0.01	0.02
Total Manganese	0.88(102)**	13.2	0.04	0.08	0.15
Soluble Manganese	1.02(102%)**	0.02	0.02	0.07	LT 0.01
Total Mercury	-	-	-	-	LT 0.002
<u>EPA 601</u>					
Methylene Chloride	0.092	LT 0.001	LT 0.001	LT 0.001	LT 0.001
Trichloroethylene	0.041	0.002	LT 0.001	LT 0.001	LT 0.001
Vinyl Chloride	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001
<u>EPA 602</u>					
Benzene	0.021	LT 0.001	LT 0.001	LT 0.001	LT 0.001
Toluene	0.075	LT 0.001	LT 0.001	LT 0.001	LT 0.001
Ethylbenzene	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001

Unless otherwise indicated, the results are reported as milligrams per liter (mg/l).

\* = Duplicate Analyses

\*\* = % Spike Recovery

LT = Less Than

Note: Alkalinity taken to a pH of 4.5.

Samples contained concentrations LT 0.001 mg/l within the EPA Series 601 and 602 except as indicated.

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TABLE I

	LANCASTER			
	<u>W-A</u> # 6	<u>W-B</u> # 7	<u>W-D</u> # 8	<u>W-E</u> # 9
pH Units	7.35	7.05	7.05	7.45
Alkalinity as CaCO <sub>3</sub>	241	383	348	393
Chloride	197	417	769	8.5
Total Organic Carbon	25.4	4.07	17.9	16.0
Ammonia Nitrogen	LT 0.10	LT 0.10	LT 0.10	LT 0.10
Nitrate Nitrogen	0.61	0.99	1.2	1.4
Total Iron	14.0	2.74	8.15	30.2
Soluble Iron	LT 0.01	0.03(0.03)*	0.01	0.02
Total Manganese	0.11	3.22	0.35	1.09
Soluble Manganese	0.01	0.05	0.22	0.01
Total Lead	-	-	-	0.058
<u>EPA 601</u>				
Methylene Chloride	LT 0.001	LT 0.001	LT 0.001	LT 0.001
Trichloroethylene	LT 0.001	LT 0.001	LT 0.001	LT 0.001
Vinyl Chloride	LT 0.001	LT 0.001	LT 0.001	LT 0.001
<u>EPA 602</u>				
Benzene	LT 0.001	LT 0.001	LT 0.001	LT 0.001
Toluene	LT 0.001	LT 0.001	LT 0.001	LT 0.001
Ethylbenzene	LT 0.001	LT 0.001	LT 0.001	LT 0.001

Unless otherwise indicated, the results are reported as milligrams per liter (mg/l).

\* = Duplicate Analyses

\*\* = % Spike Recovery

LT = Less Than

Note: Alkalinity taken to a pH of 4.5.

Samples contained concentrations LT 0.001 mg/l within the EPA Series 601 and 602 except as indicated.

192 f. 042

TABLE I

	LANCASTER			
	<u>W-7</u> # 10	<u>BLANK</u> # 11	<u>W-14</u> # 12	<u>W-C</u> # 13
pH Units	6.80	6.90	8.05	7.15
Alkalinity as CaCO <sub>3</sub>	32.3	3.2	176	808(813)*
Chloride	25.5	LT 1.0	8.0	277
Total Organic Carbon	10.2	1.01	69.4	58.7
Ammonia Nitrogen	LT 0.10	LT 0.10	LT 0.10	0.10
Nitrate Nitrogen	LT 0.11	0.08	0.52	0.99
Total Iron	6.32	0.06	74.0	16.10
Soluble Iron	LT 0.01	LT 0.01	LT 0.01	0.03
Total Manganese	0.07	0.01	0.55(0.54)*	1.26
Soluble Manganese	0.01	LT 0.01	0.06	0.36
<u>EPA 601</u>				
Methylene Chloride	LT 0.001	LT 0.001	LT 0.001	LT 0.001
Trichloroethylene	LT 0.001	LT 0.001	LT 0.001	LT 0.001
Vinyl Chloride	LT 0.001	LT 0.001	LT 0.001	LT 0.001
<u>EPA 602</u>				
Benzene	LT 0.001	LT 0.001	LT 0.001	LT 0.001
Toluene	LT 0.001	LT 0.001	LT 0.001	LT 0.001
Ethylbenzene	LT 0.001	LT 0.001	LT 0.001	LT 0.001

Unless otherwise indicated, the results are reported as milligrams per liter (mg/l).

\* = Duplicate Analyses

\*\* = % Spike Recovery

LT = Less Than

Note: Alkalinity taken to a pH of 4.5.

Samples contained concentrations LT 0.001 mg/l within the EPA Series 601 and 602 except as indicated.

241 P 115C

By J.P. Date 12-8-86



Job No. 605-55-1

Chkd. by \_\_\_\_\_ Date \_\_\_\_\_

Sheet No. \_\_\_\_\_ of \_\_\_\_\_

Subject Groundwater Elevations for Lancaster Landfill for Oct. 15, 1986

Well Id.	Datum Elevation	Pre-purged Depth to Water	Pre-Sample Depth to Water	Pre-purged Groundwater Elevation	Pre-sampled Groundwater Elevation
W-3	737.85	22.08	22.08	715.77	715.77
W-5	764.56	33.01	36.87	731.55	727.69
U-6A	755.91	74.16	74.32	681.75	681.59
W-7	763.36	12.15	12.35	751.21	751.01
W-8	732.61	33.01	36.87	699.60	695.74
B-24	787.42	65.15	-	722.27	-
W-A	725.78	7.1	-	718.68	-
W-B	732.18	12.15	12.35	720.03	719.83
W-C	732.51	Dry	-	-	-
W-D	736.75	17.3	17.4	719.45	719.75
W-E	755.84	24.9	25.0	730.94	730.84
W-F	729.30	7.35	7.30	721.95	722.00

June 16, 1986

MEM  
NO NO  
logged into  
computer

Mr. Robert Mitrey  
New York State Department of  
Environmental Conservation  
600 Delaware Avenue  
Buffalo, New York 14202

new gw.  
elements  
mVGS

Re: Lancaster Sanitary Landfill  
Groundwater Monitoring  
WE Proj. No. 09035 ST

Dear Mr. Mitrey:

Attached please find the analytical results and field data sheets for groundwater samples collected at the Lancaster Sanitary Landfill on April 2 and 3, 1986. Sampling during this period was performed in all six of the existing wells (W-3, 5, 6A, 7, 8, and B-24) plus the six new wells (W-A, B, C, D, E and F) which were installed during November of 1985 along the New York State Thruway, southwest and essentially downgradient of the landfill.

As stated in our letter of March 18, 1986, the results of the priority pollutant metals scan performed on samples collected during December, 1985 indicated that the levels of metals in most of the wells were below detectable levels and/or the minimum reportable concentrations for Class GA waters, as defined by the NYSDEC, Title 6, Part 703.5, effective September 1, 1978. However, since the minimum reportable levels were exceeded in Well W-3 for silver, W-5 for for silver and mercury, W-E for lead and W-F for mercury, these metals were analyzed during this round of sampling in the respective wells. In addition, all wells were sampled for the routine indicator parameters which are normally scheduled for analysis during this quarterly period.

The results of the recent analysis indicate that there has been no significant change in contaminant levels in either the existing or new wells, in comparison to the December, 1985 readings. The routine indicator parameters were found to be variable in all of the wells with some wells showing a slight increase, and others showing a slight decrease. Total iron and manganese concentrations were high in most wells, which in part may be due to abnormally high concentrations within the Onondaga Limestone. Chloride levels were still elevated in some of the new wells located along the Thruway which is probably reflective of their location and the use of salt in the highway during winter months. Results from Well W-3, which is located southwest and immediately downgradient of the landfill, indicated that levels of four of the six organics analyzed were above the minimum reportable concentrations. Organic levels in all other wells were below detectable and/or minimum reportable levels.

The results of the selected priority pollutant metals scan which was performed in Wells W-3, 5, 6, W-E and W-F showed a decrease in the level of silver in Wells W-3 and W-5, the level of mercury in Well W-5 and the level of lead in Well W-3, with concentrations falling below detectable and/or minimum reportable levels. The level of lead dropped in well W-E but is still above the minimum reportable level; and the level of mercury in Well W-F showed a slight increase and was still above the minimum reportable level. The metals scan will be repeated in these wells during the next quarterly sampling period (June, 1986) to establish additional baseline readings. A decision to continue or discontinue monitoring for these metals during subsequent sampling rounds will be made following an assessment of the data from the next sampling period.

Should you have any questions or wish to discuss the sampling results in more detail, please do not hesitate to call.

Yours very truly,  
WEHRAN ENGINEERING, P.C.

  
Robert R. Henschel  
Senior Geologist

DA:RRH:lc

cc: M. Kahle/T. Welsh  
enc.

244 of 264

# ACTS TESTING LABS, INC.

3916 Broadway • Buffalo, N.Y. 14227-1192 • (716) 684-3300  
120 West 41st Street • New York, N.Y. 10036 • (212) 302-6780

REVISED TECHNICAL REPORT 6-4466

June 13, 1986

Mr. Alan Scarpine  
WHERAN ENGINEERS

## OBJECT:

Re-evaluation of mercury and silver on Well W-5 and lead on Well W-E to obtain detection limits suitable for comparison with NYS DEC's ground water quality standards for these metals. Samples were received on April 2 and 3, 1986.

## RESULTS:

See Table I

## EXPERIMENTAL:

Lower detection limits were determined by concentrating samples (heat evaporation) followed by analyses according to the most recently published guidelines of Title 40, Code of Federal Regulations, Section 136.3, "Identification of Test Procedures", July 1, 1981.

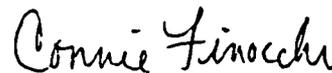
ACTS TESTING LABS, INC.



Daniel P. Murtha, Ph.D.  
Laboratory Director

/sms

ACTS TESTING LABS, INC.



Connie A. Finocchi  
Chemistry Laboratory Supervisor

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TABLE I

	LANCASTER					
	W-3	W-5	W-6A	W-8	W-A	W-B
pH Units	6.40	7.50	7.55	7.30	7.45	7.15
Specific Conductance*	2,300	580	780	1,360	840	3,480
Alkalinity**	677	297	263	219	255	312
Chloride	382.2	6.1	77.8	295.5	125.5	933.2
Total Organic Carbon***	12.8	2.53	21.6	16.7	8.02	5.65
Ammonia Nitrogen	13.4	0.28	0.98	2.1	LT 0.05	LT 0.05
Nitrate Nitrogen	1.9	LT 0.1	LT 0.1	4.7	0.82	0.18
Total Iron	53.8	6.62	4.92	6.00	19.05	8.08
Soluble Iron	0.02	LT 0.01				
Total Manganese	1.84	0.23	0.08	10.65	0.27	0.84
Soluble Manganese	0.97	LT 0.01				
Benzene***	0.006	LT 0.001				
Ethyl Benzene***	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001
Methylene Chloride***	0.054	LT 0.001	LT 0.001	0.001	0.001	LT 0.001
Toluene***	0.005	LT 0.001				
Vinyl Chloride***	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001
Trichloroethylene***	0.028	LT 0.001	LT 0.001	0.004	LT 0.001	LT 0.001
Silver	LT 0.01	LT 0.001	-	-	-	-
Mercury	-	LT 0.002	-	-	-	-

Unless otherwise indicated, the results are reported as milligrams per liter (mg/l).

\* = Reported as micromhos per centimeter.

\*\* = Reported as milligrams per liter as calcium carbonate at pH 3.7.

\*\*\* = Analyses furnished through sub-contract laboratory.

LT = Less Than

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TABLE I

	LANCASTER					
	W-C	W-D	W-E	W-F	01JJ90J5 F-1, W-7	01JJ90J5 F-1, B-24
pH Units	7.05	7.20	7.50	7.40	7.45	9.25
Specific Conductance*	1,840	3,800	520	1,720	1,760	130
Alkalinity**	730	322	529	282	364	60.3
Chloride	338.9	977.7	14.7	450.0	422.2	8.0
Total Organic Carbon***	37.7	5.04	7.92	6.59	7.29	6.28
Ammonia Nitrogen	0.14	0.33	4.2	0.19	0.19	0.23
Nitrate Nitrogen	0.82	4.2	1.6	LT 0.1	1.3	1.2
Total Iron	49.6	4.94	34.3	3.56	1.37	61.8
Soluble Iron	0.05	LT 0.01	0.02	0.06	0.02	LT 0.01
Total Manganese	2.23	0.31	1.18	0.20	0.05	0.57
Soluble Manganese	0.02	0.31	0.01	0.01	0.01	0.02
Benzene***	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001
Ethyl Benzene***	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001
Methylene Chloride***	LT 0.001	LT 0.001	LT 0.001	LT 0.001	0.001	0.001
Toluene***	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001
Vinyl Chloride***	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001
Trichloroethylene***	0.002	LT 0.001	LT 0.001	LT 0.001	0.006	LT 0.001
Lead	-	-	0.1	-	-	-
Mercury	-	-	-	0.008	-	-

Unless otherwise indicated, the results are reported as milligrams per liter (mg/l).

- \* = Reported as micromhos per centimeter.
- \*\* = Reported as milligrams per liter as calcium carbonate at pH 3.7.
- \*\*\* = Analyses furnished through sub-contract laboratory.

LT = Less Than

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# ACTS TESTING LABS, INC.

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120 West 41st Street • New York, N.Y. 10036 • (212) 302-6780

TECHNICAL REPORT 6-4466

May 28, 1986

Mr. Alan Scarpine  
WEHRAN ENGINEERS

## OBJECT:

Analyses of twelve (12) samples for various parameters. The samples were received on April 2 and 3, 1986.

## RESULTS:

See Table I.

## EXPERIMENTAL:

The analyses were determined according to the most recently published guidelines of Title 40, Code of Federal Regulations, Section 136.3, "Identification of Test Procedures", July 1, 1981.

ACTS TESTING LABS, INC.



Daniel P. Murtha, Ph.D.  
Laboratory Director

/sms

ACTS TESTING LABS, INC.



Connie A. Finocchi  
Chemistry Laboratory Supervisor

TABLE I

LANCASTER

	<u>W-3</u>	<u>W-5</u>	<u>W-6A</u>	<u>W-8</u>	<u>W-A</u>	<u>W-B</u>
pH Units	6.40	7.50	7.55	7.30	7.45	7.15
Specific Conductance*	2,300	580	780	1,360	840	3,480
Alkalinity**	677	297	263	219	255	312
Chloride	382.2	6.1	77.8	295.5	125.5	933.2
Total Organic Carbon***	12.8	2.53	21.6	16.7	8.02	5.65
Ammonia Nitrogen	13.4	0.28	0.98	2.1	LT 0.05	LT 0.05
Nitrate Nitrogen	1.9	LT 0.1	LT 0.1	4.7	0.82	0.18
Total Iron	53.8	6.62	4.92	6.00	19.05	8.08
Soluble Iron	0.02	LT 0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.01
Total Manganese	1.84	0.23	0.08	10.65	0.27	0.84
Soluble Manganese	0.97	LT 0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.01
Benzene***	0.006	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001
Ethyl Benzene***	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001
Methylene Chloride***	0.054	LT 0.001	LT 0.001	0.001	0.001	LT 0.001
Toluene***	0.005	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001
Vinyl Chloride***	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001
Trichloroethylene***	0.028	LT 0.001	LT 0.001	0.004	LT 0.001	LT 0.001
Silver	LT 0.01	LT 0.01	-	-	-	-
Mercury	-	LT 0.004	-	-	-	-

Unless otherwise indicated, the results are reported as milligrams per liter (mg/l).

\* = Reported as micromhos per centimeter.

\*\* = Reported as milligrams per liter as calcium carbonate at pH 3.7.

\*\*\* = Analyses furnished through sub-contract laboratory.

LT = Less Than

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✓  
204

TABLE I

LANCASTER

	W-C	W-D	W-6E	W-F	01JJ90J5 F-1, W-7	01JJ90J5 F-1, B-24
pH Units	7.05	7.20	7.50	7.40	7.45	9.25
Specific Conductance*	1,840	3,800	520	1,720	1,760	130
Alkalinity**	730	322	529	282	364	60.3
Chloride	338.9	977.7	14.7	450.0	422.2	8.0
Total Organic Carbon***	37.7	5.04	7.92	6.59	7.29	6.28
Ammonia Nitrogen	0.14	0.33	4.2	0.19	0.19	0.23
Nitrate Nitrogen	0.82	4.2	1.6	LT 0.1	1.3	1.2
Total Iron	49.6	4.94	34.3	3.56	1.37	61.8
Soluble Iron	0.05	LT 0.01	0.02	0.06	0.02	LT 0.01
Total Manganese	2.23	0.31	1.18	0.20	0.05	0.57
Soluble Manganese	0.02	0.31	0.01	0.01	0.01	0.02
Benzene***	LT 0.001	LT 0.001				
Ethyl Benzene***	LT 0.001	LT 0.001				
Methylene Chloride***	LT 0.001	LT 0.001	LT 0.001	LT 0.001	0.001	0.001
Toluene***	LT 0.001	LT 0.001				
Vinyl Chloride***	LT 0.001	LT 0.001				
Trichloroethylene***	0.002	LT 0.001	LT 0.001	LT 0.001	0.006	LT 0.001
Silver <i>LEAD</i>	-	-	LT 0.1	-	-	-
Mercury	-	-	-	0.008	-	-

Unless otherwise indicated, the results are reported as milligrams per liter (mg/l).

\* = Reported as micromhos per centimeter.

\*\* = Reported as milligrams per liter as calcium carbonate at pH 3.7.

\*\*\* = Analyses furnished through sub-contract laboratory.

LT = Less Than

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October 16, 1986

Mr. Robert Mitrey  
New York State Department of  
Environmental Conservation  
600 Delaware Avenue  
Buffalo, New York 14202

*File: Lancaster Sanitary Landfill  
Groundwater Monitoring  
Reports  
1986*

*NO -*

*logged  
OK - Permit  
11/1/86*

Re: Lancaster Sanitary Landfill  
Groundwater Monitoring  
WE Project No. 09035 ST

Dear Mr. Mitrey:

Attached please find the analytical results and field data sheets for groundwater samples collected at the Lancaster Sanitary Landfill on July 9, 1986. Sampling during this period was performed in three (3) of the existing wells (W-3, 6A and 8) plus the six (6) new wells (W-A, B, C, D, E and F) which were installed during November of 1985 along the New York State Thruway, southwest and essentially downgradient of the landfill.

*what about  
5, 7, 8 - 241  
OK - Permit  
11/1/86*

As stated in our letter of March 18, 1986, the results of the priority pollutant metals scan performed on samples collected during December, 1985 indicated that the levels of metals in most of the wells were below detectable levels and/or the minimum reportable concentrations for Class GA waters, as defined by the NYSDEC, Title 6, Part 703.5, effective September 1, 1978. However, since the minimum reportable levels were exceeded in Well W-3 for silver, W-5 for silver and mercury, W-E for lead and W-F for mercury, these metals were analyzed during April, and again during this round of sampling in the respective wells. In addition, all wells were sampled for the routine indicator parameters which are normally scheduled for analysis during this quarterly period.

The results of the recent analysis indicated that there has been a general decrease in containment levels in both the

*25/1/264*

existing and new wells, in comparison with the April, 1986 readings. This may be reflective of the construction of the final cap for the landfill which had been partially completed at the time of sampling. It is felt that additional improvement in water quality should be observed at the site during future sampling rounds once the final cap is fully in place. Total iron and manganese concentrations decreased considerably in most wells, although soluble iron increased in Well W-3, and soluble manganese increased in Wells W-3 and W-B to slightly above the minimum reportable levels. This may be reflective of abnormally high concentrations within the Onondaga Limestone. Chloride levels were still elevated in Well W-3 and three of the new wells located along the Thruway, but were generally lower than recorded levels in April. The high levels in the new wells is most likely due to their location and the use of salt on the highway during winter months.

Results from Well W-3, which is located southwest and immediately downgradient of the landfill, showed a marked improvement in water quality since April. All parameters showed a general decrease in concentrations, with significant reductions in the levels of ammonia nitrogen, total iron, benzene, methylene chloride, toluene and trichloroethylene. It is to be noted that organic levels in all the wells are now below detectable and/or minimum reportable levels, with the exception of methylene chloride in Well W-C. This elevated reading may simply be an erratic test result, but will be monitored in future sampling rounds.

The results of the selected priority pollutant metals scan which was performed in Wells W-3, 5, W-E and W-F showed decreases in the level of mercury in Well W-F, and the level of lead in Well W-E, with no change in the concentrations in Wells W-3 and 5. The recorded levels for the priority metals are now below detectable and/or minimum reportable levels in all the wells, with the exception of lead in Well <sup>W-E</sup> W-3, which is still slightly above the minimum reportable level. Based on the results of the April and June sampling, it is recommended that

analysis for lead in Well W-E and mercury in Well W-F be repeated during the next quarterly sampling period to establish additional baseline readings. However, considering that the levels of silver and mercury in Wells W-3 and W-5 respectively have been below detection limits for the last two sampling rounds, it is recommended that the metals analysis in these wells be discontinued.

Should you have any questions or wish to discuss the sampling results in more detail, please do not hesitate to call.

Yours very truly,

WEHRAN ENGINEERING, P.C.

*Robert R. Henschel*

Robert R. Henschel

Senior Geologist

RH:lc

cc: M. Kahle/T. Welsh

enc.

# ACTS TESTING LABS, INC.

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120 West 41st Street • New York, N.Y. 10036 • (212) 302-6780

TECHNICAL REPORT 6-9590

September 19, 1986

Mr. Robert R. Henschel  
Senior Geologist  
WEHRAN ENGINEERING, P.C.

## OBJECT:

Analysis of eleven well samples for various parameters. The samples were received on July 9, 1986 from Mr. David L. Aloysius, and identified as monitoring well samples from the Lancaster Landfill (Project No. 9035ST).

## RESULTS:

See Table I.

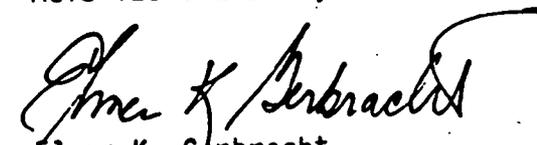
## EXPERIMENTAL:

The Methylene Chloride, Vinyl Chloride and Trichloroethylene concentrations were determined using New York State Department of Environmental Conservation (NYSDEC) approved methodology: Method 601, Purge and Trap Gas Chromatography with Electrolytic Conductivity Detection.

The Benzene, Toluene and Ethyl Benzene concentrations were also determined using NYSDEC approved methodology: Method 602, Purge and Trap Gas Chromatography with Photo Ionization Detection.

The remaining parameters were determined using methodology from the "Standard Methods for the Examination of Water and Wastewater", 15th Edition, 1980.

ACTS TESTING LABS, INC.

  
Elmer K. Gerbracht  
Technical Director

/sms

ACTS TESTING LABS, INC.

  
Connie A. Finocchi  
Chemistry Laboratory Manager

TABLE I

SAMPLE IDENTIFICATION

PARAMETER	W-3	W-5	W6-A	W-8	W-A	W-B	W-C	W-D	W-E	W-F	Blank
pH Units	6.30	NR	7.30	7.75	7.35	6.80	7.05	7.00	7.40	7.10	IS
Specific Conductance	1,920	NR	860 (860)*	960	720	3,900	1,880	3,200	480	1,200	IS
Alkalinity	510	NR	320	262	218	420	798	286	386	330 (326)*	IS
Chloride	331	NR	6.0	93.7 (125)*	83.3	1,094	806 (95.6%)**	266	9.0	173 (176)*	IS
Total Organic Carbon	7.3	NR	5.9	4.2	2.2	5.1	27.4	8.6	8.7	6.4	16.4
Ammonia Nitrogen	1.2	NR	LT 0.1	2.0	LT 0.1	LT 0.1 (LT 0.1)*	1.5	1.2	0.41	LT 0.1	IS
Nitrate Nitrogen	0.43 (0.39)*	NR	LT 0.10	2.3	0.95	LT 0.10	0.41	0.33	2.8	0.27	IS
Total Iron	13.65	NR	0.84	2.96	1.70	1.10	21.1	8.38	39.2	10.5	0.46
Soluble Iron	1.80	NR	0.02	LT 0.01	LT 0.01	LT 0.01 (LT 0.01)*	LT 0.01	0.11	LT 0.01	LT 0.01	IS

NOTE: All results are reported in milligrams per liter except pH (Units), Conductance (Micromhos), and Alkalinity (milligrams of Calcium Carbonate per liter).

NR = Not Requested    LT = Less Than    IS = Insufficient Sample    \* = Duplicate Result    \*\* = Spike Result

232  
264  
255  
A

TABLE I (continued)

SAMPLE IDENTIFICATION

<u>PARAMETER</u>	<u>W-3</u>	<u>W-5</u>	<u>W6-A</u>	<u>W-8</u>	<u>W-A</u>	<u>W-B</u>	<u>W-C</u>	<u>W-D</u>	<u>W-E</u>	<u>W-F</u>	<u>Blank</u>
Total Manganese	1.16	NR	0.07	8.40	0.02	1.10	1.88	0.26	1.26	0.27	LT 0.01
Soluble Manganese	0.82	NR	0.06	LT 0.01	LT 0.01	0.86	0.23	0.23	0.02	0.09 (0.09)*	IS
Lead	NR	LT 0.010	NR	NR	NR	NR	NR	NR	0.065	NR	IS
Mercury	NR	LT 0.002	NR	NR	NR	NR	NR	NR	NR	LT 0.002	IS
Silver	LT 0.01	LT 0.01	NR	NR	NR	NR	NR	NR	NR	NR	IS
Benzene	LT 0.001	NR	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	IS
Ethyl Benzene	LT 0.001	NR	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	IS
Methylene Chloride	0.009	NR	0.007	0.010	0.006	0.003	0.233	0.004	0.005	0.005	IS
Toluene	LT 0.001	NR	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	IS
Vinyl Chloride	LT 0.001	NR	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001	IS
Trichloroethylene	0.010	NR	0.001	0.002	LT 0.001	LT 0.001	0.002	LT 0.001	LT 0.001	LT 0.001	IS

NOTE: All results are reported in milligrams per liter except pH (Units), Conductance (Micromhos), and Alkalinity (milligrams of Calcium Carbonate per liter).

NR = Not Requested      LT = Less Than      IS = Insufficient Sample      \* = Duplicate Result      \*\* = Spike Result

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ENVIRONMENTAL PROTECTION AGENCY

Office of Enforcement

CHAIN OF CUSTODY RECORD

PROJ. NO.		PROJECT NAME				NO. OF CONTAINERS	REMARKS				
9035 ST		Lancaster monitoring well samples									
SAMPLERS: (Signature)		David Agyius Wehran Robert Lewyck : LANC. LABORILL Inc				large jar / no preserv. large jar w/ preserv. small bottle w/ preserv. small vial					
STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION						
W-5	7/9	8 <sup>30</sup> am		/		4	/	/	/	/	used BLANK bottles to sample W-5
W-6A	7/9/86	9 <sup>00</sup> am		/		4	/	/	/	/	needed SMALL for metals.
W-8		9 <sup>40</sup> am		/		4	/	/	/	/	
W-F		10 <sup>00</sup> am		/		4	/	/	/	/	
W-3		10 <sup>30</sup> am		/		4	/	/	/	/	
W-A		11 <sup>00</sup> am		/		4	/	/	/	/	
W-B		11 <sup>30</sup> am		/		4	/	/	/	/	
W-D		11 <sup>45</sup> am		/		4	/	/	/	/	
W-E		1 <sup>30</sup> pm		/		4	/	/	/	/	
W-C		1 <sup>40</sup> pm		/		4	/	/	/	/	The 2 large jars not completely filled
Blank				/		1		/			

Relinquished by: (Signature) <i>David Agyius</i>	Date / Time 7/9/86 2 <sup>50</sup> pm	Received by: (Signature) <i>Susan M. Schwab</i>	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	

By DLA Date 7/14/86



Job No. 09035 JT

Chkd. by \_\_\_\_\_ Date \_\_\_\_\_

Sheet No. 1 of 1

Subject Lancaster, groundwater levels 7/9/86 (PRE-PURGE)

Well #	Ground Elv (ft)	Ref. Pt. Top of Casing Elv (ft)	Groundwater Depth from Ref. Pt (ft)	Groundwater Elv (ft)
3	735.1	737.85	22.8	715.05
5	761.9	764.56	32.55	732.01
6a	754.2	755.91	72.15	683.76
7	761.2	763.36	51.1	712.26
8	728.97	732.61	CASCADING	
B-24s	784.8	787.12	15.2	771.92
B-24d	784.8	787.42	66.0	721.42
W-A	723.58	725.78	8.9	716.88
W-B	730.16	732.18	13.9	718.28
W-C	730.01	732.51	48.2	684.31
W-D	734.98	736.75	18.4	718.35
W-E	753.80	755.84	23.6	732.24
W-F	727.33	729.30	8.45	720.85

NOTE :: ALL WELLS WERE RECOVERED TO AT LEAST 75% OF THEIR ORIGINAL STATIC LEVEL PRIOR TO SAMPLING

**WESTERN**

March 18, 1986

**Mr. Robert Mitrey  
New York State Department of  
Environmental Conservation  
600 Delaware Avenue  
Buffalo, New York 14202**

**Re: Lancaster Sanitary Landfill  
Groundwater Monitoring Program  
WE Proj. No. 01339035**

Dear Mr. Mitrey:

Attached please find the analytical results for groundwater samples collected at the Lancaster Sanitary Landfill on December 11 and 12, 1985. Sampling during this period was performed in five of the existing wells (W-3, 5, 6A, 7 and 8) plus five of the six new wells (W-A, B, D, E & F) which were installed during November of 1985 along the New York State Thruway, southwest and essentially downgradient of the landfill (Figure 1). Wells B-24 and W-C were not sampled during this period.

In accordance with our memorandum of August 22, 1984, all the wells were sampled for the routine indicator parameters (which are currently analyzed on a quarterly basis) plus the priority pollutant metals. The results of the recent analysis indicate that there has been no significant change in any of the contaminant levels in the existing wells, and that the new wells generally show contaminant levels comparable with existing wells W-8 and W-6A. It should be noted that chloride and specific conductance levels were elevated in all new wells which is probably reflective of their location along with Thruway and the use of "salt" on the highway during winter months.

The results of the priority pollutant metals scan indicated that levels in most of the wells are below detectable levels and/or well below the minimum reportable levels for Class GA waters. However, the minimum reporting levels were exceeded in Well W-3 for silver, Well W-5 for mercury and silver, Well W-E for lead and Well W-F for mercury.

Based on the results of the recent analysis, and the data from the past several years, we would propose to modify the list of parameters to be monitored and the frequency of monitoring as outlined in Table I. In addition to the routine parameters shown in Table 1, Wells W-3, W-5, W-E and W-F would be analyzed

*NO NO log w into 1000-4*  
*W-3, W-5, W-E, W-F*  
*comments*  
*man written*  
*file*

the specific metals which occurred in each well at levels above the minimum reporting levels as determined by December 11 and 12, 1985 analysis. These metals should be analyzed during the next two quarterly sampling periods (March and June, 1986) to determine whether the recorded levels are true indicators or erroneous readings. A decision to continue or discontinue monitoring for these metals would be made following an assessment of the data from the next two sampling periods.

Should you have any questions or wish to discuss this matter in more detail, please do not hesitate to call.

Yours very truly,

**WEHRAN ENGINEERING, P.C.**



Robert R. Henschel

Senior Geologist

RH:lc

cc: T. Welch/M. Kahle

enc.

**TABLE I**

**Lancaster Sanitary Landfill  
Groundwater Monitoring Program**

<u>Parameter</u>	<u>CURRENT PROGRAM</u>	<u>PROPOSED PROGRAM</u>		<u>Remarks</u>
	<u>Wells to be Monitored</u>	<u>Quarterly</u> <sup>(1)</sup>	<u>Quarterly</u> <sup>(1)</sup>	
Water Level	All	x	x ?	
pH	All	x	x	
Conductance	All	x	x	
Alkalinity	All	x	x	
Chloride	All	x	x	
TOC	All	x	x	
Ammonia Nitrogen	All	x	x	
Nitrate Nitrogen	All	x	x	
Fe (total)	All	x	x (p. 2)	x Naturally high at site.
Fe (soluble)	All	x	x	x " " "
Mn (total)	All	x	x	
Mn (soluble)	All	x	x	
Benzene	All	x	x	x No detectable levels in past.
Ethylbenzene	All	x		x " " "
Methylene Chloride	All	x		x " " "
Toluene	All	x		x " " "
Vinyl Chloride	All	x		x " " "
Trichloroethylene	All	x	x	Has shown elevated levels in past.

(1) March, June, September, December

(2) March, September

# ACTS TESTING LABS, INC.

3016 Broadway • Buffalo, N.Y. 14227-1192 • (716) 684-3300  
120 West 41st Street • New York, N.Y. 10036 • (212) 302-6780

TECHNICAL REPORT 5-13818

January 20, 1986

Mr. Alan Scarpine  
MEMORANDUM ENGINEERS

## OBJECT:

Analysis of ten well water samples from the Lancaster Landfill. The samples were received on December 11 and 12, 1985.

## RESULTS:

See Table I.

## EXPERIMENTAL:

Metals and wet chemistry parameters were determined according to the most recently published guidelines of Title 40, Code of Federal Regulations, Section 136.3, "Identification of Test Test Procedures", July 1, 1981.

Organic parameters were determined by approved U.S. Environmental Protection Agency approved procedures (EPA Methods 601 and 602).

ACTS TESTING LABS, INC.



Daniel P. Murtha, Ph.D.  
Laboratory Director

DPM/sms

TABLE I

## LANCASTER

	W-3	W-5	W-6A	W-8	W-F
✓ pH Units	6.20	7.25	7.13	7.32	7.24
↗ Specific Conductance*	1,760	500	860	840	1,360
✓ Alkalinity**	564	296	396	242	240
✓ Chloride	195	3.5	97.7	130	239
↘ Total Organic Carbon	10.3	4.7	7.6	5.9	8.0
↘ Ammonia Nitrogen	6.8	1.3	0.84	0.69	0.22
↘ Nitrate Nitrogen	0.52	0.19	LT 0.10	1.06	0.39
s Total Iron	7.1	17.6	1.8	1.5	10.0
s Soluble Iron	0.25	LT 0.01	0.17	LT 0.01	0.08
g Total Manganese	0.15	3.4	0.10	4.1	0.20
s Soluble Manganese	LT 0.01				
Lead	LT 0.1				
Cadmium	LT 0.01				
Chromium	LT 0.01				
Copper	LT 0.01				
Nickel	LT 0.10				
Silver	0.05	0.06	LT 0.01	LT 0.01	0.02
Zinc	1.3	1.8	0.65	0.55	3.2
Thallium	LT 0.1				
Beryllium	LT 0.01				
Arsenic	0.006	0.005	LT 0.002	0.002	LT 0.002
Antimony	LT 0.002				
Selenium	LT 0.002				
↘ Mercury	LT 0.004	0.021	LT 0.004	LT 0.004	0.006
1,1,1 Trichloroethane	LT 0.001	LT 0.001	LT 0.001	0.002	LT 0.001
↘ Benzene	1.5	LT 0.001	LT 0.001	LT 0.001	LT 0.001
↘ Ethyl Benzene	LT 0.001				
↘ Methylene Chloride	LT 0.001				
↘ Toluene	LT 0.001				
↘ Trichloroethylene	0.020	0.001	0.001	0.003	LT 0.001
↘ Vinyl Chloride	LT 0.001				
↘ Trans 1,2-Dichloroethene	LT 0.001				

Unless otherwise indicated, the results are reported as milligrams per liter (mg/l).

\* = Reported as micromhos per centimeter.

\*\* = Reported as milligrams per liter as calcium carbonate.

LT = Less Than

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TABLE I (continued)

	LANCASTER				
	W-A	W-B	W-D	W-7	W-E
pH Units	7.20	7.20	7.40	7.75	7.52
Specific Conductance*	900	2,320	2,100	1,520	480
Alkalinity**	238	340	246	294	806
Chloride	159	435	461	9.8	313
Total Organic Carbon	6.8	5.5	8.8	7.6	35.9
Ammonia Nitrogen	LT 0.05	0.50	1.2	0.05	0.54
Nitrate Nitrogen	0.10	0.24	0.26	3.70	1.16
Total Iron	1.8	1.3	1.8	3.5	77.0
Soluble Iron	0.13	0.21	0.38	LT 0.01	1.08
Total Manganese	LT 0.01	0.15	0.27	0.05	2.5
Soluble Manganese	LT 0.01	LT 0.01	LT 0.01	LT 0.01	0.05
Lead	LT 0.1	LT 0.1	LT 0.1	LT 0.1	0.2
Cadmium	LT 0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.01
Chromium	LT 0.01	LT 0.01	LT 0.01	LT 0.01	0.05
Copper	LT 0.01	LT 0.01	LT 0.01	LT 0.01	0.18
Nickel	LT 0.10	LT 0.10	LT 0.10	LT 0.10	0.20
Silver	LT 0.01	LT 0.01	LT 0.01	0.02	0.04
Zinc	0.05	0.10	0.12	0.08	1.2
Thallium	LT 0.1	LT 0.1	LT 0.1	LT 0.1	LT 0.1
Beryllium	LT 0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.01
Arsenic	0.002	LT 0.002	0.002	0.003	0.020
Antimony	LT 0.002	LT 0.002	LT 0.002	LT 0.002	LT 0.002
Selenium	LT 0.002	LT 0.002	LT 0.002	LT 0.002	LT 0.002
Mercury	LT 0.004	LT 0.004	LT 0.004	LT 0.004	LT 0.004
1,1,1 Trichloroethane	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001
Benzene	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001
Ethyl Benzene	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001
Methylene Chloride	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001
Toluene	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001
Trichloroethylene	0.001	LT 0.001	0.001	0.001	0.001
Vinyl Chloride	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001
Trans 1,2-Dichloroethene	LT 0.001	LT 0.001	LT 0.001	LT 0.001	LT 0.001

Unless otherwise indicated, the results are reported as milligrams per liter (mg/l).

\* = Reported as micromhos per centimeter.

\*\* = Reported as milligrams per liter as calcium carbonate.

LT = Less Than

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