

FILE COPY

02-8705-07-SI
Rev. No.0

FINAL DRAFT
SITE INSPECTION REPORT
NEWBURGH LANDFILL
NEWBURGH, NEW YORK

PREPARED UNDER

TECHNICAL DIRECTIVE DOCUMENT NO. 02-8705-07
CONTRACT NO. 68-01-7346

FOR THE

ENVIRONMENTAL SERVICES DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY

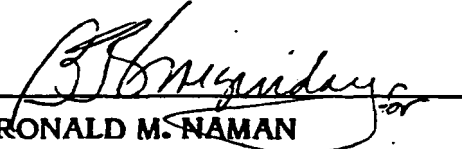
APRIL 15, 1988

NUS CORPORATION
SUPERFUND DIVISION

SUBMITTED BY


THOMAS VARNER
PROJECT MANAGER

REVIEWED/APPROVED BY


RONALD M. NAMAN
FIT OFFICE MANAGER

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SECTION 1

SITE INSPECTION REPORT EXECUTIVE SUMMARY



02-8705-07-SI
Rev. No. 0

**POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
EXECUTIVE SUMMARY**

Newburgh Landfill
Site Name

NYD980534846
EPA Site ID Number

Pierces Road
Newburgh, NY
Address

02-8705-07
TDD Number

SITE DESCRIPTION

The Newburgh Landfill is a 30-acre parcel of land owned by the city of Newburgh and is located in Orange County, New York. The landfill was in operation from the late 1940s to 1976. During this period, the landfill accepted mainly municipal wastes; however, there is documentation that states that E.I. Dupont de Nemours & Company and Stauffer Chemical Company buried sludges of all types from 1965 to 1976. Materials landfilled by Stauffer Chemical Company included caustics, pigments, polyvinyl chloride resin, solvents, calcium carbonate, silica, and oils.

The site is situated in an area of commercial, industrial, and residential properties and is presently used to dispose of trees, leaves, and brushes. The Creek Industrial Park borders the site to the west, and newly developed housing complexes border the property to the east. Interstate 84 is the landfill's northern boundary, and Pierces Road forms the southern boundary.

The major source of water in the city of Newburgh is Lake Washington. Chadwick Lake is utilized by the town of Newburgh, and New Windsor is supplied by the New York Aqueduct System, which has its source in the Catskill Mountains. Lake Washington and Chadwick Lake are 2 and 3.25 miles away from the site, respectively.

Two surface water and two sediment samples from a drainage culvert, and four soil samples from the landfill area, were collected during the NUS Corp. Region 2 FIT site inspection on July 8, 1987. All samples were analyzed for Hazardous Substance List (HSL) organic and inorganic parameters. Solvents and polyaromatic hydrocarbons were found in surface water/sediment samples, and solvents, metals, polyaromatic hydrocarbons, and pesticides were found in soil samples at significant concentration levels.

Prepared by: Thomas Varner
of NUS Corporation

Date: April 15, 1988

SECTION 2

ENVIRONMENTAL PROTECTION AGENCY FORM 2070-13

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

I. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D980534846

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site) 02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Newburgh Landfill Pierces Road
03 CITY 04 STATE 05 ZIP CODE 06 COUNTY 07 COUNTY CODE 08 CONG DIST.
Newburgh NY 12550 Orange 071 26
09 COORDINATES 10 TYPE OF OWNERSHIP (Check one)
LATITUDE LONGITUDE
4 10 3 0' 5 0" N 0 7 40 0 2' 0 4" W
A. PRIVATE B. FEDERAL C. STATE
D. COUNTY X E. MUNICIPAL F. OTHER
G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION 02 SITE STATUS 03 YEARS OF OPERATION
07 / 08 / 87 ACTIVE
MONTH DAY YEAR X INACTIVE
late 1940s / 1976 UNKNOWN
BEGINNING YEAR ENDING YEAR
AGENCY PERFORMING INSPECTION (Check all that apply)
A. EPA X B. EPA CONTRACTOR NUS FIT 2 C. MUNICIPAL D. MUNICIPAL CONTRACTOR
(Name of firm) (Name of firm)
X E. STATE F. STATE CONTRACTOR G. OTHER
(Name of firm) (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Robert G. Nies	Geologist	NUS Corporation	(201) 225-6160
09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
Jane Bullis	Environmental Scientist	NUS Corporation	(201) 225-6160
Michael Bauman	Geologist	NUS Corporation	(201) 225-6160
Mark Ellis	Geologist	NUS Corporation	(201) 225-6160
Serry Gilliland	Geologist	NUS Corporation	(201) 225-6160

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO.
Bill Mott	Supervisor of the city garage	Pierces Road Newburgh, New York	(914) 565-3297

17 ACCESS GAINED BY (Check one) 18 TIME OF INSPECTION 19 WEATHER CONDITIONS
X PERMISSION 0900 Hot and humid, 75° - 80°F
WARRANT

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
Hiana Messina	U.S. EPA, Edison, New Jersey	(201) 321-6685

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
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Thomas Varner	U.S. EPA	NUS Corp., FIT 2	(201) 225-6160	08 / 03 / 87 MONTH DAY YEAR
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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 2 - WASTE INFORMATION

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY 0980534846

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)		02 WASTE QUANTITY AT SITE	03 WASTE CHARACTERISTICS (Check all that apply)	
☒ A. SOLID	☒ E. SLURRY	(Measures of waste quantities must be independent)	☒ A. TOXIC	☐ E. SOLUBLE
☒ B. POWDER, FINES	☒ F. LIQUID		☐ B. CORROSIVE	☐ F. INFECTIOUS
☒ C. SLUDGE	☐ G. GAS		☐ C. RADIOACTIVE	☒ G. FLAMMABLE
☐ D. OTHER _____	(Specify)		☒ D. PERSISTENT	☐ H. IGNITABLE
		TONS <u>unknown</u>		
		CUBIC YARDS _____		
		NO. OF DRUMS _____		

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE	Unknown		
OLW	OILY WASTE	Unknown		
SOL	SOLVENTS	Unknown		
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

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

CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE 0 CONCENTRATION
SOL	Toluene	108-88-3	Landfill	130	ug/kg
SOL	Total xylenes	1330-20-7	Landfill	280	ug/kg
OCC	Acenaphthylene	208-96-8	Landfill	450	ug/kg
OCC	Dibenzofuran	132-64-9	Landfill	approx. 240	ug/kg
OCC	Phenanthrene	85-01-8	Landfill	approx. 5900	ug/kg
OCC	Fluoranthene	206-44-0	Landfill	9500	ug/kg
OCC	Pyrene	129-00-0	Landfill	approx. 7600	ug/kg
OCC	Benzo(a)anthracene	56-55-3	Landfill	approx. 4100	ug/kg
OCC	Chrysene	218-01-9	Landfill	approx. 4900	ug/kg
OCC	Benzo(b)fluoranthene	205-99-2	Landfill	4400	ug/kg
OCC	Benzo(k)fluoranthene	207-08-9	Landfill	approx. 4000	ug/kg
OCC	Benzo(a)pyrene	50-32-8	Landfill	approx. 3800	ug/kg
OCC	Indeno(1,2,3-cd)pyrene	193-39-5	Landfill	2200	ug/kg
OCC	Benzo(ghi)perylene	191-24-2	Landfill	approx. 2700	ug/kg
OCC	Aroclor - 1254	11097-69-1	Landfill	420	ug/kg
OCC	Aroclor - 1260	11096-82-5	Landfill	approx. 1100	ug/kg
PSD	Methoxychlor	72-43-5	Landfill	190	ug/kg
MES	Lead	7439-92-1	Landfill	630	mg/kg
MES	Copper	7440-50-8	Landfill	139	mg/kg

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS	Not Applicable		FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

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

U.S. EPA Contract Laboratory Program, Rocky Mountain Analytical and U.S. Testing Company, Inc., Case No. 7569, Laboratory Analysis from MUS Corp. Region 2 FIT Site Inspection conducted on July 8, 1987.
New York State Department of Environmental Conservation Phase I Report.

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

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D980534846

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 X A. GROUNDWATER CONTAMINATION 02 OBSERVED (DATE:) X POTENTIAL ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 9,363 04 NARRATIVE DESCRIPTION

There is a potential for migration of contaminants found on site into groundwater, since the landfill is unlined. There are 9,363 people served by private wells within 3 miles of the site.

01 X B. SURFACE WATER CONTAMINATION 02 OBSERVED (DATE:) X POTENTIAL ALLEGED
03 POPULATION POTENTIALLY AFFECTED: Unknown 04 NARRATIVE DESCRIPTION

There is a potential for surface water contamination through runoff. Gidneytown Creek, which is used for recreation, lies 500 feet to the northwest. Surface water is used for drinking in the area, but is either at a higher elevation or is not within 3 miles of the site.

01 X C. CONTAMINATION OF AIR 02 OBSERVED (DATE:) X POTENTIAL ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 68,181 04 NARRATIVE DESCRIPTION

There is potential for contamination of air. Solvents in slurry waste were allowed to evaporate into the open air.

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

There is no potential for fire/explosive conditions as a result of the presence of hazardous substances. Most of the waste is sufficiently covered, except for the trees, leaves, and brush which have been disposed of more recently.

01 X E. DIRECT CONTACT 02 OBSERVED (DATE:) X POTENTIAL ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 8,431 04 NARRATIVE DESCRIPTION

There is a potential for direct contact since the site is not completely fenced.

01 X F. CONTAMINATION OF SOIL 02 X OBSERVED (DATE: 7/8/87) POTENTIAL ALLEGED
03 AREA POTENTIALLY AFFECTED: 30 (ACRES) 04 NARRATIVE DESCRIPTION

Analysis of samples taken during an NUS Corp. Region 2 FIT site inspection showed the presence of solvents, pesticides, and other polyaromatic hydrocarbons.

01 X G. DRINKING WATER CONTAMINATION 02 OBSERVED (DATE:) X POTENTIAL ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 9,363 04 NARRATIVE DESCRIPTION

There is a potential for contamination of drinking water, since groundwater is used for drinking and the landfill is unlined. There are 9,363 people who drink water from private wells within 3 miles of the site.

01 X H. WORKER EXPOSURE/INJURY 02 OBSERVED (DATE:) X POTENTIAL ALLEGED
03 WORKERS POTENTIALLY AFFECTED: 31 04 NARRATIVE DESCRIPTION

There is potential for worker exposure/injury. The city garage is located on the landfill, and portions of it are still being used to dispose of trees, leaves, and brush. Solvents in slurry waste were allowed to evaporate into the open air.

01 X I. POPULATION EXPOSURE/INJURY 02 OBSERVED (DATE:) X POTENTIAL ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 68,181 04 NARRATIVE DESCRIPTION

There is a potential for population exposure/injury through direct contact, and migration of contaminants in air, drinking water, or surface water. Contaminants could reach groundwater and surface water in leachate and runoff, respectively. Surface water is used for recreation.

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

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY 0980534846

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 X J. DAMAGE TO FLORA
04 NARRATIVE DESCRIPTION

02 _ OBSERVED (DATE: _____) X POTENTIAL _ ALLEGED

There is potential for damage to flora through runoff. No diversion systems are in existence at the site.

01 X K. DAMAGE TO FAUNA
04 NARRATIVE DESCRIPTION (Include name(s) of species)

02 _ OBSERVED (DATE: _____) X POTENTIAL _ ALLEGED

There is a potential for damage to fauna through consumption of contaminated surface water or affected vegetation. Seven painted turtles (Chrysemys picta), rabbits (Sylvilagus floridanus), and deer tracks were seen on site.

01 X L. CONTAMINATION OF FOOD CHAIN
04 NARRATIVE DESCRIPTION

02 _ OBSERVED (DATE: _____) X POTENTIAL _ ALLEGED

There is potential for contamination of the food chain. Gidneytown Creek, which is used for recreational purposes, may be affected. Vegetation may also be affected and eaten by animals.

01 X M. UNSTABLE CONTAINMENT OF WASTES
(Spills/runoff/standing liquids/leaking drums)
03 POPULATION POTENTIALLY AFFECTED: 8,431

02 X OBSERVED (DATE: 7/8/87) _ POTENTIAL _ ALLEGED

04 NARRATIVE DESCRIPTION

Leachate was seen entering a drainage culvert during an MUS Corp. Region 2 FIT site inspection.

01 X N. DAMAGE TO OFFSITE PROPERTY
04 NARRATIVE DESCRIPTION

02 _ OBSERVED (DATE: _____) X POTENTIAL _ ALLEGED

There is potential for damage to off-site property through runoff. There are no containment systems in existence to prevent migration of wastes. There is also potential for damage to private wells through leachate migration.

01 X O. CONTAMINATION OF SEWERS, STORM DRAINS, WHITPS
04 NARRATIVE DESCRIPTION

02 _ OBSERVED (DATE: _____) X POTENTIAL _ ALLEGED

There are storm drains in the vicinity of the site which may be contaminated through runoff.

01 X P. ILLEGAL/UNAUTHORIZED DUMPING
04 NARRATIVE DESCRIPTION

02 _ OBSERVED (DATE: _____) POTENTIAL X ALLEGED

There is a potential for illegal/unauthorized dumping since the site is not completely fenced. The landfill supervisor stated that people travelling on Interstate 84 have stopped to dump waste on the back portion of the landfill.

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

III. TOTAL POPULATION POTENTIALLY AFFECTED: 68,181

IV. COMMENTS

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

General Sciences Corporation, Graphical Exposure Modeling Systems (GEMS), Landover, Maryland, 1986.
Site Inspection Report, MUS Corp. Region 2 FIT, August 3, 1987, TDD No. 02-8705-07.
U.S. Department of the Interior, Geological Survey Topographic Map, 7.5 minute series, "Newburgh Quadrangle, NY," 1985; and "Cormwall Quadrangle, NY," 1957 (photorevised 1981).
Telecon note: Conversations between Thomas Varner, MUS Corp, and:
- Mr. Ciro DiLorenzo, Town of Newburgh Building Inspector's Office, December 30, 1987
- Mr. Richard McGoey, New Windsor Town Engineer, December 30, 1987.
Conant, Roger. A field guide to reptiles and amphibians of Eastern and Central North America, 2nd edition. Boston, Houghton Mifflin Company, 1975.
U.S. EPA Contract Laboratory Program, Rocky Mountain Analytical and U.S. Testing Company, Inc., Case No. 7569, Laboratory Analysis from MUS Corp. Region 2 FIT site inspection conducted on July 8, 1987.
Telecon note: Conversation between Mr. John Hess, Newburgh City Water Department and Robert Nies, MUS Corp., June 16, 1987.
New York State Department of Environmental Conservation Phase I Report.

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

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D980534846

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				The Newburgh Landfill did not have a state permit to dispose of waste at the site.
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☐ F. SPCC PLAN				
☐ G. STATE (Specify)				
☐ H. LOCAL (Specify)				
☒ I. OTHER (Specify)	7107	4/1/87	7/1/87	Restricted burning permit, renewed regularly if there are no complaints from neighbors.
☐ J. NONE				

III. SITE DESCRIPTION

01 Storage/Disposal (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE	04 TREATMENT (Check all that apply)	05 OTHER
☐ A. SURFACE IMPOUNDMENT			☒ A. INCINERATION	☒ A. BUILDINGS ON SITE
☐ B. PILES			☐ B. UNDERGROUND INJECTION	
☐ C. DRUMS, ABOVE GROUND	approx. 15	drums	☐ C. CHEMICAL/PHYSICAL	
☐ D. TANK, ABOVE GROUND			☐ D. BIOLOGICAL	06 AREA OF SITE
☐ E. TANK, BELOW GROUND			☐ E. WASTE OIL PROCESSING	
☒ F. LANDFILL	Unknown		☐ F. SOLVENT RECOVERY	30
☐ G. LANDFARM			☐ G. OTHER RECYCLING/RECOVERY	(Acres)
☐ H. OPEN DUMP			☐ H. OTHER (Specify)	
☐ I. OTHER (Specify)				

07 COMMENTS

Municipal garbage was disposed of in the landfill for approximately 30 years. During this time no records were kept on the amount of waste being disposed of there. The landfill is still being used to dispose of trees, leaves, and brush, but municipal wastes are no longer being dumped on site.

CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

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

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

The site does not have any type of a liner or a leachate collection system to restrict the migration of contaminants from the site.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☒ YES ☐ NO

COMMENTS

The site is fenced along the front of the property and partially along the sides, but in the back, along Interstate 84, there are no barriers. The site contact mentioned that illegal dumping occurred in this area.

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

Field note: Conversation between Mr. Bill Mott, Newburgh City Garage, and Robert Nies, NUS Corp., June 4, 1987.
Field Notebook No. 0088, Newburgh Landfill, TDD No. 02-8705-07, Site Inspection, NUS Corp. Region 2 FIT, Edison, New Jersey, July 8, 1987.

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

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY 0980524846

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY
(Check as applicable)

COMMUNITY
NON-COMMUNITY

SURFACE
A. ☒
C. ☐

WELL
B. ☒
D. ☒

02 STATUS

Potentially affected

ENDANGERED
A. ☐
D. ☐

AFFECTED
B. ☐
E. ☐

MONITORED
C. ☐
F. ☐

03 DISTANCE TO SITE

Surface well

A. 2.0/2.7 (mi)
B. 2.71 (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

☐ A. ONLY SOURCE FOR DRINKING ☒ B. DRINKING

☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION

☐ D. NOT USED, UNUSEABLE

(Other sources
available)
COMMERCIAL,
INDUSTRIAL,
IRRIGATION
(No other water
sources available)

(Limited other sources available)

02 POPULATION SERVED BY GROUND WATER: 9,363

03 DISTANCE TO NEAREST DRINKING WATER WELL: 2.7 (mi)

04 DEPTH TO GROUNDWATER

05 DIRECTION OF GROUNDWATER FLOW

06 DEPTH TO AQUIFER
OF CONCERN

07 POTENTIAL YIELD
OF AQUIFER

08 SOLE SOURCE AQUIFER

6 (ft)

east

6 (ft)

unknown (gpd)

☐ YES

☒ NO

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

There are 9,363 people who drink water from private wells in the Town of Newburgh within 3 miles of the site. The wells are completed in shale bedrock, which is 20 to 40 feet below the ground surface.

10 RECHARGE AREA

☒ YES
☐ NO

COMMENTS

Overlying deposits contain a dense
fragipan which restricts downward
water flow

11. DISCHARGE AREA

☒ YES
☐ NO

COMMENTS

There are no perennial bodies of surf
water on site.

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

☒ A. RESERVOIR, RECREATION
DRINKING WATER SOURCE

☐ B. IRRIGATION, ECONOMICALLY
IMPORTANT RESOURCES

☐ C. COMMERCIAL, INDUSTRIAL

☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:

AFFECTED

DISTANCE TO SITE

Sidneytown Creek (potentially affected)

.09 (500ft) (mi)

Lake Washington (potentially affected)

2.0 (mi)

Hudson River (potentially affected)

1.6 (mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

02 DISTANCE TO NEAREST POPULATION

ONE (1) MILE OF SITE

TWO (2) MILES OF SITE

THREE (3) MILES OF SITE

A. 8,431
NO. OF PERSONS

B. 31,658
NO. OF PERSONS

C. 43,463
NO. OF PERSONS

0.10 (mi)

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

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D980534846

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

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

02 PERMEABILITY OF BEDROCK (Check one)

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

03 DEPTH TO BEDROCK

20-40 (ft)

04 DEPTH OF CONTAMINATED SOIL ZONE

8 (ft)

05 SOIL pH

7.04 to 7.73

06 NET PRECIPITATION

18 (in)

07 ONE YEAR 24 HOUR RAINFALL

2.75 (in)

08 SLOPE

SITE SLOPE

0 %

DIRECTION OF SITE SLOPE

northeast

TERRAIN AVERAGE SL

2

09 FLOOD POTENTIAL

10

SITE IS IN 500 YEAR FLOODPLAIN

Not applicable

SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODPLAIN

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE

A. 2 (mi)

OTHER Marsh

B. 1 (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

1 (mi)

ENDANGERED SPECIES: Not applicable

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL

RESIDENTIAL AREAS: NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES

PRIME AG LAND

AGRICULTURAL LANDS

AG LAND

A. 0.10 (mi)

B. Residential 0.10 (mi)

C. 1 (mi)

D. 1 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The landfill was formerly a basinlike area prior to waste disposal at the facility. Presently, the area has been filled with waste, and the site is now at a higher elevation than the surrounding properties. Gidneytown Creek runs along the northwest portion of the site and receives site runoff. Interstate 84, which also borders the landfill's northern boundary, acts as a divide and prevents runoff from flowing in that direction. The southern and eastern portions of the landfill are bordered by residential and commercial properties.

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

Federal Emergency Management Agency, Flood Insurance Rate Map, City of Newburgh, New York, Community- Panel Number 360626 00028, June 5, 1985.
New York State Department of Health, New York State Atlas of Community Water System Sources, 1982.
Frimpter, Michael H. Groundwater resources of Orange and Ulster Counties, New York. U.S. Geological Survey water - suppl: paper 1985, Washington, D.C., 1972.
U.S. Department of the Interior, Geological Survey Topographic Map, 7.5 minute series, "Newburgh Quadrangle, NY," 1985; and Cornwall Quadrangle, NY," 1957 (photorevised 1981).
Telecon note: Conversation between Mr. Ciro DiLorenzo, Town of Newburgh Building Inspector's Office, and Thomas Varner, NUS Corp., December 30, 1987.
Telecon note: Conversation between Mr. John Hess, Newburgh City Water Department, and Robert Nies, NUS Corp., June 16, 1987.
Site Inspection Report, NUS Corp., Region 2 FIT, August 3, 1987, TDD No. 02-8705-07.
Uncontrolled hazardous waste site ranking system, A User's Manual, 40 CFR, Part 300, Appendix A, 1986.

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

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY 0980524846

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER		Organic Lab: Rocky Mountain Analytical 4955 Yarrow Street Arvada, CO 80002	Results received on December 14, 1987.
SURFACE WATER	2		
WASTE			
AIR			
RUNOFF		Inorganic Lab: U.S. Testing Co., Inc. 1415 Park Avenue Hoboken, NJ 07030	
SPILL			
SOIL/Sediment	6		
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
HNu photoionization	0 ppm
OVA flame ionization	0 to 160 ppm during the surface water/sediment sampling

IV. PHOTOGRAPHS AND MAPS

01 TYPE	☒ GROUND	☒ AERIAL	02 IN CUSTODY OF	NUS Corporation, Edison, (Name of organization or individual)
		NJ		

03 MAPS	04 LOCATION OF MAPS
☒ YES	NUS Corporation, Region 2 FIT, Edison, New Jersey
☐ NO	

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

Field Notebook No. 0088, Newburgh Landfill, TDD No. 02-8705-07, Site Inspection, NUS Corp. Region 2 FIT, Edison, New Jersey, July 8, 1987.

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

Field Notebook No. 0088, Newburgh Landfill, TDD No. 02-8705-07, Site Inspection, NUS Corp. Region 2 FIT, Edison, New Jersey, July 8, 1987.

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

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D98C52484E

II. CURRENT OWNER(S)			PARENT COMPANY (If applicable)		
01 NAME	02 D + B NUMBER	08 NAME	09 D + B NUMBER		
City of Newburgh		10 STREET ADDRESS (P.O. Box, RFD#, etc.)	11 SIC CODE		
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE				
Pierces Road	06 STATE	12 CITY	13 STATE	14 ZIP CODE	
05 CITY					
Newburgh	NY	12550			

01 NAME	02 D + B NUMBER	08 NAME	09 D + B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD#, etc.)	11 SIC CODE		
05 CITY	06 STATE	12 CITY	13 STATE	14 ZIP CODE	

01 NAME	02 D + B NUMBER	08 NAME	09 D + B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD#, etc.)	11 SIC CODE		
05 CITY	06 STATE	12 CITY	13 STATE	14 ZIP CODE	

01 NAME	02 D + B NUMBER	08 NAME	09 D + B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD#, etc.)	11 SIC CODE		
05 CITY	06 STATE	12 CITY	13 STATE	14 ZIP CODE	

III. PREVIOUS OWNER(S) (List most recent first)			IV. REALTY OWNER(S) (If applicable; list most recent first)		
01 NAME	02 D + B NUMBER	01 NAME	02 D + B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE		
05 CITY	06 STATE	05 CITY	06 STATE	07 ZIP CODE	

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

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

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

Preliminary Assessment on Newburgh Landfill completed by NUS Corporation, 1986.

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

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY 0980534846

II. CURRENT OPERATOR(S) OPERATOR'S PARENT COMPANY (If applicable)

01 NAME	02 D + B Number	10 NAME	11 D + B NUMBER
City of Newburgh			
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD#, etc.)	13 SIC CODE
Pierces Road			
05 CITY	06 STATE	07 ZIP CODE	14 CITY 15 STATE 16 ZIP CODE
Newburgh	NY	12550	
08 YEARS OF OPERATION	09 NAME OF OWNER		
1940s to 1976			

III. PREVIOUS OPERATOR(S) (List most recent first: Provide only if different from owner) PREVIOUS OPERATOR'S PARENT COMPANIES (If applicable)

01 NAME	02 D + B Number	10 NAME	11 D + B NUMBER
Not applicable			
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD#, etc.)	13 SIC CODE
05 CITY	06 STATE	07 ZIP CODE	14 CITY 15 STATE 16 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER		

01 NAME	02 D + B Number	10 NAME	11 D + B NUMBER
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD#, etc.)	13 SIC CODE
05 CITY	06 STATE	07 ZIP CODE	14 CITY 15 STATE 16 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER		

01 NAME	02 D + B Number	10 NAME	11 D + B NUMBER
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD#, etc.)	13 SIC CODE
05 CITY	06 STATE	07 ZIP CODE	14 CITY 15 STATE 16 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER		

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

Preliminary Assessment on Newburgh Landfill completed by NUS Corporation, 1986.

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

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D980534846

II ON-SITE GENERATOR

01 NAME 02 D + B NUMBER

None
03 STREET ADDRESS (P.O. Box, RFD#, etc.) 04 SIC CODE

05 CITY 06 STATE 07 ZIP CODE

III OFF-SITE GENERATOR(S)

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

City Residents Stauffer Chemical Co.
03 STREET ADDRESS (P.O. Box, RFD#, etc.) 04 SIC CODE 03 STREET ADDRESS (P.O. Box, RFD#, etc.) 04 SIC CODE

City of Newburgh
05 CITY 06 STATE 07 ZIP CODE 05 CITY 06 STATE 07 ZIP CODE

Newburgh NY Westport CT 06881

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

E.I. DuPont de Nemours and Co.
03 STREET ADDRESS (P.O. Box, RFD#, etc.) 04 SIC CODE 03 STREET ADDRESS (P.O. Box, RFD#, etc.) 04 SIC CODE

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

Wilmington DE

IV. TRANSPORTER(S)

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

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

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

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

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

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

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

Engineering Investigations at Inactive Hazardous Waste Sites, Phase I Investigation, prepared by EA Science and Technology.

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

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D58053484E

II. PAST RESPONSE ACTIVITIES

01 A. WATER SUPPLY CLOSED
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history.

01 B. TEMPORARY WATER SUPPLY PROVIDED
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history.

01 C. PERMANENT WATER SUPPLY PROVIDED
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history.

01 D. SPILLED MATERIAL REMOVED
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history.

01 E. CONTAMINATED SOIL REMOVED
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history.

01 F. WASTE REPACKAGED
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history.

01 G. WASTE DISPOSED ELSEWHERE
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history.

01 H. ON SITE BURIAL
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history.

01 I. IN SITU CHEMICAL TREATMENT
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history.

01 J. IN SITU BIOLOGICAL TREATMENT
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history.

01 K. IN SITU PHYSICAL TREATMENT
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history.

01 L. ENCAPSULATION
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history.

01 M. EMERGENCY WASTE TREATMENT
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history.

01 N. CUTOFF WALLS
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history.

01 O. EMERGENCY DIKING/SURFACE WATER DIVERSION
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history.

01 P. CUTOFF TRENCHES/SUMP
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history.

01 Q. SUBSURFACE CUTOFF WALL
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history.

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

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D980534846

II. PAST RESPONSE ACTIVITIES

01 R. BARRIER WALLS CONSTRUCTED
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history.

01 S. CAPPING/COVERING
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history.

01 T. BULK TANKAGE REPAIRED
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history.

01 U. GROUT CURTAIN CONSTRUCTED
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history.

01 V. BOTTOM SEALED
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history.

01 W. GAS CONTROL
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history.

01 X. FIRE CONTROL
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history.

01 Y. LEACHATE TREATMENT
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history.

01 Z. AREA EVACUATED
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history.

01 1. ACCESS TO SITE RESTRICTED
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history.

01 2. POPULATION RELOCATED
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history.

01 3. OTHER REMEDIAL ACTIVITIES
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

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

U.S. EPA, Edison, New Jersey, Region 2 files.
New York State Department of Environmental Conservation Phase I Investigation reports.

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

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D980534846

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION _ YES X NO

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

There are no known enforcement actions at the site.

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

U.S. EPA, Edison, New Jersey, Region 2 files.
New York State Department of Environmental Conservation Phase I Investigation reports.

SECTION 3

MAPS AND PHOTOGRAPHS

NEWBURGH LANDFILL
NEWBURGH, NEW YORK

CONTENTS

- Figure 1: Site Location Map
- Figure 2: Site Map
- Figure 3: Sample Location Map
- Figure 4: Photo Location Map
- Exhibit A: Photograph Log



SCALE: 1" = 2000'



NUS
CORPORATION

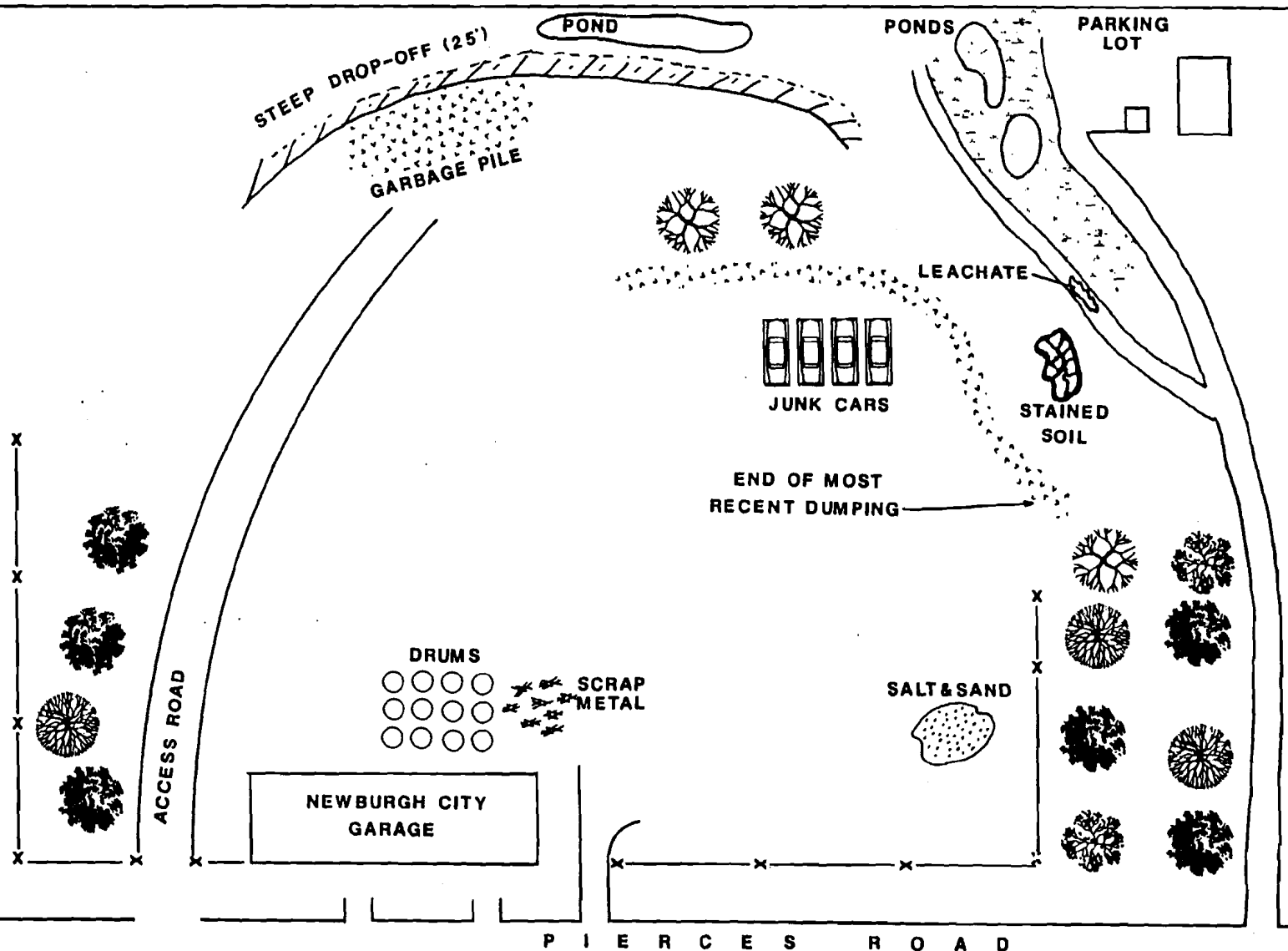
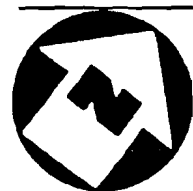


FIGURE 2

SITE MAP

NEWBURGH LANDFILL, NEWBURGH, N.Y.

(NOT TO SCALE)



FIGURE 3



SAMPLE LOCATION MAP
NEWBURGH LANDFILL, NEWBURGH, N.Y.

(NOT TO SCALE)

I N T E R S T A T E 8 4

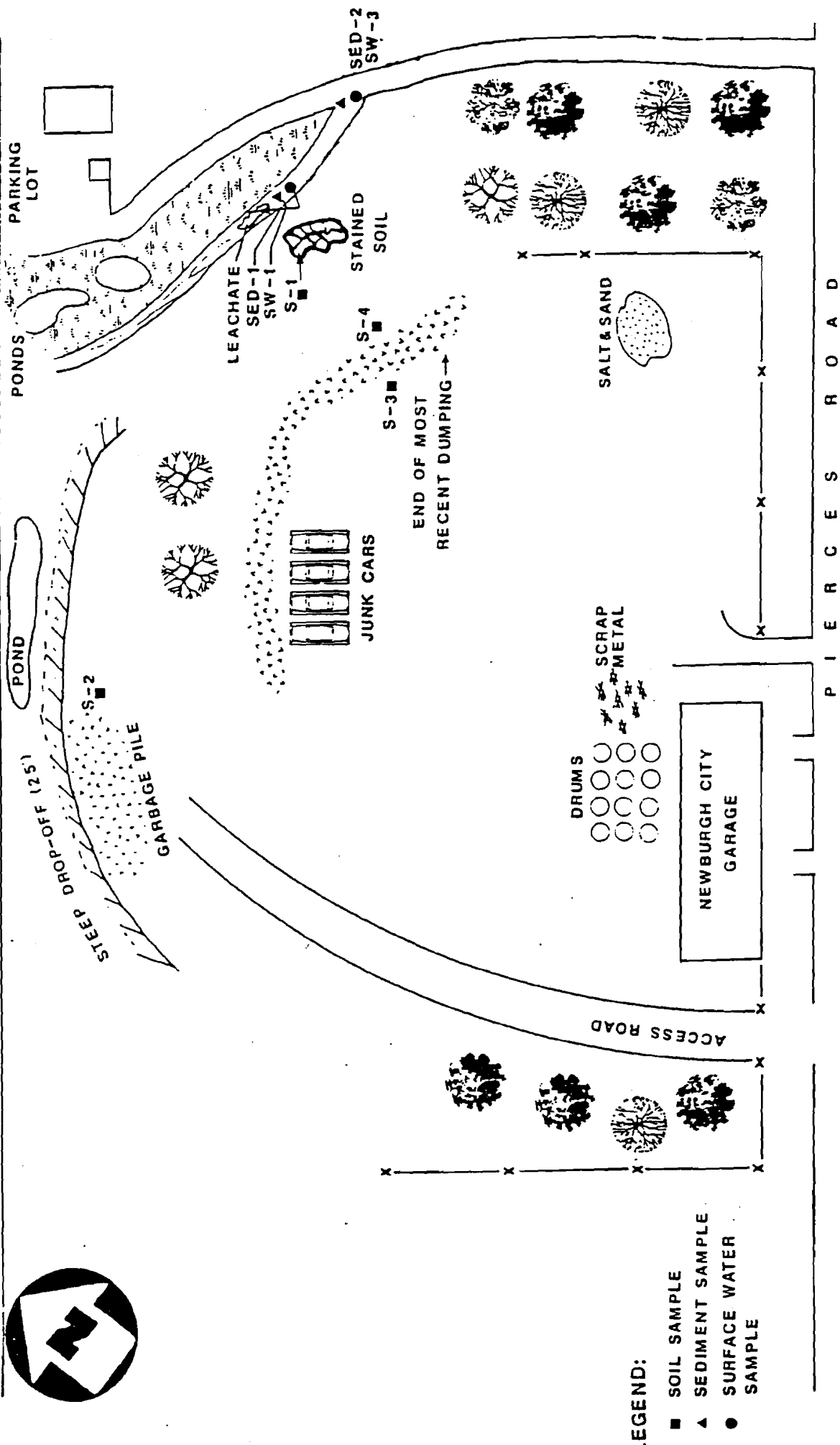


FIGURE 4

NUS
CORPORATION

PHOTO LOCATION MAP

NEWBURGH LANDFILL, NEWBURGH, N.Y.

(NOT TO SCALE)

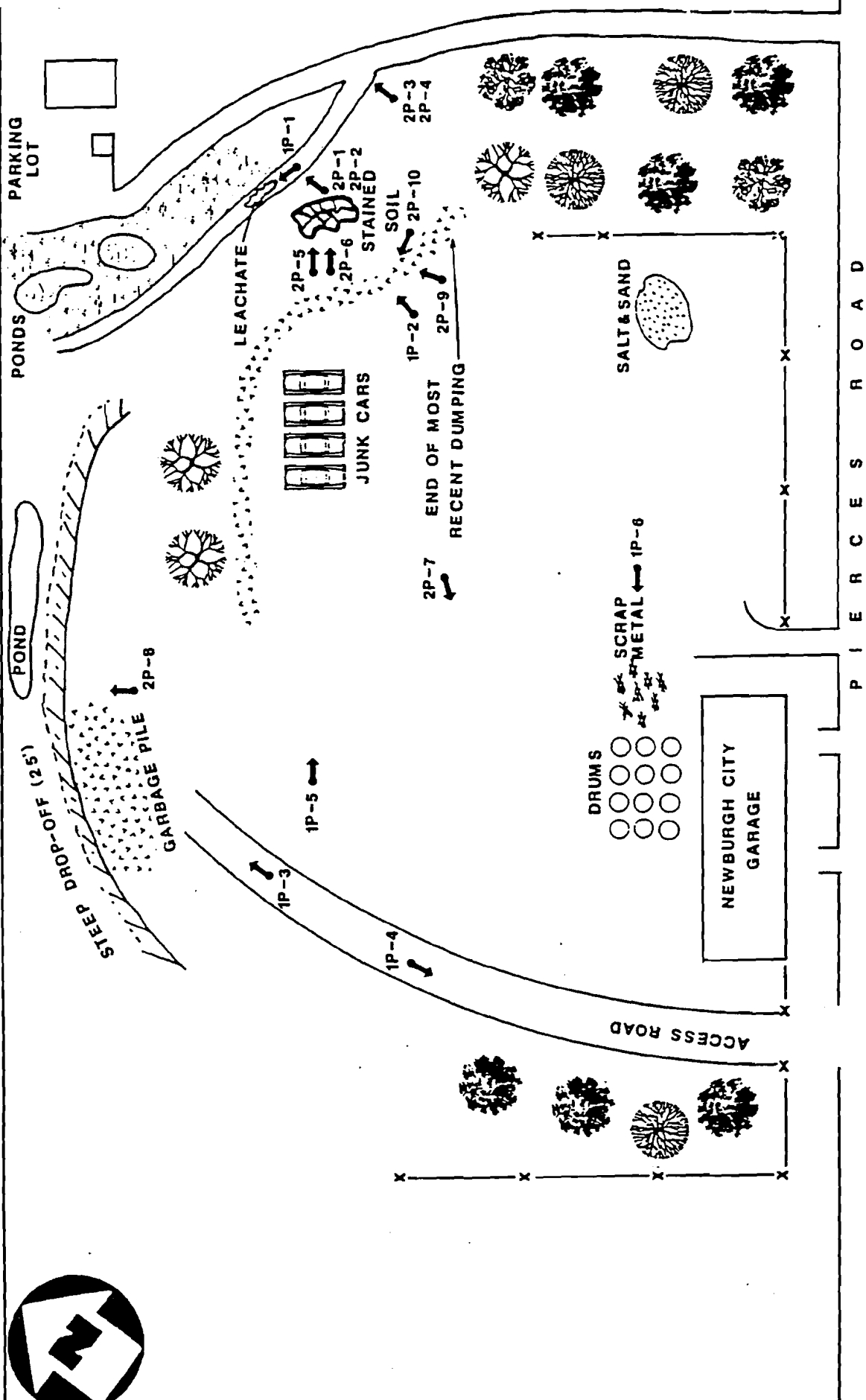


EXHIBIT A

PHOTOGRAPH LOG

NEWBURGH LANDFILL
NEWBURGH, NEW YORK

SITE RECONNAISSANCE: JUNE 17, 1987
SITE INSPECTION: JULY 8, 1987

NEWBURGH LANDFILL

NEWBURGH, NEW YORK

JUNE 17, 1987

AND

JULY 8, 1987

PHOTOGRAPH INDEX

ALL PHOTOGRAPHS TAKEN BY BOB NIES

<u>Photo Number</u>	<u>Description</u>	<u>Time</u>
1P-1	View of leachate in drainage culvert at northeast end of landfill.	1040
1P-2	Looking northeast at the landfill area. The leachate is located just past the clearing.	1103
1P-3	View of back portion of the landfill looking north.	1133
1P-4	View of access road looking back at the city garage from the landfill area.	1150
1P-5	View of old cars looking across the landfill eastward.	1156
1P-6	View of empty drums stored behind the garage looking west.	1324
2P-1	G. Gilliland collects SW-1 from the drainage culvert at the northeast end of the landfill.	1056
2P-2	G. Gilliland collects SED-1 (same location as SW-1)	1105
2P-3	M. Bauman collects SW-2 from the drainage culvert upstream of landfill area.	1126
2P-4	M. Bauman collects SED-2 (same location as SW-2)	1137
2P-5	M. Bauman collects S-1 approximately 10 ft. west of SW-1 sample location.	1148
2P-6	View of S-1 location. Note rust color staining of surface soils.	1149
2P-7	View from roadway at the east end of the landfill looking southwest back toward disposal area.	1155
2P-8	M. Bauman collects S-2 at the northern end of the in the area of recent dumping.	1243
2P-9	M. Bauman collects S-3. This photo is mislabeled as S-2.	1300
2P-10	M. Bauman collects S-4 at the base of steep embankment on the east side of the landfill.	1312

NEWBURGH LANDFILL PIERCES ROAD, NEW YORK



1P-1

June 17, 1987

1040

View of leachate in drainage culvert at northeast
end of landfill.



1P-2

June 17, 1987

1103

Looking northeast at the landfill area. The
leachate is located just past the clearing.

NEWBURGH LANDFILL PIERCES ROAD, NEW YORK



1P-3

June 17, 1987

1133

View of back portion of the landfill looking north.



1P-4

June 17, 1987

1150

View of access road looking back at the city garage
from the landfill area.

NEWBURGH LANDFILL PIERCES ROAD, NEW YORK



June 17, 1987

1156

View of old cars looking across the landfill
eastward.



June 17, 1987

1324

View of empty drums stored behind the garage looking

NEWBURGH LANDFILL PIERCES ROAD, NEW YORK



2P-1

July 8, 1987 1056
G. Gilliland collects SW-1 from the drainage
culvert at the northeast end of the landfill.



2P-2

July 8, 1987 1105
G. Gilliland collects SED-1 (same location as SW-1)

NEWBURGH LANDFILL PIERCES ROAD, NEW YORK



2P-3

July 8, 1987 1128
M. Bauman collects SW-2 from the drainage culvert
upstream of landfill area.



2P-4

July 8, 1987 1137
M. Bauman collects SED-2 (same location as SW-2)

NEWBURGH LANDFILL PIERCES ROAD, NEW YORK



2P-5

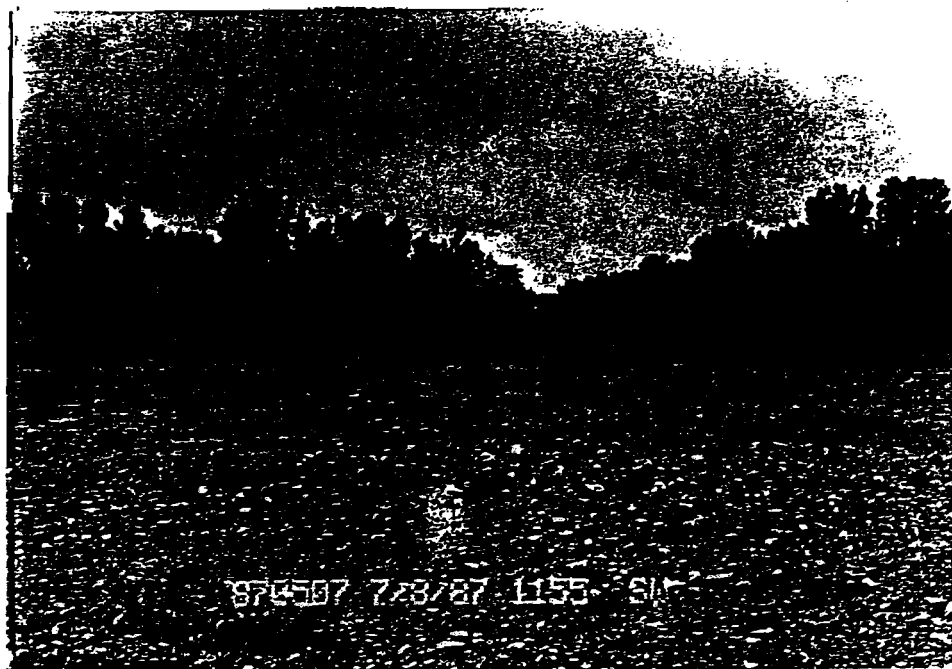
July 8, 1987 1148
M. Bauman collects S-1 approximately 10 ft west of
SW-1 sample location.



2P-6

July 8, 1987 1149
View of S-1 location. Note rust color staining of
surface soils.

NEWBURGH LANDFILL PIERCES ROAD, NEW YORK



2P-7

July 8, 1987

1155

View from roadway at the east end of the landfill
looking southwest back toward disposal area.



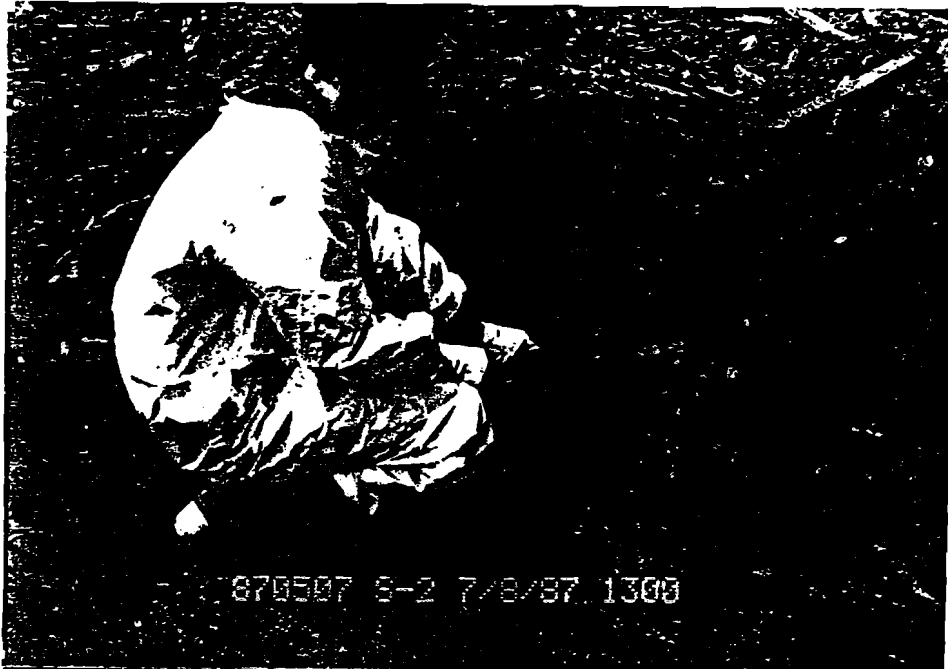
2P-8

July 8, 1987

1243

M. Bauman collects S-2 at the northern
end of the landfill
in the area recent dumping.

NEWBURGH LANDFILL PIERCES ROAD, NEW YORK



2P-9

July 8, 1987 1300
M. Bauman collects S-3. This photo is mislabeled
as S-2.



2P-10

July 8, 1987 1312
M. Bauman collects S-4 at the base of steep embankment
on the east side of the landfill.

SECTION 4

BIBLIOGRAPHY OF INFORMATION SOURCES

BIBLIOGRAPHY OF INFORMATION SOURCES

SOURCE	LOCATION
1. U.S. EPA Contract Laboratory Program, Rocky Mountain Analytical and U.S. Testing Company, Inc., Case No. 7569, Laboratory Analysis from NUS Corp. Region 2 FIT Site Inspection conducted July 8, 1987.	NUS Corporation Edison, New Jersey
2. Sampling Trip Report, NUS Corp. Region 2 FIT, July 8, 1987, TDD NO. 02-8705-07.	NUS Corporation Edison, New Jersey
3. Telecon note: Conversation between Mr. Ciro DiLorenzo, Town of Newburgh Building Inspector's Office, and Thomas Varner, NUS Corp., December 30, 1987.	NUS Corporation Edison, New Jersey
4. Telecon note: Conversation between Mr. Richard McGoey, New Windsor Town Engineer, and Thomas Varner, NUS Corp., December 30, 1987.	NUS Corporation Edison, New Jersey
5. Firmpter, Michael H. Ground-Water Resources of Orange and Ulster Counties, New York. Plate 1: Map of consolidated rocks in Orange and Ulster counties, New York. U.S. Geological Survey Water-Supply Paper 1985, Washington, D.C., 1972.	NUS Corporation Edison, New Jersey
6. Telecon note: Conversation between Mr. Frank Valdina, Town of Newburgh Water Department, and Thomas Varner, NUS Corp., December 30, 1987.	NUS Corporation Edison, New Jersey
7. Telecon note: Conversation between Ms. Isabel Drobkar, City of Newburgh Water Department, and Thomas Varner, NUS Corp., December 29, 1987.	NUS Corporation Edison, New Jersey
8. New York State Department of Environmental Conservation Phase I Report, Newburgh Landfill.	NUS Corporation Edison, New Jersey
9. Uncontrolled hazardous waste site ranking system, A user's manual, 40 CFR, Part 300, Appendix A, 1986.	NUS Corporation Edison, New Jersey
10. Olsson, Karl S. Soil Survey of Orange County, New York. U.S. Department of Agriculture, Soil Conservation Service, October, 1981.	NUS Corporation Edison, New Jersey
11. Site Inspection, NUS Corp. Region 2 FIT, July 8, 1987, TDD No. 02-8705-07.	NUS Corporation Edison, New Jersey
12. General Sciences Corporation, Graphical Exposure Modeling Systems (GEMS). Landover, Maryland, 1986.	NUS Corporation Edison, New Jersey

BIBLIOGRAPHY OF INFORMATION SOURCES (CONT'D)

SOURCE	LOCATION
13. New York State Department of Health, New York State Atlas of Community Water System Sources, 1982.	NUS Corporation Edison, New Jersey
14. U.S. Department of the Interior, Geological Survey Topographic Map, 7.5 minute series, "Newburgh Quadrangle, N.Y.", 1985; and "Cornwall Quadrangle, N.Y.", 1957 (Photorevised 1981).	NUS Corporation Edison, New Jersey
15. Telecon note: Conversation between Mr. John Hess, Newburgh City Water Department, and Robert Nies, NUS Corp., June 16, 1987.	NUS Corporation Edison, New Jersey
16. Telecon note: Conversation between Ms. Isabel Drobkar, Newburgh City Water Department, and Robert Nies, NUS Corp., July 30, 1987.	NUS Corporation Edison, New Jersey
17. Project note: Calculation of population using private wells within 3 miles of Newburgh Landfill, filed under TDD No. 02-8705-07 by Thomas Varner, NUS Corp., January 5, 1988.	NUS Corporation Edison, New Jersey
18. Telecon note: Conversation between Mr. Schleifer, Orange County Department of Health, and Denise Horgan, NUS Corp., August 18, 1987.	NUS Corporation Edison, New Jersey
19. Significant Habitat Overlay Numbers 1 and 2, New York State Department of Environmental Conservation, Division of Fish and Wildlife, "Scranton Quadrangle, PA.," March 1981 (revised November 6, 1985).	NUS Corporation Edison, New Jersey
20. Letter from Mr. John W. Ozard, Senior Wildlife Biologist, Significant Habitat Unit, Wildlife Resources Center, New York State Department of Environmental Conservation, to Denise Horgan, NUS Corp., October 9, 1987.	NUS Corporation Edison, New Jersey
21. Sax, N. Irving. Dangerous properties of industrial materials, 6th ed. New York, Van Nostrand Reinhold Co., 1984.	NUS Corporation Edison, New Jersey
22. Telecon note: Conversation between Mr. Bill Mott, City of Newburgh Garage, and Robert Nies, NUS Corp., June 4, 1987.	NUS Corporation Edison, New Jersey

SECTION 5

PRESS RELEASE SUMMARY

SUMMARY STATEMENT

Newburgh Landfill is a 30-acre landfill, owned by the City of Newburgh, Orange County, New York. It received municipal wastes from the 1940s to 1976. Also, from 1965 to 1976, the site received sludges and a slurry containing caustics, pigments, polyvinyl chloride resin, solvents, calcium carbonate, silica, and oils. The site now has a restricted burning permit, and receives trees, leaves, and brush.

The site is in close proximity to an urban area to the south and east, and a suburban area to the north and west. A creek runs 500 feet northwest of the site, and a small marshy area is present to the southeast. There are 9,363 people who use groundwater for drinking within 3 miles of the site; thus, groundwater is the migration route of major concern.

Analysis of surface water/sediment samples showed the presence of solvents and polyaromatic hydrocarbons, while analysis of soil samples showed the presence of solvents, polyaromatic hydrocarbons, and pesticides.

No cleanup or enforcement actions have been taken, nor are any scheduled.

SECTION 6

BACKGROUND INFORMATION

REFERENCE NO. 1

TABLE 1

SAMPLE CROSS - REFERENCE

<u>Sample I.D</u>	<u>Type</u>	<u>Organic Report #</u>	<u>Inorganic Report #</u>
NYT5-B1	Rinsate Blank	BK541	MB728
NYT5-B2	Trip Blank	BK542	-----
NYT5-B3	Trip Blank	BK543	-----
NYT5-SW1 (MS/MSD)	Surface Water	BK544	MBK729
NYT5-SW2 (Duplicate)	Surface Water	BK545	MBK730
NYT5-SED1	Sediment	BK546	MBK731
NYT5-SED2	Sediment	BK547	MBK732
NYT5-S1 (MS/MSD)	Soil	BK548	MBK733
NYT5-S2 (Duplicate)	Soil	BK549	MBK734
NYT5-S3	Soil	BK550	MBK735
NYT5-S4	Soil	BK551	MBK736

ANALYTICAL DATA
 NAME: NEWBARCH LANDFILL
 SAMPLING DATE: JULY 8, 1987
 CASE NUMBER: 7569

VOLATILES

SAMPLE NUMBER TRAFFIC REPORT NUMBER MATRIX UNITS	DILUTION FACTOR (IF NOT 1)										5			
	BLK-1 BK541 WATER ug/L	BLK-2 BK542 WATER ug/L	BLK-3 BK543 WATER ug/L	SW-1 BK544 WATER ug/L	SW-2 BK545 WATER ug/L	SED-1 BK546 SOIL ug/Kg	SED-2 BK547 SOIL ug/Kg	S-1 BK548 SOIL ug/Kg	S-2 DUP BK 549 SOIL ug/Kg	S-3 BK550 SOIL ug/Kg	S-4 BK551 SOIL ug/Kg			
Chloroethane						0			0					
Bromoethane						0			0					
Vinyl Chloride						0			0					
Chloromethane						0			0					
Methylene Chloride						0			0					
Acetone	249	0	0	0	0	0	J	7.5E	0	0	0			
Carbon Disulfide						0	0	J	0	0	0			
1,1-Dichloroethene						0	0		0					
1,1-Dichloroethane						0	0		0					
Trans-1,2-Dichloroethene						0	0		0					
Chloroform			6.1			0	0		0					
1,2-Dichloroethane		5.9				0	0		0					
2-Butanone	110	30	63			0	0		0					
1,1,1-Trichloroethane						0	0		0					
Carbon Tetrachloride						0	0		0					
Vinyl Acetate						0	0		0					
Bromodichloroethane						0	0		0					
1,2-Dichloropropane						0	0		0					
Trans-1,3-Dichloropropene						0	0		0					
Trichloroethene						0	0		0					
Dibromochloroethane						0	0		0					
1,1,2-Trichloroethane						0	0		0					
Benzene						0	0		0					
Cis-1,3-Dichloropropene						0	0		0					
2-Chloroethylvinylether						0	0		0					
Bromoform						0	0		0					
2-Hexanone						0	0		0					
4-Methyl-2-Pentanone						0	0		0					
Tetrachloroethene						0	0		0					
1,1,2,2-Tetrachloroethane						0	0		0					
Toluene	9.0	7.7	9.5			0	0		0	0	130			
Chlorobenzene						0	0		0					
Ethylbenzene						0	0		0					
Styrene						0	0		0					
Total Xylenes	0					0	0		0					280

NOTES TO ORGANICS DATA:

Blank space - compound analyzed for but not detected
 Q - analysis did not pass EPA QA/QC requirements
 J - compound present below contract-specified detection limits, but above instrument detection limits.
 R - compound found in laboratory blank as well as the sample, and indicates possible/probable blank contamination.
 E - value estimated due to laboratory interference

ANALYTICAL DATA
NAME: NEWBURGH LANDFILL
SAMPLING DATE: JULY 8, 1987
CASE NUMBER: 7569

INORGANICS									
SAMPLE NUMBER	BLK-1	SW-1	SW-2	SED-1	SED-2	S-1	S-2 DUP	S-3	S-4
TRAFFIC REPORT NUMBER	MBK728	MBK729	MBK730	MBK731	MBK732	MBK733	MBK734	MBK735	MBK736
MATRIX	WATER	WATER	WATER	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	ug/L	ug/L	ug/L	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Aluminum	[37]	1140 E	Q	8380	10700	10400	11900	7490	10900
Antimony									
Arsenic					6.9		8.7	[6]	16
Barium		272	[23]	[54]	[30]	326	135	[63]	157
Beryllium									
Cadmium									
Calcium	[219]	103000	72500	4240	[2650]	8330	10300	37200	17900
Chromium				12E	12 E	16 E	18 E	14 E	24 E
Cobalt					[6.8]		[10]	[6.1]	[5.7]
Copper		[6.1]		[14]	20	51	38	34	139
Iron		7300	715	19600	20600	46700	26800	19600	45300
Lead				10	13	58	72	458	630
Magnesium		42400	21400	4910	4710	4560	5660	15200	7500
Manganese		2360	468	253	422	323	1100	365	634
Mercury	Q	Q	Q						
Nickel		[9.6]			12.1	28	26	26	35
Potassium		25000 E	[3420]	[532]	[590]	[877]	[878]	[621]	[742]
Selenium									
Silver									
Sodium	[1590]	261000	57800	[912]					[1020]
Thallium									
Tin									
Vanadium				[15]	[17]	[21]	[18]	[27]	[18]
Zinc	Q	Q	Q	74	62	295	153	269	550

NOTES TO INORGANICS DATA:

Blank space - compound analyzed for but not detected

Q - analysis did not pass EPA QA/QC requirements

[] - compound present below contract-specified detection limits,
but above instrument detection limits

B - compound found in laboratory blank as well as the sample and
indicates possible/probable blank contamination

E - value estimated due to laboratory interference

NR - analysis not required

ANALYTICAL DATA
NAME: NEWBURGH LANDFILL
SAMPLING DATE: JULY 8, 1987
CASE NUMBER: 7569

SEMI-VOLATILES

DILUTION FACTOR (IF NOT 1)	2			2	2	66.2	66.6	66.4	65.8	1030	66.4
SAMPLE NUMBER	BLK-1	BLK-2	BLK-3	SW-1	SW-2	SED-1	SED-2	S-1	S-2 DUP	S-3	S-4
TRAFFIC REPORT NUMBER	BK541	BK542	BK543	BK544	BK545	BK546	BK547	BK548	BK 549	BK550	BK551
MATRIX	WATER	WATER	WATER	WATER	WATER	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	ug/L	ug/L	ug/L	ug/L	ug/L	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
Phenol		NR	NR	6J							
Bis(2-Chloroethyl)Ether		NR	NR								
2-Chlorophenol		NR	NR								
1,3-Dichlorobenzene		NR	NR								
1,4-Dichlorobenzene		NR	NR								
Benzyl Alcohol		NR	NR								
1,2-Dichlorobenzene		NR	NR								
2-Methylphenol		NR	NR								
Bis(2-Chloroisopropyl)Ether		NR	NR								
4-Methylphenol		NR	NR			380J	120J				
N-Nitroso-Di-n-Propylamine		NR	NR								
Hexachloroethane		NR	NR								
Nitrobenzene		NR	NR								
Isophorone		NR	NR								
2-Nitrophenol		NR	NR	2.8J							
2,4-Dimethylphenol		NR	NR								
Benzoic Acid		NR	NR								150 J
Bis(2-Chloroethoxy)Methane		NR	NR								
2,4-Dichlorophenol		NR	NR								
1,2,4-Trichlorobenzene		NR	NR								
Naphthalene		NR	NR								300 J
4-Chloroaniline		NR	NR								
Hexachlorobutadiene		NR	NR								
4-Chloro-3-Methylphenol		NR	NR								
2-Methylnaphthalene		NR	NR								
Hexachlorocyclopentadiene		NR	NR								
2,4,6-Trichlorophenol		NR	NR								
2,4,5-Trichlorophenol		NR	NR								
2-Chloronaphthalene		NR	NR								
2-Nitroaniline		NR	NR								
Dimethyl Phthalate		NR	NR								
Acenaphthylene		NR	NR								450
3-Nitroaniline		NR	NR								
Acenaphthene		NR	NR								180 J
2,4-Dinitrophenol		NR	NR								
4-Nitrophenol		NR	NR								
Dibenzofuran		NR	NR								240 J
2,4-Dinitrotoluene		NR	NR								
2,6-Dinitrotoluene		NR	NR								
Diethylphthalate		NR	NR								
4-Chlorophenylphenyl ether		NR	NR								
Fluorene		NR	NR								520

ANALYTICAL DATA
 NAME: NEWBURGH LANDFILL
 SAMPLING DATE: JULY 6, 1987
 CASE NUMBER: 7569

SEMI-VOLATILES

DILUTION FACTOR (IF NOT 1)		2		2		66.2		66.6		66.4		65.8		1830		66.4	
SAMPLE NUMBER	BLK-1	BLK-2	BLK-3	SW-1	SW-2	SED-1	SED-2	S-1	S-2	DUP	S-3	S-4					
TRAFFIC REPORT NUMBER	BK541	BK542	BK543	BK544	BK545	BK546	BK547	BK548	BK 549		BK550	BK551					
MATRIX	WATER	WATER	WATER	WATER	WATER	SOIL	SOIL	SOIL	SOIL		SOIL	SOIL					
UNITS	ug/L	ug/L	ug/L	ug/L	ug/L	ug/Kg	ug/Kg	ug/Kg	ug/Kg		ug/Kg	ug/Kg					
4-Nitroaniline		NR	NR														
4, 6-Dinitro-2-Methylphenol		NR	NR														
N-Nitrosodiphenylamine		NR	NR														
4-Bromophenylphenyl ether		NR	NR														
Hexachlorobenzene		NR	NR														
Pentachlorophenol		NR	NR														
Phenanthrene		NR	NR					390J	96 J		5900 J	4100					
Anthracene		NR	NR									750					
Di-n-Butylphthalate		NR	NR														
Fluoranthene		NR	NR			92J		490	190 J		7600 J	9500					
Pyrene		NR	NR					440	180 J		7600 J	4500					
Butylbenzylphthalate		NR	NR									96 J					
3,3'-Dichlorobenzidine		NR	NR														
Benzo(a)Anthracene		NR	NR					270 J			4100 J	3700					
Bis(2-Ethylhexyl)Phthalate	Q	NR	NR	Q	Q	Q	Q	Q	Q	Q	Q	Q					
Chrysene		NR	NR					310 J	87 J		4900 J	3300					
DI-n-Octyl Phthalate		NR	NR														
Benzo(b)Fluoranthene		NR	NR					270 J	76 J			4400					
Benzo(k)Fluoranthene		NR	NR					250 J	93 J		4000 J	2700					
Benzo(a)Pyrene		NR	NR					240 J	72 J		3600 J	3600					
Indeno(1,2,3-cd)Pyrene		NR	NR					180 J				2200					
Dibenzo(a,h)Anthracene		NR	NR														
Benzo(ghi)Perylene		NR	NR					120 J			2700 J	1300					

NOTES TO ORGANICS DATA

Blank space - compound analyzed for but not detected

Q - analysis did not pass EPA QA/QC requirements

J - compound present below contract-specified detection limits, but above instrument detection limits.

B - compound found in laboratory blank as well as the sample, and indicates possible/probable blank contamination.

E - value estimated due to laboratory interference

NR - analysis not required

ANALYTICAL DATA
NAME: NEWBIRGH LANDFILL
SAMPLING DATE: JULY 8, 1987
CASE NUMBER: 7569

PESTICIDES/PCBs

DILUTION FACTOR (IF NOT 1)	50		50		6620		6660		6640		6580		51000		6640	
SAMPLE NUMBER	BLK-1	BLK-2	BLK-3	SW-1	SW-2	SED-1	SED-2	S-1	S-2 DUP	S-3	S-4					
TRAFFIC REPORT NUMBER	BK541	BK542	BK543	BK544	BK545	BK546	BK547	BK548	BK 549	BK550	BK551					
MATRIX	WATER	WATER	WATER	WATER	WATER	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL					
UNITS	ug/L	ug/L	ug/L	ug/L	ug/L	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg					
Alpha-BHC		NR	NR													
Beta-BHC		NR	NR													
Delta-BHC		NR	NR													
Gamma-BHC (Lindane)		NR	NR													
Heptachlor		NR	NR													
Aldrin		NR	NR													
Heptachlor Epoxide		NR	NR													
Endosulfan I		NR	NR													
Dieldrin		NR	NR													
4,4'-DDE		NR	NR													
Endrin		NR	NR													
Endosulfan II		NR	NR													
4,4'-DDD		NR	NR													
Endosulfan sulfate		NR	NR													
4,4'-DDT		NR	NR													
Methoxychlor		NR	NR													190
Endrin Ketone		NR	NR													
Chlordane		NR	NR													
Toxaphene		NR	NR													
Aroclor-1016		NR	NR													
Aroclor-1221		NR	NR													
Aroclor-1232		NR	NR													
Aroclor-1242		NR	NR													
Aroclor-1248		NR	NR													
Aroclor-1254		NR	NR													420
Aroclor-1260		NR	NR										1100 J			

NOTES TO ORGANICS DATA:

Blank space - compound analyzed for but not detected

Q - analysis did not pass EPA QA/QC requirements

J - compound present below contract-specified detection limits,
but below instrument detection limits

B - compound found in laboratory blank as well as the sample,
and indicates possible/probable blank contamination

E - value estimated due to laboratory interference

NR - analysis not required

ORGANIC DATA REPORTING QUALIFIERS

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of such flags must be explicit.

- Value -If the result is a value greater than or equal to the detection limit, report the value.
- U -Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.
- J -Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero. (e.g., 10J)
- C -This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥ 10 ng/ul in the final extract should be confirmed by GC/MS.
- B -This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.
- Other -Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

ORGANICS ANALYSIS DATA SHEET
(Page 1)

Laboratory Name: Rocky Mountain Analytical Lab
Laboratory Sample ID. Number: BK341
Sample Matrix: Water
Released Authorized By: JC

Sample Number: BK341
Case Number: 7549
O.C. Report No: 7258
Contract No.: 68-01-7083
Date Sample Rec: 7/09/87

Volatile Compounds

Concentration: LOW
Date Extracted/Prepared: N/A
Date Analyzed: 7/16/87
Conc./Dilution Factor: 1.00
pH: 6.8
Percent Moisture: 100%
Percent Moisture (Decanted): N/A

Number	Value	ug/L	CAS Number	Value	ug/L
3-3	Chloromethane	10 U	79-34-5	1,1,2,2-Tetrachloroethane	5 U
3-9	Bromomethane	10 U	78-87-5	1,2-Dichloropropane	5 U
01-4	Vinyl Chloride	10 U	10061-02-6	Trans-1,3-Dichloropropene	5 U
00-3	Chloroethane	10 U	79-10-6	Trichloroethane	5 U
1-2	Methylene Chloride	5 U	124-48-1	Dibromochloromethane	5 U
1-1	Acetone	24	79-00-5	1,1,2-Trichloroethane	5 U
15-0	Carbon Disulfide	5 U	71-43-2	Benzene	5 U
1-4	1,1-Dichloroethane	5 U	10061-01-5	cis-1,3-Dichloropropene	5 U
1-3	1,1-Dichloroethane	5 U	110-75-8	2-Chloroethylvinylether	10 U
60-5	Trans-1,2-Dichloroethane	5 U	75-25-2	Bromoform	5 U
4-3	Chloroform	5 U	591-78-6	2-Butanone	10 U
6-2	1,2-Dichloroethane	5 U	108-10-1	4-Methyl-2-Pentanone	10 U
1-3	2-Butanone	110	127-18-4	Tetrachloroethane	5 U
55-6	1,1,1-Trichloroethane	5 U	108-88-3	Toluene	9.8
5	Carbon Tetrachloride	5 U	108-90-7	Chlorobenzene	5 U
3-4	Vinyl Acetate	10 U	100-61-4	Ethylbenzene	5 U
27-4	Bromodichloromethane	5 U	100-42-5	Styrene	5 U
			Total Xylenes		J B

U - compound was not detected
J - concentration detected is less than the required detection limit
B - compound was detected in the blank
sp - compound was a spike

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Laboratory Name : Rocky Mountain Analytical Lab
 See No: 7569
 Report No: 7258

Organics Analysis Data Sheet

Sample Number
 BK541

Page 2

Semivolatile Compounds

Conc.: LOW
 Date Extracted/Prepared: 7/10/87
 Date Analyzed: 7/15/87
 Conc/Dil Factor: 2.00
 Percent Moisture (Decanted): N/A

GPC Cleanup: NO
 Separatory Funnel Extraction: NO
 Continuous Liquid-Liquid Extraction: YES

CAS Number	Compound	Value	ug/L	CAS Number	Compound	Value	ug/L
08-95-2	Phenol		10 U	83-32-9	Acenaphthene		10 U
14-00-4	bis(2-Chloroethyl)Ether		10 U	51-28-3	2,4-Dinitrophenol		50 U
17-8	2-Chlorophenol		10 U	100-02-7	4-Nitrophenol		50 U
24-73-1	1,3-Dichlorobenzene		10 U	132-64-9	Dibenzofuran		10 U
26-46-7	1,4-Dichlorobenzene		10 U	121-14-2	2,4-Dinitrotoluene		10 U
51-6	Benzyl Alcohol		10 U	606-20-2	2,6-Dinitrotoluene		10 U
10-1	1,2-Dichlorobenzene		10 U	84-66-2	Diethylphthalate		10 U
14-68-7	2-Methylphenol		10 U	7005-72-3	4-Chlorophenyl-phenylether		10 U
178-32-9	bis(2-chloroisopropyl)Ether		10 U	86-73-7	Fluorene		10 U
14-5	4-Methylphenol		10 U	100-01-6	4-Nitroaniline		50 U
14-64-7	N-Nitro-Di-n-Propylamine		10 U	534-52-1	4,6-Dinitro-2-Methylphenol		50 U
172-1	Hexachloroethane		10 U	86-30-6	N-Nitrosodiphenylamine (1)		10 U
11-3	Nitrobenzene		10 U	101-55-3	4-Bromophenyl-phenylether		10 U
11-1	Isophorone		10 U	118-74-1	Hexachlorobenzene		10 U
175-5	2-Nitrophenol		10 U	87-86-5	Pentachlorophenol		50 U
14-67-9	2,4-Dimethylphenol		10 U	85-01-8	Phenanthrene		10 U
11-0	Benzoic Acid		50 U	120-12-7	Anthracene		10 U
14-1-1	bis(2-Chloroethoxy) Methane		10 U	84-74-2	Di-N-Butylphthalate		10 U
14-83-2	2,4-Dichlorophenol		10 U	206-44-0	Fluoranthene		10 U
12-1	1,2,4-Trichlorobenzene		10 U	129-00-0	Pyrene		10 U
11-3	Naphthalene		10 U	85-68-7	Butylbenzylphthalate		10 U
14-67-8	4-Chloroaniline		10 U	91-94-1	3,3'-Dichlorobenzidine		20 U
11-3	Hexachlorobutadiene		10 U	56-55-3	Benzo(a)Anthracene		10 U
11-7	4-Chloro-3-Methylphenol		10 U	117-81-7	bis(2-Ethylhexyl)Phthalate		10 U
11-6	2-Methylnaphthalene		10 U	218-01-9	Chrysene		10 U
14-7-4	Hexachlorocyclopentadiene		10 U	117-84-0	Di-n-Octylphthalate		10 U
12	2,4,6-Trichlorophenol		10 U	205-99-2	Benzo(b)Fluoranthene		10 U
14	2,4,5-Trichlorophenol		50 U	207-08-9	Benzo(k)Fluoranthene		10 U
18-7	2-Chloronaphthalene		10 U	50-32-8	Benzo(a)Pyrene		10 U
14	2-Nitroaniline		50 U	193-39-5	Indeno(1,2,3-cd)Pyrene		10 U
14-4	Dimethyl Phthalate		10 U	53-70-3	Dibenzo(a,h)Anthracene		10 U
14-8	Acenaphthylene		10 U	191-24-2	Benzo(g,h,i)Perylene		10 U
19-2	3-Nitroaniline		50 U				

(1)-Cannot be separated from diphenylamine.

Laboratory Name: Rocky Mountain Analytical Lab
Case No: 7569

Sample Number:
BCS41

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ORGANICS ANALYSIS DATA SHEET
(Page 3)

Pesticides/ PCB's:

Concentration : Low
Date Ext./Prep : 7/10/87
Date Analyzed : 7/28/87
Conc./Dil Factor : 50.0
Percent Moisture :

GPC Cleanup : NO
Separatory Funnel Extract.: YES
Cont. Liquid/Liquid Extr. : NO
Sonication Extraction : NO

CAS Number	Compound	Value	ug/ L
319-84-6	Alpha-BHC		0.05 U
319-85-7	Beta-BHC		0.05 U
319-86-8	Delta-BHC		0.05 U
58-89-9	Gamma-BHC(Lindane)		0.05 U
76-44-8	Heptachlor		0.05 U
309-00-2	Aldrin		0.05 U
1204-57-3	Heptachlor Epoxide		0.05 U
959-98-8	Endosulfan I		0.05 U
60-57-1	Dieldrin		0.10 U
72-55-9	4,4'-DDE		0.10 U
72-20-8	Endrin		0.10 U
33213-65-9	Endosulfan II		0.10 U
72-54-8	4,4'-DDD		0.10 U
1031-07-8	Endosulfan Sulfate		0.10 U
50-29-3	4,4'-DDT		0.10 U
72-43-5	Methoxychlor		0.50 U
53494-70-5	Endrin Ketone		0.10 U
57-74-9	Chlordane		0.50 U
8001-35-2	Toxaphene		1.00 U
12674-11-2	Aroclor-1016		0.50 U
11104-28-2	Aroclor-1221		0.50 U
11141-16-5	Aroclor-1232		0.50 U
53469-21-9	Aroclor-1242		0.50 U
12672-29-6	Aroclor-1248		0.50 U
11097-69-1	Aroclor-1254		1.00 U
11096-82-5	Aroclor-1260		1.00 U

V_i = Volume of extract injected (ul)
V_s = Volume of water extracted (ml)
W_s = Weight of sample extracted (g)
V_t = Volume of total extract (ul)

V_i = 2ul/4ul
V_s = 1000ml
W_s =
V_t = 10000ul

ORGANICS ANALYSIS DATA SHEET
(Page 1)

Sample Number : BK542

Case Number : 7569

G.C. Report No: 7258

Contract No. : 68-01-7083

Date-Sample Rec: 7/09/87

Lab Name: Rocky Mountain Analytical Lab

Sample ID. Number : BK542

Matrix : Water

Classified Authorized By : JC

Volatile Compounds

Concentration : LOW
Date Extracted/Prepared : N/A
Date Analyzed : 7/16/87
Conc./Dilution Factor : 1.00
pH : 6.0
Percent Moisture : 100%
Percent Moisture (Decanted) : N/A

Value	ug/L	CAS Number	Value	ug/L
Chloromethane	10 U	79-34-5	1,1,2,2-Tetrachloroethane	5 U
Bromomethane	10 U	78-87-5	1,2-Dichloropropane	5 U
Vinyl Chloride	10 U	10061-02-6	Trans-1,3-Dichloropropane	5 U
Chloroethane	10 U	79-10-6	Trichloroethane	5 U
Ethylene Chloride	5 U	124-48-1	Dibromochloromethane	5 U
Acetone	0.5	79-00-5	1,1,2-Trichloroethane	5 U
Carbon Disulfide	5 U	71-43-2	Benzene	5 U
1,1-Dichloroethane	5 U	10061-01-5	cis-1,3-Dichloropropane	5 U
1,2-Dichloroethane	5 U	110-75-8	2-Chloroethylvinylether	10 U
Trans-1,2-Dichloroethane	5 U	75-25-2	Bromoform	5 U
Chloroform	5.9	591-78-6	2-Hexanone	10 U
1,2-Dichloroethane	5 U	108-10-1	4-Methyl-2-Pentanone	10 U
Butanone	30	127-18-4	Tetrachloroethane	5 U
1,1,1-Trichloroethane	5 U	108-88-3	Toluene	7.7
Carbon Tetrachloride	5 U	108-90-7	Chlorobenzene	5 U
Ethyl Acetate	10 U	100-41-4	Ethylbenzene	5 U
1,1-Dichloroethane	5 U	100-42-5	Styrene	5 U
			Total Xylenes	5 U

- " - compound was not detected
- concentration detected is less than the required detection limit
- compound was detected in the blank
- sp - compound was a spike

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ORGANICS ANALYSIS DATA SHEET
(Page 1)

Laboratory Name: Rocky Mountain Analytical Lab
 Laboratory Sample ID. Number : BK543
 Sample Matrix : Water
 Analyzed/Released Authorized By : JCS

Sample Number : 88343
Case Number : 7569
G.C. Report No: 728
Contract No. : 68-01-7083
Date Sample Rec: 7/09/87

Volatile Compounds

Concentration :	LOW
Date Extracted/Prepared :	N/A
Date Analyzed :	7/16/87
Conc./Dilution Factor :	1.00
pH :	6.8
Percent Moisture :	100%
Percent Moisture (Decanted) :	N/A

	Value	ug/L	CUS Number	Value	ug/L
-3 Chloromethane		10 U	79-34-5	1,1,2,2-Tetrachloroethane	5 U
Bromomethane		10 U	78-87-5	1,2-Dichloropropane	5 U
VinylChloride		10 U	10061-02-6	Trans-1,3-Dichloropropane	5 U
-3 Chloroethane		10 U	79-10-6	Trichloroethane	5 U
MethyleneChloride		5 U	124-48-1	Dibromochloromethane	5 U
Acetone		5 U	79-00-5	1,1,2-Trichloroethane	5 U
-0 CarbonDisulfide		5 U	71-43-2	Benzene	5 U
-4 1,1-Dichloroethane		5 U	10061-01-5	cis-1,3-Dichloropropane	5 U
1,1-Dichloroethane		5 U	110-75-8	2-Chloroethylvinylether	10 U
Trans-1,2-Dichloroethane		5 U	75-25-2	Bromoform	5 U
-3 Chloroform	6.1		591-78-6	2-Necanene	10 U
1,2-Dichloroethane		5 U	108-10-1	4-Methyl-2-Pentanone	10 U
2-Butanone	63		127-18-4	Tetrachloroethane	5 U
6 1,1,1-Trichloroethane		5 U	108-88-3	Toluene	9.5
CarbonTetrachloride		5 U	108-90-7	Chlorobenzene	5 U
VinylAcetate		10 U	100-41-4	Ethylbenzene	5 U
- Bromodichloromethane		5 U	100-42-5	Styrene	5 U
				Total Xylenes	5 U

U - compound was not detected
J - concentration detected is less than the required detection limit
B - compound was detected in the blank
sp - compound was a spike

10/15 Nov

ORGANICS ANALYSIS DATA SHEET
(Page 1)

Laboratory Name: Rocky Mountain Analytical Lab
Laboratory Sample ID. Number : BK544
Sample Matrix : Water
Data Released Authorized By : *JR*

Sample Number : BK544
Case Number : 7569
G.C. Report No: 7258
Contract No. : 68-01-7083
Date Sample Rec: 7/09/87

Volatile Compounds

Concentration : LOW
Date Extracted/Prepared : N/A
Date Analyzed : 7/16/87
Conc./Dilution Factor : 1.00
pH : 6.0
Percent Moisture : 100%
Percent Moisture (Decanted) : N/A

CAS Number		Value	ug/L	CAS Number		Value	ug/L
74-83-3	Chloromethane		10 U	79-34-5	1,1,2,2-Tetrachloroethane		5 U
74-83-9	Bromomethane		10 U	78-87-5	1,2-Dichloropropane		5 U
75-01-4	Vinyl Chloride		10 U	10061-02-6	Trans-1,3-Dichloropropene		5 U
75-00-3	Chloroethane		10 U	79-10-6	Trichloroethane		5 U
75-09-2	Methylene Chloride		5 U	124-48-1	Dibromochloromethane		5 U
67-64-1	Acetone		5 U	79-00-5	1,1,2-Trichloroethane		5 U
75-15-0	Carbon Disulfide		5 U	71-43-2	Benzene		5 U
75-33-4	1,1-Dichloroethane		5 U	10061-01-5	cis-1,3-Dichloropropene		5 U
75-34-3	1,1-Dichloroethane		5 U	110-75-8	2-Chloroethylvinylether		10 U
156-60-5	Trans-1,2-Dichloroethane		5 U	75-25-2	Bromoform		5 U
67-66-3	Chloroform		5 U	591-78-6	2-Hexanone		10 U
107-06-2	1,2-Dichloroethane		5 U	108-10-1	4-Methyl-2-Pentanone		10 U
78-93-3	2-Butanone		10 U	127-18-4	Tetrachloroethane		5 U
71-55-6	1,1,1-Trichloroethane		5 U	108-88-3	Toluene		5 U
56-23-5	Carbon Tetrachloride		5 U	108-90-7	Chlorobenzene		5 U
108-05-4	Vinyl Acetate		10 U	100-41-4	Ethylbenzene		5 U
75-27-4	Bromodichloromethane		5 U	100-42-5	Styrene		5 U
					Total Xylenes		5 U

U - compound was not detected
J - concentration detected is less than the required detection limit
B - compound was detected in the blank
sp - compound was a spike

Laboratory Name : Rocky Mountain Analytical Lab
 Case No: 7569
 O.C. Report No: 7258

Organics Analysis Data Sheet

Page 2

Sample Number
 BK544

Semivolatile Compounds

Conc.: LOM
 Date Extracted/Prepared: 7/10/87
 Date Analyzed: 7/14/87
 Conc/Dil Factor 2.00
 Percent Moisture (Decanted) N/A

GPC Cleanup NO
 Separatory Funnel Extraction NO
 Continuous Liquid-Liquid Extraction YES

CAS Number	Compound	Value	ug/L	CAS Number	Compound	Value	ug/L
108-95-2	Phenol	6.0	J	83-32-9	Acenaphthene		10 U
111-44-4	bis(2-Chloroethyl)Ether		10 U	51-28-5	2,4-Dinitrophenol		50 U
95-57-8	2-Chlorophenol		10 U	100-02-7	4-Nitrophenol		50 U
541-73-1	1,3-Dichlorobenzene		10 U	132-64-9	Dibenzofuran		10 U
106-46-7	1,4-Dichlorobenzene		10 U	121-14-2	2,4-Dinitrotoluene		10 U
100-51-6	Benzyl Alcohol		10 U	606-20-2	2,6-Dinitrotoluene		10 U
95-50-1	1,2-Dichlorobenzene		10 U	84-66-2	Diethylphthalate		10 U
95-48-7	2-Methylphenol		10 U	7005-72-3	4-Chlorophenyl-phenylether		10 U
39638-32-9	bis(2-chloroisopropyl)Ether		10 U	86-73-7	Fluorene		10 U
106-44-5	4-Methylphenol		10 U	100-01-6	4-Nitroaniline		50 U
621-64-7	N-Nitro-Di-n-Propylamine		10 U	534-52-1	4,6-Dinitro-2-Methylphenol		50 U
67-72-1	Hexachloroethane		10 U	86-30-6	N-Nitrosodiphenylamine (1)		10 U
98-95-3	Nitrobenzene		10 U	101-55-3	4-Bromophenyl-phenylether		10 U
78-59-1	Isophorone		10 U	118-74-1	Hexachlorobenzene		10 U
88-75-5	2-Nitrophenol	2.8	J	87-84-5	Pentachlorophenol		50 U
105-67-9	2,4-Dimethylphenol		10 U	85-01-8	Phenanthrene		10 U
65-85-0	Benzoic Acid		50 U	120-12-7	Anthracene		10 U
111-91-1	bis(2-Chloroethoxy) Methane		10 U	84-74-2	Di-n-Butylphthalate		10 U
120-83-2	2,4-Dichlorophenol		10 U	206-44-0	Fluoranthene		10 U
120-82-1	1,2,4-Trichlorobenzene		10 U	129-00-0	Pyrene		10 U
91-20-3	Naphthalene		10 U	85-68-7	Butylbenzylphthalate		10 U
106-47-8	4-Chloroaniline		10 U	91-94-1	3,3'-Dichlorobenzidine		20 U
87-68-3	Hexachlorobutadiene		10 U	56-55-3	Benzo(e)Anthracene		10 U
59-50-7	4-Chloro-3-Methylphenol		10 U	117-81-7	bis(2-Ethylhexyl)Phthalate		10 U
91-57-6	2-Methylnaphthalene		10 U	218-01-9	Chrysene		10 U
77-47-4	Hexachlorocyclopentadiene		10 U	117-84-0	Di-n-Octylphthalate		10 U
88-06-2	2,4,6-Trichlorophenol		10 U	205-99-2	Benzo(b)Fluoranthene		10 U
95-95-4	2,4,5-Trichlorophenol		50 U	207-08-9	Benzo(k)Fluoranthene		10 U
91-58-7	2-Chloronaphthalene		10 U	50-32-8	Benzo(a)Pyrene		10 U
88-74-4	2-Nitroaniline		50 U	193-39-5	Indeno(1,2,3-cd)Pyrene		10 U
131-11-4	Dimethyl Phthalate		10 U	53-70-3	Dibenzo(a,h)Anthracene		10 U
208-96-8	Acenaphthylene		10 U	191-24-2	Benzo(g,h,i)Perylene		10 U
99-09-2	3-Nitroaniline		50 U				

(1)-Cannot be separated from diphenylamine.

Laboratory Name: Rocky Mountain Analytical Lab
Case No: 7569

Sample Number:
BKS44

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ORGANICS ANALYSIS DATA SHEET
(Page 3)

Pesticides/ PCB's:

Concentration : Low
Date Ext./Prep : 7/10/87
Date Analyzed : 7/28/87
Conc./Dil Factor : 50.0
Percent Moisture :
GPC Cleanup : NO
Separatory Funnel Extract.: YES
Cont. Liquid/Liquid Extr. : NO
Sonication Extraction : NO

CAS Number	Compound	Value	ug/ L
319-84-6	Alpha-BHC		0.05 U
319-85-7	Beta-BHC		0.05 U
319-86-8	Delta-BHC		0.05 U
58-89-9	Gamma-BHC(Lindane)		0.05 U
76-44-8	Heptachlor		0.05 U
309-00-2	Aldrin		0.05 U
1204-57-3	Heptachlor Epoxide		0.05 U
959-98-8	Endosulfan I		0.05 U
60-57-1	Dieldrin		0.10 U
72-55-9	4,4'-DDE		0.10 U
72-20-8	Endrin		0.10 U
33213-65-9	Endosulfan II		0.10 U
72-54-8	4,4'-DDD		0.10 U
1031-07-8	Endosulfan Sulfate		0.10 U
50-29-3	4,4'-DDT		0.10 U
72-43-5	Methoxychlor		0.50 U
53494-70-5	Endrin Ketone		0.10 U
57-74-9	Chlordane		0.50 U
8001-35-2	Toxaphene		1.00 U
12674-11-2	Aroclor-1016		0.50 U
11104-28-2	Aroclor-1221		0.50 U
11141-16-5	Aroclor-1232		0.50 U
53469-21-9	Aroclor-1242		0.50 U
12672-29-6	Aroclor-1248		0.50 U
11097-69-1	Aroclor-1254		1.00 U
11096-82-5	Aroclor-1260		1.00 U

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

M_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_i = 2ul/4ul

V_s = 1000ml

M_s = -

V_t = 10000ul

ORGANICS ANALYSIS DATA SHEET
(Page 1)

Sample Number : BK545

Laboratory Name: Rocky Mountain Analytical Lab
Laboratory Sample ID. Number : BK545
Sample Matrix : Water
Data Released Authorized By : JC

Case Number : 7569
Q.C. Report No: 7258
Contract No. : 68-01-7083
Date Sample Rec: 7/09/87

Volatile Compounds

Concentration : LOM
Date Extracted/Prepared : N/A
Date Analyzed : 7/16/87
Conc./Dilution Factor : 1.00
pH : 6.0
Percent Moisture : 100%
Percent Moisture (Decanted) : N/A

CAS Number	Value	ug/L	CAS Number	Value	ug/L
74-83-3	Chloromethane	10 U	79-34-5	1,1,2,2-Tetrachloroethane	5 U
74-83-9	Bromomethane	10 U	78-87-5	1,2-Dichloropropane	5 U
75-01-4	Vinyl Chloride	10 U	10061-02-6	Trans-1,3-Dichloropropene	5 U
75-00-3	Chloroethane	10 U	79-10-6	Trichloroethane	5 U
75-09-2	Methylene Chloride	5 U	124-48-1	Dibromochloromethane	5 U
67-64-1	Acetone	5 U	79-00-5	1,1,2-Trichloroethane	5 U
75-15-0	Carbon Disulfide	5 U	71-43-2	Benzene	5 U
75-35-4	1,1-Dichloroethane	5 U	10061-01-5	cis-1,3-Dichloropropene	5 U
75-34-3	1,1-Dichloroethane	5 U	110-75-8	2-Chloroethylvinylether	10 U
156-60-5	Trans-1,2-Dichloroethane	5 U	75-25-2	Bromoform	5 U
67-66-3	Chloroform	5 U	591-78-6	2-Hexanone	10 U
107-06-2	1,2-Dichloroethane	5 U	108-10-1	4-Methyl-2-Pentanone	10 U
78-93-3	2-Butanone	10 U	127-18-4	Tetrachloroethene	5 U
71-55-6	1,1,1-Trichloroethane	5 U	108-88-3	Toluene	5 U
56-23-5	Carbon tetrachloride	5 U	108-90-7	Chlorobenzene	5 U
108-05-4	Vinyl Acetate	10 U	100-41-4	Ethylbenzene	5 U
75-27-4	Bromodichloromethane	5 U	100-42-5	Styrene	5 U
				Total Xylenes	5 U

U - compound was not detected
J - concentration detected is less than the required detection limit
B - compound was detected in the blank
sp - compound was a spike

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Laboratory Name : Rocky Mountain Analytical Lab
Case No: 7569
O.C. Report No: 7258

Organics Analysis Data Sheet

Sample Number
BX545

Page 2

Semivolatile Compounds

Conc.: LOW
Date Extracted/Prepared: 7/10/87
Date Analyzed: 7/15/87
Conc/Dil Factor: 2.00
Percent Moisture (Decanted) N/A

GPC Cleanup NO
Separatory Funnel Extraction NO
Continuous Liquid-Liquid Extraction YES

CAS Number	Compound	Value	ug/L	CAS Number	Compound	Value	ug/L
108-95-2	Phenol		10 U				
111-44-4	bis(-2-Chloroethyl)Ether		10 U	83-32-9	Acenaphthene		10 U
95-57-8	2-Chlorophenol		10 U	51-28-5	2,4-Dinitrophenol		50 U
541-73-1	1,3-Dichlorobenzene		10 U	100-02-7	4-Nitrophenol		50 U
106-46-7	1,4-Dichlorobenzene		10 U	132-64-9	Dibenzofuran		10 U
100-51-6	Benzyl Alcohol		10 U	121-14-2	2,4-Dinitrotoluene		10 U
95-50-1	1,2-Dichlorobenzene		10 U	606-20-2	2,6-Dinitrotoluene		10 U
95-48-7	2-Methylphenol		10 U	84-66-2	Diethylphthalate		10 U
39638-32-9	bis(2-chloroisopropyl)Ether		10 U	7005-72-3	4-Chlorophenyl-phenylether		10 U
106-44-5	4-Methylphenol		10 U	86-73-7	Fluorene		10 U
621-66-7	N-Nitro-Di-n-Propylamine		10 U	100-01-6	4-Nitroaniline		50 U
67-72-1	Hexachloroethane		10 U	534-52-1	4,6-Dinitro-2-Methylphenol		50 U
98-95-3	Nitrobenzene		10 U	86-30-6	N-Nitrosodiphenylamine (1)		10 U
78-59-1	Isophorone		10 U	101-53-3	4-Bromophenyl-phenylether		10 U
88-75-5	2-Nitrophenol		10 U	118-74-1	Hexachlorobenzene		10 U
105-67-9	2,4-Dimethylphenol		10 U	87-86-5	Pentachlorophenol		50 U
15-85-0	Benzoic Acid		50 U	85-01-8	Phenanthrene		10 U
111-91-1	bis(2-Chloroethoxy) Methane		10 U	120-12-7	Anthracene		10 U
20-83-2	2,4-Dichlorophenol		10 U	86-74-2	Di-N-Butylphthalate		10 U
20-82-1	1,2,4-Trichlorobenzene		10 U	206-44-0	Fluoranthene		10 U
1-20-3	Naphthalene		10 U	129-00-0	Pyrene		10 U
106-47-8	4-Chloroaniline		10 U	85-68-7	Butylbenzylphthalate		10 U
7-68-3	Hexachlorobutadiene		10 U	91-94-1	3,3'-Dichlorobenzidine		20 U
9-50-7	4-Chloro-3-Methylphenol		10 U	56-53-3	Benzo(a)Anthracene		10 U
91-57-6	2-Methylnaphthalene		10 U	117-81-7	bis(2-Ethylhexyl)Phthalate		10 U
7-47-4	Hexachlorocyclopentadiene		10 U	218-01-9	Chrysene		10 U
8-06-2	2,4,6-Trichlorophenol		10 U	117-84-0	Di-n-Octylphthalate		10 U
75-95-4	2,4,5-Trichlorophenol		50 U	205-99-2	Benzo(b)Fluoranthene		10 U
91-58-7	2-Chloronaphthalene		10 U	207-08-9	Benzo(k)Fluoranthene		10 U
8-74-4	2-Nitroaniline		50 U	50-32-8	Benzo(a)Pyrene		10 U
31-11-4	Dimethyl Phthalate		10 U	193-39-5	Indeno(1,2,3-cd)Pyrene		10 U
208-96-8	Acenaphthylene		10 U	53-70-3	Dibenzo(a,h)Anthracene		10 U
7-09-2	3-Nitroaniline		50 U	191-24-2	Benzo(g,h,i)Perylene		10 U

(1)-Cannot be separated from diphenylamine.

Laboratory Name: Rocky Mountain Analytical Lab
Case No: 7569

Sample Number:
BK545

ORGANICS ANALYSIS DATA SHEET
(Page 3)

Pesticides/ PCB's:

Concentration : Low
Date Ext./Prep : 7/10/87
Date Analyzed : 7/29/87
Conc./Dil Factor : 50.0
Percent Moisture :

GPC Cleanup : NO
Separatory Funnel Extract.: YES
Cont. Liquid/Liquid Extr. : NO
Sonication Extraction : NO

CAS Number	Compound	Value	ug/ L
319-84-6	Alpha-BHC		0.05 U
319-85-7	Beta-BHC		0.05 U
319-86-8	Delta-BHC		0.05 U
58-89-9	Gamma-BHC(Lindane)		0.05 U
76-44-8	Heptachlor		0.05 U
309-00-2	Aldrin		0.05 U
1204-57-3	Heptachlor Epoxide		0.05 U
959-98-8	Endosulfan I		0.05 U
60-57-1	Dieldrin		0.10 U
72-55-9	4,4'-DDE		0.10 U
72-20-8	Endrin		0.10 U
33213-65-9	Endosulfan II		0.10 U
72-54-8	4,4'-DDD		0.10 U
1031-07-8	Endosulfan Sulfate		0.10 U
50-29-3	4,4'-DDT		0.10 U
72-43-5	Methoxychlor		0.50 U
53494-70-5	Endrin Ketone		0.10 U
57-74-9	Chlordane		0.50 U
8001-35-2	Toxaphene		1.00 U
12674-11-2	Aroclor-1016		0.50 U
11104-28-2	Aroclor-1221		0.50 U
11141-16-5	Aroclor-1232		0.50 U
53469-21-9	Aroclor-1242		0.50 U
12672-29-6	Aroclor-1248		0.50 U
11097-69-1	Aroclor-1254		1.00 U
11096-82-5	Aroclor-1260		1.00 U

V_i = Volume of extract injected (ul)
V_e = Volume of water extracted (ml)
W_e = Weight of sample extracted (g)
V_T = Volume of total extract (ul)

V_i = 2ul/4ul
V_e = 1000ml
W_e = -
V_T = 10000ul

ORGANICS ANALYSIS DATA SHEET
(Page 1)

00021
Sample Number :
BK546

Laboratory Name: Rocky Mountain Analytical Lab
Laboratory Sample ID. Number : BK546
Sample Matrix : Soil
Data Released Authorized By : *FL*

Case Number : 7569
O.C. Report No: 7259
Contract No. : 68-01-7083
Date Sample Rec: 7-09-87

Volatile Compounds

Concentration :
Date Extracted/Prepared :
Date Analyzed :
Conc./Dilution Factor :
pH :
Percent Moisture :
Percent Moisture (Decanted) :

Low
N/A
7-21-87
0.99
7.54
23.1%
0.0%

Lab	Value ug/Kg	CAS Number	Value ug/Kg
3-3 Chloromethane	13 U	79-34-5 1,1,2,2-Tetrachloroethane	6 U
1-9 Bromomethane	13 U	78-87-5 1,2-Dichloropropane	6 U
01-4 Vinyl Chloride	13 U	10061-02-6 Trans-1,3-Dichloropropane	6 U
03-3 Chloroethane	13 U	79-10-6 Trichloroethene	6 U
02-2 Methylene Chloride	7.8 J	124-48-1 Dibromochloromethane	4 U
04-1 Acetone	52 B	79-00-5 1,1,2-Trichloroethane	4 U
15-0 Carbon Disulfide	6 U	71-43-2 Benzene	4 U
04-4 1,1-Dichloroethene	6 U	10061-01-5 cis-1,3-Dichloropropane	4 U
03-3 1,1-Dichloroethane	4 U	110-75-8 2-Chloroethylvinylether	13 U
60-5 Trans-1,2-Dichloroethene	4 U	75-25-2 Bromoform	4 U
03-3 Chloroform	4 U	591-78-6 2-Hexanone	13 J
02-2 1,2-Dichloroethane	4 U	108-10-1 4-Methyl-2-Pentanone	10 J
73-3 2-Butanone	15	127-18-4 Tetrachloroethane	2.1 J
06-6 1,1,1-Trichloroethane	4 U	108-88-3 Toluene	5.2 J
05-5 Carbon Tetrachloride	4 U	108-90-7 Chlorobenzene	6 U
05-4 Vinyl Acetate	13 U	100-41-4 Ethylbenzene	6 U
07-4 Bromodichloromethane	4 U	100-42-5 Styrene	6 U
		Total Xylenes	6 U

U - compound was not detected
J - concentration detected is less than the required detection limit
B - compound was detected in the blank
sp - compound was a spike

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Page 2

Pt No: 7259

00023

Semivolatile Compounds

Conc.: _____
 Date Extracted/Prepared: 7-15-87
 Date Analyzed: 7-27-87
 Conc/Dil Factor: 66.2
 Percent Moisture (Decanted): 23.1%

GPC Cleanup: YES
 Separatory Funnel Extraction: NO
 Continuous Liquid-Liquid Extraction: NO
 Sonication: YES

CAS Number	Compound	Value	ug/Kg	CAS Number	Compound	Value	ug/Kg
108-95-2	Phenol		430 U	83-32-9	Acenaphthene		430 U
1-64-4	bis(-2-Chloroethyl)Ether		430 U	51-28-5	2,4-Dinitrophenol		2100 U
~57-8	2-Chlorophenol		430 U	100-02-7	4-Nitrophenol		2100 U
541-73-1	1,3-Dichlorobenzene		430 U	132-64-9	Dibenzofuran		430 U
5-46-7	1,4-Dichlorobenzene		430 U	121-14-2	2,4 Dinitrotoluene		430 U
3-51-6	Benzyl Alcohol		430 U	606-20-2	2,6-Dinitrotoluene		430 U
95-50-1	1,2-Dichlorobenzene		430 U	84-66-2	Diethylphthalate		430 U
~48-7	2-Methylphenol		430 U	7005-72-3	4-Chlorophenyl-phenylether		430 U
38-32-9	bis(2-chloroisopropyl)Ether		430 U	86-73-7	Fluorene		430 U
100-44-5	4-Methylphenol	380	J	100-01-6	4-Nitroaniline		2100 U
121-64-7	N-Nitro-Di-n-Propylamine		430 U	534-52-1	4,6-Dinitro-2-Methylphenol		2100 U
72-1	Hexachloroethane		430 U	86-30-6	N-Nitrosodiphenylamine (1)		430 U
95-3	Nitrobenzene		430 U	101-55-3	4-Bromophenyl-phenylether		430 U
8-59-1	Isophorone		430 U	118-74-1	Hexachlorobenzene		430 U
75-5	2-Nitrophenol		430 U	87-86-5	Pentachlorophenol		2100 U
~67-9	2,4-Dimethylphenol		430 U	85-01-8	Phenanthrene		430 U
5-85-0	Benzoic Acid	2100 U		120-12-7	Anthracene		430 U
~91-1	bis(2-Chloroethoxy)Methane		430 U	84-74-2	Di-N-Butylphthalate		430 U
83-2	2,4-Dichlorophenol		430 U	206-44-0	Fluoranthene	92	J
10-82-1	1,2,4-Trichlorobenzene		430 U	129-00-0	Pyrene		430 U
1-20-3	Naphthalene		430 U	85-68-7	Butylbenzylphthalate		430 U
47-8	4-Chloroaniline		430 U	91-94-1	3,3'-Dichlorobenzidine		850 U
~8-3	Hexachlorobutadiene		430 U	56-55-3	Benzo(a)Anthracene		430 U
~50-7	4-Chloro-3-Methylphenol		430 U	117-81-7	bis(2-Ethylhexyl)Phthalate		430 U
7-6	2-Methylnaphthalene		430 U	218-01-9	Chrysene		430 U
7-4	Hexachlorocyclopentadiene		430 U	117-84-0	Di-n-Octylphthalate		430 U
~06-2	2,4,6-Trichlorophenol		430 U	205-99-2	Benzo(b)Fluoranthene		430 U
7-4	2,4,5-Trichlorophenol	2100 U		207-08-9	Benzo(k)Fluoranthene		430 U
3-7	2-Chloronaphthalene		430 U	50-32-8	Benzo(a)Pyrene		430 U
74-4	2-Nitroaniline	2100 U		193-39-5	Indenol(1,2,3-cd)Pyrene		430 U
1-11-4	Dimethyl Phthalate		430 U	53-70-3	Dibenzo(a,h)Anthracene		430 U
6-8	Acenaphthylene		430 U	191-24-2	Benzo(g,h,i)Perylene		430 U
~2	3-Nitroaniline	2100 U					

(1)-Cannot be separated from diphenylamine.

Laboratory Name: Rocky Mountain Analytical Lab
Case No: T569

Sample Number:
81346

ORGANICS ANALYSIS DATA SHEET
(Page 3)

00025

Pesticides/ PCB's:

Concentration : Low
Date Ext./Prep : 7-15-87
Date Analyzed : 8-05-87
Conc./Dil Factor : 6620
Percent Moisture : 23.1%

GPC Cleanup : YES
Separatory Funnel Extract.: NO
Cont. Liquid/Liquid Extr. : NO
Sonication Extraction : YES

CAS Number	Compound	Value	ug/ Kg
319-84-6	Alpha-BHC	10.0 U	
319-85-7	Beta-BHC	10.0 U	
319-86-8	Delta-BHC	10.0 U	
58-89-9	Gamma-BHC(Lindane)	10.0 U	
76-44-8	Heptachlor	10.0 U	
309-00-2	Aldrin	10.0 U	
1204-57-3	Heptachlor Epoxide	10.0 U	
959-98-8	Endosulfan I	10.0 U	
60-57-1	Dieldrin	21.0 U	
72-55-9	4,4'-DDE	21.0 U	
72-20-8	Endrin	21.0 U	
33213-65-9	Endosulfan II	21.0 U	
72-54-8	4,4'-DDD	21.0 U	
1031-07-8	Endosulfan Sulfate	21.0 U	
50-29-3	4,4'-DDT	21.0 U	
72-43-5	Methoxychlor	100.0 U	
53494-70-5	Endrin Ketone	21.0 U	
57-74-9	Chlordane	100.0 U	
8001-35-2	Toxaphene	210.0 U	
12674-11-2	Aroclor-1016	100.0 U	
11104-28-2	Aroclor-1221	100.0 U	
11141-16-5	Aroclor-1232	100.0 U	
53469-21-9	Aroclor-1242	100.0 U	
12672-29-6	Aroclor-1248	100.0 U	
11097-69-1	Aroclor-1254	210.0 U	
11096-82-5	Aroclor-1260	210.0 U	

V_i = Volume of extract injected (ul)
V_s = Volume of water extracted (ml)
W_s = Weight of sample extracted (g)
V_t = Volume of total extract (ul)

V_i = 2ul/4ul
V_s = -
W_s = 30.22g
V_t = 1000ul

ORGANICS ANALYSIS DATA SHEET
(Page 1)

Sample Number :
BK547

Laboratory Name: Rocky Mountain Analytical Lab
Laboratory Sample ID. Number : BK547
Sample Matrix : Soil
Data Released Authorized By : JCL

Case Number : 7569
Q.C. Report No: 7259
Contract No. : 68-01-7083
Date Sample Rec: 7-09-87

00097

Volatile Compounds

Concentration : Low
Date Extracted/Prepared : N/A
Date Analyzed : 7-18-87
Conc./Dilution Factor : 1.00
pH : 7.04
Percent Moisture : 19.0%
Percent Moisture (Decanted) : 0.0%

Value ug/Kg			CAS Number	Value ug/Kg		
53-3	Chloromethane	12 U	79-34-5	1,1,2,2-Tetrachloroethane	6 U	
42-9	Bromomethane	12 U	78-87-5	1,2-Dichloropropene	6 U	
4	Vinyl Chloride	12 U	10061-02-6	Trans-1,3-Dichloropropene	6 U	
40-3	Chloroethane	12 U	79-10-6	Trichloroethane	6 U	
19-2	Methylene Chloride	2.9 J	124-48-1	Dibromochloromethane	6 U	
1	Acetone	B	79-00-5	1,1,2-Trichloroethane	6 U	
0	Carbon Disulfide	6 U	71-43-2	Benzene	6 U	
5-4	1,1-Dichloroethane	6 U	10061-01-5	cis-1,3-Dichloropropene	6 U	
3	1,1-Dichloroethane	6 U	110-75-8	2-Chloroethylvinylether	12 U	
5	Trans-1,2-Dichloroethane	6 U	75-25-2	Bromoform	6 U	
5-3	Chloroform	6 U	591-78-6	2-Hexanone	12 U	
4-2	1,2-Dichloroethane	6 U	108-10-1	4-Methyl-2-Pentanone	12 U	
1	2-Butanone	12 U	127-18-4	Tetrachloroethene	6 U	
1-8	1,1,1-Trichloroethane	6 U	108-88-3	Toluene	6 U	
5	Carbon Tetrachloride	6 U	108-90-7	Chlorobenzene	6 U	
6	Vinyl Acetate	12 U	100-41-4	Ethylbenzene	6 U	
	Bromodichloromethane	6 U	100-42-5	Styrene	6 U	
				Total Xylenes	6 U	

U - compound was not detected
J - concentration detected is less than the required detection limit
B - compound was detected in the blank
sp - compound was a spike

10/85 Rev

369
No: 729

Semivolatile Compounds

Conc.: LOW
Date Extracted/Prepared: 7-15-87
Date Analyzed: 7-27-87
Conc/Dil Factor: 66.6
Percent Moisture (Decanted): 19.0%

GPC Cleanup
Separatory Funnel Extraction
Continuous Liquid-Liquid Extraction
Sonication

YES
NO
NO
YES

00099

Compound	Value	ug/Kg	CAS Number	Compound	Value	ug/Kg
Phenol		410 U	83-32-9	Acenaphthene		410 U
bis(2-Chloroethyl)Ether		410 U	51-28-5	2,4-Dinitrophenol		2000 U
2-Chlorophenol		410 U	100-02-7	4-Nitrophenol		2000 U
1,3-Dichlorobenzene		410 U	132-64-9	Dibenzofuran		410 U
1,4-Dichlorobenzene		410 U	121-14-2	2,4 Dinitrotoluene		410 U
Benzyl Alcohol		410 U	606-20-2	2,6-Dinitrotoluene		410 U
1,2-Dichlorobenzene		410 U	84-66-2	Diethylphthalate		410 U
2-Methylphenol		410 U	7005-72-3	4-Chlorophenyl-phenylether		410 U
bis(2-chloroisopropyl)Ether		410 U	86-73-7	Fluorene		410 U
4-Methylphenol	120	J	100-01-6	4-Nitroaniline		2000 U
N-Nitro-Di-n-Propylamine		410 U	534-52-1	4,6-Dinitro-2-Methylphenol		2000 U
Hexachloroethane		410 U	86-30-6	N-Nitrosodiphenylamine (1)		410 U
Nitrobenzene		410 U	101-55-3	4-Bromophenyl-phenylether		410 U
Isophorone		410 U	118-74-1	Hexachlorobenzene		410 U
2-Nitrophenol		410 U	87-86-5	Pentachlorophenol		2000 U
2,4-Dimethylphenol		410 U	85-01-8	Phenanthrene		410 U
Benzoic Acid		2000 U	120-12-7	Anthracene		410 U
bis(2-Chloroethoxy)Methane		410 U	84-74-2	Di-n-Butylphthalate		410 U
2,4-Dichlorophenol		410 U	206-44-0	Fluoranthene		410 U
1,2,4-Trichlorobenzene		410 U	129-00-0	Pyrene		410 U
Naphthalene		410 U	85-68-7	Butylbenzylphthalate		410 U
4-Chloroaniline		410 U	91-94-1	3,3'-Dichlorobenzidine		810 U
Hexachlorobutadiene		410 U	56-55-3	Benzo(a)Anthracene		410 U
4-Chloro-3-Methylphenol		410 U	117-81-7	bis(2-Ethylhexyl)Phthalate	190	J B
2-Methylnaphthalene		410 U	218-01-9	Chrysene		410 U
Hexachlorocyclopentadiene		410 U	117-84-0	Di-n-Octylphthalate		410 U
2,4,6-Trichlorophenol		410 U	205-99-2	Benzo(b)Fluoranthene		410 U
2,4,5-Trichlorophenol		2000 U	207-08-9	Benzo(k)Fluoranthene		410 U
2-Chloronaphthalene		410 U	50-32-8	Benzo(a)Pyrene		410 U
2-Nitroaniline		2000 U	193-39-5	Indenol(1,2,3-cd)Pyrene		410 U
Dimethyl Phthalate		410 U	53-70-3	Dibenzo(a,h)Anthracene		410 U
Acenaphthylene		410 U	191-24-2	Benzo(g,h,i)Perylene		410 U
3-Nitroaniline		2000 U				

(1)-Cannot be separated from diphenylamine.

Laboratory Name: Rocky Mountain Analytical Lab
Case No: 7569

Sample Number:
BK547

ORGANICS ANALYSIS DATA SHEET
(Page 3)

00101

Pesticides/ PCB's:

Concentration : Low
Date Ext./Prep : 7-15-87
Date Analyzed : 8-10-87
Conc./Dil Factor : 6660
Percent Moisture : 19.0%

GPC Cleanup : YES
Separatory Funnel Extract.: NO
Cont. Liquid/Liquid Extr. : NO
Sonication Extraction : YES

CAS Number	Compound	Value	ug/ Kg
319-84-6	Alpha-BHC		9.9 U
319-85-7	Beta-BHC		9.9 U
319-86-8	Delta-BHC		9.9 U
58-89-9	Gamma-BHC(Lindane)		9.9 U
76-44-8	Heptachlor		9.9 U
309-00-2	Aldrin		9.9 U
1204-57-3	Heptachlor Epoxide		9.9 U
959-98-8	Endosulfan I		9.9 U
60-57-1	Dieldrin		20.0 U
72-55-9	4,4'-DDE		20.0 U
72-20-8	Endrin		20.0 U
33213-65-9	Endosulfan II		20.0 U
72-54-8	4,4'-DDD		20.0 U
1031-07-8	Endosulfan Sulfate		20.0 U
50-29-3	4,4'-DDT		20.0 U
72-43-5	Methoxychlor		99.0 U
53494-70-5	Endrin Ketone		20.0 U
57-74-9	Chlordane		99.0 U
8001-35-2	Toxaphene		200.0 U
12674-11-2	Aroclor-1016		99.0 U
11104-28-2	Aroclor-1221		99.0 U
11141-16-5	Aroclor-1232		99.0 U
53469-21-9	Aroclor-1242		99.0 U
12672-29-6	Aroclor-1248		99.0 U
11097-69-1	Aroclor-1254		200.0 U
11096-82-5	Aroclor-1260		200.0 U

Vi = Volume of extract injected (ul)
Vs = Volume of water extracted (ml)
Ws = Weight of sample extracted (g)
Vt = Volume of total extract (ul)

Vi = 2ul/4ul
Vs = -
Ws = 30.04g
Vt = 1000ul

ORGANICS ANALYSIS DATA SHEET

(Page 1)

Sample Number :

BK348

00167

Laboratory Name: Rocky Mountain Analytical Lab

Laboratory Sample ID. Number : BK348

Sample Matrix : Soil

Released Authorized By : JCL

Case Number : 7569

Q.C. Report No: 7259

Contract No. : 68-01-7083

Data Sample Rec: 7-09-87

Volatile Compounds

Concentration : Low
 Date Extracted/Prepared : N/A
 Date Analyzed : 7-18-87
 Conc./Dilution Factor : 1.00
 pH : 7.58
 Percent Moisture : 24.9%
 Percent Moisture (Decanted) : 0.0%

	Value ug/Kg	CAS Number		Value ug/Kg
1-3 Chloromethane	13 U	79-34-5	1,1,2,2-Tetrachloroethane	7 U
Bromomethane	13 U	78-87-5	1,2-Dichloropropane	7 U
Vinyl Chloride	13 U	10061-02-6	Trans-1,3-Dichloropropane	7 U
3 Chloroethane	13 U	79-10-6	Trichloroethane	7 U
Methylene Chloride	7.5 J	124-48-1	Dibromochloromethane	7 U
Acetone	13 U	79-00-5	1,1,2-Trichloroethane	7 U
10 Carbon Disulfide	3.7 J	71-43-2	Benzene	7 U
4 1,1-Dichloroethane	7 U	10061-01-5	cis-1,3-Dichloropropane	7 U
1,1-Dichloroethane	7 U	110-75-8	2-Chloroethylvinylether	13 U
Trans-1,2-Dichloroethane	7 U	75-25-2	Bromoform	7 U
3 Chloroform	7 U	591-78-6	2-Hexanone	13 U
1,2-Dichloroethane	7 U	108-10-1	4-Methyl-2-Pentanone	13 U
2-Butanone	13 U	127-18-4	Tetrachloroethane	7 U
6 1,1,1-Trichloroethane	7 U	108-88-3	Toluene	7 U
Carbon Tetrachloride	7 U	108-90-7	Chlorobenzene	7 U
Vinyl Acetate	13 U	100-41-4	Ethylbenzene	7 U
4 Bromodichloromethane	7 U	100-42-5	Styrene	7 U
			Total Xylenes	7 U

U - compound was not detected

J - concentration detected is less than the required detection limit

B - compound was detected in the blank

sp - compound was a spike

10/85 Rev

Form 1

0016

Semivolatile Compounds

Conc.:
Date Extracted/Prepared: 7-15-87
Date Analyzed 7-27-87
Conc/Dil Factor 66.4
Percent Moisture (Decanted) 24.9%

GPC Cleanup YES
Separatory Funnel Extraction NO
Continuous Liquid-Liquid Extraction NO
Sonication YES

CAS Number	Compound	Value	ug/Kg	CAS Number	Compound	Value	ug/Kg
08-95-2	Phenol		440 U	83-32-9	Acenaphthene		440 U
11-44-4	bis(2-Chloroethyl)Ether		440 U	51-28-5	2,4-Dinitrophenol		2100 U
95-57-8	2-Chlorophenol		440 U	100-02-7	4-Nitrophenol		2100 U
541-73-1	1,3-Dichlorobenzene		440 U	132-64-9	Dibenzofuran		440 U
36-46-7	1,4-Dichlorobenzene		440 U	121-14-2	2,4 Dinitrotoluene		440 U
30-51-6	Benzyl Alcohol		440 U	606-20-2	2,6-Dinitrotoluene		440 U
95-50-1	1,2-Dichlorobenzene		440 U	84-66-2	Diethylphthalate		440 U
1-48-7	2-Methylphenol		440 U	7005-72-3	4-Chlorophenyl-phenylether		440 U
638-32-9	bis(2-chloroisopropyl)Ether		440 U	86-73-7	Fluorene		440 U
106-44-5	4-Methylphenol		440 U	100-01-6	4-Nitroaniline		2100 U
471-64-7	N-Nitro-Di-n-Propylamine		440 U	534-52-1	4,6-Dinitro-2-Methylphenol		2100 U
72-1	Hexachloroethane		440 U	86-30-6	N-Nitrosodiphenylamine (1)		440 U
98-95-3	Nitrobenzene		440 U	101-55-3	4-Bromophenyl-phenylether		440 U
78-59-1	Isophorone		440 U	118-74-1	Hexachlorobenzene		440 U
75-5	2-Nitrophenol		440 U	87-86-5	Pentachlorophenol		2100 U
5-67-9	2,4-Dimethylphenol		440 U	85-01-8	Phenanthrene	390	J
65-85-0	Benzoic Acid	2100 U		120-12-7	Anthracene		440 U
1-91-1	bis(2-Chloroethoxy)Methane		440 U	84-74-2	Di-n-Butylphthalate		440 U
0-83-2	2,4-Dichlorophenol		440 U	206-44-0	Fluoranthene	490	
120-82-1	1,2,4-Trichlorobenzene		440 U	129-00-0	Pyrene	440	
20-3	Naphthalene		440 U	85-68-7	Butylbenzylphthalate		440 U
5-47-8	4-Chloroaniline		440 U	91-94-1	3,3'-Dichlorobenzidine		870 U
87-68-3	Hexachlorobutadiene		440 U	56-55-3	Benzo(a)Anthracene	270	J
59-50-7	4-Chloro-3-Methylphenol		440 U	117-81-7	bis(2-Ethylhexyl)Phthalate	590	
57-6	2-Methylnaphthalene		440 U	218-01-9	Chrysene	310	J
47-4	Hexachlorocyclopentadiene		440 U	117-84-0	Di-n-Octylphthalate		440 U
58-06-2	2,4,6-Trichlorophenol		440 U	205-99-2	Benzo(b)Fluoranthene	270	J
95-4	2,4,5-Trichlorophenol	2100 U		207-08-9	Benzo(k)Fluoranthene	250	J
58-7	2-Chloronaphthalene		440 U	50-32-8	Benzo(a)Pyrene	240	J
58-74-4	2-Nitroaniline	2100 U		193-39-5	Indenol(1,2,3-cd)Pyrene	180	J
11-4	Dimethyl Phthalate	440 U		53-70-3	Dibenzo(a,h)Anthracene		440 U
96-8	Acenaphthylene	440 U		191-24-2	Benzo(g,h,i)Perylene	120	J
9-09-2	3-Nitroaniline	2100 U					

(1)-Cannot be separated from diphenylamine.

Laboratory Name: Rocky Mountain Analytical Lab
Case No: 7569

Sample Number:
BK548

ORGANICS ANALYSIS DATA SHEET
(Page 3)

00171

Pesticides/ PCB's:

Concentration : Low
Date Ext./Prep : 7-15-87
Date Analyzed : 8-05-87
Conc./Dil Factor : 6640
Percent Moisture : 24.9%

GPC Cleanup : YES
Separatory Funnel Extract.: NO
Cont. Liquid/Liquid Extr. : NO
Sonication Extraction : YES

CAS Number	Compound	Value	ug/ Kg
319-84-6	Alpha-BHC	11.0 U	
319-85-7	Beta-BHC	11.0 U	
319-86-8	Delta-BHC	11.0 U	
58-89-9	Gamma-BHC(Lindane)	11.0 U	
76-44-8	Heptachlor	11.0 U	
309-00-2	Aldrin	11.0 U	
1204-57-3	Heptachlor Epoxide	11.0 U	
959-98-8	Endosulfan I	11.0 U	
60-57-1	Dieldrin	21.0 U	
72-55-9	4,4'-DDE	21.0 U	
72-20-8	Endrin	21.0 U	
33213-65-9	Endosulfan II	21.0 U	
72-54-8	4,4'-DDD	21.0 U	
1031-07-8	Endosulfan Sulfate	21.0 U	
50-29-3	4,4'-DDT	21.0 U	
72-43-5	Methoxychlor	110.0 U	
53494-70-5	Endrin Ketone	21.0 U	
57-74-9	Chlordane	110.0 U	
8001-35-2	Toxaphene	210.0 U	
12674-11-2	Aroclor-1016	110.0 U	
11104-28-2	Aroclor-1221	110.0 U	
11141-16-5	Aroclor-1232	110.0 U	
53469-21-9	Aroclor-1242	110.0 U	
12672-29-6	Aroclor-1248	110.0 U	
11097-69-1	Aroclor-1254	210.0 U	
11096-82-5	Aroclor-1260	210.0 U	

Vi = Volume of extract injected (ul)
Va = Volume of water extracted (ml)
Ws = Weight of sample extracted (g)
Vt = Volume of total extract (ul)

Vi = 2ul/4ul
Vs = -
Ws = 30.13g
Vt = 1000ul

ORGANICS ANALYSIS DATA SHEET
(Page 1)

Sample Number :
BKS49

0025

Laboratory Name: Rocky Mountain Analytical Lab
Laboratory Sample ID. Number : BKS49
Sample Matrix : Soil
Data Released Authorized By : JCH

Case Number : 7569
G.C. Report No: 7259
Contract No. : 68-01-7083
Date Sample Rec: 7-09-87

Volatile Compounds

Concentration :
Date Extracted/Prepared :
Date Analyzed :
Conc./Dilution Factor :
pH :
Percent Moisture :
Percent Moisture (Decanted) :

Low
N/A
7-21-87
1.00
7.73
8.58%
0.0%

CAS Number	Value ug/Kg	CAS Number	Value ug/Kg
74-83-3 Chloromethane	1E U	79-34-5 1,1,2,2-Tetrachloroethane	5 U
74-83-9 Bromomethane	1E U	78-87-5 1,2-Dichloropropane	5 U
75-01-4 Vinyl Chloride	1E U	10061-02-6 Trans-1,3-Dichloropropene	5 U
75-00-3 Chloroethane	1E U	79-10-6 Trichloroethane	5 U
75-09-2 Methylene Chloride	2.1 J	124-48-1 Dibromochloromethane	5 U
67-64-1 Acetone	2.2 J	79-00-5 1,1,2-Trichloroethane	5 U
75-15-0 Carbon Disulfide	2.2 J	71-43-2 Benzene	5 U
75-35-4 1,1-Dichloroethane	5 U	10061-01-5 cis-1,3-Dichloropropene	5 U
75-34-3 1,1-Dichloroethane	5 U	110-75-8 2-Chloroethylvinylether	11 U
156-60-5 Trans-1,2-Dichloroethane	5 U	75-25-2 Bromoform	5 U
67-66-3 Chloroform	5 U	591-78-6 2-Hexanone	11 U
107-06-2 1,2-Dichloroethane	5 U	108-10-1 4-Methyl-2-Pentanone	5 U
78-93-3 2-Butanone	11 U	127-18-4 Tetrachloroethene	5 U
71-55-6 1,1,1-Trichloroethane	5 U	108-88-3 Toluene	5 U
56-23-5 Carbon Tetrachloride	5 U	108-90-7 Chlorobenzene	5 U
108-05-4 Vinyl Acetate	11 U	100-41-4 Ethylbenzene	5 U
75-27-4 Bromodichloromethane	5 U	100-42-5 Styrene	5 U
		Total Xylenes	5 U

U - compound was not detected
J - concentration detected is less than the required detection limit
B - compound was detected in the blank
sp - compound was a spike

10/85 Rev

Page 1

ORGANICS ANALYSIS DATA SHEET
(Page 1)

Sample Number :
DKS49RR

00261

Laboratory Name: Rocky Mountain Analytical Lab
Laboratory Sample ID. Number : DKS49RR
Sample Matrix : Soil
Data Released Authorized By : JCH

Case Number : 7569
O.C. Report No: 7259
Contract No. : 68-01-7083
Date Sample Rec: 7-09-87

Volatile Compounds

Concentration :
Date Extracted/Prepared :
Date Analyzed :
Conc./Dilution Factor :
pH :
Percent Moisture :
Percent Moisture (Decanted) :

Low
N/A
7-22-87
1.00
7.73
8.58%
0.0%

AS Number		Value ug/Kg	CAS Number		Value ug/Kg
74-83-3	Chloromethane	11 U	79-34-5	1,1,2,2-Tetrachloroethane	5 U
4-83-9	Bromomethane	11 U	78-87-5	1,2-Dichloropropane	5 U
75-01-4	Vinyl Chloride	11 U	10061-02-6	Trans-1,3-Dichloropropane	5 U
75-00-3	Chloroethane	11 U	79-10-6	Trichloroethene	5 U
5-09-2	Methylene Chloride	1.7 J	124-48-1	Dibromochloromethane	5 U
7-64-1	Acetone	1.4 J	79-00-5	1,1,2-Trichloroethane	5 U
75-15-0	Carbon Disulfide	1.4 J	71-43-2	Benzene	5 U
75-35-4	1,1-Dichloroethene	5 U	10061-01-5	cis-1,3-Dichloropropane	5 U
75-34-3	1,1-Dichloroethane	5 U	110-75-8	2-Chloroethylvinylether	11 U
156-60-5	Trans-1,2-Dichloroethene	5 U	75-25-2	Bromoform	5 U
57-66-3	Chloroform	5 U	591-78-6	2-Hexanone	11 U
107-06-2	1,2-Dichloroethane	5 U	108-10-1	4-Methyl-2-Pentanone	11 U
78-93-3	2-Butanone	11 U	127-18-4	Tetrachloroethene	1.4
71-55-6	1,1,1-Trichloroethane	5 U	108-88-3	Toluene	5 U
56-23-5	Carbon Tetrachloride	5 U	108-90-7	Chlorobenzene	5 U
108-05-4	Vinyl Acetate	11 U	100-41-4	Ethylbenzene	5 U
75-27-4	Bromodichloromethane	5 U	100-42-5	Styrene	5 U
				Total Xylenes	5 U

U - compound was not detected
J - concentration detected is less than the required detection limit
B - compound was detected in the blank
sp - compound was a spike

10/85 Rev

Semivolatile Compounds

0026

Conc.:
Date Extracted/Prepared: 7-15-87
Date Analyzed 7-27-87
Conc/Dil Factor 65.8
Percent Moisture (Decanted) 8.58%

GPC Cleanup YES
Separatory Funnel Extraction NO
Continuous Liquid-Liquid Extraction NO
Sonication YES

CAS Number	Compound	Value	ug/Kg	CAS Number	Compound	Value	ug/Kg
08-95-2	Phenol		360 U	83-32-9	Acenaphthene		360 U
11-44-4	bis(2-Chloroethyl)Ether		360 U	51-28-5	2,4-Dinitrophenol		1700 U
95-57-8	2-Chlorophenol		360 U	100-02-7	4-Nitrophenol		1700 U
11-73-1	1,3-Dichlorobenzene		360 U	132-64-9	Dibenzofuran		360 U
16-46-7	1,4-Dichlorobenzene		360 U	121-14-2	2,4 Dinitrotoluene		360 U
100-51-6	Benzyl Alcohol		360 U	606-20-2	2,6-Dinitrotoluene		360 U
95-50-1	1,2-Dichlorobenzene		360 U	84-66-2	Diethylphthalate		360 U
48-7	2-Methylphenol		360 U	7005-72-3	4-Chlorophenyl-phenylether		360 U
638-32-9	bis(2-chloroisopropyl)Ether		360 U	86-73-7	Fluorene		360 U
106-46-5	4-Methylphenol		360 U	100-01-6	4-Nitroaniline		1700 U
1-64-7	N-Nitro-Di-n-Propylamine		360 U	534-52-1	4,6-Dinitro-2-Methylphenol		1700 U
72-1	Hexachloroethane		360 U	86-30-6	N-Nitrosodiphenylamine (1)		360 U
98-95-3	Nitrobenzene		360 U	101-55-3	4-Bromophenyl-phenylether		360 U
74-59-1	Isophorone		360 U	118-74-1	Hexachlorobenzene		360 U
1-75-5	2-Nitrophenol		360 U	87-86-5	Pentachlorophenol		1700 U
105-67-9	2,4-Dimethylphenol		360 U	85-01-8	Phenanthrene	96	J
95-85-0	Benzoic Acid	1700 U		120-12-7	Anthracene		360 U
1-91-1	bis(2-Chloroethoxy)Methane		360 U	84-74-2	Di-N-Butylphthalate		360 U
1-83-2	2,4-Dichlorophenol		360 U	206-44-0	Fluoranthene	190	J
120-82-1	1,2,4-Trichlorobenzene		360 U	129-00-0	Pyrene	180	J
20-3	Naphthalene		360 U	85-68-7	Butylbenzylphthalate		360 U
1-47-8	4-Chloroaniline		360 U	91-94-1	3,3'-Dichlorobenzidine		710 U
17-68-3	Hexachlorobutadiene		360 U	56-53-3	Benzo(a)Anthracene		360 U
9-50-7	4-Chloro-3-Methylphenol		360 U	117-81-7	bis(2-Ethylhexyl)Phthalate	~~360~~	~~360~~ B
1-17-6	2-Methylnaphthalene		360 U	218-01-9	Chrysene	87	J
7-47-4	Hexachlorocyclopentadiene		360 U	117-84-0	Di-n-Octylphthalate		360 U
8-06-2	2,4,6-Trichlorophenol		360 U	205-99-2	Benzo(b)Fluoranthene	76	J
1-5-4	2,4,5-Trichlorophenol	1700 U		207-08-9	Benzo(k)Fluoranthene	93	J
1-8-7	2-Chloronaphthalene		360 U	50-32-8	Benzo(a)Pyrene	72	J
3-74-4	2-Nitroaniline	1700 U		193-39-5	Indenol(1,2,3-cd)Pyrene		360 U
1-11-4	Dimethyl Phthalate		360 U	53-70-3	Dibenzo(a,h)Anthracene		360 U
1-16-8	Acenaphthylene		360 U	191-24-2	Benzo(g,h,i)Perylene		360 U
1-09-2	3-Nitroaniline	1700 U					

(1)-Cannot be separated from diphenylamine.

ORGANICS ANALYSIS DATA SHEET

(Page 3)

00265

Pesticides/ PCB's:

Concentration : Low
Date Ext./Prep : 7-15-87
Date Analyzed : 8-05-87
Conc./Dil Factor : 6580
Percent Moisture : 8.58%

GPC Cleanup : YES
Separatory Funnel Extract.: NO
Cont. Liquid/Liquid Extr. : NO
Sonication Extraction : YES

CAS Number	Compound	Value	ug/ Kg
319-84-6	Alpha-BHC		8.6 U
319-85-7	Beta-BHC		8.6 U
319-86-8	Delta-BHC		8.6 U
58-89-9	Gamma-BHC(Lindane)		8.6 U
76-44-8	Heptachlor		8.6 U
309-00-2	Aldrin		8.6 U
1204-57-3	Heptachlor Epoxide		8.6 U
959-98-8	Endosulfan I		8.6 U
60-57-1	Dieldrin		17.0 U
72-55-9	4,4'-DDE		17.0 U
72-20-8	Endrin		17.0 U
33213-65-9	Endosulfan II		17.0 U
72-54-8	4,4'-DDD		17.0 U
1031-07-8	Endosulfan Sulfate		17.0 U
50-29-3	4,4'-DDT		17.0 U
72-43-5	Methoxychlor		86.0 U
53494-70-5	Endrin Ketone		17.0 U
57-74-9	Chlordane		86.0 U
8001-33-2	Toxaphene		170.0 U
12674-11-2	Aroclor-1016		86.0 U
11104-28-2	Aroclor-1221		86.0 U
11141-16-5	Aroclor-1232		86.0 U
53469-21-9	Aroclor-1242		86.0 U
12672-29-6	Aroclor-1248		86.0 U
11097-69-1	Aroclor-1254		170.0 U
11096-82-5	Aroclor-1260		170.0 U

V_i = Volume of extract injected (ul)
V_w = Volume of water extracted (ml)
W_s = Weight of sample extracted (g)
V_T = Volume of total extract (ul)

V_i = 2ul/4ul
V_w = -
W_s = 30.37g
V_T = 1000ul

ORGANICS ANALYSIS DATA SHEET
(Page 1)

Sample Number :
BK550

00366

retory Name: Rocky Mountain Analytical Lab
oratory Sample ID. Number : BK550
Matrix : Soil
eleased Authorized By : *TC*

Case Number : 7569
Q.C. Report No: 7259
Contract No. : 68-01-7083
Date Sample Rec: 7-09-87

Volatile Compounds

Concentration : Low
Date Extracted/Prepared : N/A
Date Analyzed : 7-17-87
Conc./Dilution Factor : 5.00
pH : 7.58
Percent Moisture : 17.6X
Percent Moisture (Decanted) : 0.0X

	Value ug/Kg	CAS Number		Value ug/Kg
Chloromethane	61 U	79-34-5	1,1,2,2-Tetrachloroethane	30 U
9 Bromomethane	61 U	78-87-5	1,2-Dichloropropane	30 U
VinylChloride	61 U	10061-02-6	Trans-1,3-Dichloropropane	30 U
Chloroethane	61 U	79-10-6	Trichloroethane	30 U
2 MethyleneChloride	30 U	124-48-1	Dibromochloromethane	30 U
1 Acetone	30 U	79-00-5	1,1,2-Trichloroethane	30 U
CarbonDisulfide	30 U	71-43-2	Benzene	30 U
1,1-Dichloroethane	30 U	10061-01-5	cis-1,3-Dichloropropane	30 U
1,1-Dichloroethane	30 U	110-75-8	2-Chloroethylvinylether	61 U
Trans-1,2-Dichloroethane	30 U	75-25-2	Bromoform	30 U
Chloroform	30 U	591-78-6	2-Hexanone	61 U
2 1,2-Dichloroethane	30 U	108-10-1	4-Methyl-2-Pentanone	61 U
2-Butanone	61 U	127-18-4	Tetrachloroethane	30 U
1,1,1-Trichloroethane	30 U	108-88-3	Toluene	30 U
CarbonTetrachloride	30 U	108-90-7	Chlorobenzene	30 U
6 VinylAcetate	61 U	100-41-4	Ethylbenzene	29 J
Bromodichloromethane	30 U	100-42-5	Styrene	30 U
			Total Xylenes	280

U - compound was not detected
J - concentration detected is less than the required detection limit
B - compound was detected in the blank
sp - compound was a spike

10/85 Rev

Form 3

Semivolatile Compounds

Conc.: MEDIUM
Date Extracted/Prepared: 7-10-87
Date Analyzed: 7-20-87
Conc/Dil Factor: 1830
Percent Moisture (Decanted): 17.6%

GPC Cleanup: NO
Separatory Funnel Extraction: NO
Continuous Liquid-Liquid Extraction: NO
Sonication: YES

CAS Number	Compound	Value	ug/Kg	CAS Number	Compound	Value	ug/Kg
95-2	Phenol		22000 U	83-32-9	Acenaphthene		22000 U
44-4	bis(2-Chloroethyl)Ether		22000 U	51-28-5	2,4-Dinitrophenol		110000 U
57-8	2-Chlorophenol		22000 U	100-02-7	4-Nitrophenol		110000 U
73-1	1,3-Dichlorobenzene		22000 U	132-64-9	Dibenzofuran		22000 U
6-7	1,4-Dichlorobenzene		22000 U	121-14-2	2,4 Dinitrotoluene		22000 U
1-6	Benzyl Alcohol		22000 U	606-20-2	2,6-Dinitrotoluene		22000 U
50-1	1,2-Dichlorobenzene		22000 U	84-66-2	Diethylphthalate		22000 U
7	2-Methylphenol		22000 U	7005-72-3	4-Chlorophenyl-phenylether		22000 U
32-9	bis(2-chloroisopropyl)Ether		22000 U	86-73-7	Fluorene		22000 U
44-5	4-Methylphenol		22000 U	100-01-6	4-Nitroaniline		110000 U
7	N-Nitro-Di-n-Propylamine		22000 U	534-52-1	4,6-Dinitro-2-Methylphenol		110000 U
1	Hexachloroethane		22000 U	86-30-6	N-Nitrosodiphenylamine (1)		22000 U
5-3	Nitrobenzene		22000 U	101-55-3	4-Bromophenyl-phenylether		22000 U
9-1	Isophorone		22000 U	118-74-1	Hexachlorobenzene		22000 U
3	2-Nitrophenol		22000 U	87-86-5	Pentachlorophenol		110000 U
9-9	2,4-Dimethylphenol		22000 U	85-01-8	Phenanthrene	5900	J
1-0	Benzoic Acid	110000 U		120-12-7	Anthracene		22000 U
1	bis(2-Chloroethoxy)Methane		22000 U	84-74-2	Di-n-Butylphthalate		22000 U
1-2	2,4-Dichlorophenol		22000 U	206-44-0	Fluoranthene	7600	J
2-1	1,2,4-Trichlorobenzene		22000 U	129-00-0	Pyrene	7600	J
	Naphthalene		22000 U	85-68-7	Butylbenzylphthalate		22000 U
3	4-Chloroaniline		22000 U	91-94-1	3,3'-Dichlorobenzidine		44000 U
3	Hexachlorobutadiene		22000 U	56-55-3	Benzo(a)Anthracene	4100	J
7	4-Chloro-3-Methylphenol		22000 U	117-81-7	bis(2-Ethylhexyl)Phthalate		B
	2-Methylnaphthalene		22000 U	218-01-9	Chrysene	4900	J
	Hexachlorocyclopentadiene		22000 U	117-84-0	Di-n-Octylphthalate		22000 U
2	2,4,6-Trichlorophenol		22000 U	205-99-2	Benzo(b)Fluoranthene		22000 U
	2,4,5-Trichlorophenol		110000 U	207-08-9	Benzo(k)Fluoranthene	4000	J
	2-Chloronaphthalene		22000 U	50-32-8	Benzo(a)Pyrene	3800	J
	2-Nitroaniline		110000 U	193-39-5	Indenol(1,2,3-cd)Pyrene		22000 U
	Dimethyl Phthalate		22000 U	53-70-3	Dibenzo(a,h)Anthracene		22000 U
	Acenaphthylene		22000 U	191-24-2	Benzo(g,h,i)Perylene	2700	J
	3-Nitroaniline		110000 U				

(1)-Cannot be separated from diphenylamine.

Laboratory Name: Rocky Mountain Analytical Lab
Case No. enter here

Sample Number:
BC550

ORGANICS ANALYSIS DATA SHEET
(Page 3)

00370

Pesticides/ PCB's:

Concentration : Medium
Date Ext./Prep : 7-15-87
Date Analyzed : 8-06-86
Conc./Dil Factor : 51000
Percent Moisture : 17.6%

GPC Cleanup : NO
Separatory Funnel Extract.: NO
Cont. Liquid/Liquid Extr. : NO
Sonication Extraction : YES

CAS Number	Compound	Value	ug/ Kg
319-84-6	Alpha-BHC	150.0 U	
319-85-7	Beta-BHC	150.0 U	
319-86-8	Delta-BHC	150.0 U	
58-89-9	Gamma-BHC(Lindane)	150.0 U	
76-44-8	Heptachlor	150.0 U	
309-00-2	Aldrin	150.0 U	
1284-57-3	Heptachlor Epoxide	150.0 U	
959-98-8	Endosulfan I	150.0 U	
60-57-1	Dieldrin	300.0 U	
72-55-9	4,4'-DDE	300.0 U	
72-20-8	Endrin	300.0 U	
33213-65-9	Endosulfan II	300.0 U	
72-54-8	4,4'-DDD	300.0 U	
1031-07-8	Endosulfan Sulfate	300.0 U	
50-29-3	4,4'-DDT	300.0 U	
72-43-5	Methoxychlor	1500.0 U	
53494-70-5	Endrin Ketone	300.0 U	
57-74-9	Chlordane	1500.0 U	
8081-35-2	Toxaphene	3000.0 U	
12674-11-2	Aroclor-1016	1500.0 U	
11104-28-2	Aroclor-1221	1500.0 U	
11141-16-5	Aroclor-1232	1500.0 U	
53469-21-9	Aroclor-1242	1500.0 U	
12672-29-6	Aroclor-1248	1500.0 U	
11097-69-1	Aroclor-1254	3000.0 U	
11096-82-5	Aroclor-1260	3000.0 U	

3890 SEP
1100

Vf = Volume of extract injected (ul)
Ve = Volume of water extracted (ml)
Ws = Weight of sample extracted (g)
Vt = Volume of total extract (ul)

Vf = 2ul/4ul
Ve = -
Ws = 0.98g
Vt = 1000ul

ORGANICS ANALYSIS DATA SHEET
(Page 1)

Sample Number :
BK551

00449

Story Name: Rocky Mountain Analytical Lab
Laboratory Sample ID. Number : BK551
Sample Matrix : Soil
Released Authorized By : JCL

Case Number : 7569
O.C. Report No: 7259
Contract No. : 68-01-7083
Date Sample Rec: 7-09-87

Volatile Compounds

Concentration : Low
Date Extracted/Prepared : N/A
Date Analyzed : 7/16/87
Conc./Dilution Factor : 1.00
pH : 7.45
Percent Moisture : 17.3%
Percent Moisture (Decanted) : 0.0%

Value	ug/Kg	CAS Number	Value	ug/Kg	
-3	Chloromethane	12 U	79-34-5	1,1,2,2-Tetrachloroethane	6 U
-9	Bromomethane	12 U	78-87-5	1,2-Dichloropropane	6 U
01-4	VinylChloride	12 U	10061-02-6	Trans-1,3-Dichloropropane	6 U
-3	Chloroethane	12 U	79-10-6	Trichloroethene	6 U
-2	MethyleneChloride	J B	124-48-1	Dibromochloromethane	6 U
06-1	Acetone	B	79-00-5	1,1,2-Trichloroethane	6 U
15-0	CarbonDisulfide	6 U	71-43-2	Benzene	6 U
-4	1,1-Dichloroethane	6 U	10061-01-5	cis-1,3-Dichloropropane	6 U
-3	1,1-Dichloroethane	6 U	110-75-8	2-Chloroethylvinylether	12 U
1-60-5	Trans-1,2-Dichloroethane	6 U	75-25-2	Bromoform	6 U
-3	Chloroform	6 U	591-78-6	2-Hexanone	12 U
6-2	1,2-Dichloroethane	6 U	108-10-1	4-Methyl-2-Pentanone	12 U
93-3	2-Butanone	12 U	127-18-4	Tetrachloroethene	6 U
-6	1,1,1-Trichloroethane	6 U	108-88-3	Toluene	6 U
-5	CarbonTetrachloride	6 U	108-90-7	Chlorobenzene	6 U
105-4	VinylAcetate	12 U	100-41-4	Ethylbenzene	6 U
27-4	Bromodichloromethane	6 U	100-42-5	Styrene	6 U
				Total Xylenes	6 U

U - compound was not detected

J - concentration detected is less than the required detection limit

B - compound was detected in the blank

sp - compound was a spike

10/85 Rev

ORGANICS ANALYSIS DATA SHEET
(Page 1)

Sample Number :
BK551RR

004!

Rocky Mountain Analytical Lab
Sample ID. Number : BK551RR
Matrix : Soil
Released Authorized By : [Signature]

Case Number : 7569
O.C. Report No: 7259
Contract No. : 68-01-7083
Date Sample Rec: 7-09-87

Volatile Compounds

Concentration : Low
Date Extracted/Prepared : N/A
Date Analyzed : 7-18-87
Conc./Dilution Factor : 1.00
pH : 7.45
Percent Moisture : 17.3%
Percent Moisture (Decanted) : 0.0%

AS		Value ug/Kg	CAS Number	Value ug/Kg
83-3	Chloromethane	12 U	79-34-5	1,1,2,2-Tetrachloroethane 6 U
7-9	Bromomethane	12 U	78-87-5	1,2-Dichloropropane 6 U
1-4	VinylChloride	12 U	10061-02-6	Trans-1,3-Dichloropropane 6 U
00-3	Chloroethane	12 U	79-10-6	Trichloroethane 6 U
09-2	MethyleneChloride	6 U	124-48-1	Dibromochloromethane 6 U
-1	Acetone	6 U	79-00-5	1,1,2-Trichloroethane 6 U
-0	CarbonDisulfide	6 U	71-43-2	Benzene 6 U
35-4	1,1-Dichloroethene	6 U	10061-01-5	cis-1,3-Dichloropropane 6 U
-3	1,1-Dichloroethane	6 U	110-75-8	2-Chloroethylvinylether 12 U
7-5	Trans-1,2-Dichloroethene	6 U	75-25-2	Bromoform 6 U
66-3	Chloroform	6 U	591-78-6	2-Hexanone 12 U
1-2	1,2-Dichloroethane	6 U	108-10-1	4-Methyl-2-Pentanone 12 U
3	2-Butanone	12 U	127-18-4	Tetrachloroethene 6 U
5-6	1,1,1-Trichloroethane	6 U	108-88-3	Toluene 130
3-5	CarbonTetrachloride	6 U	108-90-7	Chlorobenzene 6 U
4	VinylAcetate	12 U	100-41-4	Ethylbenzene 6 U
4	Bromodichloromethane	6 U	100-42-5	Styrene 6 U
			Total Xylenes	6 U

U - compound was not detected
Δ - concentration detected is less than the required detection limit
B - compound was detected in the blank
sp - compound was a spike

10/85 Rev

00453

Semivolatile Compounds

Conc.:
 Date Extracted/Prepared: 7-15-87
 Date Analyzed: 7-27-87
 Conc/Dil Factor: 66.4
 Percent Moisture (Decanted): 17.3%

GPC Cleanup: YES
 Separatory Funnel Extraction: NO
 Continuous Liquid-Liquid Extraction: NO
 Sonication: YES

CAS Number	Compound	Value	ug/Kg	CAS Number	Compound	Value	ug/Kg
1-95-2	Phenol		400 U	83-32-9	Acenaphthene	180	J
1-44-4	bis(2-Chloroethyl)Ether		400 U	51-28-5	2,4-Dinitrophenol		1900 U
75-57-8	2-Chlorophenol		400 U	100-02-7	4-Nitrophenol		1900 U
541-73-1	1,3-Dichlorobenzene		400 U	132-64-9	Dibenzofuran	240	J
1-46-7	1,4-Dichlorobenzene		400 U	121-14-2	2,4 Dinitrotoluene		400 U
1-51-6	Benzyl Alcohol		400 U	606-20-2	2,6-Dinitrotoluene		400 U
75-50-1	1,2-Dichlorobenzene		400 U	84-66-2	Diethylphthalate		400 U
1-48-7	2-Methylphenol		400 U	7005-72-3	4-Chlorophenyl-phenylether		400 U
1-38-32-9	bis(2-chloroisopropyl)Ether		400 U	86-73-7	Fluorene	520	
106-44-5	4-Methylphenol		400 U	100-01-6	4-Nitroaniline		1900 U
1-64-7	N-Nitro-Di-n-Propylamine		400 U	534-52-1	4,6-Dinitro-2-Methylphenol		1900 U
1-72-1	Hexachloroethane		400 U	86-30-6	N-Nitrosodiphenylamine (1)		400 U
8-95-3	Nitrobenzene		400 U	101-55-3	4-Bromophenyl-phenylether		400 U
7-59-1	Isophorone		400 U	118-74-1	Hexachlorobenzene		400 U
1-75-5	2-Nitrophenol		400 U	87-86-5	Pentachlorophenol		1900 U
105-67-9	2,4-Dimethylphenol		400 U	85-01-8	Phenanthrene	4100	
5-85-0	Benzoic Acid	150	J	120-12-7	Anthracene	750	
1-91-1	bis(2-Chloroethoxy)Methane		400 U	84-74-2	Di-n-Butylphthalate		400 U
1-83-2	2,4-Dichlorophenol		400 U	206-44-0	Fluoranthene	9500	
20-82-1	1,2,4-Trichlorobenzene		400 U	129-00-0	Pyrene	4500	
1-10-3	Naphthalene	300	J	85-68-7	Butylbenzylphthalate	96	J
1-47-8	4-Chloroaniline		400 U	91-94-1	3,3'-Dichlorobenzidine		790 U
7-68-3	Hexachlorobutadiene		400 U	56-55-3	Benzo(a)Anthracene	3700	
1-70-7	4-Chloro-3-Methylphenol		400 U	117-81-7	bis(2-Ethylhexyl)Phthalate	~~4800~~	B
1-7-6	2-Methylnaphthalene		400 U	218-01-9	Chrysene	3300	
1-47-4	Hexachlorocyclopentadiene		400 U	117-84-0	Di-n-Octylphthalate		400 U
1-16-2	2,4,6-Trichlorophenol		400 U	205-99-2	Benzo(b)Fluoranthene	4400	
1-5-4	2,4,5-Trichlorophenol		1900 U	207-08-9	Benzo(k)Fluoranthene	2700	
1-8-7	2-Chloronaphthalene		400 U	50-32-8	Benzo(a)Pyrene	3600	
1-74-4	2-Nitroaniline		1900 U	193-39-5	Indanol(1,2,3-cd)Pyrene	2200	
1-11-4	Dimethyl Phthalate		400 U	53-70-3	Dibenzo(a,h)Anthracene		400 U
1-16-8	Acenaphthylene	450		191-24-2	Benzo(g,h,i)Perylene	1300	
1-09-2	3-Nitroaniline		1900 U				

(1)-Cannot be separated from diphenylamine.

ORGANICS ANALYSIS DATA SHEET
 (Page 3)

00455

Pesticides/ PCB's:

Concentration : Low
 Date Ext./Prep : 7-15-87
 Date Analyzed : 8-05-87
 Conc./Dil Factor : 6640
 Percent Moisture : 17.33

GPC Cleanup : YES
 Separatory Funnel Extract.: NO
 Cont. Liquid/Liquid Extr.: NO
 Sonication Extraction : YES

CAS Number	Compound	Value	ug/ Kg
319-84-6	Alpha-BHC		9.6 U
319-85-7	Beta-BHC		9.6 U
319-86-8	Delta-BHC		9.6 U
58-89-9	Gamma-BHC(Lindane)		9.6 U
76-44-8	Heptachlor		9.6 U
309-00-2	Aldrin		9.6 U
1204-57-3	Heptachlor Epoxide		9.6 U
959-98-8	Endosulfan I		9.6 U
60-57-1	Dieldrin		19.0 U
72-55-9	4,4'-DDE		19.0 U
72-20-8	Endrin		19.0 U
33213-65-9	Endosulfan II		19.0 U
72-54-8	4,4'-DDO		19.0 U
1031-07-8	Endosulfan Sulfate		19.0 U
50-29-3	4,4'-DDT		19.0 U
72-43-5	Methoxychlor	190	
53494-70-5	Endrin Ketone		19.0 U
57-74-9	Chlordane		96.0 U
8001-35-2	Toxaphene		190.0 U
12674-11-2	Aroclor-1016		96.0 U
11104-28-2	Aroclor-1221		96.0 U
11141-16-5	Aroclor-1232		96.0 U
53469-21-9	Aroclor-1242		96.0 U
12672-29-6	Aroclor-1248		96.0 U
11097-69-1	Aroclor-1254	420	
11096-82-5	Aroclor-1260		190.0 U

V_i = Volume of extract injected (ul)
 V_e = Volume of water extracted (ml)
 W_e = Weight of sample extracted (g)
 V_T = Volume of total extract (ul)

V_i = 2ul/4ul
 V_e = -
 W_e = 30.12g
 V_T = 1000ul

INORGANIC DATA QUALIFIER

Footnotes:

NR - not required by contract at this time.

Form I:

Value - If the result is a value greater than or equal to the instrument detection limit but less than the contract required detection limit, report the value in brackets (i.e., [10]). Indicate the analytical method used with P (for ICP/Flame AA) or F (for furnace).

U - Indicates element was analyzed for but not detected. Report with the detection limit value (e.g., 10U).

E - Indicates a value estimated or not reported due to the presence of interference. Explanatory note included on cover page.

s - Indicates value determined by Method of Standard Addition.

R - Indicates spike sample recovery is not within control limits.

* - Indicates duplicate analysis is not within control limits.

+ - Indicates the correlation coefficient for method of standard addition is less than 0.995

Form I

0000

U.S. EPA Contract Laboratory Program
 Sample Management Office
 209 Madison St. - Alexandria, VA 22314
 703/557-2490 FTS: 8-557-2490

EPA Sample No.
 MBK733

Date 8-18-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY MOUNTAIN ANALYTICAL
 SOW NO. 784
 LAB SAMPLE ID. NO. -

CASE NO. 7569

QC REPORT NO. 87054

Elements Identified and Measured

Concentration: Low X Medium _____
 Matrix: Water _____ Soil X Sludge _____ Other _____

mg/kg dry weight

1. <u>ALUMINUM</u>	<u>10400</u>	<u>P</u>	13. <u>MAGNESIUM</u>	<u>4560</u>	<u>P</u>
2. <u>ANTIMONY</u>	<u>170</u>	<u>P R</u>	14. <u>MANGANESE</u>	<u>323</u>	<u>P</u>
3. <u>ARSENIC</u>	<u>6.8U</u>	<u>F</u>	15. <u>MERCURY</u>	<u>0.14U</u>	<u>CV</u>
4. <u>BARIUM</u>	<u>326</u>	<u>P</u>	16. <u>NICKEL</u>	<u>28</u>	<u>P</u>
5. <u>BERYLLIUM</u>	<u>0.68U</u>	<u>P</u>	17. <u>POTASSIUM</u>	<u>[8771]</u>	<u>P</u>
6. <u>CADMIUM</u>	<u>2.7U</u>	<u>P</u>	18. <u>SELENIUM</u>	<u>3.4U</u>	<u>F R</u>
7. <u>CALCIUM</u>	<u>8330</u>	<u>P</u>	19. <u>SILVER</u>	<u>2.7U</u>	<u>P R</u>
8. <u>CHROMIUM</u>	<u>16</u>	<u>J P</u>	20. <u>SODIUM</u>	<u>736U</u>	<u>P</u>
9. <u>COBALT</u>	<u>6.1U</u>	<u>P</u>	21. <u>THALLIUM</u>	<u>6.8U</u>	<u>F R</u>
10. <u>COPPER</u>	<u>51</u>	<u>P</u>	22. <u>TIN</u>	<u>15U</u>	<u>P</u>
11. <u>IRON</u>	<u>46700</u>	<u>P X</u>	23. <u>VANADIUM</u>	<u>[211]</u>	<u>P</u>
12. <u>LEAD</u>	<u>58</u>	<u>F</u>	24. <u>ZINC</u>	<u>295</u>	<u>P</u>

Cyanide NR

Percent Solids (%) 74

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Lead Value Reported at an additional 10x dilution

Lab Manager KED

00003

Form I

U.S. EPA Contract Laboratory Program
 Sample Management Office
 209 Madison St. - Alexandria, VA 22314
 703/557-2490 FTS: 8-557-2490

EPA Sample No.
 MBK731

Date 8-18-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY MOUNTAIN ANALYTICAL
 SOW NO. 784
 LAB SAMPLE ID. NO. -

CASE NO. 7569

QC REPORT NO. 87054

Elements Identified and Measured

Concentration: Low X Medium -
 Matrix: Water - Soil X Sludge - Other -

mg/kg dry weight

1. <u>ALUMINUM</u>	<u>8380</u>	<u>P</u>	13. <u>MAGNESIUM</u>	<u>4910</u>	<u>P</u>
2. <u>ANTIMONY</u>	<u>17U</u>	<u>P R</u>	14. <u>MANGANESE</u>	<u>253</u>	<u>P</u>
3. <u>ARSENIC</u>	<u>6.7U</u>	<u>F</u>	15. <u>MERCURY</u>	<u>0.13U</u>	<u>CV</u>
4. <u>BARIUM</u>	<u>[54]</u>	<u>P</u>	16. <u>NICKEL</u>	<u>[20]</u>	<u>P</u>
5. <u>BERYLLIUM</u>	<u>0.67U</u>	<u>P</u>	17. <u>POTASSIUM</u>	<u>[532]</u>	<u>P</u>
6. <u>CADMIUM</u>	<u>2.7U</u>	<u>P</u>	18. <u>SELENIUM</u>	<u>3.3U</u>	<u>F R</u>
7. <u>CALCIUM</u>	<u>4240</u>	<u>P</u>	19. <u>SILVER</u>	<u>2.7U</u>	<u>P R</u>
8. <u>CHROMIUM</u>	<u>12</u>	<u>P</u>	20. <u>SODIUM</u>	<u>[912]</u>	<u>P</u>
9. <u>COBALT</u>	<u>6U</u>	<u>P</u>	21. <u>THALLIUM</u>	<u>6.7U</u>	<u>F R</u>
10. <u>COPPER</u>	<u>[14]</u>	<u>P</u>	22. <u>TIN</u>	<u>15U</u>	<u>P</u>
11. <u>IRON</u>	<u>19600</u>	<u>P X</u>	23. <u>VANADIUM</u>	<u>[15]</u>	<u>P</u>
12. <u>LEAD</u>	<u>10</u>	<u>F</u>	24. <u>ZINC</u>	<u>74</u>	<u>P</u>

Cyanide NR

Percent Solids (%) 75

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments:

Lab Manager WD

00004

Form I

U.S. EPA Contract Laboratory Program
 Sample Management Office
 209 Madison St. - Alexandria, VA 22314
 703/557-2490 FTS: 8-557-2490

EPA Sample No.
 MBK732

Date 8-18-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY MOUNTAIN ANALYTICAL
 SOW NO. 784
 LAB SAMPLE ID. NO. -

CASE NO. 7569

QC REPORT NO. 87054

Elements Identified and Measured

Concentration: Low X Medium
 Matrix: Water Soil X Sludge Other

mg/kg dry weight

1. <u>ALUMINUM</u>	<u>10700</u>	<u>P</u>	13. <u>MAGNESIUM</u>	<u>4710</u>	<u>P</u>
2. <u>ANTIMONY</u>	<u>14U</u>	<u>P R</u>	14. <u>MANGANESE</u>	<u>422</u>	<u>P</u>
3. <u>ARSENIC</u>	<u>6.9</u>	<u>F</u>	15. <u>MERCURY</u>	<u>0.11U</u>	<u>CV</u>
4. <u>BARIUM</u>	<u>[30]</u>	<u>P</u>	16. <u>NICKEL</u>	<u>[21]</u>	<u>P</u>
5. <u>BERYLLIUM</u>	<u>0.57U</u>	<u>P</u>	17. <u>POTASSIUM</u>	<u>[590]</u>	<u>P</u>
6. <u>CADMIUM</u>	<u>2.3U</u>	<u>P</u>	18. <u>SELENIUM</u>	<u>2.9U</u>	<u>F R</u>
7. <u>CALCIUM</u>	<u>[2650]</u>	<u>P</u>	19. <u>SILVER</u>	<u>2.3U</u>	<u>P R</u>
8. <u>CHROMIUM</u>	<u>12</u>	<u>P</u>	20. <u>SODIUM</u>	<u>626U</u>	<u>P</u>
9. <u>COBALT</u>	<u>[6.8]</u>	<u>P</u>	21. <u>THALLIUM</u>	<u>5.7U</u>	<u>F R</u>
10. <u>COPPER</u>	<u>20</u>	<u>P</u>	22. <u>TIN</u>	<u>13U</u>	<u>P</u>
11. <u>IRON</u>	<u>20600</u>	<u>P I</u>	23. <u>VANADIUM</u>	<u>[17]</u>	<u>P</u>
12. <u>LEAD</u>	<u>13</u>	<u>FS</u>	24. <u>ZINC</u>	<u>62</u>	<u>P</u>

Cyanide NR

Percent Solids (%) 87

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Lead Value determined by mSA

Lab Manager W

00005

Form I

U.S. EPA Contract Laboratory Program
 Sample Management Office
 209 Madison St. - Alexandria, VA 22314
 703/557-2490 FTS: 8-557-2490

EPA Sample No.
 MBK734

Date 8-18-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY MOUNTAIN ANALYTICAL
 SOW NO. 784
 LAB SAMPLE ID. NO. -

CASE NO. 7569

QC REPORT NO. 87054

Elements Identified and Measured

Concentration: Low X Medium
 Matrix: Water Soil X Sludge Other

mg/kg dry weight

1. <u>ALUMINUM</u>	<u>11900</u>	<u>P</u>	13. <u>MAGNESIUM</u>	<u>5660</u>	<u>P</u>
2. <u>ANTIMONY</u>	<u>14U</u>	<u>P R</u>	14. <u>MANGANESE</u>	<u>1100</u>	<u>P</u>
3. <u>ARSENIC</u>	<u>8.7</u>	<u>F</u>	15. <u>MERCURY</u>	<u>0.11U</u>	<u>CV</u>
4. <u>BARIUM</u>	<u>135</u>	<u>P</u>	16. <u>NICKEL</u>	<u>26</u>	<u>P</u>
5. <u>BERYLLIUM</u>	<u>0.54U</u>	<u>P</u>	17. <u>POTASSIUM</u>	<u>[878]</u>	<u>P</u>
6. <u>CADMIUM</u>	<u>2.2U</u>	<u>P</u>	18. <u>SELENIUM</u>	<u>2.7U</u>	<u>F R</u>
7. <u>CALCIUM</u>	<u>10300</u>	<u>P</u>	19. <u>SILVER</u>	<u>2.2U</u>	<u>P R</u>
8. <u>CHROMIUM</u>	<u>18</u>	<u>P</u>	20. <u>SODIUM</u>	<u>592U</u>	<u>P</u>
9. <u>COBALT</u>	<u>[10]</u>	<u>P</u>	21. <u>THALLIUM</u>	<u>5.4U</u>	<u>F R</u>
10. <u>COPPER</u>	<u>38</u>	<u>P</u>	22. <u>TIN</u>	<u>12U</u>	<u>P</u>
11. <u>IRON</u>	<u>26800</u>	<u>P X</u>	23. <u>VANADIUM</u>	<u>[18]</u>	<u>P</u>
12. <u>LEAD</u>	<u>72</u>	<u>F S</u>	24. <u>ZINC</u>	<u>153</u>	<u>P</u>

Cyanide NR Percent Solids (%) 92

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Lead value determined by WSA

Lab Manager WU

00006

Form I

U.S. EPA Contract Laboratory Program
 Sample Management Office
 209 Madison St. - Alexandria, VA 22314
 703/557-2490 FTS: 8-557-2490

EPA Sample No.
 MBK735

Date 8-18-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY MOUNTAIN ANALYTICAL
 SOW NO. 784
 LAB SAMPLE ID. NO. -

CASE NO. 7569

QC REPORT NO. 87054

Elements Identified and Measured

Concentration: Low X Medium
 Matrix: Water Soil X Sludge Other

mg/kg dry weight

1. <u>ALUMINIUM</u>	<u>7490</u>	<u>P</u>	13. <u>MAGNESIUM</u>	<u>15200</u>	<u>P</u>
2. <u>ANTIMONY</u>	<u>15U</u>	<u>P R</u>	14. <u>MANGANESE</u>	<u>365</u>	<u>P</u>
3. <u>ARSENIC</u>	<u>[6]</u>	<u>F</u>	15. <u>MERCURY</u>	<u>0.12U</u>	<u>CV</u>
4. <u>BARIUM</u>	<u>[63]</u>	<u>P</u>	16. <u>NICKEL</u>	<u>26</u>	<u>P</u>
5. <u>BERYLLIUM</u>	<u>0.6U</u>	<u>P</u>	17. <u>POTASSIUM</u>	<u>[621]</u>	<u>P</u>
6. <u>CADMIUM</u>	<u>2.4U</u>	<u>P</u>	18. <u>SELENIUM</u>	<u>3U</u>	<u>F</u>
7. <u>CALCIUM</u>	<u>37200</u>	<u>P</u>	19. <u>SILVER</u>	<u>2.4U</u>	<u>P</u>
8. <u>CHROMIUM</u>	<u>14</u>	<u>J P</u>	20. <u>SODIUM</u>	<u>657U</u>	<u>P</u>
9. <u>COBALT</u>	<u>[6.1]</u>	<u>P</u>	21. <u>THALLIUM</u>	<u>6U</u>	<u>F</u>
10. <u>COPPER</u>	<u>34</u>	<u>P</u>	22. <u>TIN</u>	<u>13U</u>	<u>P</u>
11. <u>IRON</u>	<u>19600</u>	<u>P X</u>	23. <u>VANADIUM</u>	<u>[27]</u>	<u>P</u>
12. <u>LEAD</u>	<u>458</u>	<u>F</u>	24. <u>ZINC</u>	<u>269</u>	<u>P</u>

Cyanide NR Percent Solids (%) 83

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnote explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Lead value reported at an additional 20x dilution

Lab Manager W

00007

Form I

U.S. EPA Contract Laboratory Program
 Sample Management Office
 209 Madison St. - Alexandria, VA 22314
 703/557-2490 FTS: 8-557-2490

EPA Sample No.
 MBK736

Date 8-18-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY MOUNTAIN ANALYTICAL
 SOW NO. 784
 LAB SAMPLE ID. NO. -

CASE NO. 7569
 QC REPORT NO. 87054

Elements Identified and Measured

Concentration: Low X Medium
 Matrix: Water Soil X Sludge Other

mg/kg dry weight

1. <u>ALUMINUM</u>	<u>10900</u>	<u>P</u>	13. <u>MAGNESIUM</u>	<u>7500</u>	<u>P</u>
2. <u>ANTIMONY</u>	<u>15U</u>	<u>P R</u>	14. <u>MANGANESE</u>	<u>634</u>	<u>P</u>
3. <u>ARSENIC</u>	<u>16</u>	<u>FS</u>	15. <u>MERCURY</u>	<u>0.12U</u>	<u>CV</u>
4. <u>BARIUM</u>	<u>157</u>	<u>P</u>	16. <u>NICKEL</u>	<u>35</u>	<u>P</u>
5. <u>BERYLLIUM</u>	<u>0.6U</u>	<u>P</u>	17. <u>POTASSIUM</u>	<u>[742]</u>	<u>P</u>
6. <u>CADMIUM</u>	<u>2.4U</u>	<u>P</u>	18. <u>SELENIUM</u>	<u>3U</u>	<u>F R</u>
7. <u>CALCIUM</u>	<u>17900</u>	<u>P</u>	19. <u>SILVER</u>	<u>2.4U</u>	<u>P R</u>
8. <u>CHROMIUM</u>	<u>24</u>	<u>J P</u>	20. <u>SODIUM</u>	<u>[1020]</u>	<u>P</u>
9. <u>COBALT</u>	<u>[5.7]</u>	<u>P</u>	21. <u>THALLIUM</u>	<u>6U</u>	<u>F R</u>
10. <u>COPPER</u>	<u>139</u>	<u>P</u>	22. <u>TIN</u>	<u>83</u>	<u>P</u>
11. <u>IRON</u>	<u>45300</u>	<u>P R</u>	23. <u>VANADIUM</u>	<u>[18]</u>	<u>P</u>
12. <u>LEAD</u>	<u>630</u>	<u>FS</u>	24. <u>ZINC</u>	<u>550</u>	<u>P</u>

Cyanide NR Percent Solids (%) 83

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Arsenic & Lead values determined by MSA

Lab Manager WJ

U.S. EPA Contract Laboratory Program
Sample Management Office
209 Madison St. - Alexandria, VA 22314
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MBK729

Date 8-14-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY MOUNTAIN ANALYTICAL
SOW NO. 784
LAB SAMPLE ID. NO. -

CASE NO. 7569
QC REPORT NO. 87053

Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water X Soil _____ Sludge _____ Other _____

UG/L

1. ALUMINUM	1140	J	P	13. MAGNESIUM	42400	P
2. ANTIMONY	25U		P	14. MANGANESE	2360	P
3. ARSENIC	10U		F	15. ~~MERCURY~~	~~0.2U~~	~~CV~~
4. BARIUM	272		P	16. NICKEL	[9.6]	P
5. BERYLLIUM	1U		P	17. POTASSIUM	25600	J P
6. CADMIUM	4U		P	18. SELENIUM	5U	F
7. CALCIUM	103000		P	19. SILVER	4U	P R
8. CHROMIUM	4U		P	20. SODIUM	261000	P
9. COBALT	9U		P	21. THALLIUM	10U	F
10. COPPER	[6.1]		P	22. TIN	22U	P
11. IRON	7300		P	23. VANADIUM	7U	P
12. LEAD	5U		F	24. ~~ZINC~~	~~70~~	~~P~~

Cyanide NR Percent Solids (%) _____

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: _____

Lab Manager W

Form I

00003

U.S. EPA Contract Laboratory Program
Sample Management Office
209 Madison St. - Alexandria, VA 22314
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MBK730

Date 8-14-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY MOUNTAIN ANALYTICAL
SOV NO. 784
LAB SAMPLE ID. NO. -

CASE NO. 7569QC REPORT NO. 87053Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water X Soil _____ Sludge _____ Other _____

UG/L

1. <u>ALUMINUM</u>	<u>292</u>	<u>P</u>	13. <u>MAGNESIUM</u>	<u>21400</u>	<u>P</u>
2. <u>ANTIMONY</u>	<u>25U</u>	<u>P</u>	14. <u>MANGANESE</u>	<u>468</u>	<u>P</u>
3. <u>ARSENIC</u>	<u>10U</u>	<u>F</u>	15. <u>MERCURY</u>	<u>0.2U</u>	<u>CV</u>
4. <u>BARIUM</u>	<u>[23]</u>	<u>P</u>	16. <u>NICKEL</u>	<u>8U</u>	<u>P</u>
5. <u>BERYLLIUM</u>	<u>1U</u>	<u>P</u>	17. <u>POTASSIUM</u>	<u>[3420]</u>	<u>J P</u>
6. <u>CADMIUM</u>	<u>4U</u>	<u>P</u>	18. <u>SELENIUM</u>	<u>5U</u>	<u>F</u>
7. <u>CALCIUM</u>	<u>72500</u>	<u>P</u>	19. <u>SILVER</u>	<u>4U</u>	<u>P R</u>
8. <u>CHROMIUM</u>	<u>4U</u>	<u>P</u>	20. <u>SODIUM</u>	<u>57800</u>	<u>P</u>
9. <u>COBALT</u>	<u>9U</u>	<u>P</u>	21. <u>THALLIUM</u>	<u>10U</u>	<u>F</u>
10. <u>COPPER</u>	<u>6U</u>	<u>P</u>	22. <u>TIN</u>	<u>22U</u>	<u>P</u>
11. <u>IRON</u>	<u>715</u>	<u>P</u>	23. <u>VANADIUM</u>	<u>7U</u>	<u>P</u>
12. <u>LEAD</u>	<u>5U</u>	<u>F</u>	24. <u>ZINC</u>	<u>32</u>	<u>P</u>

Cyanide NR

Percent Solids (%) _____

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: _____

Lab Manager WU

Form I

00004

U.S. EPA Contract Laboratory Program
Sample Management Office
209 Madison St. - Alexandria, VA 22314
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MBK728

Date 8-14-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY MOUNTAIN ANALYTICAL
SOW NO. 784
LAB SAMPLE ID. NO. -

CASE NO. 7569QC REPORT NO. 87053Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water X Soil _____ Sludge _____ Other _____

UG/L

1. ALUMINUM	[37]	P	13. MAGNESIUM	153U	P
2. ANTIMONY	25U	P	14. MANGANESE	4U	P
3. ARSENIC	10U	F	15. ~~MERCURY~~	~~0.2U~~	~~CV~~
4. BARIUM	3U	P	16. NICKEL	8U	P
5. BERYLLIUM	1U	P	17. POTASSIUM	175U	P
6. CADMIUM	4U	P	18. SELENIUM	5U	F
7. CALCIUM	[219]	P	19. SILVER	4U	P R
8. CHROMIUM	4U	P	20. SODIUM	[1590]	P
9. COBALT	9U	P	21. THALLIUM	10U	F
10. COPPER	6U	P	22. TIN	22U	P
11. IRON	24U	P	23. VANADIUM	7U	P
12. LEAD	5U	F	24. ~~ZINC~~	~~10.1~~	~~P~~

Cyanide NR

Percent Solids (%) _____

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Sample 13a blankLab Manager 610

REFERENCE NO. 2

0018-0
02-8705-07

02-8705-07-STR

SAMPLING TRIP REPORT

SITE NAME: Newburgh Landfill
TDD #: 02-8705-07
SAMPLING DATE: 07/08/87
EPA CASE NO: 7569

1. Site Location: See Figure 1
2. Sampling Locations: See Figure 2
3. Sample Descriptions: See Table 1
4. Laboratories Receiving Samples:

<u>Sample Type</u>	<u>Name and Address of Laboratory</u>
Organic	Rocky Mountain Analytical 4955 Yarrow Street Arvada, CO 80002
Inorganic	U.S. Testing Company, Inc. 1415 Park Avenue Hoboken, NJ 07030

5. Sample Dispatch Data:

Organic aqueous and soil/sediment samples were shipped by FIT 2 personnel via Federal Express under airbill #4486830121 to Rocky Mountain Analytical on 07/08/87 at 1500 hours.

Inorganic aqueous and soil/sediment samples were shipped by FIT 2 personnel via Federal Express under airbill #4486830132 to U.S. Testing Company, Inc. on 07/08/87 at 1500 hours.

6. Sampling Personnel:

<u>Name</u>	<u>Organization</u>	<u>Duties on Site</u>
Robert Nies	NUS Corp., FIT 2	Project Manager
Jane Bullis	NUS Corp., FIT 2	Site Safety Officer
Mark Ellis	NUS Corp., FIT 2	Sample Management Officer
Gerry Gilliland	NUS Corp., FIT 2	Sampler
Mike Bauman	NUS Corp., FIT 2	Sampler

7. Weather Conditions: Hot and humid, 85°.

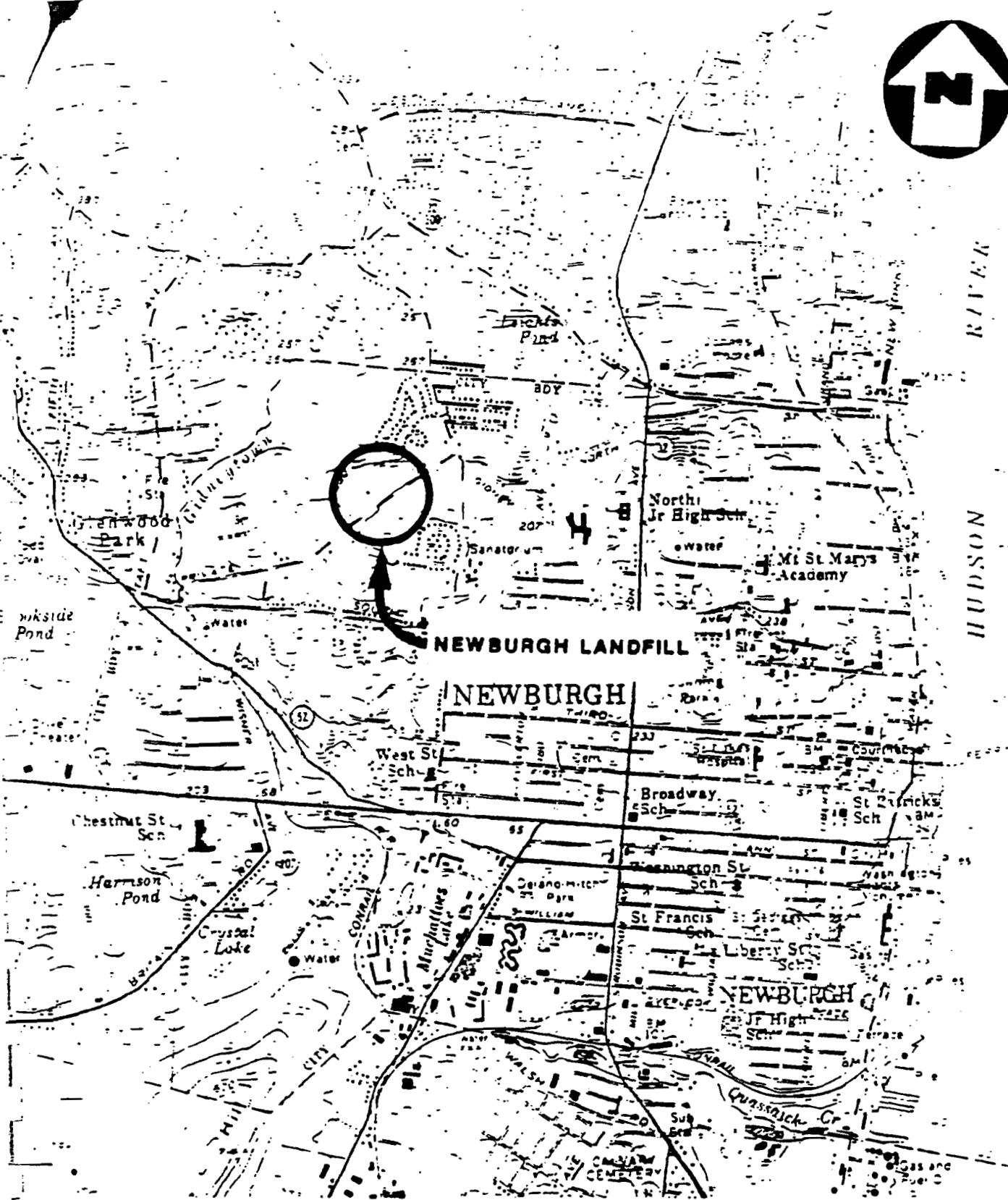
8. Additional Comments:

Four soil, two sediment, and two surface water samples, as well as a duplicate and a matrix spike/matrix spike duplicate (MS/MSD) for each matrix were collected during the site inspection. The duplicate and the MS/MSD sample were noted on the respective traffic reports.

One trip blank for each matrix and one rinsate blank were collected to meet QA/QC requirements. All samples will be analyzed for Hazardous Substance List (HSL) organic and inorganic parameters except for the two trip blanks which will be analyzed for volatile organics only.

9. Report Prepared By: Robert Nies Date: 07/08/87

10. Approved By: *[Signature]* Date: 8/5/87



NEWBURGH, N.Y.

SITE LOCATION MAP

NEWBURGH LANDFILL, NEWBURGH, N.Y.

SCALE: 1" = 2000'

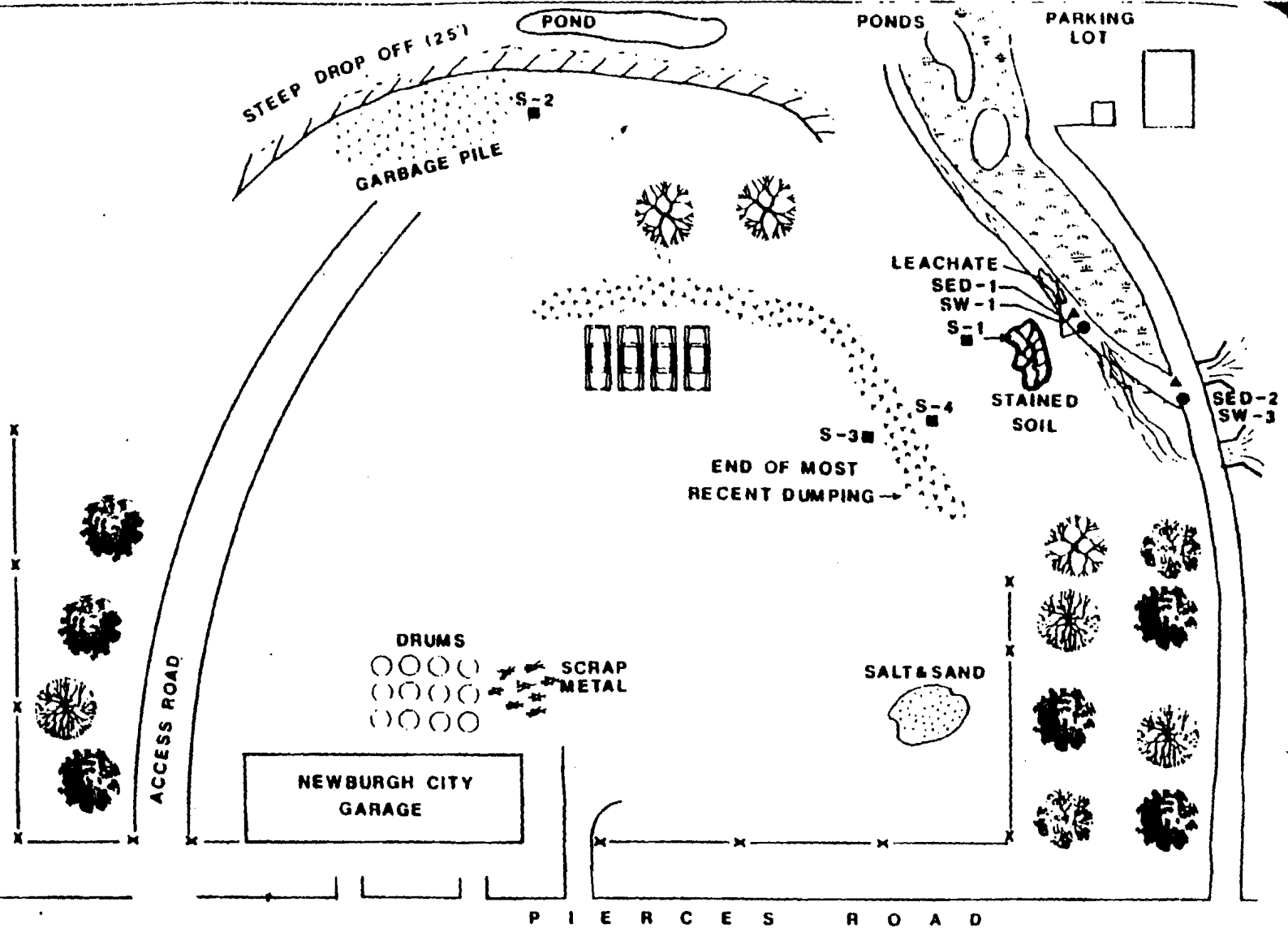
FIGURE 1





LEGEND:

- SOIL SAMPLE
- ▲ SEDIMENT SAMPLE
- SURFACE WATER SAMPLE



SAMPLE LOCATION MAP
NEWBURGH LANDFILL, NEWBURGH, N.Y.

(NOT TO SCALE)

FIGURE 2



TABLE I
SAMPLE DESCRIPTION
NEWBURGH LANDFILL
CASE #7569

<u>Sample ID Number</u>	<u>Organic Traffic Report #</u>	<u>Inorganic Traffic Report #</u>	<u>Time (Hours)</u>	<u>Sample Type</u>	<u>Sample Location</u>
NYT5-B-1	BK 541	MB728	----	Aqueous Rinsate Blank	Rinsate water obtained from EPA Region 2 Lab, Edison, NJ
NYT5-B-2	BK 542	-----	----	Aqueous Trip Blank	EPA Region 2 Lab Edison, NJ
NYT5-B-3	BK 543	-----	----	Aqueous Trip Blank	Same as B-2.
NYT5-SW-1 (MS/MSD)	BK 544	MBK729	1056	Surface Water	East end of landfill in the drainage culvert approximately 75 yards from the access road.
NYT5-SW-2 (Duplicate)	BK 545	MBK730	1114	Surface Water	In the drainage culvert on the west side of the access road.
NYT5-Sed-1	BK 546	MBK731	1107	Sediment	Same as SW-1.
NYT5-Sed-2	BK 547	MBK732	1134	Sediment	Same as SW-2.
NYT5-S-1 (MS/MSD)	BK 548	MBK733	1145	Soil	Approximately 10 yards southwest of SW-1 just above drainage culvert.
NYT5-S-2 (Duplicate)	BK 549	MBK734	1240	Soil	Northern end of the landfill approximately 2 yards from steep cliff.
NYT5-S-3	BK 550	MBK735	1300	Soil	Northeast section of the landfill 10 yards from st cliff in the area of most recent dumping.
NYT5-S-4	BK 551	MBK736	1312	Soil	Just below S-3 at the bottom of the steep cli in the northeast section of the landfill.

REFERENCE NO. 3

CONTROL NO.

02-8705-07

DATE:

12/30/87

TIME:

1607.

DISTRIBUTION:

Newburgh Landfill (COR)

BETWEEN:

Mr. Ciro DiLorenzo

OF: Town of Newburgh

Building Inspector's
Office

PHONE:

(914) 564-7800

AND:

Thomas Varner

(NUS)

DISCUSSION:

Mr. DiLorenzo said the depth to bedrock varies usually from 20 to 40 feet, and most wells are ^{at least} 80 feet deep. The bedrock is shale. He said about 65% of the people in Newburgh Township have private wells, while 35% of the people use water from Chadwick Lake.

TAV 12/30/87

ACTION ITEMS:

REFERENCE NO. 4

CONTROL NO:

02-8705-07

DATE:

12/30/87

TIME:

1643.

DISTRIBUTION:

Newburgh Landfill (COR)

BETWEEN:

Mr. Richard McGoeey

OF: New Windsor Town
Engineer

PHONE:

(914) 562-8641

AND:

Thomas Varner

(NUS)

DISCUSSION:

Mr. McGoeey said that east of ^{TAV 12/30/87} ~~Stewart~~ Stewart Airport people in New Windsor use water from the Catskill aqueduct system. West of the New York Thruway people are on private wells. Public supply wells in New Windsor were put on standby in the early 1980's.

TAV 12/30/87

ACTION ITEMS:

REFERENCE NO. 5

GROUND-WATER BASIC DATA ORANGE AND ULSTER COUNTIES NEW YORK

BY
MICHAEL H. FRIMPTER
U.S. GEOLOGICAL SURVEY



Prepared by
UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
in cooperation with
NEW YORK WATER RESOURCES COMMISSION

STATE OF NEW YORK
CONSERVATION DEPARTMENT
WATER RESOURCES COMMISSION

Bulletin 65
1970

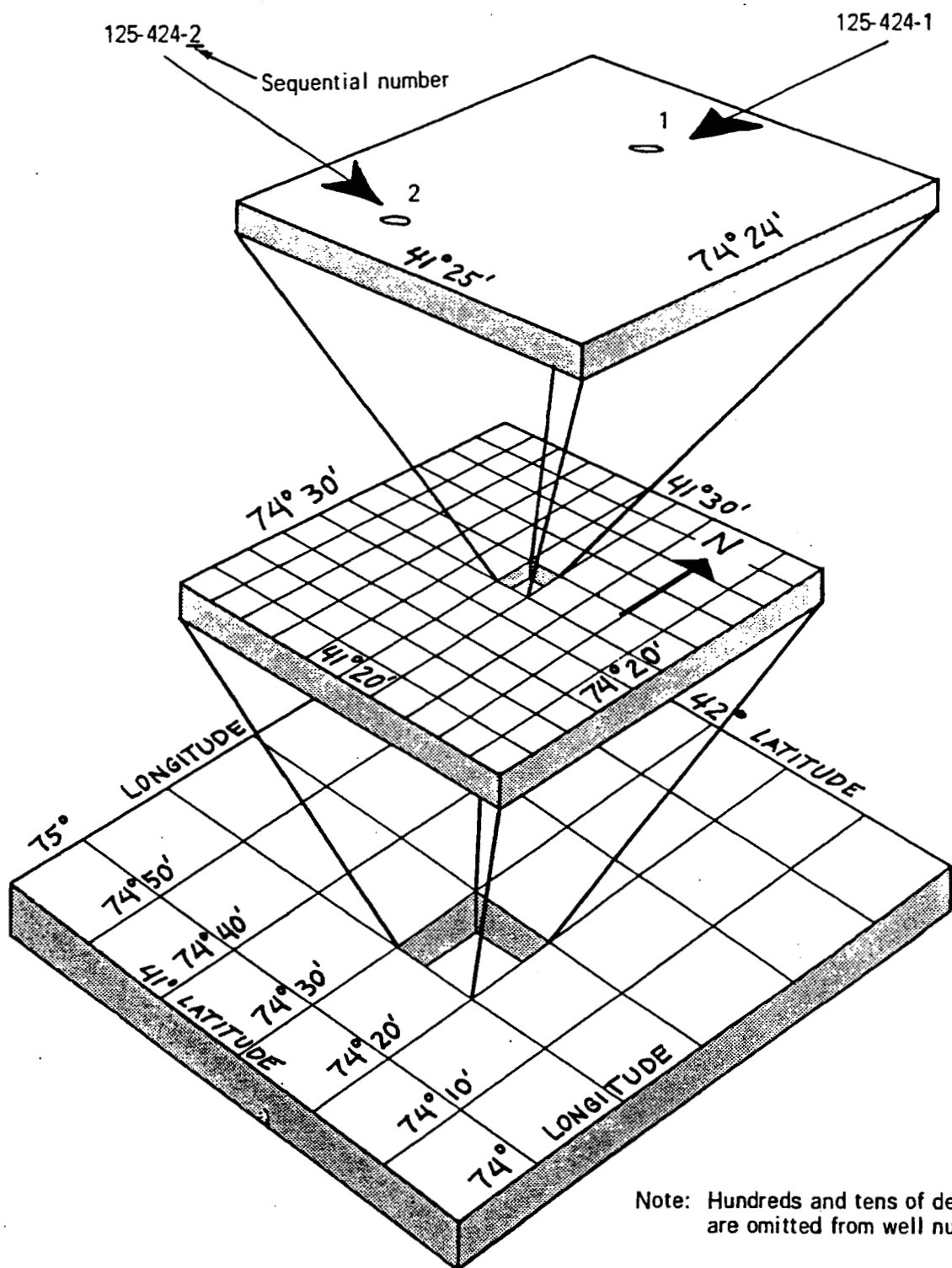
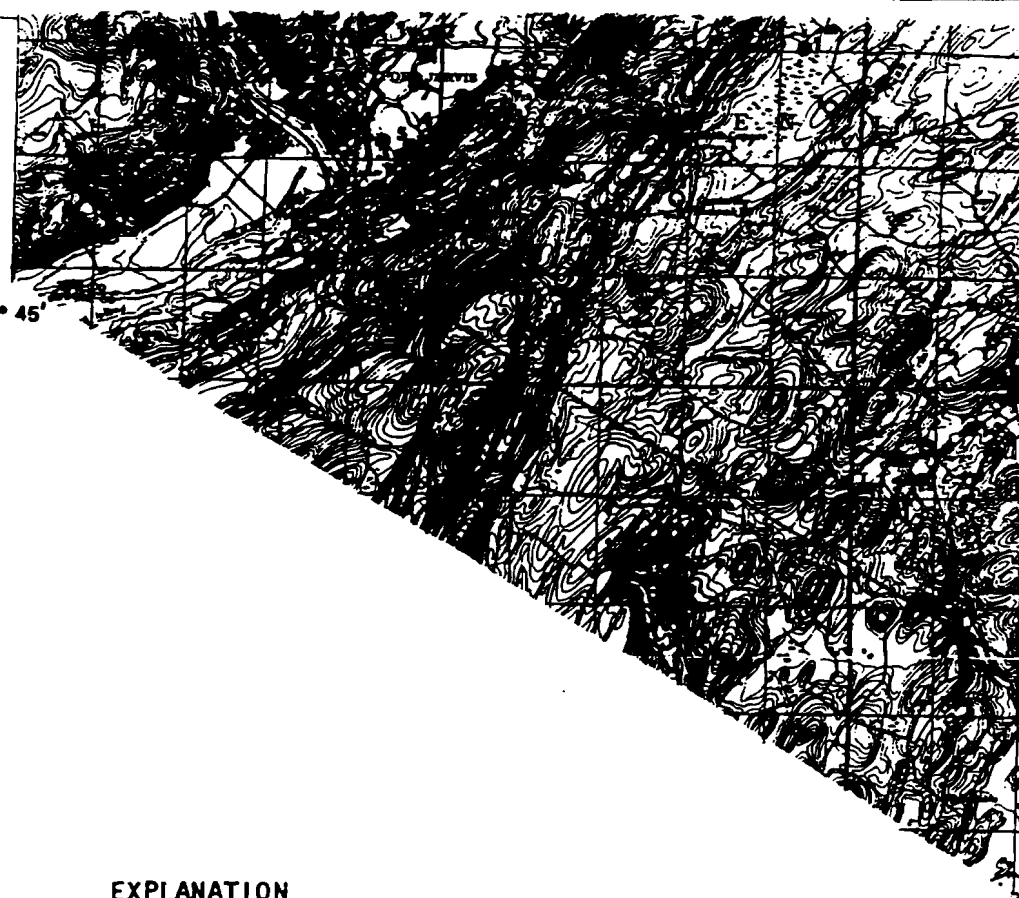


Figure 1.--Well-location system.

74° 45'



EXPLANATION

•¹ •²

Well or spring that taps stratified,
unconsolidated deposits.
(See text for explanation of well-
location system.)

o¹ o²

Well or spring that taps bedrock or till;
number is well or spring number.
(See text for explanation of
well-location system.)

••

Boring that ends in unconsolidated
deposits; letter is boring letter.

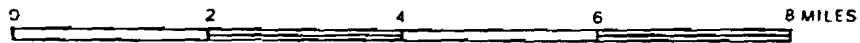
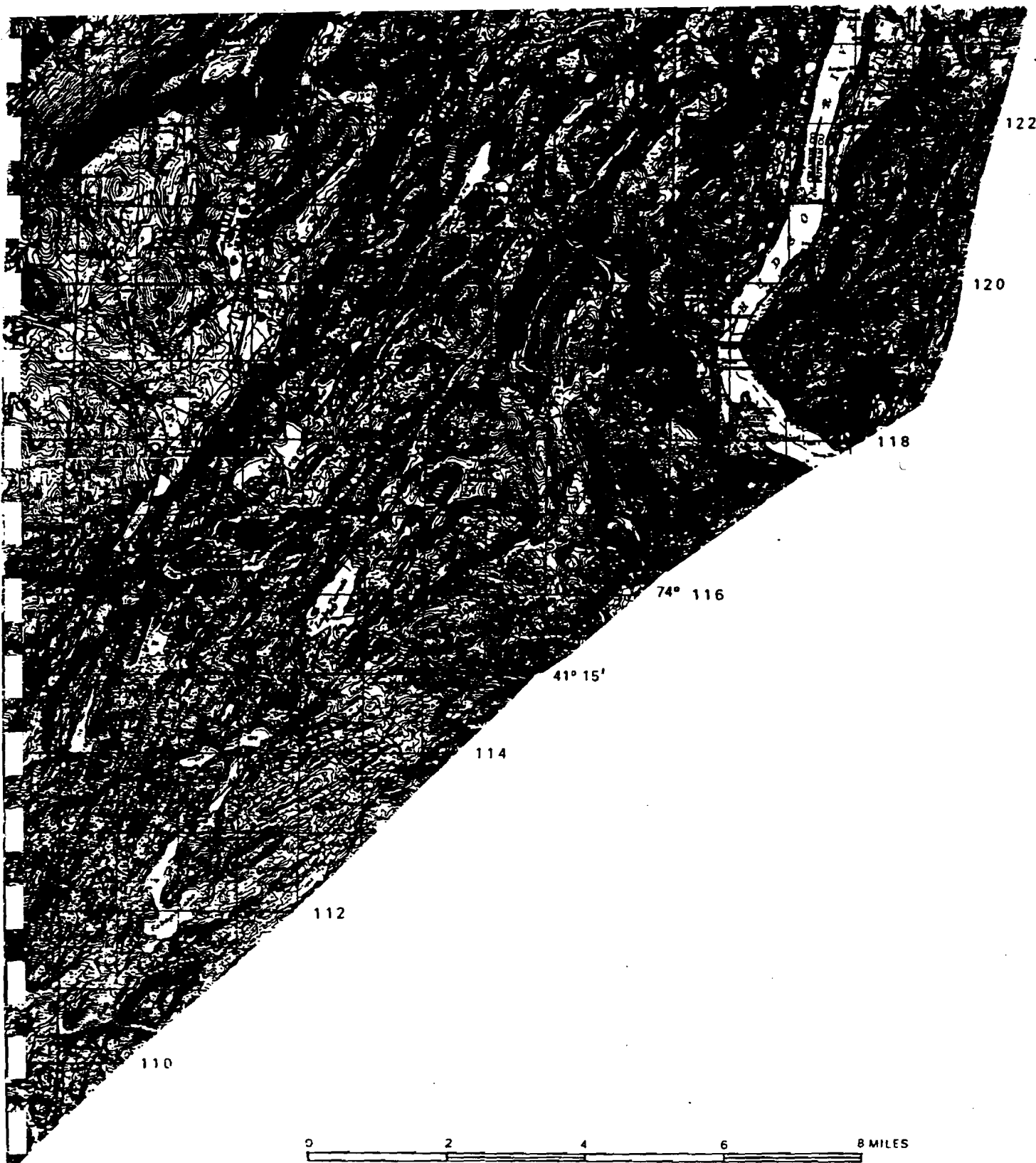
o^b

Boring that ends in bedrock;
letter is boring letter.

o¹² o^{a,b}

Two wells or borings near the same
location but tapping or ending
in different deposits.

41°



CONTOUR INTERVAL 20 FEET
DATUM IS MEAN SEA LEVEL

Table 1.--Records of selected wells and springs

Well number: See text for explanation.		Explanation of symbols and abbreviations used in table:	
Use: A - agricultural C - commercial D - domestic I - institutional In - industrial		Water level below land surface: All water levels are below land surface except those preceded by a plus (+) sign which are above land surface. flows - water flows above land surface. r - reported all others measured by U.S.G.S. personnel.	
Method of construction; completion: Dr - drilled Dv - driven Du - dug J - jetted OE - open end OH - open hole P - perforated S - screened		Topographic situation: Hs - hillside Ht - hilltop Pln - plain Plt - plateau Ter - terrace VF - valley flat	
Depth of well: All depths below land surface. r - reported ? - unknown Measurement given to nearest foot except for well diameter which is given to nearest inch.		Altitude above sea level: estimated from topographic maps.	
Diameter of wells: Diameters of dug wells are approximate. Multiple casing sizes are given, where applicable.		Remarks: Anal - chemical analyses dd - drawdown, in feet gpd - gallons per day gpm - gallons per minute H ₂ S - noticeable odor of hydrogen sulfide ("sulfur water") Iron - water contains a relatively high concentration of iron, and stains porcelain fixtures. Log - graphical log in this report. min - minutes temp - temperature, in degrees Celsius, measured by U.S.G.S.	
Aquifer: Carbonate - limestone, dolostone, or marble Crystalline - igneous or metamorphic None - no deposits that yield significant quantities of water were penetrated. ? - Unknown			

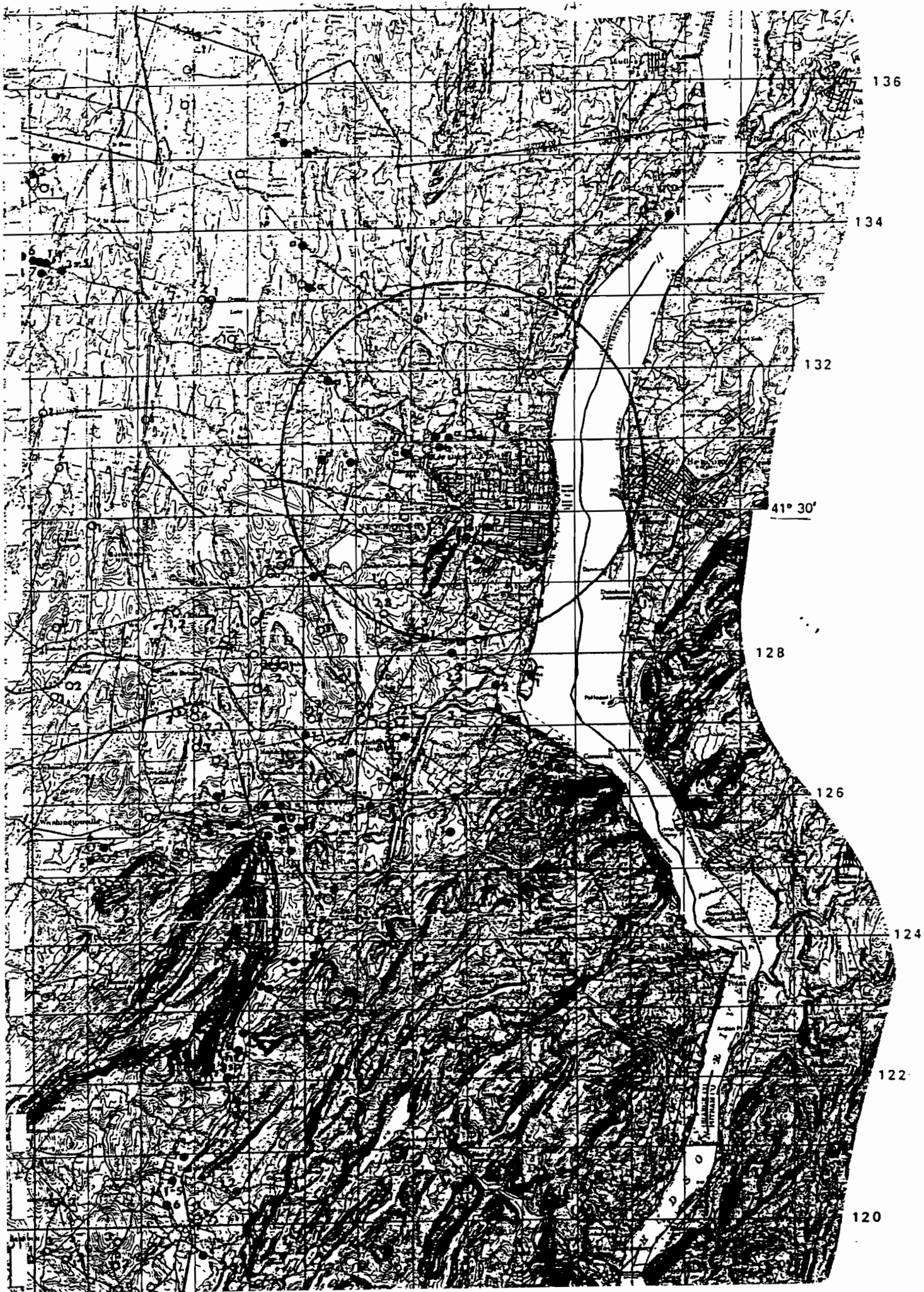


Table 1.--Records of selected wells and springs (Continued)

Well number	Owner's name	Reported yield (gallons per minute)	Use	Method of construction; completion	Depth of well (feet)	Diameter (inches)	Length of casing (feet)	Aquifer	Water level		Topo- graphic situa- tion	Altitude above sea level (feet)	Remarks
									Below land surface (feet)	Date			
133-409-5	Village of Velden	--	T	--	r36	--	--	None	--	--	Vf	350	Log.
-6	do.	381	P	Dr; S	r43	16, 8	33	Gravel	7.0	5/14/65	Vf	350	Anal; dd 20.5 after pumping 24 hours; log.
-7	do.	480	P	Dr; S	r37	--	--	do.	15	5/14/65	Vf	355	Water level measured while pumping 480 gpm.
133-406-1	D. Gomez	4	D	Dr; OH	r200	6	5	Shale	flows	9/16/65	Hs	490	
-2	do.	--	D	--	r268	6	5	do.	r80	--	Hs	580	
133-404-1	Mae Dostik, M. D.	--	D	--	r224	6	--	do.	--	--	Hs	595	
133-400-1	Jackson Baldwin	20	D	--	r300	6	175	do.	--	--	Hs	460	
132-425-1	Roy Johnson and Clair Dickinson	3	D	Dr; OE	r120	6	120	Sand and gravel	r92	1940	Hs	580	Log; well ends on bedrock surface.
-7	do.	180	I	Dr; OH	r255	8	--	Shale	r25	--	Hs	560	
-3	Sherwood Allen	25	D	Dr; OF	r64	6	64	Gravel	r11	1940	Hs	530	
-1	Arthur Trumlinger	36	D	--	r64	6	64	Sand and gravel	r4.5	6/ /64	Hs	505	Log.
-5	Walt Dickinson	--	D	Dr; S	r37	1	37	do.	r0	1/ /64	Vf	500	Log; flowed when driven to 25 ft.
-6	Mrs. Masio Furlin	1	D	Dr; OH	r246	6	73	Shale	r70	--	Hs	540	Log.
-7	Bruno Furlin	15	D	--	r105	6	101	do.	r70	--	Hs	580	
-8	Kenneth Angasani	15	D	--	r73	6	48	do.	r38	1956	Vf	550	
-9	Mrs. Josephine Valters	--	D	--	r98	6	--	do.	--	--	Hs	630	
132-471-1	Art Lunney	21	D	--	r56	6	40	do.	r13	7/ /64	Pin	500	
-7	John Bell	12	D	--	r175	6	45	do.	--	--	Pin	520	
-3	do.	75	D	--	r75	6	40	do.	r7	--	Pin	500	
-4	do.	21	C, D	--	49	6	40	do.	10.2	8/29/64	Pin	500	
132-470-1	Vincent Viola	9	D	--	r54	6	44	do.	r20	1953	Hs	510	Partial anal.
-2	Anthony Viola	25	C, D	--	r48	6	28	do.	--	--	Hs	515	
132-418-1	Joseph Scalfone	10	D	--	r32	6	10	do.	r15	6/ /53	Hs	595	
132-416-1	Frank O. McFitt	10	D	--	r50	6	23	do.	r6	5/ /58	Vf	380	
-2	James Kullfin	30	D	--	r74	6	33	do.	r10	1964	Vf	385	
-3	Earl Helstrom	10	D	--	r85	4	42	do.	r8	7/ /64	Vf	390	
-4	Barney Miller	6	D	--	53	6	20	do.	10.2	7/ 8/65	Hs	380	
-5	William Monkstra	25	A, D	--	98	6	18	do.	21.7	7/ 8/65	Hs	390	
132-413-1	Levi Sinsbaugh	5	D	--	r107	6	20	do.	--	--	Hs	400	
132-406-1	Frank Demaro	9	D	--	r125	6	100	do.	--	--	Hs	493	Log.
132-402-1	William Coyne	--	D	--	r98	--	--	do.	--	--	Hs	380	
132-400-1	Milton Quirk	--	D	--	r497	6	3	Carbonate	--	--	Hs	360	
-2	Philip De Santis	--	D	--	420	6	3	do.	43.1	9/20/65	Hs	360	
131-477-1	Dan Hamilton	15	D	--	r62	6	43	Shale	--	--	Hs	510	

Table 1.--Records of selected wells and springs (Continued)

Well number	Owner's name	Reported yield (gallons per minute)	Use	Method of construction; completion	Depth of well (feet)	Diameter (inches)	Length of casing (feet)	Aquifer	Below land surface (feet)	Water level Date	Topographic situation	Altitude above sea level (feet)	Remarks
131-402-1	Shell Oil Co.	20	C	-- --	258	6	233	Carbonate	16.0	5/12/62	Pin	285	Log.
-2	T. W. Westlake	150	P	Dr; S	r27	6	19	Gravel	r2	1963	VF	240	dd 6 after pumping 24 hours.
130-428-1	Mrs. C. H. Meyer	--	D	-- --	r71	6	71	do.	r5	8/ /54	VF	540	
130-423-1	Floyd Bull	20	D	Dr; OH	r122	6	28	Shale	r12	--	Pin	625	
130-419-1	Lester Martin	6	D	-- --	r195	6	20	do.	r50	--	Ms	630	
-2	M. Hughes	10	D	-- --	r150	6	20	do.	--	--	Ms	630	
-3	Frank Murgolo	20	D	-- --	r58	6	19	do.	r4	1965	Ms	480	H ₂ S.
130-418-1	Elmer Halberg	5	D	-- --	r200	6	23	do.	--	--	Ms	570	Do.
130-417-1	Blanche Kazenecki	15	D	-- --	80	6	22	do.	r15	9/ /54	Ms	460	
130-415-1	Orange County	15	C, P	-- --	r200	6	32	do.	r0	1964	VF	350	H ₂ S.
-2	do.	14	P	-- --	r230	6	150	do.	--	--	VF	355	Anal; H ₂ S; Air Force Number 11.
-3	John Loeltene	7	A, D	Dr; OH	r271	6	40	do.	r36	1958	Ms	385	H ₂ S; log.
-4	George Hoffner	10	D	-- --	r120	6	60	do.	--	--	Ms	385	
-5	Ralph Dunn	25	D	Dr; OC	r42	6	61	Gravel	--	--	Plt	380	Well ends on bedrock.
130-413-1	Phil Hafner	20	D	Dr; OH	r100	6	20	Shale	--	--	Pin	410	10 gpm after pumping 4 hours.
130-412-1	Art Birch	14	A, D	-- --	r100	6	34	do.	r12	10/ /56	VF	420	
130-411-1	George Carlow	16	D	-- --	r47	6	4	do.	--	--	Ms	420	
130-409-1	Unknown	10	D	-- --	r114	6	48	do.	--	--	Ms	460	
130-405-1	Air Defense Command	5	D	-- --	119	6	20	do.	31.7	6/ 4/65	Pin	465	Anal; Air Force Number 6.
130-402-1	E. I. du Pont de Nemours & Co.	200	T	-- --	r409	10, 8	25	Carbonate	r2	1958	Ms	200	from; water level 6 ft below land surface June 1965.
129-444-1	Richard B. Pendell, Sr.	5	D	-- --	r252	6	90	Sandstone	r70	1963	Ms	1,400	
-2	Charles King	7	D	-- --	r137	6	99	do.	--	--	Ms	1,335	
129-414-1	James Walker	60	C	-- --	r160	6	60	7	16.3	7/13/62	VF	490	
-2	Mr. Grimeshaw	--	D	Dr; OC	62	6	64	Gravel	41.0	7/16/62	VF	550	Filled in 2 ft.
-3	Mr. Lukin	--	C	Dr; OH	r200	4	--	Shale	r35	--	Ms	600	
129-433-1	Mrs. Joseph De Pace	--	C, D	Dr; S	r42	6	40	Sand and gravel	--	--	Ms	540	
-2	Walter H. Schulz	--	D	Dr; P	17	42	17	Sand	17	7/13/62	VF	505	
129-430-1	Henry O. Siers	1	D	Dr; OH	r400	6	190	Shale	r50	4/ 8/66	Ter	780	
-2	do.	60	D	Dr; OC	r119	6	119	Gravel	r50	1958	Ter	780	
-3	Henry B. Siers	5	D	-- --	r126	6	126	do.	--	--	Ms	760	
129-428-1	A. C. Howell	15	D	Dr; OH	r127	6	14	Shale	r10	8/24/64	Ms	700	
-2	John Kidder	10	C, D	Dr; OC	r58	6	58	Gravel	flows	10/10/64	VF	620	H ₂ S.
129-425-1	Frank Pylus	20	D	Dr; OH	r52	6	16	Shale	12.1	21/ 7/65	Ms	650	Yield may be more than 20 gpm.

Table 1.--Records of selected wells and springs (Continued)

Well number	Owner's name	Reported yield (gallons per minute)	Use	Method of construction; completion	Depth of well (feet)	Diameter (inches)	Length of casing (feet)	Aquifer	Below surface (feet)	Date	Topographic situation	Altitude above sea level (feet)	Remarks
129-435-2	George D. Muer and Sons	6	D	--	r91	6	27	Shale	r15	1965	Ms	650	
129-422-1	Mrs. Wesley Warren	5	D	--	r170	6	54	do.	27.0	10/30/64	Ms	720	
-2	Stan Lorenz	5	D	--	r180	6	50	do.	r40	8/ /64	Ms	735	
129-420-1	Ira Bailey	12	D	--	r118	6	58	do.	r20	3/ /54	Ms	610	Log.
-2	Joseph Rau	5	D	--	r80	6	15	do.	r16	9/ /58	Ms	530	
-3	Mr. Madgate	10	D	--	r98	6	70	do.	r30	9/ /58	Ms	510	Log.
-4	Mr. Blaha	5	D	--	r102	6	35	do.	r10	9/ /60	Ms	520	
129-417-1	Ray Martin, Jr.	12	D	--	r112	6	70	do.	r25	6/ /60	Ter	385	H ₂ S; log.
-2	Raymond Martin, Sr.	17	D	--	r95	6	70	do.	r24	1949	Ter	385	
-3	Steven Klein	25	D	--	r80	6	67	do.	r28	10/ /53	Ter	385	
-4	Raymond Martin, Sr.	--	C	Dv; S	r26	1	24	Sand	r19	1940	Ter	385	
129-414-1	William Eger	--	A	Dv; S	19	6	20	Cliff	3.9	10/15/64	Ter	390	
-2	do.	--	D	Dv; P	19	36	19	do.	15.3	10/15/64	Ms	410	Filled in 1 ft.
-3	do.	--	A	--	22	60	22	do.	10.6	10/15/64	Ms	420	
-4	Mr. Goldman	--	A, D	--	r10	120	10	Gravel	3.0	10/15/64	Ter	370	Flows in wet seasons.
129-413-1	Anthony Roman	--	D	--	12	36	12	Sand	7.7	10/15/64	Ter	405	
-2	do.	--	D	--	11	36	11	do.	7.9	10/15/64	Ter	410	
-3	do.	--	A	Or; OH	89	6	--	Shale	9.6	10/15/64	Ter	410	
129-411-1	Andrew C. Lindsey	30	A, D	Or; OH	r80	6	50	do.	8	1955	Ter	380	
129-408-1	Eric Wollenberg	25	--	--	r187	6	92	do.	--	--	Ms	479	Anal; Air Force Number 10.
129-406-1	Air Defense Command	6	D	--	266	6	92	do.	57.0	6/14/65	Ms	480	Anal; Air Force Number 7.
129-405-1	do.	20	D	--	r176	6	50	do.	--	--	Ms	365	Anal; Air Force Number 8.
-2	do.	4	D	--	145	6	20	do.	33.0	6/14/65	Ms	380	Anal; Air Force Number 9.
129-403-1	do.	3	D	--	r120	4	20	do.	--	--	VF	360	
-2	Fred Perna	5	D	--	r198	6	--	do.	--	--	Ms	410	Turbid water.
-3	Phillip Scaglino	22	D	--	r92	6	72	Carbonate	20	5/ /63	Ms	250	
129-402-1	Mr. Strook	150	C	--	57	6	--	do.	38	8/ 3/65	Ms	260	
129-401-1	New Windsor Water Dist.	--	D	Or; --	r285	6	--	do.	--	--	VF	200	
-2	do.	--	D	Or; --	r33	6	--	Gravel	7.5	8/12/65	Ms	120	Log; backfilled 7 ft.
-3	do.	190	P	Or; S	r37	8	28	do.	18.1	8/12/65	Ms	140	5 ft. from well 129-401-1, water level measured while pumping 129-401-1 at 190 gpm.
-4	do.	20	T	--	r32	--	21	Sand and gravel	r6.7	9/ 2/65	Ms	140	dd 20; log; backfilled 4 ft.
									r2.8	1965	Ms	110	dd 15.8 after pumping 3 hours, log; destroyed.

Nearest well drawing from aquifer of concern

Table 1.--Records of selected wells and springs (Continued)

Well number	Owner's name	Reported yield (gallons per minute)	Use	Method of construction; completion	Depth of well (feet)	Diameter casing (inches)	Length of casing (feet)	Aquifer	Water level		Topographic situation	Altitude above sea level (feet)	Remarks
									Below land surface (feet)	Date			
179-401-5	New Windsor Water Dist.	20	T	--	r24	--	21	Sand and gravel	r1	1965	Hs	110	dd 10.9 after pumping 9 hours; log; destroyed.
-6	do.	87	T	--	r33	6	27	Gravel	r6.6	1965	Hs	125	dd 18.1 after pumping 3 1/4 hours; log; backfilled 11 ft; destroyed.
-7	do.	110	T	--	r38	6	33	Sand and gravel	r8.0	1965	Pin	135	dd 16.3 after pumping 7 hours; log.
-8	do.	0	T	Dr; OE	r50	--	50	Sand and clay	--	--	Hs	160	Log; destroyed.
-9	do.	--	T	Dr; OE	r54	--	54	None	--	--	Hs	130	Do.
-10	do.	--	T	--	r50	--	50	do.	--	--	Pin	130	Do.
-11	do.	--	T	--	r35	--	25	do.	--	--	Hs	110	Do.
179-400-1	American Felt Co.	50	C	Dr; OM	r225	6	--	Shale	r4	5/23/46	Hs	30	
-2	do.	120	C	--	r305	--	55	do.	r+2.5	1963	Hs	35	dd 20.1 after pumping 8 hours a day for 4 days; H ₂ S; log.
-3	do.	60	C	--	r272	--	25	Shale and carbonate	r72	1963	Hs	20	H ₂ S; water level dropped from 40 ft to 72 ft when drilled into cavity at 272 ft; limestone near bottom; tried to shoot cavity with 9 sticks of 605 dynamite, but never felt or heard the explosion; charge may still be in well.
178-414-1	Richard B. Pendell, Jr.	1	0	--	131	6	--	Sandstone	29.1	6/9/65	Hs	1,220	
178-436-1	John Durland	--	D	Dr; P	4	36	4	do.	2.1	6/6/57	Hs	690	
-2	Steven Hirschburg	--	D	Dr; OM	r196	--	--	do.	--	--	Hs	690	
178-435-1	Clifford Gordon	5	D	--	r52	8	37	7	--	--	Tar	540	
-7	Paradise Farm	30	D, C	--	r257	6	41	Shale	--	--	VF	540	
-3	John Kehlenbeck	--	D	--	r160	6	--	do.	--	--	VF	570	
-4	Mrs. Muktulan	30	D	Dr; OE	r135	6	135	Sand and gravel	--	--	VF	540	
178-434-1	Mr. Leech	--	D	Dr; P	6	48	6	Till	21	6/6/57	Hs	660	
-2	Stanley Lewis	10	D	Dr; OM	223	6	40	Shale	23.5	7/13/62	VF	550	
178-432-1	Mr. Brisson	200	T	Dr; S	r50	8	40	Sand and gravel	r5.7	12/22/66	VF	820	Mostly clayey sand and gravel; clay 18-22 ft and sand and gravel 32-50 ft; bedrock at 51 ft; 300 gpm for 8 hours followed by 200 gpm for 7 1/2 hours caused 15 ft of drawdown.
178-431-1	Robert Benton	31	D	--	r128	6	--	Shale	--	--	VF	740	H ₂ S; Iron.
-2	Town of Mount Hope	20	C	--	r96	6	40	do.	10.9	4/8/66	VF	750	H ₂ S; well had been recently pumped when water level was measured.
-3	Louis C. Ouden	30	D	--	r61	6	38	do.	r4.5	1962	Hs	750	H ₂ S.
-4	Martha Morgan	--	D	--	43	6	43	do.	15.8	4/8/66	Hs	750	
-5	Unknown	--	C	--	115	6	40	do.	30.0	4/8/66	Hs	820	Abandoned.
-6	Henry Messels	--	A	Dr; S	24	1	22	Sand and gravel	6	--	Hs	785	
178-429-1	Schoonmaker Homes	3	D	Dr; OM	142	6	37	Shale	17.7	7/22/65	Tar	750	

Table 1.--Records of selected wells and springs (Continued)

Well number	Owner's name	Reported yield (gallons per minute)	Use	Method of construction; completion	Depth of well (feet)	Diameter (inches)	Length of casing (feet)	Aquifer	Below land surface (feet)	Water level Date	Topographic elevation (feet)	Altitude above sea level (feet)	Remarks
128-418-1	Karnit Lewis	6	D	--	227	6	26	Shale	--	--	720	720	5 spm year at 235 ft at contact of sand quartzite with soft shale.
128-427-1	Richard Hassenmeyer	10	D	--	r106	6	28	do.	--	--	730	730	
128-421-1	Goldenree Water Corp.	40	P	--	r115	6	51	do.	r13	4/ /64	765	765	Low.
-2	do.	50	P	--	60	6	50	do.	r7	4/ /64	770	770	old 5 after pumping 1 hour; low; yield from gravel overburden.
128-420-1	Pollados Interstate Park Com.	--	D	--	218	6	21	do.	63	5/13/65	740	740	Abandoned.
-2	Cella Beusman	12	D	--	r91	6	17	do.	r3	--	740	740	
128-419-1	Pollados Interstate Park Com.	--	D	--	254	6	27	do.	29.1	5/13/65	740	740	
128-418-1	Mr. Jurey	15	D	--	r197	6	1007	do.	--	--	740	740	
-2	Sayer Fancher	25	P	--	r165	6	55	do.	53.2	8/19/64	740	740	Water level measured while well in use.
-3	Thomas Boast	20	P	--	r91	6	18	do.	r16	10/ /54	740	740	
128-417-1	John Bull	5	A, D	--	r150	6	24	do.	r18	1957	745	745	H ₂ S; low.
-2	do.	5	D	--	r72	6	16	do.	r12	10/ /53	745	745	H ₂ S.
128-416-1	Orange County	9	P	--	102	6	50	do.	16.5	7/21/65	780	780	Log; filled in d. it.
128-414-1	William Eger	--	D	Dr; P	7	36	7	Trill	5.4	10/15/64	755	755	
-2	William Vison	--	D	Dr; S	r33	1	31	Sand	r17	1955	780	780	
-3	Village of Maybrook	160	P	Dr; P	r20	1,200 x 24	--	do.	r5.5	4/13/65	750	750	
-4	do.	100	P	Dr; OH	r300	8	56	Shale	r3	1/11/57	750	750	old 255 after pumping 2 1/2 hours; H ₂ S; low.
-5	do.	100	P	--	r300	8	36	do.	r5	10/26/56	750	750	old 193 after pumping 2 1/2 hours; low.
-6	M. L. and C. E. Pitts	20	D	--	97	6	20	do.	r16	--	790	790	
128-413-1	Henry DeGroot	--	D	Dr; P	11	36	11	Sand	9.4	10/ 8/64	744	744	Temp 11.3 10/7/64.
-2	Thomas Puglisse	--	P	--	6	144	6	Sand and gravel	1.6	10/15/64	750	750	Temp 8.0 10/11/64.
128-409-1	Mrs. Clement Muller	4	D	Dr; OH	r207	6	88	Shale	--	--	750	750	
128-407-1	Alfred Vitfield	4	D	--	r120	--	60	do.	--	--	750	750	
-2	do.	--	D	--	r275	6	85	do.	--	--	750	750	
128-406-1	Robert V. Lewis	10	D	--	r115	6	70	do.	flows	1965	790	790	Low.
-2	R. Kimble	15	D	--	r187	6	60	do.	flows	1965	790	790	Low.
128-405-1	Louis Claffone	--	D	--	r192	6	150	Carbonate	--	--	790	790	
-2	Harold F. Benter	20	A, D	--	r190	6	58	7	--	--	790	790	Low; yield may be near floor 20 spm.
128-404-1	Mrs. Marie Pomarico	2	D	--	r265	6	160	Shale	--	--	790	790	
128-403-1	M. J. Bonaven	20	D	--	r82	6	20	Crystalline	--	--	790	790	
-2	Petro Brothers	40	P	--	r83	6	4	Shale	flows	--	790	790	0-20 ft. overburden; 20-50 ft. soft brown rock; 50-82 ft. hard granite.
-3	do.	40	P	--	r150	8	12	do.	--	--	790	790	

Table 1.--Records of selected wells and springs (Continued)

Well number	Owner's name	Reported yield (gallons per minute)	Use	Method of construction; completion	Depth of well (feet)	Diameter (inches)	Length of casing (feet)	Aquifer	Water level		Topographic situation	Altitude above sea level (feet)	Remarks
									Below land surface (feet)	Date			
128-402-1	Harrison S. Goulet	5	B	--	r100	6	52	Shale	--	--	Ms	280	
-2	Arthur Maharry	0	B	--	r500	6	40	do.	--	--	Ms	310	Yield 0.33 gpm.
-3	F. Sagece	8	B	--	r258	6	40	do.	--	--	Ms	300	
-4	New Windsor Water Dist.	180	P	Dr; --	r105	12	97	Gravel	--	--	Ter	140	
-5	do.	215	P	Dr; --	r100	6	90	do.	--	--	Ter	140	
-6	do.	215	P	Dr; --	r100	8	90	do.	--	--	Ter	140	
128-401-1	William J. Muelich	5	B	Dr; OH	85	6	32	Shale	r3.5	--	Pin	135	Interferes with well 128-402-6.
128-400-1	Tull Iron & Car Co., Inc.	15	C	--	139	8	--	do.	--	--	VF	20	Interferes with well 128-402-5.
127-437-1	R. Bellstein	10	B	--	102	6	22	Sandstone	r8	1957	Ms	920	Anal.
127-436-1	Fred Brantley	2	D	--	r235	6	15	do.	28.8	7/17/62	VF	490	
-2	Unknown	--	D	Dr; OE	29	6	29	Sand and gravel	13.8	7/17/62	VF	490	Temp 10 7/17/62.
127-435-1	Winston M. White	--	C, D	Dr; OH	r128	6	85	Shale	--	--	Ter	540	
-3	Joe Chase	--	D	Dr; P	18	38	18	Sand and gravel	16.6	7/13/62	VF	490	
-4	James Kousios	--	D	Dr; S	r15	1	13	Sand	r4	1960	VF	485	
-5	Paul and Matilda Lee	--	C	Dr; OH	r60	6	--	Sandstone	--	--	VF	490	
-6	Lauren Stamp	--	D	Dr; OE	r72	6	72	Sand and gravel	r20	--	VF	490	
127-434-1	Mr. Chanin	--	D	Dr; OH	r177	6	50	?	r40	6/6/57	Ms	690	
-2	Mr. Cuddeback	--	A, D	Dr; P	36	36	36	Shale	11.5	6/6/57	Ms	695	
127-430-1	James Bohney	--	D	Dr; OH	r100	6	--	Shale	14.6	7/23/65	VF	770	
127-424-1	K and K Enterprises	65	C	--	r307	7	108	do.	--	--	VF	535	
-2	Unknown	1	D	--	r512	6	28	do.	14.7	11/19/64	Ms	640	Temp 10.9 11/19/64; well bore is not straight; 1/4 gpm at 400 ft.
-3	Edmond Lloyd	10	P	--	r345	6	60	do.	--	--	Ms	610	H ₂ S; yield drops to 10 gpm after pumping for 24 hours.
-4	do.	14	P	--	r315	6	60	do.	--	--	Ms	615	H ₂ S; water-bearing fractures at 300 ft.
127-423-1	Lloyd's Shopping Center	40	C	--	r345	6	100	do.	--	--	Ms	560	H ₂ S.
127-422-1	Gulf Oil Company	--	C	--	r220	6	180	do.	--	--	Ms	580	H ₂ S; aquifer test at well 127-422-2 interfered with this well.
-2	Boehm Enterprises	200	C	--	420	6	157	do.	68.0	10/14/65	Ms	550	dd 225 after pumping 24 hours; log; water source at 417 ft.
-3	Clyde Griffin	--	D	--	r270	6	255	do.	r100	--	Ms	600	H ₂ S.
127-421-1	Ernest L. Tromper	2	D	--	r155	6	15	do.	r.2	1949	Ms	580	Water-bearing fracture at 108 ft.
-2	William Vleer	20	A, D	--	r103	6	14	do.	r30	8/ /58	Ms	475	
127-420-1	Edward Tetz	19	D	--	r85	6	30	do.	r15	1959	VF	395	
-2	William Phillips	22	D	--	r162	6	110	do.	r45	1959	Ms	400	
-3	William Bronstema	30	D	--	r85	6	35	do.	r19	6/26/53	Ms	430	H ₂ S strong enough to tarnish silverware.

Table 2.--Lithologic logs of wells and test borings

EXPLANATION

Locations of wells and test borings are shown in plates 1 and 2. Well and test-boring logs have been generalized in some cases for consistency.

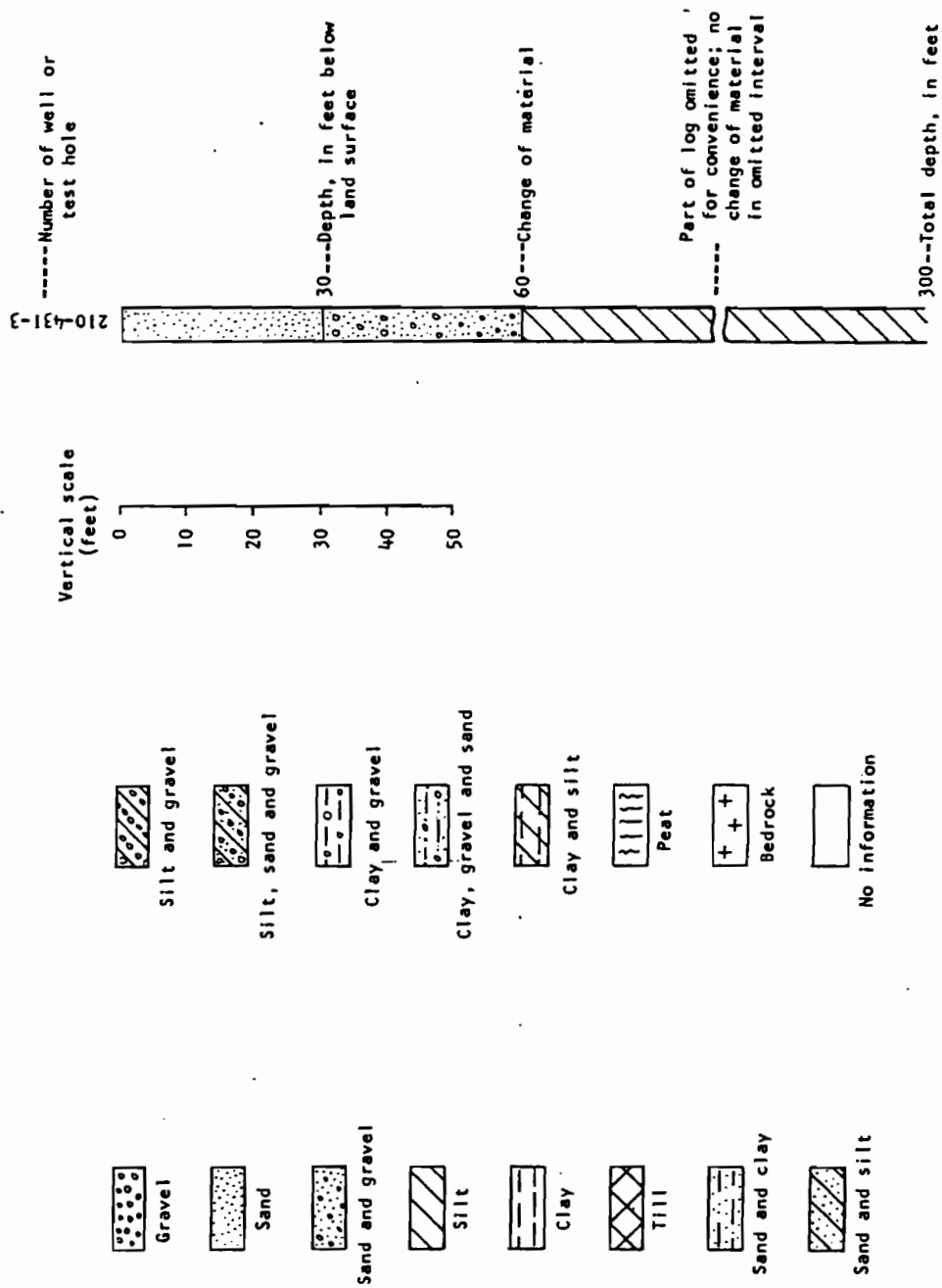


Table 2.--Lithologic logs of wells and test borings (Continued)

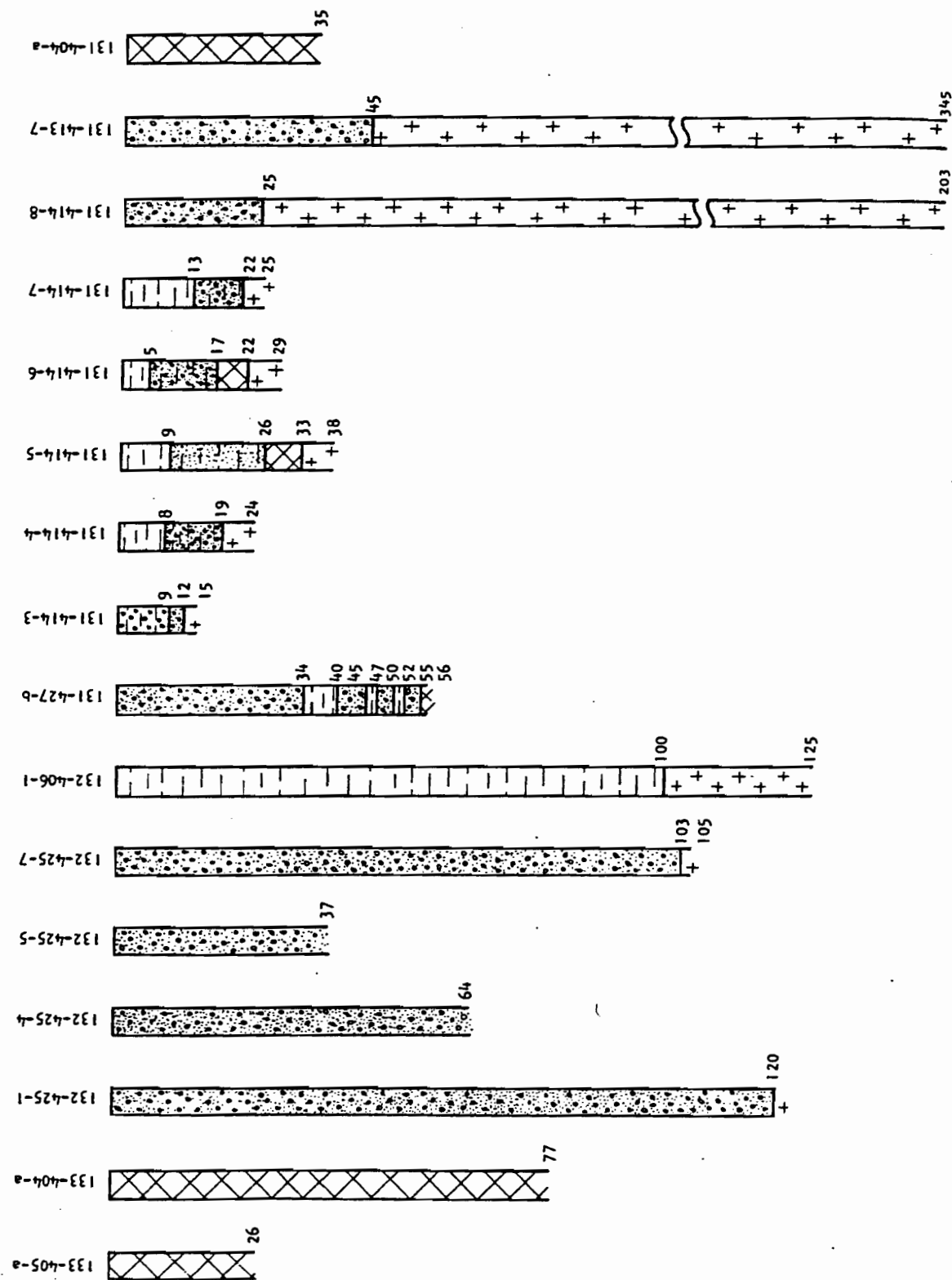


Table 2.--Lithologic logs of wells and test borings (Continued)

Table 2.--Lithologic logs of wells and test borings (Continued)

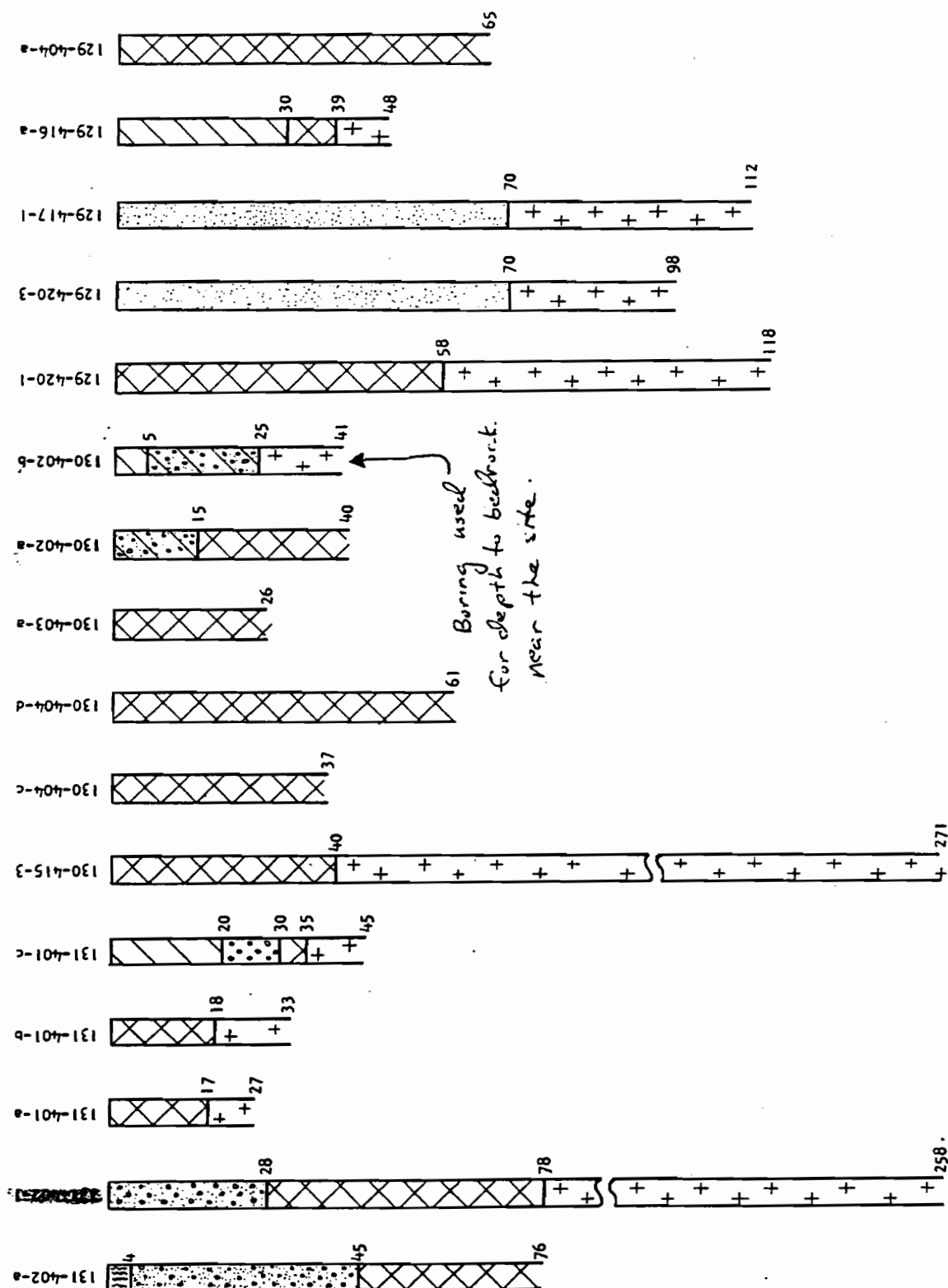
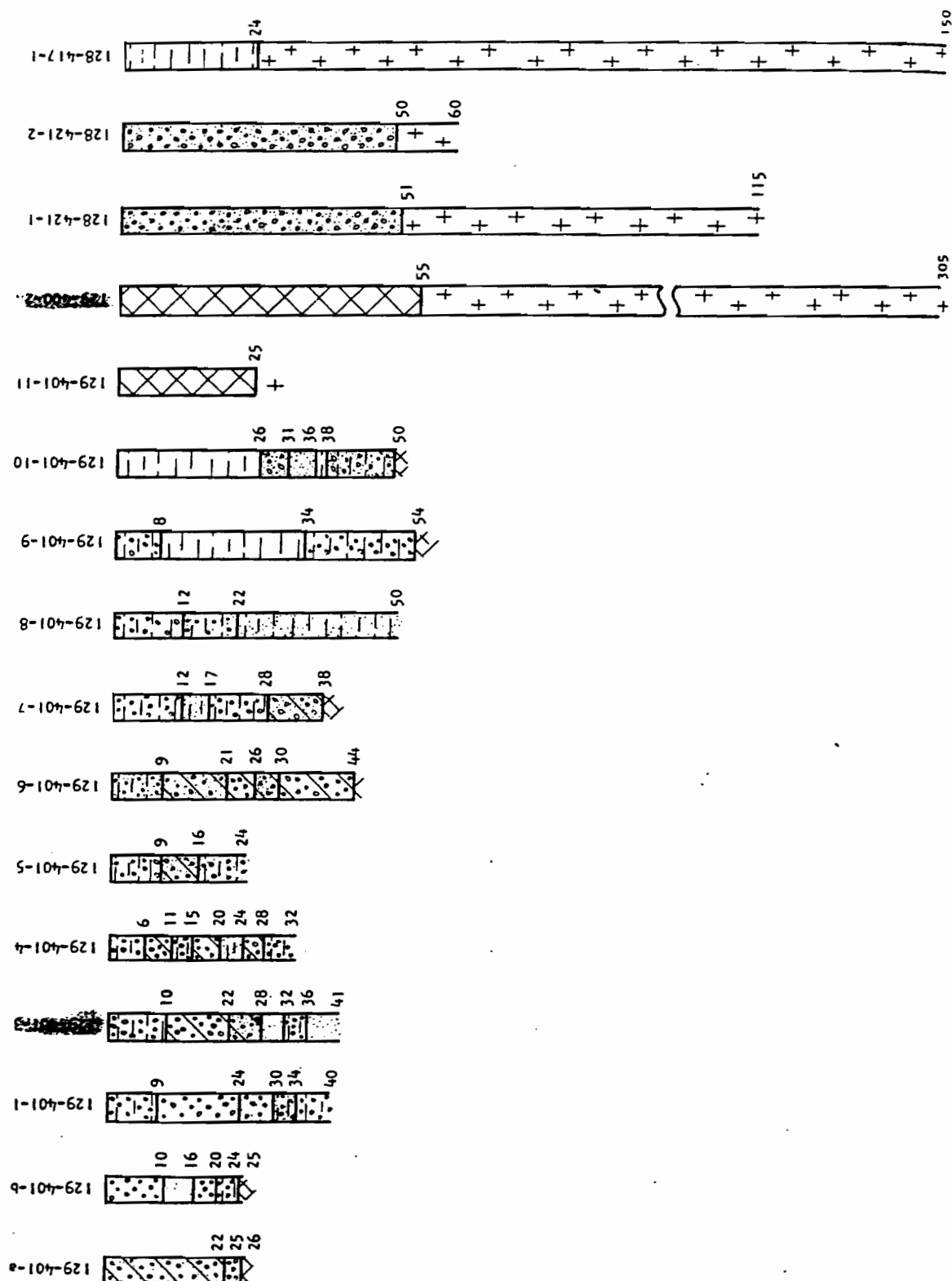
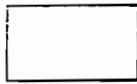


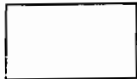
Table 2.--Lithologic logs of wells and test borings (Continued)



Conglomerate or quartzite



Red shale and red conglomerate



Layered sandstone and shale



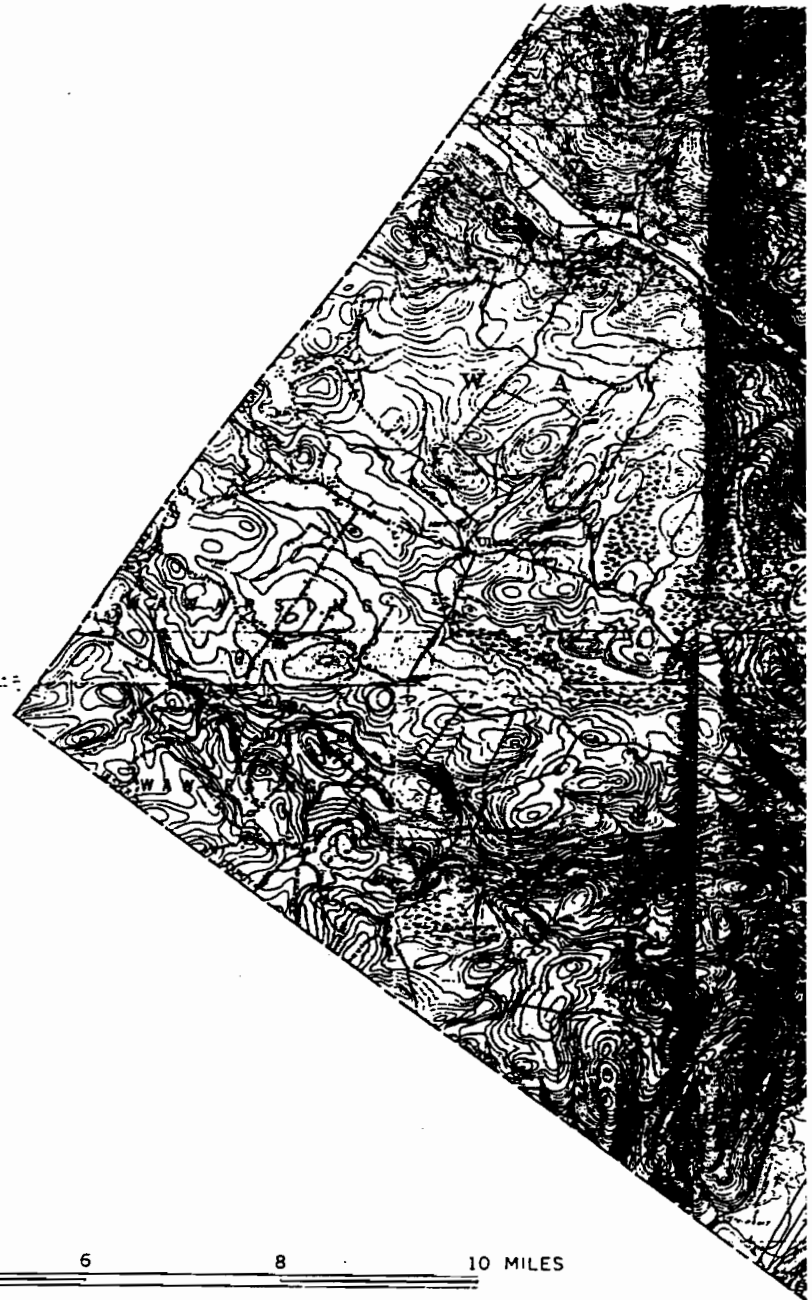
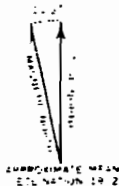
Quartzite with some shale layers

Contact

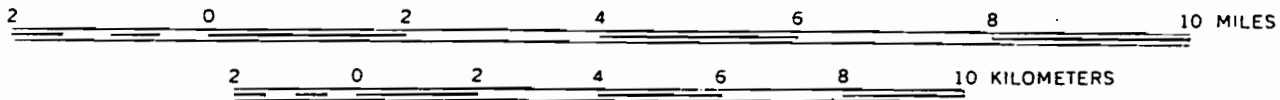
Dotted where concealed

Fault

Dashed where inferred; dotted where concealed



SCALE 1:125 000

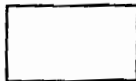


CONTOUR INTERVAL 20 FEET
DATUM IS MEAN SEA LEVEL

MAP OF CONSOLIDATED ROCKS IN ORANGE AND ULSTER COUNTIES, NEW YORK

EXPLANATION

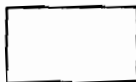
LITHOLOGIC UNITS



Folded shale and sandstone



Carbonate rock



Crystalline rock



Conglomerate or quartzite



Red shale and red conglomerate



Layered sandstone and shale



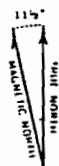
Quartzite with some shale layers

Contact

Dotted where concealed

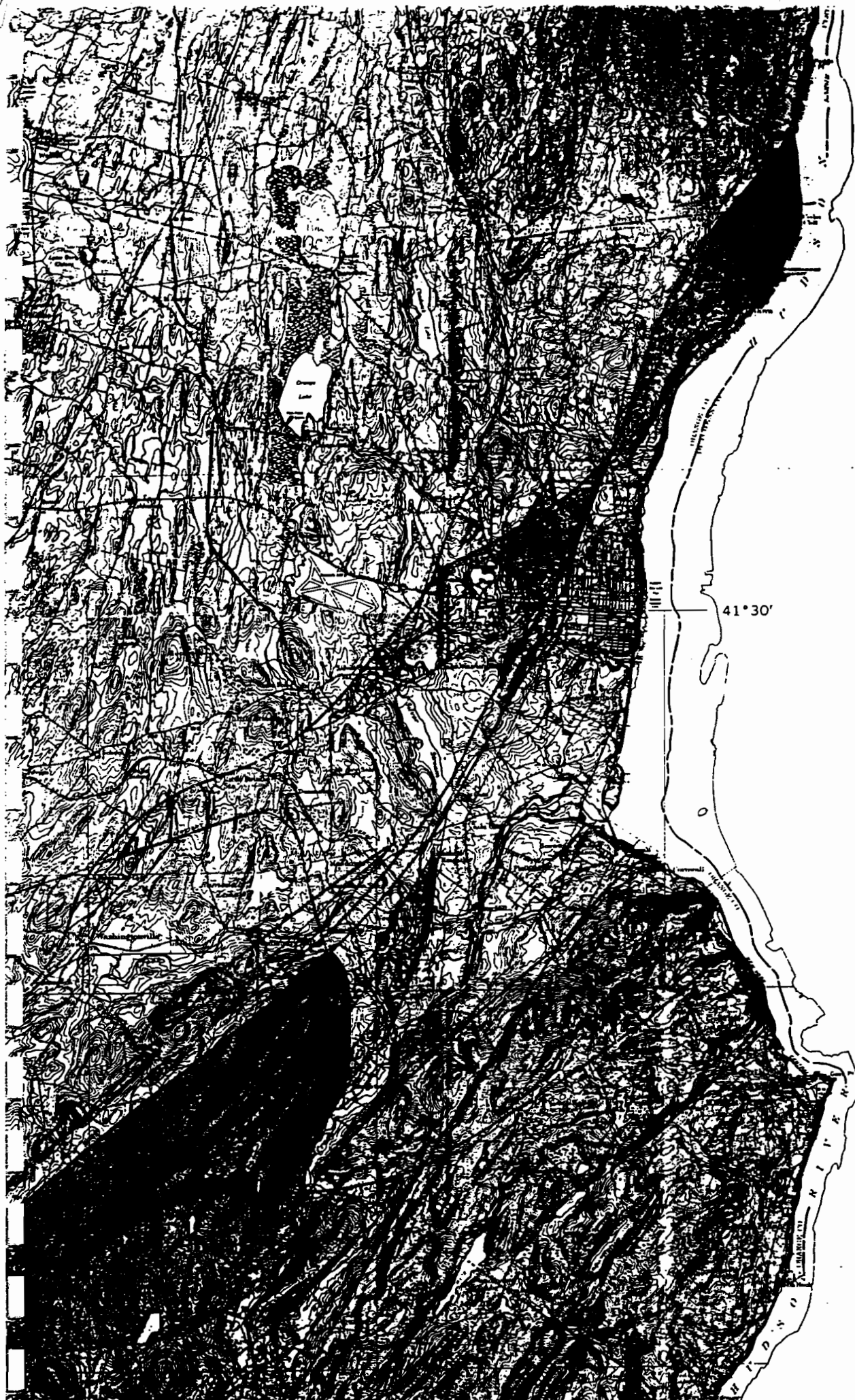
Fault

Dashed where inferred; dotted where concealed



APPROXIMATE MEAN
DECLINATION 1972

41°45'



REFERENCE NO. 6

CONTROL NO.

02-8705-07

DATE:

12/30/87

TIME:

0840.

DISTRIBUTION:

Newburgh Landfill file (COR)

BETWEEN:

Mr. Frank Valding

OF:

Newburgh (Water Dept.)
Township Engineer

PHONE:

(914) 564-7813

AND:

Thomas Varner

(NUS)

DISCUSSION:

Mr. Valding said the city of Newburgh only uses water from ^{Lake Washington} ~~Chadwick Lake~~ ^{TAV} ~~Chadwick Lake~~. The town of Newburgh uses water from Chadwick Lake and from private residential wells, some of which are shallow and some of which are in bedrock. He could not say which aquifer the majority of people use. He said New Windsor uses water from public supply wells. He said to call Mr. Richard McGoe, New Windsor Town Engineer, at (914) 562-8640.

TAV 12/30/87

ACTION ITEMS:

REFERENCE NO. 7

CONTROL NO.

02-8705-07

DATE:

12/29/87

TIME:

1116.

DISTRIBUTION:

Newburgh Landfill (COR)

BETWEEN:

Ms. Isabel Drobner

OF: City of Newburgh
Water Dept.

PHONE:

(914) 565-3354

AND:

Thomas Varner

(NUS)

DISCUSSION:

Ms. Drobner said the city of Newburgh uses water only from Lake Washington. She said she wasn't familiar with groundwater use outside of city limits, but that the town of Newburgh used Chadwick Lake in addition to having wells. She said the number for the town of Newburgh Water Dept. is (914) 564-7813.

TAV 12/29/87

ACTION ITEMS:

REFERENCE NO. 8

Al.1-5). The landfill, located north of Old Pierces Road, reportedly was used over a period of more than 50 years by DuPont (until 1967) and for 7 years by Stauffer (from 1967 until approximately 1975), ~~although actual quantities of wastes disposed are unknown~~ (Appendixes Al.1-2 and Al.1-5 through Al.1-8). During the period 1950 to 1965, DuPont burned or evaporated burnable sludge wastes in the open field area north of Old Pierces Road. Non-burnable sludges were pumped to a sludge pit or ~~pumped in trenches~~ about 8 ft deep and then layer landfilled. During the period 1965 to 1970, DuPont and Stauffer Chemical buried sludges of all types in either the company landfill trench operation or the City landfill dump located adjacent to the company landfill. Stauffer landfilled a slurry containing caustics, pigments, PVC resin, solvents, CaCO_3 , silica, and oils. The disposal slurry was allowed to evaporate prior to burial to remove solvents. Along with the slurry, solids (fabric, metal cans, cotton synthetics, PVC film) and powder (PVC resin, atomite, and silica) were reportedly landfilled. Depth of cover for the landfill was reported to be 5-5.5 ft. Much of Stauffer's wastes were reportedly sent to the City or County landfills (Appendixes Al.1-5 and Al.1-9). DuPont incinerated wastes until 1965 in an onsite incinerator. Ashes were distributed on the property as either surface or landfill and covered by dirt from the site.

Prior to 1950, a disposal area located between Old Pierces Road and South Street was reportedly used by DuPont for storage, burning, and sludge burial. Substances listed as having been disposed by Dupont in this area were corfam, caustic, diacetyl, acetic acid, methyl ethyl ketone, methyl isobutyl ketone, pigments, PVC resins, and possibly tetrahydrofuran and toluene (Appendix Al.1-2 and Al.1-5).

Stauffer Chemical Company reported in a 1979 news article that it never buried toxic wastes in the landfill (Appendix A1.1-9). A company representative said Stauffer used the nearby city incinerator and landfill until 1976 when these operations were shut down. A variety of waste including vinyl scraps and short rolls, oil and oil sludges, and small amounts of waste pigments and solvents was sent to the City facility. The only indication of how waste was handled after 1976 was that at the time of the newspaper article, Stauffer reportedly had recently shipped 70 barrels of color materials to the Niagara Falls area for disposal.

A NYSDEC site inspection of the area north of South Street found, in the wooded area of the parcel, an old, galvanized drum (full), old drum covers littering the ground, plastic-like material covering about 4 acres of ground, and a large pile of material pushed up with drums mixed in (Appendix A1.1-10 includes this site report). A U.S. Environmental Protection Agency (U.S. EPA) site inspection report (Appendix A1.1-11) lists materials disposed of by Stauffer as wooden pallets, paper, vinyl products, trim and scrap, nitrocellulose jellies, vinyl jellies, and mixture of pigments and plasticizers.

In recent years, there have been incidences of improper storage/handling of hazardous wastes at the industrial building complex south of South Street. In 1981, a bankrupted solvent reclamation company left hundreds of barrels of solvent at the facility, then owned by Creek Industrial. On 17 August 1982, Creek Industrial was charged with violation of state laws for dumping drums of solvent out in their parking lot and mixing the wastes with stone dust (Appendixes A1.1-12 through A1.1-14). NYSDEC officials observed several 55-gal drums of waste being disposed of in this manner. Late in August of 1982, Creek

May 18, 1979

NEWBURGH FACILITY WASTE DISPOSAL

The Newburgh manufacturing facility, currently owned by Stauffer Chemical Company, who purchased it from E.I. duPont de Nemours Co., Inc. in February 1967, who, in turn, had purchased it as a going concern from the Aspenwald Co. in 1910. The best recollection is that the plant had initially started with the fabric coating operation sometime in the latter part of the 1890's.

The dump site, which is of primary concern for Stauffer Chemical Company is located north of old Pierce's Road and constitutes approximately five to six acres in a thirty-eight acre plot of ground. An additional area of waste disposal was used by DuPont Company into the 1940's, and it was located between South Street and old Pierce's Road. The dumpings, burnings, and sludge pits of this area were not extensive and would probably not constitute the same degree of hazard as experienced in the major site mentioned above.

Dry Waste

- - DuPont Company - Incinerated until 1965 in the company owned incinerator. Ashes distributed on property as either surface or landfill and coverage by dirt from site. Company incinerator closed.
- - DuPont Company & Stauffer Chemical Co. - Incinerated until 1970 in the city owned incinerator; ashes removed to City of Newburgh landfill. City incinerator - no deliveries 1970.
- - Stauffer Chemical Company - Had delivered the dry wastes to the city landfill dump or the County (Orange) landfill dump starting in 1970 until plant full shutdown. The city dump was closed in 1976 Orange County opened transfer station at Stewart Field Airport; garbage dumped, then moved to Orange County landfill.

Slops

- - DuPont Company - Developed and used the dumpsite north of Pierce's Road from 1950 until they sold the plant to Stauffer Chemical Company in 1967. Prior to 1950 DuPont Company used the
 - 1) area north of Pierce's Road,
 - 2) also some adjacent land area north of South Street and south of Pierce's Road.The second area was used for storage, burning and sludge burial.

Slops Contd.

- - DuPont Company - During the period 1950 to 1965 the excess Color Room burnable slops were open field burned or evaporated in the open field area north of Pierce's Road. Non-burnable slops were pumped to a sludge pit or dumped in trenches about eight feet deep and then layer landfilled.
- - DuPont Company - Stauffer Chemical Co. - During the period 1965 to 1970 Color Room slops of all types were buried in either the company landfill trench operation or the city landfill dump located north of Pierce's Road adjacent to the company landfill.
- - Stauffer Chemical Company - Buried Color Room slops in the company landfill 1970 to 1975 or city dump.

Bomb Slops

- Bags of jelly or cleanup were buried with the dry waste or burned in the city incinerator from 1967 to 1970.

The period of 1970 until plant full closure of operations in 1979 (January), the bomb slops were buried with the dry waste either in the city landfill 1970-76 or county landfill 1976-79. No segregation was made. Slop bombs incinerated until 1965.

Handwritten signature/initials
sp/11

REFERENCE NO. 9

Uncontrolled Hazardous Waste Site Ranking System

A Users Manual (HW-10)

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

United States
Environmental Protection
Agency

1984

REFERENCE NO. 10

Soil Survey of

Orange County, New York



**United States Department of Agriculture, Soil Conservation Service
in cooperation with Cornell University Agricultural Experiment Station**

580 000 FEET

Ab

ErB

UF

Du

MdD



UF

Included with this soil in mapping are small areas of the shallow, somewhat excessively drained to moderately well drained Arnot soils. A few spots of the deep, well drained to moderately well drained Swartswood soils and moderately well drained to somewhat poorly drained Wurtsboro soils are also included. Pockets of very poorly drained Alden soils in a few depressions and along drainageways are identified by spot symbols on the soil map. A few included areas are gently sloping. Some are moderately steep.

There is usually no perched water table above the bedrock in spring. Permeability is moderate. Available water capacity is moderate to low, and runoff is rapid. Depth to bedrock ranges from 20 to 40 inches. Roots are restricted. Natural organic matter content is low. The soil is 15 to 35 percent gravel or channery fragments. In unlimed areas, the surface layer is very strongly acid to slightly acid.

Most areas are either idle or forested. A few are used for pasture and hay.

This soil can be used for cultivated crops but generally is better suited to hay or pasture. The hazard of erosion, the moderate depth to bedrock, and midsummer droughtiness are limitations for crops. Erosion is a particularly serious hazard on long slopes or in areas bare of plant cover. Channery or gravel fragments are bothersome for some kinds of tillage and cause excessively rapid wear of equipment. The remoteness and poor accessibility of many areas are additional limitations. In cultivated areas, cross-slope tillage, strip cropping, cover crops, minimum tillage, and a high proportion of sod crops in the cropping system reduce erosion and increase organic matter content, which improves available water capacity.

Pasture grasses are suited to this soil, but midsummer droughtiness causes slow growth in some years. Proper stocking, lime and fertilizer, and rotation grazing are needed to maintain pasture seedings.

Suitability for timber production is good to fair. Woodlots commonly support such species as northern red oak, sugar maple, and white ash. There are few equipment limitations. Channery fragments can be slightly bothersome in machine planting of seedlings. Erosion is generally not a problem, but logging trails should be laid out across the slope to avoid gulying along the trails. Seedlings should be planted early in spring to avoid midsummer droughtiness.

Depth to bedrock and the slope are serious limitations for many urban uses. Deep excavation and the installation of septic tank absorption fields are difficult because of the hardness of the rock. Some areas provide good sites for picnic areas, campsites, and hiking trails, but site selection is important because of slope.

The capability subclass is IIle.

Ma—Madalin silt loam. This deep, poorly drained and very poorly drained, nearly level soil formed in glacial lake deposits of silt and clay. It is on flats and in depres-

sions on lowland lake plains and in small basins in uplands. Areas are commonly round and concave and 5 to 15 acres.

Typically the surface layer is black silt loam 8 inches thick. The subsurface layer is mottled dark gray silt loam 2 inches thick. The subsoil is 28 inches thick. It is greenish gray heavy silty clay loam that is mottled in the upper 7 inches. The substratum to a depth of 60 inches is firm, dark gray silty clay.

Included with this soil in mapping are the somewhat poorly drained Rhinebeck soils on a few slightly higher benches. Also included are a few spots of poorly drained and very poorly drained Canandaigua soils where the clay content is lower than in the Madalin soil. In a few spots the surface layer is gravelly.

The water table is at or near the surface for prolonged periods during the year. Some areas are ponded for brief periods in spring. Permeability is moderately slow in the surface layer, slow in the subsoil, and slow or very slow in the substratum. Available water capacity is high, and runoff is very slow. In undrained areas, roots are mostly confined to the surface layer and upper few inches of the subsoil. The soil is generally gravel free. Natural organic matter content is high. The surface layer is strongly acid to mildly alkaline.

Most areas are idle and support only the grasses, shrubs, and trees that tolerate wetness.

This soil is poorly suited to most crops because of prolonged wetness. Drainage systems are often difficult to install because of lack of suitable outlets and slow water movement through the subsoil. Close spacing of subsurface drains and open ditch drains is required. If this soil is drained and used for cultivated crops, minimum tillage, cover crops, sod crops in the cropping system, and tillage at the proper moisture content are needed to maintain tilth and organic matter content. Tilth is somewhat difficult to maintain because of the high clay content.

If partial drainage is feasible, this soil can be used for pasture. Bedding improves surface drainage. Grazing in wet periods compacts the soil and destroys desirable grasses. Rotation grazing and restricted grazing when the soil is wet prolong the life of pasture seedings.

Wetness limits suitability for timber production. Species such as red maple, white ash, and white spruce, however, will grow on this soil. Windthrow and seedling mortality are major hazards, and the use of equipment is severely limited.

This soil is poorly suited to most urban and recreation uses because of prolonged wetness and slow or very slow permeability. Some areas provide excellent sites for dugout ponds or wildlife marshes. Low strength is a problem in constructing roads and buildings.

The capability subclass is IVw.

MdB—Mardin gravelly silt loam, 3 to 8 percent slopes. This deep, moderately well drained, gently sloping soil formed in glacial till deposits derived from sand-

stone, shale, and slate. It has a dense fragipan in the subsoil. It is on broad divides, hilltops, and ridges in uplands. Areas are mostly round and 10 to 15 acres.

Typically the surface layer is dark brown gravelly silt loam 8 inches thick. The upper 7 inches of the subsoil is yellowish brown gravelly silt loam. The next 5 inches is a leached layer of mottled pale brown gravelly silt loam. Extending from 20 to 60 inches is a firm, olive brown channery silt loam fragipan.

Included with this soil in mapping are small areas of the somewhat poorly drained Erie soils in concave spots, on foot slopes, and along drainageways. The well drained Bath soils are included on a few higher knolls and ridges. Spots of the very poorly drained Alden soils in a few depressions are identified by spot symbols on the soil map.

The water table in this Mardin soil is perched above the fragipan early in spring and in other excessively wet periods. Permeability is moderate in the surface layer and upper part of the subsoil and is slow or very slow in the fragipan and substratum. Available water capacity is moderate to low, and runoff is slow to medium. Roots are restricted by the dense fragipan, but a few penetrate along vertical cracks in the pan. Natural organic matter content is low. The surface layer and upper part of the subsoil are 15 to 35 percent gravel fragments. In unlimed areas, the surface layer is extremely acid to slightly acid.

Many areas are farmed. Some are urbanized, idle, or forested.

This soil is suited to cultivated crops, small grain, and hay. Seasonal wetness slightly delays tillage and planting in spring. Random subsurface drains to included wet spots and interceptor drains that divert runoff from higher adjacent soils improve many fields. Erosion is a hazard on long slopes, and gravel fragments are slightly bothersome in planting and harvesting. Because the fragipan restricts root penetration, droughtiness is also a problem in some years. Cross-slope tillage, cover crops, minimum tillage, tillage at the proper moisture content, and sod crops in the cropping system reduce erosion, promote tilth, and increase organic matter content, which improves available water capacity.

This soil is suited to pasture. Grazing in wet periods, however, compacts the soil and destroys desirable grasses. Proper stocking, rotation grazing, restricted grazing in wet periods, and lime and fertilizer are needed to maintain pasture seedings.

Suitability for timber production is fair to good. Woodlots support such trees as sugar maple, northern red oak, and black cherry. Windthrow, high seedling mortality, erosion hazard, and equipment limitation are not major problems.

Seasonal wetness and slow or very slow permeability in the pan are limitations for many urban uses. Carefully designed and installed drains around foundations are needed to overcome the risk of damage from wetness in spring. Some areas are suitable for campsites, picnic areas, and dike ponds. Gravel fragments, however, can be bothersome for some recreation uses.

The capability subclass is 1lw.

MdC—Mardin gravelly silt loam, 8 to 15 percent slopes. This deep, moderately well drained, sloping soil formed in glacial till deposits derived from sandstone, shale, and slate. It commonly receives runoff from higher adjacent soils. It has a dense fragipan in the lower part of the subsoil. It is on valley sides, hillsides, and ridges in uplands. Areas are mostly oval and 10 to 50 acres.

Typically the surface layer is dark brown gravelly silt loam 7 inches thick. The upper 6 inches of the subsoil is yellowish brown gravelly silt loam. The next 5 inches is a leached layer of mottled pale brown gravelly silt loam. Extending from 18 to 60 inches is a firm, olive brown channery silt loam fragipan.

Included with this soil in mapping are small areas of the somewhat poorly drained Erie soils on foot slopes and along drainageways. Also included are well drained Bath soils on a few higher knolls and ridges. A few spots are severely eroded, and in a few areas large stones are on the surface.

The water table is perched above the fragipan early in spring and in other excessively wet periods. Permeability is moderate in the surface layer and upper part of the subsoil and is slow or very slow in the pan and substratum. Available water capacity is moderate to low, and runoff is medium. Roots are restricted by the dense pan, but a few penetrate along vertical cracks in the pan. Natural organic matter content is low. The surface layer and upper part of the subsoil are 15 to 35 percent gravel fragments. In unlimed areas, the surface layer is extremely acid to slightly acid.

Some areas of this soil are used in farming, particularly for pasture. Others are idle or forested. A few are urbanized.

This soil is moderately suited to cultivated crops, small grain, and hay. Erosion is a serious hazard, particularly on long slopes, or in areas bare of plant cover. Seasonal wetness slightly delays tillage in spring. Interceptor drains that divert runoff from higher adjacent soils improve many fields. Gravel fragments are slightly bothersome in planting. Droughtiness is a hazard in some years because of the restricted root zone. Cross-slope tillage, strip cropping, diversion ditches, cover crops, minimum tillage, and sod crops in the cropping system reduce the erosion hazard, promote tilth, and increase organic matter content. Increasing organic matter content improves available water capacity.

This soil is suited to pasture. Grazing in wet periods, however, compacts the soil and destroys desirable grasses. Proper stocking, rotation grazing, restricted grazing in wet periods, and lime and fertilizer are needed to maintain pasture seedings.

Suitability for timber production is fair to good. Woodlots support such species as sugar maple, northern red oak, and black cherry. Windthrow, high seedling mortality, erosion hazard, and equipment limitation are not major problems. Slope and gravel fragments are minor problems for machine planting of seedlings.

REFERENCE NO. 11

0020 - F

02-8705-07

NUS CORPORATION

II

0088

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DESCRIPTION

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5-10

SF inspection & sampling 7/8/87

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Photo log

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Newburgh Landfill

02-8705-07

Newburgh N.Y.

June 17, 1987

NUS personnel:

Robert G. Nies	- Project Manager (PM)
Rick Lorfing	- SSO
Joe Murtagh	- Surveillance
John Gutierrez	- Surveillance

weather conditions: hot & humid in the 90's

other personnel:

Bill Mott - Supervisor of City garage

Robert G. Nies 7/18/87

Mark E. D. 7/27

NYTS

02-8705-07

6-17-87

6

0930 Bill Mott showed me his restricted
burning permit # 7107 issued date 9-1-87
expiration date 7-1-87

- he also mentioned that they used to
dump in trench about 30 ft. deep
some of the material is covered
and some is not. The front of
the property is fenced but in back along
I-84 people have dumped illegally

0950 Rick Loring had a Tailgate safety meeting
to discuss tailgates.

Two personnel present were:

Bob Nies
Joe Murtagh
John Gutierrez

Robert H. Nies
Joseph Murtagh
John Gutierrez

SCBA Logs

Rick Loring - (Backup)	# 192069
John Gutierrez - Serve!	# 165530
Joe Murtagh - Serve!	# 307173

OWA - E	field ready	6/10	S.B.
ANU - G	" "	6/12	S.B.

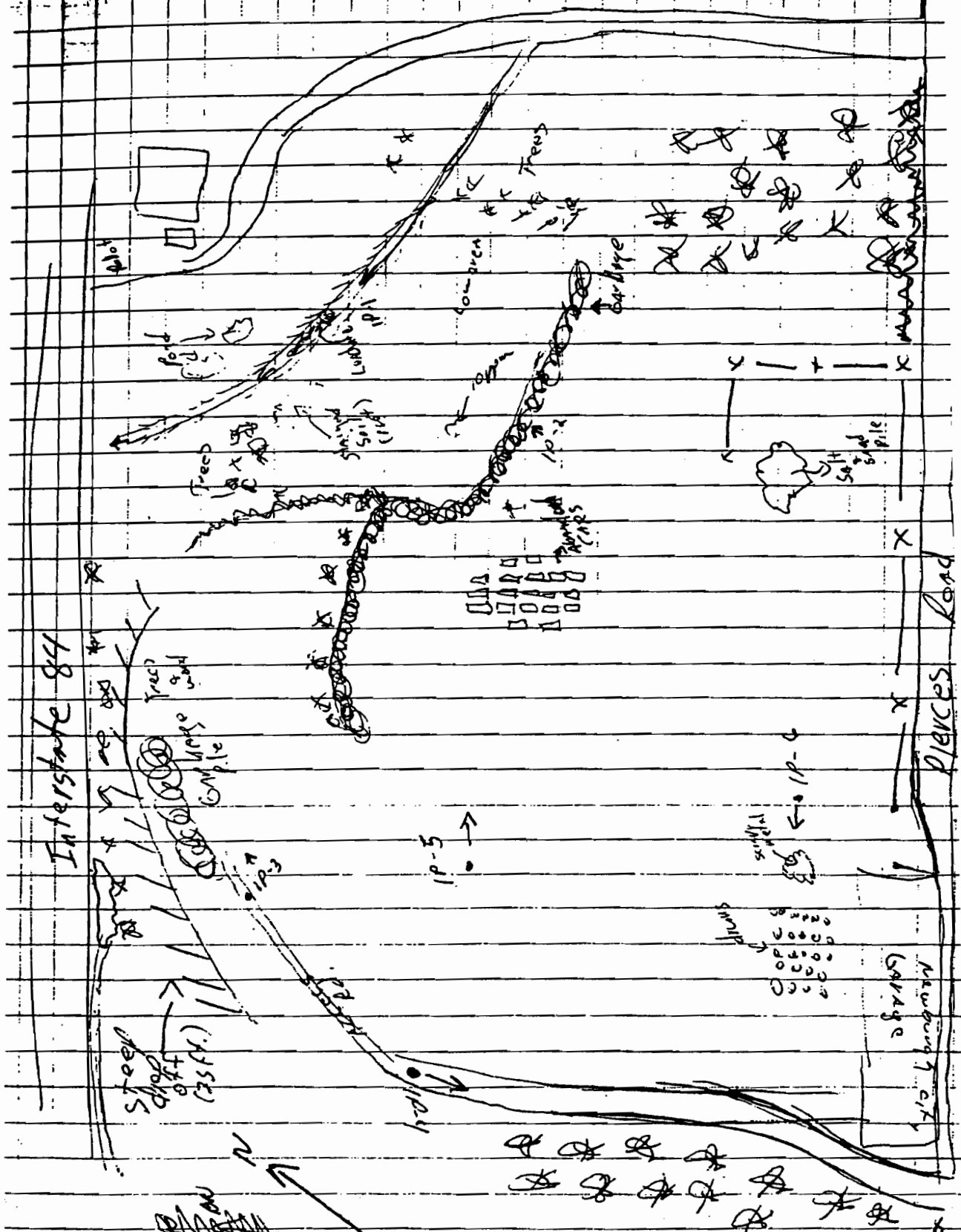
Robert H. Nies
6-17-87

Mark W 7/27

NY 55

02-8705-07

6-17-87



Robert S. King 6-24-87 Maudsl 7/27

NYTS

07-8708-07

6-17-87

8

1028 ready to enter site Joe & John
will be on air for recon

1030 on air

1035 1.4 on the OVA, nothing HNU
at area in clearing just above waste area.

1055 OVA 10 ppm

1040 - IP-1 of beech in drainage ditch

1059 off air

1103 - IP-2 of site ^{near} while we reconed looking
North East

1103- heading back to Decon.

1128- Back on air after changing cables (John & Joe)
- heading into site to recon new area.

1134- at back end of landfill (see IP-3)

- garbage on site - trees, shingles, rotten
metal & wood

- 1 drum

- no readings on HNU or OVA

1147 - reached end of landfill, steep drop off
to possible natural surface.

1145 - OVA 5 ppm then dropped off. Then 2 ppm
HNU 0

Robert L. Price 6-17-87 Marked 7/27

NY T5

02-8705-87

6-17-87

9

1149 - John getting readings along tree line
of 3 ppm ^{pathway} on HNU
- seems to be with wind blows

1153 - it appears that readings may be coming from
the shrub bushes. they entered
wooded ^{area} ~~area~~ readings jumped significantly
(6 ppm) - they shook tree and readings increased
- but nothing more when soil was
disturbed.
- just on OVA, nothing HNU

1156 - 1P-S of cars on site looking
Eastward

- going back toward Decm area.

1158 - John & Joe are off air.

1200 - Decomed and tapping SCBA's

1205 - getting ready to leave landfill area

1215 - begin driving around perimeter of
site to look for possible sampling
points and other pertinent info.

1230 - looked along ^{Interstate} Route 84 for illegal
Robert H. M. dumping - no evidence. ^{Muhlen 11/27}
6-29-87

NYTS

02-8705-07

6-17-87

10

1250 - back at site to speak w/ Bill Mott
he is trying to get me info from
the city records (wasp zone)

1304

~~1004~~^{PN}

leaving site, work finished

Robert M. Hill 6-24-87 Marked 7/27

DYFS 02-8705-07

7/8/87

11

UCIS personnel on site

Bob Nies

Jane Bullis

Gerry Grilliand

Mark Ellis

Mika Brunan

weather: hot & humid 75°-80°

Other personnel - Phil Roth - City
garage supervisor.

Robert A. Nies 7/8/87

Mark Ellis 7/27

NYTS

02-8705-07

7/8/87

12

0900 - arrived onsite meet w/ Bill Mott
 - he called city's office (engineers office)
 Bill is going to show me some maps
 of the city dump

0910 - leaving site to go to city office
 w/ ~~from~~ Mark Negron

0950 per Cornell will be sending me
 info (maps) of the site tomorrow
 the site used to be owned by Merritt Farm
 print property - wasn't landfill til city owned

1024 Jane Bullis giving Tailgate
 Safety meeting. Those present
 at the meeting were:

Bob Nies - Bob Nies
 Mike Brown - Michael Brown
 Mark Ellis - Mark Ellis
 Gerry Gilman - Gerry Gilman

1030

OVA - B

EPA # 307134

HWC -

EPA # 469747

MCAI - RAD

EPA # 469786

Robert J. Nies 7/8/87

Mark Ellis 7/27

NTTS

02-8705-07

7/8/87

13

1056 Gary Hilliard collecting SW-1
at east end of landfill in the
drainage culvert.

1058 160 ppm^{on OVA} in SW-1 after battle
nothing in breathing zone

- soil was disturbed and the
OVA pegged on the 1X scale
- nothing on HNU
2P-2 taking of G.C. collecting SW-1

1101 - 1 ppm in breathing zone for
SW-1 then ~~in~~ back down to 0
- nothing on the HNU

1106 - .6 on the OVA when collecting the
add'l sample
- nothing HNU.

1107 - Gary collects SED-1 at same location SW-1
2P-2 taking of G.C. collecting SED-1

1110 - lone rabbit on site

1114 - changed SW-2 sample to upstream
in order to get an observed release

Robert J. Hine 7/8/87

Mark OVA 7/27

Newburyl. LF. GR 870501

MTTS

7/8/97

14

1127

~~1027~~ BN

Mike taking SCE-2 in drainage
culvert crossing road behind East
side of the 18.

- no readings on OVA & HNU before
Mike started sampling.

1128

~~1028~~ BN

2P-2 taking on M.B. collecting
~~SW-2~~ SW-2

1128 BN

~~1030~~

- no reading while sampling SCE-2
on in drainage pipe.

1133 BN

~~1033~~

OVA reading of 16ppm in outer
bottle.
- nothing in breathing zone.

1139 BN

~~1039~~

Jane Bullis noticed deer prints
nwb to the drainage culvert.

1139 BN

~~1037~~

M.B. collects SED-2
no readings on HNU or OVA
in breathing or in bottles.
2P-4 of M.B. collecting SED-2

~~1045~~

1145 BN

M.B. collects S-1 - red staining
of surface soil.
sample is brown granular sand

2P-5 of M.B. collecting S-1

shot at 11 in 7/8/97

marked 7/27

MYTS

02-8705-07

7/8/87

15

1149 - ZP-6 taken of S-1 area
(note red staining)

1151 - ZP-7 taken of SW view of site.
- returning to Deon area.

1159 - at Deon area

1230 - back on site at S.B. B.N.
M.B. to collect soil

1240 - M.B. collects S-2 at northern
end of landfill. in the area of
most recent dumping. wood, appliances
& other garbage dumped on site.

ZP-8 taken of W.B. collecting S-2
- no readings on HNU or OVA
during sampling.

1300 - M.B. sampling S-3
- taken from freshly dumped soil
that may have come from the sewer pump
trunk that entered earlier today.
- no readings on HNU or OVA
ZP-9

1512 - M.B. collects S-^{SW}4

no readings on HNU or OVA

about 9:15 ZP-10 taken on freshly dumped material
7/8/87 marked 7/27

N.Y.T.S

02-8705-07

7/8/87

16

continued
from last
page. →

in the Northeast section of the landfill
the frozen food shop can be seen
in the distance looking N.E.
and Route 69 is to the N.

1322 - D.N. M.B. & J.B. return to suburban
to go back to the Leon area.

1357 - I just talked to Tom of the
city garage, he called Bill Wolt
to tell him the drums in
the back of the builders van from
he said the Newburgh based
company on Union St. (Williams St?)
He didn't know if they got
washed before bringing them
on site. ^{on} they still had
sticks on them that had
poison flammable hazards
but they were blocked out.

1358 - leaving site finishing up
the packaging of the samples &
cleaning up.

1430 leaving site

Robert N. Van 7/8/87

Mark H. 7/27

REFERENCE NO. 12

GEMS DATA

Hewlett-Packard (HP)

Model 90

Date: 01/30/2008

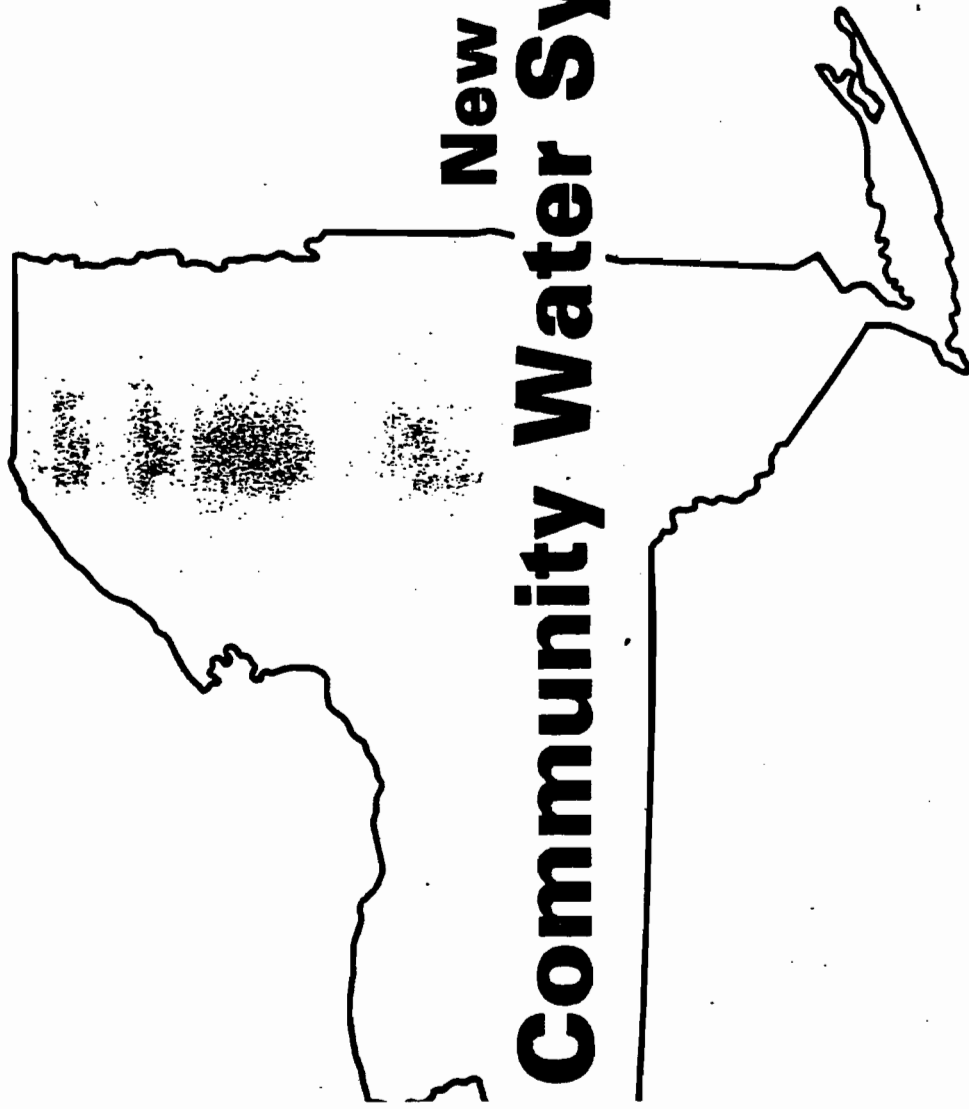
Long: 74°02'04"W

Data File of Dataset: NYTS

Number of Records = 6

REC #	TYPE	HOUSE	DISTANCE (km)	SECTOR	Houses	Total Population (within each indicated distance)
1	1	936	0.400000	1	265	265
2	1	0	0.810000	1		1933 + 265 = 2198
3	1	6498	1.600000	1		1933 + 6498 = 8431
4	1	83207	3.200000	1		8431 + 23,207 = 31,638
5	1	11805	4.800000	1		31,638 + 11,805 = 43,443
6	1	24718	6.400000	1		43,443 + 24,718 = 68,161

REFERENCE NO. 13



New York State Atlas of Community Water System Sources 1982

**NEW YORK STATE DEPARTMENT OF HEALTH
DIVISION OF ENVIRONMENTAL PROTECTION
BUREAU OF PUBLIC WATER SUPPLY PROTECTION**

FOREWARD

SOURCE LOCATIONS

The county maps in this atlas show the locations of surface water intakes and groundwater sources for community water systems in New York State. A community water system is defined in Part 5 of the New York State Sanitary Code as a public water system which serves at least five service connections used by year round residents or regularly serves at least 25 year round residents. Many different types of water systems are therefore included. Community water systems which purchase 100 percent of their water and have no sources of their own are not shown.

Each county map is accompanied by a list of the county's community water systems, population served, and source names. Systems are separated into MUNICIPAL COMMUNITY (program code 100) and NON-MUNICIPAL COMMUNITY (all other program codes) and listed alphabetically within each. MUNICIPAL COMMUNITY water systems are operated by a city, town, village, county or water authority or the water system may be a water district or privately owned. NON-MUNICIPAL COMMUNITY systems are primarily mobile home parks but also include apartments/condominiums, resident health care facilities, resident institutions, and federal facilities.

EXPLANATION OF SYMBOLS

Surface water intakes are designated on the county maps by a triangle (▲) accompanied by the corresponding water supply number.

Groundwater sources are designated by a dot (•) followed by the supply number. Multiple wells separated by less than 1000' and supplying the same water system are shown with one dot. Springs and infiltration galleries are shown as groundwater sources unless the local health unit has designated it a surface source. Therefore, springs and infiltration galleries are listed as wells (springal or wells (infiltration galleries)).

If a Community Water System has source(s) located outside the county, these sources are shown in the county list and show in parentheses the system number, county and page number. Conversely, when a county contains source(s) which supply community water systems located outside the county, the name of the system is also shown in that county's list of sources.

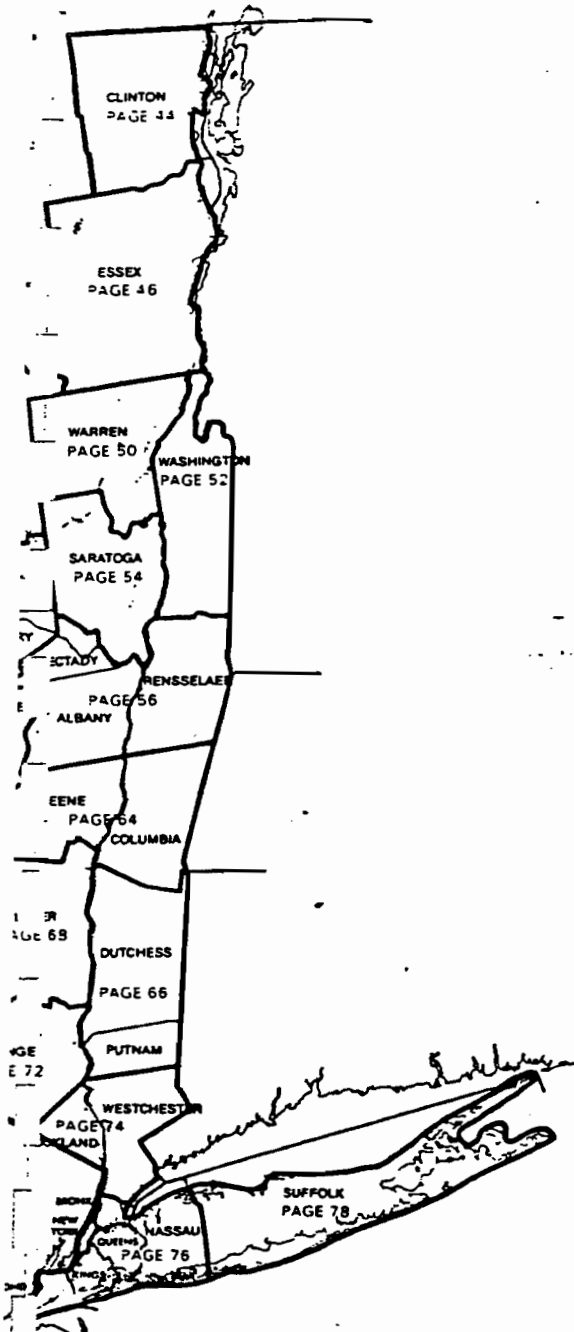
ACKNOWLEDGEMENT

Data compiled in this Atlas is based on location of community water system sources from visits, in 1979, to every county health unit in the State by technicians working for the Bureau of Public Water Supply Protection. This data was updated in 1982 through use of the Department of Health's SAFWATER computer inventory and through limited field review. The Bureau of Public Water Supply Protection wishes to acknowledge the following organizations who have made the Atlas possible:

To the United States Environmental Protection Agency for funding this Atlas as a part of the Underground Injection Control Program.

To the Cartography Section of the New York State Department of Transportation for providing the talent, time and effort in performing the necessary cartographic work to produce this Atlas.

To the engineers and technicians of the Bureau of Public Water Supply Protection of the New York State Department of Health for the painstaking work of gathering the basic data and cross checking it, and for leading the project through to completion.



LEGEND

BOUNDARIES AND PLACES

International	-----
State	-----
County	-----
Town	-----
Indian Reservation	-----
City	
Village	
Unincorporated Place	o
Federal Reservation	
Built-up Area (Over 25,000 population including any contiguous city or village)	-----

CLASSIFICATION OF POPULATED PLACES

100,000 or more	YONKERS
50,000 to 100,000	Levittown
12,500 to 50,000	Poughkeepsie
2,500 to 12,500	Hampton Bays
250 to 2,500	Borerville
250 or less	Corbett

TRANSPORTATION

Highways

Divided Highways	-----
Full Control of Access	-----
Partial or No Control of Access	-----
Undivided Highway	-----
Interchange	
Touring Route (State, U.S., Interstate) or State Parkway	-----
Touring Route Markers	
State: U.S.: Interstate	

Railroads

Operating Line	-----
Service Discontinued	-----
Operator	DELaware AND HUDSON
Owner (If Other than Operator)	(PENN CENTRAL)
Company Having Trackage Rights	(CONRAIL)

Airports (Open to the Public, Military)

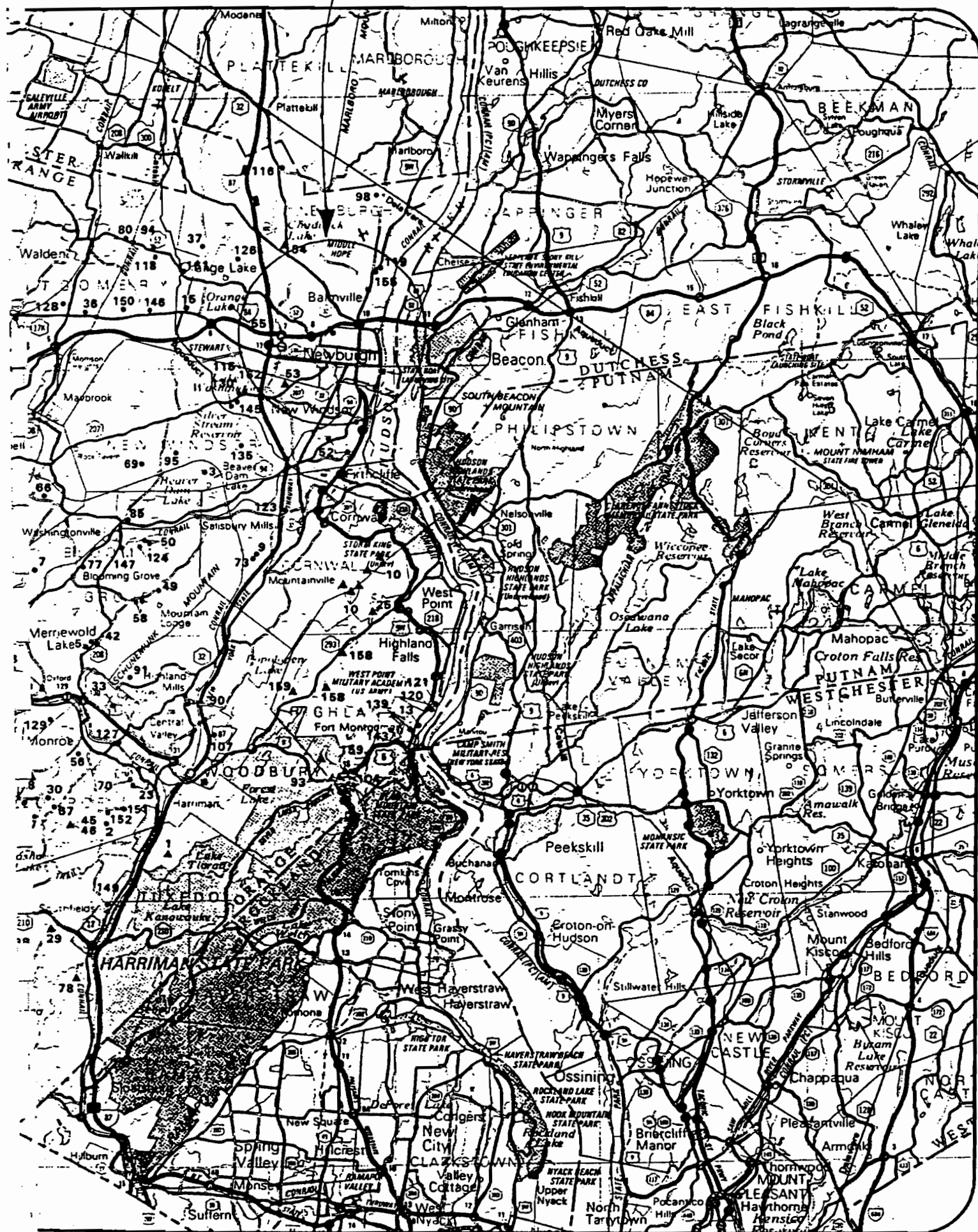
Runway under 4000'	✕
Runway over 4000'	-----

Rest Areas

Food, Gas, Rest Rooms	■
Rest Rooms	■
Gas, Rest Rooms	■
Parking Only	■

RECREATION FACILITIES

State or National Recreation Area	■
State Campground	■
State Boat Launching Site	■
State Canal Park	■
State Fish Hatchery	○
Other State Recreation Site	●



ORANGE COUNTY

ID NO	COMMUNITY WATER SYSTEM	POPULATION	SOURCE	ID NO	COMMUNITY WATER SYSTEM	POPULATION	SOURCE	ID NO	COMMUNITY WATER SYSTEM	POPULATION	SOURCE
Municipal Community											
1	Arden Farms Dairy Company.	60.	Echo Lake	71	State Hill (Green).	40.	Wells	136	Mt Hope Foundation-Residence.	35.	Wells
2	Arrow Park, Inc.	NA.	Wells	72	Squirrel Hills.	78.	Wells	137	Mt Orange Trailer Park.	40.	Wells
3	Beaver Dam Lake Development.	400.	Wells	73	Star Industries.	160.	Wells	138	MT Orange Trailer Park.	120.	Wells
4	Bellevue Park Water District.	100.	Wells	74	Stone Hedge Water Company.	160.	Wells	139	MT Orange Trailer Park.	120.	Wells
5	Blooming Grove Water District #1.	2000.	Wells	75	Sugar Leaf Hills.	125.	Wells	140	Old 9-W Realty Corp.	30.	Wells
6	Blooming Grove Water District #2.	80.	Wells	76	Surrey Meadow Water District.	900.	Wells	141	Old 9-W Realty Corp.	30.	Wells
7	Blooming Grove Water District #3.	200.	Wells	77	Tappan Homes.	536.	Wells	142	Pine Grove Trailer Park.	NA.	Wells
8	Blooming Grove Water District #4.	200.	Wells	78	Tuendo Park Village.	1800.	Wells	143	Pine Grove Trailer Park.	20.	Wells
9	Cornwall-on-Hudson, Main Line.	318.	Wells	79	Unionville Village.	576.	Wells	144	Rock Terrace Trailer Park.	110.	Wells
10	Cornwall-on-Hudson, Mt. Lino.	300.	Wells	80	Watsonville Village.	5500.	Wells	145	Schoerick Trailer Park.	105.	Wells
11	Deer Park Manor.	400.	Wells	81	Watkinsville Heights.	NA.	Wells	146	Silver Stream Trailer Court.	105.	Wells
12	Deer Park Manor.	130.	Wells	82	Watkinsville Heights.	12000.	Wells	147	Sleepy Hollow Mobile Park.	620.	Wells
13	Deer Park Manor.	50.	Wells	83	Watkinsville Heights.	5000.	Wells	148	Sleepy Hollow Mobile Park.	25.	Wells
14	Deer Park Manor.	200.	Wells	84	Watkinsville Heights.	4370.	Wells	149	South Maple Estates.	200.	Wells
15	Deer Park Manor.	225.	Wells	85	Watkinsville Heights.	NA.	Wells	150	South Maple Estates.	350.	Wells
16	Deer Park Manor.	2000.	Wells	86	Watkinsville Heights.	125.	Wells	151	St Patrick's Villa Group.	122.	Wells
17	Deer Park Manor.	400.	Wells	87	West Side Greenwood Lake	1800.	Wells	152	St Patrick's Villa Group.	122.	Wells
18	Deer Park Manor.	5000.	Wells	88	Whitlock Farms.	120.	Wells	153	Stoney Ford Trailer Park.	30.	Wells
19	Deer Park Manor.	2000.	Wells	89	Whitlock Farms.	1100.	Wells	154	Stoney Ford Trailer Park.	30.	Wells
20	Deer Park Manor.	750.	Wells	90	Whitlock Farms.	4500.	Wells	155	Stoney Ford Trailer Park.	30.	Wells
21	Deer Park Manor.	400.	Wells	91	Whitlock Farms.	360.	Wells	156	Thompson's Trailer Park.	35.	Wells
22	Deer Park Manor.	1800.	Wells	92	Whitlock Farms.	100.	Wells	157	Tri-State Trailer Park.	35.	Wells
23	Deer Park Manor.	200.	Wells	93	Whitlock Farms.	100.	Wells	158	U S M A - Stony Lunsmead	12000.	Wells
24	Deer Park Manor.	200.	Wells	94	Whitlock Farms.	100.	Wells	159	US Military Academy Lusk	NA.	Wells
25	Deer Park Manor.	5500.	Wells	95	Whitlock Farms.	100.	Wells	160	Valley View Park	150.	Wells
26	Deer Park Manor.	40.	Wells	96	Whitlock Farms.	100.	Wells	161	Valley View Park	150.	Wells
27	Deer Park Manor.	25.	Wells	97	Whitlock Farms.	100.	Wells	162	Valley View Park	150.	Wells
28	Deer Park Manor.	80.	Wells	98	Whitlock Farms.	100.	Wells	163	Valley View Park	150.	Wells
29	Deer Park Manor.	2000.	Wells	99	Whitlock Farms.	100.	Wells	164	Valley View Park	150.	Wells
30	Deer Park Manor.	15.	Wells	100	Whitlock Farms.	100.	Wells				
31	Deer Park Manor.	150.	Wells	101	Whitlock Farms.	100.	Wells				
32	Deer Park Manor.	200.	Wells	102	Whitlock Farms.	100.	Wells				
33	Deer Park Manor.	200.	Wells	103	Whitlock Farms.	100.	Wells				
34	Deer Park Manor.	360.	Wells	104	Whitlock Farms.	100.	Wells				
35	Deer Park Manor.	120.	Wells	105	Whitlock Farms.	100.	Wells				
36	Deer Park Manor.	120.	Wells	106	Whitlock Farms.	100.	Wells				
37	Deer Park Manor.	120.	Wells	107	Whitlock Farms.	100.	Wells				
38	Deer Park Manor.	120.	Wells	108	Whitlock Farms.	100.	Wells				
39	Deer Park Manor.	120.	Wells	109	Whitlock Farms.	100.	Wells				
40	Deer Park Manor.	120.	Wells	110	Whitlock Farms.	100.	Wells				
41	Deer Park Manor.	120.	Wells	111	Whitlock Farms.	100.	Wells				
42	Deer Park Manor.	120.	Wells	112	Whitlock Farms.	100.	Wells				
43	Deer Park Manor.	120.	Wells	113	Whitlock Farms.	100.	Wells				
44	Deer Park Manor.	120.	Wells	114	Whitlock Farms.	100.	Wells				
45	Deer Park Manor.	120.	Wells	115	Whitlock Farms.	100.	Wells				
46	Deer Park Manor.	120.	Wells	116	Whitlock Farms.	100.	Wells				
47	Deer Park Manor.	120.	Wells	117	Whitlock Farms.	100.	Wells				
48	Deer Park Manor.	120.	Wells	118	Whitlock Farms.	100.	Wells				
49	Deer Park Manor.	120.	Wells	119	Whitlock Farms.	100.	Wells				
50	Deer Park Manor.	120.	Wells	120	Whitlock Farms.	100.	Wells				
51	Deer Park Manor.	120.	Wells	121	Whitlock Farms.	100.	Wells				
52	Deer Park Manor.	120.	Wells	122	Whitlock Farms.	100.	Wells				
53	Deer Park Manor.	120.	Wells	123	Whitlock Farms.	100.	Wells				
54	Deer Park Manor.	120.	Wells	124	Whitlock Farms.	100.	Wells				
55	Deer Park Manor.	120.	Wells	125	Whitlock Farms.	100.	Wells				
56	Deer Park Manor.	120.	Wells	126	Whitlock Farms.	100.	Wells				
57	Deer Park Manor.	120.	Wells	127	Whitlock Farms.	100.	Wells				
58	Deer Park Manor.	120.	Wells	128	Whitlock Farms.	100.	Wells				
59	Deer Park Manor.	120.	Wells	129	Whitlock Farms.	100.	Wells				
60	Deer Park Manor.	120.	Wells	130	Whitlock Farms.	100.	Wells				
61	Deer Park Manor.	120.	Wells	131	Whitlock Farms.	100.	Wells				
62	Deer Park Manor.	120.	Wells	132	Whitlock Farms.	100.	Wells				
63	Deer Park Manor.	120.	Wells	133	Whitlock Farms.	100.	Wells				
64	Deer Park Manor.	120.	Wells	134	Whitlock Farms.	100.	Wells				
65	Deer Park Manor.	120.	Wells	135	Whitlock Farms.	100.	Wells				
66	Deer Park Manor.	120.	Wells	136	Whitlock Farms.	100.	Wells				
67	Deer Park Manor.	120.	Wells	137	Whitlock Farms.	100.	Wells				
68	Deer Park Manor.	120.	Wells	138	Whitlock Farms.	100.	Wells				
69	Deer Park Manor.	120.	Wells	139	Whitlock Farms.	100.	Wells				
70	Deer Park Manor.	120.	Wells	140	Whitlock Farms.	100.	Wells				
71	Deer Park Manor.	120.	Wells	141	Whitlock Farms.	100.	Wells				
72	Deer Park Manor.	120.	Wells	142	Whitlock Farms.	100.	Wells				
73	Deer Park Manor.	120.	Wells	143	Whitlock Farms.	100.	Wells				
74	Deer Park Manor.	120.	Wells	144	Whitlock Farms.	100.	Wells				
75	Deer Park Manor.	120.	Wells	145	Whitlock Farms.	100.	Wells				
76	Deer Park Manor.	120.	Wells	146	Whitlock Farms.	100.	Wells				
77	Deer Park Manor.	120.	Wells	147	Whitlock Farms.	100.	Wells				
78	Deer Park Manor.	120.	Wells	148	Whitlock Farms.	100.	Wells				
79	Deer Park Manor.	120.	Wells	149	Whitlock Farms.	100.	Wells				
80	Deer Park Manor.	120.	Wells	150	Whitlock Farms.	100.	Wells				
81	Deer Park Manor.	120.	Wells	151	Whitlock Farms.	100.	Wells				
82	Deer Park Manor.	120.	Wells	152	Whitlock Farms.	100.	Wells				
83	Deer Park Manor.	120.	Wells	153	Whitlock Farms.	100.	Wells				
84	Deer Park Manor.	120.	Wells	154	Whitlock Farms.	100.	Wells				
85	Deer Park Manor.	120.	Wells	155	Whitlock Farms.	100.	Wells				
86	Deer Park Manor.	120.	Wells	156	Whitlock Farms.	100.	Wells				
87	Deer Park Manor.	120.	Wells	157	Whitlock Farms.	100.	Wells				
88	Deer Park Manor.	120.	Wells	158	Whitlock Farms.	100.	Wells				
89	Deer Park Manor.	120.	Wells	159	Whitlock Farms.	100.	Wells				
90	Deer Park Manor.	120.	Wells	160	Whitlock Farms.	100.	Wells				
91	Deer Park Manor.	120.	Wells	161	Whitlock Farms.	100.	Wells				
92	Deer Park Manor.	120.	Wells	162	Whitlock Farms.	100.	Wells				
93	Deer Park Manor.	120.	Wells	163	Whitlock Farms.	100.	Wells				
94	Deer Park Manor.	120.	Wells	164	Whitlock Farms.	100.	Wells				
95	Deer Park Manor.	120.	Wells	165	Whitlock Farms.	100.	Wells				
96	Deer Park Manor.	120.	Wells	166	Whitlock Farms.	100.	Wells				
97	Deer Park Manor.	120.	Wells	167	Whitlock Farms.	100.	Wells				
98	Deer Park Manor.	120.	Wells	168	Whitlock Farms.	100.	Wells				
99	Deer Park Manor.	120.	Wells	169	Whitlock Farms.	100.	Wells				
100	Deer Park Manor.	120.	Wells	170	Whitlock Farms.	100.	Wells				

REFERENCE NO. 14

TO: Newburgh Landfill SI/HR5 report DATE: 1/5/88

FROM: Thomas Varner

COPIES:

SUBJECT: Topographic map

REFERENCE: A 3-mile vicinity map showing topographic features and other important data is located in the back pocket of this report.

REFERENCE NO. 15

NUS CORPORATION

TELECON NOTE

CONTROL NO:

02-8705-07

DATE:

6-16-87

TIME:

1000

DISTRIBUTION:

Newburgh file - Correspondence

BETWEEN:

John Hess

OF:

Newburgh City Water
dept.

PHONE:

(914) 561-6000

AND:

Robert G. Nies

(NUS)

DISCUSSION:

Surface water uses in Newburgh Vicinity:

(1) Browns Pond - used as back up Reservoir
to Washington Lake.

(2) NYC Aqueduct - feeds the New Windsor Supply

(3) Chadwick Lake - supplies the town
of Newburgh(4) Harrison Pond is used to backflush
screen. Amer textile utilizes this
but not for drinking- Groundwater is used in the vicinity but
he didn't know the amount (population).

ACTION ITEMS:

REFERENCE NO. 16

CONTROL NO:

C2-8705-07

DATE:

7-30-87

TIME:

0934

DISTRIBUTION:

file

BETWEEN:

Isibell Drobnar

OF:

City of Newburgh ^{water} Dept.

PHONE:

(914) 565-3356

AND:

Bob Nies

(NUS)

DISCUSSION:

She stated that there are not ^{private} wells within the city limits that are used for drinking or irrigation purposes. She also said that it was illegal to have a private well in the city without notification.

ACTION ITEMS:

REFERENCE NO. 17

TO: Newburgh Landfill file DATE: 1/5/88

FROM: Thomas Varner COPIES:

SUBJECT: Population using groundwater from private wells.

REFERENCE: - New York State Atlas of Community Water System Sources;
- GEMS Data;
- Telecon note: conversation between Mr. Ciro DiLorenzo, Newburgh (Township) Building Inspector's office, and Thomas Varner, NUS Corp., 12/30/87;
- U.S. Department of the Interior, Geological Survey Topographic Map, 7.5 minute series, "Newburgh Quadrangle 1985 and Cornwall Quadrangle," 1957 (photo revised 1981).
- Telecon note: Conversation between Mr. John Hess, Newburgh City Water Dept., and ^{THV 1/5/88} Thomas Varner Robert Nies, June 16, 1987.

Total population within 3 miles of the site: 43,463

- Population using surface water:

Lake Washington (Newburgh City) - 23,488

NYC Aqueduct (New Windsor) - $1450 \text{ houses} \times 3.8 = 5510$

- Population using community water supplies (wells):

municipal - 0

non-municipal - $25 \text{ (Hudson Valley Trailer Park)} + 36 \text{ (Sunset Trailer Court)} = 61$

Population which uses either private wells or - 14,404

Chadwick Lake within 3 miles of the site

Population which uses private wells = $65\% \times 14,404 = \underline{\underline{9,363}}$

REFERENCE NO. 18

CONTROL NO:

62-8706-11 / NYUISI

DATE:

8-18-87

TIME:

950

DISTRIBUTION:

DUPONT STAUFFER DURAMATE

BETWEEN:

MR. SCHLEIFER

OF: ORANGE CO. DEPT. of HEALTH
ENV. HEALTH DIV

PHONE:

(914) 674-7961

AND:

DENISE HORGAN

(NUS)

DISCUSSION:

RE: DRINKING WATER SUPPLY IN THE CITY OF NEWBURGH.

Mr. SCHLEIFER explained to me that the city of Newburgh is on city water supply. The municipal water supply is obtained from Lake Washington and Browns Pond and services a population of approximately 33,000. This municipal water supply also services a small population in Windsor. The total supply is approximately 4 mgd.

There are no residents in the city of Newburgh that have private drinking water wells. The only private wells are used for industrial purposes.

Windsor obtains its drinking water from the New York City Aqueduct. The township has wells that are used only for standby protection. There are also some private wells in Windsor used for drinking water supply.

Mr. SCHLEIFER said that within a 3-mile radius of

ACTION ITEMS:

SOUTH STREET IN NEWBURGH, there are no private wells used for drinking water purposes, all residents are on city water. Proceeding NORTH OF SOUTH STREET is the town of Newburgh whose residents are on public water supply; proceeding WEST of SOUTH STREET is still the City of Newburgh using public water supply; Proceeding South of South Street is Windsor and the

CONTROL NO:

DATE:

8-18-87

TIME:

DISTRIBUTION:

DUPONT STAUFFER DURAMAT CONT'D

BETWEEN:

OF:

PHONE:

()

AND:

(NUS)

DISCUSSION:

residents that would be included in the three mile radius
are hooked up to public water supply.

According to Mr. SCHLEIFER There is no irrigation within
a 3-mile radius of South Street.

~~_____~~
~~_____~~
The creek is primarily storm water drainage and
also used by the Vonnegut Sewage Plant.

ACTION ITEMS:

REFERENCE NO. 19

SIGNIFICANT HABITAT OVERLAY NO. 1 OF 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

DIVISION OF FISH AND WILDLIFE
BUREAU OF WILDLIFE



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

PREPARED BY: HABITAT INVENTORY UNIT

QUAD: SCRANTON, PA.

SCALE: 1:250,000

MARCH, 1981

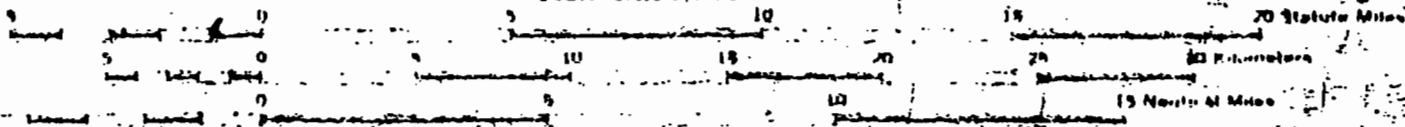
REVISED: 11/6/85

KEY

- (SW) SIGNIFICANT FOR WILDLIFE
- (SP) SIGNIFICANT FOR PLANTS
- (SB) SIGNIFICANT FOR WILDLIFE AND PLANTS
- (PW) POTENTIALLY SIGNIFICANT FOR WILDLIFE
- (PP) POTENTIALLY SIGNIFICANT FOR PLANTS
- (PB) POTENTIALLY SIGNIFICANT FOR WILDLIFE AND PLANTS
- (OT) OTHER (e.g. UNIQUE GEOLOGICAL FORMATIONS)

BOSTON
RICHMOND
EVANSTON
Hartford
New York

Scale 1:250,000



CONTOUR INTERVAL 100 FEET
WITH SUPPLEMENTARY CONTOURS AT 50 FOOT INTERVALS

TRANSVERSE MEASUREMENT PROJECTION

BEACH MEASUREMENTS, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, BUREAU OF WILDLIFE

ALL MEASUREMENTS ARE BASED ON THE 1980 EARTHQUAKE DATA. THE DATA IS BASED ON THE 1980 EARTHQUAKE DATA. THE DATA IS BASED ON THE 1980 EARTHQUAKE DATA.

FOR SALE BY U.S. GEOLOGICAL SURVEY RESTON VIRGINIA 22092

SIGNIFICANT HABITAT OVERLAY NO. 2 OF 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION



DIVISION OF FISH AND WILDLIFE
BUREAU OF WILDLIFE

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

PREPARED BY: HABITAT INVENTORY UNIT

QUAD: SCRANTON, PA.

SCALE: 1:250,000

MARCH, 1981

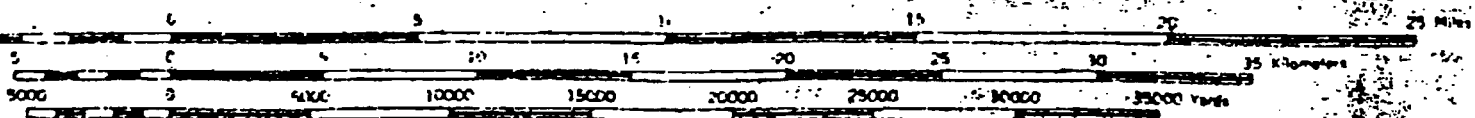
REVISED: 11/6/85

Scale: 1:250,000

- (DC) DEER CONCENTRATION AREA IN USE
- (DN) DEER CONCENTRATION AREA NOT IN USE
- (DA) DEER CONCENTRATION AREA - AERIAL SURVEY
- (X) EXCLUDED AREA

FOR SALE BY U.S. GEOLOGICAL SURVEY, WASHINGTON, VIRGINIA 22024

Scale: 1:250,000



CONTOUR INTERVAL 100 FEET

TRANSVERSE MERCATOR PROJECTION
NAD 83 NORTH AMERICAN DATUM

100,000 FOOT GRIDS BASED ON NEW YORK COORDINATE SYSTEM CENTRAL AND EAST ZONES
1000-METER UNIVERSAL TRANSVERSE MERCATOR GRID ZONE IN SHOWN IN BLUE

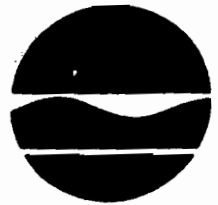
100,000 FOOT GRID FOR THIS SHEET BASED ON THE 1983 DATUM AND THE 1983 ZONE
EDGE OF THE DATUM AND THE CENTER OF THE DATUM GRID ZONE CHANGE IS 100,000 FEET

FOR SALE BY U.S. GEOLOGICAL SURVEY, WASHINGTON, D.C. 20244



REFERENCE NO. 20

New York State Department of Environmental Conservation
Wildlife Resources Center
Delmar, NY 12054



Thomas C. Jorling
Commissioner

October 09, 1987

Ms. Denise Horgan
NUS Corporation
1090 King George's Post Road
Suite 1103
Edison, NJ 08837

Dear Ms. Horgan:

We have reviewed the Significant Habitat Program and the Natural Heritage Program files with respect to the hazardous waste site in the City of Newburgh, Orange County, NY.

We have identified the following potential concerns:

SW 36-038 Snake Hill is former habitat for a state listed threatened species. This area is located on the Cornwall quadrangle in the southwest corner of the City of Newburgh.

Our files are continually growing as new habitats and occurrences of rare species and communities are discovered. In most cases, site-specific or comprehensive surveys for plant and animal occurrences have not been conducted. For these reasons, we can only provide data which have been assembled from our files. We cannot provide a definitive statement on the presence or absence of species, habitats or natural communities. This information should not be substituted for on-site surveys that may be required for environmental assessment.

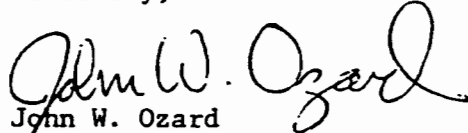
This response applies only to known occurrences of rare animals, plants and natural communities and/or significant wildlife habitats. You should contact our regional offices(s), Division of Regulatory Affairs, at the address(es) enclosed for information regarding any regulated areas or permits that may be required (e.g., regulated wetlands) under State law.

New York Natural Heritage Program is supported in part
by The Nature Conservancy

If this project is still active one year from now we recommend that you contact us again so that we may update this response.

If we can be of further assistance please do not hesitate to contact us.

Sincerely,

A handwritten signature in dark ink, appearing to read "John W. Ozard". The signature is fluid and cursive, with the first name "John" and last name "Ozard" clearly distinguishable.

John W. Ozard
Senior Wildlife Biologist
Significant Habitat Unit

cc: A. Breisch
G. Cole ATTN: J. Hermes

JWO:sjs

REFERENCE NO. 21

Dangerous Properties of Industrial Materials

Sixth Edition

N. IRVING SAX

Assisted by:

Benjamin Feiner/Joseph J. Fitzgerald/Thomas J. Haley/Elizabeth K. Weisburger



VAN NOSTRAND REINHOLD COMPANY
NEW YORK CINCINNATI TORONTO LONDON MELBOURNE

CONTROL NO:

02-8705-07

DATE:

6-4-87

TIME:

1342

DISTRIBUTION:

Newburgh Correspondence file

BETWEEN:

Bill Mott

OF:

City of Newburgh

PHONE:

(914) 565-3297

AND:

Robert Nies

(NUS)

DISCUSSION:

The landfill was started in the late 1940's and was in operation from till the 1970's. The majority of the waste was household garbage. The site covered approx 40 acres. Dupont disposed of garbage waste at the site about 10 to 20 years ago. No known chemical or industrial waste disposed of on site by Dupont.

When Route 89 was put in the landfill burned for 2 weeks as^{BN} resulting from the spreading of surface^{BN} burning of trees and stumps cut down during the construction process.

Today trees, leaves & bushes are burned at the site under permit. The facility has 31 employees. Some illegal dumping in back of property.

ACTION ITEMS:

None