02-8706-13-SI
REV. 3

FINAL
SITE INSPECTION REPORT
AND HAZARD RANKING SYSTEM MODEL
US PIPE AND FOUNDRY
BURLINGTON, NEW JERSEY

PREPARED UNDER

TECHNICAL DIRECTIVE DOCUMENT NO.02-8403-64A
CONTRACT NO. 68-01-6699

REVISED UNDER TECHNICAL DIRECTIVE DOCUMENT NO.02-8706-13
CONTRACT NO. 68-01-7346

FOR THE

ENVIRONMENTAL SERVICES DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY

JUNE 7, 1985
(REVISION 1: JUNE 27, 1987)
(REVISION 2: SEPTEMBER 22, 1987)
(REVISION 3: NOVEMBER 2, 1987)

NUS CORPORATION
SUPERFUND DIVISION

SUBMITTED BY

CHARLES LOBUE
PROJECT MANAGER

REVIEWED/APPROVED BY

STUART FERGUSON
FIT OFFICE MANAGER

278103

REVISION STATUS

This SI Report was issued on June 7, 1985 and with revisions issued on June 27, 1987, September 22, 1987, and November 2, 1987.

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SECTION 1

SITE INSPECTION REPORT EXECUTIVE SUMMARY

NUS CORPORATION
A Halliburton Company

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
EXECUTIVE SUMMARY

U.S. Pipe and Foundry Co.
Site Name

NJD002347565
EPA Site ID Number

East Pearl Street, Burlington City, NJ
Address

02-8403-64A
TDD Number

SITE DESCRIPTION

U.S. Pipe and Foundry Co. is comprised of the Industrial Products Division and the Pipe Products Division. The Pipe Products Division melts ferrous metals and manufactures gray and ductile cast iron pipe for sewer and water lines.

Wastes generated consist of asphalt paint sludge, waste oil, slag from melting and treating operations, dust collected from the baghouses, cupola drop and cement lining washout. These items are collected at various points throughout the facility and taken for deposit to the plant's landfill.

The facility has allocated thirty-five acres for landfilling. Thus far only seventeen acres have been used. The landfill has no known clay or synthetic liners and no leachate collection system. This landfill is located in a former gravel pit.

In the industrial facilities area an unlined settling pond receives process wastewater which contains water-soluble cutting oil. Effluents from this settling pond are recirculated to the process. A settling basin receives washwater containing sand and cement from the pipe lining process. Overflow from this facility is directed under NPDES permit, to the Burlington City sanitary sewer which discharges directly into the Delaware River. The sanitary landfill and settling pond are unlined therefore a NJPDES discharge to groundwater permit was issued in 1983 which required installation and sampling of monitoring wells.

The following are potential sources for contamination of groundwater and surface water. Two storage basins exist that hold asphalt -based paint sludges prior to deposition in the landfill. The basins are not equipped with runoff diversion structures and containment of the sludges appears inadequate. Numerous drums have been observed, including approximately 27 which are apparently leaking asphalt-based sludge and oil. In addition, soil saturation by oily substances has been observed.

(See Attachment)

HAZARD RANKING SCORE: $S_m = 29.06$ ($S_{gw} = 26.37$, $S_{sw} = 42.80$, $S_a = 0$) $S_{dc} = 62.50$

Prepared by: Charles LoBue
of NUS Corporation

Date: 9/22/87

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ATTACHMENT

Site surface runoff flows into a collection basin that discharges into the Delaware River. New Jersey Department of Environmental Protection (NJDEP) reports that discharges to the river continued after NPDES permits expired in November, 1976. On 9/5/84 and 9/6/84, FIT II conducted a site inspection. Six groundwater, one surface water, and nine soil samples were collected.

SECTION 2

ENVIRONMENTAL PROTECTION AGENCY FORM 2070-13

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NJ	0002347565

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
U.S. Pipe and Foundry Co.	East Pearl Street

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Burlington City	NJ	08016	Burlington	005	04

09 COORDINATES LATITUDE	LONGITUDE	10 TYPE OF OWNERSHIP (Check one)
40° 05' 00". N	074° 50' 05". W	☒ A. PRIVATE ☐ B. FEDERAL ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL ☐ F. OTHER ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
9 / 5 / 84 (MONTH DAY YEAR)	☒ ACTIVE ☐ INACTIVE	1955 (BEGINNING YEAR) / Present (ENDING YEAR) ___ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)

☐ A. EPA ☒ B. EPA CONTRACTOR NUS Corporation (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR ___ (Name of firm)
☐ E. STATE ☐ F. STATE CONTRACTOR ___ (Name of firm) ☐ G. OTHER ___ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
William Neal	Environmental Scientist	NUS Corp.	(201) 225-6160

09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
Dennis Farley	Geologist	NUS Corp.	(201) 225-6160
Tony Russo	Biologist	NUS Corp.	(201) 225-6160
Michael Nicholas	Geologist	NUS Corp.	(201) 225-6160
Art Clarke	Chemist	NUS Corp.	(201) 225-6160
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
John Watson	Senior Envir. Engineer	U.S. Pipe and Foundry Co. Birmingham ALA 35202	(205) 254-7434
Paul Waxmonski	Engineer	U.S. Pipe and Foundry Co. Burlington, NJ 08016	(609) 386-1850
Jim Schrager	Plant Engineer	U.S. Pipe and Foundry Co. Burlington, NJ 08016	(609) 386-1850
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT	1050 hrs on 9/5/84 0930 hrs on 9/6/84	Sunny, clear, 70°-75°

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
Mark Haulenbeek	U.S. EPA Region II	(201) 321-6685

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Michael Nicholas/ Charles LoBue		NUS Corp. FIT II	201-225-6160	11 / 15 / 84 (MONTH DAY YEAR)

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NJ	D002347555

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

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

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

TONS _____
CUBIC YARDS 67
NO. OF DRUMS 27

03 WASTE CHARACTERISTICS (Check all that apply)

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

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE	Unknown	gallons	Asphalt based paint sludge
OLW	OILY WASTE	Unknown	gallons	
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS	17	acres	landfill consists of scrap ferrous metal slag, coke, emission bag house dust

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

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
SLU	Asphalt paint sludge	Unknown	two 30' x 30' x 4' pits	Unknown	Unknown
FDS	#4 oil	Unknown	above and below ground tanks	Unknown	Unknown
FDS	Cutting oil	Unknown	Above and below ground tanks	Unknown	Unknown
FDS	Diesel	Unknown	Above and below ground tanks	Unknown	Unknown
FDS	Gasoline	Unknown	Above and below ground tanks	Unknown	Unknown
FDS	Paint Thinner	Unknown	Below ground tank	Unknown	Unknown
FDS	Asphalt paint	Unknown	Below ground tank	Unknown	Unknown
FDS	#6 Oil	Unknown	Below ground tank	Unknown	Unknown
FDS	#2 Oil	Unknown	Below ground tank	Unknown	Unknown
FDS	#1 Oil	Unknown	Below bround tank	Unknown	Unknown

V. FEEDSTOCKS (See Appendix for CAS Numbers)

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

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

NUS FIT II Site Inspection 9/5/84 and 9/6/84
EPA - Detailed SPCC Documentation form dated 8/4/82

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POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT

PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NJ	0002347565

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ A. GROUNDWATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 12,000
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

The potential for groundwater contamination and migration is high due to the permeable soil found in the area. Burlington Township public supply wells and private wells exist within three miles of the site.

01 ☒ B. SURFACE WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 10,546
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

The facility maintains one discharge point to the Delaware River. The effluent discharged comes from the storm water collection system.

01 ☒ C. CONTAMINATION OF AIR
03 POPULATION POTENTIALLY AFFECTED: 1,500
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None observed. The potential exists as a result of the facility's melting processes and the emissions produced.

01 ☒ D. FIRE/EXPLOSIVE CONDITIONS
03 POPULATION POTENTIALLY AFFECTED: <50
02 ☒ OBSERVED (DATE: 9/5/84) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Leaking drums containing asphalt based paint sludge and oil, pose a potential for fire/explosive conditions.

01 ☒ E. DIRECT CONTACT
03 POPULATION POTENTIALLY AFFECTED: 1111
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

The potential exists for direct contact with oil laden soil.

01 ☒ F. CONTAMINATION OF SOIL
03 AREA POTENTIALLY AFFECTED: 3 (Acres)
02 ☒ OBSERVED (DATE: 9/5/84) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Soil, laden with cutting oil and paint sludge, was observed at various parts of the facility.

01 ☒ G. DRINKING WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 22,546
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

The Burlington City Water Plant and river intake station, which is located a half mile downstream from the facility, may be affected. Burlington Township Water Works supply wells #1, 2, 3 & 4 are located about 2.7 miles from the site.

01 ☒ H. WORKER EXPOSURE/INJURY
03 WORKERS POTENTIALLY AFFECTED: 370
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Workers have a limited potential of being exposed to polychlorinated biphenyls and oil contaminated soil.

01 ☒ I. POPULATION EXPOSURE/INJURY
03 POPULATION POTENTIALLY AFFECTED: 31,052
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

The potential for population exposure exists due to potential drinking water contamination.

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NJ	D002347565

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

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

None observed. The potential exists for water runoff from the industrial facility and 17-acre landfill to damage flora.

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

Site surface runoff into the Delaware River presents a potential for damage to endangered species such as shortnose sturgeon and commercially important and threatened species such as shad, herring and striped bass.

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

Site surface runoff into the Delaware River presents a potential for contamination of a habitat for the feeding , migrating, spawning and development of important food species, shad, herring and striped bass.

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES (Spills, Runoff, Standing liquids, Leaking drums) — 02 ☒ OBSERVED (DATE: 9/5/84) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 10,641 — 04 NARRATIVE DESCRIPTION

Several drums containing asphalt paint sludge and oil were observed to be leaking. Two sludge storage basins have no runoff diversion systems.

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

None observed, no potential exists.

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

The facility discharges water from the wastewater settling pond directly to the Burlington City sanitary sewer system.

01 ☒ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☒ OBSERVED (DATE. 9/5/84) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Garbage debris was observed ten feet from Pearl Street at the northern end of property.

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

None

III. TOTAL POPULATION POTENTIALLY AFFECTED: 31,052

IV. COMMENTS

None

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

NUS FIT II Site Inspection 9/5/84 and 9/6/84
Telecon: Mr. Paul Scully, Burlington Township Water Dept. and C. LoBue, NUS Corp. 6/24/87
Telecon: Mr. Joe Fahey, Burlington City Water Works and C. LoBue NUS Corp. 6/25/87
U.S. G.S. Topographic Map, Bristol, Quad

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NJ	D002347565

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 NJ	5266	10-1-84	10-1-89	For discharge to Delaware River and Burlington City sanitary sewer.
☐ B. UIC	5266	8-1-84	8-1-87	For discharge to Sanitary landfill.
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☒ F. SPCC PLAN	018557	6/7/82	Unknown	
☒ G. STATE (Specify)	NJ005266	Unknown	Unknown	Three year permit to monitor 3
☐ H. LOCAL (Specify)				wells surrounding landfill.
☐ I. OTHER (Specify)				
☐ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☒ A. SURFACE IMPOUNDMENT	67	Cu.Yd.
☐ B. PILES		
☒ C. DRUMS, ABOVE GROUND	27	Drums
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☒ F. LANDFILL	17	acres
☐ G. LANDFARM		
☐ H. OPEN DUMP		
☐ I. OTHER (Specify)		

04 TREATMENT (Check all that apply)

- ☐ A. INCENERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER (Specify)

05 OTHER

☒ A. BUILDINGS ON SITE
25
2 plant production divisions

06 AREA OF SITE

100 (Acres)
17 acres used for disposal area

07 COMMENTS

There are thirty-five acres allocated for landfilling of which only 17 acres have been used. The landfill is presently (9/6/84) 10'-15' above original ground surface. The wastewater settling pond receives water soluble cutting oil which is discharged under permit to the Burlington City sanitary sewer system. The sediment in the settling pond is discharged to the sanitary landfill. During the Site Inspection a broken hydraulic line was leaking hydraulic oil into the unlined cement settling lagoon. There are two 30' x 30' storage basins containing asphalt-based paint sludge.

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

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

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

No known clay or snythetic liners are present at landfill. The two paint sludge pits are lined with cement and have piled sand at the mouth for easy disposal and cleaning access. The wastewater settling pond is lined with cement. Several 55 gallon drums were observed to be leaking.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☐ YES ☒ NO

02 COMMENTS

The 17 acre landfill is the only accessible part of the facility. This area is fenced on two sides and surrounded by heavily wooded areas on the other two sides.

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

NUS FIT II Site Inspection 9/5/84 and 9/6/84

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NJ	000234565

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)

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

02 STATUS

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

03 DISTANCE TO SITE
A. 0.1 (surface water) 1.4 (well) (mi)
B. 0.5 (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

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

02 POPULATION SERVED BY GROUND WATER 12,000

03 DISTANCE TO NEAREST DRINKING WATER WELL 1.4 (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
6-10 (ft)	Northwest	6-10 (ft)	38.96×10^6 (gpd)	☐ YES ☒ NO

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

There are 29 wells within a 2 mile radius of the site with a 70 gpm capacity or greater. The depths of these wells range from 50 ft. to 270 ft. Approximately half of these wells are used for drinking and half for irrigation and industrial purposes. On site there were six monitoring wells sampled. These wells have two inch I.D. and 0.010 inch machine slotted PVC well screens. Monitoring well depth ranges from 24 ft to 36 ft.

10 RECHARGE AREA
☐ YES
☒ NO
COMMENTS

11 DISCHARGE AREA
☒ YES
☐ NO
COMMENTS The facility is located adjacent to the Delaware River.

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
Delaware River	☐	0.0 (mi)
Delaware Bay	☐	50.0 (mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. 1,111 NO. OF PERSONS	B. 29,418 NO. OF PERSONS	C. 51,000 NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION 0.1 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE >2600

04 DISTANCE TO NEAREST OFF-SITE BUILDING 0.1 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

The area south and west of the site is moderately dense in population. To the east of the site is a more rural type population.

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

I. IDENTIFICATION

01 STATE: NJ | 02 SITE NUMBER: D002347555

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

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

02 PERMEABILITY OF BEDROCK (Check one)

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

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH
5-10 (ft)	Unknown (ft)	Unknown

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
10 (in)	2.8 (in)	<3% %	Northwest	<3% %

09 FLOOD POTENTIAL

SITE IS IN 100 YEAR FLOODPLAIN

10 river borders site on the northwest
☒ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE	OTHER
A 45 (mi)	B 5 (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

>1.0 (mi)

ENDANGERED SPECIES Not applicable

13 LAND USE IN VICINITY

DISTANCE TO

COMMERCIAL INDUSTRIAL	RESIDENTIAL AREAS, NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AGRICULTURAL LANDS: AG LAND
A. 0.1 (mi)	B 0.1 (mi)	C. >3.0 (mi)	D >3.0 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The site is located on the bank of the Delaware River and has a slope of less than 3%. The facility is built on the Raritan and Magothy formation, a medium to coarse grained quartz sand, which outcrops along the Delaware River in Burlington and Burlington County.

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

NUS FIT II Site Inspection 9/5/84 and 9/6/84
U.S. Geological Survey Open-File Report 81-405
USGS Topographic Map 7.5' series
H.P. Drilling Inc., Drilling Logs
Malcolm Pirnie Hydrogeologic Map

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NJ	D002347565

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO Organics	Inorganics	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER	6	Radian Corp.	Versar Inc.	11/6/84
SURFACE WATER	1	Radian Corp.	Versar Inc.	11/6/84
WASTE				
AIR				
RUNOFF				
SPILL				
SOIL	9	Radian Corp.	Versar Inc.	11/6/84
VEGETATION				
OTHER				

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
Air Quality	Organic vapor analyser and HNu photoionization detector, no readings above background.

IV. PHOTOGRAPHS AND MAPS

01 TYPE ☒ GROUND ☐ AERIAL

02 IN CUSTODY OF NUS Corporation, FIT II Edison, N.J.
(Name of organization or individual)

03 MAPS ☒ YES ☐ NO

04 LOCATION OF MAPS Site location map and site map attached. Plan maps of site in FIT II Files.

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

Field Notebook - TDD# 02-8403-64A
Photographs - refer to Exhibit A-1

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

NUS Site Insepction 9/5/84 and 9/6/84

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NJ	D002347565

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER
U.S. Pipe and Foundry Co.	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
East Pearl Street	3325

05 CITY	06 STATE	07 ZIP CODE
Burlington	NJ	08016

01 NAME	02 D+B NUMBER

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

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

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

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

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

05 CITY	06 STATE	07 ZIP CODE

PARENT COMPANY (If applicable)

08 NAME	09 D+B NUMBER
Jim Walters Corp.	

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE
phone # (813) 871-4811	

12 CITY	13 STATE	14 ZIP CODE
Tampa	Fl	

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER

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

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

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

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

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

05 CITY	06 STATE	07 ZIP CODE

IV. REALTY OWNER(S) (If applicable; list most recent first)

01 NAME	02 D+B NUMBER

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

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

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

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

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

05 CITY	06 STATE	07 ZIP CODE

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

NUS FIT II Site Inspection 9/5/84 and 9/6/84

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NJ	D002347565

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME: U.S. Pipe and Foundry Co.	02 D+B NUMBER:
03 STREET ADDRESS (P.O. Box, RFD #, etc.): East Pearl Street	04 SIC CODE: 3325
05 CITY: Burlington	06 STATE: NJ / 07 ZIP CODE: 08016
08 YEARS OF OPERATION: 100 years	09 NAME OF OWNER:

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME: same as parent co.	11 D+B NUMBER:
12 STREET ADDRESS (P.O. Box, RFD #, etc.):	13 SIC CODE:
14 CITY:	15 STATE: / 16 ZIP CODE:

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

01 NAME:	02 D+B NUMBER:
03 STREET ADDRESS (P.O. Box, RFD #, etc.):	04 SIC CODE:
05 CITY:	06 STATE: / 07 ZIP CODE:
08 YEARS OF OPERATION:	09 NAME OF OWNER DURING THIS PERIOD:

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

10 NAME:	11 D+B NUMBER:
12 STREET ADDRESS (P.O. Box, RFD #, etc.):	13 SIC CODE:
14 CITY:	15 STATE: / 16 ZIP CODE:

01 NAME:	02 D+B NUMBER:
03 STREET ADDRESS (P.O. Box, RFD #, etc.):	04 SIC CODE:
05 CITY:	06 STATE: / 07 ZIP CODE:
08 YEARS OF OPERATION:	09 NAME OF OWNER DURING THIS PERIOD:

10 NAME:	11 D+B NUMBER:
12 STREET ADDRESS (P.O. Box, RFD #, etc.):	13 SIC CODE:
14 CITY:	15 STATE: / 16 ZIP CODE:

01 NAME:	02 D+B NUMBER:
03 STREET ADDRESS (P.O. Box, RFD #, etc.):	04 SIC CODE:
05 CITY:	06 STATE: / 07 ZIP CODE:
08 YEARS OF OPERATION:	09 NAME OF OWNER DURING THIS PERIOD:

10 NAME:	11 D+B NUMBER:
12 STREET ADDRESS (P.O. Box, RFD #, etc.):	13 SIC CODE:
14 CITY:	15 STATE: / 16 ZIP CODE:

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

NUS FIT II Site Inspection 9/5/84 and 9/6/84

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NJ	D002347565

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
U.S. Pipe and Foundry Co.	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
East Pearl Street	3325

05 CITY	06 STATE	07 ZIP CODE
Burlington	NJ	08016

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
Not Applicable			

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

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
Not Applicable			

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)

NUS FIT II Site Inspection 9/5/84 and 9/6/84

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NJ	D002347565

II. PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No Reported History

01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No Reported History

01 ☐ C. PERMANENT WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No Reported History

01 ☐ D. SPILLED MATERIAL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No Reported History

01 ☐ E. CONTAMINATED SOIL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No Reported History

01 ☐ F. WASTE REPACKAGED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No Reported History

01 ☐ G. WASTE DISPOSED ELSEWHERE — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No Reported History

01 ☐ H. ON SITE BURIAL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No Reported History

01 ☐ I. IN SITU CHEMICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No Reported History

01 ☐ J. IN SITU BIOLOGICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No Reported History

01 ☐ K. IN SITU PHYSICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No Reported History

01 ☐ L. ENCAPSULATION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No Reported History

01 ☐ M. EMERGENCY WASTE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No Reported History

01 ☐ N. CUTOFF WALLS — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No Reported History

01 ☐ O. EMERGENCY DIKING/SURFACE WATER DIVERSION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No Reported History

01 ☐ P. CUTOFF TRENCHES/SUMP — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No Reported History

01 ☐ Q. SUBSURFACE CUTOFF WALL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No Reported History

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NJ	D002347565

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No Reported History

01 ☐ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No Reported History

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No Reported History

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No Reported History

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No Reported History

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No Reported History

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No Reported History

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No Reported History

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No Reported History

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No Reported History

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No Reported History

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None

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

NUS FIT II Site Inspection 9/5/84 and 9/6/84

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NJ	D0023475656

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☐ YES ☒ NO

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

None

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

NUS FIT II Site Inspection 9/5/84 and 9/6/84
U.S. EPA Region II, Environmental Services Division Files

SECTION 3

MAPS AND PHOTOGRAPHS

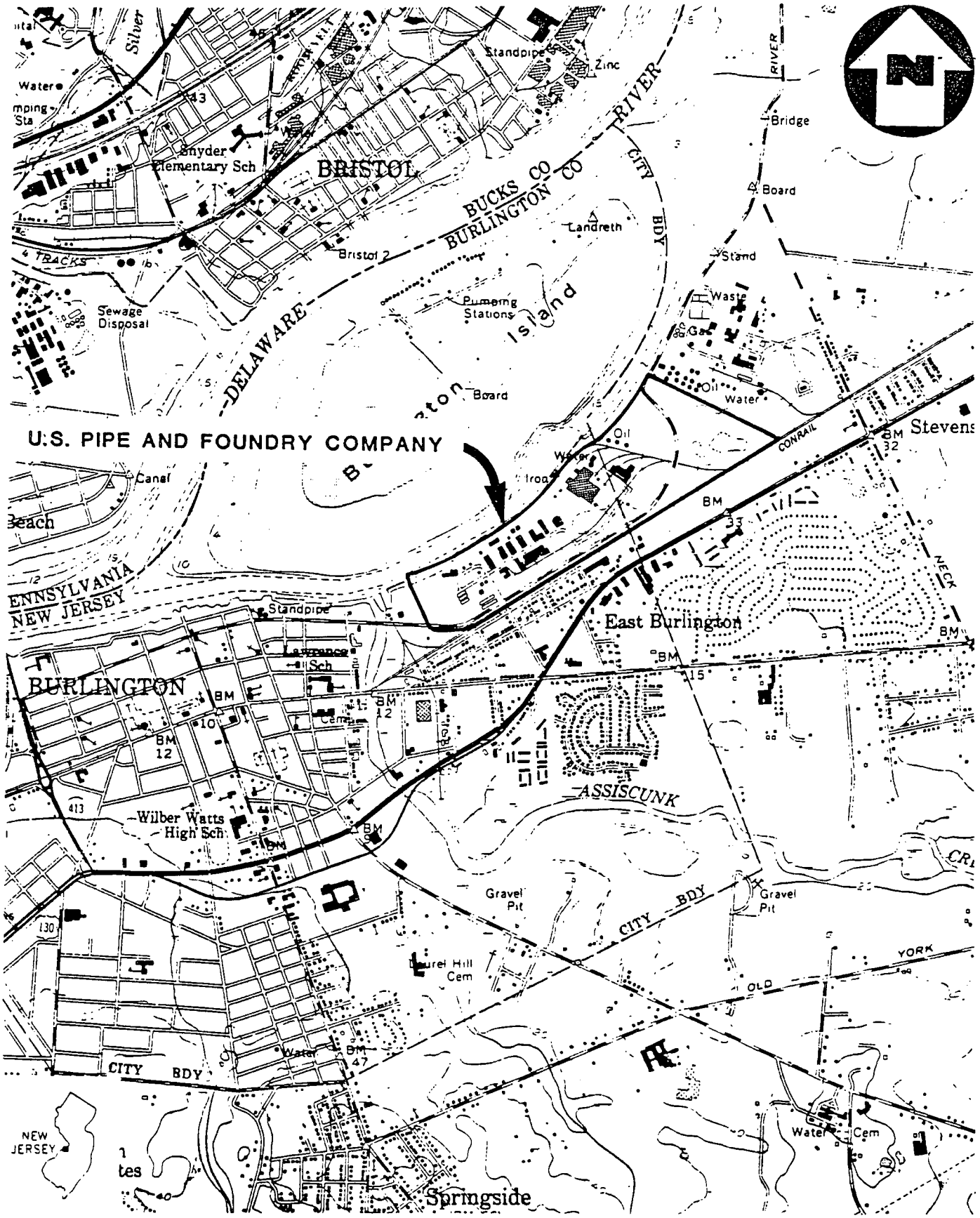


FIGURE A-1

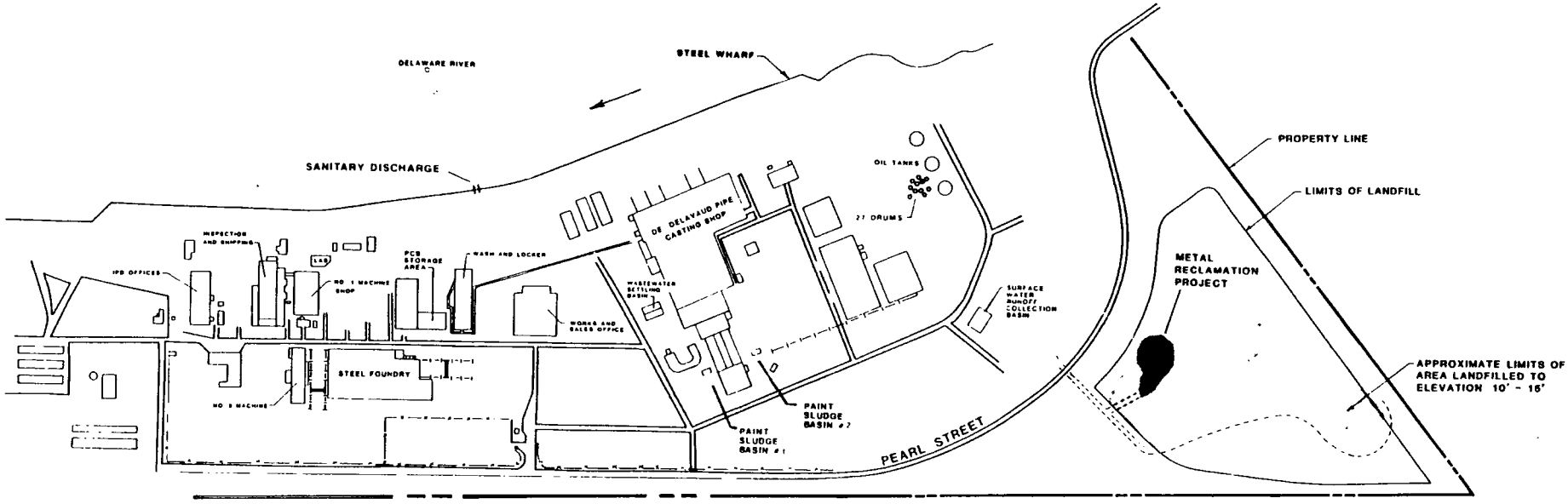
SITE LOCATION MAP

U.S. PIPE AND FOUNDRY COMPANY, BURLINGTON, N.J.

SCALE: 1" = 2000'

NUS CORPORATION

A Halliburton Company



SITE MAP

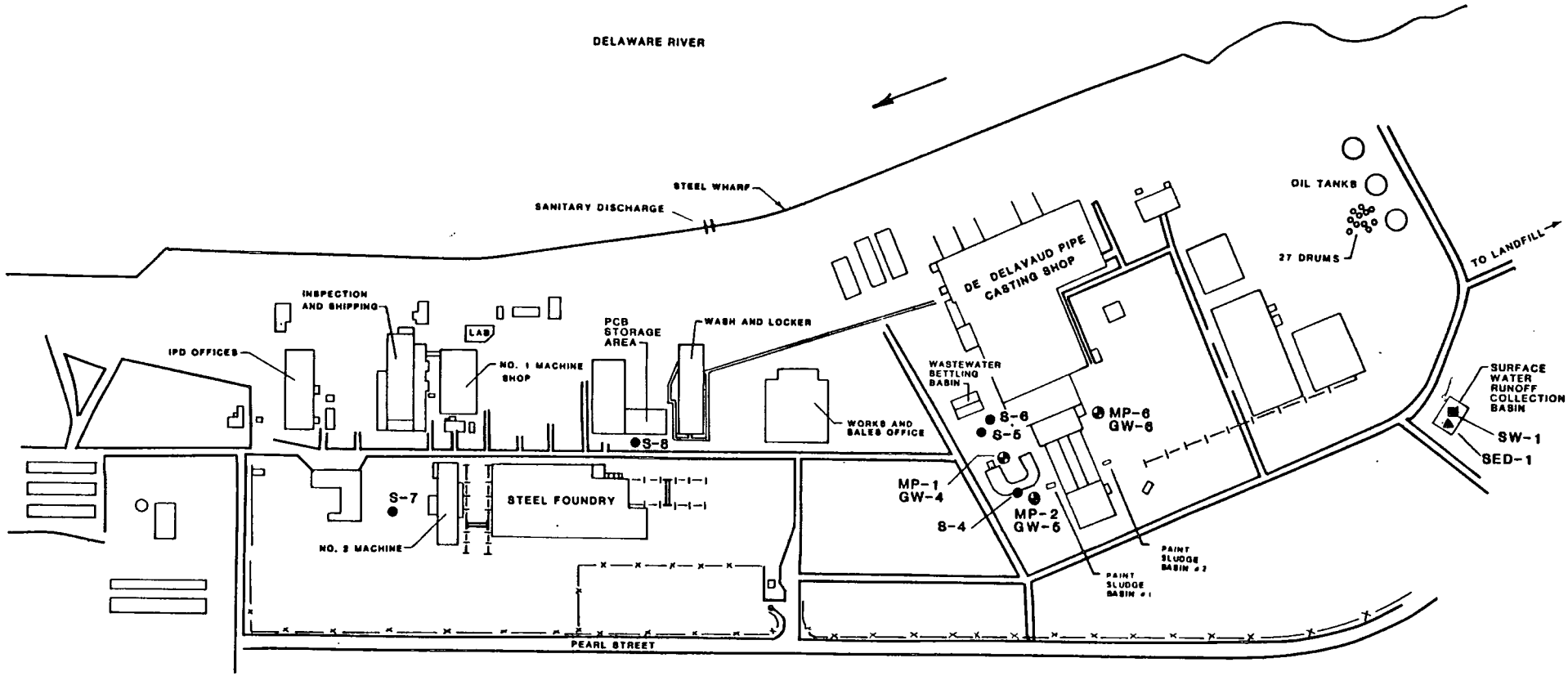
INDUSTRIAL FACILITY AND LANDFILL

U.S. PIPE AND FOUNDRY COMPANY, BURLINGTON, N.J.

(NOT TO SCALE)

FIGURE A-2

NUS CORPORATION



LEGEND:

- ■ SURFACE WATER SAMPLE
- ◐ MONITORING WELL / GROUNDWATER SAMPLE
- ▲ SEDIMENT SAMPLE
- ● SOIL SAMPLE

INDUSTRIAL FACILITY SAMPLING LOCATION MAP

U.S. PIPE AND FOUNDRY COMPANY, BURLINGTON, N.J.

(NOT TO SCALE)

FIGURE A-3

NUS CORPORATION
A Halliburton Company

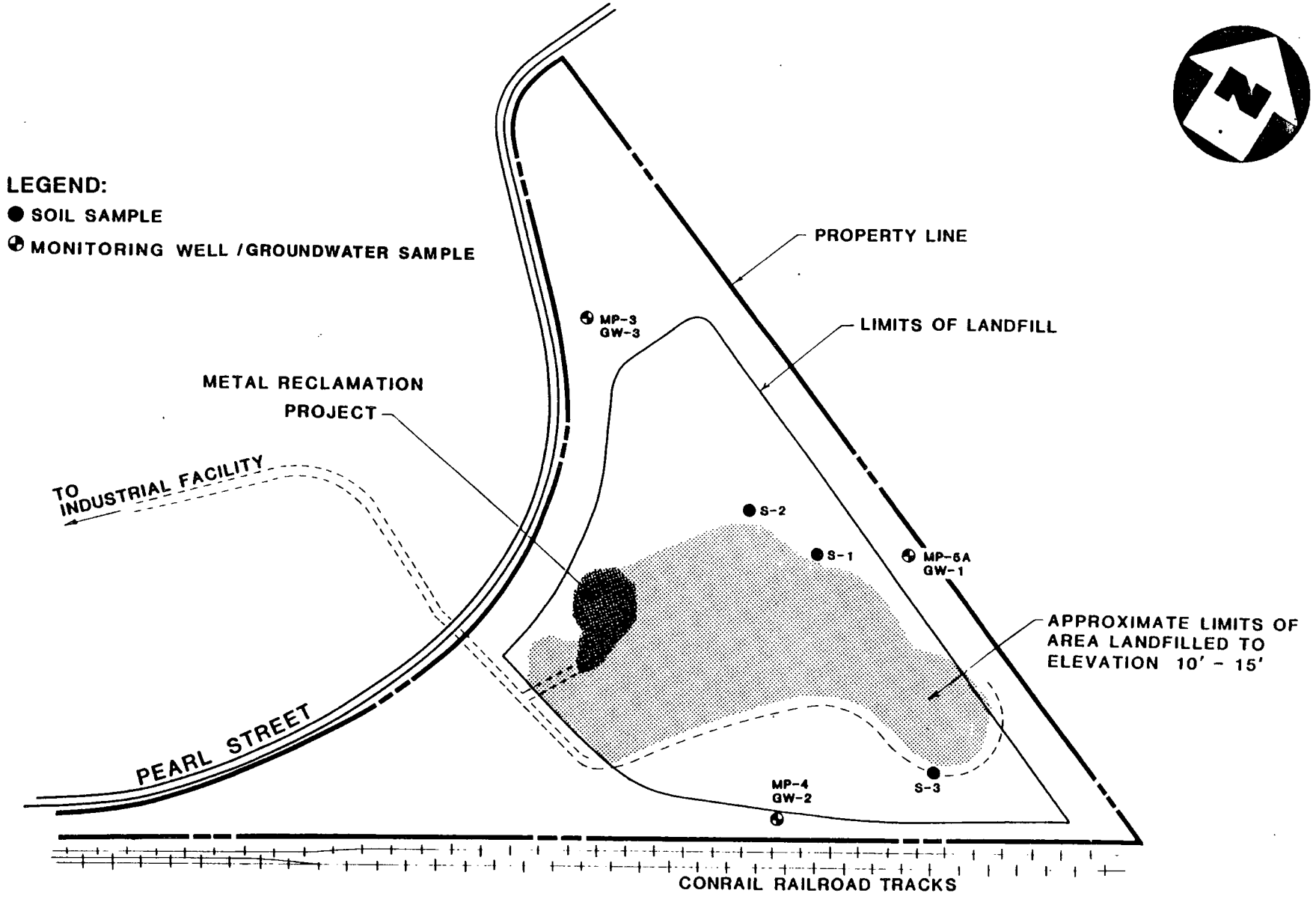


FIGURE A-4

LANDFILL SAMPLING LOCATION MAP

U.S. PIPE & FOUNDRY, BURLINGTON, N.J.

(NOT TO SCALE)

NUS CORPORATION

A Halliburton Company

FIGURE A-5

SURFACE WATER INTAKE AND NEAREST WELL

U.S. PIPE AND FOUNDRY COMPANY, BURLINGTON, N.J.

NUS CORPORATION

SCALE: 1" = 1 MILE

EXHIBIT A-1

PHOTOGRAPH LOG

U.S. PIPE AND FOUNDRY COMPANY

SEPTEMBER 5 and 6, 1984

PHOTOGRAPHIC INDEX
U.S. PIPE AND FOUNDRY CO.

EXHIBIT A-1

Photo Number	Description	Time
1.	September 5, 1984 Eastern bank of landfill. Photographer: William Neal	1150
2.	September 5, 1984 Top of landfill. Shows layering of fill and solid waste material present. Photographer: William Neal	1210
3.	September 5, 1984 Top of landfill showing ferrous metal debris. Photographer: William Neal	1212
4.	September 5, 1984 Leaking drums containing paint sludge and oil. Location is northern end of facility. Photographer: William Neal	1239
5.	September 5, 1984 Empty drums stating: 3, 5 dichloro N - (1, 1 Dimethyll-propynol) benzomide, which are used to store slag. Location is northwest corner of facility. Photographer: William Neal	1245
6.	September 5, 1984 Color of water present in the discharge outfall pipe, which discharges water runoff to the river. Photographer: William Neal	1251
7.	September 5, 1984 Dennis Farley and Mike Nicholas collecting organic groundwater sample GW-1 at Well #MP-5A. Located north of landfill. Photographer: William Neal	1555
8.	September 5, 1984 Tony Russo collecting soil sample S-2. Location is backfill area on northern part of landfill. Photographer: William Neal	1623

PHOTOGRAPHIC INDEX
U.S. PIPE AND FOUNDRY CO.

EXHIBIT A-1

Photo Number	Description	Time
9.	September 5, 1984 Tony Russo collecting soil sample S-1 from northern slope of landfill. Photographer: William Neal	1628
10.	September 5, 1984 Excavated drum containing what appears to be asphalt paint sludge. Photographer: William Neal	1630
11.	September 5, 1984 Mike Nicholas and Dennis Farley collecting organic groundwater sample GW-2 at Well #MP-4. Located southeast of landfill. Photographer: William Neal	1632
12.	September 5, 1984 Tony Russo collecting soil sample S-3 on eastern bank of landfill. Photographer: William Neal	1635
13.	September 5, 1984 Dennis Farley and Mike Nicholas collecting organic groundwater sample GW-3 at Well #MP-3. Located west of landfill. Photographer: William Neal	1745
14.	September 6, 1984 Cement lined waste water settling basin. Location is central portion of facility. Photographer: William Neal	1015
15.	September 6, 1984 Open drums of cutting oil. Located in front of waste water settling basin. Photographer: William Neal	1017
16.	September 6, 1984 Mike Nicholas and Dennis Farley collecting inorganic groundwater sample GW-4 at Well #MP-1. Located 15 feet northeast of pump house at the cement settling pond. Photographer: William Neal	1010

PHOTOGRAPHIC INDEX
U.S. PIPE AND FOUNDRY CO.

EXHIBIT A-1

Photo Number	Description	Time
17.	September 6, 1984 Dennis Farley and Mike Nicholas collecting organic groundwater sample GW-5 at Well #MP-2. Located approx. 30 feet from southeast end of cement settling pond. Photographer: William Neal	1030
18.	September 6, 1984 Asphalt based paint sludge deposit area #1 located approx. 50 feet east of cement settling pond. Photographer: William Neal	1040
19.	September 6, 1984 Southeastern end of cement settling pond where paint sludge has entered during times of high rainfall. Photographer: William Neal	1050
20.	September 6, 1984 Asphalt based paint sludge deposit area #2. Located on the east side of cement lining bldg. Photographer: William Neal	1055
21.	September 6, 1984 Mike Nicholas and Dennis Farley collecting inorganic groundwater sample GW-6 at Well #MP-6. Located on east side of cement lining bldg. Photographer: William Neal	1140
22.	September 6, 1984 Tony Russo collecting soil sample S-4 from bank of cement settling pond. Photographer: William Neal	1205
23.	September 6, 1984 Tony Russo collecting soil sample S-5 east of cement lined waste water settling basin. Photographer: William Neal	1215
24.	September 6, 1984 Mike Nicholas and Tony Russo collecting soil sample S-6. Location is 20 ft. north of soil sample S-5 in a storm water runoff drain. Photographer: William Neal	1228

PHOTOGRAPHIC INDEX
U.S. PIPE AND FOUNDRY CO.

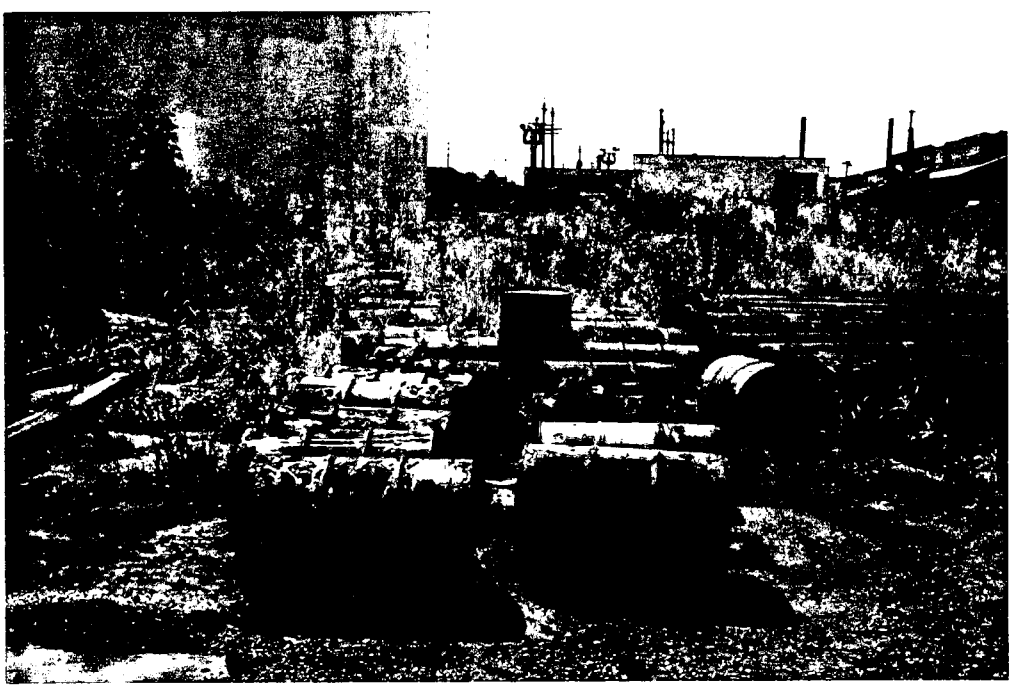
EXHIBIT A-1

Photo Number	Description	Time
25.	September 6, 1984 Dennis Farley and Tony Russo collecting organic surface water sample SW-1 at a common water runoff collection basin. Photographer: William Neal	1235
26.	September 6, 1984 Tony Russo collecting sediment sample sed-1. Location is the same as photo #25. Photographer: William Neal	1240
27.	September 6, 1984 Tony Russo collecting soil sample S-7. Location is at the base of large scrap metal pile in the Industrial Products Division. Photographer: William Neal	1320
28.	September 6, 1984 Tony Russo collecting soil sample S-7. Location is outside of PCB storage area in Industrial Products Division. Photographer: William Neal	1325

1. September 5, 1984 1150
Eastern bank of landfill.
Photographer: William Neal

2. September 5, 1984 1210
Top of landfill. Shows layering of fill and solid waste material present. Photographer: William Neal

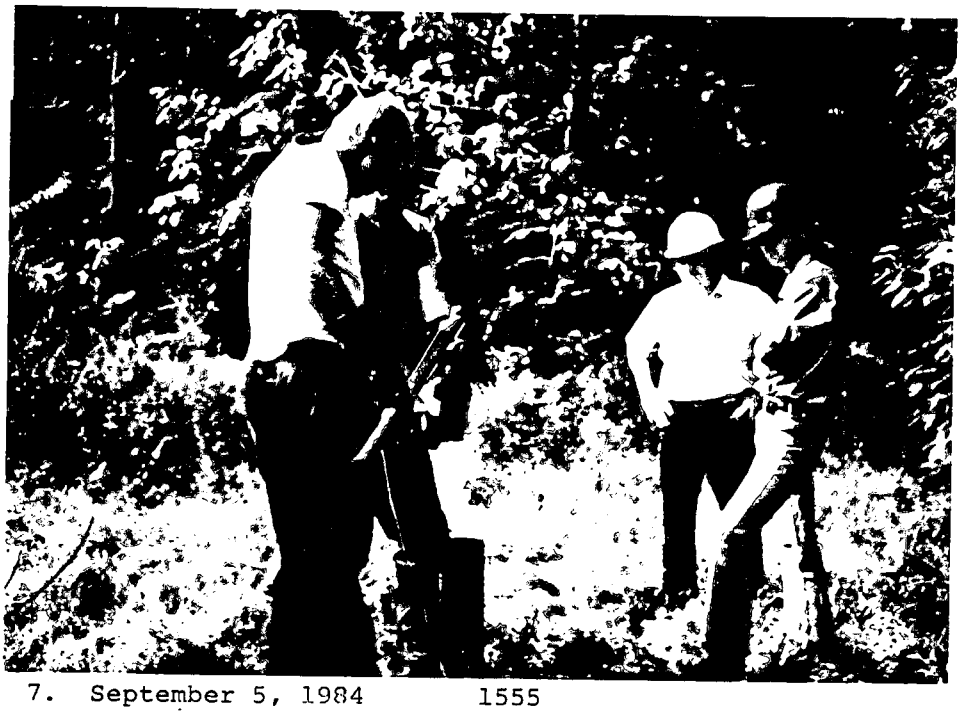
3. September 5, 1984 1212
Top of landfill showing ferrous metal debris.
Photographer: William Neal



4. September 5, 1984 1239
Leaking drums containing paint sludge and oil. Location is northern end of facility. Photographer: William Neal

5. September 5, 1984 1245
Empty drums stating: 3, 5 dichloro N - (1,1 Dimethyll-propynol) benzomide, which are used to store slag.
Location is northwest corner of facility.
Photographer: William Neal

6. September 5, 1984 1251
Color of water present in the discharge outfall pipe, which discharges water runoff to the river.
Photographer: William Neal



7. September 5, 1984 1555
Dennis Farley and Mike Nicholas collecting organic groundwater sample GW-1 at Well #MP-5A. Located north of landfill.
Photographer: William Neal

8. September 5, 1984 1623
Tony Russo collecting soil sample S-2. Location is backfill area on northern part of landfill.
Photographer: William Neal

9. September 5, 1984 1628
Tony Russo collecting soil sample S-1 from northern slope of landfill.
Photographer: William Neal

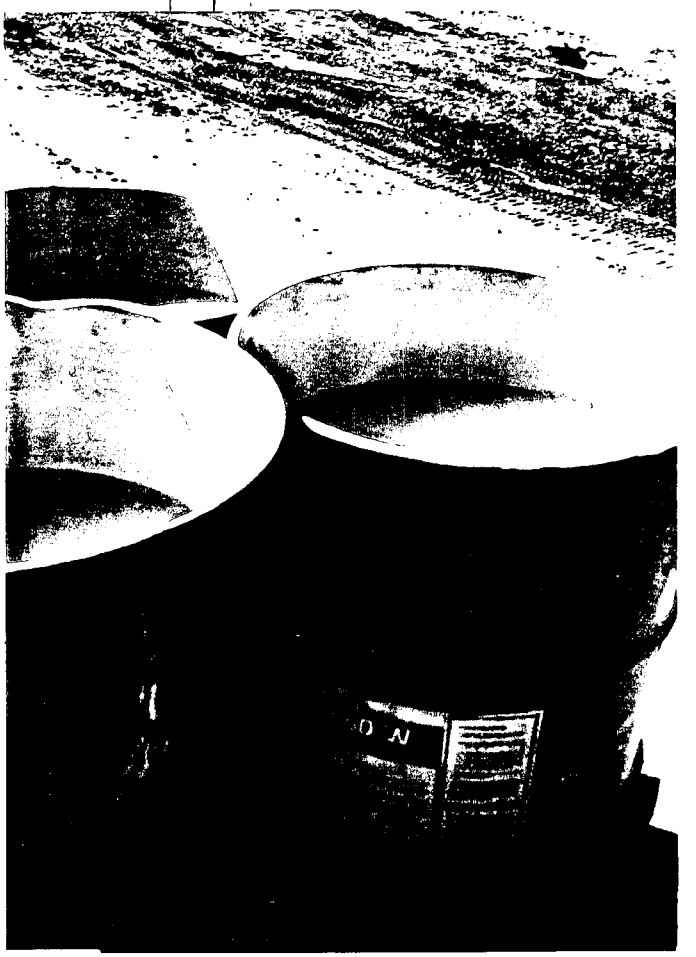
10. September 5, 1984 1630
Excavated drum containing what appears to be asphalt paint sludge.
Photographer: William Neal

11. September 5, 1984 1632
Mike Nicholas and Dennis Farley collecting organic groundwater sample GW-2 at Well #MP-4. Located southeast of landfill.
Photographer: William Neal

12. September 5, 1984 1635
Tony Russo collecting soil sample S-3 on eastern bank of landfill.
Photographer: William Neal

13. September 5, 1984 1745
Dennis Farley and Mike Nicholas collecting organic groundwater sample GW-3 at Well #MP-3. Located west of landfill.
Photographer: William Neal

14. September 6, 1984 1015
Cement lined waste water settling basin. Location is central portion of facility. Photographer: William Neal



15. September 6, 1984 1017
Open drums of cutting oil. Location in front of waste water settling basin.
Photographer: William Neal.

16. September 6, 1984 1010
Mike Nicholas and Dennis Farley collecting inorganic groundwater sample GW-4 at Well #MP-1. Located 15 feet northeast of pump house at the cement settling pond.
Photographer: William Neal.

17. September 6, 1984 1030
Dennis Farley and Mike Nicholas collecting organic groundwater sample GW-5 at well #MP-2. Located approx. 30 feet from southeast end of cement settling pond.
Photographer: William Neal.

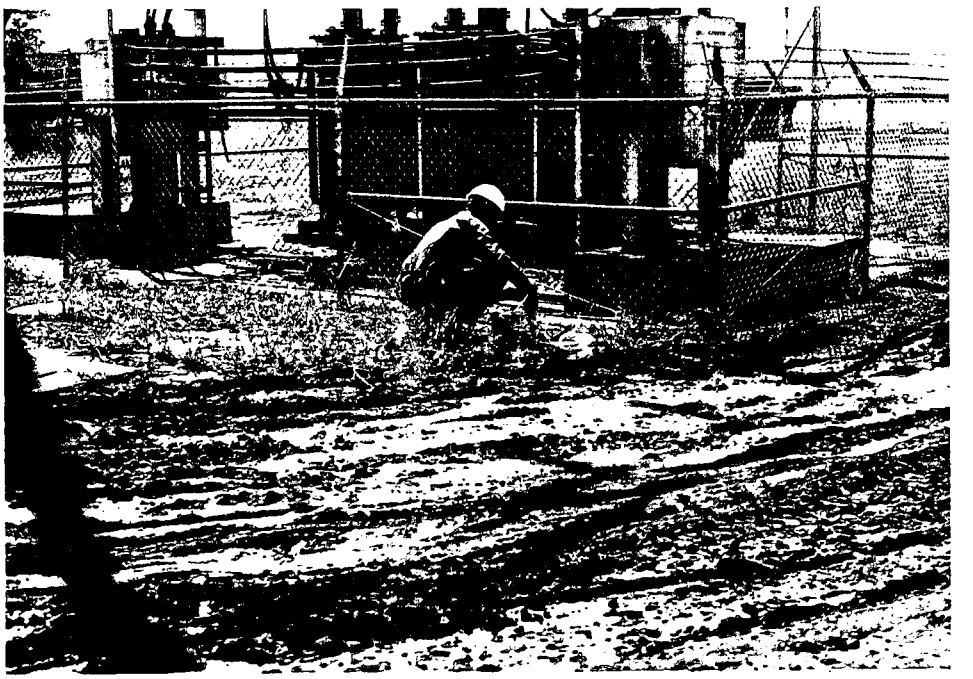
18. September 6, 1984 1040
Asphalt based paint sludge deposit area #1 located approx. 50 feet east of cement settling pond.
Photographer: William Neal.

19. September 6, 1984 1050
Southeastern end of cement settling pond where paint sludge has entered during times of high rainfall.
Photographer: William Neal.

20. September 6, 1984 1055
Asphalt based paint sludge deposit area #2. Located on the east side of cement lining bldg.
Photographer: William Neal.

21. September 6, 1984 1140
Mike Nicholas and Dennis Farley collecting inorganic groundwater sample GW-6 at Well #MP-6. Located on east side of cement lining bldg.
Photographer: William Neal.

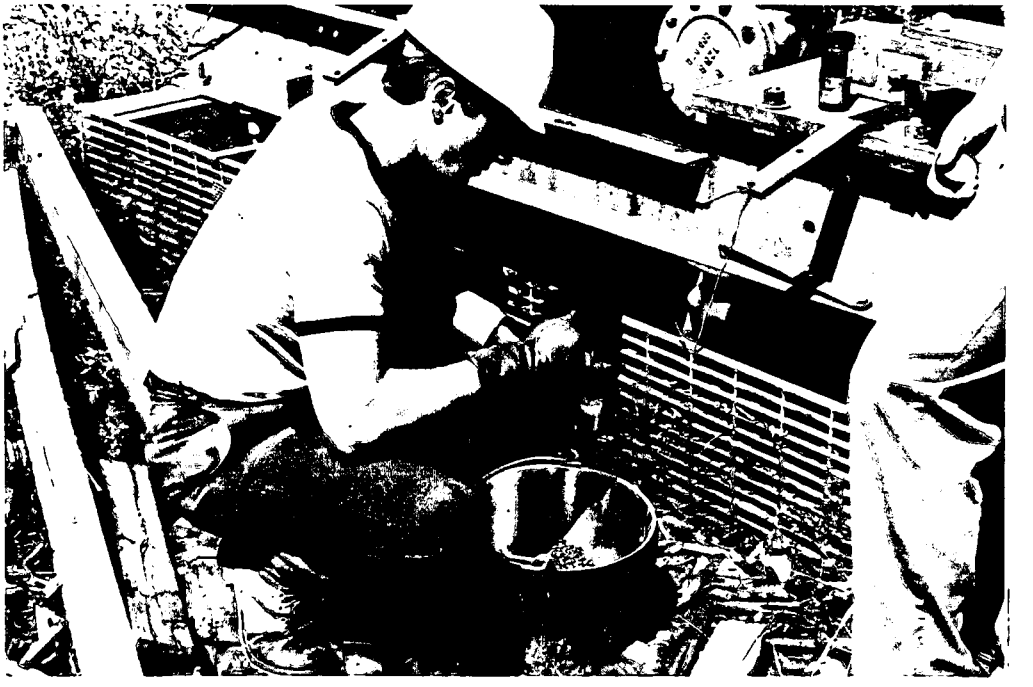
22. September 6, 1984 1205
Tony Russo collecting soil sample S-4 from bank of cement settling pond.
Photographer: William Neal.



23. September 6, 1984 1215
Tony Russo collecting soil sample S-5 east of cement lined waste water settling basin.
Photographer: William Neal

24. September 6, 1984 1228
Mike Nicholas and Tony Russo collecting soil sample S-6. Location is 20 ft. north of soil sample S-5 in a storm water runoff drain. Photographer: William Neal

25. September 6, 1984 1235
Dennis Farley and Tony Russo collecting organic surface water sample SW-1 at a common water runoff collection basin.
Photgrapher: William Neal



26. September 6, 1984 1240
Tony Russo collecting sediment sample sed-1. Location is the same as photo #25.
Photographer: William Neal

NUS CORPORATION

27. September 6, 1984 1320
Tony Russo collecting soil sample S-7. Location is at the base of large scrap metal pile in the Industrial Products Division.
Photographer: William Neal

28. September 6, 1984 1325
Tony Russo collecting soil sample S-7. Location is outside of PCB storage area in Industrial Products Division.
Photographer: William Neal

SECTION 4

DOCUMENTATION RECORDS FOR HAZARD RANKING SYSTEM

FIT QUALITY ASSURANCE TEAM
DOCUMENTATION RECORDS
FOR
HAZARD RANKING SYSTEM

INSTRUCTIONS: **As briefly as possible summarize the information you used to assign the score for each factor (e.g., "Waste quantity = 4,230 drums plus 800 cubic yards of sludges"). The source of information should be provided for each entry and should be a bibliographic-type reference. Include the location of the document.**

FACILITY NAME: U.S. Pipe and Foundry Co.

LOCATION: Burlington City, New Jersey

DATE SCORED: June 4, 1985 (Revised June 25, 1987) (Revised Sept. 22,1987)

PERSON SCORING: Charles LoBue

PRIMARY SOURCE(S) OF INFORMATION (e.g., EPA region, state, FIT, etc.):
NUS FIT II Site Inspection 9/5/84 and 9/6/84.

FACTORS NOT SCORED DUE TO INSUFFICIENT INFORMATION:

COMMENTS OR QUALIFICATIONS:
Site surface runoff flows into a collection basin that discharges into the Delaware River. New Jersey Department of Environmental Protection (NJDEP) reports that discharges to the river continued after NPDES permits expired in November, 1976. Surface water is scored on the basis of the unpermitted discharge of surface water runoff.

GROUNDWATER ROUTE

1 OBSERVED RELEASE

Contaminants detected (5 maximum):

Groundwater monitoring yielded insufficient data to document an observed release to groundwater.

Rationale for attributing the contaminants to the facility:

Not applicable.

* * *

2 ROUTE CHARACTERISTICS

Depth to Aquifer of Concern

Name/description of aquifer(s) of concern:

Groundwater in the region is drawn from the Raritan-Magothy Aquifer. This system consist of an undifferentiated layering of the two formations. The Magothy overlies the Raritan and ranges 0-40 feet in thickness and the Raritan ranges to about 260 feet in thickness. The Raritan-Magothy formation is composed of unconsolidated light grey to white crossbed medium to coarse grained quartz sand, interbedded with red and white variegated clay, silt and a small amount of gravel. This formation outcrops in a 2-mile belt along the Delaware River and dips to the southeast at a slope of 40-100 feet per mile.

There are two water bearing zones in the locality of U.S. Pipe and Foundry which are analogous with the upper and middle aquifer systems of the regional Potomac-Raritan- Magothy system. Clay beds in the Magothy formation, that range from 50 to 150 feet thick, tend to divide the aquifers. However their continuity in the area of U.S. Pipe and Foundry has not been determined (Ref. #19, plate 9)

In the vicinity of U.S. Pipe the water table exists at a depth of six feet (Ref# 4, p. 2). The top of the middle aquifer exists at a depth of 75 to 80 feet (Ref. #4, p. 4; Ref. #19, p 53, plate 2, plate 7).

Burlington Township Water Department supply wells draw from the middle aquifer at a depth of 163 feet (Ref. #4, p. 5). The top of the middle aquifer exists at a depth of about 140 to 150 feet (Ref. #4 p. 6; Ref. #19 p. 54, plate 2, plate 7). The middle aquifer is the aquifer of concern.

In the absence of pump test or well log data to document hydraulic connection, these aquifers will be considered as separate water bearing units.

Ref: #1, pp. 30-32
Ref: #2, pp. 4, 6-8
Ref: #3
Ref: #4, pp 2, 4, 5, 6
Ref: #19, pp 53, 54, plate 2, 7, 9

Depth(s) from the ground surface to the highest seasonal level of the saturated zone water table(s) of the aquifer of concern:
80 feet
Ref: #4 p. 4
Ref. #19 p. 53, plate 2, plate 7

Depth from the ground surface to the lowest point of waste disposal/storage:
Both unlined drum storage and asphalt-based paint sludge basins represent deposition on to ground surface. Depth is zero.
Ref. #6 pp. 5, 6, 15, 24, 25

Net Precipitation

Mean annual or seasonal precipitation (list months for seasonal):
44 inches.
Ref: #5

Mean annual lake or seasonal evaporation (list months for seasonal):
34 inches
Ref: #5

Net precipitation (subcontract the above figures):
10 inches.

Permeability of Unsaturated Zone

Soil type in unsaturated zone:

Tough red and white clay.

Ref: #4 p. 4

Permeability associated with soil type:

10^{-7} cm/sec

Ref: #5

Physical State

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

Sludges, liquid (see Section 3 photo #18, 19 and 20)

Ref: #6, pp 24, 25

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Leaking drums with no liner or containment system (see Section 3, photo #4). Paint sludge storage basins (see Section 3, photo # 18, and 20). As indicated by photo #19, the sludge is also implicated in a third, containment, the settling pond, however, its quantity and integrity cannot be presently evaluated due to lack of information.

Ref: #6 pp. 5, 6, 15, 24, 25

Method with highest score:

Leaking drums and the sludge storage basins represent uncontained storage of asphalt-based paint sludge.

Ref: #5

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

Polyaromatic hydrocarbons were detected in sediments of a surface water runoff collection basin that is located in the vicinity of the paint sludge storage basins and leaking drums. The assumption is made that the sediments reflect runoff

conditions in this general area and their analyses indicate contaminants from those sources. The analytical data are presented with the qualifier that QA/QC requirements for holding time after extraction for semi-volatile analyses were exceeded by some unknown time. However it is assumed that if this procedure had an effect on detection of these persistent compounds, it would be that concentrations at the sample locations are actually higher than indicated by the analyses. The data are presented to document the presence of those contaminants detected, rather than their quantity.

benzo (a) pyrene, pyrene, chrysene

Ref: #9 Page 63, Sample No. B3717

Compound with highest score:

All the above mentioned compounds score 18 for toxicity/persistence.

Ref: #5, #10

Hazardous Waste Quantity

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

Approximately 27 drums containing asphalt-based paint sludge and oil are estimated by counting those in photo No. 4 (See section 3, Exhibit A-1). Two sludge storage basins approximately 20 feet square filled to an approximate depth of 12 inches (estimated total 30 cubic yards). Total estimated quantity is 36 cubic yards.

Ref: #6 pp 6, 15

Ref: #5

Basis of estimating and/or computing waste quantity:

The waste quantity estimates given are based on amounts observed at the time of the site inspection.

Ref: #6, #8

5 TARGETS

Groundwater Use

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

Public drinking water supply, irrigation and industrial uses.

Ref: #8

Distance to Nearest Well

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

A private well, east of the facility on Route 130 near Dulty's Lane (see Section 3, figure A-5)

Ref: #8

Distance to above well or building:

1.4 miles (see Figure 4)

Ref: #13

Population Served by Groundwater Wells Within a 3-Mile Radius

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

The Burlington Township Water Department Supply wells #1, 2, 3 and 4 supply approximately 12,000 people. (see Section 3, figure A-5) (Reference 7). Other wells also serve the area (Reference 8). Supply wells on Burlington Island are not presently used (Reference 18). The Bristol Borough Water and Sewer Authority Well #10, located in Bristol, PA near the Delaware River, is no longer in service. The Bristol well field, located in Edgely, PA, is greater than 3 miles from U.S. Pipe and Foundry (Reference 20).

Ref: #7, #8, #18, #20

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

Two irrigation wells are located approximately 1.7 miles due east of the facility near the Florence Township border. Acreage irrigated is unknown.

Ref: #8

Total population served by groundwater within a 3-mile radius:

Over 12,000 people documented.

Ref: #7, #8

SURFACE WATER ROUTE

1 OBSERVED RELEASE

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

None detected

Ref: #1

Rationale for attributing the contaminants to the facility:

Not applicable.

* * *

2 ROUTE CHARACTERISTICS

Facility Slope and Intervening Terrain

Average slope of facility in percent:

The site lies on the east bank of the Delaware River. The average elevation of the low-lying areas along the east bank is less than 20 feet. The most severe slope on the site is in an area where a 20-foot elevation contour comes within 600 feet of the river's edge. Assuming that the river's edge is at an elevation of greater than 3 feet MSL, and assuming that the waste sources (2 sludge basins and leaking drum area) do not present elevations that could significantly add to the slope, the steepest site slope is calculated as:

$$\text{Slope} < \left(\frac{17}{600}\right) \times 100$$

$$\text{Slope} < 2.8\%$$

Ref: #13

Name/description of nearest downslope surface water:

The Delaware River borders the facility on the northwest. The Delaware River flows southward to the Delaware Bay (approx. 45 miles downstream).

Ref: #13

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

Site runoff is chanelled through the collection basin and discharged into the sanitary discharge at the central part of the Industrial facility (See Section

3, Figure A-2). Surface elevation at the basin is about 20 feet MSL. Sanitary discharge is located about 2200 feet due west. Assuming the river level to be slightly above sea level, slope is calculated as:

$$\text{Slope} < \left(\frac{20}{2200}\right) \times 100,$$

Slope < 0.9%
Ref: #6

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

No.

Ref: #13

Is the facility completely surrounded by areas of higher elevation?

No.

Ref: #13

1-Year 24-Hour Rainfall in Inches

2.8 inches

Ref: #5

Distance to Nearest Downslope Surface Water

The facility is bordered to the northwest by the Delaware River. A steel bulkhead separates the property from the river and most likely restricts major surface runoff to the Delaware. The distance of the migration path is evaluated as the distance from the origin of the surface water runoff collection basin to the point of sanitary discharge which is at least 2200 feet.
Ref: #13

Physical State of Waste

The paint sludge pits contain paint sludge. Fifty-five gallon drums contain sludge and oil (see Section 3, photo #4, 18, 19 and 20)
Ref: #6, pp 24, 25

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Leaking drums with no spill containment system (see Section 3, photo #4). Paint sludge storage basins (see Section 3, photo #18 and 20).

Ref: #6, pp. 5, 6, 15, 24, 25

Method with highest score:

Both the above mentioned sources have no methods for runoff diversion

Ref: #6

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated

Polyaromatic hydrocarbons were detected in sediments of a surface water runoff collection basin that is located in the vicinity of the paint sludge storage basins and leaking drums. The assumption is made that the sediments reflect runoff conditions in this general area and their analyses indicate contaminants from those sources. The analytical data is presented with the qualifier that QA/QC requirements, for holding time after extraction for semi-volatile analysis, were exceeded by some unknown time. However it is assumed that if this procedure had an effect on detection of these persistent compounds, it would be that concentration at the sample locations are actually higher than indicated by the analyses. The data is presented with the intent more to document the presence of those contaminants detected and not the quantity.

benzo (a) pyrene

pyrene

chrysene

Ref: #9 Page 63, Sample No. B3717

Compound with highest score:

All the above mentioned compounds score 18 for toxicity/persistence.

Ref: #5

Ref: #10

Hazardous Waste Quantity

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

Approximately 27 drums containing asphalt-based paint sludge and oil are estimated by counting those in photo #4 (See section 3, Exhibit A-1). Two sludge storage basins approximately 20 feet square filled to an approximate depth of 12 inches (estimated total 30 cubic yards). Total estimated quantity is 36 cubic yards.
Ref: #5
Ref: #6 pp 6, 15

Basis of estimating and/or computing waste quantity:

The waste quantity estimates given are based on amounts observed at the time of the site inspection.
Ref: #6 pp. 6, 15; #5

5 TARGETS

Surface Water Use

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

Burlington City Water Plant and river intake station are located 0.4 mile downstream of the site discharge. The Delaware River surface water is used to supply Burlington City with drinking water. Bristol Borough Water and Sewer Authority operates a surface water supply intake on the Delaware River in Bristol, opposite of Burlington Island. The intake is located upstream of the point of confluence with potential U.S. Pipe and Foundry discharge and will not be considered a target.
Ref: #8, #11, #21

Is there tidal influence?

Yes.
Ref: #12 p. 4

Distance to a Sensitive Environment

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

Unknown.

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:
0.8 miles to the south of site near a branch of the Assiscunk Creek.
Ref: #13

Distance to critical habitat of an endangered species or national wildlife refuge, if 1 mile or less:
Shortnose sturgeon (Acipenser brevirostrum) migrates up the Delaware River to spawn at Scudders Falls which is north of U.S. Pipe and Foundry. New Jersey Division of Fresh Water Fisheries considers the reach of the Delaware, south of Trenton, to be a significant habitat for the sturgeon as well as other commercially and ecologically important species such as shad, herring and striped bass. Although New Jersey fishery authorities consider the area to be an important habitat for the shortnose sturgeon, the U.S. Fish and Wildlife Service does not consider this to be a critical habitat.
Ref: #14, #17

Population Served by Surface Water

Location(s) of water-supply intake(s) within 3 miles (free-flowing bodies) or 1 mile (static water bodies) downstream of the hazardous substance and population served by each intake:
The Burlington City Water Plant's river intake is located approximately 0.4 miles from the surface water discharge of the site. This river intake along with a reservoir located on Burlington Island, northwest of site across the Delaware River, provide Burlington City with drinking water. Population served: 10,546
Ref: #11

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

Total population served:
10,546
Ref: #11

Name/description of nearest of above water bodies:

The site is located on the east bank of the Delaware River.

Ref: #6

Ref: #12

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

The migration path distance from surface discharge point to the Burlington City Supply intake is approximately 2000 feet.

Ref: #8

Ref: #12, p. 4

AIR ROUTE

1 OBSERVED RELEASE

Contaminants detected:

None detected on HNu photoionization detector or Organic Vapor Analyzer, during 9/5 and 9/6/84 site inspections.

Ref: #6

Date and location of detection of contaminants

Not applicable.

Methods used to detect the contaminants:

Not applicable.

Rationale for attributing the contaminants to the site:

Not applicable.

* * *

2 WASTE CHARACTERISTICS

Reactivity and Incompatibility

Most reactive compound:

Not applicable.

Most incompatible pair of compounds:

Not applicable.

Toxicity

Most toxic compound:

Not applicable.

Hazardous Waste Quantity

Total quantity of hazardous waste:

Not applicable.

Basis of estimating and/or computing waste quantity:

Not applicable.

* * *

3 TARGETS

Population Within 4-Mile Radius

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

0 to 4 mi 0 to 1 mi 0 to 1/2 mi

Not applicable.

Distance to a Sensitive Environment

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

Not applicable.

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

Not applicable.

Distance to critical habitat of an endangered species, if 1 mile or less:
Not applicable.

Land Use

Distance to commercial/industrial area, if 1 mile or less:
Not applicable.

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:
Not applicable.

Distance to residential area, if 2 miles or less:
Not applicable.

Distance to agricultural land in production within past 5 years, if 1 mile or less:
Not applicable.

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:
Not applicable.

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?
Not applicable.

FIRE AND EXPLOSION

1 CONTAINMENT

Hazardous substances present:

Burlington City Fire Chief does not consider U.S. Pipe and Foundry to be a threat for fire and explosion conditions.

Ref: #16

Type of containment, if applicable:

* * *

2 WASTE CHARACTERISTICS

Direct Evidence

Type of instrument and measurements:

Ignitability

Compound used:

Reactivity

Most reactive compound:

Incompatibility

Most incompatible pair of compounds:

* * *

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility:

Basis of estimating and/or computing waste quantity:

* * *

3 TARGETS

Distance to Nearest Population

Distance to Nearest Building

Distance to Sensitive Environment

Distance to wetlands:

Distance to critical habitat:

Land Use

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

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

Distance to residential area, if 2 miles or less:

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

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

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

Population Within 2-Mile Radius

Buildings Within 2-Mile Radius

DIRECT CONTACT

1 OBSERVED INCIDENT

Date, location, and pertinent details of incident:

No observed incidents.

* * *

2 ACCESSIBILITY

Describe type of barrier(s):

Facility is fenced in and patrolled. The landfill is fenced in on two sides and bordered by wooded area on two sides.

Ref: #6

* * *

3 CONTAINMENT

Type of containment, if applicable:

Leaking drums and oil spills on the ground surface. Soil contamination at the landfill.

Ref: #6

* * *

4 WASTE CHARACTERISTICS

Toxicity

Compounds evaluated:

benzo(a)pyrene

chrysene

Ref: #9 Sample No B3717 and B3706; pp. 32 and 63.

Compound with highest score:

chrysene

Ref: #10

5 TARGETS

Population Within One-Mile Radius

1,111

Ref: #13

Distance to Critical Habitat (of Endangered Species)

There are no critical habitat in the area. See page 10.

Ref: #14, #17

SECTION 5

HAZARD RANKING SYSTEM SCORING FORMS

REV. 2

Facility name: U.S. Pipe and Foundry Co.

Location: Burlington City, New Jersey

EPA Region: 2

Persons(s) in charge of the facility: J.A. Reynolds

Name of Reviewer: Charles LoBue **Date:** 9/22/87

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

The facility covers 100 acres along the Delaware River. A 17 acre landfill with no known clay or synthetic liner is maintained on site. The wastes generated on site consist of asphalt based paint sludge, waste oil and slag from melting and treating operations. Other potential contamination sources include: an unlined settling pond, a cement settling basin, and two sludge storage pits. A potential exists for contamination of groundwater and surface water, both of which are used for drinking sources.

Score: $S_M = 29.06$ ($S_{gw} = 26.37$ $S_{sw} = 42.80$ $S_a = 0$)

$S_{FE} = 0$

$S_{DC} = 62.50$

HRS COVER SHEET

(REV. 2)

02-8706-13 U.S. PIPE AND FOUNDRY

Ground Water Route Work Sheet

Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	0 45	1	0	45	3.1
If observed release is given a score of 45, proceed to line 4. If observed release is given a score of 0, proceed to line 2.					
2 Route Characteristics					3.2
Depth to Aquifer of Concern	0 (1) 2 3	2	2	6	
Net Precipitation	0 1 (2) 3	1	2	3	
Permeability of the Unsaturated Zone	(0) 1 2 3	1	0	3	
Physical State	0 1 2 (3)	1	3	3	
Total Route Characteristics Score			7	15	
3 Containment	0 1 2 (3)	1	3	3	3.3
4 Waste Characteristics					3.4
Toxicity/Persistence	0 3 6 9 12 15 (18)	1	18	18	
Hazardous Waste Quantity	0 1 (2) 3 4 5 6 7 8	1	2	8	
Total Waste Characteristics Score			20	26	
5 Targets					3.5
Ground Water Use	0 1 (2) 3	3	6	9	
Distance to Nearest Well/Population Served	0 4 6 8 10 / 12 16 18 20 / 24 (30) 32 35 40	1	30	40	
Total Targets Score			36	49	
6 If line 1 is 45, multiply 1 x 4 x 5 / If line 1 is 0, multiply 2 x 3 x 4 x 5			15120	57,330	
7 Divide line 6 by 57,330 and multiply by 100			S_{gw} = 26.37		

(REV. 2)

02-8786-13 U. S. PIPE AND FOUNDRY

Surface Water Route Work Sheet

Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	0 45	1	0	45	4.1
If observed release is given a value of 45, proceed to line 4. If observed release is given a value of 0, proceed to line 2.					
2 Route Characteristics					4.2
Facility Slope and Intervening Terrain	(0) 1 2 3	1	0	3	
1-yr. 24-hr. Rainfall	0 1 (2) 3	1	2	3	
Distance to Nearest Surface Water	0 1 (2) 3	2	4	6	
Physical State	0 1 2 (3)	1	3	3	
Total Route Characteristics Score			9	15	
3 Containment	0 1 2 (3)	1	3	3	4.3
4 Waste Characteristics					4.4
Toxicity/Persistence	0 3 6 9 12 15 (18)	1	18	18	
Hazardous Waste Quantity	0 1 (2) 3 4 5 6 7 8	1	2	8	
Total Waste Characteristics Score			20	26	
5 Targets					4.5
Surface Water Use	0 1 2 (3)	3	9	9	
Distance to a Sensitive Environment	0 (1) 2 3	2	2	6	
Population Served/Distance to Water Intake Downstream	0 4 6 8 10 / 12 16 18 20 / 24 30 32 35 (40)	1	40	40	
Total Targets Score			51	55	
6 If line 1 is 45, multiply 1 x 4 x 5 / If line 1 is 0, multiply 2 x 3 x 4 x 5			27540	64,350	
7 Divide line 6 by 64,350 and multiply by 100			S_{sw} = 42.80		

(Rev. 1)

U. S. Pipe + Foundry 02-8706-13

Air Route Work Sheet

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

REV. 2

02-8607-13 U.S. PIPE AND FOUNDRY

	S	S^2
Groundwater Route Score (S_{gw})	26.37	695.38
Surface Water Route Score (S_{sw})	42.80	1831.84
Air Route Score (S_a)	0	
$S_{gw}^2 + S_{sw}^2 + S_a^2$		2527.22
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		50.27
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} / 1.73 = S_M =$		29.06

FIGURE 10
WORKSHEET FOR COMPUTING S_M

(REV. 1)

U.S. PIPE AND FOUNDRY 02-8706-13

Direct Contact Work Sheet

Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Incident	0 45	1	0	45	8.1
If line 1 is 45, proceed to line 4 If line 1 is 0, proceed to line 2					
2 Accessibility	0 1 2 (3)	1	3	3	8.2
3 Containment	0 (15)	1	15	15	8.3
4 Waste Characteristics Toxicity	0 1 2 (3)	5	15	15	8.4
5 Targets					8.5
Population Within a 1-Mile Radius	0 1 2 (3) 4 5	4	12	20	
Distance to a Critical Habitat	0 1 (2) 3	4	8	12	
Total Targets Score			20	32	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			13500	21,600	
7 Divide line 6 by 21,600 and multiply by 100			S_{DC} = 62.5		

(Rev. 1)

U.S. PIPE + FOUNDRY 02-8706-13

Fire and Explosion Work Sheet

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

SECTION 6

BIBLIOGRAPHY OF INFORMATION SOURCES

BIBLIOGRAPHY OF INFORMATION SOURCES

HRS MODEL

SOURCE	LOCATION
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2. Langmuir, Donald, 1969. Iron in Ground Waters of the Magothy and Raritan Formations in Camden and Burlington Counties, New Jersey. Water Resources Circular No. 19. State of New Jersey Department of Water Policy and Supply.	NUS Corp. Edison, NJ
3. U.S. Pipe and Foundry Company, NJPDES Permit Application. Malcolm Pirnie. Plate 2, Hydrogeology Map.	NUS Corp. Edison, NJ
4. Well Records, State of New Jersey Department of Conservation and Economic Development, Division of Water Policy and Supply.	NUS Corp. Edison, NJ
5. Uncontrolled Hazardous Waste Site Ranking System, A Users Manual (HW-10), Mitre Corporation, McLean, VA; prepared for the U.S. EPA, 1984.	NUS Corp. Edison, NJ
6. Field Notebook No. 977, Site Inspection, NUS Corporation, Region 2 FIT, Edison, New Jersey, September 5, 1984.	NUS Corp. Edison, NJ
7. Telecon Note: telephone conversation between Mr. Paul Scully, Water Operator, Burlington Township Water Department and Charles LoBue, NUS Corporation on June 24, 1987.	NUS Corp. Edison, NJ
8. U.S. Pipe and Foundry Company, NJDEPS Permit Application, Malcolm Pirnie, Plate 3, Water Supply Map.	NUS Corp. Edison, NJ
9. Laboratory Analysis from NUS Region 2 FIT Site Inspection, September 5 and 6, 1984. EPA Case #3191.	NUS Corp. Edison, NJ
10. Sax, N. Irving. Dangerous Properties of Industrial Materials. Sixth Edition, New York: Van Nostrand Reinhold Co., 1984.	NUS Corp. Edison, NJ
11. Telecon Note: telephone conversation between Mr. Joe Fahey, Burlington City Water Works and Charles LoBue, NUS Corporation, on June 25, 1987.	NUS Corp. Edison, NJ
12. File: New Jersey Department of Environmental Protection Inspection of U.S. Pipe and Foundry, Response to Complaint #23, logged by Central Region Enforcement, September 20, 1983. John N. Beaulieu.	NUS Corp. Edison, NJ

BIBLIOGRAPHY OF INFORMATION SOURCES (CONT'D)

HRS MODEL

SOURCE	LOCATION
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14. Telecon Note: telephone conversation between Mr. Art Lupine of NJ Freshwater Fishery, Lebanon, NJ and Charles LoBue, NUS Corporation, on June 25, 1986.	NUS Corp. Edison, NJ
15. U.S. Department of Agriculture Soil Conservation Service. Soil Survey of Burlington County, 1971.	NUS Corp. Edison, NJ
16. Telecon Note: telephone conversation between Fire Chief Jame Boyle of the Burlington City Fire Department and Charles LoBue, NUS Corporation, on June 27, 1987.	NUS Corp. Edison, NJ
17. Endangered and Threatened Wildlife and Plants. Department of the Interior, U.S. Fish and Wildlife Service. 50 CFR 17.11 and 17.12. July 20, 1984.	NUS Corp. Edison, NJ
18. Telecon Note: telephone conversation between Mr. Joe Fahey, Burlington City Water Works and Joann Wagner NUS Corporation, on June 24, 1987.	NUS Corp. Edison, NJ
19. Zapecza, Otto S., Hydrogeologic Framework of the New Jersey Coastal Plain Open File Report 84-730, U.S. Geological Survey.	NUS Corp. Edison, NJ
20. Telecon Note: telephone conversations between David Chichilitti of the Bristol Borough Water and Sewer Authority and Donna Restivo, NUS Corporation, on October 21, and October 22, 1987.	NUS Corp. Edison, NJ
21. Telecon Note: telephone conversation between Mr. Huxley of Lower Bucks Surface Water Authority and Donna Restivo, NUS Corporation on October 22, 1987.	NUS Corp. Edison, NJ

SECTION 7

PRESS RELEASE SUMMARY-MITRE HAZARD RANKING SYSTEM

Summary Statement
U.S. Pipe and Foundry Co.
Burlington City, New Jersey

U.S. Pipe and Foundry Co. is located in Burlington City, Burlington County, in south-central New Jersey. The facility covers 100 acres along the Delaware River. The facility has allocated a landfill area of 35 acres, of which 17 acres have been used. Since 1955, waste generated at the facility was disposed at the landfill. Leaking drums and oil stained soil have been observed at the site.

The wastes generated on site consist of asphalt based paint sludge, waste oil and slag from melting and treating operations.

Primary concern is for contamination of the Delaware River, the source of drinking water for Burlington City. The landfill has no known clay or synthetic liner; therefore, contamination of the groundwater may occur. Infiltration of contaminated groundwater into the Delaware River is possible, since groundwater flow is toward the river.

SECTION 8

ATTACHMENTS- CITED DOCUMENTS

REFERENCE #1

GEOLOGY AND GROUND-WATER RESOURCES OF BURLINGTON COUNTY, NEW JERSEY

By

F. Eugene Rush

U. S. Geological Survey

SPECIAL REPORT NO. 26

1968

Prepared by the U. S. Geological Survey

in Cooperation with the

State of New Jersey

volume of the rock. The major source of water in the formation is from the overlying sands and gravels of the Raritan and Magothy Formations. Because of the poor past record and the geologic character of the formation, future development of the Wissahickon Formation as a source of ground water is unlikely.

MESOZOIC SEDIMENTS

Cretaceous System

Raritan and Magothy Formations

Stratigraphy.—The Raritan and Magothy Formations crop out in a 2-mile wide belt immediately southeast of the Delaware River (fig. 3). The outcrop area in Burlington County is approximately 48 square miles. The Raritan Formation lithology is extremely variable and therefore cannot be subdivided into the seven members reported in the Sayreville area, Middlesex County (Barksdale, 1943, p. 18). It has not been possible to separate the Raritan and Magothy completely because they lose some of the distinguishing characteristics described by Barksdale and others (1943, p. 64-140). Most of the outcrop area of these two formations in Burlington County is overlain by Pleistocene deposits, which further complicates any separation.

The Raritan Formation, in outcrop consists chiefly of light gray to white, cross-stratified, medium- to coarse-grained quartz sand, arkosic in part and interbedded with white to red and white variegated clays. Mechanical analyses made on sand samples taken from the Raritan and Magothy Formations in both the outcrop and the subsurface show the following percent particle size distribution:

	Clay-silt		*Sand*			*Gravel*	
Sample	*(undivided)*	*v. fine*	*fine*	*medium*	*coarse*	*v. coarse*	*(undivided)*
Tinnaminson Twp.-outcrop	10.0	3.1	16.7	49.5	16.3	2.3	2.1
Westampton Twp.-depth 905'	4.0	4.4	21.4	57.4	12.0	0.8	—

In outcrop, the Magothy Formation is similar to the Raritan Formation in having more sand than clay. However the clay beds of the Magothy Formation are generally dark and lignite bearing. Mica and pyrite are other accessory minerals of the Magothy Formation.

The Raritan and Magothy Formations thicken downdip to form a wedge-shaped unit. The thickness at Bordentown, near the outcrop area, is about 330 feet, whereas downdip near Wrightstown, it is over 600 feet thick. Farther downdip, greater thicknesses can be anticipated.

There appears to be little textural or compositional change in the sands and clays of the Raritan and Magothy Formations downdip. However, the relative proportions of these two dominant lithologies do change: the sand beds make up a smaller proportion of the formations downdip.

The Raritan and Magothy Formations are generally considered to be continental, near-shore deposits. However, it appears that the Raritan and Magothy Formations have a marine facies downdip. Horace G. Richards, Associate Curator of Geology and Paleontology, Academy of Natural Sciences, Philadelphia, (oral communications) points out that marine fossils were found in the Raritan Formation in the Transcontinental Gas Pipe Line well 16T between 1,648 and 1,658 feet below land surface and in Transcontinental Gas Pipe Line well 17T at a depth of 1,710 feet. Well 16T is in Bass River Township, Burlington County, whereas, well 17T is in Ocean County but within 3 miles of Woodland Township, Burlington County.

The Raritan and Magothy Formations unconformably overlie the Wissahickon Formation in most of the county. However, downdip, pre-Raritan sediments are probably present. The Raritan and Magothy Formations are overlain unconformably by the Merchantville Formation.

Hydrology.—The undifferentiated Raritan and Magothy Formations contain the most important and productive aquifers in Burlington County. Most of the industries adjacent to the Delaware River and most of the public water supplies and irrigation supplies throughout the county obtain ground water from these formations. Large-diameter wells tapping these formations yield up to 1,500 gpm. The specific capacities of 55 industrial, public-supply, and irrigation wells range from 2.4 to 86 gpm per foot and average 21 gpm per foot. The hydraulic characteristics and thickness of the water-bearing zones (and confining beds) in these formations vary greatly within short distances. The sand aquifers range in thickness from a few feet to about 100 feet, although the total thickness of the formation is generally much greater.

In the outcrop area adjacent to the Delaware River, two water-bearing zones are present. The upper zone, usually under water-table conditions, includes the water-bearing beds in the upper 70 feet of the formation. In most of the outcrop area, the formations are overlain by the Cape May Formation of Pleistocene age. This formation is generally in hydraulic continuity with the Raritan and Magothy water-table aquifer.

resulting in a total saturated thickness of as much as 100 feet. The lower artesian zone, generally separated from the upper water-table zone by clay beds, is composed of the water-bearing beds in the lower part of the formations. It may be as much as 250 feet thick in the outcrop area, but commonly does not exceed 50 feet in thickness along the Delaware River between Palmyra and Burlington.

On Burlington Island, public-water supply wells tap the water-table zone. These wells yield up to 760 gpm with a specific capacity of 58 gpm per foot.

Throughout the Raritan and Magothy outcrop area, wells more commonly tap the lower artesian aquifer. In the Riverside and Burlington areas, many wells yield as much as 1,000 gpm from this lower zone. At Florence, artesian wells yield up to 620 gpm, whereas at Beverly, the yield is up to 1,200 gpm.

To the southeast, beyond the Raritan and Magothy outcrop area, all aquifers of these formations are under artesian conditions. In this area, the sand and clay beds are not identifiable as being continuous. Therefore the Raritan and Magothy cannot be divided into distinct water-bearing zones, and it is necessary to treat these several sand aquifers as a group (fig. 8). In the Wrightstown area, the aquifers of these formations are developed extensively for water supplies to serve Fort Dix, McGuire Air Force Base, and Wrightstown. These large-diameter wells will yield from 900 to 1,000 gpm. At Wrightstown, the cumulative thickness of the aquifers in the Raritan and Magothy Formations is 260 feet. At Birmingham, wells yield up to 1,000 gpm, at Mount Holly 1,200 gpm, and at Willingboro, yields of from 1,400 to 1,500 gpm are common. To the southeast of a line connecting Marlton, Medford, Birmingham, and the Wrightstown area, no wells tap the aquifers of the Raritan and Magothy Formations because there is no industrial or public-supply demand for large quantities of water. However, if this demand should arise, it could probably be satisfied by the aquifer of the Wenonah Formation and Mount Laurel Sand or by the Cohansey Sand, both at much shallower depths.

Laboratory analyses of the coefficient of permeability were made on two sand samples and one clay sample. These analyses had coefficients of permeability of 290 and 300 gpd per sq ft for the sands and 0.08 gpd per sq ft for the clay.

Several aquifer tests were made in various parts of the county to determine the hydraulic characteristics of the aquifers. The results of these tests are summarized in the following table:

Location	*Zone*	*Coefficient of transmissibility (gpd/ft)*	*Coefficient of permeability (gpd/ft²)*	*Coefficient of storage (dimensionless)*
Burlington	upper	165,000	1,500	0.060
Burlington Twp.	lower	46,600 to 90,000	1,000 to 2,000	2.10×10^{-4}
Cinnaminson Twp.	lower	150,000	1,500	1.60×10^{-4}
Palmyra	lower	211,000 to 513,000	—	1.08×10^{-4} to 5.84×10^{-4}
Beverly	lower (?)	98,000 to 130,000	1,630 to 2,170	1.00×10^{-4} to 2.40×10^{-4}

The wide range of results of pumping tests is evidence of the variability of the geology and hydrology of these formations. At some distance from the outcrop, no pumping tests have been made; however similar coefficients can be anticipated.

In the heavily populated and industrialized area between the Delaware River and the New Jersey Turnpike of Burlington County, essentially all of the ground-water pumpage is from the Raritan and Magothy Formations. Two other areas of large withdrawal from these formations are at Mount Holly, and at Fort Dix and McGuire Air Force Base, both in New Hanover Township. (Fort Dix also obtains an average of 2 mgd of surface water from Greenwood Branch at New Lisbon.) It is estimated that 20 mgd of water are taken from these formations in Burlington County. This represents 80 percent of the total ground-water pumpage in the county.

Prior to development of the aquifers in the Raritan and Magothy Formations, much of the recharge to the aquifers was from precipitation on the high-level intake areas in Middlesex County. The water flowed to the southeast in response to natural gradients. The fresh water-salt water interface (fig. 19) in the southeastern part of the county (Barksdale and others, 1958, p. 110) is a boundary along which the fresh water is diverted with subsequent flow to the southwest into Burlington County from Ocean and Monmouth Counties.

With the growth in population of Burlington County and the increased need for water, the pumpage increased from the Raritan and Magothy Formations. Withdrawal of water locally from this aquifer changed the

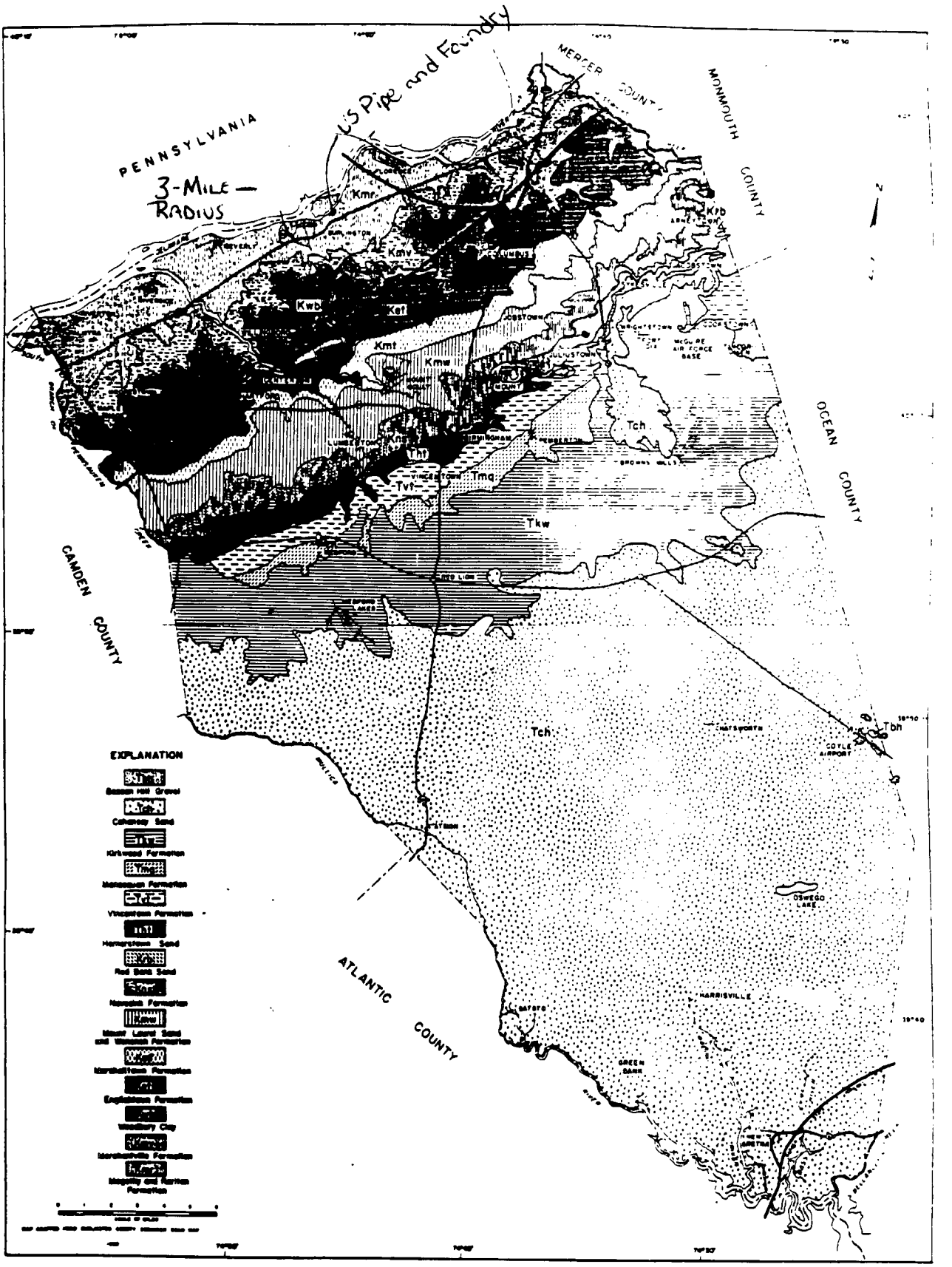


Figure 3.—Pre-Quaternary map of Burlington County.

REFERENCE #2

STATE OF NEW JERSEY

DEPARTMENT OF CONSERVATION AND ECONOMIC DEVELOPMENT

DIVISION OF WATER POLICY AND SUPPLY

IRON IN GROUND WATERS OF THE MAGOTHY AND RARITAN FORMATIONS IN CAMDEN AND BURLINGTON COUNTIES, NEW JERSEY

WATER RESOURCES CIRCULAR NO. 19

Prepared in Cooperation with
United States Department of the Interior
Geological Survey
1969

IRON IN GROUND WATERS OF THE MAGOTHY AND RARITAN FORMATIONS IN CAMDEN AND BURLINGTON COUNTIES, NEW JERSEY

By

Donald Langmuir, Hydrologist

U. S. Geological Survey

Prepared by the U. S. Geological Survey

in cooperation with

the State of New Jersey

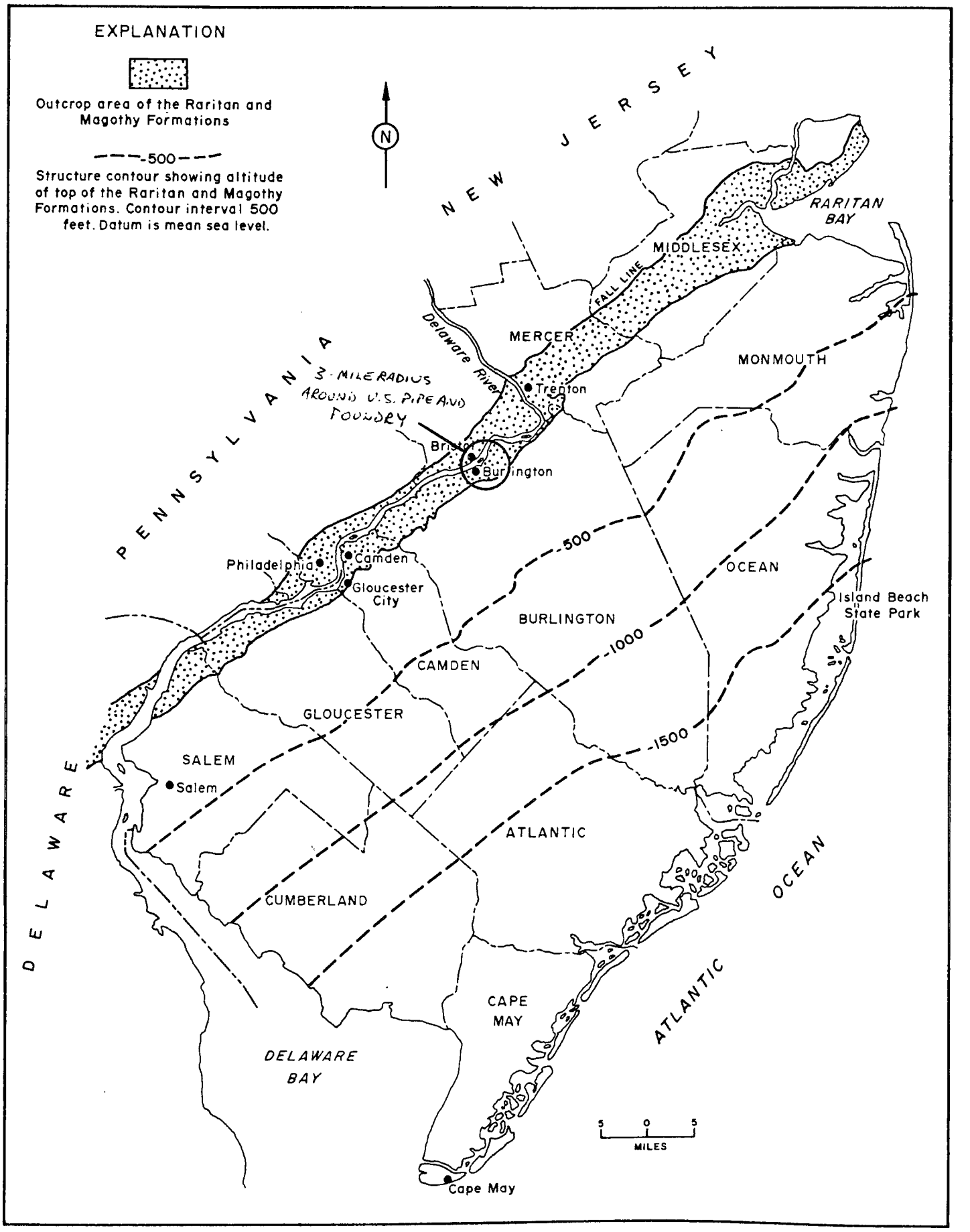


Figure 1.—Map showing outcrop area and generalized altitude of the top of the Magothy and Raritan Formations in southern New Jersey.

GEOLOGY

Coastal Plain geology in New Jersey is characterized by a wedge of unconsolidated and semiconsolidated sediments exposed southeast of the Fall Line, of Cretaceous through Quaternary age, that thicken downdip towards the Atlantic Ocean. The oldest of these sediments, known in New Jersey as the Raritan and Magothy Formations, rest unconformably upon an early Paleozoic and Precambrian crystalline basement, which crops out at the surface northwest of the Fall Line (fig. 1). In New Jersey, the erosion surface on the buried pre-Cretaceous basement dips from 60-100 feet per mile toward the southeast (Parker and others, 1964, p. 42), is about 3,800 feet deep at Island Beach State Park and 6,000 feet deep at Cape May (Richards and others, 1962, p. 13). South of Trenton the surface is characterized by a number of easterly to southerly trending channels which were carved by the ancient Schuylkill and Delaware Rivers and their tributaries (Greenman and others, 1961). The buried upper surface of the crystalline basement has been weathered into a micaceous residual clay. The clay is widespread, and probably serves as a confining bed where it occurs below the overlying unconsolidated sediments.

The Magothy and Raritan Formations, which make up approximately the lower half of the Coastal Plain sequence in New Jersey, are Late Cretaceous in age, and are composed of unconsolidated sand, clay, and silt, and small amounts of gravel. In the outcrop area south of Trenton, the Raritan is about 200 feet thick and the Magothy ranges in thickness from 0-45 feet (H. E. Gill, oral communication). The formations dip from 40-100 feet per mile toward the southeast, with the lower dips assigned to the overlying Magothy formation (Johnson and Richards, 1952, p. 2, 152). At Island Beach State Park, the Raritan attains a thickness of 1,730 feet and the Magothy about 260 feet. The contours in figure 1 show the altitude of the top of the Magothy Formation. In the Delaware Valley, south of Trenton, the outcrop area of both formations is almost completely covered by permeable sand and gravel, and semi-permeable silt and clay deposits of Pleistocene age.

Although a number of distinct sand and clay members within the Raritan Formation have been identified in Middlesex County, several tens of miles northeast of the study area, it has not been possible to trace these beds for great distances away from the type locality. Magothy and Raritan sediments in Camden and Burlington Counties are highly variable in nature both vertically and horizontally because of their predominantly fluvial character. Because of this variability, it has traditionally been assumed that the major sand and gravel aquifers within the two formations are interconnected over relatively short distances around the clay layers. Although this assumption is open to question in some areas, the interconnection is certainly most effective in sediments filling several major stream channels which have been carved into the crystalline basement. These ancient valleys contain thick accumulations of highly permeable coarse-grained sediments which are the most reliable and productive sources of ground water in the area. A thickness map of the uppermost water-bearing zone in Magothy and Raritan sediments, based largely on an interpretation of geophysical logs by Gill (written communication) is shown in figure 2. The map shows two major channels south and east of Philadelphia, respectively, which are characterized by a thickening of sands and gravels to over 100 feet. The channel in Gloucester County may represent an ancient course of the Schuylkill River. Also of hydrologic significance are the 100-120 foot thick sands southeast of Bristol. Considerable movement of ground water has taken place in sediments filling the channel south of Philadelphia. The channel opposite Bristol has also had an important influence on ground-water movement in that area.

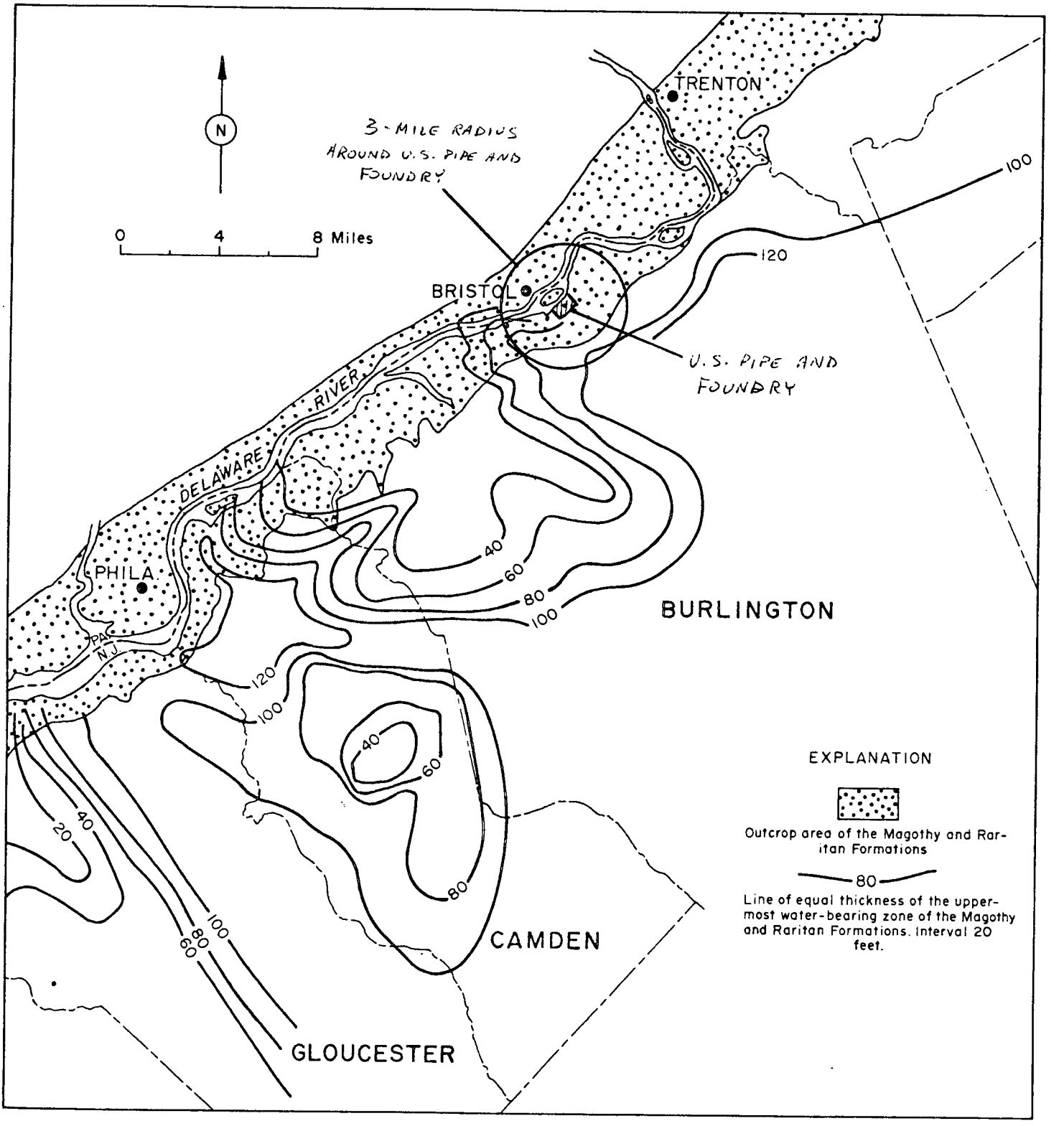
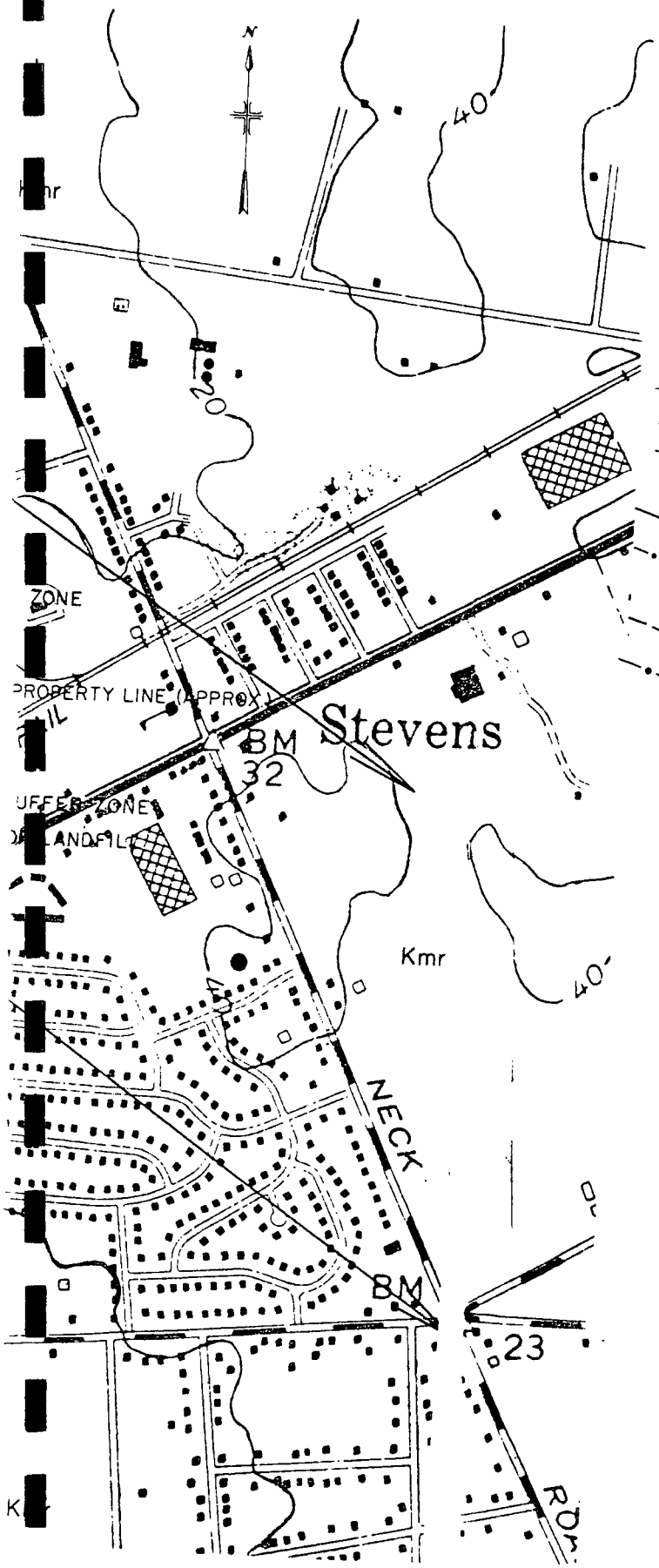


Figure 2.—Thickness of the uppermost water-bearing zone of the Magothy and Raritan Formations.

The aquifers within the Magothy and Raritan Formations are effectively confined below by the crystalline basement and its residual clay, and above by the silts and clays of the Merchantville Formation and Woodbury Clay of Late Cretaceous age, which collectively are about 100 feet thick or more. The Merchantville Formation is a sequence of horizontally stratified thin-to-thick bedded silts and sands which are slightly to very clayey. The Woodbury Clay is a massive bedded, and somewhat silty clay (Owens and Minard, 1964). These two formations, of marine origin are areally extensive, and function primarily as a confining bed in the study area.

REFERENCE #3



LEGEND

GEOLOGY:

Kmr RARITAN AND MAGOTHY FORMATION. CONTINENTAL, NEAR-SHORE DEPOSITS. LIGHT GREY TO WHITE, CROSS-BEDDED, MEDIUM TO COARSE GRAINED QUARTZ SAND AND INTERBEDDED WITH WHITE TO RED AND WHITE VARIEGATED CLAYS. MAGOTHY FORMATION TYPICALLY CONTAINS CLAY BEDS THAT ARE DARK AND LIGNITE BEARING. MICA AND PYRITE ARE COMMON ACCESSORY MINERALS.

HYDROLOGY:

MP-1 MONITORING WELL LOCATION

#20 EXISTING U.S. PIPE AND FOUNDRY WATER SUPPLY WELL

ESTIMATED REGIONAL GROUNDWATER FLOW DIRECTION

LOCAL GROUNDWATER CONTOUR (DASHED WHERE APPROXIMATE)

30 SEPTEMBER 14, 1983

30 FEBRUARY 27, 1984

LOCAL GROUNDWATER FLOW DIRECTION

SEPTEMBER 14, 1983

FEBRUARY 27, 1984

PLATE 2

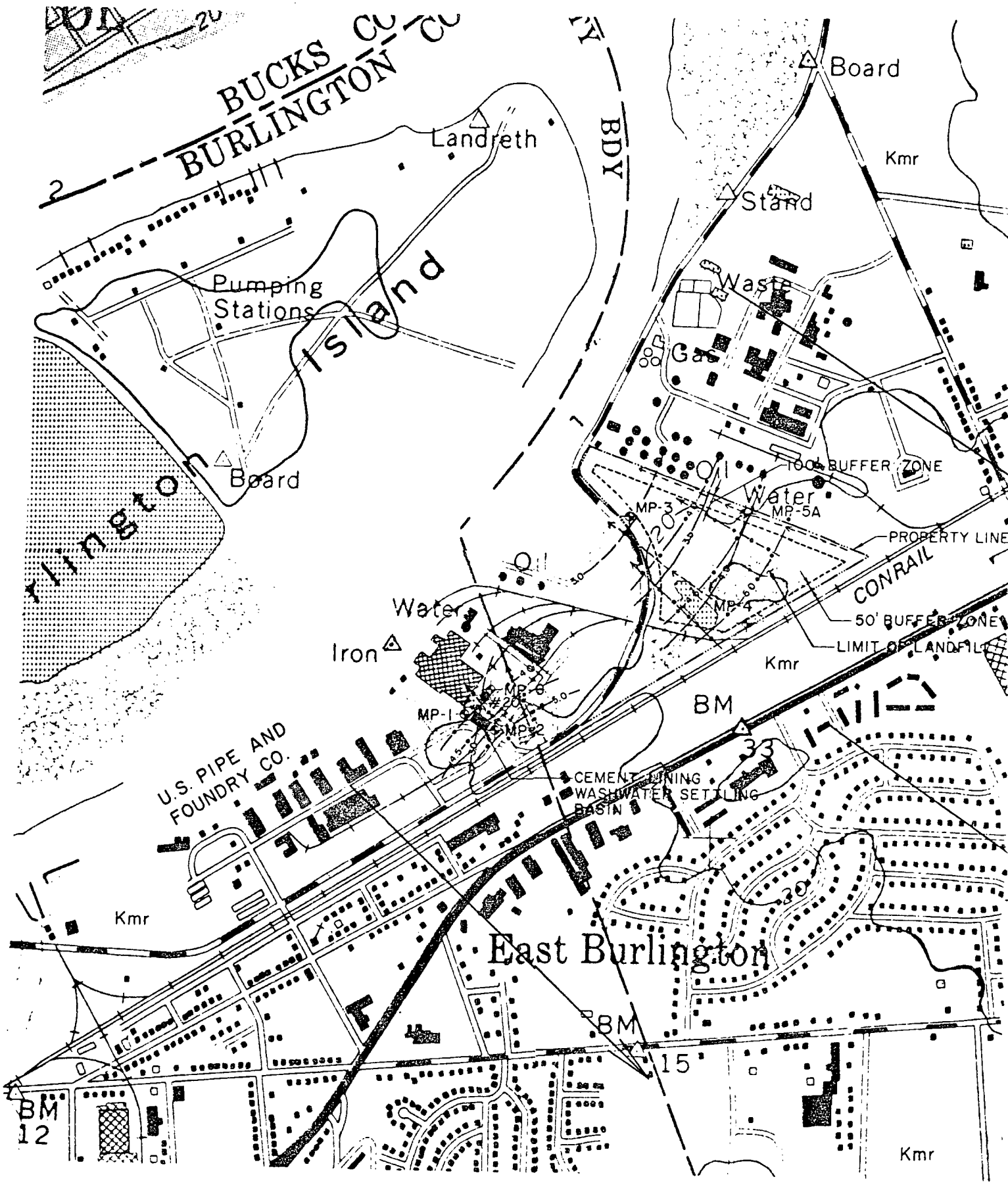
UNITED STATES PIPE AND FOUNDRY COMPANY

NJPDES PERMIT APPLICATION

HYDROGEOLOGIC MAP

400 200 0 400 800 1200

SCALE IN FEET



MALCOLM PIRNIE

REFERENCE #4

27-34-859

Form 87 (1)

DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
DIVISION OF WATER POLICY & SUPPLY

Permit No. 27-5343
Application No. P-896
County

WELL RECORD

1. OWNER U.S. PIPE & ~~Foundry~~ FOUNDRY CO ADDRESS EAST PEARL STREET
   Owner's Well No. 3-8 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION BURLINGTON, N.J. 08016
3. DATE COMPLETED FEB. 20-1971 DRILLER JOSEF STRAUBER
4. DIAMETER: top 8 Inches Bottom 8 Inches TOTAL DEPTH 43 Feet
5. CASING: Type PVC 250 Diameter 8" Inches Length 16 Feet
6. SCREEN: Type PVC Size of Opening 020 Diameter 8 Inches Length 27 Feet
   Range in Depth { Top 16 Feet, Bottom 43 Feet } Geologic Formation QCAL?
   Tail piece: Diameter — Inches Length — Feet
7. WELL FLOWS NATURALLY — Gallons per Minute at — Feet above surface
   Water rises to — Feet above surface
8. RECORD OF TEST: Date FEB 22-1971 Yield 250 Gallons per minute
   Static water level before pumping 6'6" Feet below surface
   Pumping level 25 feet below surface after 24 hours pumping
   Drawdown 21/2 Feet Specific Capacity 250 Gals. per min. per ft. of drawdown
   How Pumped JET PUMP How measured REGULAR
   Observed effect on nearby wells YES
9. PERMANENT PUMPING EQUIPMENT:
   Type SUBM Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. 25 R.P.M. _____
   Depth of Pump in well 30 Feet Depth of Footpiece in well — Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR INDUSTRIAL WATER AMOUNT { Average _____ Gallons Daily, Maximum _____ Gallons Daily }
11. QUALITY OF WATER GOOD Sample: Yes _____ No. _____
    Taste NO Odor NO Color _____ Temp. _____ °F
12. LOG YES Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy)
13. SOURCE OF DATA CUTTING
14. DATA OBTAINED BY Josef Straubr Date FEB. 22-1971

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements etc.)

27-34-859
27-5343

Engineering Drilling Company

PROJECT: U.S. PIPE
LOCATION: BURLINGTON, NEW JERSEY
BORING Nº: 3-8" GROUND ELEV. _____ B.M. ELEV. _____

BEGIN BORING: DATE _____ TIME _____
FINISH BORING: DATE _____ TIME _____

DRIVE HAMMER: DISTANCE DROP _____ INCHES; WEIGHT _____ POUNDS; CASING SIZE _____

SPOON HAMMER: DISTANCE DROP _____ INCHES; WEIGHT _____ POUNDS; SPOON SIZE _____ INCHES

WATER OBSV. PIPE _____ FT.
CORE BIT SIZE _____
UNDISTURBED SAMPLE SIZE _____ INCHES O.D.
ANGLE OF INCLINATION _____
WATER PRES. TEST _____

GROUND WATER	DATE	HOUR AM	HOUR PM	DEPTH
				6'6"

* IF NO WATER IS ENCOUNTERED WRITE - "NONE"

CASING BLOWS: 0-1, 1-2, 2-3, 3-4, 4-5, 5-6, 6-7, 7-8, 8-9, 9-10, 10-11, 11-12, 12-13, 13-14, 14-15, 15-16, 16-17, 17-18, 18-19, 19-20, 20-21, 21-22, 22-23, 23-24, 24-25, 25-26, 26-27, 27-28, 28-29, 29-30, 30-31, 31-32, 32-33, 33-34, 34-35, 35-36, 36-37, 37-38, 38-39, 39-40, 40-41, 41-42, 42-43, 43-44, 44-45, 45-46, 46-47, 47-48, 48-49, 49-50, 50-51, 51-52, 52-53, 53-54, 54-55

DEPTH FROM-TO	DESCRIPTION	SAMPLE NUMBER	EARTH DEPTH FROM-TO	EARTH SPOON BLOWS PER 6 INCHES	REMARKS
0-3'	Brown sand and gravel trace of cinders				
	Fill				
3'-30'	Brown coarse to medium Sand gravel and				
	bolders				
30'-42'	Brown coarse to medium Sand with trace of				
	gravel				
42'-43'	White silty clay				
	Well completed at 43'				
	Test pump 20 hrs 260 gal . per min.				
	Water level ~~XXXXXXXXXX~~ during pumping				
	time: Well #1-8 7 foot 6" draw-down				
	Well #1-4 8 foot 1½' draw-down				
	✓ Well #3-8 9 foot 2½' draw-down				

JOB Nº _____ RIG Nº _____ WEATHER _____ TEMP. _____
DRILLER _____ HELPER _____ SHEET _____ OF _____

27-34-918

Form 57

DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
DIVISION OF WATER POLICY & SUPPLY

Permit No. 27-3568
Application No. P-173
County

WELL RECORD

1. OWNER Hercules Powder Co. ADDRESS Wilmington, Del.
   Owner's Well No. 3 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Burlington Twp., Burlington County, N.J.
3. DATE COMPLETED 5/17/61 DRILLER Layne - New York Co., Inc.
4. DIAMETER: top 12 Inches Bottom 12 Inches TOTAL DEPTH 138 Feet
5. CASING: Type steel Diameter 12 Inches Length 111 Feet
6. SCREEN: Type Stainless St. Size of Opening Shutter Diameter 12 Inches Length 25 Feet
   Range in Depth { Top 111 Feet, Bottom 136 Feet } Geologic Formation Coarse sand & light gravel strks white clay
   Tail piece: Diameter 12 Inches Length 2 Feet
7. WELL FLOWS NATURALLY _____ Gallons per Minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date 6-22-61 Yield 750 Gallons per minute
   Static water level before pumping 34 Feet below surface
   Pumping level 67 feet below surface after 8 hours pumping
   Drawdown 33 Feet Specific Capacity 22.6 Gals. per min. per ft. of drawdown
   How Pumped Turbine How measured Orifice
   Observed effect on wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type Turbine Mfrs. Name Layne & Bowler, Inc. Memphis, Tenn.
   Capacity 750 G.P.M. How Driven Elec.Motor H.P. 40 R.P.M. 1800
   Depth of Pump in well 95 Feet Depth of Footpiece in well 10 Feet
   Depth of Air Line in well 104 Feet Type of Meter on Pump _____ Size ___ Inches
10. USED FOR Industrial AMOUNT { Average _____ Gallons Daily, Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes ___ No. ___
    Taste _____ Odor _____ Color _____ Temp. _____ °F
12. LOG see reverseside Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy)
13. SOURCE OF DATA Layne - New York Co., Inc.
14. DATA OBTAINED BY Layne - New York Co., Inc. Date 10/30/61

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements etc.)

(4)

	0'	6'	Top soil
UPPER	6'	12'	Red sand
AQUIFER	12'	30'	Brown sandy clay strks of gravel
	30'	48'	Coarse yellow sand & heavy gravel
	48'	80'	Tough white & red clay
MIDDLE	80'	98'	Sandy white clay strks sand & gravel
AQUIFER	98'	110'	Coarse sand & gravel & strks white clay
	110'	142'	Coarse sand & light gravel & strks white clay

RECEIVED
JAN 8 '62
DEPT. CONSERVATION & ECONOMIC DEVELOPMENT
GEOLOGIC & TOP. SURVEY

RECEIVED
JAN 9 1962
DEPT. OF CONSERVATION &
ECONOMIC DEVELOPMENT
GEOLOGIC & TOP. SURVEY

Form 97

(5)

DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

Permit No. 27-57
Application No. 1531
County _____

WELL RECORD

1. OWNER BURLINGTON TOWNSHIP, N. J. ADDRESS BURLINGTON TWSP., N. J.
   Owner's Well No. 2 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Oxmead Road
3. DATE COMPLETED May, 1973 DRILLER A. C. SCHULTES & SONS, INC.
4. DIAMETER: top 18 Inches Bottom 12 Inches TOTAL DEPTH 234'0" Feet
5. CASING: Type Steel Diameter 18"x12" Inches Length 18" = 158'0" 12" = 163'0" Feet
6. SCREEN: Type SS/WW Size of Opening .060 Diameter 12" Inches Length 38 Feet
   Range in Depth { Top 163'0" Feet, Bottom 224'0" Feet } Geologic Formation RARITAN
   Tail piece: Diameter 12" Inches Length 10'-0" Feet
7. WELL FLOWS NATURALLY _____ Gallons per Minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date May, 1973 Yield 300 Gallons per minute
   Static water level before pumping 77'3" Feet below surface
   Pumping level 88'3" feet below surface after 24 hours hours pumping
   Drawdown 11'11" Feet Specific Capacity 48.5 Gals. per min. per ft. of drawdown
   How Pumped vertical turbine pump How measured orifice
   Observed effect on nearby wells yes
9. PERMANENT PUMPING EQUIPMENT:
   Type V.T.P. Mfrs. Name Worthington
   Capacity 300 G.P.M. How Driven electric H.P. 60 R.P.M. 1300
   Depth of Pump in well 130 Feet Depth of Footpiece in well none Feet
   Depth of Air Line in well 13' Feet Type of Meter on Pump electric Size 8 Inches
10. USED FOR Public Supply AMOUNT { Average _____ Gallons Daily, Maximum _____ Gallons Daily }
11. QUALITY OF WATER Good Sample: Yes ___ No. ___
    Taste None Odor None Color None Temp. 58 °F
12. LOG See Attached Are samples available? ___
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy)
13. SOURCE OF DATA Drillers' Log
14. DATA OBTAINED BY A. C. Schultes & Sons, Inc. Date May, 1973

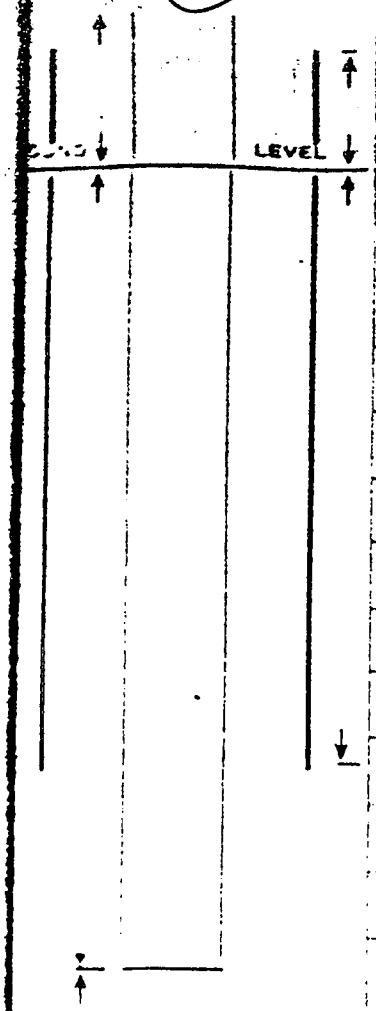
(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements etc.)

A.C. SCHULTES & SONS, INC.

GRAVEL PACKED WELL

27-5727

(6)



WELL LOG	FEET FROM GROUND SURFACE	NAME OF OWNER
Topsoil	0 to 1	BURLINGTON TOWNSHIP
Brown Sand	1 - 13	Location OXMEAD ROAD
Brown Clay	13 - 19	Permit No. 2
Gray Clay	19 - 53	Log No. 9040
Green Marl	53 - 69	Test Pumping Hrs. 24
Gray Clay & a Few Streaks of Red Clay	69 - 142	Capacity G.P.M. 578
Coarse Sand & Gravel	142 - 145	Static Water Level 77'-4"
Very Fine Sand	145 - 150	Pumping Water Level 89'-3"
Wood	150 - 152	Screen Diameter 48.
Fine to Coarse White Sand	152 - 162	Diameter of Pump Column 18"
Fine to Coarse Sand & Gravel	162 - 180	Diameter of Casing 12"
Small Stones-White Clay	180 - 181	Depth of Well 237'
Fine White Sand	181 - 187	[illegible]
Sand, Gravel & Stones	187 - [illegible]	60'
White & Gray Clay	204 - 211	109'
Fine to Medium Coarse Sand & Gravel	211 - 224	236'
White & Blue Clay	224 - 237	3[illegible]"
		[illegible]
		[illegible]
		X
		[illegible]
		[illegible]
		[illegible]
		[illegible]
		900
		WILSON DI[illegible]
		MAY, 197[illegible]
		W. JESTER

REFERENCE # 5

REFERENCE #6

U.S. Pipe
Project Manager-
Nick Dmytryszyn
TDD #02-8403-64A
Field Notebook 977

Dawn Sran 8:55 AM 1
Nick Dmytryszyn Arrived

Weather: Cloudy humid
Wind slight breeze - westerly
T ≈ 80°F

Stopped at gate to register and inform guard of our appointment with Paul Wojnowsky.

Paul met us and took us into the office. We explained the nature of an SI and that we came today to basically do a site review from a car. The anticipated SI is for the week of Aug. 27.

We explained that there was no accurate drawing map of the facility and the landfill area. Therefore the number of samples we want to take

SCIENTIFIC BINDERY PRODUCTS CHICAGO

N. Dmytryszyn 8/10/84

there he. Paul said there is one discharge point that is preceded by an oil/water separator. As for storm water runoff, it appears as if there is no control.

As we neared the foundry area, we started asking what occurs in each building. He gave us an overview of the processes. I asked how many shifts there were, and he said only one 9½ hr. shift. The plant originated in the late 1800's, and the operation has had its ups and downs for the past number of years.

We drove around, saw the foundry building for pipe manufacturing; the area where the pipes are coated with a black "asphalt-type paint; and then the pipe

SCIENTIFIC STANDARD PRODUCTS CHICAGO 8

N. Dougherty 1990

storage area. By the gate storage area were 3 above ground oil storage tanks: 1 - 250,000 gal and 2 - 125,000 gal. There were dark stained soil areas near these oil tanks. There were also drums scattered over the area.

The area by the land fill was heavily overgrown with weeds and brush. The land fill covers an area of about 35 acres. Half of this area is being dug up to reclaim the old scrap metal and drums that were buried there over the years. The soil appeared to be heavily contacted, gray black and type of sand. There were piles of the rusty scrap metal around the area. We asked why there were so many drums. The drums contained slag material, not

SCIENTIFIC BINDERY PRODUCTS CHICAGO 8

M. Dougherty

No fill is brought in from outside sources.
Have Submitted Closure Plan to N.J.
Valid over in 25 years.

12:37 pm - Oil Storage TANKS
HNU = 4.6
OVA : 0.2

2 are inactive one is still active. Approx 20 drums of an oily substance are present here. Oil is leaking out of drums.
Contain Paint Sludge & oil drums.
HNU = 4.6
OVA = 0.2

200 Drums supposedly empty with Labels
STATING: 3,5 dichloro N-(1,1 Dimethyl propynyl) benzamide. 150 lbs!
KARB - 500
ROHM & HAAS - Products
[illegible] 9/5/87

SCIENTIFIC BINDERY PRODUCTS CHICAGO 8

Asphalt based paint sludge is dumped into a concrete diked area. One side is open so the material can be removed by a front-end loader when the concrete box is full. The front is blocked with sand. This is one of two areas where the paint sludge is deposited from plant operations.
This particular area is located approx. 50' from the horseshoe-shaped cement settling pond.
It looks like the sludge material has gotten into the lagoon at various times either from overflow caused by heavy rain, or overfilling.
Slide photo # 26+27, Print photo # 27
TIME: 1040 hrs.
Paper in the area does not belong there a matter of poor housekeeping.
Slide # 28, Print # 28: Southeastern end of horseshoe-shaped pond. where it

SCIENTIFIC BINDERY PRODUCTS CHICAGO 5

R. [illegible] 9/1/84

appear paint sludge have gotten in in the past. Time 1050 hrs.
Well is finished being bailed.
Sample from well # MP-2 collected by D. Farley + M. Nicholas at 1055 hrs.
Slide # 29, Print # 29.
Second paint sludge storage basin. East side of cement lining bldg. Slide photo # 30+31, Print # 30.
Well # MP-6 East side of cement lining building. Located. Return to get D. Farley + M. Nicholas and equipment.
Time: 1115 hrs. Uncap well.
No readings from well on OVA or HNU.
Depth to water 6'.
Depth of well 24'.
Bailing begins 1125 hrs.
It appear that the WD-40 used on the metal outer casings interfere with air monitoring. Readings are obtained from WD40 lubricating spray on both HNU + OVA.
WD40 used on all wells except MP-1 and MP-2

SCIENTIFIC BINDERY PRODUCTS CHICAGO 5

B. Neal 9/1/04

REFERENCE #7

NUS CORPORATION TELECON NOTE

CONTROL NO:	DATE:	TIME:
02-8706-13	6/24/87	1645

DISTRIBUTION:

FILE: U.S. Pipe and Foundry

BETWEEN:	OF:	PHONE:
Paul Scully (Operator)	Burlington Twp Water Department	(609) 386-0049

AND: C. LaBue (NUS)

DISCUSSION:

Question: How many people are served by Burlington Township Supply Wells #1, 2, 3 + 4

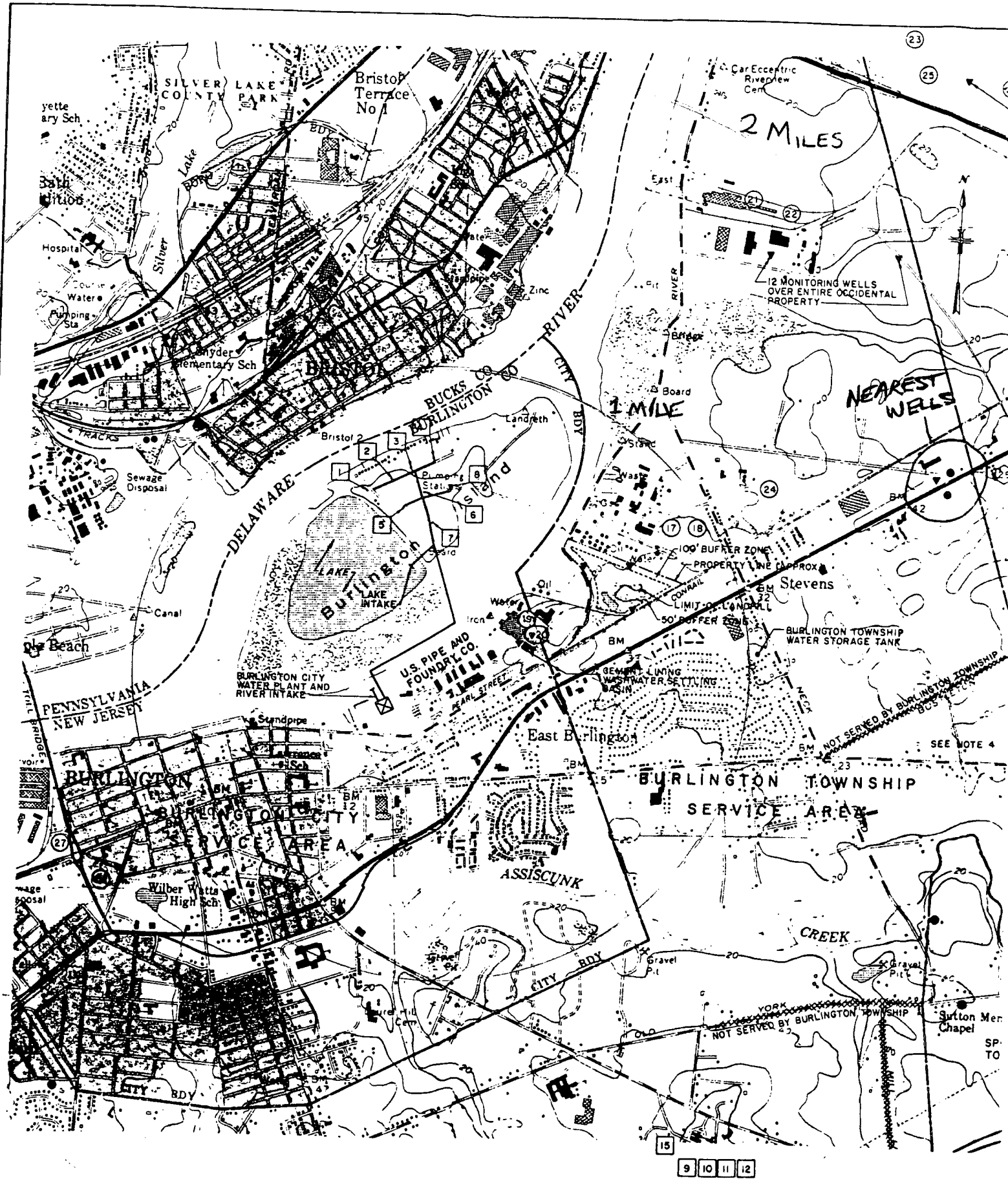
Scully: ~~P~~ Approximately 12,000 people are served by those wells.

Carl LaBue

ACTION ITEMS:

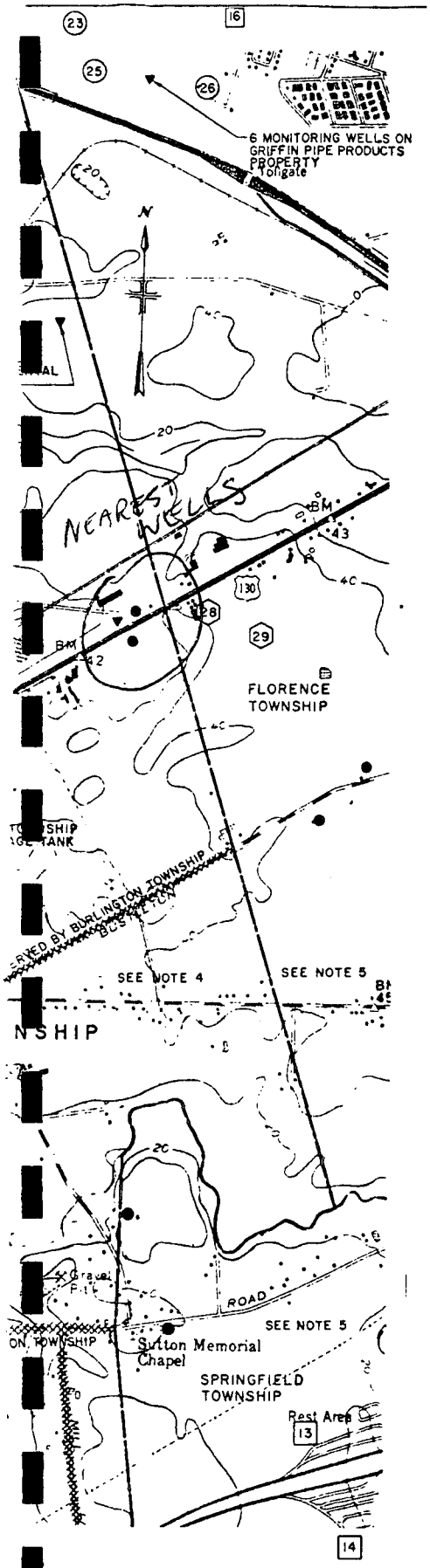
NUS 067 REVISED 0581

REFERENCE #8



BURLINGTON TWP WELLS → #1, 2, 3, 4

MALCOLM PIRNIE



LEGEND

- [1] PUBLIC WATER SUPPLY WELLS >70 GPM CAPACITY
- (17) INDUSTRIAL WATER SUPPLY WELLS >70 GPM CAPACITY
- (27) IRRIGATION WATER SUPPLY WELLS >70 GPM CAPACITY
- ● WELLS <70 GPM CAPACITY
- ▼ MONITORING WELLS
- —·— SERVICE AREA BOUNDARY

LISTING OF WELLS GREATER THAN 70 GPM CAPACITY

MAP REF. NO.	OWNER	CAPACITY (GPM)	DEPTH (FT)	STATIC LEVEL (FT BELOW CASING)	DATE DRILLED
1	BURLINGTON CITY # 1	175	—	—	—
2	BURLINGTON CITY # 2	250	—	—	—
3	BURLINGTON CITY # 3	300	—	—	—
4	BURLINGTON CITY # 4	CAPPED	—	—	—
5	BURLINGTON CITY # 5	50	—	—	—
6	BURLINGTON CITY # 6	550	50	19	6/67
7	BURLINGTON CITY # 7	600	50	17	8/67
8	BURLINGTON CITY # 8	400	—	—	—
9	BURLINGTON TOWNSHIP #1	510	208	65	4/73
10	BURLINGTON TOWNSHIP #2	578	234	77	5/73
11	BURLINGTON TOWNSHIP #3	1023	270	82	7/74
12	BURLINGTON TOWNSHIP #4	—	—	—	—
13	NEW JERSEY DEPT. OF TRANS. #1	201	221	32	8/72
14	NEW JERSEY DEPT. OF TRANS. #2	151	240	38	8/72
15	MASONIC HOME	250	220	27	2/54
16	FLORENCE TOWNSHIP #4	668	139	27	8/48
17	HERCULES POWDER CO. #1	610	140	—	2/46
18	HERCULES POWDER CO. #3	750	138	34	5/61
19	U.S. PIPE & FOUNDRY CO. #1-8	200	42	7	2/71
20	U.S. PIPE & FOUNDRY CO. #3-8	250	43	7	2/71
21	NATIONAL GYPSUM #1	207	130	16	5/56
22	NATIONAL GYPSUM #2	219	125	15	11/55
23	NATIONAL GYPSUM #3	235	143	19	12/64
24	LIQUID CARBONIC	351	140	45	10/76
25	GRIFFIN PIPE PRODUCTS	160	113	30	11/64
26	GRIFFIN PIPE PRODUCTS	582	119	70	12/64
27	CHAMBERLAIN CORP.	383	47	11	8/66
28	JOHN CANNULI	200	92	29	1/55
29	WILLIAM DONALD	275	106	26	2/55

NOTES:

1- WELL INFORMATION AND LOCATIONS OBTAINED PRINCIPALLY FROM N.J. DEPT. OF ENVIRONMENTAL PROTECTION, WATER ALLOCATION OFFICE, WELL PERMIT SECTION. LOCATIONS ARE APPROXIMATE.

2- INFORMATION ON CITY OF BURLINGTON WELLS OBTAINED FROM TAYLOR, WISEMAN AND TAYLOR, ENGINEERS.

3- INFORMATION ON BURLINGTON TOWNSHIP WELLS OBTAINED FROM THE TOWNSHIP ENGINEER.

4- APPROXIMATELY 40 PERCENT OF THE HOMES BETWEEN NECK ROAD AND THE TOWNSHIP LINE HAVE CONNECTED INTO THE PUBLIC WATER SUPPLY.

5- ALL RESIDENCES IN FLORENCE AND SPRINGFIELD TOWNSHIPS ARE ASSUMED TO HAVE PRIVATE WELLS.

PLATE 3

UNITED STATES PIPE AND FOUNDRY COMPANY

NJPDES PERMIT APPLICATION

WATER SUPPLY MAP

1000 500 0 1000 2000 3000

SCALE IN FEET

REFERENCE #9

TABLE 1

SAMPLE DESCRIPTIONS

U.S. PIPE AND FOUNDRY COMPANY

02-8403-64A

EPA CASE 3191

9/5/84

Sample Number	Sample Type	Traffic Report #	Time	Location
GW-1	Organic (Aqueous) Inorganic (Aqueous)	B3701 MB0998	1555	Well #MP-5A Located north of landfill
GW-2	Organic (Aqueous) Inorganic (Aqueous)	B3702 MB0999	1630	Well #MP-4 Located southeast of landfill
GW-3	Organic (Aqueous) Inorganic (Aqueous)	B3703 MB0997	1745	Well #MP-3 Located west of landfill
GWB-1	Organic (Blank)[a] Inorganic (Blank)[a]	B3704 MB1000	NA[c] NA[c]	EPA, Edison, N.J. EPA, Edison, N.J.
S-1	Organic (Soil/Sediment) Inorganic (Soil/Sediment)	B3705 MB1076	1628	Northern slope of filled area
S-2	Organic (Soil/Sediment) Inorganic (Soil/Sediment)	B3706 MB1077	1623	Backfilled material north of metal reclamation project
S-3	Organic (Soil/Sediment) Inorganic (Soil/Sediment)	B3707 MB1078	1635	East side of landfill at base
SB-1	Organic (Blank)[b] Inorganic (Blank)[b]	B3709 MB1080	NA[c] NA[c]	EPA, Edison, N.J. EPA, Edison, N.J.

NOTES:

(a) Organic and inorganic aqueous blanks contained doubly deionized distilled water taken from EPA, Edison, N.J., on 9/4/84.

(b) Organic and inorganic soil/sediment blanks contained doubly deionized water taken from EPA, Edison, N.J., on 9/4/84.

(c) NA = Not Applicable

TABLE 1 (cont'd)

SAMPLE DESCRIPTIONS

U.S. PIPE AND FOUNDRY COMPANY

02-8403-64A

EPA CASE 3191

9/6/84

Sample Number	Sample Type	Traffic Report #	Time	Location
GW-4	Organic (Aqueous) Inorganic (Aqueous)	B3710 MB0082	1010	Well #MP-1 Located approximately 15 feet northeast of pump house at the cement settling pond
GW-5	Organic (Aqueous) Inorganic (Aqueous)	B3711 MB0083	1055	Well #MP-2 Located approximately 30 feet from southeast end of cement settling pond
GW-6	Organic (Aqueous) Inorganic (Aqueous)	B3712 MB0084	1140	Well #MP-6 East side of cement lining building
GWB-2	Organic (Blank)[a] Inorganic (Blank)[a]	B3713 MB0085	NA[c] NA[c]	EPA, Edison, N.J. EPA, Edison, N.J.
S-4	Organic (Soil/Sediment) Inorganic(Soil/Sediment)	B3714 MB0086	1205	Collected from southeast bank of cement settling pond, inside fence
S-5	Organic (Soil/Sediment) Inorganic (Soil/Sediment)	B3715 MB0087	1215	Collected approximately 30 feet east of wastewater settling basin by transformers

NOTES:

(a) Organic and inorganic aqueous blanks contained doubly deionized distilled water taken from EPA, Edison, N.J., on 9/4/84.

(b) Organic and inorganic soil/sediment blanks contained doubly deionized water taken from EPA, Edison, N.J., on 9/4/84.

(c) NA = Not Applicable

TABLE 1 (cont'd)

SAMPLE DESCRIPTIONS

U.S. PIPE AND FOUNDRY COMPANY

02-8403-64A

EPA CASE 3191

9/6/84

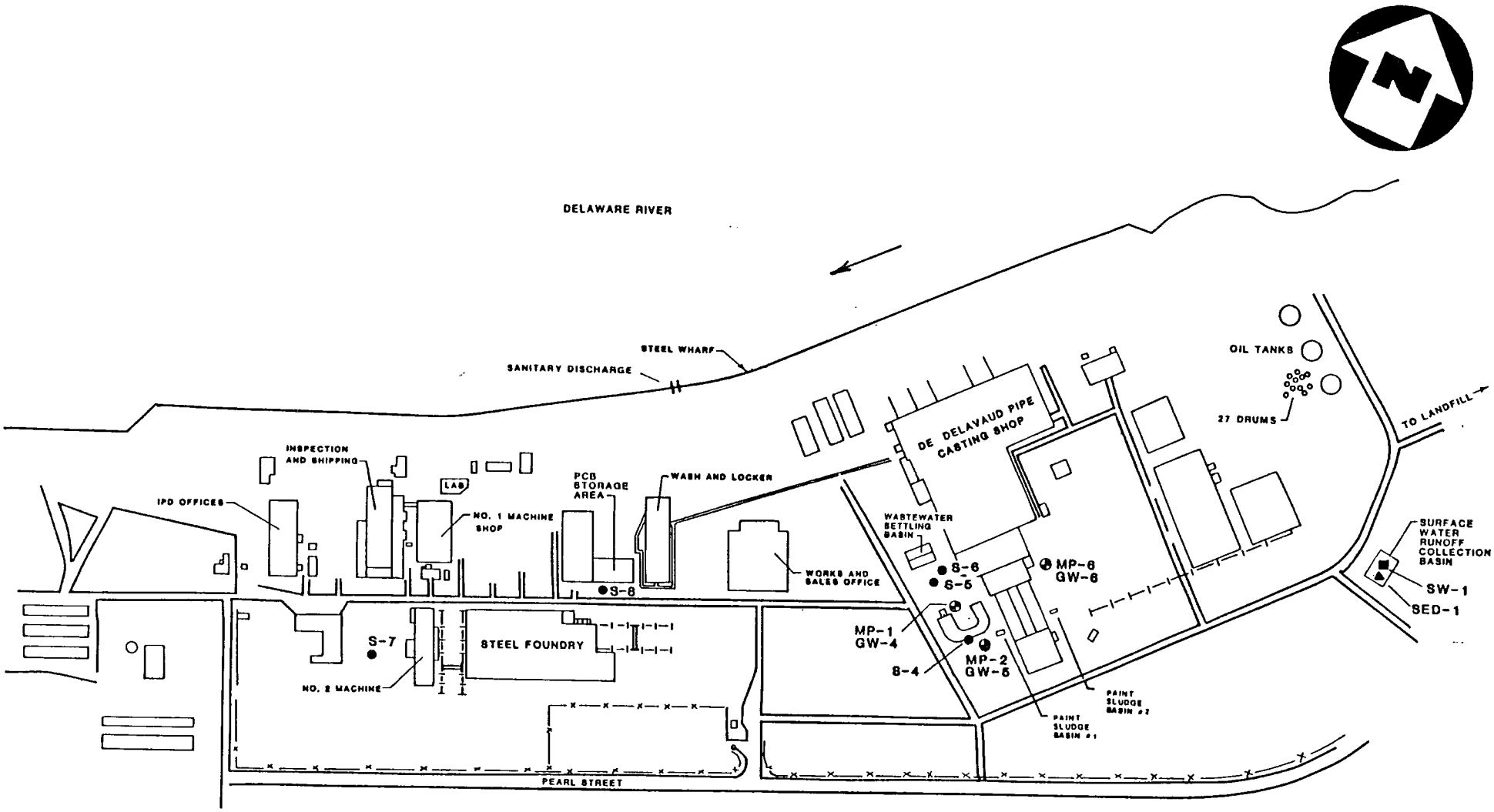
Sample Number	Sample Type	Traffic Report #	Time	Location
SW-1	Organic (Aqueous) Inorganic (Aqueous)	B3716 MB0088	1235	Collected from runoff collection basin at east side of facility
SED-1	Organic (Soil/Sediment) Inorganic (Soil/Sediment)	B3717 MB0089	1240	Collected from runoff collection basin at east side of facility
S-6	Organic (Soil/Sediment) Inorganic (Soil/Sediment)	B3718 MB0090	1228	Collected from storm water collection basin approximately 20 feet east of wastewater settling basin
S-7	Organic (Soil/Sediment) Inorganic (Soil/Sediment)	B3719 MB0091	1320	Collected at base of large scrap metal pile in the Industrial Products Division
S-8	Organic (Soil/Sediment) Inorganic (Soil/Sediment)	B3720 MB0092	1325	Collected outside of PCB storage area in Industrial Products Division
SB-2	Organic (Blank)[b] Inorganic (Blank)[b]	B3721 MB0093	NA[c] NA[c]	EPA, Edison, N.J. EPA, Edison, N.J.

NOTES:

(a) Organic and inorganic aqueous blanks contained doubly deionized distilled water taken from EPA, Edison, N.J., on 9/4/84.

(b) Organic and inorganic soil/sediment blanks contained doubly deionized water taken from EPA, Edison, N.J., on 9/4/84.

(c) NA = Not Applicable



LEGEND:

- ■ SURFACE WATER SAMPLE
- ◐ MONITORING WELL
- ▲ SEDIMENT SAMPLE
- ● SOIL SAMPLE

INDUSTRIAL FACILITY SAMPLING LOCATION MAP

U.S. PIPE AND FOUNDRY COMPANY, BURLINGTON, N.J.

(NOT TO SCALE)

FIGURE A-3

NUS CORPORATION

A Halliburton Company

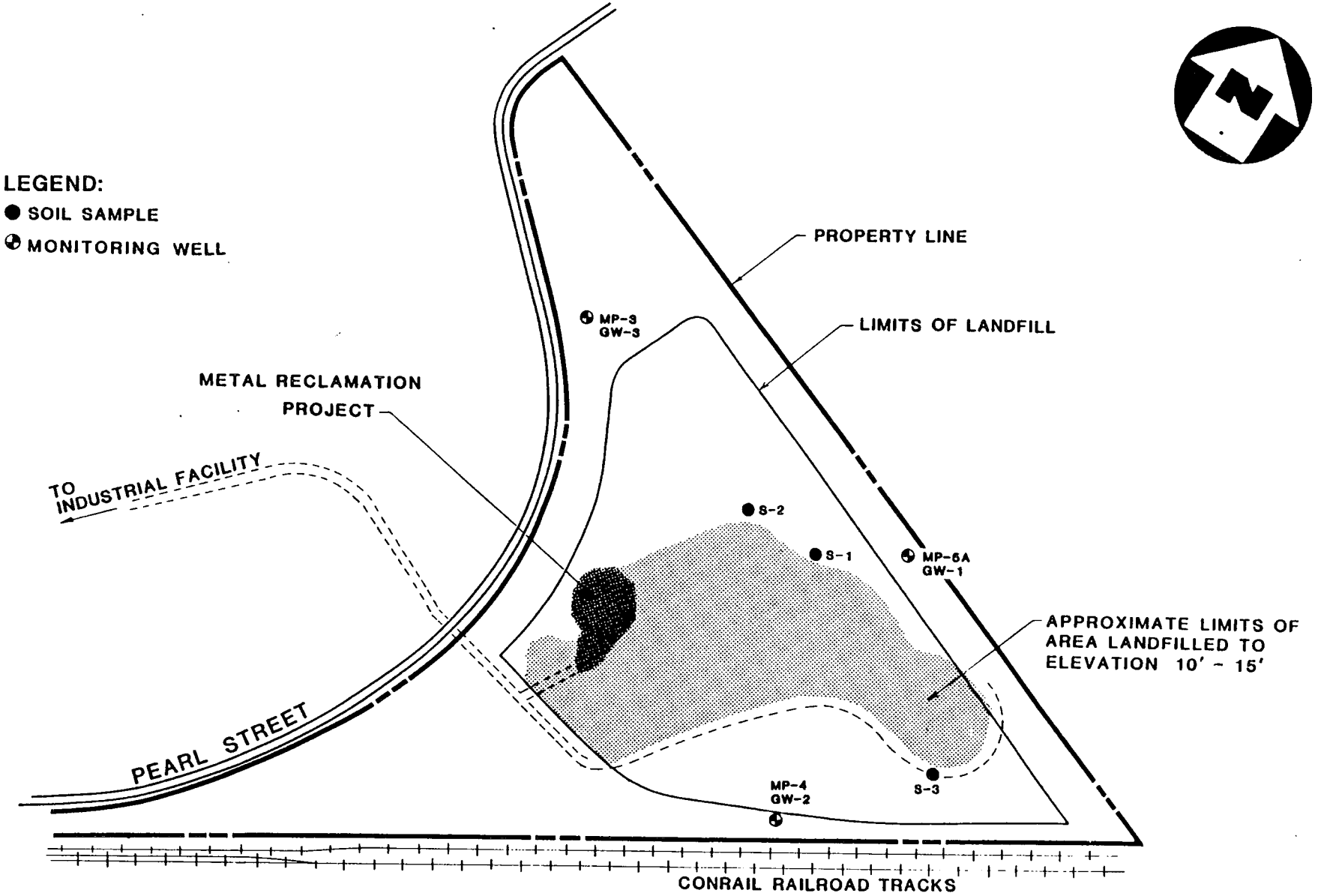


FIGURE A-4

LANDFILL SAMPLING LOCATION MAP

U.S. PIPE & FOUNDRY, BURLINGTON, N.J.

(NOT TO SCALE)

NUS CORPORATION

A Halliburton Company

	GW-1	GW-2	GW-3	GW-?-1	S-1	S-2	S-3	SB-1	GW-4	GW-5	GW-6

[illegible]

[illegible]	GW-1	GW-2	GW-3	GW-R-1	S-1	S-2	[illegible]	SD-1	GW-4	[illegible]	[illegible]

[illegible]	6WB-1	S-4	S-5	SW-1	Seep-1	S-6	S-7	S-8	SB-2
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

[illegible]	6WB-1	S-[illegible]	S-5	SW-1	Sn-1	S-6	S-7	S-8	SB-2
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

S-4 S-8

7.8

[illegible]

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
B3701

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Radian
Lab Sample ID No: E409028-01
Sample Matrix: WATER
Data Release Authorized By: Lafferman

Case No: 3191-2
QC Report No: 25
Contract No.: 68-01-6553
Date Sample Received: 9-6-84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9-10-84
DATE ANALYZED: 10-17-84
PERCENT MOISTURE: 100%
CONC./DILUTION FACTOR: 550 mL : 2 mL

PP #	CAS #		ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6- trichlorophenol	10U
(22A)	59-50-7	p-chloro-m-cresol	10U
(24A)	95-57-8	2- chlorophenol	10U
(31A)	120-83-2	2,4-dichlorophenol	10U
(34A)	105-67-9	2,4-dimethylphenol	10U
(57A)	88-75-5	2- nitrophenol	10U
(58A)	100-02-7	4-nitrophenol	20U
(59A)	51-28-5	2,4-dinitrophenol	50U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	50U
(64A)	87-86-5	pentachlorophenol	20U
(65A)	108-95-2	phenol	10U
	65-85-0	benzoic acid	10U
	95-48-7	2-methylphenol	10U
	108-39-4	4-methylphenol	5U
	95-95-4	2,4,5-trichlorophenol	5U
(1B)	83-32-9	acenaphthene	10U
(5B)	92-87-5	benzidine	10U
(8B)	120-82-1	1,2,4-trichlorobenzene	40U
(9B)	118-74-1	hexachlorobenzene	10U
(12B)	67-72-1	hexachloroethane	10U
(13B)	111-44-4	bis(2-chloroethyl)ether	10U
(20B)	91-58-7	2-chloronaphthalene	10U
(25B)	95-50-1	1,2-dichlorobenzene	10U
(26B)	541-73-1	1,3-dichlorobenzene	10U
(27B)	106-46-7	1,4-dichlorobenzene	10U
(28B)	91-94-1	3,3'-dichlorobenzidine	20U
(35B)	121-14-2	2,4-dinitrotoluene	5U
(36B)	606-20-2	2,6-dinitrotoluene	20U
(37B)	122-66-7	1,2-diphenylhydrazine	20U
(39B)	206-44-0	fluoranthene	10U
(40B)	7005-72-3	4-chlorophenyl phenyl ether	10U
(41B)	101-55-3	4-bromophenyl phenyl ether	10U
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	20U
(43B)	111-91-1	bis (2-chloroethoxy) methane	20U

PP #	CAS #		ug/l or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene	10U
(53B)	77-47-4	hexachlorocyclopentadiene	10U
(54B)	78-59-1	isophorone	10U
(55B)	91-20-3	naphthalene	10U
(56B)	98-95-3	nitrobenzene	10U
(61B)	62-75-9	N-nitrosodimethylamine	10U
(62B)	86-30-6	N-nitrosodiphenylamine	10U
(63B)	621-64-7	N-nitrosodipropylamine	10U
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	15
(67B)	85-68-7	benzyl butyl phthalate	10U
(68B)	84-74-2	di-n-butyl phthalate	10U
(69B)	117-84-0	di-n-octyl phthalate	10U
(70B)	84-66-2	diethyl phthalate	10U
(71B)	131-11-3	dimethyl phthalate	10U
(72B)	56-55-3	benzo(a)anthracene	10U
(73B)	50-32-8	benzo(a)pyrene	20U
(74B)	205-99-2	benzo(b)fluoranthene	20U
(75B)	207-08-9	benzo(k)fluoranthene	20U
(76B)	218-01-9	chrysene	20U
(77B)	208-96-8	acenaphthylene	10U
(78B)	120-12-7	anthracene	10U
(79B)	191-24-2	benzo(ghi)perylene	20U
(80B)	86-73-7	fluorene	10U
(81B)	85-01-8	phenanthrene	10U
(82B)	53-70-3	dibenzo(a,h)anthracene	20U
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	20U
(84B)	129-00-0	pyrene	10U
	62-53-3	aniline	5U
	100-51-6	benzyl alcohol	20U
	106-47-8	4-chloroaniline	50U
	132-64-9	dibenzofuran	10U
	91-57-6	2-methylnaphthalene	20U
	88-74-4	2-nitroaniline	100U
	99-09-2	3-nitroaniline	100U
	100-01-6	4-nitroaniline	100U

Sample Number B3701

17

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Radian
Lab Sample ID No: 8409028-01
Sample Matrix: WATER
Data Release Authorized By: L. A. Petkovich

Case No: 3191-2
QC Report No: 25
Contract No.: 68-01-6853
Date Sample Received: 9-6-84

VOLATILES

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: —
DATE ANALYZED: 9-13-84
PERCENT MOISTURE: 100%
CONC./DILUTION FACTOR: 1:1

PP #	CAS #		ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	1U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10U
(16V)	75-00-3	chloroethane	10U
(19V)	110-75-8	2-chloroethylvinyl ether	10U
(23V)	67-66-3	chloroform	5U
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	trans-1,2-dichloroethene	5U
(32V)	78-87-5	1,2-dichloropropane	10U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	5U
(33V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	5U
(45V)	74-87-3	chloromethane	10U
(46V)	74-83-9	bromomethane	10U
(47V)	75-25-2	bromoform	10U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	5U
(50V)	75-71-8	dichlorodifluoromethane	5U
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	5U
(87V)	79-01-6	trichloroethene	5U
(88V)	75-01-4	vinyl chloride	10U
	67-64-1	acetone	5U
	78-93-3	2-butanone	5U
	75-15-0	carbondisulfide	1U
	519-78-6	2-hexanone	5U
	108-10-1	4-methyl-2-pentanone	5U
	100-42-5	styrene	5U
	108-05-4	vinyl acetate	5U
	1330-20-7	total xylenes	5U

PESTICIDES

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9-10-84
DATE ANALYZED: 11-3-84
PERCENT MOISTURE: 100%
CONC./DILUTION FACTOR: 550:5

Pesticide data [illegible] holding time after extraction [illegible] Contract requirement.

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin S.G.	.005U
(90P)	60-57-1	dieldrin	.005U
(91P)	57-74-9	chlordane	.050U
(92P)	50-29-3	4,4'-DDT	.010U
(93P)	72-55-9	4,4'-DDE	.005U
(94P)	72-54-8	4,4'-DDD	.010U
(95P)	115-29-7	α-endosulfan	.005U
(96P)	115-29-7	β-endosulfan	.005U
(97P)	1031-07-8	endosulfan sulfate	.010U
(98P)	72-20-8	endrin	.005U
(99P)	7421-93-4	endrin aldehyde	.010U
(100P)	76-44-8	heptachlor	.005U
(101P)	1024-57-3	heptachlor epoxide	.005U
(102P)	319-84-6	α-BHC	.005U
(103P)	319-85-7	β-BHC	.005U
(104P)	319-86-8	δ-BHC	.005U
(105P)	58-89-9	γ-BHC (lindane)	.005U
(106P)	53469-21-9	PCB-1242	.050U
(107P)	11097-69-1	PCB-1254	.100U
(108P)	11104-28-2	PCB-1221	.100U
(109P)	11141-16-5	PCB-1232	.100U
(110P)	12672-29-6	PCB-1248	.100U
(111P)	11096-82-5	PCB-1260	.200U
(112P)	12674-11-2	PCB-1016	.050U
(113P)	8001-35-2	toxaphene	.050U

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: N/A
DATE ANALYZED:
PERCENT MOISTURE:
CONC./DILUTION FACTOR:

PP #	CAS #		ug/l or ug/kg (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	

SAMPLE NUMBER:
51, S, EPA

13701

ORGANICS ANALYSIS DATA SHEET
(PAGE 3)

TENTATIVELY IDENTIFIED COMPOUNDS

	CAS NUMBER	COMPOUND NAME	FRACTION	RT OR SCAN NUMBER	ESTIMATED CONCENTRATIC UG/L OR UG/K
1	2233-00-3	1-PROPENE, 3, 3, 3-TRICHLORO-	ABN	499	450
2	3564-32-4	HEPTANE, 3-ETHYL-	ABN	590	350
3	105-60-2	2H-AZEPIN-2-ONE, HEXAHYDRO-	ABN	816	370
4	2536-91-6	2-BENZOTHIAZOLAMINE, 6-METHYL-	ABN	934	490
5	3966-35-3	2-ISONONENAL	ABN	1593	90
6	628-79-5	PENTANAL, OXIME	ABN	1864	50

* Solvent contaminant?

P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number: B3702

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ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Radian
Lab Sample ID No: 8409028-02
Sample Matrix: WATER
Data Release Authorized By: LaPetrone

Case No: 3191-2
QC Report No: 25
Contract No.: 68-01-6853
Date Sample Received: 9-6-84

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: —
DATE ANALYZED: 9-13-84
PERCENT MOISTURE: 100%
CONC./DILUTION FACTOR: 1:1

PP #	CAS #		ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	1U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10U
(16V)	75-00-3	chloroethane	10U
(19V)	110-75-8	2-chloroethylvinyl ether	10U
(23V)	67-66-3	chloroform	5U
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	trans-1,2-dichloroethene	5U
(32V)	78-87-5	1,2-dichloropropane	10U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	5U
(38V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	5U
(45V)	74-87-3	chloromethane	10U
(46V)	74-83-9	bromomethane	10U
(47V)	75-25-2	bromoform	10U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	5U
(50V)	75-71-8	dichlorodifluoromethane	5U
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	5U
(87V)	79-01-6	trichloroethene	5U
(88V)	75-01-4	vinyl chloride	10U
	67-64-1	acetone	5U
	78-93-3	2-butanone	5U
	75-15-0	carbondisulfide	1U
	519-78-6	2-hexanone	5U
	108-10-1	4-methyl-2-pentanone	5U
	100-42-5	styrene	5U
	108-05-4	vinyl acetate	5U
	1330-20-7	total xylenes	5U

PESTICIDES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9-10-84
DATE ANALYZED: 11-3-84
PERCENT MOISTURE: 100%
CONC./DILUTION FACTOR: 700:5

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	.005U
(90P)	60-57-1	dieldrin	.005U
(91P)	57-74-9	chlordane	.050U
(92P)	50-29-3	4,4'-DDT	.010U
(93P)	72-55-9	4,4'-DDE	.005U
(94P)	72-54-8	4,4'-DDD	.010U
(95P)	115-29-7	α-endosulfan	.005U
(96P)	115-29-7	β-endosulfan	.005U
(97P)	1031-07-8	endosulfan sulfate	.010U
(98P)	72-20-8	endrin	.005U
(99P)	7421-93-4	endrin aldehyde	.010U
(100P)	76-44-8	heptachlor	.005U
(101P)	1024-57-3	heptachlor epoxide	.005U
(102P)	319-84-6	α-BHC	.005U
(103P)	319-85-7	β-BHC	.005U
(104P)	319-86-8	δ-BHC	.005U
(105P)	58-89-9	γ-BHC (lindane)	.005U
(106P)	53469-21-9	PCB-1242	.050U
(107P)	11097-69-1	PCB-1254	.100U
(108P)	11104-28-2	PCB-1221	.100U
(109P)	11141-16-5	PCB-1232	.100U
(110P)	12672-29-6	PCB-1248	.100U
(111P)	11096-82-5	PCB-1260	.200U
(112P)	12674-11-2	PCB-1016	.050U
(113P)	8001-35-2	toxaphene	.050U

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED:
PERCENT MOISTURE:
CONC./DILUTION FACTOR:

PP #	CAS #		ug/l or ug/kg (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
B3702

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Radian
Case No: 3191-2
Lab Sample ID No: 8409028-02
QC Report No: 25
Sample Matrix: WATER
Contract No.: 68-01-6553
Data Release Authorized By: L. A. Petkovich
Date Sample Received: 9-6-84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9-10-84
DATE ANALYZED: 10-17-84
PERCENT MOISTURE: 100%
CONC./DILUTION FACTOR: 700ML : 2ML

u values must be multiplied by 1.4.

PP #	CAS #		ug/l or ug/kg (circle one)
(1A)	88-06-2	2,4,6-trichlorophenol	10U
(22A)	59-50-7	p-chloro-m-cresol	10U
(4A)	95-57-3	2-chlorophenol	10U
(1A)	120-83-2	2,4-dichlorophenol	10U
(34A)	105-67-9	2,4-dimethylphenol	10U
(7A)	88-75-5	2-nitrophenol	20U
(8A)	100-02-7	4-nitrophenol	50U
(59A)	51-28-5	2,4-dinitrophenol	50U
(0A)	534-52-1	4,6-dinitro-2-methylphenol	20U
(4A)	87-86-5	pentachlorophenol	10U
(65A)	108-95-2	phenol	10U
	65-85-0	benzoic acid	100U
	95-48-7	2-methylphenol	5U
	108-39-4	4-methylphenol	5U
	95-95-4	2,4,5-trichlorophenol	100U
(1B)	83-32-9	acenaphthene	10U
(5B)	92-87-5	benzidine	40U
(8B)	120-82-1	1,2,4-trichlorobenzene	10U
(9B)	118-74-1	hexachlorobenzene	10U
(12B)	67-72-1	hexachloroethane	10U
(13B)	111-44-4	bis(2-chloroethyl)ether	10U
(20B)	91-58-7	2-chloronaphthalene	10U
(25B)	95-50-1	1,2-dichlorobenzene	10U
(26B)	541-73-1	1,3-dichlorobenzene	10U
(27B)	106-46-7	1,4-dichlorobenzene	20U
(28B)	91-94-1	3,3'-dichlorobenzidine	5U
(35B)	121-14-2	2,4-dinitrotoluene	20U
(36B)	606-20-2	2,6-dinitrotoluene	20U
(37B)	122-66-7	1,2-diphenylhydrazine	20U
(39B)	206-44-0	fluoranthene	10U
(40B)	7005-72-3	4-chlorophenyl phenyl ether	10U
(41B)	101-55-3	4-bromophenyl phenyl ether	10U
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	20U
(43B)	111-91-1	bis (2-chloroethoxy) methane	20U

PP #	CAS #		ug/l or ug/kg (circle on
(52B)	87-68-3	hexachlorobutadiene	10U
(53B)	77-47-4	hexachlorocyclopentadiene	10U
(54B)	78-59-1	isophorone	10U
(55B)	91-20-3	naphthalene	10U
(56B)	98-95-3	nitrobenzene	10U
(61B)	62-75-9	N-nitrosodimethylamine	10U
(62B)	86-30-6	N-nitrosodiphenylamine	10U
(63B)	621-64-7	N-nitrosodipropylamine	10U
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	10K
(67B)	85-68-7	benzyl butyl phthalate	10U
(68B)	84-74-2	di-n-butyl phthalate	10U
(69B)	117-84-0	di-n-octyl phthalate	10U
(70B)	84-66-2	diethyl phthalate	10U
(71B)	131-11-3	dimethyl phthalate	10U
(72B)	56-55-3	benzo(a)anthracene	10U
(73B)	50-32-8	benzo(a)pyrene	20U
(74B)	205-99-2	benzo(b)fluoranthene	20U
(75B)	207-08-9	benzo(k)fluoranthene	20U
(76B)	218-01-9	chrysene	20U
(77B)	208-96-8	acenaphthylene	10U
(78B)	120-12-7	anthracene	10U
(79B)	191-24-2	benzo(ghi)perylene	20U
(80B)	86-73-7	fluorene	10U
(81B)	85-01-8	phenanthrene	10U
(82B)	53-70-3	dibenzo(a,h)anthracene	20U
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	20U
(84B)	129-00-0	pyrene	10U
	62-53-3	aniline	5U
	100-51-6	benzyl alcohol	20U
	106-47-8	4-chloroaniline	50U
	132-64-9	dibenzofuran	10U
	91-57-6	2-methylnaphthalene	20U
	88-74-4	2-nitroaniline	100U
	99-09-2	3-nitroaniline	100U
	100-01-6	4-nitroaniline	100U

SAMPLE NUMBER:
51, S, EPA

B3702

ORGANICS ANALYSIS DATA SHEET
(PAGE 4)

TENTATIVELY IDENTIFIED COMPOUNDS

CAS NUMBER	COMPOUND NAME	FRACTION	RT OR SCAN NUMBER	ESTIMATED CONCENTRATIC UG/L OR UG/K
1 [redacted]629-11-8	~~1,6-~~HEXANEDIOL	ABN	399	460
2 [redacted]822-67-3	~~2-CYCLOHEXEN-1-~~OL	ABN	429	240
3 56145-23-4	2-PYRROLIDINECARBOXYLICACID, 1,2-DIMET	ABN	463	97
4 [redacted]320-68-7	2-~~CYCLOHEXEN-1-ONE~~	ABN	484	300
5 [redacted]2233-00-3	1-PROPENE, 3,3,3-TRICHLORO-	ABN	499	570
6 [redacted]4310-65-8	~~1-HEXENE, 3,5,5-TRIMETHYL-~~	ABN	590	93
7 [redacted]6623-30-4	CYCLOHEXANOL, 2-CHLORO-, TRANS-	ABN	597	64
8 [redacted]2203-80-7	1-HEXYNE, 5-METHYL-	ABN	785	93
9 [redacted]12-05-0	NONANOICACID	ABN	809	47
10 105-60-2	2H-AZEPIN-2-ONE, HEXAHYDRO-	ABN	819	790
11 [redacted]119-29-5	PENTANAMIDE, 4-METHYL-	ABN	1593	46

Sample Number B3703

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ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Radian
Lab Sample ID No: E4090029-01
Sample Matrix: WATER
Data Release Authorized By: LaPitcom

Case No: 3191-2
QC Report No: 25
Contract No.: 68-01-6853
Date Sample Received: 9-6-84

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: —
DATE ANALYZED: 9-13-84
PERCENT MOISTURE: 100%
CONC./DILUTION FACTOR: 1:1

PP #	CAS #		ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	1U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10U
(16V)	75-00-3	chloroethane	10U
(19V)	110-75-8	2-chloroethylvinyl ether	10U
(23V)	67-66-3	chloroform	5U
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	trans-1,2-dichloroethene	5U
(32V)	78-87-5	1,2-dichloropropane	10U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	5U
(38V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	5U
(45V)	74-87-3	chloromethane	10U
(46V)	74-83-9	bromomethane	10U
(47V)	75-25-2	bromoform	10U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	5U
(50V)	75-71-8	dichlorodifluoromethane	5U
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	5U
(87V)	79-01-6	trichloroethene	5U
(88V)	75-01-4	vinyl chloride	10U
	67-64-1	acetone	5U
	78-93-3	2-butanone	5U
	75-15-0	carbondisulfide	1U
	519-78-6	2-hexanone	5U
	108-10-1	4-methyl-2-pentanone	5U
	100-42-5	styrene	5U
	108-05-4	vinyl acetate	5U
	1330-20-7	total xylenes	5U

PESTICIDES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9·10·84
DATE ANALYZED: 11-3-84
PERCENT MOISTURE: 100%
CONC./DILUTION FACTOR: 1000:5

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	5 or .005U
(90P)	60-57-1	dieldrin	.005U
(91P)	57-74-9	chlordane	.050U
(92P)	50-29-3	4,4'-DDT	.010U
(93P)	72-55-9	4,4'-DDE	.005U
(94P)	72-54-8	4,4'-DDD	.010U
(95P)	115-29-7	α-endosulfan	.005U
(96P)	115-29-7	β-endosulfan	.005U
(97P)	1031-07-8	endosulfan sulfate	.010U
(98P)	72-20-8	endrin	.005U
(99P)	7421-93-4	endrin aldehyde	.010U
(100P)	76-44-8	heptachlor	.005U
(101P)	1024-57-3	heptachlor epoxide	.005U
(102P)	319-84-6	α-BHC	.005U
(103P)	319-85-7	β-BHC	.005U
(104P)	319-86-8	δ-BHC	.005U
(105P)	58-89-9	γ-BHC (lindane)	.005U
(106P)	53469-21-9	PCB-1242	.050U
(107P)	11097-69-1	PCB-1254	.100U
(108P)	11104-28-2	PCB-1221	.100U
(109P)	11141-16-5	PCB-1232	.100U
(110P)	12672-29-6	PCB-1248	.100U
(111P)	11096-82-5	PCB-1260	.200U
(112P)	12674-11-2	PCB-1016	.050U
(113P)	8001-35-2	toxaphene	.050U

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED:
PERCENT MOISTURE:
CONC./DILUTION FACTOR:

PP #	CAS #		ug/l or ug/ (circle
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
B3703

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Radian
Lab Sample ID No: 8409079-01
Sample Matrix: WATER
Data Release Authorized By: J. A. Petterson

Case No: 3191-2
QC Report No: 25
Contract No.: 68-01-6853
Date Sample Received: 9-6-84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9-10-84
DATE ANALYZED: 10-17-84
PERCENT MOISTURE: 100%
CONC./DILUTION FACTOR: 1000ml : 2ml

PP #	CAS #		ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6- trichlorophenol	10U
(22A)	59-50-7	p-chloro-m-cresol	10U
(24A)	95-57-8	2- chlorophenol	10U
(31A)	120-83-2	2,4-dichlorophenol	10U
(34A)	105-67-9	2,4-dimethylphenol	10U
(57A)	88-75-5	2- nitrophenol	20U
(58A)	100-02-7	4-nitrophenol	50U
(59A)	51-28-5	2,4-dinitrophenol	50U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	20U
(64A)	87-86-5	pentachlorophenol	10U
(65A)	108-95-2	phenol	10U
	65-85-0	benzoic acid	100U
	95-48-7	2-methylphenol	5U
	108-39-4	4-methylphenol	5U
	95-95-4	2,4,5-trichlorophenol	100U
(1B)	83-32-9	acenaphthene	10U
(5B)	92-87-5	benzidine	40U
(8B)	120-82-1	1,2,4-trichlorobenzene	10U
(9B)	118-74-1	hexachlorobenzene	10U
(12B)	67-72-1	hexachloroethane	10U
(13B)	111-44-4	bis(2-chloroethyl)ether	10U
(20B)	91-58-7	2-chloronaphthalene	10U
(25B)	95-50-1	1,2-dichlorobenzene	10U
(26B)	541-73-1	1,3-dichlorobenzene	10U
(27B)	106-46-7	1,4-dichlorobenzene	20U
(28B)	91-94-1	3,3'-dichlorobenzidine	5U
(35B)	121-14-2	2,4-dinitrotoluene	20U
(36B)	606-20-2	2,6-dinitrotoluene	20U
(37B)	122-66-7	1,2-diphenylhydrazine	20U
(39B)	206-44-0	fluoranthene	10U
(40B)	7005-72-3	4-chlorophenyl phenyl ether	10U
(41B)	101-55-3	4-bromophenyl phenyl ether	10U
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	20U
(43B)	111-91-1	bis (2-chloroethoxy) methane	20U

PP #	CAS #		ug/l or ug/kg (circle on
(52B)	87-68-3	hexachlorobutadiene	10U
(53B)	77-47-4	hexachlorocyclopentadiene	10U
(54B)	78-59-1	isophorone	10U
(55B)	91-20-3	naphthalene	10U
(56B)	98-95-3	nitrobenzene	10U
(61B)	62-75-9	N-nitrosodimethylamine	10U
(62B)	86-30-6	N-nitrosodiphenylamine	10U
(63B)	621-64-7	N-nitrosodipropylamine	10U
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	~~10U~~ K
(67B)	85-68-7	benzyl butyl phthalate	10U
(68B)	84-74-2	di-n-butyl phthalate	10U
(69B)	117-84-0	di-n-octyl phthalate	10U
(70B)	84-66-2	diethyl phthalate	10U
(71B)	131-11-3	dimethyl phthalate	10U
(72B)	56-55-3	benzo(a)anthracene	10U
(73B)	50-32-8	benzo(a)pyrene	20U
(74B)	205-99-2	benzo(b)fluoranthene	20U
(75B)	207-08-9	benzo(k)fluoranthene	20U
(76B)	218-01-9	chrysene	20U
(77B)	208-96-8	acenaphthylene	10U
(78B)	120-12-7	anthracene	10U
(79B)	191-24-2	benzo(ghi)perylene	20U
(80B)	86-73-7	fluorene	10U
(81B)	85-01-8	phenanthrene	10U
(82B)	53-70-3	dibenzo(a,h)anthracene	20U
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	20U
(84B)	129-00-0	pyrene	10U
	62-53-3	aniline	5U
	100-51-6	benzyl alcohol	20U
	106-47-8	4-chloroaniline	50U
	132-64-9	dibenzofuran	10U
	91-57-6	2-methylnaphthalene	20U
	88-74-4	2-nitroaniline	100U
	99-09-2	3-nitroaniline	100U
	100-01-6	4-nitroaniline	100U

ORGANICS ANALYSIS DATA SHEET - Page 3

Laboratory Name: Radian

QC Report No: 25

Case No: 3191

B3 703

B. Tentatively Identified Compounds

CAS #	Compound Name	Fraction	Scan No. or Retention Time	% Maximum Score Attained Mass Matching Routine: (Specify: FIT)	Estimated Concentration (ug/L or ug/kg)
1. 74-[illegible]	[illegible]	BNA	348	561	40
2. 822-6[illegible]-3	2-[illegible]-1-[illegible]		429	829	19
3. 635-65-7	2-[illegible]-1-[illegible]		453	941	24
4. 2233-60-3	1-[illegible]-3,3-[illegible]		499	938	10
5. 111-64-8	Octanechloride		735	794	14
6. 105-60-2	2-[illegible]-2-one, Hexachloride		518	472	62
7. 541-35-5	[illegible]		1593	819	3
8. 261-31-4	[illegible]		1865	771	3
9.					
10.					
11.					
12.					
13.					
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28.					
29.					
30.					

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FORM II (continued)

ORGANICS ANALYSIS DATA SHEET - Page 4

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, 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.

K - If the mass spectral data indicate the presence of a compound that meets the identification criteria but the quantitative result is less than specified detection limit but greater than zero, report the detection limit as K (e.g., 10K). The footnote should read: K-Actual value, within the limitations of this method, is less than the value given.

FS - This flag applies to analysis performed by Fused Silica Capillary Column.

J - Indicates an estimated value which is used when estimating a concentration for tentatively identified compounds (e.g., 1200J). The footnote should read: J-Estimated value.

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.

** - This flag applies to pesticides parameters where the identification has been performed using two column confirmation (as specified in Method 608) but the level is too low for verification of the compound by mass spectrometry.

CX - This flag is used to indicate those compounds which were concentrated by a factor of 10 times.

Form II. (continued)

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
B3704

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Radian
Lab Sample ID No: 8409029-03
Sample Matrix: WATER
Data Release Authorized By: [illegible]

Case No: 3191-2
QC Report No: 25
Contract No.: 68-01-6553
Date Sample Received: 9-6-84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9-10-84
DATE ANALYZED: 10-17-84
PERCENT MOISTURE: 100%
CONC./DILUTION FACTOR: 1000mL : 2mL

PP #	CAS #		(ug/l) or ug/kg (circle one)
(21A)	88-06-2	2,4,6- trichlorophenol	10U
(22A)	59-50-7	p-chloro-m-cresol	10U
(24A)	95-57-8	2- chlorophenol	10U
(31A)	120-83-2	2,4-dichlorophenol	10U
(34A)	105-67-9	2,4-dimethylphenol	10U
(57A)	88-75-5	2- nitrophenol	20U
(58A)	100-02-7	4-nitrophenol	50U
(59A)	51-28-5	2,4-dinitrophenol	50U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	20U
(64A)	87-86-5	pentachlorophenol	10U
(65A)	108-95-2	phenol	10U
	65-85-0	benzoic acid	100U
	95-48-7	2-methylphenol	5U
	108-39-4	4-methylphenol	5U
	95-95-4	2,4,5-trichlorophenol	100U
(1B)	83-32-9	acenaphthene	10U
(5B)	92-87-5	benzidine	40U
(8B)	120-82-1	1,2,4-trichlorobenzene	10U
(9B)	118-74-1	hexachlorobenzene	10U
(12B)	67-72-1	hexachloroethane	10U
(13B)	111-44-4	bis(2-chloroethyl)ether	10U
(20B)	91-58-7	2-chloronaphthalene	10U
(25B)	95-50-1	1,2-dichlorobenzene	10U
(26B)	541-73-1	1,3-dichlorobenzene	10U
(27B)	106-46-7	1,4-dichlorobenzene	20U
(28B)	91-94-1	3,3'-dichlorobenzidine	5U
(35B)	121-14-2	2,4-dinitrotoluene	20U
(36B)	606-20-2	2,6-dinitrotoluene	20U
(37B)	122-66-7	1,2-diphenylhydrazine	20U
(39B)	206-44-0	fluoranthene	10U
(40B)	7005-72-3	4-chlorophenyl phenyl ether	10U
(41B)	101-55-3	4-bromophenyl phenyl ether	10U
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	20U
(43B)	111-91-1	bis (2-chloroethoxy) methane	20U

PP #	CAS #		(ug/l) or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene	10U
(53B)	77-47-4	hexachlorocyclopentadiene	10U
(54B)	78-59-1	isophorone	10U
(55B)	91-20-3	naphthalene	10U
(56B)	98-95-3	nitrobenzene	10U
(61B)	62-75-9	N-nitrosodimethylamine	10U
(62B)	86-30-6	N-nitrosodiphenylamine	10U
(63B)	621-64-7	N-nitrosodipropylamine	10U
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	10U
(67B)	85-68-7	benzyl butyl phthalate	10U
(68B)	84-74-2	di-n-butyl phthalate	10U
(69B)	117-84-0	di-n-octyl phthalate	10U
(70B)	84-66-2	diethyl phthalate	10U
(71B)	131-11-3	dimethyl phthalate	10U
(72B)	56-55-3	benzo(a)anthracene	10U
(73B)	50-32-8	benzo(a)pyrene	20U
(74B)	205-99-2	benzo(b)fluoranthene	20U
(75B)	207-08-9	benzo(k)fluoranthene	20U
(76B)	218-01-9	chrysene	20U
(77B)	208-96-8	acenaphthylene	10U
(78B)	120-12-7	anthracene	10U
(79B)	191-24-2	benzo(ghi)perylene	20U
(80B)	86-73-7	fluorene	10U
(81B)	85-01-8	phenanthrene	10U
(82B)	53-70-3	dibenzo(a,h)anthracene	20U
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	20U
(84B)	129-00-0	pyrene	10U
	62-53-3	aniline	5U
	100-51-6	benzyl alcohol	20U
	106-47-8	4-chloroaniline	50U
	132-64-9	dibenzofuran	10U
	91-57-6	2-methylnaphthalene	20U
	88-74-4	2-nitroaniline	100U
	99-09-2	3-nitroaniline	100U
	100-01-6	4-nitroaniline	100U

P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Management Office

Sample Number B3704

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ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Radian
Lab Sample ID No: 8409029-02
Sample Matrix: WATER
Data Release Authorized By:

Case No: 3191-2
QC Report No: 25
Contract No.: 68-01-6853
Date Sample Received: 9-6-84

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: —
DATE ANALYZED: 9-13-84
PERCENT MOISTURE: 100%
CONC./DILUTION FACTOR: 1:1

PP #	CAS #		(ug/l) or ug/kg (circle one)
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	1U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10U
(16V)	75-00-3	chloroethane	10U
(19V)	110-75-8	2-chloroethylvinyl ether	10U
(23V)	67-66-3	chloroform	5U
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	trans-1,2-dichloroethene	5U
(32V)	78-87-5	1,2-dichloropropane	10U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	5U
(38V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	7.0
(45V)	74-87-3	chloromethane	10U
(46V)	74-83-9	bromomethane	10U
(47V)	75-25-2	bromoform	10U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	5U
(50V)	75-71-8	dichlorodifluoromethane	5U
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	5U
(87V)	79-01-6	trichloroethene	5U
(88V)	75-01-4	vinyl chloride	10U
	67-64-1	acetone	5U
	78-93-3	2-butanone	5U
	75-15-0	carbondisulfide	1U
	519-78-6	2-hexanone	5U
	108-10-1	4-methyl-2-pentanone	5U
	100-42-5	styrene	5U
	108-05-4	vinyl acetate	5U
	1330-20-7	total xylenes	5U

PESTICIDES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9.10.84
DATE ANALYZED: 11.3.84
PERCENT MOISTURE: 100%
CONC./DILUTION FACTOR: 1000:5

PP #	CAS #		(ug/l) or ug/kg (circle one)
(89P)	309-00-2	aldrin	.005U
(90P)	60-57-1	dieldrin	.005U
(91P)	57-74-9	chlordane	.050U
(92P)	50-29-3	4,4'-DDT	.010U
(93P)	72-55-9	4,4'-DDE	.005U
(94P)	72-54-8	4,4'-DDD	.010U
(95P)	115-29-7	α-endosulfan	.005U
(96P)	115-29-7	β-endosulfan	.005U
(97P)	1031-07-8	endosulfan sulfate	.010U
(98P)	72-20-8	endrin	.005U
(99P)	7421-93-4	endrin aldehyde	.010U
(100P)	76-44-8	heptachlor	.005U
(101P)	1024-57-3	heptachlor epoxide	.005U
(102P)	319-84-6	α-BHC	.005U
(103P)	319-85-7	β-BHC	.005U
(104P)	319-86-8	δ-BHC	.005U
(105P)	58-89-9	γ-BHC (lindane)	.005U
(106P)	53469-21-9	PCB-1242	.050U
(107P)	11097-69-1	PCB-1254	.100U
(108P)	11104-28-2	PCB-1221	.100U
(109P)	11141-16-5	PCB-1232	.100U
(110P)	12672-29-6	PCB-1248	.100U
(111P)	11096-82-5	PCB-1260	.200U
(112P)	12674-11-2	PCB-1016	.050U
(113P)	8001-35-2	toxaphene	.050U

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED:
PERCENT MOISTURE:
CONC./DILUTION FACTOR:

PP #	CAS #		ug/l or ug/kg (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	

SAMPLE NUMBER:
B3704

ORGANICS ANALYSIS DATA SHEET
(PAGE 4)

TENTATIVELY IDENTIFIED COMPOUNDS

	CAS NUMBER	COMPOUND NAME	FRACTION	RT OR SCAN NUMBER	ESTIMATED CONCENTRATIO UG/L OR UG/K
1	629-11-9	1,6-HEXANEDIOL	ABN	400	335
2	822-67-3	2-CYCLOHEXEN-1-OL	ABN	430	154
3	930-68-7	2-CYCLOHEXEN-1-ONE	ABN	484	171
4	5891-93-0	1H-NAPHTHO[2,1-B]PYRAN-1-ONE,6-METHOXY-3-methyl-	ABN	1698	189

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number: B3705

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Radian
Lab Sample ID No: 8409029-03
Sample Matrix: SOIL
Data Release Authorized By: L.A. Pritchard

Case No: 3191-2
QC Report No: 25
Contract No.: 68-01-6553
Date Sample Received: 9-6-84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9-17-84
DATE ANALYZED: 10-22-84
PERCENT MOISTURE: 12%
CONC./DILUTION FACTOR: 50.18GM./12ML

Detection limits must be multiplied by 23.

PP #	CAS #		ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6-trichlorophenol	10U
(22A)	59-50-7	p-chloro-m-cresol	10U
(24A)	95-57-8	2-chlorophenol	10U
(31A)	120-83-2	2,4-dichlorophenol	10U
(34A)	105-67-9	2,4-dimethylphenol	10U
(57A)	88-75-5	2-nitrophenol	20U
(58A)	100-02-7	4-nitrophenol	50U
(59A)	51-28-5	2,4-dinitrophenol	50U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	20U
(64A)	87-86-5	pentachlorophenol	10U
(65A)	108-95-2	phenol	10U
	65-85-0	benzoic acid	6200
	95-48-7	2-methylphenol	5U
	108-39-4	4-methylphenol	5U
	95-95-4	2,4,5-trichlorophenol	100U
(1B)	83-32-9	acenaphthene	10U
(5B)	92-87-5	benzidine	40U
(8B)	120-82-1	1,2,4-trichlorobenzene	10U
(9B)	118-74-1	hexachlorobenzene	10U
(12B)	67-72-1	hexachloroethane	10U
(13B)	111-44-4	bis(2-chloroethyl)ether	10U
(20B)	91-58-7	2-chloronaphthalene	10U
(25B)	95-50-1	1,2-dichlorobenzene	10U
(26B)	541-73-1	1,3-dichlorobenzene	10U
(27B)	106-46-7	1,4-dichlorobenzene	20U
(28B)	91-94-1	3,3'-dichlorobenzidine	5U
(35B)	121-14-2	2,4-dinitrotoluene	20U
(36B)	606-20-2	2,6-dinitrotoluene	20U
(37B)	122-66-7	1,2-diphenylhydrazine	20U
(39B)	206-44-0	fluoranthene	110
(40B)	7005-72-3	4-chlorophenyl phenyl ether	10U
(41B)	101-55-3	4-bromophenyl phenyl ether	10U
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	20U
(43B)	111-91-1	bis (2-chloroethoxy) methane	20U

PP #	CAS #		ug/l or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene	10U
(53B)	77-47-4	hexachlorocyclopentadiene	10U
(54B)	78-59-1	isophorone	10U
(55B)	91-20-3	naphthalene	10U
(56B)	98-95-3	nitrobenzene	10U
(61B)	62-75-9	N-nitrosodimethylamine	10U
(62B)	86-30-6	N-nitrosodiphenylamine	10U
(63B)	621-64-7	N-nitrosodipropylamine	10U
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	~~230~~
(67B)	85-68-7	benzyl butyl phthalate	10U
(68B)	84-74-2	di-n-butyl phthalate	10U
(69B)	117-84-0	di-n-octyl phthalate	~~100~~
(70B)	84-66-2	diethyl phthalate	10U
(71B)	131-11-3	dimethyl phthalate	10U
(72B)	56-55-3	benzo(a)anthracene	33
(73B)	50-32-8	benzo(a)pyrene	20U
(74B)	205-99-2	benzo(b)fluoranthene	20U
(75B)	207-08-9	benzo(k)fluoranthene	20U
(76B)	218-01-9	chrysene	39
(77B)	208-96-8	acenaphthylene	10U
(78B)	120-12-7	anthracene	10U
(79B)	191-24-2	benzo(ghi)perylene	20U
(80B)	86-73-7	fluorene	10U
(81B)	85-01-8	phenanthrene	129
(82B)	53-70-3	dibenzo(a,h)anthracene	20U
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	20U
(84B)	129-00-0	pyrene	58
	62-53-3	aniline	5U
	100-51-6	benzyl alcohol	20U
	106-47-8	4-chloroaniline	50U
	132-64-9	dibenzofuran	10U
	91-57-6	2-methylnaphthalene	20U
	88-74-4	2-nitroaniline	100U
	99-09-2	3-nitroaniline	100U
	100-01-6	4-nitroaniline	100U

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
B3705

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Radian
Lab Sample ID No: 8409029-03
Sample Matrix: Soil
Data Release Authorized By: L A Petrowich

Case No: 3191-2
QC Report No: 25
Contract No.: 68-01-6853
Date Sample Received: 9-6-84

VOLATILES

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: —
DATE ANALYZED: 9-13-84
PERCENT MOISTURE: 12%
CONC./DILUTION FACTOR: 1:1

PP #	CAS #		ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	1U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10U
(16V)	75-00-3	chloroethane	10U
(19V)	110-75-8	2-chloroethylvinyl ether	10U
(23V)	67-66-3	chloroform	5U
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	trans-1,2-dichloroethene	5U
(32V)	78-87-5	1,2-dichloropropane	10U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	5U
(38V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	~~5U~~
(45V)	74-87-3	chloromethane	10U
(46V)	74-83-9	bromomethane	10U
(47V)	75-25-2	bromoform	10U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	5U
(50V)	75-71-8	dichlorodifluoromethane	5U
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	5U
(87V)	79-01-6	trichloroethene	5U
(88V)	75-01-4	vinyl chloride	10U
	67-64-1	acetone	5U
	78-93-3	2-butanone	5U
	75-15-0	carbondisulfide	1U
	519-78-6	2-hexanone	5U
	108-10-1	4-methyl-2-pentanone	5U
	100-42-5	styrene	5U
	108-05-4	vinyl acetate	5U
	1330-20-7	total xylenes	5U

PESTICIDES

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9-17-84 —
DATE ANALYZED: 11-20-84 —
PERCENT MOISTURE: 12%
CONC./DILUTION FACTOR: 14.35:5

Pesticide [illegible]

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	0.1U
(90P)	60-57-1	dieldrin	0.1U
(91P)	57-74-9	chlordane	1.0U
(92P)	50-29-3	4,4'-DDT	0.2U
(93P)	72-55-9	4,4'-DDE	0.1U
(94P)	72-54-8	4,4'-DDD	0.2U
(95P)	115-29-7	α-endosulfan	0.1U
(96P)	115-29-7	β-endosulfan	0.1U
(97P)	1031-07-8	endosulfan sulfate	0.2U
(98P)	72-20-8	endrin	0.1U
(99P)	7421-93-4	endrin aldehyde	0.2U
(100P)	76-44-8	heptachlor	0.1U
(101P)	1024-57-3	heptachlor epoxide	0.1U
(102P)	319-84-6	α-BHC	0.1R
(103P)	319-85-7	β-BHC	0.1U
(104P)	319-86-8	δ-BHC	0.1U
(105P)	58-89-9	γ-BHC (lindane)	0.1R
(106P)	53469-21-9	PCB-1242	1.0U
(107P)	11097-69-1	PCB-1254	2.0U
(108P)	11104-28-2	PCB-1221	2.0U
(109P)	11141-16-5	PCB-1232	2.0U
(110P)	12672-29-6	PCB-1248	1.0
(111P)	11096-82-5	PCB-1260	4.0U
(112P)	12674-11-2	PCB-1016	1.0U
(113P)	8001-35-2	toxaphene	1.0U

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED:
PERCENT MOISTURE:
CONC./DILUTION FACTOR:

PP #	CAS #		ug/l or ug/kg (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	

ORGANICS ANALYSIS DATA SHEET - Page 3

CONTROL NUMBER: B3705

Laboratory Name: Radian

Case No: 3191

QC Report No: 75

B. Tentatively Identified Compounds

	CAS #	Compound Name	Fraction	Scan No. or Retention Time	% Maximum Score Attained Mass Matching Routine: (Specify: EIT)	Estimated Concentration (ug/L or ug/kg)
1.	[illegible]	[illegible]	BNA	602	992	[illegible]
2.	119-72-7	Benzoic acid, 2-hydroxy-		940	969	4400
3.	123-69-0	[illegible]		991	995	2600
4.	544-63-5	[illegible]		1099	955	2400
5.	17557-33-0	Naphthalene, 1,2,3,4-tetrahydro-		1250	836	[illegible]
6.	1002-84-2	[illegible]		1265	955	600
7.	57-10-3	Hexadecanoic acid		1242	927	590
8.	57-10-3	"		1306	919	660
9.	57-10-3	"		1320	955	930
10.	57-10-3	"		1326	970	530
11.	2467-03-0	[illegible] 2-[illegible]-4-hydroxyphenyl [illegible]-		1365	912	420
12.	334-48-5	Decanoic acid		1376	927	230
13.	100-66-3	Benzene, methoxy-		1234	837	10,000
14.	334-48-5	Decanoic acid		1400	977	330
15.	100-66-3	Benzene, methoxy-		1426	793	13,000
16.	7133-13-3	[illegible] (ethylene)-		1472	755	140,000
17.	14[illegible]-51-8	[illegible] 1-[illegible]-chloroethylchloride		1497	775	[illegible]
18.	18364-46-3	[illegible] ethylamine, 9,10-[illegible]-B-[illegible]		1524	915	[illegible]
* 19.	1235-74-1	[illegible] acid, [illegible]		1591	953	[illegible]
20.	7242-33-1	[illegible] 3-bromo[illegible]	V	1748	964	75
21.						
22.						
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30.						

* See CAS # for complete name if competing

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FORM II (continued)

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
B3706

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Radian
Lab Sample ID No: 8409029-04
Sample Matrix: Soil
Data Release Authorized By: [illegible]

Case No: 3191
QC Report No: 25
Contract No.: 68-01-6853
Date Sample Received: 9-6-84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9-17-84
DATE ANALYZED: 12-7-84
PERCENT MOISTURE: 24%
CONC./DILUTION FACTOR: 50.34g : 2ml

[illegible] exceeded contractual requirement 5d

All u values must be multiplied by 20

PP #	CAS #		ug/l or ug/kg (circle one)
(21A)	83-06-2	2,4,6- trichlorophenol	10U
(22A)	59-50-7	p-chloro-m-cresol	10U
(24A)	95-57-8	2- chlorophenol	10U
(31A)	120-83-2	2,4-dichlorophenol	10U
(34A)	105-67-9	2,4-dimethylphenol	130
(57A)	88-75-5	2- nitrophenol	20U
(58A)	100-02-7	4-nitrophenol	50U
(59A)	51-28-5	2,4-dinitrophenol	50U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	20U
(64A)	87-86-5	pentachlorophenol	10U
(65A)	108-95-2	phenol	10U
	65-85-0	benzoic acid	100U
	95-48-7	2-methylphenol	5U
	108-39-4	4-methylphenol	5U
	95-95-4	2,4,5-trichlorophenol	100U
(1B)	83-32-9	acenaphthene	10U
(6B)	92-87-5	benzidine	40U
(8B)	120-82-1	1,2,4-trichlorobenzene	10U
(9B)	118-74-1	hexachlorobenzene	10U
(12B)	67-72-1	hexachloroethane	10U
(18B)	111-44-4	bis(2-chloroethyl)ether	10U
(20B)	91-58-7	2-chloronaphthalene	10U
(25B)	95-50-1	1,2-dichlorobenzene	10U
(26B)	541-73-1	1,3-dichlorobenzene	10U
(27B)	106-46-7	1,4-dichlorobenzene	20U
(28B)	91-94-1	3,3'-dichlorobenzidine	5U
(35B)	121-14-2	2,4-dinitrotoluene	20U
(36B)	606-20-2	2,6-dinitrotoluene	20U
(37B)	122-66-7	1,2-diphenylhydrazine	20U
(39B)	206-44-0	fluoranthene	240
(40B)	7005-72-3	4-chlorophenyl phenyl ether	10U
(41B)	101-55-3	4-bromophenyl phenyl ether	10U
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	20U
(43B)	111-91-1	bis (2-chloroethoxy) methane	20U

PP #	CAS #		ug/l or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene	10U
(53B)	77-47-4	hexachlorocyclopentadiene	10U
(54B)	78-59-1	isophorone	10U
(55B)	91-20-3	naphthalene	920
(56B)	98-95-3	nitrobenzene	10U
(61B)	62-75-9	N-nitrosodimethylamine	10U
(62B)	86-30-6	N-nitrosodiphenylamine	10U
(63B)	621-64-7	N-nitrosodipropylamine	10U
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	520
(67B)	85-68-7	benzyl butyl phthalate	10U
(68B)	84-74-2	di-n-butyl phthalate	330
(69B)	117-84-0	di-n-octyl phthalate	70
(70B)	84-66-2	diethyl phthalate	10U
(71B)	131-11-3	dimethyl phthalate	10U
(72B)	56-55-3	benzo(a)anthracene	1200
(73B)	50-32-8	benzo(a)pyrene	120
(74B)	205-99-2	benzo(b)fluoranthene	1040
(75B)	207-08-9	benzo(k)fluoranthene	20U
(76B)	218-01-9	chrysene	1200
(77B)	208-96-8	acenaphthylene	10U
(78B)	120-12-7	anthracene	10U
(79B)	191-24-2	benzo(ghi)perylene	490
(80B)	86-73-7	fluorene	350
(81B)	85-01-8	phenanthrene	3400
(82B)	53-70-3	dibenzo(a,h)anthracene	130
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	20U
(84B)	129-00-0	pyrene	10U
	62-53-3	aniline	5U
	100-51-6	benzyl alcohol	20U
	106-47-8	4-chloroaniline	50U
	132-64-9	dibenzofuran	10U
	91-57-6	2-methylnaphthalene	560
	88-74-4	2-nitroaniline	100U
	99-09-2	3-nitroaniline	100U
	100-01-6	4-nitroaniline	100U

SAMPLE NUMBER:
B3706

ORGANICS ANALYSIS DATA SHEET
(PAGE 4)

TENTATIVELY IDENTIFIED COMPOUNDS

CAS NUMBER	COMPOUND NAME	FRACTION	RT OR SCAN NUMBER	ESTIMATED CONCENTRATION UG/L OR UG/KG
1 [illegible]5153-[illegible]	ETHANONE, 2-(FORMYLOXY)-1-PHENYL-	ABN	425	3316
2 13475-[illegible]	HEXANE, 2,2,3,3-TETRAMETHYL-	ABN	461	11062
3 [illegible]63-[illegible]	HEXANE, 3,3-DIMETHYL-	ABN	566	6961
4 [illegible]5-[illegible]	1,3-ISOBENZOFURANDIONE	ABN	786	1711
5	~~[illegible] DIONE, 2-METHYL~~	~~ABN~~	~~841~~	~~3296~~
6 [illegible]2-[illegible]	1,1'-BIPHENYL	ABN	844	13709
7 [illegible]5-[illegible]-3	ETHANE, CHLORO-	ABN	965	4615
8 [illegible]-[illegible]	HEXANE, 3,3-DIMETHYL-	ABN	1007	4486
9 [illegible]32-[illegible]-0	DIBENZOTHIOPHENE	ABN	1152	4047
0 [illegible]72-[illegible]	OCTANE, 2,7-DIMETHYL-	ABN	1221	2008
1 [illegible]531-[illegible]-2	PHENANTHRENE, 2-METHYL-	ABN	12540	6002
2 [illegible]332-[illegible]	PHENANTHRENE, 4-METHYL-	ABN	1254	5834
3 [illegible]-16-3	HEXADECANOICACID	ABN	1260	9203
4 [illegible]	2,6-DIMETHYLPYRAZINEDIAMINE	ABN	1509	9878
5 10[illegible]2-16-[illegible]	OCTANE, 2,7-DIMETHYL-	ABN	1575	7616
6	~~[illegible] METHYL-2-BENZOTHIAZO~~	~~ABN~~	~~1596~~	~~4935~~
7 [illegible]71-40-0	17-PENTATRIACONTENE	ABN	1629	6204
8 [illegible]1654-[illegible]-5	4-OCTENOICACID, 6-ETHYL-3-HYDROXY-3,7-	ABN	1680	1886
9 [illegible]1654-[illegible]-5	4-OCTENOICACID, 6-ETHYL-3-HYDROXY-3,7-	ABN	1730	4882
0 [illegible]004-26-1	PENT-[illegible]NE, 1-(2-BUTENYLOXY)-, (E)-	ABN	1750	7609
1.	Cyclotrisiloxane, Hexamethyl-	V	509	23
2.	Hexane, 2,2,5,5-tetramethyl-	V	631	9

ORGANICS ANALYSIS DATA SHEET - Page 3

Antonio Nunnery
B3707

Laboratory Name: Radian Case No: 3191

QC Report No: 25

B. Tentatively Identified Compounds

	CAS #	Compound Name	Fraction	Scan No. or Retention Time	% Maximum Score Attained Mass Matching Routine: (Specify: FIT)	Estimated Concentration (ug/L or ug/kg)
1.	[illegible]	[illegible]	B/A	366	99	2200
2.	[illegible]-51-4	3,5-[illegible]-1,4-[illegible]		639	911	240
3.	[illegible]-51-4	[illegible]		642	94	1,000
4.	334-24-3	1,1'-biphenyl, 4-[illegible]		953	988	2,100
5.	334-24-3	1,1'-biphenyl, 4-[illegible]		969	955	2400
6.	2536-[illegible]	2-[illegible]methanamine, [illegible]methyl-		974	947	1100
7.	334-48-5	[illegible]		1290	981	[illegible]
8.	55133-64-2	[illegible]		1402	974	330
9.	334-48-5	[illegible]		1413	970	520
10.	2351-21-7	[illegible]		1487	96	430
11.	13537-59-9	[illegible]-2,endo-3[illegible]		1535	924	320
12.	544-[illegible]-3	[illegible]		1563	969	600
13.	544-[illegible]-3	[illegible]		1596	974	680
14.	629-92-5	[illegible]decane		1614	949	740
15.	24310-[illegible]-21	[illegible]Naphtho[2,3-d]thiazole-		1642	942	270
16.	55324-42-1	[illegible]-[illegible]		1651	931	1200
17.	4543-[illegible]	[illegible]-[illegible]		1665	94	830
18.	4544-[illegible]	[illegible]-[illegible]		1680	936	320
19.	13151-[illegible]-3	[illegible]		1724	936	510
20.	2536-[illegible]	2-[illegible]		967	924	920
21.						
22.						
23.						
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25.						
26.						
27.						
28.						
29.						
30.						

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FORM II (continued)

P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number: B3707

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Radian
Lab Sample ID No: E4009029-05
Sample Matrix: Soil
Data Release Authorized By: L. Petkovich

Case No: 3191-2
QC Report No: 25
Contract No.: 68-01-6853
Date Sample Received: 9-6-84

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: —
DATE ANALYZED: 9-13-84
PERCENT MOISTURE: 27%
CONC./DILUTION FACTOR: 1:1

PP #	CAS #		ug/l or (ug/kg) (circle one)
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	5U
(11V)	71-55-6	1,1,1-trichloroethane	1U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	5U
(16V)	75-00-3	chloroethane	10U
(19V)	110-75-8	2-chloroethylvinyl ether	10U
(23V)	67-66-3	chloroform	10U
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	trans-1,2-dichloroethene	5U
(32V)	78-87-5	1,2-dichloropropane	5U
(33V)	10061-02-6	trans-1,3-dichloropropene	10U
	10061-01-05	cis-1,3-dichloropropene	5U
(38V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	~~14~~ 3
(45V)	74-87-3	chloromethane	10U
(46V)	74-83-9	bromomethane	10U
(47V)	75-25-2	bromoform	10U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	5U
(50V)	75-71-8	dichlorodifluoromethane	5U
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	5U
(87V)	79-01-6	trichloroethene	5K
(88V)	75-01-4	vinyl chloride	5U
	67-64-1	acetone	10U
	78-93-3	2-butanone	5U
	75-15-0	carbondisulfide	14
	519-78-6	2-hexanone	1U
	108-10-1	4-methyl-2-pentanone	5U
	100-42-5	styrene	5U
	108-05-4	vinyl acetate	5U
	1330-20-7	total xylenes	5U

PESTICIDES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9.17.84
DATE ANALYZED: 11-20-84
PERCENT MOISTURE: 27%
CONC./DILUTION FACTOR: 40.36:5

PP #	CAS #		ug/l or ug/k (circle o
(89P)	309-00-2	aldrin	0.1U
(90P)	60-57-1	dieldrin	0.1U
(91P)	57-74-9	chlordane	1.0U
(92P)	50-29-3	4,4'-DDT	0.2U
(93P)	72-55-9	4,4'-DDE	0.1U
(94P)	72-54-8	4,4'-DDD	0.2U
(95P)	115-29-7	α-endosulfan	0.1U
(96P)	115-29-7	β-endosulfan	0.1U
(97P)	1031-07-8	endosulfan sulfate	0.2U
(98P)	72-20-8	endrin	0.83
(99P)	7421-93-4	endrin aldehyde	0.2U
(100P)	76-44-8	heptachlor	0.1U
(101P)	1024-57-3	heptachlor epoxide	0.1U
(102P)	319-84-6	α-BHC	0.1U
(103P)	319-85-7	β-BHC	0.1U
(104P)	319-86-8	δ-BHC	0.1U
(105P)	58-89-9	γ-BHC (lindane)	0.1K
(106P)	53469-21-9	PCB-1242	1.0U
(107P)	11097-69-1	PCB-1254	4.3
(108P)	11104-28-2	PCB-1221	2.0U
(109P)	11141-16-5	PCB-1232	2.0U
(110P)	12672-29-6	PCB-1248	2.0U
(111P)	11096-82-5	PCB-1260	4.0U
(112P)	12674-11-2	PCB-1016	1.0U
(113P)	8001-35-2	toxaphene	1.0U

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED: N/A
PERCENT MOISTURE:
CONC./DILUTION FACTOR:

PP #	CAS #		ug/l or ug/k (circle o
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
B3707

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Radian
Lab Sample ID No: E4090029-05
Sample Matrix: SOIL
Data Release Authorized By: L. Petrone

Case No: 3191-2
QC Report No: 25
Contract No.: 68-01-6553
Date Sample Received: 9-6-84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9-17-84
DATE ANALYZED: 10-29-84
PERCENT MOISTURE: 27%
CONC./DILUTION FACTOR: 51.36GM/2ML

All u values must be multiplied by [2.6] SG.

PP #	CAS #		ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6- trichlorophenol	10U
(22A)	59-50-7	p-chloro-m-cresol	10U
(24A)	95-57-8	2- chlorophenol	10U
(31A)	120-83-2	2,4-dichlorophenol	10U
(34A)	105-67-9	2,4-dimethylphenol	10U
(57A)	88-75-5	2- nitrophenol	10U
(58A)	100-02-7	4-nitrophenol	20U
(59A)	51-28-5	2,4-dinitrophenol	50U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	50U
(64A)	87-86-5	pentachlorophenol	20U
(65A)	108-95-2	phenol	10U
	65-85-0	benzoic acid	152
	95-48-7	2-methylphenol	325
	108-39-4	4-methylphenol	5U
	95-95-4	2,4,5-trichlorophenol	5U
(1B)	83-32-9	acenaphthene	10U
(5B)	92-87-5	benzidine	10U
(8B)	120-82-1	1,2,4-trichlorobenzene	40U
(9B)	118-74-1	hexachlorobenzene	10U
(12B)	67-72-1	hexachloroethane	10U
(13B)	111-44-4	bis(2-chloroethyl)ether	10U
(20B)	91-58-7	2-chloronaphthalene	10U
(25B)	95-50-1	1,2-dichlorobenzene	10U
(26B)	541-73-1	1,3-dichlorobenzene	10U
(27B)	106-46-7	1,4-dichlorobenzene	10U
(28B)	91-94-1	3,3'-dichlorobenzidine	20U
(29B)	121-14-2	2,4-dinitrotoluene	5U
(36B)	606-20-2	2,6-dinitrotoluene	20U
(37B)	122-66-7	1,2-diphenylhydrazine	20U
(39B)	206-44-0	fluoranthene	150
(40B)	7005-72-3	4-chlorophenyl phenyl ether	10U
(41B)	101-55-3	4-bromophenyl phenyl ether	10U
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	20U
(43B)	111-91-1	bis (2-chloroethoxy) methane	20U

PP #	CAS #		ug/l or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene	10U
(53B)	77-47-4	hexachlorocyclopentadiene	10U
(54B)	78-59-1	isophorone	10U
(55B)	91-20-3	naphthalene	522
(56B)	98-95-3	nitrobenzene	10U
(61B)	62-75-9	N-nitrosodimethylamine	10U
(62B)	86-30-6	N-nitrosodiphenylamine	41
(63B)	621-64-7	N-nitrosodipropylamine	10U
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	10U
(67B)	85-68-7	benzyl butyl phthalate	10U
(68B)	84-74-2	di-n-butyl phthalate	10U
(69B)	117-84-0	di-n-octyl phthalate	10U
(70B)	84-66-2	diethyl phthalate	10U
(71B)	131-11-3	dimethyl phthalate	10U
(72B)	56-55-3	benzo(a)anthracene	60
(73B)	50-32-8	benzo(a)pyrene	99
(74B)	205-99-2	benzo(b)fluoranthene	615
(75B)	207-08-9	benzo(k)fluoranthene	20U
(76B)	218-01-9	chrysene	482
(77B)	208-96-8	acenaphthylene	10U
(78B)	120-12-7	anthracene	10U
(79B)	191-24-2	benzo(ghi)perylene	128
(80B)	86-73-7	fluorene	217
(81B)	85-01-8	phenanthrene	401
(82B)	53-70-3	dibenzo(a,h)anthracene	95
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	20U
(84B)	129-00-0	pyrene	110
	62-53-3	aniline	5U
	100-51-6	benzyl alcohol	20U
	106-47-8	4-chloroaniline	50U
	132-64-9	dibenzofuran	10U
	91-57-6	2-methylnaphthalene	29
	88-74-4	2-nitroaniline	100U
	99-09-2	3-nitroaniline	100U
	100-01-6	4-nitroaniline	100U

U.S. EPA DRINKING WATER STANDARDS and CRITERIA

INORGANICS

ug/l	MCL[a]	MCL-Secondary[f]				
aluminum						
antimony						
arsenic	50					
barium	1000					
beryllium						
cadmium	10					
chromium	50					
cobalt						
copper		1000				
iron		300				
lead	50					
manganese		50				
mercury	2					
nickel						
selenium	10					
silver	50					
thallium						
tin						
vanadium						
zinc		5000				
nitrate as N	10,000					

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number: B3706

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Radian
Lab Sample ID No: E409029-04
Sample Matrix: Soil
Data Release Authorized By: [illegible]

Case No: 3191-2
QC Report No: 25
Contract No.: 68-01-6853
Date Sample Received: 9-6-84

VOLATILES

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: —
DATE ANALYZED: 9-13-84
PERCENT MOISTURE: 24%
CONC./DILUTION FACTOR: 1:1

PP #	CAS #		ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	100U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	5U
(11V)	71-55-6	1,1,1-trichloroethane	1U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	5U
(16V)	75-00-3	chloroethane	10U
(19V)	110-75-8	2-chloroethylvinyl ether	10U
(23V)	67-66-3	chloroform	10U
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	trans-1,2-dichloroethene	5U
(32V)	78-87-5	1,2-dichloropropane	5U
(33V)	10061-02-6	trans-1,3-dichloropropene	10U
	10061-01-05	cis-1,3-dichloropropene	5U
(38V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	5U
(45V)	74-87-3	chloromethane	78
(46V)	74-83-9	bromomethane	10U
(47V)	75-25-2	bromoform	10U
(48V)	75-27-4	bromodichloromethane	10U
(49V)	75-69-4	fluorotrichloromethane	5U
(50V)	75-71-8	dichlorodifluoromethane	5U
(51V)	124-48-1	chlorodibromomethane	5U
(35V)	127-18-4	tetrachloroethene	5U
(36V)	108-88-3	toluene	5U
(37V)	79-01-6	trichloroethene	5U
(38V)	75-01-4	vinyl chloride	5U
	67-64-1	acetone	10U
	78-93-3	2-butanone	5U
	75-15-0	carbondisulfide	5U
	519-73-6	2-hexanone	1U
	108-10-1	4-methyl-2-pentanone	5U
	100-42-5	styrene	5U
	108-05-4	vinyl acetate	5U
	1330-20-7	total xylenes	5U

PESTICIDES

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9.17.84
DATE ANALYZED: 11-20-84
PERCENT MOISTURE: 24%
CONC./DILUTION FACTOR: 42.65:25

Pesticide raw data in referred [illegible] time [illegible] [illegible] 50

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	0.1U
(90P)	60-57-1	dieldrin	0.1U
(91P)	57-74-9	chlordane	1.0U
(92P)	50-29-3	4,4'-DDT	0.2U
(93P)	72-55-9	4,4'-DDE	0.1U
(94P)	72-54-8	4,4'-DDD	0.2U
(95P)	115-29-7	α-endosulfan	0.1U
(96P)	115-29-7	β-endosulfan	0.1U
(97P)	1031-07-8	endosulfan sulfate	0.2U
(98P)	72-20-8	endrin	0.1U
(99P)	7421-93-4	endrin aldehyde	0.2U
(100P)	76-44-8	heptachlor	0.1U
(101P)	1024-57-3	heptachlor epoxide	0.1U
(102P)	319-84-6	α-BHC	0.1U
(103P)	319-85-7	β-BHC	0.1U
(104P)	319-86-8	δ-BHC	0.1U
(105P)	58-89-9	γ-BHC (lindane)	0.1U
(106P)	53469-21-9	PCB-1242	1.0U
(107P)	11097-69-1	PCB-1254	43
(108P)	11104-28-2	PCB-1221	2.0U
(109P)	11141-16-5	PCB-1232	2.0U
(110P)	12672-29-6	PCB-1248	2.0U
(111P)	11096-82-5	PCB-1260	4.0U
(112P)	12674-11-2	PCB-1016	1.0U
(113P)	8001-35-2	toxaphene	1.0U

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED:
PERCENT MOISTURE:
CONC./DILUTION FACTOR:

PP #	CAS #		ug/l or ug/kg (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	

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Sample Management Office

Sample Number: B3709 BLK

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ORGANICS ANALYSIS DATA SHEET

Laboratory Name: RADIAN
Lab Sample ID No: 8409029-06
Sample Matrix: SOIL BLANK
Data Release Authorized By: [illegible]

Case No: 3191
QC Report No: 25
Contract No.: 68-01-6853
Date Sample Received: 9-6-84

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: —
DATE ANALYZED: 9-13-84
PERCENT MOISTURE: 100%
CONC./DILUTION FACTOR: 1:1

PP #	CAS #		ug/l or (ug/kg) (circle one)
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	1U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10U
(16V)	75-00-3	chloroethane	10U
(19V)	110-75-8	2-chloroethylvinyl ether	10U
(23V)	67-66-3	chloroform	~~5K~~
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	trans-1,2-dichloroethene	5U
(32V)	78-87-5	1,2-dichloropropane	10U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	5U
(38V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	42
(45V)	74-87-3	chloromethane	10U
(46V)	74-83-9	bromomethane	10U
(47V)	75-25-2	bromoform	10U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	5U
(50V)	75-71-8	dichlorodifluoromethane	5U
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	5U
(87V)	79-01-6	trichloroethene	5U
(88V)	75-01-4	vinyl chloride	10U
	67-64-1	acetone	5U
	78-93-3	2-butanone	7.8 ~~5U~~
	75-15-0	carbondisulfide	~~7~~ 5U
	519-78-6	2-hexanone	5U
	108-10-1	4-methyl-2-pentanone	5U
	100-42-5	styrene	5U
	108-05-4	vinyl acetate	5U
	1330-20-7	total xylenes	5U

PESTICIDES

CONCENTRATION (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9.17.84
DATE ANALYZED: 11-20-84
PERCENT MOISTURE: 100%
CONC./DILUTION FACTOR: 50:5

[illegible] Special [illegible] 50.

PP #	CAS #		ug/l or (ug/kg) (circle one)
(89P)	309-00-2	aldrin	0.1U
(90P)	60-57-1	dieldrin	0.1U
(91P)	57-74-9	chlordane	1.0U
(92P)	50-29-3	4,4'-DDT	0.2U
(93P)	72-55-9	4,4'-DDE	0.1U
(94P)	72-54-8	4,4'-DDD	0.2U
(95P)	115-29-7	α-endosulfan	0.1U
(96P)	115-29-7	β-endosulfan	0.1U
(97P)	1031-07-8	endosulfan sulfate	0.2U
(98P)	72-20-8	endrin	0.1U
(99P)	7421-93-4	endrin aldehyde	0.2U
(100P)	76-44-8	heptachlor	0.1U
(101P)	1024-57-3	heptachlor epoxide	0.1U
(102P)	319-84-6	α-BHC	0.1U
(103P)	319-85-7	β-BHC	0.1U
(104P)	319-86-8	δ-BHC	0.1U
(105P)	58-89-9	γ-BHC (lindane)	0.1U
(106P)	53469-21-9	PCB-1242	1.0U
(107P)	11097-69-1	PCB-1254	2.0U
(108P)	11104-28-2	PCB-1221	2.0U
(109P)	11141-16-5	PCB-1232	2.0U
(110P)	12672-29-6	PCB-1248	2.0U
(111P)	11096-82-5	PCB-1260	4.0U
(112P)	12674-11-2	PCB-1016	1.0U
(113P)	8001-35-2	toxaphene	1.0U

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED:
PERCENT MOISTURE:
CONC./DILUTION FACTOR:

PP #	CAS #		ug/l or ug/kg (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	

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Sample Number
B3709

Field Blank

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Radian
Lab Sample ID No: 940929-06
Sample Matrix: Water (blank to water)
Data Release Authorized By: [signature]

Case No: 3191
QC Report No: 25
Contract No.: 68-01-6853
Date Sample Received: 9-6-94

SEMIVOLATILE COMPOUNDS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9-17-94
DATE ANALYZED: 12-07-94
PERCENT MOISTURE: 100%
CONC./DILUTION FACTOR: 50.54g : 2ml

All Semivolatile Data to reflect laboratory time after contamination was added contract requirement

All u values must be multiplied by 20.

PP #	CAS #		ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6-trichlorophenol	10U
(22A)	59-50-7	p-chloro-m-cresol	10U
(24A)	95-57-8	2-chlorophenol	10U
(31A)	120-83-2	2,4-dichlorophenol	10U
(34A)	105-67-9	2,4-dimethylphenol	10U
([illegible]A)	88-75-5	2-nitrophenol	10U
(58A)	100-02-7	4-nitrophenol	20U
(59A)	51-28-5	2,4-dinitrophenol	50U
([illegible]A)	534-52-1	4,6-dinitro-2-methylphenol	50U
(64A)	87-86-5	pentachlorophenol	20U
(65A)	108-95-2	phenol	10U
[illegible]	65-85-0	benzoic acid	10U
	95-48-7	2-methylphenol	100U
[illegible]	108-39-4	4-methylphenol	5U
	95-95-4	2,4,5-trichlorophenol	5U
(1B)	83-32-9	acenaphthene	100U
(5B)	92-87-5	benzidine	10U
(8[illegible]	120-82-1	1,2,4-trichlorobenzene	40U
(9B)	118-74-1	hexachlorobenzene	10U
(10B)	67-72-1	hexachloroethane	10U
(1[illegible])	111-44-4	bis(2-chloroethyl)ether	10U
(20B)	91-58-7	2-chloronaphthalene	10U
(2[illegible])	95-50-1	1,2-dichlorobenzene	10U
(2[illegible])	541-73-1	1,3-dichlorobenzene	10U
(27B)	106-46-7	1,4-dichlorobenzene	10U
(2[illegible])	91-94-1	3,3'-dichlorobenzidine	20U
(3[illegible])	121-14-2	2,4-dinitrotoluene	5U
(36B)	606-20-2	2,6-dinitrotoluene	20U
(3[illegible]	122-66-7	1,2-diphenylhydrazine	20U
(39[illegible]	206-44-0	fluoranthene	20U
(40B)	7005-72-3	4-chlorophenyl phenyl ether	10U
(41[illegible]	101-55-3	4-bromophenyl phenyl ether	10U
(42[illegible]	39638-32-9	bis (2-chloroisopropyl) ether	20U
(43B)	111-91-1	bis (2-chloroethoxy) methane	20U

PP #	CAS #		ug/l or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene	10U
(53B)	77-47-4	hexachlorocyclopentadiene	10U
(54B)	78-59-1	isophorone	10U
(55B)	91-20-3	naphthalene	10U
(56B)	98-95-3	nitrobenzene	10U
(61B)	62-75-9	N-nitrosodimethylamine	10U
(62B)	86-30-6	N-nitrosodiphenylamine	10U
(63B)	621-64-7	N-nitrosodipropylamine	10U
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	10U
(67B)	85-68-7	benzyl butyl phthalate	410
(68B)	84-74-2	di-n-butyl phthalate	130
(69B)	117-84-0	di-n-octyl phthalate	240
(70B)	84-66-2	diethyl phthalate	100
(71B)	131-11-3	dimethyl phthalate	10U
(72B)	56-55-3	benzo(a)anthracene	10U
(73B)	50-32-8	benzo(a)pyrene	10U
(74B)	205-99-2	benzo(b)fluoranthene	20U
(75B)	207-08-9	benzo(k)fluoranthene	20U
(76B)	218-01-9	chrysene	20U
(77B)	208-96-8	acenaphthylene	20U
(78B)	120-12-7	anthracene	10U
(79B)	191-24-2	benzo(ghi)perylene	10U
(80B)	86-73-7	fluorene	20U
(81B)	85-01-8	phenanthrene	10U
(82B)	53-70-3	dibenzo(a,h)anthracene	10U
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	20U
(84B)	129-00-0	pyrene	20U
	62-53-3	aniline	10U
	100-51-6	benzyl alcohol	5U
	106-47-8	4-chloroaniline	20U
	132-64-9	dibenzofuran	50U
	91-57-6	2-methylnaphthalene	10U
	88-74-4	2-nitroaniline	20U
	99-09-2	3-nitroaniline	100U
	100-01-6	4-nitroaniline	100U

SAMPLE NUMBER:
B3709

ORGANICS ANALYSIS DATA SHEET
(PAGE 4)

TENTATIVELY IDENTIFIED COMPOUNDS

CAS NUMBER	COMPOUND NAME	FRACTION	RT OR SCAN NUMBER	ESTIMATED CONCENTRATION UG/L OR UG/KG
1. 85-44-9	1,3-ISOBENZOFURANDIONE	ABN	787	934
2.	~~2-BENZOTHIAZOLAMINE,6-METHYL-~~	~~ABN~~	~~843~~	~~4699.~~
3. 4110-44-9	1-NONENE,4,6,8-TRIMETHYL-	ABN	1261	2743
4. 765-03-7	1-DODECYNE	ABN	1375	1488
5. 54644-31-6	OXIRANE,2,3-BIS(1-METHYLETHYL)-,TRANS	ABN	1403	1981
6. 506-42-4	9-OCTADECENAL	ABN	1510	5287
7. 79-19-6	HYDRAZINECARBOTHIOAMIDE	ABN	1575	1078
8. 23922-13-3	1,2-BENZENEDIOL,4-(1,2-DIHYDROXYETHYL	ABN	1683	2117
9. 10045-43-6	BUTANIMIDAMIDE,N-(1-CHLORO-2-METHYL-1	ABN	1752	1681
0. 104-42-5	BENZENE,DECYL-	ABN	1763	1020
1. 13294-24-7	ETHANEDIOICACID,BIS(TRIMETHYLSILYL)ES	ABN	1782	2212
2. 13425-27-4	1-PHTHALAZINECARBONITRILE,2-BENZOYL-1	ABN	1828	821
3. 6232-37-6	BENZENE,1,1',1''-[1-(BROMOMETHYL)-2-M	ABN	1839	3379
4. 16323-62-4	3H-IMIDAZO[4,5-B]PYRIDIN-2-ONE,1,3-DI	ABN	1925	827
5. 33675-75-2	~~PHENOL,3-(2-PHENYLETHYL)-~~	ABN	1942	1678
6. 071-31-4	Hexane, 2,2,5,5-tetramethyl	V	631	4

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P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number: B3710

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Radian
Lab Sample ID No: E4090045-01
Sample Matrix: WATER
Data Release Authorized By: [illegible]

Case No: 3191-2
QC Report No: 25
Contract No.: 68-01-6853
Date Sample Received: 9-6-84

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: —
DATE ANALYZED: 9-13-84
PERCENT MOISTURE: 100%
CONC./DILUTION FACTOR: 1:1

PP #	CAS #		(ug/l) or ug/kg (circle one)
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	1U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10U
(16V)	75-00-3	chloroethane	10U
(19V)	110-75-8	2-chloroethylvinyl ether	10U
(23V)	67-66-3	chloroform	5U
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	trans-1,2-dichloroethene	5U
(32V)	78-87-5	1,2-dichloropropane	10U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	5U
(33V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	5U
(45V)	74-87-3	chloromethane	10U
(46V)	74-83-9	bromomethane	10U
(47V)	75-25-2	bromoform	10U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	5U
(50V)	75-71-8	dichlorodifluoromethane	5U
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	5U
(87V)	79-01-6	trichloroethene	5U
(88V)	75-01-4	vinyl chloride	10U
	67-64-1	acetone	5U
	78-93-3	2-butanone	5U
	75-15-0	carbondisulfide	1U
	519-78-6	2-hexanone	5U
	108-10-1	4-methyl-2-pentanone	5U
	100-42-5	styrene	5U
	108-05-4	vinyl acetate	5U
	1330-20-7	total xylenes	5U

PESTICIDES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9·10·84
DATE ANALYZED: 11-8-84
PERCENT MOISTURE: 100%
CONC./DILUTION FACTOR: 1000:50

[illegible]

PP #	CAS #		(ug/l) or ug/kg (circle one)
(89P)	309-00-2	aldrin	.005U
(90P)	60-57-1	dieldrin	.005U
(91P)	57-74-9	chlordane	.050U
(92P)	50-29-3	4,4'-DDT	.010U
(93P)	72-55-9	4,4'-DDE	.005U
(94P)	72-54-8	4,4'-DDD	.010U
(95P)	115-29-7	α-endosulfan	.005U
(96P)	115-29-7	β-endosulfan	.005U
(97P)	1031-07-8	endosulfan sulfate	.010U
(98P)	72-20-8	endrin	.005U
(99P)	7421-93-4	endrin aldehyde	.010U
(100P)	76-44-8	heptachlor	.005U
(101P)	1024-57-3	heptachlor epoxide	.005U
(102P)	319-84-6	α-BHC	.005U
(103P)	319-85-7	β-BHC	.005U
(104P)	319-86-8	δ-BHC	.005U
(105P)	58-89-9	γ-BHC (lindane)	.16
(106P)	53469-21-9	PCB-1242	.050U
(107P)	11097-69-1	PCB-1254	.100U
(108P)	11104-28-2	PCB-1221	.100U
(109P)	11141-16-5	PCB-1232	.100U
(110P)	12672-29-6	PCB-1248	.100U
(111P)	11096-82-5	PCB-1260	.200U
(112P)	12674-11-2	PCB-1016	.050U
(113P)	8001-35-2	toxaphene	.050U

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED: N/A
PERCENT MOISTURE:
CONC./DILUTION FACTOR:

PP #	CAS #		ug/l or ug/kg (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
B3710

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Radian
Lab Sample ID No: E409045-01
Sample Matrix: WATER
Data Release Authorized By: L. Petkovsek

Case No: 3191-2
QC Report No: 25
Contract No.: 68-01-6553
Date Sample Received: 9-6-84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9-10-84
DATE ANALYZED: 10-17-84
PERCENT MOISTURE: 100%
CONC./DILUTION FACTOR: 1000ML : 2ML

PP #	CAS #		ug/l or ~~ug/kg~~ (circle one)
(21A)	88-06-2	2,4,6- trichlorophenol	10U
(22A)	59-50-7	p-chloro-m-cresol	10U
(24A)	95-57-8	2- chlorophenol	10U
(31A)	120-83-2	2,4-dichlorophenol	10U
(34A)	105-67-9	2,4-dimethylphenol	10U
(57A)	88-75-5	2- nitrophenol	20U
(58A)	100-02-7	4-nitrophenol	50U
(59A)	51-28-5	2,4-dinitrophenol	50U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	20U
(64A)	87-86-5	pentachlorophenol	10U
(65A)	108-95-2	phenol	10U
	65-85-0	benzoic acid	36
	95-48-7	2-methylphenol	5U
	108-39-4	4-methylphenol	5U
	95-95-4	2,4,5-trichlorophenol	100U
(1B)	83-32-9	acenaphthene	10U
(3B)	92-87-5	benzidine	40U
(8B)	120-82-1	1,2,4-trichlorobenzene	10U
(9B)	118-74-1	hexachlorobenzene	10U
(12B)	67-72-1	hexachloroethane	10U
(13B)	111-44-4	bis(2-chloroethyl)ether	10U
(20B)	91-58-7	2-chloronaphthalene	10U
(25B)	95-50-1	1,2-dichlorobenzene	10U
(26B)	541-73-1	1,3-dichlorobenzene	10U
(27B)	106-46-7	1,4-dichlorobenzene	20U
(28B)	91-94-1	3,3'-dichlorobenzidine	5U
(35B)	121-14-2	2,4-dinitrotoluene	20U
(36B)	606-20-2	2,6-dinitrotoluene	20U
(37B)	122-66-7	1,2-diphenylhydrazine	20U
(39B)	206-44-0	fluoranthene	10U
(40B)	7005-72-3	4-chlorophenyl phenyl ether	10U
(41B)	101-55-3	4-bromophenyl phenyl ether	10U
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	20U
(43B)	111-91-1	bis (2-chloroethoxy) methane	20U

PP #	CAS #		ug/l or ~~ug/kg~~ (circle on
(52B)	87-68-3	hexachlorobutadiene	10U
(53B)	77-47-4	hexachlorocyclopentadiene	10U
(54B)	78-59-1	isophorone	10U
(55B)	91-20-3	naphthalene	10U
(56B)	98-95-3	nitrobenzene	10U
(61B)	62-75-9	N-nitrosodimethylamine	10U
(62B)	86-30-6	N-nitrosodiphenylamine	10U
(63B)	621-64-7	N-nitrosodipropylamine	10U
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	~~10K~~
(67B)	85-68-7	benzyl butyl phthalate	10U
(68B)	84-74-2	di-n-butyl phthalate	10U
(69B)	117-84-0	di-n-octyl phthalate	10U
(70B)	84-66-2	diethyl phthalate	10U
(71B)	131-11-3	dimethyl phthalate	10U
(72B)	56-55-3	benzo(a)anthracene	10U
(73B)	50-32-8	benzo(a)pyrene	20U
(74B)	205-99-2	benzo(b)fluoranthene	20U
(75B)	207-08-9	benzo(k)fluoranthene	20U
(76B)	218-01-9	chrysene	20U
(77B)	208-96-8	acenaphthylene	10U
(78B)	120-12-7	anthracene	10U
(79B)	191-24-2	benzo(ghi)perylene	20U
(80B)	86-73-7	fluorene	10U
(81B)	85-01-8	phenanthrene	10U
(82B)	53-70-3	dibenzo(a,h)anthracene	20U
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	20U
(84B)	129-00-0	pyrene	10K
	62-53-3	aniline	5U
	100-51-6	benzyl alcohol	20U
	106-47-8	4-chloroaniline	50U
	132-64-9	dibenzofuran	10U
	91-57-6	2-methylnaphthalene	20U
	88-74-4	2-nitroaniline	100U
	99-09-2	3-nitroaniline	100U
	100-01-6	4-nitroaniline	100U

SAMPLE NUMBER:
51, S, EPA

B3710

ORGANICS ANALYSIS DATA SHEET
(PAGE 4)

TENTATIVELY IDENTIFIED COMPOUNDS

	CAS NUMBER	COMPOUND NAME	FRACTION	RT OR SCAN NUMBER	ESTIMATED CONCENTRATIC UG/L OR UG/K
	5204-[illegible]	4-PENTENAL, 2-ETHYL-	ABN	397	195
2	322-[illegible]	2-CYCLOHEXEN-1-OL	ABN	428	220
3	[illegible]-[illegible]	2-CYCLOHEXEN-1-ONE	ABN	482	193
	[illegible]-31-0	4-PENTEN-2-OL	ABN	507	173
	[illegible]-[illegible]-7	1-HEXANOL, 2-ETHYL-	ABN	579	145
6	2[illegible]-2[illegible]-2	7-THIABICYCLO[4. 1. 0]HEPTANE	ABN	602	67
7	[illegible]-[illegible]-5	HEXANOICACID, 2-ETHYL-	ABN	669	45
	[illegible]-[illegible]-0	NONANOICACID	ABN	810	66
9	[illegible]-[illegible]-2	2H-AZEPIN-2-ONE, HEXAHYDRO-	ABN	819	691
10	19377-[illegible]	BICYCLO[3. 1. 0]HEXAN-2-ONE, 1, 5-BIS(1, 1	ABN	1000	37
11	[illegible]-47-7	PROPANE, 2, 2'-[1, 2-ETHANEDIYLBIS(OXY)]	ABN	1209	15
12	[illegible]-[illegible]-3	2-PENTENE, 5-BROMO-2, 3-DIMETHYL-	ABN	1277	14
13	[illegible]-[illegible]-[illegible]	1-PENTANOL, 3-METHYL-2-PROPYL-	ABN	1311	12
14	[illegible]-52-0	3, 4-PENTADIEN-1-OL, 2, 2-DIMETHYL-	ABN	1355	12
15	[illegible]-52-0	3, 4-PENTADIEN-1-OL, 2, 2-DIMETHYL-	ABN	1365	23
16	139-97-5	1H-CYCLOBUT[A]INDENE, 2, 2A, 7, 7A-TETRAH	ABN	1572	6
17	[illegible]-62-5	2-HEXENAL, 2-ETHYL-	ABN	1592	64
18	[illegible]-[illegible]	3-HEPTANOL, 4-METHYL-	ABN	1604	9
19	[illegible]-[illegible]	. DELTA. 2-TETRAZABOROLINE, 5-METHYL-1, 4	ABN	1696	94
20	[illegible]-82-1	2-PENTENOICACID, 3, 4, 4-TRIMETHYL-, ETHY	ABN	1861	12

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number: B3711

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Radian
Lab Sample ID No: 8409045-02
Sample Matrix: WATER
Data Release Authorized By: LaPetterson

Case No: 3191-2
QC Report No: 25
Contract No.: 68-01-6953
Date Sample Received: 9-6-84

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: —
DATE ANALYZED: 9-13-84
PERCENT MOISTURE: 100%
CONC./DILUTION FACTOR: 1:1

PP #	CAS #		ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	1U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10U
(16V)	75-00-3	chloroethane	10U
(19V)	110-75-8	2-chloroethylvinyl ether	10U
(23V)	67-66-3	chloroform	5U
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	trans-1,2-dichloroethene	5U
(32V)	78-87-5	1,2-dichloropropane	10U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	5U
(34V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	5U
(45V)	74-87-3	chloromethane	10U
(46V)	74-83-9	bromomethane	10U
(47V)	75-25-2	bromoform	10U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	5U
(50V)	75-71-8	dichlorodifluoromethane	5U
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	5U
(87V)	79-01-6	trichloroethene	5U
(88V)	75-01-4	vinyl chloride	10U
	67-64-1	acetone	5U
	78-93-3	2-butanone	5U
	75-15-0	carbondisulfide	1U
	519-78-6	2-hexanone	5U
	108-10-1	4-methyl-2-pentanone	5U
	100-42-5	styrene	5U
	108-05-4	vinyl acetate	5U
	1330-20-7	total xylenes	5U

PESTICIDES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9.10.84
DATE ANALYZED: 11.8.84
PERCENT MOISTURE: 100%
CONC./DILUTION FACTOR: 1000:5

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	.005U
(90P)	60-57-1	dieldrin	SG .005U
(91P)	57-74-9	chlordane	.050U
(92P)	50-29-3	4,4'-DDT	.010U
(93P)	72-55-9	4,4'-DDE	.005U
(94P)	72-54-8	4,4'-DDD	.010U
(95P)	115-29-7	α-endosulfan	.005U
(96P)	115-29-7	β-endosulfan	.005U
(97P)	1031-07-8	endosulfan sulfate	.010U
(98P)	72-20-8	endrin	.005U
(99P)	7421-93-4	endrin aldehyde	.010U
(100P)	76-44-8	heptachlor	.005U
(101P)	1024-57-3	heptachlor epoxide	.005U
(102P)	319-84-6	α-BHC	.005R
(103P)	319-85-7	β-BHC	.005U
(104P)	319-86-8	δ-BHC	.005U
(105P)	58-89-9	γ-BHC (lindane)	.005R
(106P)	53469-21-9	PCB-1242	.050U
(107P)	11097-69-1	PCB-1254	.100U
(108P)	11104-28-2	PCB-1221	.100U
(109P)	11141-16-5	PCB-1232	.100U
(110P)	12672-29-6	PCB-1248	.100U
(111P)	11096-82-5	PCB-1260	.200U
(112P)	12674-11-2	PCB-1016	.050U
(113P)	8001-35-2	toxaphene	.050U

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED: NA
PERCENT MOISTURE:
CONC./DILUTION FACTOR:

PP #	CAS #		ug/l or ug/ (circle
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
B3711

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Radian
Lab Sample ID No: 8409045-02
Sample Matrix: WATER
Data Release Authorized By: [signature]

Case No: 3191-2
QC Report No: 25
Contract No.: 68-01-6553
Date Sample Received: 9-6-84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9-10-84
DATE ANALYZED: 10-19-84
PERCENT MOISTURE: 100%
CONC./DILUTION FACTOR: 1000ML: 2ML

PP #	CAS #		(ug/l) or ug/kg (circle one)
(21A)	88-06-2	2,4,6- trichlorophenol	10U
(22A)	59-50-7	p-chloro-m-cresol	10U
(24A)	95-57-8	2- chlorophenol	10U
(31A)	120-83-2	2,4-dichlorophenol	10U
(34A)	105-67-9	2,4-dimethylphenol	10U
(57A)	88-75-5	2- nitrophenol	20U
(53A)	100-02-7	4-nitrophenol	50U
(59A)	51-28-5	2,4-dinitrophenol	50U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	20U
(64A)	87-86-5	pentachlorophenol	10U
(65A)	108-95-2	phenol	10U
	65-85-0	benzoic acid	100U
	95-48-7	2-methylphenol	5U
	108-39-4	4-methylphenol	5U
	95-95-4	2,4,5-trichlorophenol	100U
(1B)	83-32-9	acenaphthene	10U
(5B)	92-87-5	benzidine	40U
(8B)	120-82-1	1,2,4-trichlorobenzene	10U
(9B)	118-74-1	hexachlorobenzene	10U
(12B)	67-72-1	hexachloroethane	10U
(13B)	111-44-4	bis(2-chloroethyl)ether	10U
(20B)	91-58-7	2-chloronaphthalene	10U
(25B)	95-50-1	1,2-dichlorobenzene	10U
(26B)	541-73-1	1,3-dichlorobenzene	10U
(27B)	106-46-7	1,4-dichlorobenzene	20U
(28B)	91-94-1	3,3'-dichlorobenzidine	5U
(35B)	121-14-2	2,4-dinitrotoluene	20U
(36B)	606-20-2	2,6-dinitrotoluene	20U
(37B)	122-66-7	1,2-diphenylhydrazine	20U
(39B)	206-44-0	fluoranthene	10U
(40B)	7005-72-3	4-chlorophenyl phenyl ether	10U
(41B)	101-55-3	4-bromophenyl phenyl ether	10U
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	20U
(43B)	111-91-1	bis (2-chloroethoxy) methane	20U

PP #	CAS #		(ug/l) or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene	10U
(53B)	77-47-4	hexachlorocyclopentadiene	10U
(54B)	78-59-1	isophorone	10U
(55B)	91-20-3	naphthalene	10U
(56B)	98-95-3	nitrobenzene	10U
(61B)	62-75-9	N-nitrosodimethylamine	10U
(62B)	86-30-6	N-nitrosodiphenylamine	10U
(63B)	621-64-7	N-nitrosodipropylamine	10U
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	2.5
(67B)	85-68-7	benzyl butyl phthalate	10U
(68B)	84-74-2	di-n-butyl phthalate	10U
(69B)	117-84-0	di-n-octyl phthalate	10U
(70B)	84-66-2	diethyl phthalate	10U
(71B)	131-11-3	dimethyl phthalate	10U
(72B)	56-55-3	benzo(a)anthracene	10U
(73B)	50-32-8	benzo(a)pyrene	20U
(74B)	205-99-2	benzo(b)fluoranthene	20U
(75B)	207-08-9	benzo(k)fluoranthene	20U
(76B)	218-01-9	chrysene	20U
(77B)	208-96-8	acenaphthylene	10U
(78B)	120-12-7	anthracene	10U
(79B)	191-24-2	benzo(ghi)perylene	20U
(80B)	86-73-7	fluorene	10U
(81B)	85-01-8	phenanthrene	10U
(82B)	53-70-3	dibenzo(a,h)anthracene	20U
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	20U
(84B)	129-00-0	pyrene	10U
	62-53-3	aniline	5U
	100-51-6	benzyl alcohol	20U
	106-47-8	4-chloroaniline	50U
	132-64-9	dibenzofuran	10U
	91-57-6	2-methylnaphthalene	20U
	88-74-4	2-nitroaniline	100U
	99-09-2	3-nitroaniline	100U
	100-01-6	4-nitroaniline	100U

ORGANICS ANALYSIS DATA SHEET - Page 3

Laboratory Sample Number: B3711

Laboratory Name: Radian

Case No: 3191

QC Report No: 25

B. Tentatively Identified Compounds

CAS #	Compound Name	Fraction	Scan No. or Retention Time	% Maximum Score Attained Mass Matching Routine: (Specify: FIT)	Estimated Concentration (ug/L or ug/kg)
1. 211-11-8	~~[illegible]~~	BNA	400	948	35
2. 822-67-3	2-[illegible]-1-ol		431	952	32
3. 9[illegible]-36-4	1,3-[illegible]benzene, 1-methyl-		457	954	5
4. 2234-[illegible]-3	[illegible] 3,3-trichloro-		500	965	25
5. 10[illegible]	1,4-[illegible]-2-nitro, hexachloride		518	980	51
6. ~~[illegible]~~	~~[illegible]~~		~~1567~~	~~331~~	—
7. 645-12-5	2-nonanone, 2-ethyl-		1593	877	12
8. 36207-52-4	~~[illegible]~~ 1,2,2-trimethyl-		1541	931	9
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FORM II (continued)

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

48

Sample Number
B3712

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Radian
Lab Sample ID No: 8409045-03
Sample Matrix: WATER
Data Release Authorized By: [illegible]

Case No: 3191-2
QC Report No: 25
Contract No.: 68-01-6853
Date Sample Received: 9-6-84

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: —
DATE ANALYZED: 9-13-84
PERCENT MOISTURE: 100%
CONC./DILUTION FACTOR: 1:1

PP #	CAS #		ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	1U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10U
(16V)	75-00-3	chloroethane	10U
(19V)	110-75-8	2-chloroethylvinyl ether	10U
(23V)	67-66-3	chloroform	5U
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	trans-1,2-dichloroethene	5U
(32V)	78-87-5	1,2-dichloropropane	10U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	5U
(39V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	5U
(45V)	74-87-3	chloromethane	10U
(46V)	74-83-9	bromomethane	10U
(47V)	75-25-2	bromoform	10U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	5U
(50V)	75-71-8	dichlorodifluoromethane	5U
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	5U
(87V)	79-01-6	trichloroethene	5U
(88V)	75-01-4	vinyl chloride	10U
	67-64-1	acetone	5U
	78-93-3	2-butanone	5U
	75-15-0	carbondisulfide	1U
	519-78-6	2-hexanone	5U
	108-10-1	4-methyl-2-pentanone	5U
	100-42-5	styrene	5U
	108-05-4	vinyl acetate	5U
	1330-20-7	total xylenes	5U

PESTICIDES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9.10.84
DATE ANALYZED: 11.3.84
PERCENT MOISTURE: 100%
CONC./DILUTION FACTOR: 1000:5

Pl. pesticide/PCB gels in received [illegible] Contacted [illegible] S.G

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	.005U
(90P)	60-57-1	dieldrin	.005U
(91P)	57-74-9	chlordane	.050U
(92P)	50-29-3	4,4'-DDT	.010U
(93P)	72-55-9	4,4'-DDE	.005U
(94P)	72-54-8	4,4'-DDD	.010U
(95P)	115-29-7	α-endosulfan	.005U
(96P)	115-29-7	β-endosulfan	.005U
(97P)	1031-07-8	endosulfan sulfate	.010U
(98P)	72-20-8	endrin	.005U
(99P)	7421-93-4	endrin aldehyde	.010U
(100P)	76-44-8	heptachlor	.005U
(101P)	1024-57-3	heptachlor epoxide	.005U
(102P)	319-84-6	α-BHC	.005U
(103P)	319-85-7	β-BHC	.005U
(104P)	319-86-8	δ-BHC	.005U
(105P)	58-89-9	γ-BHC (lindane)	.005U
(106P)	53469-21-9	PCB-1242	.050U
(107P)	11097-69-1	PCB-1254	.100U
(108P)	11104-28-2	PCB-1221	.100U
(109P)	11141-16-5	PCB-1232	.100U
(110P)	12672-29-6	PCB-1248	.100U
(111P)	11096-82-5	PCB-1260	.200U
(112P)	12674-11-2	PCB-1016	.050U
(113P)	8001-35-2	toxaphene	.050U

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED:
PERCENT MOISTURE:
CONC./DILUTION FACTOR:

PP #	CAS #		ug/l or ug/ (circle
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
B3712

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Radian
Lab Sample ID No: 8409045-03
Sample Matrix: WATER
Data Release Authorized By: LaPetrow

Case No: 3191-2
QC Report No: 25
Contract No.: 68-01-6553
Date Sample Received: 9-6-84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9-10-84
DATE ANALYZED: 10-19-84
PERCENT MOISTURE: 100%
CONC./DILUTION FACTOR: 1000ML : 2ML

PP #	CAS #		(ug/l) or ug/kg (circle one)
(21A)	88-06-2	2,4,6- trichlorophenol	10U
(22A)	59-50-7	p-chloro-m-cresol	10U
(24A)	95-57-8	2- chlorophenol	10U
(31A)	120-83-2	2,4-dichlorophenol	10U
(34A)	105-67-9	2,4-dimethylphenol	10U
(57A)	88-75-5	2- nitrophenol	20U
(58A)	100-02-7	4-nitrophenol	50U
(59A)	51-28-5	2,4-dinitrophenol	50U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	20U
(64A)	87-86-5	pentachlorophenol	10U
(65A)	108-95-2	phenol	10U
	65-85-0	benzoic acid	10U
	95-48-7	2-methylphenol	100U
	108-39-4	4-methylphenol	5U
	95-95-4	2,4,5-trichlorophenol	5U
(1B)	83-32-9	acenaphthene	100U
(5B)	92-87-5	benzidine	10U
(8B)	120-82-1	1,2,4-trichlorobenzene	40U
(9B)	118-74-1	hexachlorobenzene	10U
(12B)	67-72-1	hexachloroethane	10U
(13B)	111-44-4	bis(2-chloroethyl)ether	10U
(20B)	91-58-7	2-chloronaphthalene	10U
(25B)	95-50-1	1,2-dichlorobenzene	10U
(26B)	541-73-1	1,3-dichlorobenzene	10U
(27B)	106-46-7	1,4-dichlorobenzene	10U
(28B)	91-94-1	3,3'-dichlorobenzidine	20U
(35B)	121-14-2	2,4-dinitrotoluene	5U
(36B)	606-20-2	2,6-dinitrotoluene	20U
(37B)	122-66-7	1,2-diphenylhydrazine	20U
(39B)	206-44-0	fluoranthene	(10K)
(40B)	7005-72-3	4-chlorophenyl phenyl ether	10U
(41B)	101-55-3	4-bromophenyl phenyl ether	10U
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	20U
(43B)	111-91-1	bis (2-chloroethoxy) methane	20U

PP #	CAS #		(ug/l) or ug/kg (circle on
(52B)	87-68-3	hexachlorobutadiene	10U
(53B)	77-47-4	hexachlorocyclopentadiene	10U
(54B)	78-59-1	isophorone	10U
(55B)	91-20-3	naphthalene	10U
(56B)	98-95-3	nitrobenzene	10U
(61B)	62-75-9	N-nitrosodimethylamine	10U
(62B)	86-30-6	N-nitrosodiphenylamine	10U
(63B)	621-64-7	N-nitrosodipropylamine	10U
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	10K
(67B)	85-68-7	benzyl butyl phthalate	10U
(68B)	84-74-2	di-n-butyl phthalate	10U
(69B)	117-84-0	di-n-octyl phthalate	10U
(70B)	84-66-2	diethyl phthalate	10U
(71B)	131-11-3	dimethyl phthalate	10U
(72B)	56-55-3	benzo(a)anthracene	(20K)
(73B)	50-32-8	benzo(a)pyrene	20U
(74B)	205-99-2	benzo(b)fluoranthene	(20K)
(75B)	207-08-9	benzo(k)fluoranthene	(20K)
(76B)	218-01-9	chrysene	(20K)
(77B)	208-96-8	acenaphthylene	10U
(78B)	120-12-7	anthracene	10U
(79B)	191-24-2	benzo(ghi)perylene	20U
(80B)	86-73-7	fluorene	10U
(81B)	85-01-8	phenanthrene	10U
(82B)	53-70-3	dibenzo(a,h)anthracene	10U
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	20U
(84B)	129-00-0	pyrene	20U
	62-53-3	aniline	(10K)
	100-51-6	benzyl alcohol	5U
	106-47-8	4-chloroaniline	20U
	132-64-9	dibenzofuran	50U
	91-57-6	2-methylnaphthalene	10U
	88-74-4	2-nitroaniline	20U
	99-09-2	3-nitroaniline	100U
	100-01-6	4-nitroaniline	100U
			100U

ORGANICS ANALYSIS DATA SHEET - Page 3

Laboratory Name: Radian

QC Report No: 75

Case No: 3191

Laboratory Number: B3712

B. Tentatively Identified Compounds

	CAS #	Compound Name	Fraction	Scan No. or Retention Time	% Maximum Score Attained Mass Matching Routine: (Specify: FIT)	Estimated Concentration (ug/L or ug/kg)
1.	[illegible]	Hydroperoxide, [illegible]-	BNA	398	849	20
2.	522-[illegible]-3	[illegible]		429	912	21
3.	2441-[illegible]	Naphthalene, 2-chlor[illegible]		455	922	5
4.	937-68-7	[illegible]		493	956	18
5.	22 22 [illegible]-31	1-propene, 3,3,3-trichloro[illegible]		409	960	22
6.	52[illegible]-82-4	Hexane, 4-(1-methylethyl)[illegible]		590	963	14
7.	22 03-50-7	1-hexene, 5-methyl-		755	347	3
8.	105-[illegible]-7	2H-Azepin-2-one, hexahydro[illegible]		920	979	67
9.	445-[illegible]-5	2-hexenal, 2-ethyl-		1504	993	4
10.	123-72-8	Butanal	✓	1564	979	2
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FORM II (continued)

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
B3713

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Radian
Lab Sample ID No: 8409046-01
Sample Matrix: WATER
Data Release Authorized By: [illegible]

Case No: 3191-2
QC Report No: 25
Contract No.: 68-01-6853
Date Sample Received: 9-6-84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9-10-84
DATE ANALYZED: 10-19-84
PERCENT MOISTURE: 100%
CONC./DILUTION FACTOR: 1000ML:2ML

PP #	CAS #		ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6-trichlorophenol	10U
(22A)	59-50-7	p-chloro-m-cresol	10U
(30A)	95-57-8	2-chlorophenol	10U
(31A)	120-83-2	2,4-dichlorophenol	10U
(34A)	105-67-9	2,4-dimethylphenol	10U
(57A)	88-75-5	2-nitrophenol	20U
(58A)	100-02-7	4-nitrophenol	50U
(59A)	51-28-5	2,4-dinitrophenol	50U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	20U
(64A)	87-86-5	pentachlorophenol	10U
(65A)	108-95-2	phenol	10U
	65-85-0	benzoic acid	10U
	95-48-7	2-methylphenol	10U
	108-39-4	4-methylphenol	5U
	95-95-4	2,4,5-trichlorophenol	5U
(1B)	83-32-9	acenaphthene	100U
(6B)	92-87-5	benzidine	10U
(8B)	120-82-1	1,2,4-trichlorobenzene	40U
(9B)	118-74-1	hexachlorobenzene	10U
(10B)	67-72-1	hexachloroethane	10U
(11B)	111-44-4	bis(2-chloroethyl)ether	10U
(20B)	91-58-7	2-chloronaphthalene	10U
(21B)	95-50-1	1,2-dichlorobenzene	10U
(22B)	541-73-1	1,3-dichlorobenzene	10U
(27B)	106-46-7	1,4-dichlorobenzene	10U
(28B)	91-94-1	3,3'-dichlorobenzidine	20U
(29B)	121-14-2	2,4-dinitrotoluene	5U
(36B)	606-20-2	2,6-dinitrotoluene	20U
(37B)	122-66-7	1,2-diphenylhydrazine	20U
(39B)	206-44-0	fluoranthene	20U
(40B)	7005-72-3	4-chlorophenyl phenyl ether	10U
(41B)	101-55-3	4-bromophenyl phenyl ether	10U
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	20U
(43B)	111-91-1	bis (2-chloroethoxy) methane	20U

PP #	CAS #		ug/l or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene	10U
(53B)	77-47-4	hexachlorocyclopentadiene	10U
(54B)	78-59-1	isophorone	10U
(55B)	91-20-3	naphthalene	10U
(56B)	98-95-3	nitrobenzene	10U
(61B)	62-75-9	N-nitrosodimethylamine	10U
(62B)	86-30-6	N-nitrosodiphenylamine	10U
(63B)	621-64-7	N-nitrosodipropylamine	10U
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	10K
(67B)	85-68-7	benzyl butyl phthalate	10U
(68B)	84-74-2	di-n-butyl phthalate	10U
(69B)	117-84-0	di-n-octyl phthalate	10U
(70B)	84-66-2	diethyl phthalate	10U
(71B)	131-11-3	dimethyl phthalate	10U
(72B)	56-55-3	benzo(a)anthracene	10U
(73B)	50-32-8	benzo(a)pyrene	20U
(74B)	205-99-2	benzo(b)fluoranthene	20U
(75B)	207-08-9	benzo(k)fluoranthene	20U
(76B)	218-01-9	chrysene	20U
(77B)	208-96-8	acenaphthylene	10U
(78B)	120-12-7	anthracene	10U
(79B)	191-24-2	benzo(ghi)perylene	20U
(80B)	86-73-7	fluorene	10U
(81B)	85-01-8	phenanthrene	10U
(82B)	53-70-3	dibenzo(a,h)anthracene	20U
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	20U
(84B)	129-00-0	pyrene	10U
	62-53-3	aniline	5U
	100-51-6	benzyl alcohol	20U
	106-47-8	4-chloroaniline	50U
	132-64-9	dibenzofuran	10U
	91-57-6	2-methylnaphthalene	20U
	88-74-4	2-nitroaniline	100U
	99-09-2	3-nitroaniline	100U
	100-01-6	4-nitroaniline	100U

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number: B3713

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Radian
Lab Sample ID No: E409046-01
Sample Matrix: WATER
Data Release Authorized By: J. A. Petrone

Case No: 3191-2
QC Report No: 25
Contract No.: 68-01-6853
Date Sample Received: 9-6-84

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: —
DATE ANALYZED: 9-13-84
PERCENT MOISTURE: 100%
CONC./DILUTION FACTOR: 1:1

PP #	CAS #		ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	1U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10U
(16V)	75-00-3	chloroethane	10U
(19V)	110-75-8	2-chloroethylvinyl ether	10U
(23V)	67-66-3	chloroform	5U
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	trans-1,2-dichloroethene	5U
(32V)	78-87-5	1,2-dichloropropane	10U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	5U
(33V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	5U
(45V)	74-87-3	chloromethane	10U
(46V)	74-83-9	bromomethane	10U
(47V)	75-25-2	bromoform	10U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	5U
(50V)	75-71-8	dichlorodifluoromethane	5U
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	5U
(87V)	79-01-6	trichloroethene	5U
(88V)	75-01-4	vinyl chloride	10U
	67-64-1	acetone	5U
	78-93-3	2-butanone	5U
	75-15-0	carbondisulfide	1U
	519-78-6	2-hexanone	5U
	108-10-1	4-methyl-2-pentanone	5U
	100-42-5	styrene	5U
	108-05-4	vinyl acetate	5U
	1330-20-7	total xylenes	5U

PESTICIDES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9.10.84
DATE ANALYZED: 11.3.84
PERCENT MOISTURE: 100%
CONC./DILUTION FACTOR: 1000:5

All pesticide/PCB data rejected following the [illegible] extraction beyond contractual holding time. CG

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	.005U
(90P)	60-57-1	dieldrin	.005U
(91P)	57-74-9	chlordane	.050U
(92P)	50-29-3	4,4'-DDT	.010U
(93P)	72-55-9	4,4'-DDE	.005U
(94P)	72-54-8	4,4'-DDD	.010U
(95P)	115-29-7	α-endosulfan	.005U
(96P)	115-29-7	β-endosulfan	.005U
(97P)	1031-07-8	endosulfan sulfate	.010U
(98P)	72-20-8	endrin	.005U
(99P)	7421-93-4	endrin aldehyde	.010U
(100P)	76-44-8	heptachlor	.005U
(101P)	1024-57-3	heptachlor epoxide	.005U
(102P)	319-84-6	α-BHC	.005U
(103P)	319-85-7	β-BHC	.005U
(104P)	319-86-8	δ-BHC	.005U
(105P)	58-89-9	γ-BHC (lindane)	.005U
(106P)	53469-21-9	PCB-1242	.050U
(107P)	11097-69-1	PCB-1254	.100U
(108P)	11104-28-2	PCB-1221	.100U
(109P)	11141-16-5	PCB-1232	.100U
(110P)	12672-29-6	PCB-1248	.100U
(111P)	11096-82-5	PCB-1260	.200U
(112P)	12674-11-2	PCB-1016	.050U
(113P)	8001-35-2	toxaphene	.050U

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: N/A
DATE ANALYZED: N/A
PERCENT MOISTURE: N/A
CONC./DILUTION FACTOR: N/A

PP #	CAS #		ug/l or ug/kg (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample Number: B3713

Laboratory Name: Radian Case No: 3191

QC Report No: 25

B. Tentatively Identified Compounds

	CAS #	Compound Name	Fraction	Scan No. or Retention Time	% Maximum Score Attained Mass Matching Routine: (Specify: FIT)	Estimated Concentration (ug/L or ug/kg)
1.	[illegible]	[illegible]	[illegible]	[illegible]	985	25
2.	822-67-3	2-[illegible]-1-[illegible]	[illegible]	42[illegible]	91[illegible]	11
3.	[illegible]	2-[illegible]-1-[illegible]	[illegible]	1154	950	10
4.	3431-34-2	Furan, 2,3-dihydro-4-(1-methylethyl)	[illegible]	1[illegible]14	952	4
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4/82

FORM II (continued)

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number: B3714

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Radian
Lab Sample ID No: 8409047-01
Sample Matrix: Soil
Data Release Authorized By: [illegible]

Case No: 3191-2
QC Report No: 25
Contract No.: 68-01-6853
Date Sample Received: 9-6-84

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: —
DATE ANALYZED: 9-13-84
PERCENT MOISTURE: 17%
CONC./DILUTION FACTOR: 1:1

PP #	CAS #		ug/l or (ug/kg) (circle one)
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	1U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10U
(16V)	75-00-3	chloroethane	10U
(19V)	110-75-8	2-chloroethylvinyl ether	10U
(23V)	67-66-3	chloroform	5U
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	trans-1,2-dichloroethene	5U
(32V)	78-87-5	1,2-dichloropropane	10U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	5U
(38V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	~~91~~
(45V)	74-87-3	chloromethane	10U
(46V)	74-83-9	bromomethane	10U
(47V)	75-25-2	bromoform	10U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	5U
(50V)	75-71-8	dichlorodifluoromethane	5U
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	5U
(87V)	79-01-6	trichloroethene	5U
(88V)	75-01-4	vinyl chloride	10U
	67-64-1	acetone	5U
	78-93-3	2-butanone	5U
	75-15-0	carbondisulfide	1U
	519-73-6	2-hexanone	5U
	108-10-1	4-methyl-2-pentanone	5U
	100-42-5	styrene	5U
	108-05-4	vinyl acetate	5U
	1330-20-7	total xylenes	5U

PESTICIDES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9.17.84
DATE ANALYZED: 11.21.84
PERCENT MOISTURE: 17%
CONC./DILUTION FACTOR: 3.22:50

All pesticide/PCB data inspected. Healing and dry extraction [illegible] [illegible]

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	~~5.0~~ 5.0
(90P)	60-57-1	dieldrin	1.0U
(91P)	57-74-9	chlordane	10.0U
(92P)	50-29-3	4,4'-DDT	2.0U
(93P)	72-55-9	4,4'-DDE	1.0U
(94P)	72-54-8	4,4'-DDD	2.0U
(95P)	115-29-7	α-endosulfan	1.0U
(96P)	115-29-7	β-endosulfan	1.0U
(97P)	1031-07-8	endosulfan sulfate	2.0U
(98P)	72-20-8	endrin	1.0U
(99P)	7421-93-4	endrin aldehyde	2.0U
(100P)	76-44-8	heptachlor	1.0U
(101P)	1024-57-3	heptachlor epoxide	1.0U
(102P)	319-84-6	α-BHC	1.0U
(103P)	319-85-7	β-BHC	1.0U
(104P)	319-86-8	δ-BHC	1.0U
(105P)	58-89-9	γ-BHC (lindane)	1.0U
(106P)	53469-21-9	PCB-1242	10.0U
(107P)	11097-69-1	PCB-1254	74
(108P)	11104-28-2	PCB-1221	20.0U
(109P)	11141-16-5	PCB-1232	20.0U
(110P)	12672-29-6	PCB-1248	20.0U
(111P)	11096-82-5	PCB-1260	40.0U
(112P)	12674-11-2	PCB-1016	10.0U
(113P)	8001-35-2	toxaphene	10.0U

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED: N/A
PERCENT MOISTURE:
CONC./DILUTION FACTOR:

PP #	CAS #		ug/l or ug/kg (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	

U. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
B3714

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Radian
Lab Sample ID No: 8409047-01
Sample Matrix: SOIL
Data Release Authorized By: L. Petkovic

Case No: 3191-2
QC Report No: 25
Contract No.: 68-01-6553
Date Sample Received: 9-6-84

SEMIVOLATILE COMPOUNDS

All volo Semivolatile data is rejected. Holding time after exceeded contractual requirement. SG.

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9-17-84
DATE ANALYZED: 11-6-84
PERCENT MOISTURE: 17%
CONC./DILUTION FACTOR: 3.18GM/2ML

PP #	CAS #		ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6-trichlorophenol	10U
(22A)	59-50-7	p-chloro-m-cresol	10U
(4A)	95-57-8	2-chlorophenol	10U
(31A)	120-83-2	2,4-dichlorophenol	10U
(34A)	105-67-9	2,4-dimethylphenol	10U
(7A)	88-75-5	2-nitrophenol	20U
(53A)	100-02-7	4-nitrophenol	50U
(59A)	51-28-5	2,4-dinitrophenol	50U
(0A)	534-52-1	4,6-dinitro-2-methylphenol	20U
(64A)	87-86-5	pentachlorophenol	10U
(65A)	108-95-2	phenol	10U
	65-85-0	benzoic acid	100U
	95-48-7	2-methylphenol	5U
	108-39-4	4-methylphenol	5U
	95-95-4	2,4,5-trichlorophenol	100U
(1B)	83-32-9	acenaphthene	10U
(5B)	92-87-5	benzidine	40U
8B)	120-82-1	1,2,4-trichlorobenzene	10U
(9B)	118-74-1	hexachlorobenzene	10U
(12B)	67-72-1	hexachloroethane	10U
(13B)	111-44-4	bis(2-chloroethyl)ether	10U
(20B)	91-58-7	2-chloronaphthalene	10U
(25B)	95-50-1	1,2-dichlorobenzene	10U
(26B)	541-73-1	1,3-dichlorobenzene	10U
(27B)	106-46-7	1,4-dichlorobenzene	20U
(28B)	91-94-1	3,3'-dichlorobenzidine	5U
(35B)	121-14-2	2,4-dinitrotoluene	20U
(36B)	606-20-2	2,6-dinitrotoluene	20U
(37B)	122-66-7	1,2-diphenylhydrazine	20U
(39B)	206-44-0	fluoranthene	10U
(40B)	7005-72-3	4-chlorophenyl phenyl ether	10U
(41B)	101-55-3	4-bromophenyl phenyl ether	10U
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	20U
(43B)	111-91-1	bis (2-chloroethoxy) methane	20U

PP #	CAS #		ug/l or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene	10U
(53B)	77-47-4	hexachlorocyclopentadiene	10U
(54B)	78-59-1	isophorone	10U
(55B)	91-20-3	naphthalene	10U
(56B)	98-95-3	nitrobenzene	10U
(61B)	62-75-9	N-nitrosodimethylamine	10U
(62B)	86-30-6	N-nitrosodiphenylamine	10U
(63B)	621-64-7	N-nitrosodipropylamine	10U
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	~~43.000~~
(67B)	85-68-7	benzyl butyl phthalate	10U
(68B)	84-74-2	di-n-butyl phthalate	10U
(69B)	117-84-0	di-n-octyl phthalate	10U
(70B)	84-66-2	diethyl phthalate	10U
(71B)	131-11-3	dimethyl phthalate	10U
(72B)	56-55-3	benzo(a)anthracene	10U
(73B)	50-32-8	benzo(a)pyrene	20U
(74B)	205-99-2	benzo(b)fluoranthene	20U
(75B)	207-08-9	benzo(k)fluoranthene	20U
(76B)	218-01-9	chrysene	20U
(77B)	208-96-8	acenaphthylene	10U
(78B)	120-12-7	anthracene	10U
(79B)	191-24-2	benzo(ghi)perylene	20U
(80B)	86-73-7	fluorene	10U
(81B)	85-01-8	phenanthrene	10U
(82B)	53-70-3	dibenzo(a,h)anthracene	20U
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	20U
(84B)	129-00-0	pyrene	10U
	62-53-3	aniline	5U
	100-51-6	benzyl alcohol	20U
	106-47-8	4-chloroaniline	50U
	132-64-9	dibenzofuran	10U
	91-57-6	2-methylnaphthalene	20U
	88-74-4	2-nitroaniline	100U
	99-09-2	3-nitroaniline	100U
	100-01-6	4-nitroaniline	100U

SAMPLE NUMBER:
B 3714

ORGANICS ANALYSIS DATA SHEET
(PAGE 4)

TENTATIVELY IDENTIFIED COMPOUNDS

CAS NUMBER	COMPOUND NAME	FRACTION	RT OR SCAN NUMBER	ESTIMATED CONCENTRATIO UG/L OR UG/K
1 [illegible]	1-NONENE, 4, 6, 8-TRIMETHYL-	ABN	1470	30 00,000
2 13151-41-2	TRIDECANE6-CYCLOHEXYL-, 6-CYCLOHEXYL-	ABN	1489	2,400,000
3 [illegible]	1-NONENE, 4, 6, 8-TRIMETHYL-	ABN	1510	6,400,000
4 [illegible]	1-PENTANOL, 2-ETHYL-4-METHYL-	ABN	1531	1,900,000
5 13151-41-2	TRIDECANE6-CYCLOHEXYL-, 6-CYCLOHEXYL-	ABN	1545	5,200,000
6 [illegible]	PENTATRIACONTANE	ABN	1563	9,700,000
7 [illegible]	CYCLOHEXANOL, 3-METHYL-2-(1-METHYLETHY	ABN	1578	3,700,000
8 [illegible]	TETRACONTANE, 3, 5, 24-TRIMETHYL-	ABN	1584	2,300,000
9 [illegible]	UNDECANE5-CYCLOHEXYL-, 5-CYCLOHEXYL-	ABN	1600	17,000,000
10 [illegible]	PENTATRIACONTANE	ABN	1615	19 000,000
11 [illegible]	DODECANE6-CYCLOHEXYL-, 6-CYCLOHEXYL-	ABN	1652	15,000,000
12 [illegible]	PENTATRIACONTANE	ABN	1666	19,000,000
13 [illegible]	PENTATRIACONTANE	ABN	1681	9,100,000
14 [illegible]	2, 3-BORNANEDIOL, ENDO-2, EXO-3-	ABN	1681 6	4,200,000
15 [illegible]	4-HEXENOICACID, 3-METHYL-2, 6-DIOXO-	ABN	1707	5,050,000
16 [illegible]	D-HOMOANDROSTANE, (5. ALPHA. , 13. ALPHA.)	ABN	1718	2,300,000
17 [illegible]	TETRACONTANE, 3, 5, 24-TRIMETHYL-	ABN	1725	14,000,000
18 [illegible]	TETRACONTANE, 3, 5, 24-TRIMETHYL-	ABN	1794	5,200,000
19 [illegible]	OCTACOSANE	ABN	1874	8,400,000
20 [illegible]	TETRACONTANE, 3, 5, 24-TRIMETHYL-	ABN	1944	3,500,000

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
B3715

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Radian
Lab Sample ID No: 8409047-02
Sample Matrix: SOIL
Data Release Authorized By: L. A. Petrovan

Case No: 3191-2
QC Report No: 25
Contract No.: 68-01-6553
Date Sample Received: 9-6-84

SEMIVOLATILE COMPOUNDS

All semivol. tic data rejected with no time after extraction exceeded contract requirements E, G

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9-17-84
DATE ANALYZED: 11-6-84
PERCENT MOISTURE: 26%
CONC./DILUTION FACTOR: 3.65GM/2ML

All U values (not detected) must be multiplied by 3.65

PP #	CAS #		ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6-trichlorophenol	10U
(22A)	59-50-7	p-chloro-m-cresol	10U
(24A)	95-57-8	2-chlorophenol	10U
(31A)	120-83-2	2,4-dichlorophenol	10U
(34A)	105-67-9	2,4-dimethylphenol	10U
(57A)	88-75-5	2-nitrophenol	20U
(58A)	100-02-7	4-nitrophenol	50U
(59A)	51-28-5	2,4-dinitrophenol	50U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	20U
(64A)	87-86-5	pentachlorophenol	10U
(65A)	108-95-2	phenol	10U
	65-85-0	benzoic acid	3600
	95-48-7	2-methylphenol	5U
	108-39-4	4-methylphenol	5U
	95-95-4	2,4,5-trichlorophenol	10U
(1B)	83-32-9	acenaphthene	10U
(5B)	92-87-5	benzidine	40U
(8B)	120-82-1	1,2,4-trichlorobenzene	10U
(9B)	118-74-1	hexachlorobenzene	10U
(12B)	67-72-1	hexachloroethane	10U
(13B)	111-44-4	bis(2-chloroethyl)ether	10U
(20B)	91-58-7	2-chloronaphthalene	10U
(25B)	95-50-1	1,2-dichlorobenzene	10U
(26B)	541-73-1	1,3-dichlorobenzene	10U
(27B)	106-46-7	1,4-dichlorobenzene	20U
(28B)	91-94-1	3,3'-dichlorobenzidine	5U
(35B)	121-14-2	2,4-dinitrotoluene	20U
(36B)	606-20-2	2,6-dinitrotoluene	20U
(37B)	122-66-7	1,2-diphenylhydrazine	20U
(39B)	206-44-0	fluoranthene	10U
(40B)	7005-72-3	4-chlorophenyl phenyl ether	10U
(41B)	101-55-3	4-bromophenyl phenyl ether	10U
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	20U
(43B)	111-91-1	bis (2-chloroethoxy) methane	20U

PP #	CAS #		ug/l or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene	10U
(53B)	77-47-4	hexachlorocyclopentadiene	10U
(54B)	78-59-1	isophorone	10U
(55B)	91-20-3	naphthalene	210
(56B)	98-95-3	nitrobenzene	10U
(61B)	62-75-9	N-nitrosodimethylamine	10U
(62B)	86-30-6	N-nitrosodiphenylamine	1300
(63B)	621-64-7	N-nitrosodipropylamine	10U
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	2900
(67B)	85-68-7	benzyl butyl phthalate	10U
(68B)	84-74-2	di-n-butyl phthalate	10U
(69B)	117-84-0	di-n-octyl phthalate	10U
(70B)	84-66-2	diethyl phthalate	10U
(71B)	131-11-3	dimethyl phthalate	10U
(72B)	56-55-3	benzo(a)anthracene	10U
(73B)	50-32-8	benzo(a)pyrene	20U
(74B)	205-99-2	benzo(b)fluoranthene	1600
(75B)	207-08-9	benzo(k)fluoranthene	20U
(76B)	218-01-9	chrysene	20U
(77B)	208-96-8	acenaphthylene	10U
(78B)	120-12-7	anthracene	10U
(79B)	191-24-2	benzo(ghi)perylene	20U
(80B)	86-73-7	fluorene	10U
(81B)	85-01-8	phenanthrene	130
(82B)	53-70-3	dibenzo(a,h)anthracene	20U
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	20U
(84B)	129-00-0	pyrene	10U
	62-53-3	aniline	5U
	100-51-6	benzyl alcohol	20U
	106-47-8	4-chloroaniline	50U
	132-64-9	dibenzofuran	10U
	91-57-6	2-methylnaphthalene	20U
	88-74-4	2-nitroaniline	100U
	99-09-2	3-nitroaniline	100U
	100-01-6	4-nitroaniline	100U

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number: B3715

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Radian
Lab Sample ID No: 8409047-02
Sample Matrix: Soil
Data Release Authorized By: [illegible]

Case No: 3191-2
QC Report No: 25
Contract No.: 68-01-6853
Date Sample Received: 9-6-84

VOLATILES

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: —
DATE ANALYZED: 9-13-84
PERCENT MOISTURE: 26%
CONC./DILUTION FACTOR: 1:1

PP #	CAS #		ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	100U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	5U
(11V)	71-55-6	1,1,1-trichloroethane	1U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	5U
(16V)	75-00-3	chloroethane	10U
(19V)	110-75-8	2-chloroethylvinyl ether	10U
(23V)	67-66-3	chloroform	10U
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	trans-1,2-dichloroethene	5U
(32V)	78-87-5	1,2-dichloropropane	5U
(33V)	10061-02-6	trans-1,3-dichloropropene	10U
	10061-01-05	cis-1,3-dichloropropene	5U
(38V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	5U
(45V)	74-87-3	chloromethane	27
(46V)	74-83-9	bromomethane	10U
(47V)	75-25-2	bromoform	10U
(48V)	75-27-4	bromodichloromethane	10U
(49V)	75-69-4	fluorotrichloromethane	5U
(50V)	75-71-8	dichlorodifluoromethane	5U
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	5U
(87V)	79-01-6	trichloroethene	5U
(88V)	75-01-4	vinyl chloride	5U
	67-64-1	acetone	10U
	78-93-3	2-butanone	5U
	75-15-0	carbondisulfide	5U
	519-78-6	2-hexanone	1U
	108-10-1	4-methyl-2-pentanone	5U
	100-42-5	styrene	5U
	108-05-4	vinyl acetate	5U
	1330-20-7	total xylenes	5U

PESTICIDES

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9-17-84
DATE ANALYZED: 11-20-84
PERCENT MOISTURE: 26%
CONC./DILUTION FACTOR: 3.99:25

All results after data review. [illegible] after extraction [illegible] contract [illegible]

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	0.1U
(90P)	60-57-1	dieldrin	0.1U
(91P)	57-74-9	chlordane	1.0U
(92P)	50-29-3	4,4'-DDT	0.2U
(93P)	72-55-9	4,4'-DDE	0.1U
(94P)	72-54-8	4,4'-DDD	0.2U
(95P)	115-29-7	α-endosulfan	0.1U
(96P)	115-29-7	β-endosulfan	0.1U
(97P)	1031-07-8	endosulfan sulfate	0.2U
(98P)	72-20-8	endrin	0.1U
(99P)	7421-93-4	endrin aldehyde	0.2U
(100P)	76-44-8	heptachlor	0.1U
(101P)	1024-57-3	heptachlor epoxide	0.1U
(102P)	319-84-6	α-BHC	0.1U
(103P)	319-85-7	β-BHC	0.1U
(104P)	319-86-8	δ-BHC	0.1U
(105P)	58-89-9	γ-BHC (lindane)	0.1U
(106P)	53469-21-9	PCB-1242	380
(107P)	11097-69-1	PCB-1254	235
(108P)	11104-28-2	PCB-1221	2.0U
(109P)	11141-16-5	PCB-1232	2.0U
(110P)	12672-29-6	PCB-1248	2.0U
(111P)	11096-82-5	PCB-1260	2.0U
(112P)	12674-11-2	PCB-1016	4.0U
(113P)	8001-35-2	toxaphene	1.0U

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED:
PERCENT MOISTURE:
CONC./DILUTION FACTOR:

PP #	CAS #		ug/l or ug/kg (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	

SAMPLE NUMBER:
B 3715

ORGANICS ANALYSIS DATA SHEET
(PAGE 4)

TENTATIVELY IDENTIFIED COMPOUNDS

CAS NUMBER	COMPOUND NAME	FRACTION	RT OR SCAN NUMBER	ESTIMATED CONCENTRATION UG/L OR UG/KG
1	~~ETHENE, TETRACHLORO-~~	~~ABN~~	~~297~~	29155
2 [illegible]	3-DECENE, 2, 2-DIMETHYL-, (E)-	ABN	352	12,000
3 [illegible]30-65-7	2-CYCLOHEXEN-1-ONE	ABN	435	13,000
4 [illegible]-53-6	1H-INDENE, OCTAHYDRO-2, 2, 4, 4, 7, 7-HEXAM	ABN	923	23,000
5 [illegible]-53-6	1H-INDENE, OCTAHYDRO-2, 2, 4, 4, 7, 7-HEXAM	ABN	954	37,000
6 [illegible]-14-2	1, 4-UNDECADIENE, (Z)-	ABN	1022	11,000
7 [illegible]-14-0	6-OCTEN-1-OL, 3, 7-DIMETHYL-, PROPANOATE	ABN	1033	23,000
8 [illegible]-37-9	OCTANE, 2, 4, 6-TRIMETHYL-	ABN	1037	19,000
9 [illegible]-75-3	NONANE, 5-METHYL-5-PROPYL-	ABN	1116	41,000
0 [illegible]-42-7	CYCLOPENTANEETHANOL, 2-(HYDROXYMETHYL)	ABN	1288	63,000
1 [illegible]-27-3	CYCLOHEXANOL, 1-ETHYNYL-	ABN	1664	38,000
2 [illegible]-53-5	3-PENTEN-1-OL, 2, 2, 4-TRIMETHYL-	ABN	1660	45,000
3 [illegible]-04-4	ETHANE, (METHYLSELENO)-	ABN	1716	20,000
4 [illegible]-46-2	NAPHTHALENE, 2-(1, 1-DIMETHYLETHYL)DECA	ABN	1724	49,000
~~5~~	~~ETHANONE, 1-[2-(DIMETHYLAMINO)PHENYL]~~	~~ABN~~	~~0~~	

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
B3716

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Radian
Lab Sample ID No: 342264-02
Sample Matrix: Water
Data Release Authorized By: [illegible]

Case No: 3191
QC Report No: 25
Contract No.: 68-01-6853
Date Sample Received: 9-6-84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 11-16-84
DATE ANALYZED: 11-19-84
PERCENT MOISTURE: 100%
CONC./DILUTION FACTOR: 1000:2 ml

PP #	CAS #		ug/L or ug/kg (circle one)
(21A)	88-06-2	2,4,6- trichlorophenol	10U
(22A)	59-50-7	p-chloro-m-cresol	10U
(23A)	95-57-8	2- chlorophenol	10U
(24A)	120-83-2	2,4-dichlorophenol	10U
(34A)	105-67-9	2,4-dimethylphenol	10U
(35A)	88-75-5	2- nitrophenol	10U
(58A)	100-02-7	4-nitrophenol	20U
(59A)	51-28-5	2,4-dinitrophenol	50U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	50U
(64A)	87-86-5	pentachlorophenol	20U
(65A)	108-95-2	phenol	10U
	65-85-0	benzoic acid	10U
	95-48-7	2-methylphenol	100U
	108-39-4	4-methylphenol	5U
	95-95-4	2,4,5-trichlorophenol	5U
(1B)	83-32-9	acenaphthene	100U
(5B)	92-87-5	benzidine	10U
(8B)	120-82-1	1,2,4-trichlorobenzene	40U
(9B)	118-74-1	hexachlorobenzene	10U
(10B)	67-72-1	hexachloroethane	10U
(19B)	111-44-4	bis(2-chloroethyl)ether	10U
(20B)	91-58-7	2-chloronaphthalene	10U
(25B)	95-50-1	1,2-dichlorobenzene	10U
(26B)	541-73-1	1,3-dichlorobenzene	10U
(27B)	106-46-7	1,4-dichlorobenzene	10U
(28B)	91-94-1	3,3'-dichlorobenzidine	20U
(35B)	121-14-2	2,4-dinitrotoluene	5U
(36B)	606-20-2	2,6-dinitrotoluene	20U
(37B)	122-66-7	1,2-diphenylhydrazine	20U
(39B)	206-44-0	fluoranthene	20U
(40B)	7005-72-3	4-chlorophenyl phenyl ether	10U
(41B)	101-55-3	4-bromophenyl phenyl ether	10U
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	20U
(43B)	111-91-1	bis (2-chloroethoxy) methane	20U

PP #	CAS #		ug/L or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene	10U
(53B)	77-47-4	hexachlorocyclopentadiene	10U
(54B)	78-59-1	isophorone	10U
(55B)	91-20-3	naphthalene	10U
(56B)	98-95-3	nitrobenzene	10U
(61B)	62-75-9	N-nitrosodimethylamine	10U
(62B)	86-30-6	N-nitrosodiphenylamine	10U
(63B)	621-64-7	N-nitrosodipropylamine	10U
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	10U
(67B)	85-68-7	benzyl butyl phthalate	10U
(68B)	84-74-2	di-n-butyl phthalate	10U
(69B)	117-84-0	di-n-octyl phthalate	10U
(70B)	84-66-2	diethyl phthalate	10U
(71B)	131-11-3	dimethyl phthalate	10U
(72B)	56-55-3	benzo(a)anthracene	10U
(73B)	50-32-8	benzo(a)pyrene	10U
(74B)	205-99-2	benzo(b)fluoranthene	20U
(75B)	207-08-9	benzo(k)fluoranthene	20U
(76B)	218-01-9	chrysene	20U
(77B)	208-96-8	acenaphthylene	20U
(78B)	120-12-7	anthracene	10U
(79B)	191-24-2	benzo(ghi)perylene	10U
(80B)	86-73-7	fluorene	20U
(81B)	85-01-8	phenanthrene	10U
(82B)	53-70-3	dibenzo(a,h)anthracene	10U
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	20U
(84B)	129-00-0	pyrene	20U
	62-53-3	aniline	10U
	100-51-6	benzyl alcohol	5U
	106-47-8	4-chloroaniline	20U
	132-64-9	dibenzofuran	50U
	91-57-6	2-methylnaphthalene	10U
	88-74-4	2-nitroaniline	20U
	99-09-2	3-nitroaniline	100U
	100-01-6	4-nitroaniline	100U

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Sample Number
B3716

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Radian
Lab Sample ID No: E4C9046-02
Sample Matrix: WATER
Data Release Authorized By: H. Petrosse

Case No: 3191-2
QC Report No: 25
Contract No.: 68-01-6853
Date Sample Received: 9-6-84

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: —
DATE ANALYZED: 9-13-84
PERCENT MOISTURE: 100%
CONC./DILUTION FACTOR: 1:1

PP #	CAS #		ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	1U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10U
(16V)	75-00-3	chloroethane	10U
(19V)	110-75-8	2-chloroethylvinyl ether	10U
(23V)	67-66-3	chloroform	5U
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	trans-1,2-dichloroethene	5U
(32V)	78-87-5	1,2-dichloropropane	10U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	5U
(38V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	5U
(45V)	74-87-3	chloromethane	10U
(46V)	74-83-9	bromomethane	10U
(47V)	75-25-2	bromoform	10U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	5U
(50V)	75-71-8	dichlorodifluoromethane	5U
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	5U
(87V)	79-01-6	trichloroethene	5U
(88V)	75-01-4	vinyl chloride	10U
	67-64-1	acetone	5U
	78-93-3	2-butanone	5U
	75-15-0	carbondisulfide	1U
	519-78-6	2-hexanone	5U
	108-10-1	4-methyl-2-pentanone	5U
	100-42-5	styrene	5U
	108-05-4	vinyl acetate	5U
	1330-20-7	total xylenes	5U

PESTICIDES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9-10-84
DATE ANALYZED: 11-3-84
PERCENT MOISTURE: 100%
CONC./DILUTION FACTOR: 1000:5

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	.005U
(90P)	60-57-1	dieldrin	.005U
(91P)	57-74-9	chlordane	.050U
(92P)	50-29-3	4,4'-DDT	.010U
(93P)	72-55-9	4,4'-DDE	.005U
(94P)	72-54-8	4,4'-DDD	.010U
(95P)	115-29-7	α-endosulfan	.005U
(96P)	115-29-7	β-endosulfan	.005U
(97P)	1031-07-8	endosulfan sulfate	.010U
(98P)	72-20-8	endrin	.005U
(99P)	7421-93-4	endrin aldehyde	.010U
(100P)	76-44-8	heptachlor	.005U
(101P)	1024-57-3	heptachlor epoxide	.005U
(102P)	319-84-6	α-BHC	.005U
(103P)	319-85-7	β-BHC	.005U
(104P)	319-86-8	δ-BHC	.005U
(105P)	58-89-9	γ-BHC (lindane)	.02
(106P)	53469-21-9	PCB-1242	.050U
(107P)	11097-69-1	PCB-1254	.100U
(108P)	11104-28-2	PCB-1221	.100U
(109P)	11141-16-5	PCB-1232	.100U
(110P)	12672-29-6	PCB-1248	.100U
(111P)	11096-82-5	PCB-1260	.100U
(112P)	12674-11-2	PCB-1016	.050U
(113P)	8001-35-2	toxaphene	.050U

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED:
PERCENT MOISTURE:
CONC./DILUTION FACTOR:

PP #	CAS #		ug/l or ug/ (circle
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample Number: B3716

Laboratory Name: Radian

Case No: 3191

QC Report No: 25

B. Tentatively Identified Compounds

	CAS #	Compound Name	Fraction	Scan No. or Retention Time	% Maximum Score Attained Mass Matching Routine: (Specify: [illegible])	Estimated Concentration (ug/L or ug/kg)
1.	[illegible]	[illegible]	B/N	1109	(CIT) 952	5
2.	[illegible]	[illegible]	[illegible]	1046	(PURI) 945	4
3.	[illegible]	[illegible]	[illegible]	1955	(PIAP) 194	1
4.		[illegible]				
5.						
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FORM II (continued)

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
B3717

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Radian
Lab Sample ID No: 8409047-03
Sample Matrix: SOIL
Data Release Authorized By: H. Pettrone

Case No: 3191-2
QC Report No: 25
Contract No.: 68-01-6553
Date Sample Received: 9-6-84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9-17-84
DATE ANALYZED: 11-6-84
PERCENT MOISTURE: 1590
CONC./DILUTION FACTOR: 20.68GM/2ML

PP #	CAS #		ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6-trichlorophenol	10U
(22A)	59-50-7	p-chloro-m-cresol	10U
(24A)	95-57-8	2-chlorophenol	10U
(31A)	120-83-2	2,4-dichlorophenol	10U
(34A)	105-67-9	2,4-dimethylphenol	10U
(37A)	88-75-5	2-nitrophenol	10U
(38A)	100-02-7	4-nitrophenol	20U
(39A)	51-28-5	2,4-dinitrophenol	50U
(40A)	534-52-1	4,6-dinitro-2-methylphenol	50U
(64A)	87-86-5	pentachlorophenol	20U
(65A)	108-95-2	phenol	10U
	65-85-0	benzoic acid	10U
	95-48-7	2-methylphenol	100U
	108-39-4	4-methylphenol	5U
	95-95-4	2,4,5-trichlorophenol	5U
(1B)	83-32-9	acenaphthene	100U
(5B)	92-87-5	benzidine	400
(8B)	120-82-1	1,2,4-trichlorobenzene	40U
(9B)	118-74-1	hexachlorobenzene	10U
(10B)	67-72-1	hexachloroethane	10U
(13B)	111-44-4	bis(2-chloroethyl)ether	10U
(20B)	91-58-7	2-chloronaphthalene	10U
(25B)	95-50-1	1,2-dichlorobenzene	10U
(26B)	541-73-1	1,3-dichlorobenzene	10U
(27B)	106-46-7	1,4-dichlorobenzene	10U
(28B)	91-94-1	3,3'-dichlorobenzidine	20U
(32B)	121-14-2	2,4-dinitrotoluene	5U
(36B)	606-20-2	2,6-dinitrotoluene	20U
(37B)	122-66-7	1,2-diphenylhydrazine	20U
(39B)	206-44-0	fluoranthene	2,700
(40B)	7005-72-3	4-chlorophenyl phenyl ether	10U
(41B)	101-55-3	4-bromophenyl phenyl ether	10U
(42B)	39638-32-9	bis(2-chloroisopropyl) ether	20U
(43B)	111-91-1	bis(2-chloroethoxy) methane	20U

PP #	CAS #		ug/l or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene	10U
(53B)	77-47-4	hexachlorocyclopentadiene	10U
(54B)	78-59-1	isophorone	10U
(55B)	91-20-3	naphthalene	130
(56B)	98-95-3	nitrobenzene	10U
(61B)	62-75-9	N-nitrosodimethylamine	10U
(62B)	86-30-6	N-nitrosodiphenylamine	10U
(63B)	621-64-7	N-nitrosodipropylamine	10U
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	700
(67B)	85-68-7	benzyl butyl phthalate	10U
(68B)	84-74-2	di-n-butyl phthalate	10U
(69B)	117-84-0	di-n-octyl phthalate	10U
(70B)	84-66-2	diethyl phthalate	10U
(71B)	131-11-3	dimethyl phthalate	10U
(72B)	56-55-3	benzo(a)anthracene	970
(73B)	50-32-8	benzo(a)pyrene	930
(74B)	205-99-2	benzo(b)fluoranthene	20U
(75B)	207-08-9	benzo(k)fluoranthene	20U
(76B)	218-01-9	chrysene	930
(77B)	208-96-8	acenaphthylene	10U
(78B)	120-12-7	anthracene	280
(79B)	191-24-2	benzo(ghi)perylene	20U
(80B)	86-73-7	fluorene	88
(81B)	85-01-8	phenanthrene	1200
(82B)	53-70-3	dibenzo(a,h)anthracene	20U
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	560
(84B)	129-00-0	pyrene	2500
	62-53-3	aniline	5U
	100-51-6	benzyl alcohol	20U
	106-47-8	4-chloroaniline	50U
	132-64-9	dibenzofuran	83
	91-57-6	2-methylnaphthalene	20U
	88-74-4	2-nitroaniline	100U
	99-09-2	3-nitroaniline	100U
	100-01-6	4-nitroaniline	100U

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Sample Number: B3717

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Radian
Lab Sample ID No: E409047-03
Sample Matrix: Soil
Data Release Authorized By: R. Petterson

Case No: 3191-2
QC Report No: 25
Contract No.: 68-01-6853
Date Sample Received: 9-6-84

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: —
DATE ANALYZED: 9-13-84
PERCENT MOISTURE: 15%
CONC./DILUTION FACTOR: 1:1

PP #	CAS #		ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	1U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10U
(16V)	75-00-3	chloroethane	10U
(19V)	110-75-8	2-chloroethylvinyl ether	10U
(23V)	67-66-3	chloroform	5U
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	trans-1,2-dichloroethene	5U
(32V)	78-87-5	1,2-dichloropropane	10U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	5U
(38V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	27
(45V)	74-87-3	chloromethane	10U
(46V)	74-83-9	bromomethane	10U
(47V)	75-25-2	bromoform	10U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	5U
(50V)	75-71-8	dichlorodifluoromethane	5U
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	5U
(87V)	79-01-6	trichloroethene	5U
(88V)	75-01-4	vinyl chloride	10U
	67-64-1	acetone	5U
	78-93-3	2-butanone	5U
	75-15-0	carbondisulfide	1U
	519-78-6	2-hexanone	5U
	108-10-1	4-methyl-2-pentanone	5U
	100-42-5	styrene	5U
	108-05-4	vinyl acetate	5U
	1330-20-7	total xylenes	5U

PESTICIDES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9-17-84
DATE ANALYZED: 11-20-84
PERCENT MOISTURE: 15%
CONC./DILUTION FACTOR: 20.48:25

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	0.1U
(90P)	60-57-1	dieldrin	0.1U
(91P)	57-74-9	chlordane	1.0U
(92P)	50-29-3	4,4'-DDT	0.2U
(93P)	72-55-9	4,4'-DDE	0.1U
(94P)	72-54-8	4,4'-DDD	0.2U
(95P)	115-29-7	α-endosulfan	0.1U
(96P)	115-29-7	β-endosulfan	0.1U
(97P)	1031-07-8	endosulfan sulfate	0.2U
(98P)	72-20-8	endrin	0.1U
(99P)	7421-93-4	endrin aldehyde	0.2U
(100P)	76-44-8	heptachlor	0.1U
(101P)	1024-57-3	heptachlor epoxide	0.1U
(102P)	319-84-6	α-BHC	0.1U
(103P)	319-85-7	β-BHC	0.1U
(104P)	319-86-8	δ-BHC	0.1U
(105P)	58-89-9	γ-BHC (lindane)	0.1U
(106P)	53469-21-9	PCB-1242	1.0U
(107P)	11097-69-1	PCB-1254	2.0U
(108P)	11104-28-2	PCB-1221	2.0U
(109P)	11141-16-5	PCB-1232	2.0U
(110P)	12672-29-6	PCB-1248	2.0U
(111P)	11096-82-5	PCB-1260	4.0U
(112P)	12674-11-2	PCB-1016	1.0U
(113P)	8001-35-2	toxaphene	1.0U

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED:
PERCENT MOISTURE:
CONC./DILUTION FACTOR:

PP #	CAS #		ug/l or ug/kg (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	

SAMPLE NUMBER:
51, S, EPA

B3717

ORGANICS ANALYSIS DATA SHEET
(PAGE 4)

TENTATIVELY IDENTIFIED COMPOUNDS

A[illegible] U[illegible]BER	COMPOUND NAME	FRACTION	RT OR SCAN NUMBER	ESTIMATED CONCENTRATIO UG/L OR UG/K (x59)
1	~~ETHENE, TETRACHLORO-~~	~~ABN~~	~~299~~	~~100~~
2 629-11-8	1,6-HEXANEDIOL	ABN	353	3,100
3 [illegible]32-67-3	2-CYCLOHEXEN-1-OL	ABN	383	2,300
4 [illegible]06-42-3	BENZENE, 1,4-DIMETHYL-	ABN	392	5,000
5 17312-[illegible]-3	UNDECANE, 4-ETHYL-	ABN	1035	3,300
6 [illegible]6976-[illegible]-4	PENTANOICACID, 4,4-DIMETHYL-3-METHYLEN	ABN	1298	1,400
7 [illegible]014-[illegible]-1	HEXANE, 3-ETHYL-4-METHYL-	ABN	1356	2,300
8 [illegible]032-[illegible]-4	HEPTANE, 3,3-DIMETHYL-	ABN	1369	1,300
9 [illegible]33-34-6	11H-BENZO[A]FLUORENE	ABN	1481	9,700
0 [illegible]9757-51-5	3-BUTENE-1,2-DIOL, 1-(2-FURYL)-2,3-DIM	ABN	1495	11,000
1 [illegible]3351-2[illegible]-7	PYRENE, 1-METHYL-	ABN	1498	3,500
2 13794-47-3	3-PICOLINE, 5-(TERT-BUTYLTHIO)-	ABN	1573	6,700
3 [illegible]4345-34-5	2-BUTEN-1-ONE, 1-(1,4-DIHYDROXY-2,6,6-	ABN	1590	11,000
4 [illegible]92-13-2	HEXANE, 2,5-DIMETHYL-	ABN	1658	22,000
5 31455-[illegible]	2,4(1H,3H)-PYRIMIDINEDIONE, 6-IODO-5-M	ABN	1892	5,900

S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
B3718

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Radian
Lab Sample ID No: 84C9647-04
Sample Matrix: Soil
Data Release Authorized By: J. A. Petrocine

Case No: 3191
QC Report No: 25
Contract No.: 68-01-6553
Date Sample Received: 9-6-84

SEMIVOLATILE COMPOUNDS

All compounds detected including the alkyl phthalates excluded compound confirmed by mass spec

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9-17-84
DATE ANALYZED: 11-6-84
PERCENT MOISTURE: 18%
CONC./DILUTION FACTOR: 3.22gr/2ml

0.5 ml vol. was used due multi-phased by GPC.

PP #	CAS #		ug/l or ug/kg (circle one)
(2[illegible])	88-06-2	2,4,6-trichlorophenol	10U
(22A)	59-50-7	p-chloro-m-cresol	10U
(24A)	95-57-8	2-chlorophenol	10U
(3[illegible])	120-83-2	2,4-dichlorophenol	10U
(34A)	105-67-9	2,4-dimethylphenol	10U
(57A)	88-75-5	2-nitrophenol	20U
(5[illegible])	100-02-7	4-nitrophenol	50U
(59A)	51-28-5	2,4-dinitrophenol	50U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	20U
(6[illegible])	87-86-5	pentachlorophenol	10U
(65A)	108-95-2	phenol	10U
	65-85-0	benzoic acid	47,000
	95-48-7	2-methylphenol	5U
	108-39-4	4-methylphenol	5U
	95-95-4	2,4,5-trichlorophenol	100U
[illegible]	83-32-9	acenaphthene	1400
(5B)	92-87-5	benzidine	40U
([illegible])	120-82-1	1,2,4-trichlorobenzene	10U
[illegible])	118-74-1	hexachlorobenzene	10U
(12B)	67-72-1	hexachloroethane	10U
([illegible]B)	111-44-4	bis(2-chloroethyl)ether	10U
[illegible]B)	91-58-7	2-chloronaphthalene	10U
(25B)	95-50-1	1,2-dichlorobenzene	10U
([illegible]B)	541-73-1	1,3-dichlorobenzene	10U
[illegible]B)	106-46-7	1,4-dichlorobenzene	20U
(28B)	91-94-1	3,3'-dichlorobenzidine	5U
([illegible]B)	121-14-2	2,4-dinitrotoluene	20U
[illegible]B)	606-20-2	2,6-dinitrotoluene	20U
(37B)	122-66-7	1,2-diphenylhydrazine	20U
([illegible]B)	206-44-0	fluoranthene	35,000
[illegible]B)	7005-72-3	4-chlorophenyl phenyl ether	10U
(41B)	101-55-3	4-bromophenyl phenyl ether	10U
([illegible]B)	39638-32-9	bis (2-chloroisopropyl) ether	20U
[illegible]B)	111-91-1	bis (2-chloroethoxy) methane	20U

PP #	CAS #		ug/l or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene	10U
(53B)	77-47-4	hexachlorocyclopentadiene	10U
(54B)	78-59-1	isophorone	10U
(55B)	91-20-3	naphthalene	1200
(56B)	98-95-3	nitrobenzene	10U
(61B)	62-75-9	N-nitrosodimethylamine	10U
(62B)	86-30-6	N-nitrosodiphenylamine	10U
(63B)	621-64-7	N-nitrosodipropylamine	10U
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	5000
(67B)	85-68-7	benzyl butyl phthalate	4400
(68B)	84-74-2	di-n-butyl phthalate	10U
(69B)	117-84-0	di-n-octyl phthalate	1900
(70B)	84-66-2	diethyl phthalate	10U
(71B)	131-11-3	dimethyl phthalate	10U
(72B)	56-55-3	benzo(a)anthracene	10U
(73B)	50-32-8	benzo(a)pyrene	6400
(74B)	205-99-2	benzo(b)fluoranthene	5700
(75B)	207-08-9	benzo(k)fluoranthene	20U
(76B)	218-01-9	chrysene	20U
(77B)	208-96-8	acenaphthylene	10U
(78B)	120-12-7	anthracene	3300
(79B)	191-24-2	benzo(ghi)perylene	20U
(80B)	86-73-7	fluorene	1500
(81B)	85-01-8	phenanthrene	13,000
(82B)	53-70-3	dibenzo(a,h)anthracene	20U
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	20U
(84B)	129-00-0	pyrene	24,000
	62-53-3	aniline	5U
	100-51-6	benzyl alcohol	20U
	106-47-8	4-chloroaniline	50U
	132-64-9	dibenzofuran	1200
	91-57-6	2-methylnaphthalene	470
	88-74-4	2-nitroaniline	100U
	99-09-2	3-nitroaniline	100U
	100-01-6	4-nitroaniline	100U

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CLP Sample Management Office

Sample Number 67
B3718

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Radian
Lab Sample ID No: E409047-04
Sample Matrix: Soil
Data Release Authorized By: [illegible]

Case No: 3191-2
QC Report No: 25
Contract No.: 68-01-6853
Date Sample Received: 9-6-84

VOLATILES

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: —
DATE ANALYZED: 9-14-84
PERCENT MOISTURE: 18%
CONC./DILUTION FACTOR: 1:1

PP #	CAS #		ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	1U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10U
(16V)	75-00-3	chloroethane	10U
(19V)	110-75-8	2-chloroethylvinyl ether	10U
(23V)	67-66-3	chloroform	5U
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	trans-1,2-dichloroethene	5U
(32V)	78-87-5	1,2-dichloropropane	10U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	5U
(38V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	8.8
(45V)	74-87-3	chloromethane	10U
(46V)	74-83-9	bromomethane	10U
(47V)	75-25-2	bromoform	10U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	5U
(50V)	75-71-8	dichlorodifluoromethane	5U
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	5U
(87V)	79-01-6	trichloroethene	5U
(88V)	75-01-4	vinyl chloride	10U
	67-64-1	acetone	5U
	78-93-3	2-butanone	5U
	75-15-0	carbondisulfide	1U
	519-78-6	2-hexanone	5U
	108-10-1	4-methyl-2-pentanone	5U
	100-42-5	styrene	5U
	108-05-4	vinyl acetate	5U
	1330-20-7	total xylenes	5U

PESTICIDES

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9.17.84
DATE ANALYZED: 11.21.84
PERCENT MOISTURE: 18%
CONC./DILUTION FACTOR: 3.28:50

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	1.0U
(90P)	60-57-1	dieldrin	1.0U
(91P)	57-74-9	chlordane	10.0U
(92P)	50-29-3	4,4'-DDT	2.0U
(93P)	72-55-9	4,4'-DDE	1.0U
(94P)	72-54-8	4,4'-DDD	2.0U
(95P)	115-29-7	α-endosulfan	1.0U
(96P)	115-29-7	β-endosulfan	1.0U
(97P)	1031-07-8	endosulfan sulfate	2.0U
(98P)	72-20-8	endrin	1.0U
(99P)	7421-93-4	endrin aldehyde	2.0U
(100P)	76-44-8	heptachlor	1.0U
(101P)	1024-57-3	heptachlor epoxide	1.0U
(102P)	319-84-6	α-BHC	1.0U
(103P)	319-85-7	β-BHC	1.0U
(104P)	319-86-8	δ-BHC	1.0U
(105P)	58-89-9	γ-BHC (lindane)	1.0U
(106P)	53469-21-9	PCB-1242	10.0U
(107P)	11097-69-1	PCB-1254	20.0U
(108P)	11104-28-2	PCB-1221	20.0U
(109P)	11141-16-5	PCB-1232	20.0U
(110P)	12672-29-6	PCB-1248	20.0U
(111P)	11096-82-5	PCB-1260	40.0U
(112P)	12674-11-2	PCB-1016	10.0U
(113P)	8001-35-2	toxaphene	10.0U

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED:
PERCENT MOISTURE:
CONC./DILUTION FACTOR:

PP #	CAS #		ug/l or ug/k (circle or
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	

SAMPLE NUMBER: 68
B 3718

ORGANICS ANALYSIS DATA SHEET
(PAGE 4)

TENTATIVELY IDENTIFIED COMPOUNDS

.378

CAS NUMBER	COMPOUND NAME	FRACTION	RT OR SCAN NUMBER	ESTIMATED CONCENTRATION UG/L OR UG/K
1 57-10-3	HEXADECANOICACID	ABN	1295	1,700,000
2 2467-03-0	PHENOL, 2-[(4-HYDROXYPHENYL)METHYL]-	ABN	1336	440,000
3 61504-54-2	1, 4-HEXADIENE, 2, 3, 4, 5-TETRAMETHYL-	ABN	1347	72,000
4 30571-71-2	DECANE, 3-BROMO-	ABN	1361	250,000
5 620-92-8	PHENOL, 4, 4'-METHYLENEBIS-	ABN	1375	670,000
6 2971-46-0	17-PENTATRIACONTENE	ABN	1419	2,600,000
7 54004-44-0	1-PENTANOL, 4-METHYL-2-PROPYL-	ABN	1419	2,100,000
8 13151-92-3	TRIDECANE7-CYCLOHEXYL-, 7-CYCLOHEXYL-	ABN	1448	420,000
9 55162-64-3	TETRACONTANE, 3, 5, 24-TRIMETHYL-	ABN	1470	410,000
10 13264-30-3	2-PHENANTHRYLAMINE, 9, 10-DIHYDRO-3-NIT	ABN	1477	160,000
11 13151-96-5	DODECANE6-CYCLOHEXYL-, 6-CYCLOHEXYL-	ABN	1488	580,000
12 55000-30-1	CYCLOHEXANOL, DODECYL-	ABN	1501	1,100,000
13 30571-71-2	DECANE, 3-BROMO-	ABN	1556	290,000
14 13151-90-4	UNDECANE5-CYCLOHEXYL-, 5-CYCLOHEXYL-	ABN	1575	550,000
15 54410-98-9	1-NONENE, 4, 6, 8-TRIMETHYL-	ABN	1598	960,000
16 56711-77-5	4-HEXENOICACID, 3-METHYL-2, 6-DIOXO-	ABN	1611	530,000
17 31104-61-7	CYCLOHEXANOL, 3-METHYL-2-(1-METHYLETHY	ABN	1648	1,200,000
18 13151-91-0	UNDECANE6-CYCLOHEXYL-, 6-CYCLOHEXYL-	ABN	1661	660,000
19 55162-38-4	NONANE, 2-BROMO-5-ETHYL-	ABN	1675	540,000
20 61504-54-2	1, 4-HEXADIENE, 2, 3, 4, 5-TETRAMETHYL-	ABN	1719	220,000

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
B3719

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Radian
Lab Sample ID No: 8409047-05
Sample Matrix: SOIL
Data Release Authorized By: [illegible]

Case No: 3191-2
QC Report No: 25
Contract No.: 68-01-6553
Date Sample Received: 9-6-84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9-17-84
DATE ANALYZED: 11-6-84
PERCENT MOISTURE: 12%
CONC./DILUTION FACTOR: 3.83gm/2ml

PP #	CAS #		ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6- trichlorophenol	10U
(22A)	59-50-7	p-chloro-m-cresol	10U
(24A)	95-57-8	2- chlorophenol	10U
(31A)	120-83-2	2,4-dichlorophenol	10U
(34A)	105-67-9	2,4-dimethylphenol	10U
(57A)	88-75-5	2- nitrophenol	20U
(58A)	100-02-7	4-nitrophenol	50U
(59A)	51-28-5	2,4-dinitrophenol	50U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	20U
(64A)	87-86-5	pentachlorophenol	10U
(65A)	108-95-2	phenol	10U
	65-85-0	benzoic acid	100U
	95-48-7	2-methylphenol	5U
	108-39-4	4-methylphenol	5U
	95-95-4	2,4,5-trichlorophenol	100U
(1B)	83-32-9	acenaphthene	10U
(5B)	92-87-5	benzidine	40U
(8B)	120-82-1	1,2,4-trichlorobenzene	10U
(9B)	118-74-1	hexachlorobenzene	10U
(12B)	67-72-1	hexachloroethane	10U
(13B)	111-44-4	bis(2-chloroethyl)ether	10U
(20B)	91-58-7	2-chloronaphthalene	10U
(25B)	95-50-1	1,2-dichlorobenzene	10U
(26B)	541-73-1	1,3-dichlorobenzene	10U
(27B)	106-46-7	1,4-dichlorobenzene	20U
(28B)	91-94-1	3,3'-dichlorobenzidine	5U
(35B)	121-14-2	2,4-dinitrotoluene	20U
(36B)	606-20-2	2,6-dinitrotoluene	20U
(37B)	122-66-7	1,2-diphenylhydrazine	20U
(39B)	206-44-0	fluoranthene	10U
(40B)	7005-72-3	4-chlorophenyl phenyl ether	10U
(41B)	101-55-3	4-bromophenyl phenyl ether	10U
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	20U
(43B)	111-91-1	bis (2-chloroethoxy) methane	20U

PP #	CAS #		ug/l or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene	10U
(53B)	77-47-4	hexachlorocyclopentadiene	10U
(54B)	78-59-1	isophorone	10U
(55B)	91-20-3	naphthalene	10U
(56B)	98-95-3	nitrobenzene	10U
(61B)	62-75-9	N-nitrosodimethylamine	10U
(62B)	86-30-6	N-nitrosodiphenylamine	10U
(63B)	621-64-7	N-nitrosodipropylamine	10U
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	410
(67B)	85-68-7	benzyl butyl phthalate	430
(68B)	84-74-2	di-n-butyl phthalate	140
(69B)	117-84-0	di-n-octyl phthalate	10U
(70B)	84-66-2	diethyl phthalate	10U
(71B)	131-11-3	dimethyl phthalate	10U
(72B)	56-55-3	benzo(a)anthracene	10U
(73B)	50-32-8	benzo(a)pyrene	20U
(74B)	205-99-2	benzo(b)fluoranthene	20U
(75B)	207-08-9	benzo(k)fluoranthene	20U
(76B)	218-01-9	chrysene	20U
(77B)	208-96-8	acenaphthylene	10U
(78B)	120-12-7	anthracene	10U
(79B)	191-24-2	benzo(ghi)perylene	20U
(80B)	86-73-7	fluorene	10U
(81B)	85-01-8	phenanthrene	10U
(82B)	53-70-3	dibenzo(a,h)anthracene	20U
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	20U
(84B)	129-00-0	pyrene	10U
	62-53-3	aniline	5U
	100-51-6	benzyl alcohol	20U
	106-47-8	4-chloroaniline	50U
	132-64-9	dibenzofuran	10U
	91-57-6	2-methylnaphthalene	20U
	88-74-4	2-nitroaniline	100U
	99-09-2	3-nitroaniline	100U
	100-01-6	4-nitroaniline	100U

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number: B3719

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Radian
Lab Sample ID No: E409047-05
Sample Matrix: Soil
Data Release Authorized By: [illegible]

Case No: 3191-2
QC Report No: 25
Contract No.: 68-01-6853
Date Sample Received: 9-6-84

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: —
DATE ANALYZED: 9-14-84
PERCENT MOISTURE: 12%
CONC./DILUTION FACTOR: 1:1

PP #	CAS #		ug/l or (ug/kg) (circle one)
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	1U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10U
(16V)	75-00-3	chloroethane	10U
(19V)	110-75-8	2-chloroethylvinyl ether	10U
(23V)	67-66-3	chloroform	5U
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	trans-1,2-dichloroethene	5U
(32V)	78-87-5	1,2-dichloropropane	10U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	5U
(38V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	29
(45V)	74-87-3	chloromethane	10U
(46V)	74-83-9	bromomethane	10U
(47V)	75-25-2	bromoform	10U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	5U
(50V)	75-71-8	dichlorodifluoromethane	5U
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	5U
(87V)	79-01-6	trichloroethene	5U
(88V)	75-01-4	vinyl chloride	10U
	67-64-1	acetone	5U
	78-93-3	2-butanone	5U
	75-15-0	carbondisulfide	1U
	519-78-6	2-hexanone	5U
	108-10-1	4-methyl-2-pentanone	5U
	100-42-5	styrene	5U
	108-05-4	vinyl acetate	5U
	1330-20-7	total xylenes	5U

PESTICIDES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9-17-84
DATE ANALYZED: 11-20-84
PERCENT MOISTURE: 12%
CONC./DILUTION FACTOR: 3.42:25

Old pesticide data [illegible] time after extraction [illegible]

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	1.0U
(90P)	60-57-1	dieldrin	1.0U
(91P)	57-74-9	chlordane	10.0U
(92P)	50-29-3	4,4'-DDT	2.0U
(93P)	72-55-9	4,4'-DDE	1.0U
(94P)	72-54-8	4,4'-DDD	2.0U
(95P)	115-29-7	α-endosulfan	1.0U
(96P)	115-29-7	β-endosulfan	1.0U
(97P)	1031-07-8	endosulfan sulfate	2.0U
(98P)	72-20-8	endrin	1.0U
(99P)	7421-93-4	endrin aldehyde	2.0U
(100P)	76-44-8	heptachlor	210.
(101P)	1024-57-3	heptachlor epoxide	1.0U
(102P)	319-84-6	α-BHC	1.0U
(103P)	319-85-7	β-BHC	1.0U
(104P)	319-86-8	δ-BHC	1.0U
(105P)	58-89-9	γ-BHC (lindane)	4.3
(106P)	53469-21-9	PCB-1242	10.0U
(107P)	11097-69-1	PCB-1254	20.0U
(108P)	11104-28-2	PCB-1221	20.0U
(109P)	11141-16-5	PCB-1232	20.0U
(110P)	12672-29-6	PCB-1248	942
(111P)	11096-82-5	PCB-1260	40.0U
(112P)	12674-11-2	PCB-1016	10.0U
(113P)	8001-35-2	toxaphene	10.0U

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED:
PERCENT MOISTURE:
CONC./DILUTION FACTOR:

PP #	CAS #		ug/l or ug/kg (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	

SAMPLE NUMBER:
3719

ORGANICS ANALYSIS DATA SHEET
(PAGE 4)

TENTATIVELY IDENTIFIED COMPOUNDS

X 2.93

CAS NUMBER	COMPOUND NAME	FRACTION	RT OR SCAN NUMBER	ESTIMATED CONCENTRATION UG/L OR UG/KG
1 630-02-4	OCTACOSANE	ABN	1180	340,000
2 17301-30-3	UNDECANE, 3, 8-DIMETHYL-	ABN	1187	350,000
31295-56-4	DODECANE, 2, 6, 11-TRIMETHYL-	ABN	1247	480,000
4 [illegible]	CYCLOHEPTANE, METHOXY-	ABN	1250	190,000
5 [illegible]	1, 6, 10-DODECATRIENE, 7, 11-DIMETHYL-3-M	ABN	1275	201,000
[illegible]	CYCLOPENTANEETHANOL, 2-(HYDROXYMETHYL)	ABN	1282	800,000
[illegible]	4-DECYNE	ABN	1298	120,000
8 [illegible]	THIOPHENE, 2-DECYL-	ABN	1360	260,000
[illegible]	OCTADECANE, 2, 2, 4, 15, 17, 17-HEXAMETHYL-	ABN	0	0
10 [illegible]	PYRIMIDO[5, 4-E]-1, 2, 4-TRIAZIN-7-AMINE	ABN	1398	180,000
11 [illegible]	1H-IMIDAZOLE-4-ETHANAMINE, N, 5-DIMETHYL-	ABN	1412	330,000
12 [illegible]	CYCLOHEPTANE, METHOXY-	ABN	1423	190,000
13 [illegible]	BICYCLO[3. 1. 1]HEPTAN-3-ONE, 2, 6, 6-TRIM	ABN	1443	1,020,000
14 [illegible]	3-BUTEN-2-ONE, 4-(DIMETHYLAMINO)-3-(ME	ABN	1445	1,900,000
15 [illegible]	ACETICACID, TRIFLUORO-, 1, 2-ETHANEDIYLE	ABN	1458	960,000
16 [illegible]	DECANE, 3, 8-DIMETHYL-	ABN	1468	2,900,000
17 [illegible]	4, 8-DIOXATRICYCLO[5. 1. 0. 03, 5]OCTANE, 1	ABN	1502	1,030,000
18 [illegible]	1-HEXANOL, 2-ETHYL-2-PROPYL-	ABN	1511	3,300,000
19 [illegible]	UNDECANE, 3, 8-DIMETHYL-	ABN	1553	860,000
[illegible]	1-NONENE, 4, 6, 8-TRIMETHYL-	ABN	1596	1,500,000
—	Anthracene	V	565	3
[illegible]	Bicyclo[4.1.0] Heptane, 3,7,7 - trimethyl-	V	534	11
[illegible]	Hexane, 2,2,5,5 - tetramethyl	V	631	3

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Sample Number
B3720

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Radian
Lab Sample ID No: 840947-06
Sample Matrix: Soil
Data Release Authorized By: Z A Petrowski

Case No: 3191
QC Report No: 25
Contract No.: 68-01-6853
Date Sample Received: 9-6-84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9-17-84
DATE ANALYZED: 11-6-84
PERCENT MOISTURE: 57%
CONC./DILUTION FACTOR: 40g/1ml

PP #	CAS #		ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6-trichlorophenol	10U
(22A)	59-50-7	p-chloro-m-cresol	10U
(24A)	95-57-8	2-chlorophenol	10U
(31A)	120-83-2	2,4-dichlorophenol	10U
(34A)	105-67-9	2,4-dimethylphenol	10U
(57A)	88-75-5	2-nitrophenol	10U
(58A)	100-02-7	4-nitrophenol	20U
(59A)	51-28-5	2,4-dinitrophenol	50U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	50U
(64A)	87-86-5	pentachlorophenol	20U
(65A)	108-95-2	phenol	10U
	65-85-0	benzoic acid	10U
	95-48-7	2-methylphenol	100U
	108-39-4	4-methylphenol	5U
	95-95-4	2,4,5-trichlorophenol	5U
(11B)	83-32-9	acenaphthene	10U
(58)	92-87-5	benzidine	10U
(8)	120-82-1	1,2,4-trichlorobenzene	40U
(9B)	118-74-1	hexachlorobenzene	10U
(12B)	67-72-1	hexachloroethane	10U
(B)	111-44-4	bis(2-chloroethyl)ether	10U
(20B)	91-58-7	2-chloronaphthalene	10U
(B)	95-50-1	1,2-dichlorobenzene	10U
(B)	541-73-1	1,3-dichlorobenzene	10U
(7B)	106-46-7	1,4-dichlorobenzene	10U
(B)	91-94-1	3,3'-dichlorobenzidine	20U
(B)	121-14-2	2,4-dinitrotoluene	5U
(B)	606-20-2	2,6-dinitrotoluene	20U
(B)	122-66-7	1,2-diphenylhydrazine	20U
(B)	206-44-0	fluoranthene	20U
(B)	7005-72-3	4-chlorophenyl phenyl ether	10U
(B)	101-55-3	4-bromophenyl phenyl ether	10U
(B)	39638-32-9	bis (2-chloroisopropyl) ether	20U
(B)	111-91-1	bis (2-chloroethoxy) methane	20U

PP #	CAS #		ug/l or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene	10U
(53B)	77-47-4	hexachlorocyclopentadiene	10U
(54B)	78-59-1	isophorone	10U
(55B)	91-20-3	naphthalene	10U
(56B)	98-95-3	nitrobenzene	10U
(61B)	62-75-9	N-nitrosodimethylamine	10U
(62B)	86-30-6	N-nitrosodiphenylamine	970
(63B)	621-64-7	N-nitrosodipropylamine	10U
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	670
(67B)	85-68-7	benzyl butyl phthalate	10U
(68B)	84-74-2	di-n-butyl phthalate	10U
(69B)	117-84-0	di-n-octyl phthalate	10U
(70B)	84-66-2	diethyl phthalate	10U
(71B)	131-11-3	dimethyl phthalate	10U
(72B)	56-55-3	benzo(a)anthracene	10U
(73B)	50-32-8	benzo(a)pyrene	10U
(74B)	205-99-2	benzo(b)fluoranthene	20U
(75B)	207-08-9	benzo(k)fluoranthene	20U
(76B)	218-01-9	chrysene	20U
(77B)	208-96-8	acenaphthylene	20U
(78B)	120-12-7	anthracene	10U
(79B)	191-24-2	benzo(ghi)perylene	10U
(80B)	86-73-7	fluorene	20U
(81B)	85-01-8	phenanthrene	10U
(82B)	53-70-3	dibenzo(a,h)anthracene	10U
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	20U
(84B)	129-00-0	pyrene	270
	62-53-3	aniline	5U
	100-51-6	benzyl alcohol	20U
	106-47-8	4-chloroaniline	50U
	132-64-9	dibenzofuran	10U
	91-57-6	2-methylnaphthalene	20U
	88-74-4	2-nitroaniline	100U
	99-09-2	3-nitroaniline	100U
	100-01-6	4-nitroaniline	100U

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Sample Number
B3720

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Radian
Lab Sample ID No: 8409047-06
Sample Matrix: Soil
Data Release Authorized By: LaPetrow

Case No: 3191-2
QC Report No: 25
Contract No.: 68-01-6853
Date Sample Received: 9-6-84

VOLATILES

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: —
DATE ANALYZED: 9-14-84
PERCENT MOISTURE: 5%
CONC./DILUTION FACTOR: 1:1

PP #	CAS #		ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	1U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10U
(16V)	75-00-3	chloroethane	10U
(19V)	110-75-8	2-chloroethylvinyl ether	10U
(23V)	67-66-3	chloroform	5U
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	trans-1,2-dichloroethene	5U
(32V)	78-87-5	1,2-dichloropropane	10U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	5U
(38V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	32
(45V)	74-87-3	chloromethane	10U
(46V)	74-83-9	bromomethane	10U
(47V)	75-25-2	bromoform	10U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	5U
(50V)	75-71-8	dichlorodifluoromethane	5U
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	5U
(87V)	79-01-6	trichloroethene	5U
(88V)	75-01-4	vinyl chloride	10U
	67-64-1	acetone	5U
	78-93-3	2-butanone	5U
	75-15-0	carbondisulfide	1U
	519-78-6	2-hexanone	5U
	108-10-1	4-methyl-2-pentanone	5U
	100-42-5	styrene	5U
	108-05-4	vinyl acetate	5U
	1330-20-7	total xylenes	5U

PESTICIDES

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9-17-84
DATE ANALYZED: 11-21-84
PERCENT MOISTURE: 5%
CONC./DILUTION FACTOR: 40.81:500

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	0.1U
(90P)	60-57-1	dieldrin	0.1U
(91P)	57-74-9	chlordane	1.0U
(92P)	50-29-3	4,4'-DDT	0.2U
(93P)	72-55-9	4,4'-DDE	0.1U
(94P)	72-54-8	4,4'-DDD	0.2U
(95P)	115-29-7	α-endosulfan	0.1U
(96P)	115-29-7	β-endosulfan	0.1U
(97P)	1031-07-8	endosulfan sulfate	0.2U
(98P)	72-20-8	endrin	0.1U
(99P)	7421-93-4	endrin aldehyde	0.2U
(100P)	76-44-8	heptachlor	0.1U
(101P)	1024-57-3	heptachlor epoxide	0.1U
(102P)	319-84-6	α-BHC	0.1U
(103P)	319-85-7	β-BHC	75
(104P)	319-86-8	δ-BHC	0.1U
(105P)	58-89-9	γ-BHC (lindane)	10
(106P)	53469-21-9	PCB-1242	1.0U
(107P)	11097-69-1	PCB-1254	24000
(108P)	11104-28-2	PCB-1221	2.0U
(109P)	11141-16-5	PCB-1232	2.0U
(110P)	12672-29-6	PCB-1248	2.0U
(111P)	11096-82-5	PCB-1260	4.0U
(112P)	12674-11-2	PCB-1016	1.0U
(113P)	8001-35-2	toxaphene	1.0U

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED:
PERCENT MOISTURE:
CONC./DILUTION FACTOR:

PP #	CAS #		ug/l or ug/kg (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	

SAMPLE NUMBER:
B 3720

ORGANICS ANALYSIS DATA SHEET
(PAGE 4)

TENTATIVELY IDENTIFIED COMPOUNDS

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A[illegible] U[illegible]BER	COMPOUND NAME	FRACTION	RT OR SCAN NUMBER	ESTIMATED CONCENTRATIO. UG/L OR UG/K
1 124-18-5	DECANE	ABN	496	10,000
2 1120-21-4	UNDECANE	ABN	599	6,300
3 [illegible]6-51-4	2,5-CYCLOHEXADIENE-1,4-DIONE	ABN	698	3,400
4 [illegible]1464-31-5	1,1'-BIPHENYL,2,2',3,5'-TETRACHLORO-	ABN	1301	4,300
5 41464-39-5	1,1'-BIPHENYL,2,2',3,5'-TETRACHLORO-	ABN	1330	2,800
6 [illegible]55-40-3	PROPANE,1,1'-SULFINYLBIS[2-METHYL-	ABN	0	——
7 [illegible]2505-11-1	1,1'-BIPHENYL,2,3',4',5-TETRACHLORO-	ABN	1379	5,100
8 37680-73-2	1,1'-BIPHENYL,2,2',4,5,5'-PENTACHLORO	ABN	1386	5,000
9 [illegible]44-43-9	1,1'-BIPHENYL,2,2',3,3'-TETRACHLORO-	ABN	1408	1,200
0 [illegible]680-73-2	1,1'-BIPHENYL,2,2',4,5,5'-PENTACHLORO	ABN	1420	9,600
1 37680-73-2	1,1'-BIPHENYL,2,2',4,5,5'-PENTACHLORO	ABN	1442	9,900
2 39380-02-9	1,1'-BIPHENYL,2,2',3,4,5'-PENTACHLORO	ABN	1448	15,000
3 [illegible]429-29-2	1,1'-BIPHENYL,PENTACHLORO-	ABN	1461	46,000
4 [illegible]6272-54-4	ACETICACID,TRIFLUORO-,[2R-[2R*(4R*,8R	ABN	1476	2,500
5 25429-29-2	1,1'-BIPHENYL,PENTACHLORO-	ABN	1492	46,000
6 [illegible]965-85-4	1,5-NAPHTHYRIDIN-2-AMINE	ABN	0	——
7 [illegible]52660-63-5	1,1'-BIPHENYL,2,2',3,5,5',6-HEXACHLOR	ABN	1518	14,000
8 25429-29-2	1,1'-BIPHENYL,PENTACHLORO-	ABN	1527	35,000
9 [illegible]6601-64-9	1,1'-BIPHENYL,HEXACHLORO-	ABN	1554	37,000
[illegible]15-85-5	PHOSPHORICACID,OCTYLDIPHENYLESTER	ABN	1573	21,000

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Sample Number
B3721

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Radian
Lab Sample ID No: 8409047-07
Sample Matrix: SOIL
Data Release Authorized By: H. Petkovsek

Case No: 3191-2
QC Report No: 25
Contract No.: 68-01-6553
Date Sample Received: 9-6-84

All Semivolatile Data rejected. Holding time exceeded. Contract requirement. E.G.

SEMIVOLATILE COMPOUNDS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9-17-84
DATE ANALYZED: 11-6-84
PERCENT MOISTURE: 100%
CONC./DILUTION FACTOR: 50.0 Gm/ml

U values must be multiplied by 20

PP #	CAS #		ug/l or ug/kg (circle one)
(1A)	88-06-2	2,4,6- trichlorophenol	10U
(22A)	59-50-7	p-chloro-m-cresol	10U
(4A)	95-57-8	2- chlorophenol	10U
(1A)	120-83-2	2,4-dichlorophenol	10U
(34A)	105-67-9	2,4-dimethylphenol	10U
(7A)	88-75-5	2- nitrophenol	10U
(3A)	100-02-7	4-nitrophenol	20U
(59A)	51-28-5	2,4-dinitrophenol	50U
(0A)	534-52-1	4,6-dinitro-2-methylphenol	50U
(4A)	87-86-5	pentachlorophenol	20U
(65A)	108-95-2	phenol	10U
	65-85-0	benzoic acid	10U
	95-48-7	2-methylphenol	100U
	108-39-4	4-methylphenol	5U
	95-95-4	2,4,5-trichlorophenol	5U
(B)	83-32-9	acenaphthene	100U
(5B)	92-87-5	benzidine	10U
B)	120-82-1	1,2,4-trichlorobenzene	40U
B)	118-74-1	hexachlorobenzene	10U
(12B)	67-72-1	hexachloroethane	10U
B)	111-44-4	bis(2-chloroethyl)ether	10U
20B)	91-58-7	2-chloronaphthalene	10U
(25B)	95-50-1	1,2-dichlorobenzene	10U
B)	541-73-1	1,3-dichlorobenzene	10U
27B)	106-46-7	1,4-dichlorobenzene	10U
(28B)	91-94-1	3,3'-dichlorobenzidine	20U
B)	121-14-2	2,4-dinitrotoluene	5U
6B)	606-20-2	2,6-dinitrotoluene	20U
(B)	122-66-7	1,2-diphenylhydrazine	20U
B)	206-44-0	fluoranthene	20U
0B)	7005-72-3	4-chlorophenyl phenyl ether	10U
(B)	101-55-3	4-bromophenyl phenyl ether	10U
B)	39638-32-9	bis (2-chloroisopropyl) ether	20U
B)	111-91-1	bis (2-chloroethoxy) methane	20U

PP #	CAS #		ug/l or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene	10U
(53B)	77-47-4	hexachlorocyclopentadiene	10U
(54B)	78-59-1	isophorone	10U
(55B)	91-20-3	naphthalene	10U
(56B)	98-95-3	nitrobenzene	10U
(61B)	62-75-9	N-nitrosodimethylamine	10U
(62B)	86-30-6	N-nitrosodiphenylamine	58
(63B)	621-64-7	N-nitrosodipropylamine	10U
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	58
(67B)	85-68-7	benzyl butyl phthalate	10U
(68B)	84-74-2	di-n-butyl phthalate	10U
(69B)	117-84-0	di-n-octyl phthalate	57
(70B)	84-66-2	diethyl phthalate	10U
(71B)	131-11-3	dimethyl phthalate	10U
(72B)	56-55-3	benzo(a)anthracene	10U
(73B)	50-32-8	benzo(a)pyrene	10U
(74B)	205-99-2	benzo(b)fluoranthene	20U
(75B)	207-08-9	benzo(k)fluoranthene	20U
(76B)	218-01-9	chrysene	20U
(77B)	208-96-8	acenaphthylene	20U
(78B)	120-12-7	anthracene	10U
(79B)	191-24-2	benzo(ghi)perylene	10U
(80B)	86-73-7	fluorene	20U
(81B)	85-01-8	phenanthrene	10U
(82B)	53-70-3	dibenzo(a,h)anthracene	10U
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	20U
(84B)	129-00-0	pyrene	20U
	62-53-3	aniline	10U
	100-51-6	benzyl alcohol	5U
	106-47-8	4-chloroaniline	20U
	132-64-9	dibenzofuran	50U
	91-57-6	2-methylnaphthalene	10U
	88-74-4	2-nitroaniline	20U
	99-09-2	3-nitroaniline	100U
	100-01-6	4-nitroaniline	100U

P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
B3721BLK

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Radian
Lab Sample ID No: E409047-07
Sample Matrix: WATER
Data Release Authorized By: LaPetkowski

Case No: 3191-2
QC Report No: 25
Contract No.: 68-01-6853
Date Sample Received: 9-6-84

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: —
DATE ANALYZED: 9-14-84
PERCENT MOISTURE: 100%
CONC./DILUTION FACTOR: 1:1

PP #	CAS #		ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	1U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10U
(16V)	75-00-3	chloroethane	10U
(19V)	110-75-8	2-chloroethylvinyl ether	10U
(23V)	67-66-3	chloroform	12
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	trans-1,2-dichloroethene	5U
(32V)	78-87-5	1,2-dichloropropane	10U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	5U
(34V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	75
(45V)	74-87-3	chloromethane	10U
(46V)	74-83-9	bromomethane	10U
(47V)	75-25-2	bromoform	10U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	5U
(50V)	75-71-8	dichlorodifluoromethane	5U
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	5U
(87V)	79-01-6	trichloroethene	5U
(88V)	75-01-4	vinyl chloride	10U
	67-64-1	acetone	5U
	78-93-3	2-butanone	5U
	75-15-0	carbondisulfide	1U
	519-78-6	2-hexanone	5U
	108-10-1	4-methyl-2-pentanone	5U
	100-42-5	styrene	5U
	108-05-4	vinyl acetate	5U
	1330-20-7	total xylenes	5U

PESTICIDES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: ?
DATE ANALYZED: 11-20-84
PERCENT MOISTURE: 100%
CONC./DILUTION FACTOR: 53.39:5

PP #	CAS #		ug/l or ug/kg (circle on
(89P)	309-00-2	aldrin	0.1U
(90P)	60-57-1	dieldrin	0.1U
(91P)	57-74-9	chlordane	1.0U
(92P)	50-29-3	4,4'-DDT	0.2U
(93P)	72-55-9	4,4'-DDE	0.1U
(94P)	72-54-8	4,4'-DDD	0.2U
(95P)	115-29-7	α-endosulfan	0.1U
(96P)	115-29-7	β-endosulfan	0.1U
(97P)	1031-07-8	endosulfan sulfate	0.2U
(98P)	72-20-8	endrin	0.1U
(99P)	7421-93-4	endrin aldehyde	0.2U
(100P)	76-44-8	heptachlor	0.1U
(101P)	1024-57-3	heptachlor epoxide	0.1U
(102P)	319-84-6	α-BHC	0.1U
(103P)	319-85-7	β-BHC	0.1U
(104P)	319-86-8	δ-BHC	0.1U
(105P)	58-89-9	γ-BHC (lindane)	0.1U
(106P)	53469-21-9	PCB-1242	1.0U
(107P)	11097-69-1	PCB-1254	2.0U
(108P)	11104-28-2	PCB-1221	2.0U
(109P)	11141-16-5	PCB-1232	2.0U
(110P)	12672-29-6	PCB-1248	2.0U
(111P)	11096-82-5	PCB-1260	4.0U
(112P)	12674-11-2	PCB-1016	1.0U
(113P)	8001-35-2	toxaphene	1.0U

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED:
PERCENT MOISTURE:
CONC./DILUTION FACTOR:

PP #	CAS #		ug/l or ug/ (circle
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	

SAMPLE NUMBER:
B3721

ORGANICS ANALYSIS DATA SHEET
(PAGE 4)

TENTATIVELY IDENTIFIED COMPOUNDS

CAS NUMBER	COMPOUND NAME	FRACTION	RT OR SCAN NUMBER	ESTIMATED CONCENTRATIO UG/L OR UG/K
65499-02-0	3-DECENE, 2, 2-DIMETHYL-, (E)-	ABN	355	2485
2822-67-3	2-CYCLOHEXEN-1-OL	ABN	385	1130
930-68-7	2-CYCLOHEXEN-1-ONE	ABN	437	1939
564-02-3	PENTANE, 2, 2, 3-TRIMETHYL-	ABN	461	401
765-03-7	1-Dodecyne	ABN	1534	1141

NVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
ox 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
METHOD BLANK

ORGANICS ANALYSIS DATA SHEET

atory Name: Radian
mple ID No: 8409100000
Matrix: WATER
elease Authorized By: [illegible]

Case No: 3191-2
QC Report No: 25
Contract No.: 68-01-6853
Date Sample Received: 9-6-84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9-10-84
DATE ANALYZED: 10-17-84
PERCENT MOISTURE: 100%
CONC./DILUTION FACTOR: 1000 ML 2ML

CAS #		ug/l or ug/kg (circle one)
88-06-2	2,4,6- trichlorophenol	10U
59-50-7	p-chloro-m-cresol	10U
95-57-8	2- chlorophenol	10U
120-83-2	2,4-dichlorophenol	10U
105-67-9	2,4-dimethylphenol	10U
88-75-5	2- nitrophenol	20U
100-02-7	4-nitrophenol	50U
51-28-5	2,4-dinitrophenol	50U
534-52-1	4,6-dinitro-2-methylphenol	20U
87-86-5	pentachlorophenol	10U
108-95-2	phenol	10U
65-85-0	benzoic acid	100U
95-48-7	2-methylphenol	5U
108-39-4	4-methylphenol	5U
95-95-4	2,4,5-trichlorophenol	100U
83-32-9	acenaphthene	10U
92-87-5	benzidine	40U
120-82-1	1,2,4-trichlorobenzene	10U
118-74-1	hexachlorobenzene	10U
67-72-1	hexachloroethane	10U
111-44-4	bis(2-chloroethyl)ether	10U
91-58-7	2-chloronaphthalene	10U
95-50-1	1,2-dichlorobenzene	10U
541-73-1	1,3-dichlorobenzene	10U
106-46-7	1,4-dichlorobenzene	20U
91-94-1	3,3'-dichlorobenzidine	5U
121-14-2	2,4-dinitrotoluene	20U
606-20-2	2,6-dinitrotoluene	20U
122-66-7	1,2-diphenylhydrazine	20U
206-44-0	fluoranthene	10U
7005-72-3	4-chlorophenyl phenyl ether	10U
101-55-3	4-bromophenyl phenyl ether	10U
39638-32-9	bis (2-chloroisopropyl) ether	20U
111-91-1	bis (2-chloroethoxy) methane	20U

PP #	CAS #		ug/l or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene	10U
(53B)	77-47-4	hexachlorocyclopentadiene	10U
(54B)	78-59-1	isophorone	10U
(55B)	91-20-3	naphthalene	10U
(56B)	98-95-3	nitrobenzene	10U
(61B)	62-75-9	N-nitrosodimethylamine	10U
(62B)	86-30-6	N-nitrosodiphenylamine	10U
(63B)	621-64-7	N-nitrosodipropylamine	10U
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	10K
(67B)	85-68-7	benzyl butyl phthalate	10U
(68B)	84-74-2	di-n-butyl phthalate	10U
(69B)	117-84-0	di-n-octyl phthalate	10U
(70B)	84-66-2	diethyl phthalate	10U
(71B)	131-11-3	dimethyl phthalate	10U
(72B)	56-55-3	benzo(a)anthracene	10U
(73B)	50-32-8	benzo(a)pyrene	20U
(74B)	205-99-2	benzo(b)fluoranthene	20U
(75B)	207-08-9	benzo(k)fluoranthene	20U
(76B)	218-01-9	chrysene	20U
(77B)	208-96-8	acenaphthylene	10U
(78B)	120-12-7	anthracene	10U
(79B)	191-24-2	benzo(ghi)perylene	20U
(80B)	86-73-7	fluorene	10U
(81B)	85-01-8	phenanthrene	10U
(82B)	53-70-3	dibenzo(a,h)anthracene	20U
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	20U
(84B)	129-00-0	pyrene	10U
	62-53-3	aniline	5U
	100-51-6	benzyl alcohol	20U
	106-47-8	4-chloroaniline	50U
	132-64-9	dibenzofuran	10U
	91-57-6	2-methylnaphthalene	20U
	88-74-4	2-nitroaniline	100U
	99-09-2	3-nitroaniline	100U
	100-01-6	4-nitroaniline	100U

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Sample Number: BLANK

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Radian
Lab Sample ID No: 4EB0913V000
Sample Matrix: WATER
Data Release Authorized By: H. Petrowski

Case No: 3191-2
QC Report No: 25
Contract No.: 68-01-6953
Date Sample Received: 9-6-84

VOLATILES

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: —
DATE ANALYZED: 9-13-84
PERCENT MOISTURE: 100%
CONC./DILUTION FACTOR: NA : NA

PP #	CAS #		ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	5U
(11V)	71-55-6	1,1,1-trichloroethane	1U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	5U
(16V)	75-00-3	chloroethane	10U
(19V)	110-75-8	2-chloroethylvinyl ether	10U
(23V)	67-66-3	chloroform	10U
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	trans-1,2-dichloroethene	5U
(32V)	78-87-5	1,2-dichloropropane	5U
(33V)	10061-02-6	trans-1,3-dichloropropene	10U
	10061-01-05	cis-1,3-dichloropropene	5U
(33V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	5U
(45V)	74-87-3	chloromethane	5U
(46V)	74-83-9	bromomethane	10U
(47V)	75-25-2	bromoform	10U
(48V)	75-27-4	bromodichloromethane	10U
(49V)	75-69-4	fluorotrichloromethane	5U
(50V)	75-71-8	dichlorodifluoromethane	5U
(51V)	124-48-1	chlorodibromomethane	5U
(35V)	127-18-4	tetrachloroethene	5U
(36V)	108-88-3	toluene	5U
(37V)	79-01-6	trichloroethene	5U
(38V)	75-01-4	vinyl chloride	5U
	67-64-1	acetone	10U
	78-93-3	2-butanone	5U
	75-15-0	carbondisulfide	5U
	519-78-6	2-hexanone	1U
	108-10-1	4-methyl-2-pentanone	5U
	100-42-5	styrene	5U
	108-05-4	vinyl acetate	5U
	1330-20-7	total xylenes	5U

PESTICIDES

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9-10-84
DATE ANALYZED: 11-3-84
PERCENT MOISTURE: 100%
CONC./DILUTION FACTOR: 1000:5

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	.005U
(90P)	60-57-1	dieldrin	.005U
(91P)	57-74-9	chlordane	.050U
(92P)	50-29-3	4,4'-DDT	.010U
(93P)	72-55-9	4,4'-DDE	.005U
(94P)	72-54-8	4,4'-DDD	.010U
(95P)	115-29-7	α-endosulfan	.005U
(96P)	115-29-7	β-endosulfan	.005U
(97P)	1031-07-8	endosulfan sulfate	.010U
(98P)	72-20-8	endrin	.005U
(99P)	7421-93-4	endrin aldehyde	.010U
(100P)	76-44-8	heptachlor	.005U
(101P)	1024-57-3	heptachlor epoxide	.005U
(102P)	319-84-6	α-BHC	.005U
(103P)	319-85-7	β-BHC	.005U
(104P)	319-86-8	δ-BHC	.005U
(105P)	58-89-9	γ-BHC (lindane)	.005U
(106P)	53469-21-9	PCB-1242	.050U
(107P)	11097-69-1	PCB-1254	.100U
(108P)	11104-28-2	PCB-1221	.100U
(109P)	11141-16-5	PCB-1232	.100U
(110P)	12672-29-6	PCB-1248	.100U
(111P)	11096-82-5	PCB-1260	.200U
(112P)	12674-11-2	PCB-1016	.050U
(113P)	8001-35-2	toxaphene	.050U

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED:
PERCENT MOISTURE:
CONC./DILUTION FACTOR:

PP #	CAS #		ug/l or ug/kg (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample Number: BLK

Laboratory Name: [illegible]

QC Report No: 35

Case No: 3191

B. Tentatively Identified Compounds

	CAS #	Compound Name	Fraction	Scan No. or Retention Time	% Maximum Score Attained Mass Matching Routine: (Specify: EPA)	Estimated Concentration (ug/L or ug/kg)
1.	[illegible]	[illegible]	BLA	2019	781	4
2.	[illegible]	[illegible]		4124	9045	7
3.	[illegible]	[illegible]		4155	952	3
4.	[illegible]	[illegible]		4193	455	11
5.	[illegible]	[illegible]		4195	441	5
6.	[illegible]	[illegible]		5594	813	6
7.	[illegible]	[illegible]		15993	[illegible]	2
8.	[illegible]	[illegible]		1973	[illegible]	2
9.						
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FORM II (continued)

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number: METHOD BLANK

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Radian
Lab Sample ID No: 840917C000
Sample Matrix: WATER
Data Release Authorized By: [illegible]

Case No: 3191-2
QC Report No: 2-
Contract No.: 68-01-6553
Date Sample Received: 9-6-84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9-17-84
DATE ANALYZED: 10-22-84
PERCENT MOISTURE: 100%
CONC./DILUTION FACTOR: 1000ML: 2ML

PP #	CAS #		ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6- trichlorophenol	10U
(22A)	59-50-7	p-chloro-m-cresol	10U
(24A)	95-57-3	2- chlorophenol	10U
(31A)	120-83-2	2,4-dichlorophenol	10U
(34A)	105-67-9	2,4-dimethylphenol	10U
(37A)	88-75-5	2- nitrophenol	10U
(38A)	100-02-7	4-nitrophenol	20U
(59A)	51-28-5	2,4-dinitrophenol	50U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	50U
(64A)	87-86-5	pentachlorophenol	20U
(65A)	108-95-2	phenol	10U
	65-85-0	benzoic acid	10U
	95-48-7	2-methylphenol	100U
	108-39-4	4-methylphenol	5U
	95-95-4	2,4,5-trichlorophenol	5U
(1B)	83-32-9	acenaphthene	100U
(2B)	92-87-5	benzidine	10U
(3B)	120-82-1	1,2,4-trichlorobenzene	40U
(9B)	118-74-1	hexachlorobenzene	10U
(10B)	67-72-1	hexachloroethane	10U
(11B)	111-44-4	bis(2-chloroethyl)ether	10U
(20B)	91-58-7	2-chloronaphthalene	10U
(21B)	95-50-1	1,2-dichlorobenzene	10U
(22B)	541-73-1	1,3-dichlorobenzene	10U
(23B)	106-46-7	1,4-dichlorobenzene	10U
(24B)	91-94-1	3,3'-dichlorobenzidine	20U
(25B)	121-14-2	2,4-dinitrotoluene	5U
(26B)	606-20-2	2,6-dinitrotoluene	20U
(27B)	122-66-7	1,2-diphenylhydrazine	20U
(28B)	206-44-0	fluoranthene	10U
(29B)	7005-72-3	4-chlorophenyl phenyl ether	10U
(30B)	101-55-3	4-bromophenyl phenyl ether	10U
(31B)	39638-32-9	bis (2-chloroisopropyl) ether	20U
(43B)	111-91-1	bis (2-chloroethoxy) methane	20U

PP #	CAS #		ug/l or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene	10U
(53B)	77-47-4	hexachlorocyclopentadiene	10U
(54B)	78-59-1	isophorone	10U
(55B)	91-20-3	naphthalene	10U
(56B)	98-95-3	nitrobenzene	10U
(61B)	62-75-9	N-nitrosodimethylamine	10U
(62B)	86-30-6	N-nitrosodiphenylamine	10U
(63B)	621-64-7	N-nitrosodipropylamine	10U
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	10U
(67B)	85-68-7	benzyl butyl phthalate	10U
(68B)	84-74-2	di-n-butyl phthalate	10U
(69B)	117-84-0	di-n-octyl phthalate	10U
(70B)	84-66-2	diethyl phthalate	10U
(71B)	131-11-3	dimethyl phthalate	10U
(72B)	56-55-3	benzo(a)anthracene	10U
(73B)	50-32-8	benzo(a)pyrene	10U
(74B)	205-99-2	benzo(b)fluoranthene	20U
(75B)	207-08-9	benzo(k)fluoranthene	20U
(76B)	218-01-9	chrysene	20U
(77B)	208-96-8	acenaphthylene	20U
(78B)	120-12-7	anthracene	10U
(79B)	191-24-2	benzo(ghi)perylene	10U
(80B)	86-73-7	fluorene	20U
(81B)	85-01-8	phenanthrene	10U
(82B)	53-70-3	dibenzo(a,h)anthracene	10U
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	20U
(84B)	129-00-0	pyrene	20U
	62-53-3	aniline	10U
	100-51-6	benzyl alcohol	5U
	106-47-8	4-chloroaniline	20U
	132-64-9	dibenzofuran	50U
	91-57-6	2-methylnaphthalene	10U
	88-74-4	2-nitroaniline	20U
	99-09-2	3-nitroaniline	100U
	100-01-6	4-nitroaniline	100U

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

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Sample Number: Method Blank

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Radian
Lab Sample ID No: 340917CCCC
Sample Matrix: Water
Data Release Authorized By: Zafetkovich

Case No: 3191
QC Report No: 25
Contract No.: 68-01-6553
Date Sample Received: 9-6-84

VOLATILES

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED: N/A
PERCENT MOISTURE:
CONC./DILUTION FACTOR:

PP #	CAS #		ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein	NA
(3V)	107-13-1	acrylonitrile	
(4V)	71-43-2	benzene	
(6V)	56-23-5	carbon tetrachloride	
(7V)	108-90-7	chlorobenzene	
(10V)	107-06-2	1,2-dichloroethane	
(11V)	71-55-6	1,1,1-trichloroethane	
(13V)	75-34-3	1,1-dichloroethane	
(14V)	79-00-5	1,1,2-trichloroethane	
(15V)	79-34-5	1,1,2,2-tetrachloroethane	
(16V)	75-00-3	chloroethane	
(19V)	110-75-8	2-chloroethylvinyl ether	
(23V)	67-66-3	chloroform	
(29V)	75-35-4	1,1-dichloroethene	
(30V)	156-60-5	trans-1,2-dichloroethene	
(32V)	78-87-5	1,2-dichloropropane	
(33V)	10061-02-6	trans-1,3-dichloropropene	
	10061-01-05	cis-1,3-dichloropropene	
(38V)	100-41-4	ethylbenzene	
(44V)	75-09-2	methylene chloride	
(45V)	74-87-3	chloromethane	
(46V)	74-83-9	bromomethane	
(47V)	75-25-2	bromoform	
(48V)	75-27-4	bromodichloromethane	
(49V)	75-69-4	fluorotrichloromethane	
(50V)	75-71-8	dichlorodifluoromethane	
(51V)	124-48-1	chlorodibromomethane	
(85V)	127-18-4	tetrachloroethene	
(86V)	108-88-3	toluene	
(87V)	79-01-6	trichloroethene	
(88V)	75-01-4	vinyl chloride	
	67-64-1	acetone	
	78-93-3	2-butanone	
	75-15-0	carbondisulfide	
	519-78-6	2-hexanone	
	108-10-1	4-methyl-2-pentanone	
	100-42-5	styrene	
	108-05-4	vinyl acetate	
	1330-20-7	total xylenes	

PESTICIDES

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED: N/A
PERCENT MOISTURE: N/A
CONC./DILUTION FACTOR:

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	NA
(90P)	60-57-1	dieldrin	
(91P)	57-74-9	chlordane	
(92P)	50-29-3	4,4'-DDT	
(93P)	72-55-9	4,4'-DDE	
(94P)	72-54-8	4,4'-DDD	
(95P)	115-29-7	α-endosulfan	
(96P)	115-29-7	β-endosulfan	
(97P)	1031-07-8	endosulfan sulfate	
(98P)	72-20-8	endrin	
(99P)	7421-93-4	endrin aldehyde	
(100P)	76-44-8	heptachlor	
(101P)	1024-57-3	heptachlor epoxide	
(102P)	319-84-6	α-BHC	
(103P)	319-85-7	β-BHC	
(104P)	319-86-8	δ-BHC	
(105P)	58-89-9	γ-BHC (lindane)	
(106P)	53469-21-9	PCB-1242	
(107P)	11097-69-1	PCB-1254	
(108P)	11104-28-2	PCB-1221	
(109P)	11141-16-5	PCB-1232	
(110P)	12672-29-6	PCB-1248	
(111P)	11096-82-5	PCB-1260	
(112P)	12674-11-2	PCB-1016	
(113P)	8001-35-2	toxaphene	

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED: N/A
PERCENT MOISTURE: N/A
CONC./DILUTION FACTOR:

PP #	CAS #		ug/l or ug/kg (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample Number: Blank

Laboratory Name: Radian

QC Report No: 25

Case No: 3191

B. Tentatively Identified Compounds

	CAS #	Compound Name	Fraction	Scan No. or Retention Time	% Maximum Score Attained Mass Matching Routine: (Specify: FIT)	Estimated Concentration (ug/L or ug/kg)
1.	629-11-8	1,6-hexanediol	BNA	398	878	25
2.	822-06-3	2-cyclohexen-1-ol		429	905	6
3.	930-45-7	2-cyclohexen-1-one		443	9164	15
4.						
5.						
6.						
7.						
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29.						
30.						

6/82

FORM II (continued)

US.EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O.BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS: 8-557-2490

EPA SAMPLE NO.
MB 0C82

DATE 10-18-84

INORGANIC ANALYSIS DATA SHEET

LAB NAME VERSAR INC.

CASE NO. 3191

LAB SAMPLE ID. NO. 9300

QC REPORT NO. 49

PROJECT-TASK 854.C000

BATCH 49

ELEMENTS IDENTIFIED AND MEASURED

UG/L

1.	ALUMINUM	138000.	13.	MAGNESIUM	NR
2.	ANTIMONY	<6.	14.	MANGANESE	5710. X
3.	ARSENIC	148. X	15.	MERCURY	0.66
4.	BARIUM	410.	16.	NICKEL	120.
5.	BERYLLIUM	~~0.~~	17.	POTASSIUM	NR
6.	CADMIUM	0.81	18.	SELENIUM	<2.
7.	CALCIUM	NR	19.	SILVER	< 30.
8.	CHROMIUM	289. X	20.	SODIUM	NR
9.	COBALT	82. X	21.	THALLIUM	<2.
10.	COPPER	390.	22.	TIN	< 20.
11.	IRON	209000. C	23.	VANADIUM	293.
12.	LEAD	163. X	24.	ZINC	570.
	CYANIDE	NR		PERCENT SOLIDS	NR

FOOTNOTES: SEE COVER PAGE.

COMMENTS:

LAB MANAGER

ROBERT E. MAXFIELD

FORM I

US.EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O.BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS: 8-557-2490

EPA SAMPLE NO.
MB 0083

DATE 10-18-84

INORGANIC ANALYSIS DATA SHEET

LAB NAME VERSAR INC.

CASE NO. 3191

LAB SAMPLE ID. NO. 9301

QC REPORT NO. 49

PROJECT-TASK 854.0000

BATCH 49

ELEMENTS IDENTIFIED AND MEASURED

UG/L

1.	ALUMINUM	247000.	13.	MAGNESIUM	NR
2.	ANTIMONY	<6.	14.	MANGANESE	7330.
3.	ARSENIC	289.	15.	MERCURY	1.4
4.	BARIUM	1390.	16.	NICKEL	214.
5.	BERYLLIUM	18.	17.	POTASSIUM	NR
6.	CADMIUM	2.8	18.	SELENIUM	9.4
7.	CALCIUM	NR	19.	SILVER	< 30.
8.	CHROMIUM	336.	20.	SODIUM	NR
9.	COBALT	130.	21.	THALLIUM	<2.
10.	COPPER	396.	22.	TIN	< 200.
11.	IRON	493000. C	23.	VANADIUM	536.
12.	LEAD	731.	24.	ZINC	1100.
	CYANIDE	NR		PERCENT SOLIDS	NR

FOOTNOTES: SEE COVER PAGE.

COMMENTS:

LAB MANAGER

ROBERT E. MAXFIELD

FORM I

US.EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O.BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS: 8-557-2490

EPA SAMPLE NO.
MB CC84

DATE 10-18-84

INORGANIC ANALYSIS DATA SHEET

LAB NAME VERSAR INC.

CASE NO. 3191

LAB SAMPLE ID. NO. 9302

QC REPORT NO. 49

PROJECT-TASK 854.0000

BATCH 49

ELEMENTS IDENTIFIED AND MEASURED

UG/L

1.	ALUMINUM	264000.	13.	MAGNESIUM	NR
2.	ANTIMONY	<6.	14.	MANGANESE	19000.
3.	ARSENIC	395.	15.	MERCURY	1.5
4.	BARIUM	1790.	16.	NICKEL	360.
5.	BERYLLIUM	19.	17.	POTASSIUM	NR
6.	CADMIUM	4.9	18.	SELENIUM	3.1
7.	CALCIUM	NR	19.	SILVER	< 30.
8.	CHROMIUM	470.	20.	SODIUM	NR
9.	COBALT	360.	21.	THALLIUM	<2.
10.	COPPER	490.	22.	TIN	< 200.
11.	IRON	828000. C	23.	VANADIUM	650.
12.	LEAD	820.	24.	ZINC	2100.
	CYANIDE	NR		PERCENT SOLIDS	NR

FOOTNOTES: SEE COVER PAGE.

COMMENTS:

LAB MANAGER

ROBERT E. MAXFIELD

FORM I

US.EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O.BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS: 8-557-2490

EPA SAMPLE NO.
MB C085

DATE 10-18-84

INORGANIC ANALYSIS DATA SHEET

LAB NAME VERSAR INC.

CASE NO. 3191

LAB SAMPLE ID. NO. 9303

QC REPORT NO. 49

PROJECT-TASK 854.0000

BATCH 49

ELEMENTS IDENTIFIED AND MEASURED

UG/L

1.	ALUMINUM	~~74.~~	13.	MAGNESIUM	NR
2.	ANTIMONY	<6.	14.	MANGANESE	2.
3.	ARSENIC	<8.	15.	MERCURY	<0.2
4.	BARIUM	2.	16.	NICKEL	< 15.
5.	BERYLLIUM	< 1.	17.	POTASSIUM	NR
6.	CADMIUM	<0.5	18.	SELENIUM	<2.
7.	CALCIUM	NR	19.	SILVER	< 3.
8.	CHROMIUM	< 4.	20.	SODIUM	NR
9.	COBALT	< 10.	21.	THALLIUM	<2.
10.	COPPER	< 2.	22.	TIN	< 20.
11.	IRON	ND/8	23.	VANADIUM	< 4.
12.	LEAD	3.4	24.	ZINC	~~9.~~
	CYANIDE	NR		PERCENT SOLIDS	NR

FOOTNOTES: SEE COVER PAGE.

COMMENTS:

LAB MANAGER

ROBERT E. MAXFIELD

FORM I

US.EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O.BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS: 8-557-2490

EPA SAMPLE NO.
MB 0086

DATE 10-18-84

INORGANIC ANALYSIS DATA SHEET

LAB NAME VERSAR INC.

CASE NO. 3191

LAB SAMPLE ID. NO. 9305

QC REPORT NO. 49

PROJECT-TASK 854.0000

BATCH 49

ELEMENTS IDENTIFIED AND MEASURED

MG/KG

1.	ALUMINUM	4920.C	13.	MAGNESIUM	NR
2.	ANTIMONY	<0.3	14.	MANGANESE	450.C
3.	ARSENIC	4.3	15.	MERCURY	0.11
4.	BARIUM	170.	16.	NICKEL	8.25
5.	BERYLLIUM	0.29	17.	POTASSIUM	NR
6.	CADMIUM	3.4	18.	SELENIUM	<0.1
7.	CALCIUM	NR	19.	SILVER	0.40
8.	CHROMIUM	21.3	20.	SODIUM	NR
9.	COBALT	2.20	21.	THALLIUM	<0.1
10.	COPPER	28.8	22.	TIN	1.35
11.	IRON	9090.C	23.	VANADIUM	11.7
12.	LEAD	172.	24.	ZINC	734.C
	CYANIDE	NR		PERCENT SOLIDS	NR

FOOTNOTES: SEE COVER PAGE.

COMMENTS:

LAB MANAGER

FORM I

ROBERT E. MAXFIELD

US.EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O.BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS: 8-557-2490

EPA SAMPLE NO.
MB 0087

DATE 10-18-84

INORGANIC ANALYSIS DATA SHEET

LAB NAME VERSAR INC.

CASE NO. 3191

LAB SAMPLE ID. NO. 9306

QC REPORT NO. 49

PROJECT-TASK 854.0000

BATCH 49

ELEMENTS IDENTIFIED AND MEASURED

MG/KG

1.	ALUMINUM	6570.C	13.	MAGNESIUM	NR
2.	ANTIMONY	<0.3	14.	MANGANESE	1090.C
3.	ARSENIC	14.0	15.	MERCURY	0.32
4.	BARIUM	900.	16.	NICKEL	23.0
5.	BERYLLIUM	< 0.50	17.	POTASSIUM	NR
6.	CADMIUM	12.8	18.	SELENIUM	0.22
7.	CALCIUM	NR	19.	SILVER	< 1.50
8.	CHROMIUM	46.0	20.	SODIUM	NR
9.	COBALT	< 5.00	21.	THALLIUM	<0.1
10.	COPPER	135.	22.	TIN	< 10.0
11.	IRON	24800.C	23.	VANADIUM	22.0
12.	LEAD	823.	24.	ZINC	2920.C
	CYANIDE	NR		PERCENT SOLIDS	NR

FOOTNOTES: SEE COVER PAGE.

COMMENTS:

LAB MANAGER

ROBERT E. MAXFIELD

FORM I

US.EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O.BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS: 8-557-2490

EPA SAMPLE NO.
MB 0088

DATE 10-18-84

INORGANIC ANALYSIS DATA SHEET

LAB NAME VERSAR INC.

CASE NO. 3191

LAB SAMPLE ID. NO. 9304

QC REPORT NO. 49

PROJECT-TASK 854.0000

BATCH 49

ELEMENTS IDENTIFIED AND MEASURED

UG/L

1.	ALUMINUM	~~185.~~	13.	MAGNESIUM	NR
2.	ANTIMONY	12.	14.	MANGANESE	~~10.~~
3.	ARSENIC	<8.	15.	MERCURY	<0.2
4.	BARIUM	4700.	16.	NICKEL	< 15.
5.	BERYLLIUM	< 1.	17.	POTASSIUM	NR
6.	CADMIUM	<0.5	18.	SELENIUM	<2.
7.	CALCIUM	NR	19.	SILVER	< 3.
8.	CHROMIUM	6.	20.	SODIUM	NR
9.	COBALT	< 10.	21.	THALLIUM	<2.
10.	COPPER	25.	22.	TIN	< 20.
11.	IRON	234. C	23.	VANADIUM	< 4.
12.	LEAD	~~9.9~~ S	24.	ZINC	~~32.~~
	CYANIDE	NR		PERCENT SOLIDS	NR

FOOTNOTES: SEE COVER PAGE.

COMMENTS:

LAB MANAGER

ROBERT E. MAXFIELD

FORM I

US.EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O.BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS: 8-557-2490

EPA SAMPLE NO.
MB 0089

DATE 10-18-84

INORGANIC ANALYSIS DATA SHEET

LAB NAME VERSAR INC.

CASE NO. 3191

LAB SAMPLE ID. NO. 9307

QC REPORT NO. 49

PROJECT-TASK 854.0000

BATCH 49

ELEMENTS IDENTIFIED AND MEASURED

MG/KG

1.	ALUMINUM	12700.C	13.	MAGNESIUM	NR
2.	ANTIMONY	<0.3	14.	MANGANESE	1270.C
3.	ARSENIC	6.8	15.	MERCURY	<0.1
4.	BARIUM	338.	16.	NICKEL	12.6
5.	BERYLLIUM	2.20	17.	POTASSIUM	NR
6.	CADMIUM	0.55	18.	SELENIUM	0.28
7.	CALCIUM	NR	19.	SILVER	< 1.50
8.	CHROMIUM	34.9	20.	SODIUM	NR
9.	COBALT	2.10	21.	THALLIUM	<0.1
10.	COPPER	30.1	22.	TIN	< 10.0
11.	IRON	10100.C	23.	VANADIUM	19.7
12.	LEAD	36.3	24.	ZINC	146.C
	CYANIDE	NR		PERCENT SOLIDS	NR

FOOTNOTES: SEE COVER PAGE.

COMMENTS:

LAB MANAGER

ROBERT E. MAXFIELD

FORM I

US.EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O.BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS: 8-557-2490

EPA SAMPLE NO.
MB 0090

DATE 10-18-84

INORGANIC ANALYSIS DATA SHEET

LAB NAME VERSAR INC.

CASE NO. 3191

LAB SAMPLE ID. NO. 9308

QC REPORT NO. 49

PROJECT-TASK 854.0000

BATCH 49

ELEMENTS IDENTIFIED AND MEASURED

MG/KG

1.	ALUMINUM	5670.C	13.	MAGNESIUM	NR
2.	ANTIMONY	<0.3	14.	MANGANESE	1400.C
3.	ARSENIC	8.14	15.	MERCURY	0.14
4.	BARIUM	1080.	16.	NICKEL	35.5
5.	BERYLLIUM	< 0.50	17.	POTASSIUM	NR
6.	CADMIUM	3.4	18.	SELENIUM	0.11
7.	CALCIUM	NR	19.	SILVER	< 1.50
8.	CHROMIUM	67.5	20.	SODIUM	NR
9.	COBALT	< 5.00	21.	THALLIUM	<0.1
10.	COPPER	151.	22.	TIN	< 10.0
11.	IRON	32600.C	23.	VANADIUM	21.5
12.	LEAD	324	24.	ZINC	1000.C
	CYANIDE	NR		PERCENT SOLIDS	NR

FOOTNOTES: SEE COVER PAGE.

COMMENTS:

LAB MANAGER

FORM I

ROBERT E. MAXFIELD

US.EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O.BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS: 8-557-2490

EPA SAMPLE NO.
MB 0091

DATE 10-18-84

INORGANIC ANALYSIS DATA SHEET

LAB NAME VERSAR INC.

CASE NO. 3191

LAB SAMPLE ID. NO. 9309

QC REPORT NO. 49

PROJECT-TASK 854.0000

BATCH 49

ELEMENTS IDENTIFIED AND MEASURED

MG/KG

1.	ALUMINUM	2170.C	13.	MAGNESIUM	NR
2.	ANTIMONY	1.9	14.	MANGANESE	4040.C
3.	ARSENIC	4.0	15.	MERCURY	<0.1
4.	BARIUM	47.0	16.	NICKEL	38800.
5.	BERYLLIUM	< 0.50	17.	POTASSIUM	NR
6.	CADMIUM	0.36	18.	SELENIUM	0.47
7.	CALCIUM	NR	19.	SILVER	< 15.0
8.	CHROMIUM	143.	20.	SODIUM	NR
9.	COBALT	25.0	21.	THALLIUM	<0.1
10.	COPPER	1710.	22.	TIN	41.5
11.	IRON	139000.C	23.	VANADIUM	37.5
12.	LEAD	253.	24.	ZINC	353.C
	CYANIDE	NR		PERCENT SOLIDS	NR

FOOTNOTES: SEE COVER PAGE.

COMMENTS:

LAB MANAGER

ROBERT E. MAXFIELD

FORM I

US.EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O.BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS: 8-557-2490

EPA SAMPLE NO.
MB 0092

DATE 10-18-84

INORGANIC ANALYSIS DATA SHEET

LAB NAME VERSAR INC.

CASE NO. 3191

LAB SAMPLE ID. NO. 9310

QC REPORT NO. 49

PROJECT-TASK 854.0000

BATCH 49

ELEMENTS IDENTIFIED AND MEASURED

MG/KG

1.	ALUMINUM	3860.C	13.	MAGNESIUM	NR
2.	ANTIMONY	<0.3	14.	MANGANESE	879.C
3.	ARSENIC	5.2	15.	MERCURY	0.20
4.	BARIUM	102.	16.	NICKEL	24.3
5.	BERYLLIUM	0.36	17.	POTASSIUM	NR
6.	CADMIUM	13.3	18.	SELENIUM	<0.1
7.	CALCIUM	NR	19.	SILVER	0.22
8.	CHROMIUM	52.0	20.	SODIUM	NR
9.	COBALT	3.05	21.	THALLIUM	<0.1
10.	COPPER	81.0	22.	TIN	1.95
11.	IRON	15400.C	23.	VANADIUM	18.6
12.	LEAD	115.	24.	ZINC	269.C
	CYANIDE	NR		PERCENT SOLIDS	NR

FOOTNOTES: SEE COVER PAGE.

COMMENTS:

LAB MANAGER

ROBERT E. MAXFIELD

FORM I

US.EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O.BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS: 8-557-2490

EPA SAMPLE NO.
MB 0093

DATE 10-18-84

INORGANIC ANALYSIS DATA SHEET

LAB NAME VERSAR INC.

CASE NO. 3191

LAB SAMPLE ID. NO. 9311

QC REPORT NO. 49

PROJECT-TASK 854.0000

BATCH 49

ELEMENTS IDENTIFIED AND MEASURED

MG/KG

1.	ALUMINUM	ND/B	13.	MAGNESIUM	NR
2.	ANTIMONY	<0.3	14.	MANGANESE	ND/B
3.	ARSENIC	<0.4	15.	MERCURY	0.11
4.	BARIUM	0.55	16.	NICKEL	2.85
5.	BERYLLIUM	< 0.05	17.	POTASSIUM	NR
6.	CADMIUM	<0.02	18.	SELENIUM	<0.1
7.	CALCIUM	NR	19.	SILVER	< 0.15
8.	CHROMIUM	< 0.20	20.	SODIUM	NR
9.	COBALT	< 0.50	21.	THALLIUM	<0.1
10.	COPPER	0.65	22.	TIN	< 1.00
11.	IRON	ND/B	23.	VANADIUM	< 0.20
12.	LEAD	<0.1	24.	ZINC	ND/B
	CYANIDE	NR		PERCENT SOLIDS	NR

FOOTNOTES: SEE COVER PAGE.

COMMENTS:

LAB MANAGER

ROBERT E. MAXFIELD

FORM I

US.EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O.BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS: 8-557-2490

EPA SAMPLE NO.
MB C997

DATE 10-18-84

INORGANIC ANALYSIS DATA SHEET

LAB NAME VERSAR INC.

CASE NO. 3191

LAB SAMPLE ID. NO. 9245

QC REPORT NO. 48

PROJECT-TASK 854.0000

BATCH 48

ELEMENTS IDENTIFIED AND MEASURED

UG/L

1.	ALUMINUM	115000.C	13.	MAGNESIUM	NR
2.	ANTIMONY	<6.	14.	MANGANESE	1820.C
3.	ARSENIC	54.	15.	MERCURY	0.33
4.	BARIUM	985.	16.	NICKEL	122.
5.	BERYLLIUM	6.	17.	POTASSIUM	NR
6.	CADMIUM	0.63	18.	SELENIUM	<2.
7.	CALCIUM	NR	19.	SILVER	< 3.
8.	CHROMIUM	210.	20.	SODIUM	NR
9.	COBALT	56.	21.	THALLIUM	< 2.
10.	COPPER	121.C	22.	TIN	ND/B
11.	IRON	191000.C	23.	VANADIUM	225.
12.	LEAD	42.	24.	ZINC	308.C
	CYANIDE	NR		PERCENT SOLIDS	NR

FOOTNOTES: SEE COVER PAGE.

COMMENTS:

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SAMPLE MANAGEMENT OFFICE
P.O.BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS: 8-557-2490

EPA SAMPLE NO.
MB C998

DATE 10-18-84

INORGANIC ANALYSIS DATA SHEET

LAB NAME VERSAR INC.

CASE NO. 3191

LAB SAMPLE ID. NO. 9246

QC REPORT NO. 48

PROJECT-TASK 854.0000

BATCH 48

ELEMENTS IDENTIFIED AND MEASURED

UG/L

1.	ALUMINUM	135000.C	13.	MAGNESIUM	NR
2.	ANTIMONY	<6.	14.	MANGANESE	5860.C
3.	ARSENIC	62.	15.	MERCURY	<0.2
4.	BARIUM	785.	16.	NICKEL	142.
5.	BERYLLIUM	11.	17.	POTASSIUM	NR
6.	CADMIUM	0.91	18.	SELENIUM	<2.
7.	CALCIUM	NR	19.	SILVER	< 30.
8.	CHROMIUM	173.	20.	SODIUM	NR
9.	COBALT	159.	21.	THALLIUM	<2.
10.	COPPER	295.C	22.	TIN	ND/B
11.	IRON	174000.C	23.	VANADIUM	190.
12.	LEAD	236.	24.	ZINC	476.C
	CYANIDE	NR		PERCENT SOLIDS	NR

FOOTNOTES: SEE COVER PAGE.

COMMENTS:

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FORM I

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US.EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O.BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS: 8-557-2490

EPA SAMPLE NO.
MB 0999

DATE 10-18-84

INORGANIC ANALYSIS DATA SHEET

LAB NAME VERSAR INC.

CASE NO. 3191

LAB SAMPLE ID. NO. 9247

QC REPORT NO. 48

PROJECT-TASK 854.0000

BATCH 48

ELEMENTS IDENTIFIED AND MEASURED

UG/L

1.	ALUMINUM	128000.C	13.	MAGNESIUM	NR
2.	ANTIMONY	<6.	14.	MANGANESE	10900.C
3.	ARSENIC	55.	15.	MERCURY	<0.2
4.	BARIUM	793.	16.	NICKEL	182.
5.	BERYLLIUM	9.	17.	POTASSIUM	NR
6.	CADMIUM	1.1	18.	SELENIUM	<2.
7.	CALCIUM	NR	19.	SILVER	< 30.
8.	CHROMIUM	156.	20.	SODIUM	NR
9.	COBALT	125.	21.	THALLIUM	< 2.
10.	COPPER	191.C	22.	TIN	ND/B
11.	IRON	197000.C	23.	VANADIUM	164.
12.	LEAD	217.	24.	ZINC	464.C
	CYANIDE	NR		PERCENT SOLIDS	NR

FOOTNOTES: SEE COVER PAGE.

COMMENTS:

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US.EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O.BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS: 8-557-2490

EPA SAMPLE NO.
MB 1000

DATE 10-18-84

INORGANIC ANALYSIS DATA SHEET

LAB NAME VERSAR INC.

CASE NO. 3191

LAB SAMPLE ID. NO. 9248

QC REPORT NO. 48

PROJECT-TASK 654.0000

BATCH 48

ELEMENTS IDENTIFIED AND MEASURED

UG/L

1.	ALUMINUM	0.ND/B	13.	MAGNESIUM	NR
2.	ANTIMONY	<6.	14.	MANGANESE	0.ND/B
3.	ARSENIC	<8.	15.	MERCURY	<0.2
4.	BARIUM	2.	16.	NICKEL	< 15.
5.	BERYLLIUM	< 1.	17.	POTASSIUM	NR
6.	CADMIUM	<0.5	18.	SELENIUM	<2.
7.	CALCIUM	NR	19.	SILVER	< 3.
8.	CHROMIUM	5.	20.	SODIUM	NR
9.	COBALT	< 10.	21.	THALLIUM	<2.
10.	COPPER	0.ND/B	22.	TIN	0.ND/B
11.	IRON	0.ND/B	23.	VANADIUM	< 4.
12.	LEAD	2.8	24.	ZINC	0.ND/B
	CYANIDE	NR		PERCENT SOLIDS	NR

FOOTNOTES: SEE COVER PAGE.

COMMENTS:

LAB MANAGER

ROBERT E. MAXFIELD

FORM I

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US.EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O.BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS: 8-557-2490

EPA SAMPLE NO.
MB 1076

DATE 10-18-84

INORGANIC ANALYSIS DATA SHEET

LAB NAME VERSAR INC.

CASE NO. 3191

LAB SAMPLE ID. NO. 9249

QC REPORT NO. 48

PROJECT-TASK 854.0000

BATCH 48

ELEMENTS IDENTIFIED AND MEASURED

MG/KG

1.	ALUMINUM	5650.0	13.	MAGNESIUM	NR
2.	ANTIMONY	<0.3	14.	MANGANESE	1420.
3.	ARSENIC	7.40	15.	MERCURY	0.21
4.	BARIUM	98.0	16.	NICKEL	33.0
5.	BERYLLIUM	< 0.50	17.	POTASSIUM	NR
6.	CADMIUM	43.6	18.	SELENIUM	0.94
7.	CALCIUM	NR	19.	SILVER	4.35
8.	CHROMIUM	55.0	20.	SODIUM	NR
9.	COBALT	< 5.00	21.	THALLIUM	<0.1
10.	COPPER	101.0	22.	TIN	24.90
11.	IRON	27200.0	23.	VANADIUM	13.0
12.	LEAD	1380.	24.	ZINC	6350.
	CYANIDE	NR		PERCENT SOLIDS	NR

FOOTNOTES: SEE COVER PAGE.

COMMENTS:

LAB MANAGER

FORM I

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US.EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O.BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS: 8-557-2490

EPA SAMPLE NO.
MB 1077

DATE 10-18-84

INORGANIC ANALYSIS DATA SHEET

LAB NAME VERSAR INC.

CASE NO. 3191

LAB SAMPLE ID. NO. 9250

QC REPORT NO. 48

PROJECT-TASK 854.0000

BATCH 48

ELEMENTS IDENTIFIED AND MEASURED

MG/KG

1.	ALUMINUM	4150.0	13.	MAGNESIUM	NR
2.	ANTIMONY	0.38	14.	MANGANESE	1110.
3.	ARSENIC	4.5	15.	MERCURY	0.41
4.	BARIUM	96.0	16.	NICKEL	22.3
5.	BERYLLIUM	0.26	17.	POTASSIUM	NR
6.	CADMIUM	39.1	18.	SELENIUM	0.72
7.	CALCIUM	NR	19.	SILVER	3.80
8.	CHROMIUM	51.5	20.	SODIUM	NR
9.	COBALT	4.25	21.	THALLIUM	<0.1
10.	COPPER	129.0	22.	TIN	19.30
11.	IRON	23000.0	23.	VANADIUM	9.75
12.	LEAD	1280.	24.	ZINC	5750.
	CYANIDE	NR		PERCENT SOLIDS	NR

FOOTNOTES: SEE COVER PAGE.

COMMENTS:

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FORM I

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US.EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O.BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS: 8-557-2490

EPA SAMPLE NO.
MB 1078

DATE 10-18-84

INORGANIC ANALYSIS DATA SHEET

LAB NAME VERSAR INC.

CASE NO. 3191

LAB SAMPLE ID. NO. 9251

QC REPORT NO. 48

PROJECT-TASK 854.0000

BATCH 48

ELEMENTS IDENTIFIED AND MEASURED

MG/KG

1.	ALUMINUM	4130.C	13.	MAGNESIUM	NR
2.	ANTIMONY	0.32	14.	MANGANESE	555.
3.	ARSENIC	7.43	15.	MERCURY	< 0.1
4.	BARIUM	150.	16.	NICKEL	22.3
5.	BERYLLIUM	0.19	17.	POTASSIUM	NR
6.	CADMIUM	14.4	18.	SELENIUM	0.55
7.	CALCIUM	NR	19.	SILVER	1.91 "S"
8.	CHROMIUM	33.6	20.	SODIUM	NR
9.	COBALT	3.65	21.	THALLIUM	< 0.1
10.	COPPER	74.8C	22.	TIN	7.35C
11.	IRON	22600.C	23.	VANADIUM	6.70
12.	LEAD	471.	24.	ZINC	1970.
	CYANIDE	NR		PERCENT SOLIDS	NR

FOOTNOTES: SEE COVER PAGE.

COMMENTS:

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SAMPLE MANAGEMENT OFFICE
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703/557-2490 FTS: 8-557-2490

EPA SAMPLE NO.
MB 1080

DATE 10-18-84

INORGANIC ANALYSIS DATA SHEET

LAB NAME VERSAR INC.

CASE NO. 3191

LAB SAMPLE ID. NO. 9252

QC REPORT NO. 48

PROJECT-TASK 854.0000

BATCH 48

ELEMENTS IDENTIFIED AND MEASURED

MG/KG

1.	ALUMINUM	0.000ND/B	13.	MAGNESIUM	NR
2.	ANTIMONY	< 0.3	14.	MANGANESE	0.11
3.	ARSENIC	< 0.4	15.	MERCURY	< 0.1
4.	BARIUM	< 0.05	16.	NICKEL	< 0.75
5.	BERYLLIUM	< 0.05	17.	POTASSIUM	NR
6.	CADMIUM	< 0.02	18.	SELENIUM	< 0.1
7.	CALCIUM	NR	19.	SILVER	< 0.15
8.	CHROMIUM	< 0.20	20.	SODIUM	NR
9.	COBALT	< 0.50	21.	THALLIUM	< 0.1
10.	COPPER	0.000ND/B	22.	TIN	0.000ND/B
11.	IRON	0.000ND/B	23.	VANADIUM	< 0.20
12.	LEAD	0.23	24.	ZINC	0.43
	CYANIDE	NR		PERCENT SOLIDS	NR

FOOTNOTES: SEE COVER PAGE.

COMMENTS:

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LAB NAME VERSAR INC.

CASE NO. 3191

LAB SAMPLE ID. NO. 9252

QC REPORT NO. 48

PROJECT-TASK 854.0000

BATCH 48

ELEMENTS IDENTIFIED AND MEASURED

MG/KG

1.	ALUMINUM	0.000ND/B	13.	MAGNESIUM	NR
2.	ANTIMONY	< 0.3	14.	MANGANESE	0.11
3.	ARSENIC	< 0.4	15.	MERCURY	< 0.1
4.	BARIUM	< 0.05	16.	NICKEL	< 0.75
5.	BERYLLIUM	< 0.05	17.	POTASSIUM	NR
6.	CADMIUM	< 0.02	18.	SELENIUM	< 0.1
7.	CALCIUM	NR	19.	SILVER	< 0.15
8.	CHROMIUM	< 0.20	20.	SODIUM	NR
9.	COBALT	< 0.50	21.	THALLIUM	< 0.1
10.	COPPER	0.000ND/B	22.	TIN	0.000ND/B
11.	IRON	0.000ND/B	23.	VANADIUM	< 0.20
12.	LEAD	0.23	24.	ZINC	0.43
	CYANIDE	NR		PERCENT SOLIDS	NR

FOOTNOTES: SEE COVER PAGE.

COMMENTS:

LAB MANAGER

ROBERT E. MAXFIELD

FORM I

REFERENCE #10

Dangerous Properties of Industrial Materials

Sixth Edition

N. IRVING SAX

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

VNR VAN NOSTRAND REINHOLD COMPANY
NEW YORK CINCINNATI TORONTO LONDON MELBOURNE

NUS CORPORATION

INTERNAL CORRESPONDENCE

C-584-09-86-107

TO: STAFF

DATE: SEPTEMBER 26, 1986

FROM: RICHARD PAGANO, STEVE MAYBURY AND LAURIE GNEIDING

COPIES:

SUBJECT: TOXICITY/PERSISTENCE

The following table can be an aid in determining toxicity and persistence for future HRS models.

We have also constructed a booklet containing the above table and copies of all HSL compounds available in SAX. The booklet will be stored in the bookcase along with the SAX manual.

RP/SM/LG/ci

Reviewed and Approved J. B Taylor

Toxicity/Persistence for soil and water pathways

( ) = Values determined using NUS biodegradability criteria

	Volatiles	Toxicity/ Persistence	Toxicity	Persistence	CAS Number
1.	Chloromethane	9	1	2	74-87-3
2.	Bromomethane	15	2	3	74-83-9
3.	Vinyl Chloride	15	3	2	75-01-4
4.	Chloroethane	12	2	2	75-00-3
5.	Methylene Chloride	12	3	1	75-09-2
6.	Acetone	6	2	0	67-64-1
7.	Carbon Disulfide	12	3	1	75-15-0
8.	1,1-Dichloroethene	15	3	(2)	75-35-4
9.	1,1-Dichloroethane	12	3	1	75-35-3
10.	trans-1,2-Dichloroethene	12	1	3	156-60-5
11.	Chloroform	18	3	3	67-66-3
12.	1,2-Dichloroethane	12	2	2	107-06-2
13.	2-Butanone	6	3	0	78-93-3
14.	1,1,1-Trichloroethane	12	2	2	71-55-6
15.	Carbon Tetrachloride	18	3	3	56-23-5
16.	Vinyl Acetate	(9)	2	(1)	108-05-4
17.	Bromodichloromethane	15	2	3	75-27-4
18.	1,1,2,2-Tetrachloroethane	18	3	3	79-34-5
19.	1,2-Dichloropropane	(12)	2	(12)	78-87-5
20.	trans-1,3-Dichloropropene	(15)	3	(2)	10061-02-6
21.	Trichloroethene	12	3	1	79-01-6
22.	Dibromochloromethane	15	2	3	124-48-1
23.	1,1,2-Trichloroethane	15	3	2	79-00-5
24.	Benzene	12	3	1	71-43-2
25.	cis-1,3-Dichloropropene	(15)	3	(2)	10061-01-5

	Volatiles	Toxicity/ Persistence	Toxicity	Persistence	CAS Number
26.	2-Chloroethyl Vinyl Ether	(15)	3	(2)	110-75-8
27.	Bromoform	15	3	2	75-25-2
28.	2-Hexanone	(9)	2	(1)	591-78-6
29.	4-Methyl-2-pentanone	15	3	2	108-10-1
30.	Tetrachloroethene	12	3	1	127-18-4
31.	Toluene	9	2	1	108-88-3
32.	Chlorobenzene	12	2	2	108-90-7
33.	Ethyl Benzene	9	2	1	100-41-4
34.	Styrene	9	3	0	100-42-5
35.	Total Xylenes	9	2	1	

	Semi-Volatiles	Toxicity/ Persistence	Toxicity	Persistence	CAS Number
36.	N-Nitrosodimethylamine	12	3	1	62-75-9
37.	Phenol	12	3	1	108-95-2
38.	Aniline	12	3	1	62-53-3
39.	bis(2-Chloroethyl) ether	15	3	2	111-44-4
40.	2-Chlorophenol	12	3	1	95-57-8
41.	1,3-Dichlorobenzene	(15)			541-73-1
42.	1,4-Dichlorobenzene	15	3	(2)	106-46-7
43.	Benzyl Alcohol	15	3	2	100-51-6
44.	1,2-Dichlorobenzene	(12)	2	(2)	95-50-1
45.	2-Methylphenol	12	3	1	95-48-7
46.	bis(2-Chloroisopropyl) ether	15	3	2	39638-32-9
47.	4-Methylphenol	(15)	3	(2)	106-44-5
48.	N-Nitroso-Dipropylamine	(15)	3	(2)	621-64-7
49.	Hexachloroethane	18	3	3	67-72-1
50.	Nitrobenzene	15	3	2	98-95-3
51.	Isophorone	12	2	2	78-59-1
52.	2-Nitrophenol	12	3	1	88-75-5
53.	2,4-Dimethylphenol	12	3	1	105-67-9
54.	Benzoic Acid	(12)	2	(2)	65-85-0
55.	bis(2-Chloroethoxy) methane	(15)	3	(2)	111-91-1
56.	2,4-Dichlorophenol	18	3	3	120-83-2
57.	1,2,4-Trichlorobenzene	15	2	3	120-82-1
58.	Naphthalene	9	2	1	91-20-3
59.	4-Chloroaniline	15	3	2	106-47-8
60.	Hexachlorobutadiene	18	3	3	87-68-3

	Semi-Volatiles	Toxicity/ Persistence	Toxicity	Persistence	CAS Number
61.	4-Chloro-3-methylphenol (para-chloro-meta-cresol)	(18)	3	(3)	59-50-7
62.	2-Methylnaphthalene	(9)	1	(2)	91-57-6
63.	Hexachlorocyclopentadiene	18	3	3	77-47-4
64.	2,4,6-Trichlorophenol	18	3	(3)	88-06-2
65.	2,4,5-Trichlorophenol	(18)	3	(3)	95-95-4
66.	2-Chloronaphthalene	(15)	2	3	91-58-7
67.	2-Nitroaniline	15	2	3	88-74-4
68.	Dimethyl Phthalate	(15)	3	(2)	131-11-3
69.	Acenaphthylene	18	3	3	208-96-8
70.	3-Nitroaniline	18	3	3	99-09-2
71.	Acenaphthene	9	3	0	83-32-9
72.	2,4-Dinitrophenol	(15)	3	(2)	51-28-5
73.	4-Nitrophenol	15	3	2	100-02-7
74.	Dibenzofuran	(18)			132-64-9
75.	2,4-Dinitrotoluene	(15)	3	(2)	121-14-2
76.	2,6-Dinitrotoluene	15	3	2	606-20-2
77.	Diethylphthalate	18	3	3	84-66-2
78.	4-Chlorophenyl Phenyl ether			3	7005-72-3
79.	Fluorene				86-73-7
80.	4-Nitroaniline	18	3	3	100-01-6
81.	4,6-Dinitro-2-methylphenol				534-52-1
82.	N-nitrosodiphenylamine	(15)	3	(2)	86-30-6
83.	4-Bromophenyl Phenyl ether			3	101-55-3
84.	Hexachlorobenzene	15	3	2	118-74-1
85.	Pentachlorophenol	18	3	3	87-86-5

Semi-Volatiles	Toxicity/ Persistence	Toxicity	Persistence	CAS Number
86. Phenanthrene	15	3	(2)	85-01-8
87. Anthracene	15	3	(2)	120-12-7
88. Di-n-butylphthalate	18	3	3	84-74-2
89. Fluoranthene	18	3	3	206-44-0
90. Benzidine	18	3	3	92-87-5
91. Pyrene	(18)	3	(3)	129-00-0
92. Butyl Benzyl Phthalate	15	2	3	85-68-7
93. 3,3'-Dichlorobenzidine	18	3	3	91-94-1
94. Benzo(a)anthracene	18	3	3	56-55-3
95. bis(2-ethylhexyl)phthalate	12	3	(1)	117-81-7
96. Chrysene	18	3	3	218-01-9
97. Di-n-octyl Phthalate	18	3	3	117-84-0
98. Benzo(b)fluoranthene	18	3	3	205-99-2
99. Benzo(k)fluoranthene	18	3	3	207-08-9
100. Benzo(a)pyrene	18	3	3	50-32-8
101. Indeno(1,2,3-cd)pyrene	18	3	3	193-39-5
102. Dibenz(a,h)anthracene	18	3	3	53-70-3
103. Benzo(g,h,i)perylene	18	3	3	191-24-2

Pesticides	Toxicity/ Persistence	Toxicity	Persistence	CAS Number
104. alpha-BHC	18	3	3	319-84-6
105 beta-BHC	18	3	3	319-85-7
106. delta-BHC	15	2	3	319-86-8
107. gamma-BHC (Lindane)	18	3	3	58-89-9
108. Heptachlor	18	3	3	76-44-8
109. Aldrin	18	3	3	309-00-2
110. Heptachlor Epoxide	18	3	3	1024-57-3
111. Endosulfan I	18	3	3	959-98-8
112. Dieldrin	18	3	3	60-57-1
113. 4,4'-DDE	18	3	3	72-55-9
114. Endrin	18	3	3	72-20-8
115. Endosulfan II	18	3	3	33213-65-9
116. 4,4'-DDD	18	3	3	72-54-8
117. Endrin Aldehyde	18	3	3	7421-93-4
118. Endosulfan Sulfate	18	3	3	1031-07-8
119. 4,4'-DDT	18	3	3	50-29-3
120. Endrin Ketone	18	3	3	53494-70-5
121. Methoxychlor	18	3	3	72-43-5
122. Chlordane	18	3	3	57-74-9
123. Toxaphene	18	3	3	8001-35-2
124. AROCLOR-1016	15	2	3	12674-11-2
125. AROCLOR-1221	15	2	3	11104-28-2
126. AROCLOR-1232	15	2	3	11141-16-5
127 AROCLOR-1242	18	3	3	53469-21-9
128. AROCLOR-1248	18	3	3	12672-29-6
129. AROCLOR-1254	18	3	3	11097-69-1
130. AROCLOR-1260	18	3	3	11096-82-5

	Pesticides	Toxicity/ Persistence	Toxicity	Persistence
1.	Aluminum			3
2.	Antimony	18	3	3
3.	Arsenic	18	3	3
4.	Barium	18	3	3
5.	Beryllium	18	3	3
6.	Cadmium	18	3	3
7.	Calcium			
8.	Chromium	18	3	3
9.	Cobalt			
10.	Copper	18	3	3
11.	Iron	18	3	3
12.	Lead	18	3	3
13.	Magnesium	15	3	2
14.	Manganese	18	3	3
15.	Mercury	18	3	3
16.	Nickel	18	3	3
17.	Potassium			3
18.	Selenium	15	3	2
19.	Silver	18	3	3
20.	Sodium	18	3	3
21.	Thallium	18	3	3
22.	Tin	18	3	3
23.	Vanadium	18	3	3
24.	Zinc	18	3	3

Cyanide

REFERENCE #11

NUS CORPORATION TELECON NOTE

CONTROL NO:	DATE:	TIME:
02-8706-13	6/25/87	6/25/87

DISTRIBUTION:

~~02~~ FILE: U.S. Pipe & Foundry

BETWEEN:	OF:	PHONE:
Joe Fahey	Burlington City Water Works	(609) 386-0307

AND: C. LoBue (NUS)

DISCUSSION:

~~10546~~ CCB

The surface water intake on the Delaware River near Burlington Island services the entire area of Burlington City Proper, population 10546

Charles LoBue

ACTION ITEMS:

NUS 067 REVISED 0581

REFERENCE #12

0306A

G.U.

Charles Maack, THROUGH W. Malloy and A. Valencia

John M. Beaulieu, ECI-II 609 984-3661

Inspection of US Pipe and Foundry Co. JAN 27 1984
Burlington City, Burlington County

Ref: Response to complaint #23, logged by Central Region Enforcement

On September 20, 1983 the writer visited the US Pipe and Foundry Company located on East Pearl Street, Burlington City. The purpose of the visit was to investigate a possible unpermitted discharge to the Delaware River from the above named facility.

At the facility the writer was directed to the Plant Engineer, Paul Waxmonsky. Mr. Waxmonsky advised that the US Pipe and Foundry Company was divided into two Divisions, the Industrial Products Division, and the Pipe Products Division. We started the inspection with the Industrial Products area and were escorted by Irv Shrager, Engineer In-Charge. During the inspection the writer observed several discharges. The first was a storm water runoff which may be contaminated from different sources. In this area drums of solvent cleaner and degreaser were located outside of the building facing the railroad. This area was saturated with an oily substance.

This same area also contains four induction furnace units where most of the cooling water is used. This system has a cooling tower and the flow from this tower is partially recirculated through coils to the induction furnace. When the ambient temperature exceeds 86°F the cooling tower is not fully effective; and a portion of flow is wasted to the storm drain system and a thermal discharge is sent to the Delaware River. Additives of this cooling water are ESCO Process Chemicals, consisting of: CWT - BB 426, 436 Carbamate and CWT AT 39 FE Alkaline. The flow went to a manhole located between the "wash and locker building" and the "works" office and is approximately 40 feet from the corner of the said building. This manhole has a square lid and frame, and was sampled by the Company in order to obtain information to renew the permit (attached for your information is a copy of Century Environmental Testing Lab's report of samples taken from this location on August 11, 1983.

The actual outfall to the river was extremely hard to get to because of large piles of furnace waste, heavy vegetation, and also because the property line has a high chain link fence. Because of the above, the outfall was never located. The writer then visited the Pipe Products Division with Paul Waxmonsky.

1

The Pipe Products facility had a treatment system for product waste and the treated effluent is recirculated and not discharged. Application has been made to the DEP for a permit to discharge to ground water because of an unlined settling lagoon that is part of this treatment system. Attached for your information is a diagram drawn by Paul Waxmunsky showing the flow pattern of this system. Noted at this location was poor housekeeping around the waste treatment area and also within the production area which could contribute to the contamination of storm water runoff to the river. The solids (sludge) accumulated at this area are partially drained and taken to a company owned landfill on-site, which is permitted by the Division of Waste Management. This landfill is located on the part of the property that is in Burlington Twp.

Two monitoring wells were also noted at this site and are designated on the drawing as MP-1 and MP-2. These wells are below ground level with a valve box cover for protection. A third monitoring well is located behind the production facility and not readily accessible due to finished pipe product stored above it. Well samples were not obtained during this inspection. The waste is mostly cement and some sand used in the product to cement line ductile iron pipe, which requires a large volume of water. The overflow is reported to be directed to the Burlington City sanitary sewer system.

The figure 1 attachment Map shows the location of the US Pipe and Foundry Co., the cement lining washwater settling basin and the landfill referred to in this report.

The map in attachment #4 shows locations of three outfall discharges which where included in the original permit.

In conclusion : A review of our documents and NPDES files indicates that all discharges to the surface water of the Delaware River were reported to be connected to the sanitary sewer or ceased by November 11, 1976 and the NPDES permit was allowed to expire. Actually the discharge to the river has not totally ceased. The samples were taken to obtain a permit for a heretofore unpermitted discharge to surface water.

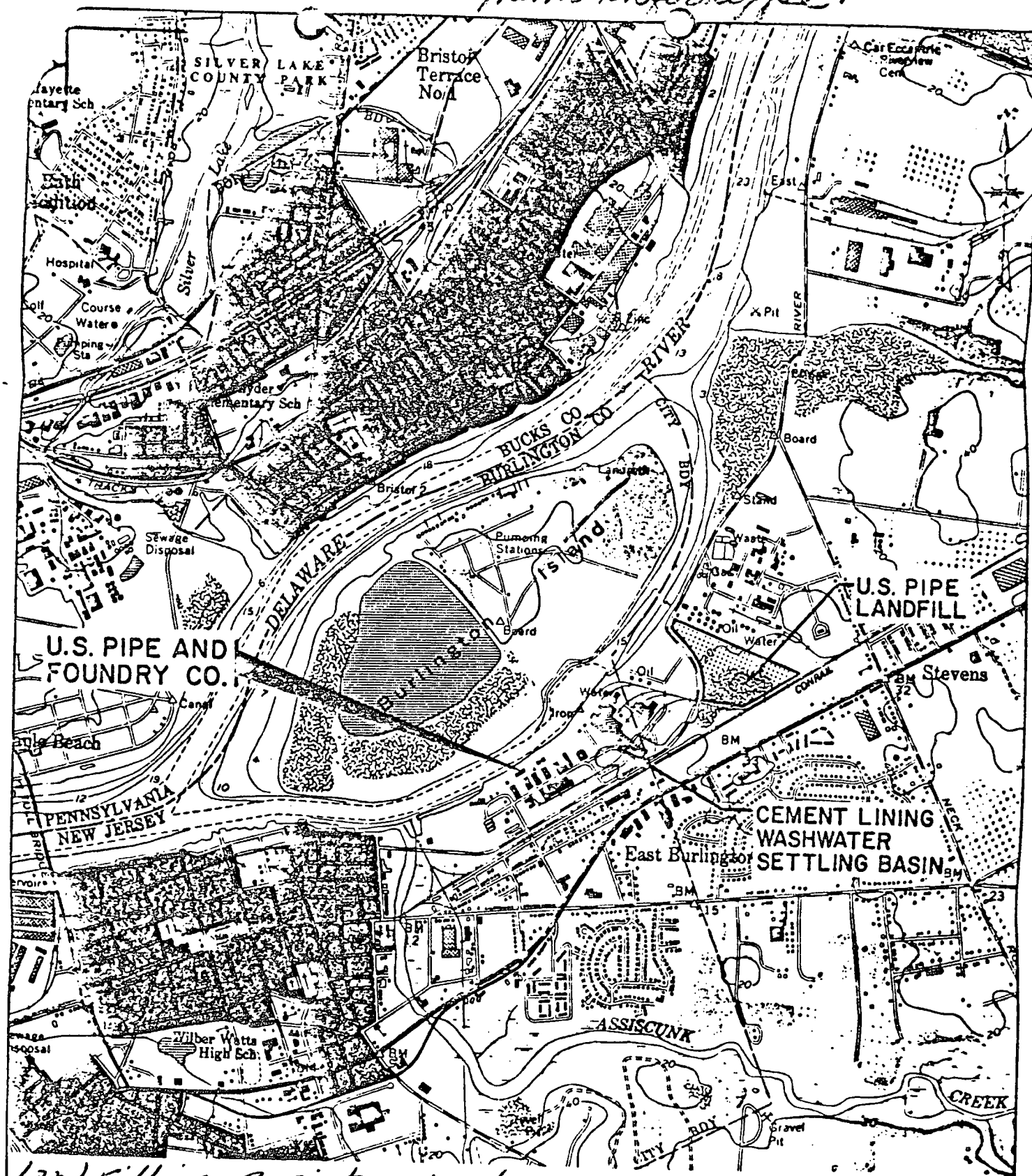
Recommendation: The Bureau of Industrial Waste Management should schedule an on-site meeting with representatives of the US Pipe and Foundry Co. to obtain full information on all waste discharged to surface and ground water from this facility, before any permits are issued.

A59:ch

cc: G. Callahan, Ground Water Permits
~~G. Fenn, Waste Management, Southern Office~~
W. Malloy
J. Beaulieu
Knack/Nunman/Region File
Division File

2

Memo. unfavorable.



Landfill is Registered w/ Division of Waste Management.

FIGURE 1

UNITED STATES PIPE AND FOUNDRY COMPANY

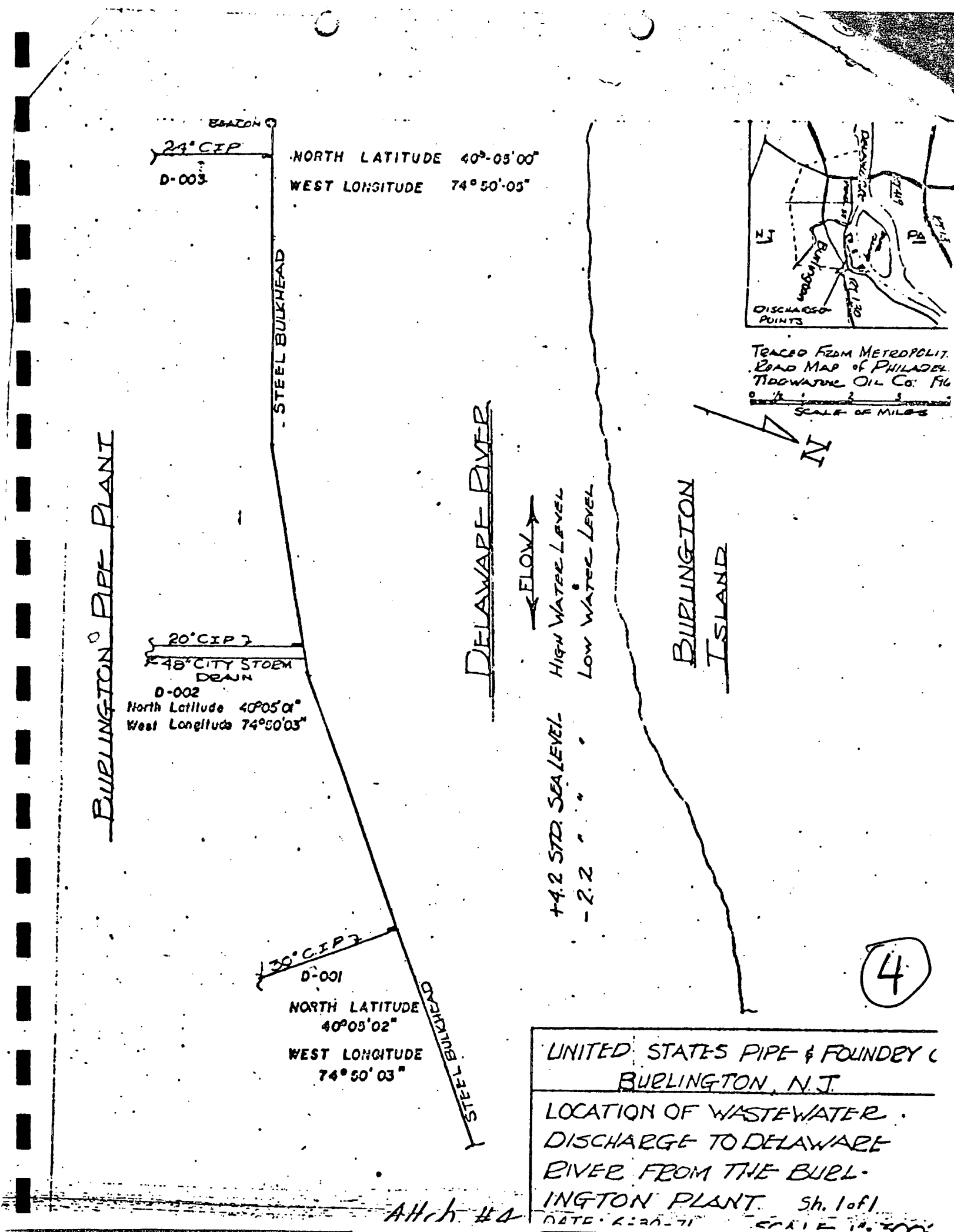
PROPOSED GROUNDWATER MONITORING PROGRAM

VICINITY MAP

SCALE: 1" = 2000'

MALCOLM PIRNIE

3



UNITED STATES PIPE & FOUNDRY C
BURLINGTON, N.J.

LOCATION OF WASTEWATER DISCHARGE TO DELAWARE RIVER FROM THE BURLINGTON PLANT Sh. 1 of 1

DATE: 6-30-71 SCALE 1" = 500'

Attch #4

GWD

UNITED STATES PIPE AND FOUNDRY COMPANY

MEMO SKETCH SHEET

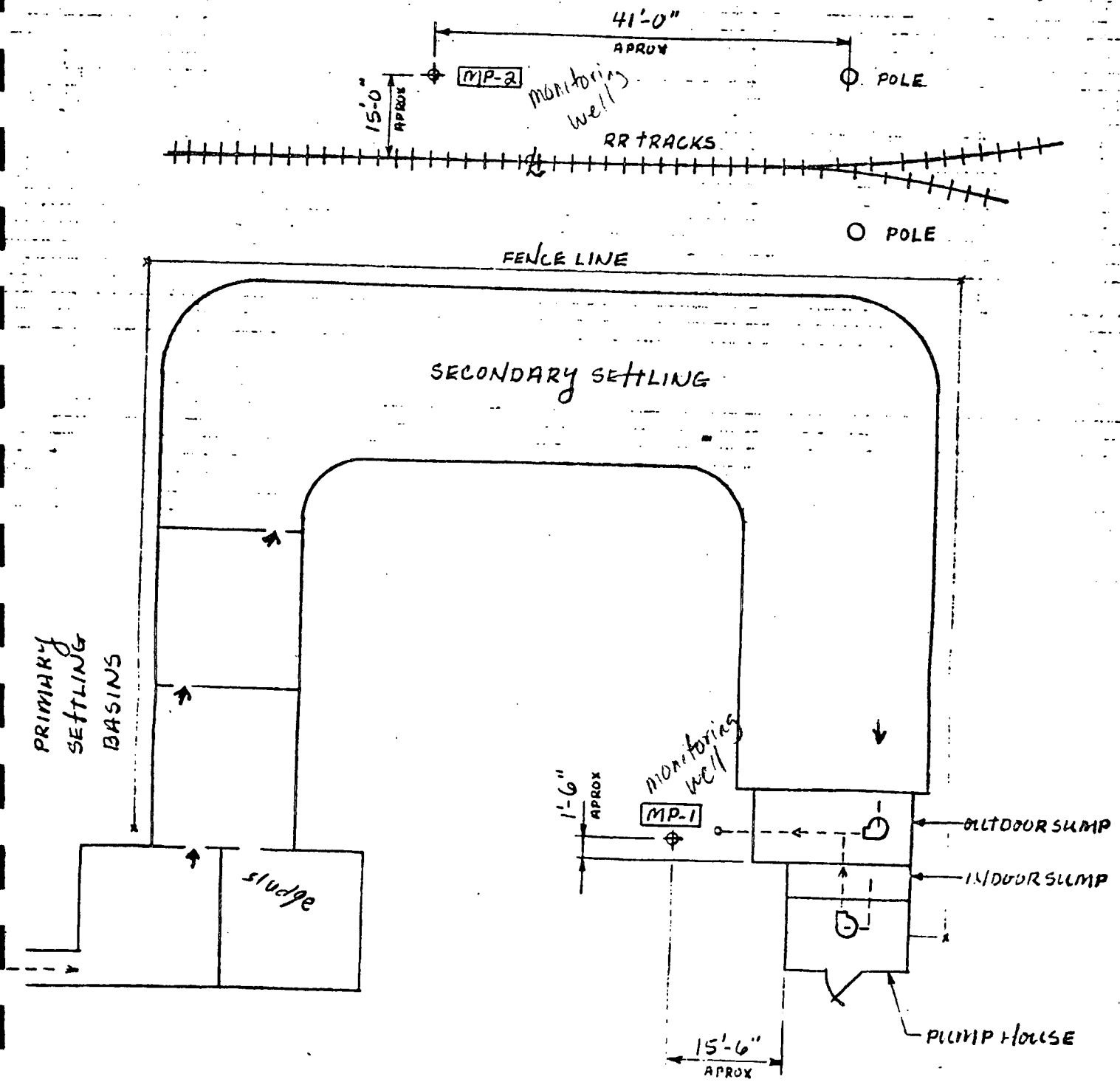
PRO Sketch No. 6062-1

Subject: MONITORING WELL LOCATIONS - C/L'g SETTLING POND

Drawn by P.W.

Checked by

Date 9/3/83



5

164—Rev. 9-62

REQUEST FOR MATERIAL

REQUEST NUMBER

PLANT

DEPARTMENT

REQUEST DATE

REQUIRED FOR PERMIT FOR WATER DISCHARGE

PURCHASE ORDER NO.

SALES ORDER NO.

PURCHASE ORDER DATE

AUTHORIZED CAPITAL JOB NO.

OTHER JOB NO.

SHOP ORDER NO.

DATE MATERIAL REQUIRED:

APPROXIMATE VALUE $

PURCHASED FROM VENDOR	VENDORS RECOMMENDED	PREVIOUS ORDER REFERENCE
	(1) CENTURY ENVIRMENTAL TESTING	NO. DATE
	(2) P.O. BOX 248 1501 GRANDVIEW AVE	
	(3) THOROFARE, NJ 08086	VENDOR 609-848-3939

TERMS	F. O. B.	SHIP VIA	DELIVERY

ITEM	QUANTITY	DESCRIPTION	UNIT	LIST PRICE	DISCOUNT
		FOR TESTING SERVICES COVERING			
		(3) THREE DISCHARGE POINTS.			
		TESTS TO BE MADE FOR:			
		BOD 5 - COD - TOC - TSS - TDS			
		NH3 (AS NITROGEN) - TEMP. - PH. - ZINC			
		CHLORINE, TOTAL RESIDUAL - OIL & GREASE -			
		SULFATE - IRON - PHOSPHORUS			
		LUMP SUM PRICE			

ACCOUNT CHARGED

EXTRA COPIES OF PURCHASE ORDER TO:

ORIGINATED BY

CHECKED BY STOREKEEPER

PLANT APPROVAL

ENGINEERING

DEPARTMENT HEAD

EXECUTIVE

6

CENTURY
Environmental Testing Labs, Inc.

ANALYSIS REPORT
NO F8696
Invoice # 2061/

CERTIFICATE OF ANALYSIS

CLIENT

U.S. Pipe and Foundry Company
East Pearl Street
Burlington, NJ 08016

LAB NUMBER: F8696

SAMPLE IDENTIFICATION: Catch Basin Manhole (8 hour compoiste)

SAMPLE RECEIVED: 8/11/83 ANALYSIS COMPLETED: 9/1/83

RESULTS (mg/L unless specified)

TEST PARAMETER	F8696			TEST PARAMETER	F8696		
[illegible]	< 5			Chlorine Demand			
[illegible]	51			Chlorine Residual	N.D.**		
[illegible]	10			Chloride (Cl)			
[illegible]				Silica			
[illegible]	< 5			Petroleum (IR)			
[illegible]				Hardness (as $CaCO_3$)			
[illegible]	157						
[illegible]							
[illegible]	7.8						
[illegible]				Aluminum			
[illegible]				Antimony			
[illegible]				Arsenic			
[illegible]				Barium			
[illegible] (mg/L LAS)				Boron			
[illegible] (Freon)	< 5			Cadmium			
Temperature	*			Calcium (Ca)			
[illegible] (N) as N)				Chromium (Total)			
Nitrogen (ammonia as N)	0.14			Chromium (Hexa)			
Nitrogen (Organic as N)				Copper			
Nitrate (N)				Iron	0.17		
Nitrate (N)				Lead			
[illegible] (P) Total	.05			Magnesium (Mg)			
[illegible] Ortho				Manganese			
[illegible]	28			Mercury			
[illegible]				Nickel			
[illegible]				Potassium			
[illegible]				Selenium			
[illegible]				Silver			
[illegible] (formula)				Sodium			
[illegible]				Tin			
[illegible]				Titanium			
[illegible]				[illegible]	0.01		
[illegible]				Molybdeium	< 0.1		

[illegible] were used for the determination
[illegible] below the limit of detection.

[illegible]: * Not valid on composite sample
** N.D. indicates non-detectable.

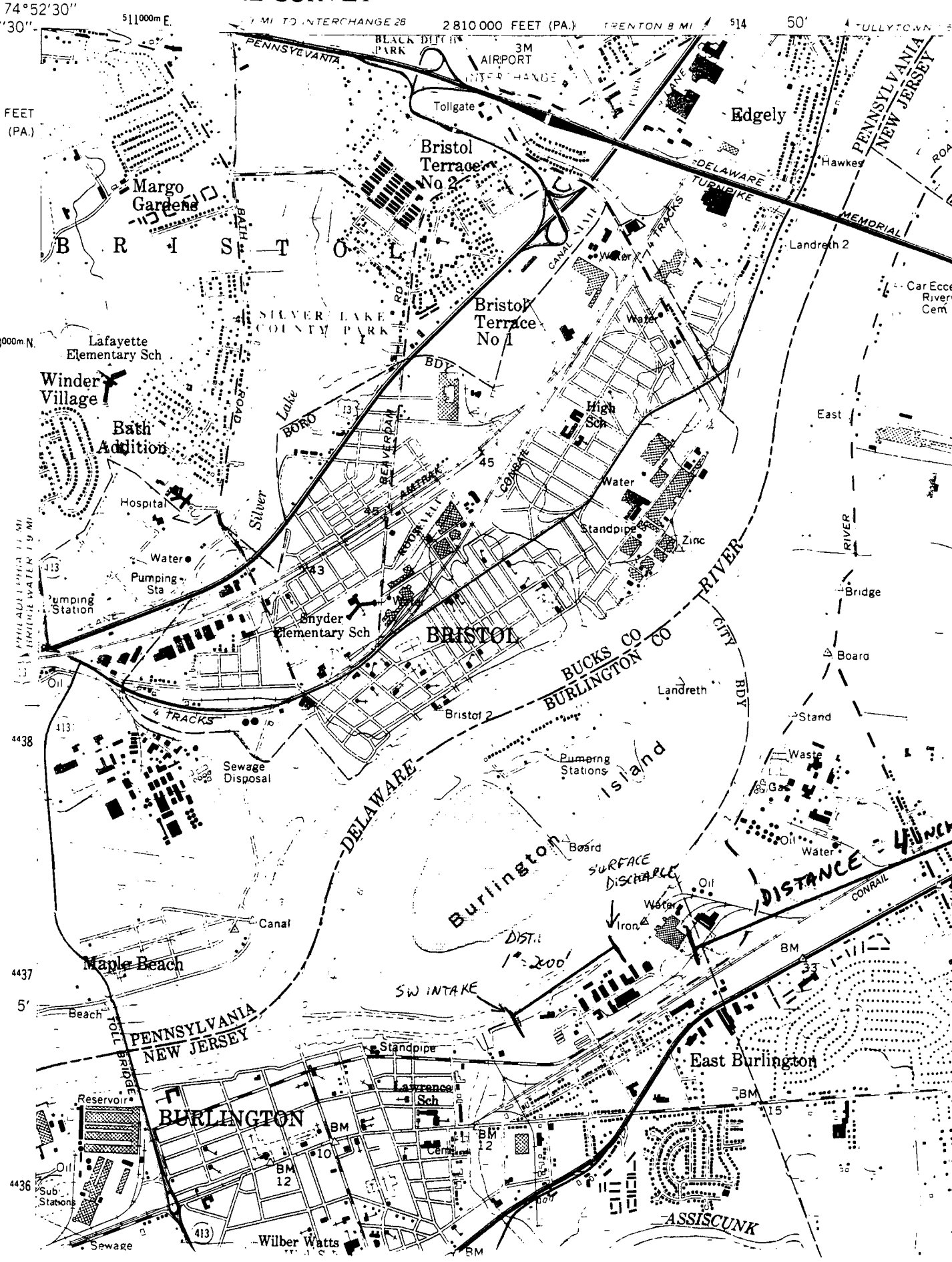
7

Reviewed by [illegible]

[illegible] 05153
[illegible]

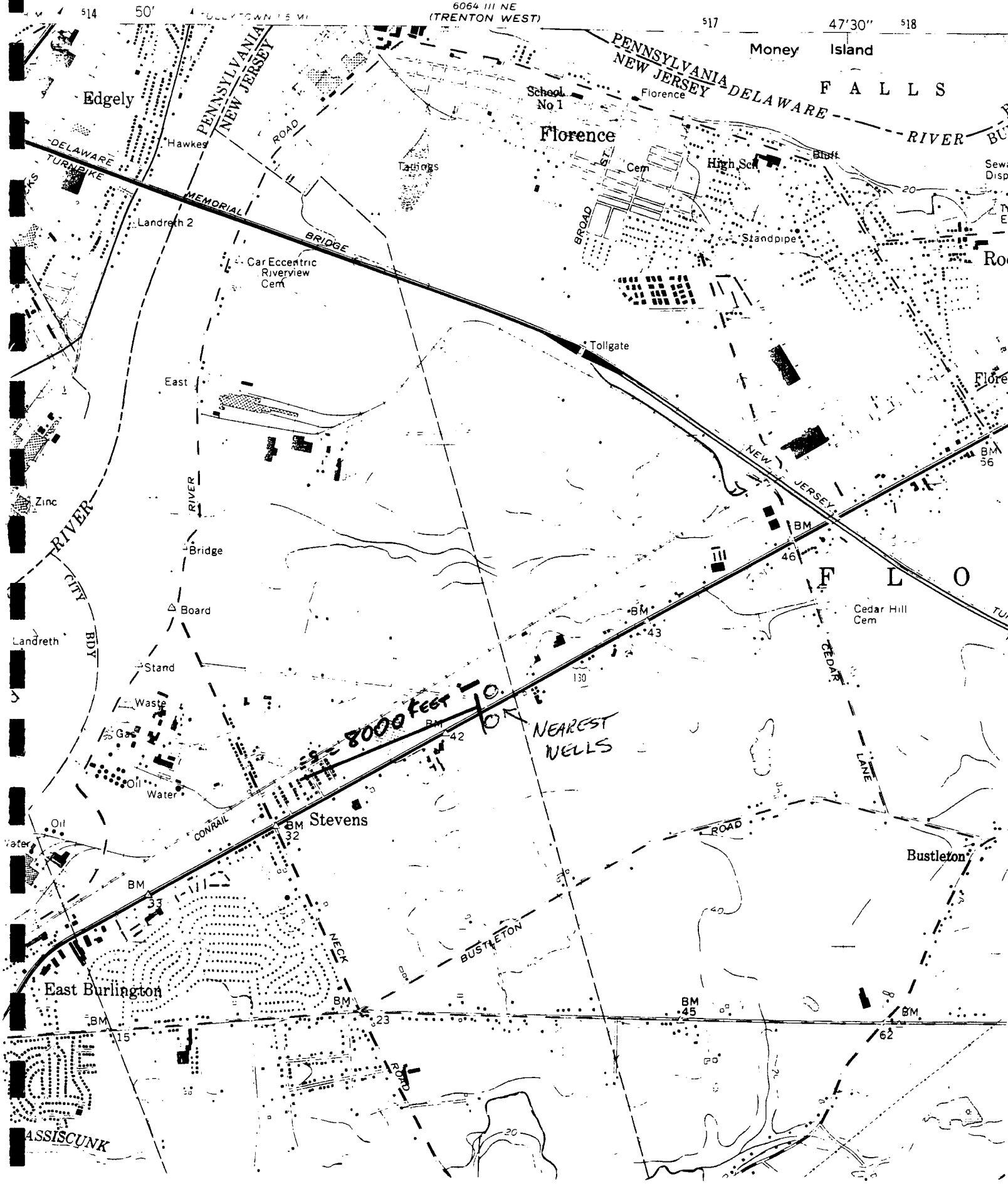
REFERENCE #13

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

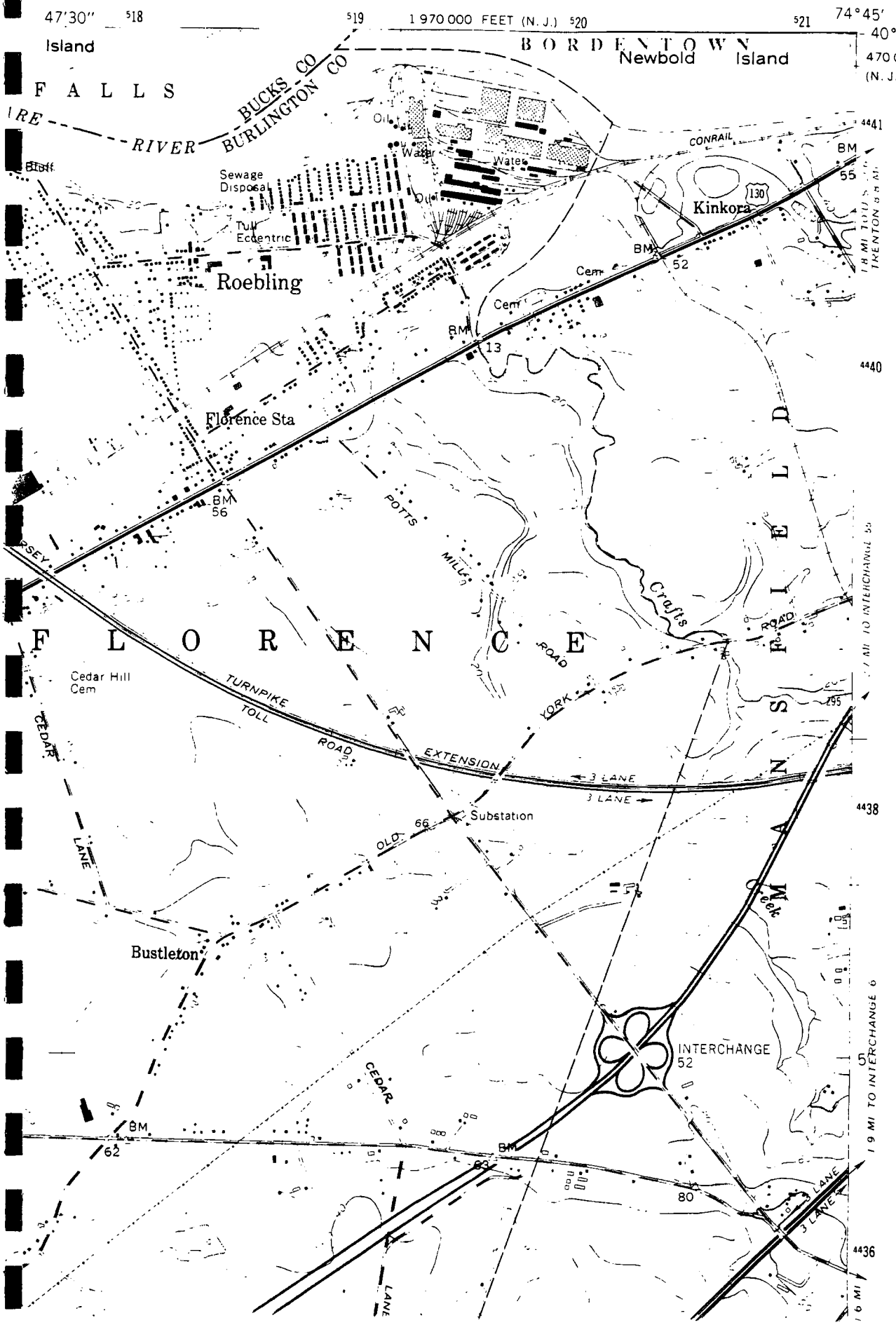


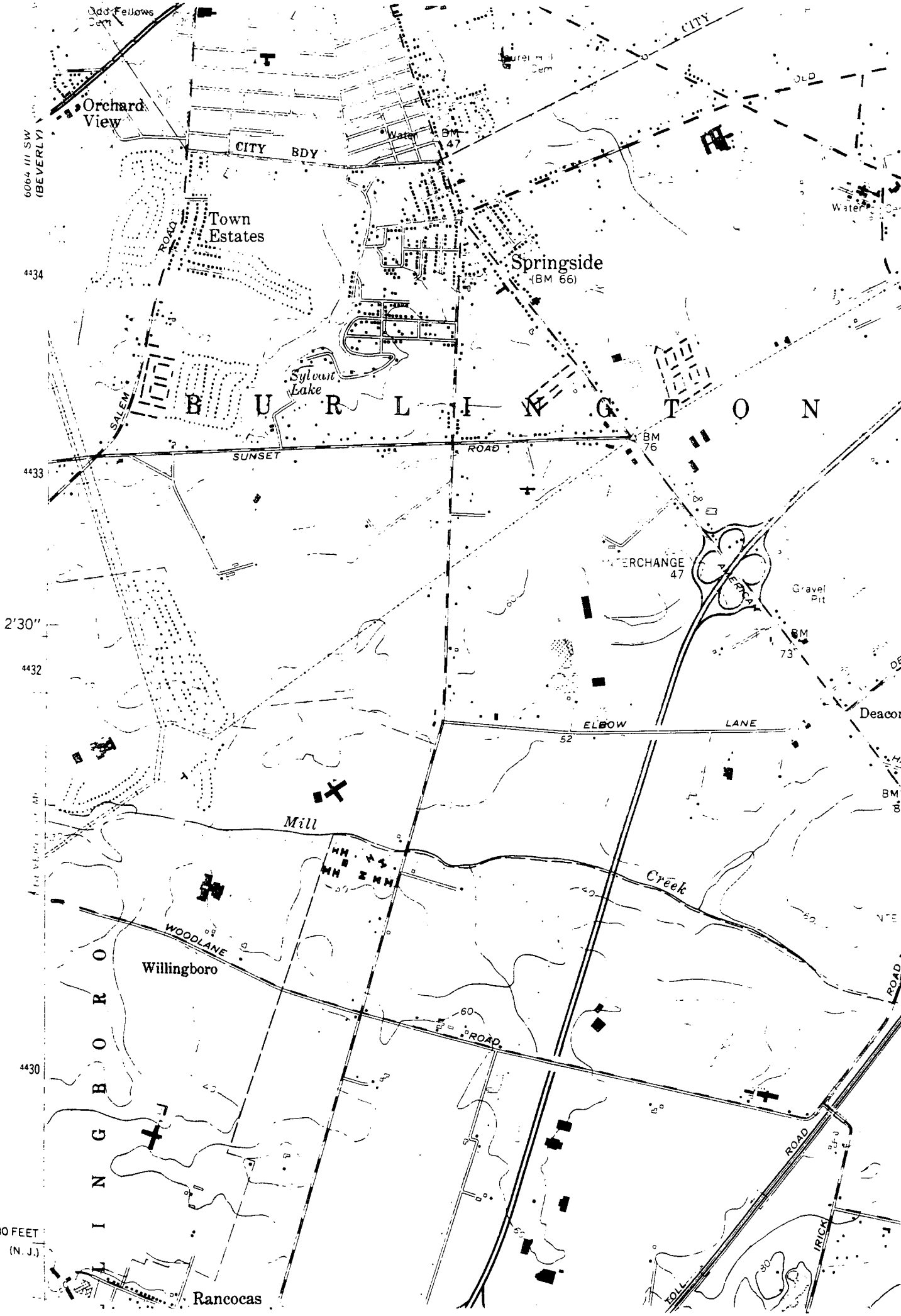
UNITED STATES
DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS

6064 III NE
(TRENTON WEST)



BRISTOL QUADRANGLE
PENNSYLVANIA-NEW JERSEY
7.5 MINUTE SERIES (TOPOGRAPHIC)




Orchard View
CITY BDY
Water
BM 47
Town Estates
Springside
(BM 66)
Sylvan Lake
BURLINGTON
SALEM
SUNSET ROAD
BM 76
INTERCHANGE 47
Gravel Pit
BM 73
ELBOW LANE
52
Mill Creek
WOODLANE ROAD
Willingboro
60
ROAD
TOLL
IRICK
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4434
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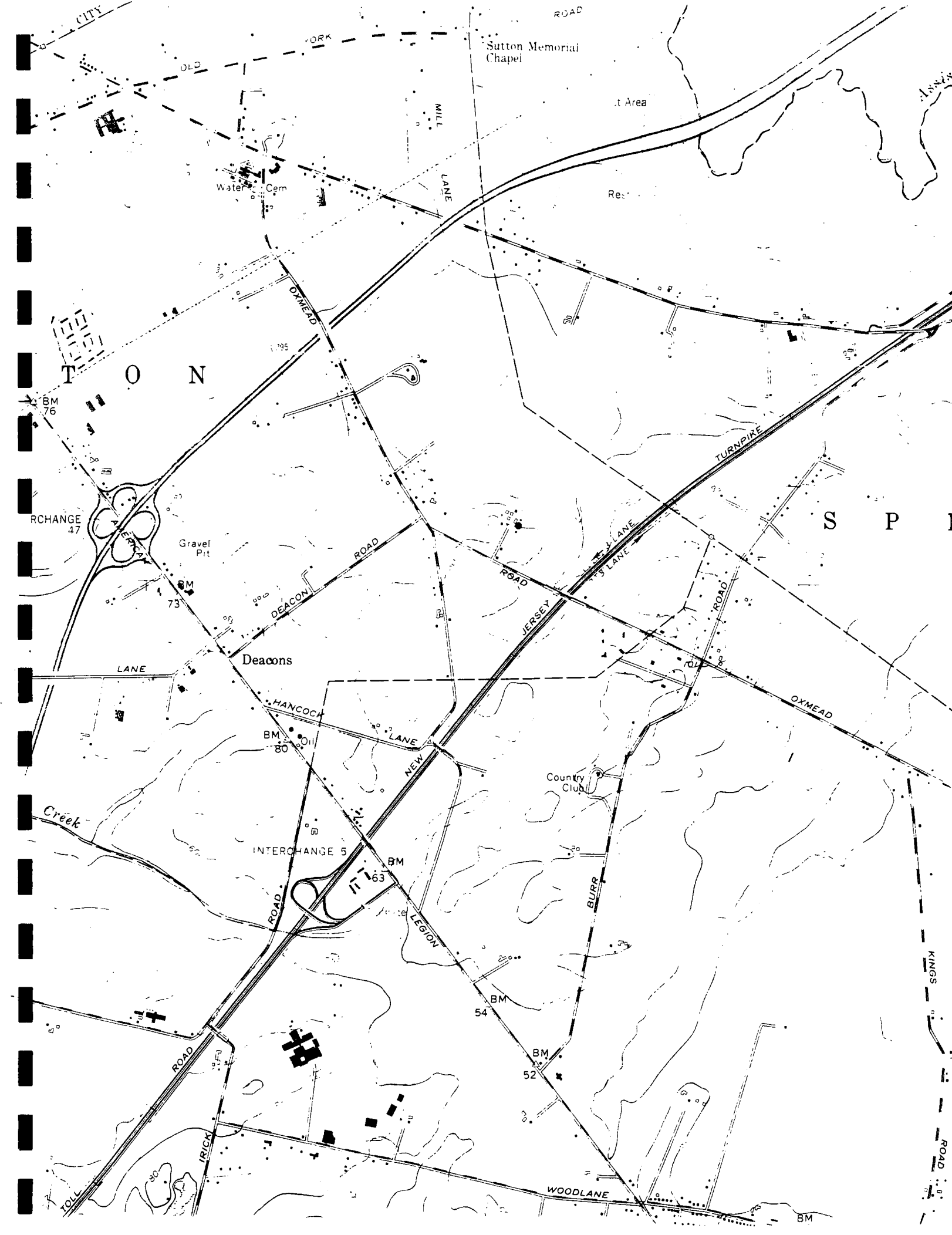
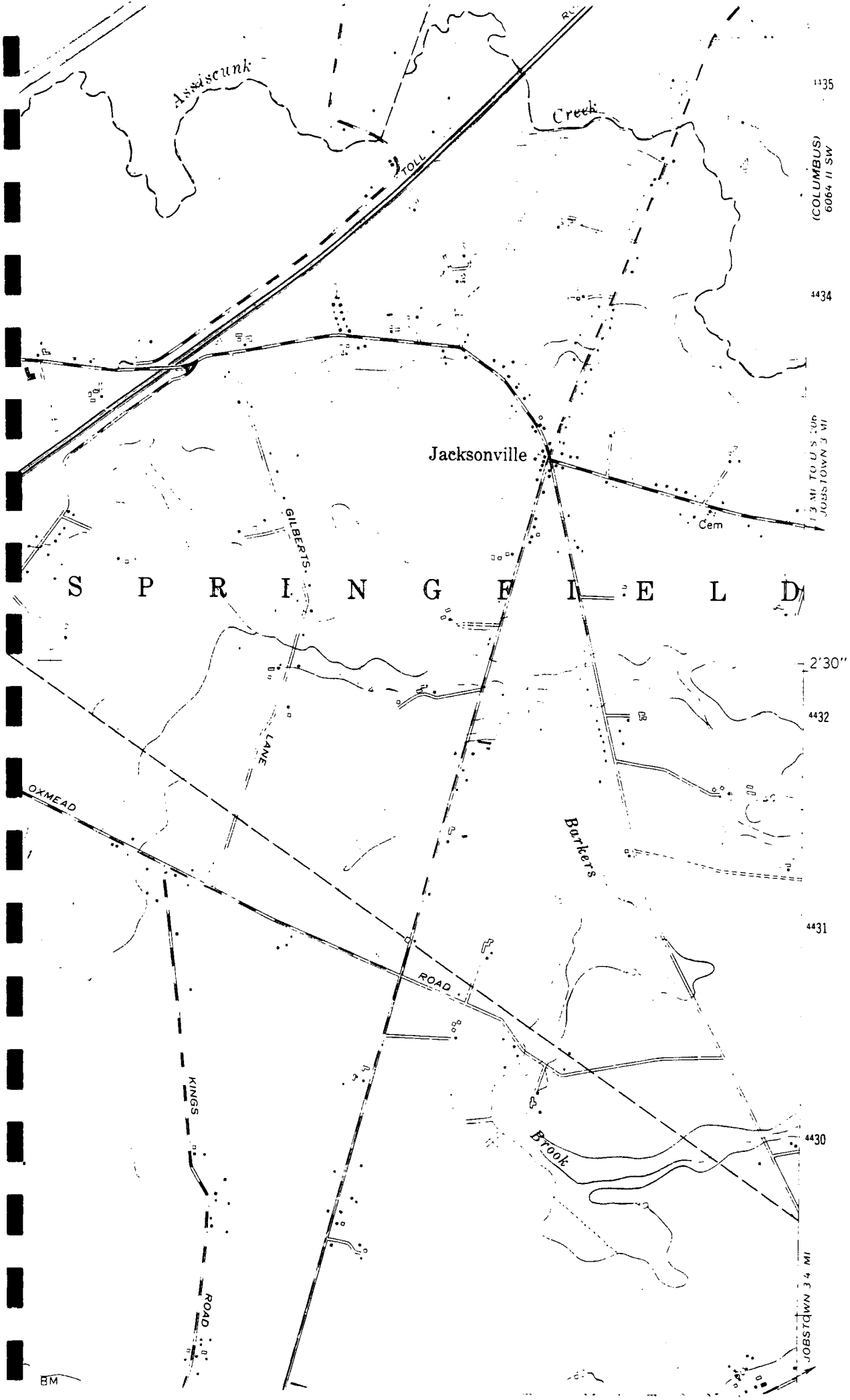
2'30"
430 000 FEET
(N. J.)
6064 III SW
(BEVERLY)


CITY
OLD
YORK
ROAD
Sutton Memorial Chapel
MILL
LANE
Water
Cem
OXMEAD
T O N
BM 76
RCHANGE 47
Gravel Pit
BM 73
DEACON
ROAD
Deacons
LANE
HANCOCK
LANE
BM 80
Oil
NEW
JERSEY
ROAD
TURNPIKE
S P
OXMEAD
Country Club
Creek
INTERCHANGE 5
BM 63
ROAD
LEGION
BURR
BM 54
BM 52
KINGS
ROAD
ROAD
IRICK
TOLL
WOODLANE
BM


Assiscunk
Creek
TOLL
Jacksonville
Cem
GILBERTS
LANE
S P R I N G F I E L D
OXMEAD
ROAD
Barkers
Brook
KINGS
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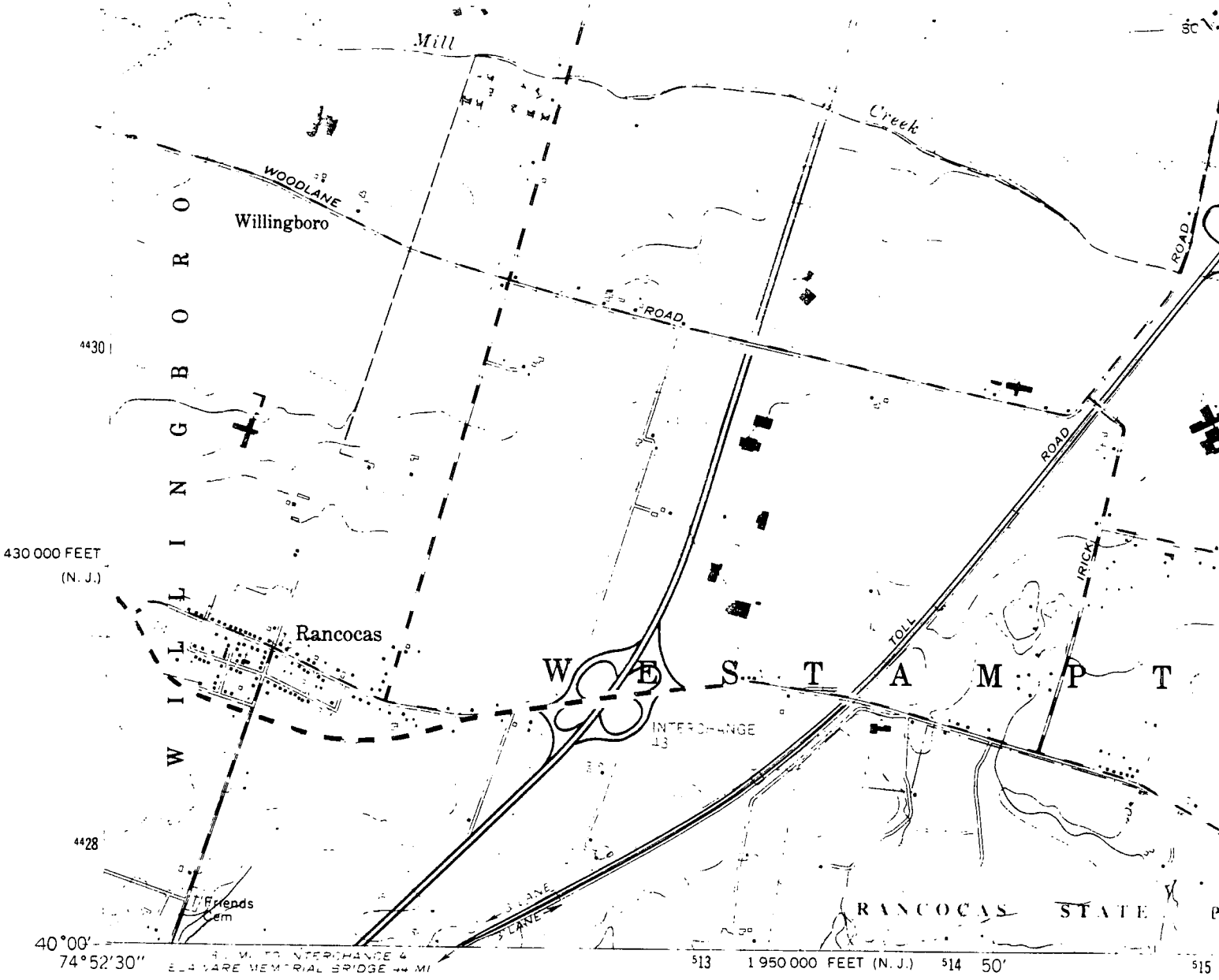
BM
4435
4434
4432
4431
4430
2'30"
(COLUMBUS)
6064 II SW
JOBSTOWN 3 MI



Mapped by the Defense Mapping Agency
Edited and published by the Geological Survey
Control by NOS/NOAA, USCE, and New Jersey Geodetic Survey
Topography by photogrammetric methods from aerial photographs taken 1942. Field checked 1943
Culture revised by the Geological Survey 1955
Hydrography compiled from NOS chart 296 (1954)
This information is not intended for navigational purposes
Polyconic projection. 10,000-foot grids based on New Jersey coordinate system and Pennsylvania coordinate system, south zone
1000-meter Universal Transverse Mercator grid ticks, zone 18, shown in blue. 1927 North American Datum. To place on the predicted North American Datum 1983 move the projection lines 6 meters south and 32 meters west as shown by dashed corner ticks
Red tint indicates areas in which only landmark buildings are shown
There may be private inholdings within the boundaries of the National or State reservations shown on this map

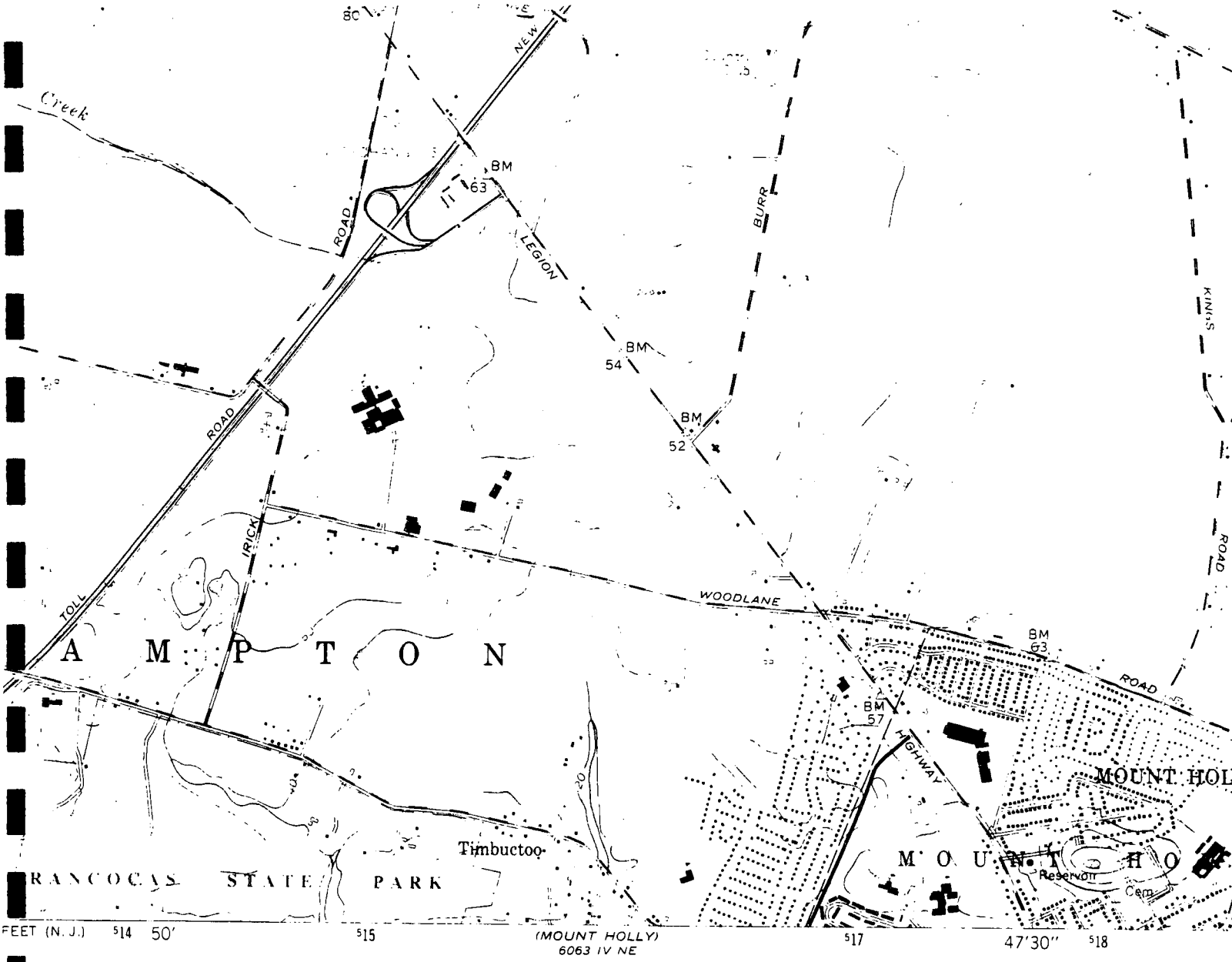
MN
GN
11½°
204 MILS
0°07'
2 MILS

UTM GRID AND 1981 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

DEPTH C

SHORELIN

FOR SA
A FOLDER DESC



SCALE 1:24 000

½ 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

.5 0 1 KILOMETER

CONTOUR INTERVAL 20 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929
DEPTH CURVES AND SOUNDINGS IN FEET—DATUM IS MEAN LOW WATER
THE RELATIONSHIP BETWEEN THE TWO DATUMS IS VARIABLE
SHORELINE SHOWN REPRESENTS THE APPROXIMATE LINE OF MEAN HIGH WATER
THE MEAN RANGE OF TIDE IS 5.9 FEET

AGNETIC NORTH
ER OF SHEET

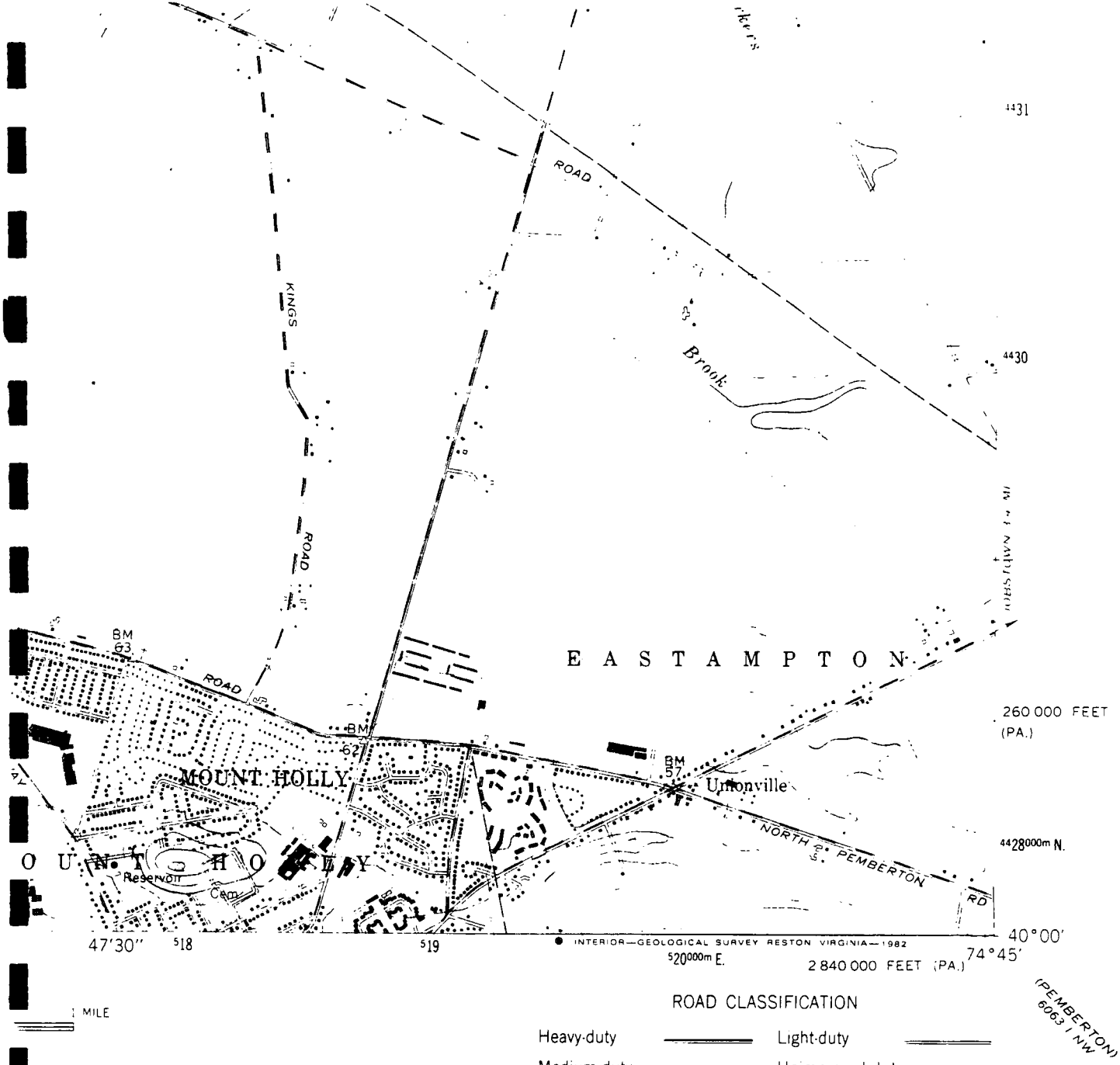
NEW JERSEY

QUADRANGLE

Revisions shown in
from aerial photograph
This information not

Purple tint indicates e

FOR SALE BY U. S. GEOLOGICAL SURVEY, RESTON, VIRGINIA 22092
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST



ROAD CLASSIFICATION

Heavy-duty — Light-duty

Medium-duty — Unimproved dirt

U. S. Route — State Route

QUADRANGLE LOCATION

BRISTOL, PA.–N. J.

N4000–W7445/7.5

1955

PHOTOREVISED 1981

DMA 6064 III SE–SERIES V822

Revisions shown in purple compiled by the Geological Survey from aerial photographs taken 1976 and other source data. This information not field checked. Map edited 1981

Purple tint indicates extension of urban areas

REFERENCE #14

NUS CORPORATION TELECON NOTE

CONTROL NO:	DATE:	TIME:
02-8706-13	6/25/87	1415

DISTRIBUTION:

FILE: U.S. Pipe and Foundry

BETWEEN:	OF:	PHONE:
Art Lupine	NJ. Division of Freshwater Fisheries	(201) 236-2118

AND: C. LaBue (NUS)

DISCUSSION:

- NJ considers the ~~area~~ (CLB) of the Delaware River near U.S. Pipe and Foundry to be a habitat for the Shortnose sturgeon. This area is a ~~run~~ run for its migration north to Scudders Falls where they spawn.

- This is also an important area for feeding, spawning and nursery for Shad, herring and Striped Bass.

Charles LaBue

ACTION ITEMS:

NUS 067 REVISED 0581

REFERENCE #15

SOIL SURVEY

Burlington County New Jersey

UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service
In cooperation with
NEW JERSEY AGRICULTURAL EXPERIMENT STATION
Issued October 1971

GUIDE TO MAPPING UNITS.--Continued

Map symbol	Mapping unit	Described on page	Capability unit	Woodland suitability group
NcA	Nixonton loamy fine sand, 0 to 2 percent slopes	39	IIw-15	2w1
NcB	Nixonton loamy fine sand, 2 to 5 percent slopes	39	IIw-15	2w1
Pa	Pasquotank fine sandy loam	40	IIIw-20	3w2
PbA	Pemberton sand, 0 to 5 percent slopes	41	IIIw-15	3s1
PcA	Pemberton sand, thick surface, 0 to 5 percent slopes	41	IIIw-16	3s1
Pt	Pits, sand and gravel	41	-----	---
Pu	Pits, clay and marl	41	-----	---
Pv	Pocomoke fine sandy loam	42	IIIw-24	3w2
Se	Sandy land, ironstone	42	VIIs-8	3s1
SfB	Sassafras loamy sand, 0 to 5 percent slopes	43	IIs-6	2o1
SgA	Sassafras fine sandy loam, 0 to 2 percent slopes	44	I-5	2o1
SgB	Sassafras fine sandy loam, 2 to 5 percent slopes	44	IIe-5	2o1
SgC	Sassafras fine sandy loam, 5 to 10 percent slopes	44	IIIe-5	2o1
ShA	Sassafras fine sandy loam, clayey substratum, 0 to 2 percent slopes	44	I-5	2o1
ShB	Sassafras fine sandy loam, clayey substratum, 2 to 5 percent slopes	44	IIe-5	2o1
Sk	Sassafras-Urban land complex	45	-----	---
Sm	Sassafras-Urban land complex, clayey substrata	45	-----	---
Sn	Shrewsbury fine sandy loam	46	IIIw-21	3w2
So	Shrewsbury fine sandy loam, clayey substratum	46	IIIw-21	3w2
Sp	Shrewsbury loam	46	IIIw-20	3w2
Sv	Shrewsbury sandy clay loam, truncated	46	IIIw-20	3w2
Sx	Shrewsbury fine sandy loam, ironstone variant	47	IVw-21	3w2
TsB	Tinton sand, 0 to 5 percent slopes	47	IIIs-6	3s1
TsC	Tinton sand, 5 to 10 percent slopes	48	IVs-7	3s1
TtB	Tinton sand, thick surface, 0 to 5 percent slopes	48	IVs-7	3s1
Ug	Urban land, sandy	48	-----	---
Ut	Urban land, clayey	48	-----	---
Uv	Urban land, sandy over clayey	48	-----	---
WaA	Westphalia loamy fine sand, 0 to 2 percent slopes	49	IIs-6	2o1
WaB	Westphalia loamy fine sand, 2 to 5 percent slopes	49	IIs-6	2o1
WdA	Westphalia fine sandy loam, 0 to 2 percent slopes	49	I-5	2o1
WdB	Westphalia fine sandy loam, 2 to 5 percent slopes	49	IIe-5	2o1
WeB	Woodmansie sand, 0 to 5 percent slopes	50	IVs-8	4s1
WeC	Woodmansie sand, 5 to 10 percent slopes	50	IVs-8	4s1
WgB	Woodmansie sand, firm substratum, 2 to 5 percent slopes	50	IVs-8	4s1
WhB	Woodmansie sand, loamy substratum, 0 to 5 percent slopes	50	IVs-8	4s1
WkA	Woodstown loamy sand, 0 to 2 percent slopes	51	IIIw-15	2w1
WlA	Woodstown loamy sand, loamy substratum, 0 to 2 percent slopes	51	IIIw-15	2w1
WmA	Woodstown fine sandy loam, 0 to 2 percent slopes	51	IIw-14	2w1
WmB	Woodstown fine sandy loam, 2 to 5 percent slopes	52	IIw-14	2w1
WnA	Woodstown fine sandy loam, clayey substratum, 0 to 2 percent slopes	52	IIw-14	2w1
WnB	Woodstown fine sandy loam, clayey substratum, 2 to 5 percent slopes	52	IIw-14	2w1

Photo base from 1963 aerial photographs. 5,000 foot grid ticks based on New Jersey plane coordinate system. 1927 North American datum.

BURLINGTON COUNTY, NEW JERSEY NO. 7

pose. (Capability unit IIIs–6; woodland suitability group 3s1)

Tinton sand, 5 to 10 percent slopes (TsC).—Erosion is a hazard on this soil. Its profile is similar to that described as typical for the series. Included with this soil in mapping are small areas of Freehold loamy sand.

Where it is farmed, this soil needs to be protected from water erosion. The use of cover crops and contour farming are effective erosion control practices. (Capability unit IVs–7; woodland suitability group 3s1)

Tinton sand, thick surface, 0 to 5 percent slopes (TtB).—Except that it has a combined surface and subsurface layer about 35 inches thick, this soil has a profile similar to that described as typical for the series. The subsoil is about 14 inches thick in most places. Included with this soil in mapping are about 200 acres on the south side of Rancocas Creek near Highway 38 where the subsoil was removed 30 to 50 years ago to be used as molding sand. Large areas were left rough and had many piles of sand. The mounds, though somewhat rounded on top, are still visible. All of these areas have reverted to woodland and support stands of Virginia pine.

Although it is too droughty and infertile to be used extensively for crops, this soil is best suited to deep-rooted perennials such as grapes or peaches. Where it is cleared, this soil is subject to soil blowing. (Capability unit IVs–7; woodland suitability group 3s1)

Urban Land

This land type consists of cut and fill areas, most of which have been developed for residential, commercial, or industrial use or for multilane highways. During development, the original soil horizon was destroyed in at least 70 percent of the area.

Urban land, sandy (Ug).—Most of this land is developed or awaiting development. The soil has slight limitations for industrial or commercial use, moderate limitations for woodland or wildlife use, and severe limitations for farming and dug ponds.

Areas of both cut and fill are moderately or rapidly permeable. Where the original soil was removed and the substratum exposed, the material remaining is rapidly permeable and extremely low in organic-matter content and fertility. Where the material was moved from one area to another, permeability is generally moderate, but it is slow in places because of compaction by heavy equipment.

In Willingboro, the topsoil was stockpiled, roads were constructed, and utility lines were installed in excavated ditches. The landscape was then reshaped according to design and the topsoil replaced.

In a few small areas several feet of the original soil were removed and the area was smoothed for farming again. In these places, yields are about one-half of what they had been. (Capability and woodland suitability unclassified)

Urban land, clayey (Ut).—Fill areas of this land generally contain brown clayey material, most of which was obtained from areas that had been farmed and limed. A grass cover generally is not difficult to establish on fill areas.

Cut areas generally have exposed dark-gray clayey beds of the Merchantville or Woodbury clay Formations. This material is low in organic-matter content, is slowly permeable, is extremely acid, and is subject to severe frost heaving. Any kind of plant cover is difficult to establish.

This land type has severe limitations to use for wildlife ponds. (Capability and woodland suitability unclassified)

Urban land, sandy over clayey (Uv).—This land consisted of sandy layers that were 1 to 2 feet deep over clayey beds until the original profile was destroyed in much of the area. Where the sandy part remains, it is moderately permeable in most places and slowly permeable where it has been compacted by equipment. The underlying clayey material is slowly permeable. In places water is perched over the clayey material long enough to wet the basements. Where the remaining sandy material is thin, frost-free fill may be needed before paving the area.

In Willingboro, the sandy upper part of this land has been moved and the landscape reshaped. Where the sandy material has been removed, the clayey material is now at the surface. Because it is sticky when wet and hard when dry, a vegetative cover is difficult to obtain. (Capability and woodland suitability unclassified)

Westphalia Series

The Westphalia series consists of well-drained, nearly level or gently sloping, sandy and loamy soils. These soils formed in the thick Kirkwood marine deposit, which consisted mostly of very fine and fine sands. Some of these soils were transported by water or wind. They occur on high positions in the county.

In a typical profile, the surface layer is dark grayish-brown fine sandy loam about 10 inches thick and the subsurface layer is light olive-brown fine sandy loam about 3 inches thick. The yellowish-brown subsoil extends to a depth of 42 inches. It is very fine sandy loam in the upper 17 inches and fine sandy loam below. The substratum is stratified yellowish-brown fine sand and fine sandy loam. The sands contain small amounts of mica.

Probably because of the high percentage of uniformly fine sand, these soils are moderately slow in permeability. The available water capacity is high for the fine sandy loam and moderate for the loamy fine sand. Organic-matter content is moderate for the fine sandy loam and low for the loamy fine sand. Westphalia soils are moderately fertile.

In most places the native vegetation is a mixed hardwood forest consisting of northern red oak, southern red oak, scarlet oak, white oak, black oak, yellow-poplar, holly, beech, hickory, and scattered Virginia pine. In places yellow-poplar or beech grow in nearly pure stands. Virginia pine commonly seeds in idle fields and occupies the site for some time before the hardwoods become reestablished.

Most of this acreage has been cleared for crops. The

REFERENCE # 16

NUS CORPORATION — *TELECON NOTE*

CONTROL NO:	DATE:	TIME:
02-8706-13	6/27/87	1420

DISTRIBUTION:

FILE: U.S. Pipe and Foundry

BETWEEN:	OF:	PHONE:
Chief James Boyle	Burlington City Fire Chief	(609) 386-0060

AND: C. LoBue (NUS)

DISCUSSION:

- Does not consider U.S. Pipe and Foundry a threat for fire and/or explosion conditions

Charles LoBue

ACTION ITEMS:

NUS 067 REVISED 0581

REFERENCE #17

ENDANGERED AND THREATENED

WILDLIFE AND PLANTS

JULY 20, 1984

50 CFR 17.11 and 17.12

Department of the Interior
U.S. Fish and Wildlife Service

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
Pupfish, Ash Meadows Amargosa	*Cyprinodon nevadensis mionectes*	U.S.A. (NV)	do	E	117E, 127E, 130	17.95(e)	NA
Pupfish, Comanche Springs	*Cyprinodon elegans*	U.S.A. (Texas)	do	E	1	NA	NA
Pupfish, Devils Hole	*Cyprinodon diabolis*	U.S.A. (Nevada)	do	E	1	NA	NA
Pupfish, Leon Springs	*Cyprinodon bovinus*	U.S.A. (Texas)	do	E	102	17.95(e)	NA
Pupfish, Owens River	*Cyprinodon radiosus*	U.S.A. (California)	do	E	1	NA	NA
Pupfish, Warm Springs	*Cyprinodon nevadensis pectoralis*	U.S.A. (Nevada)	do	E	2	NA	NA
Squawfish, Colorado	*Ptychocheilus lucius*	U.S.A. (AZ, CA, CO, NM, NV, UT, WY), Mexico.	do	E	1	NA	NA
Stickleback, unarmored threespine	*Gasterosteus aculeatus williamsoni*	U.S.A. (California)	do	E	2	NA	NA
Sturgeon, shortnose	*Acipenser brevirostrum*	U.S.A. and Canada (Atlantic Coast)	do	E	1	NA	NA
Tango, Miyako (Tokyo bitterling)	*Tanakia tanago*	Japan	do	E	3	NA	NA
Temolek, Ikan (minnow)	*Probarbus jullieni*	Thailand, Cambodia, Vietnam, Malaysia, Laos.	do	E	15	NA	NA
Topminnow, Gila	*Poeciliopsis occidentalis*	U.S.A. (AZ, NM), Mexico	do	E	1	NA	NA
Totoaba (seatrout or weakfish)	*Cynoscion macdonaldi*	Mexico (Gulf of California)	do	E	45	NA	NA
Trout, Apache (=Arizona)	*Salmo apache*	U.S.A. (Arizona)	do	T	1, 8	NA	17.44(a)
Trout, Gila	*Salmo gilae*	U.S.A. (New Mexico)	do	E	1	NA	NA
Trout, graenback cutthroat	*Salmo clarki stomias*	U.S.A. (Colorado)	do	T	1, 38	NA	17.44(f)
Trout, Lahontan cutthroat	*Salmo clarki henshawi*	U.S.A. (CA, NV)	do	T	2, 8	NA	17.44(a)
Trout, Little Kern golden	*Salmo aguabonita whitei*	U.S.A. (California)	do	T	37	17.95(e)	17.44(e)
Trout, Paiute cutthroat	*Salmo clarki seleniris*	do	do	T	1, 8	NA	17.44(a)
Woundfin	*Plagopterus argentissimus*	U.S.A. (AZ, NV, UT)	do	E	2	NA	NA
SNAILS							
Snail, Chittenango ovate amber	*Succinea chittenangoensis*	U.S.A. (New York)	NA	T	41	NA	NA
Snail, flat-spired three-toothed	*Triodopsis platysayoides*	U.S.A. (West Virginia)	NA	T	41	NA	NA
Snail, Iowa Pleistocene	*Discus macclintocki*	U.S.A. (Iowa)	NA	E	41	NA	NA
Snail, Manus Island tree	*Papustyla pulcherrima*	Pacific Ocean: Admiralty Is. (Manus Is.)	NA	E	3	NA	NA
Snail, noonday	*Mesodon clarki nantahala*	U.S.A. (North Carolina)	NA	T	41	NA	NA
Snail, Oahu tree	*Achatinella* spp. (all species)	U.S.A. (Hawaii)	NA	E	108, 112	NA	NA
Snail, painted snake coiled forest	*Anguispira picta*	U.S.A. (Tennessee)	NA	T	41	NA	NA
Snail, Stock Island	*Orthalicus reses*	U.S.A. (Florida)	NA	T	41	NA	NA
Snail, Virginia fringed mountain	*Polygyriscus virginianus*	U.S.A. (Virginia)	NA	E	41	NA	NA
CLAMS							
Pearly mussel, Alabama lamp	*Lampsilis virescens*	U.S.A. (AL, TN)	NA	E	15	NA	NA
Pearly mussel, Appalachian monkeyface	*Quadrula sparsa*	U.S.A. (TN, VA)	NA	E	15	NA	NA
Pearly mussel, birdwing	*Conradilla caelata*	do	NA	E	15	NA	NA
Pearly mussel, Cumberland bean	*Villosa (=Micromya) trabalis*	U.S.A. (KY, TN)	NA	E	15	NA	NA
Pearly mussel, Cumberland monkeyface	*Quadrula intermedia*	U.S.A. (AL, TN, VA)	NA	E	15	NA	NA
Pearly mussel, Curtis'	*Epioblasma (=Dysnomia) florentina curtisi.*	U.S.A. (Missouri)	NA	E	15	NA	NA
Pearly mussel, dromedary	*Dromus dromas*	U.S.A. (TN, VA)	NA	E	15	NA	NA
Pearly mussel, green-blossom	*Epioblasma (=Dysnomia) torulosa gubernaculum.*	do	NA	E	15	NA	NA
Pearly mussel, Higgins' eye	*Lampsilis higginsi*	U.S.A. (IL, IA, MN, MO, NE, WI)	NA	E	15	NA	NA
Pearly mussel, Nicklin's	*Megalonaias nicklineana*	Mexico	NA	E	15	NA	NA
Pearly mussel, orange-footed	*Plethobasus cooperianus*	U.S.A. (AL, IN, IA, KY, OH, PA, TN)	NA	E	15	NA	NA
Pearly mussel, pale lilliput	*Toxolasma (=Carunculina) cylindrella*	U.S.A. (AL, TN)	NA	E	15	NA	NA
Pearly mussel, pink mucket	*Lampsilis orbiculata*	U.S.A. (AL, IL, IN, KY, MO, OH, PA, TN, WV).	NA	E	15	NA	NA
Pearly mussel, Tampico	*Cyrtonaias tampicoensis tecomatensis*	Mexico	NA	E	15	NA	NA

REFERENCE #18

NUS CORPORATION

CONTROL NO.	DATE.	TIME
	6/24/87	1600

DISTRIBUTION.

Tenneco Polymers Inc.

BETWEEN:	OF:	PHONE.
Mr. Faye	Burlington Water Works	(609) 386-0307

AND:

Joann Wagner (NUS)

DISCUSSION:

Source of water for city of Burlington municipal supply is surface water intakes on back bay of Delaware River, supplemented by man-made lake when needed. Wells on Burlington Island are not used. The city of Burlington was interconnected with Burlington Twp. (which uses wells) - now valved off. The city waterworks plant is 7 yrs old, pumps an avg of 1.5 mgd; capacity is 4 mgd. The population served by the City of Burlington is 10,546

ACTION ITEMS:

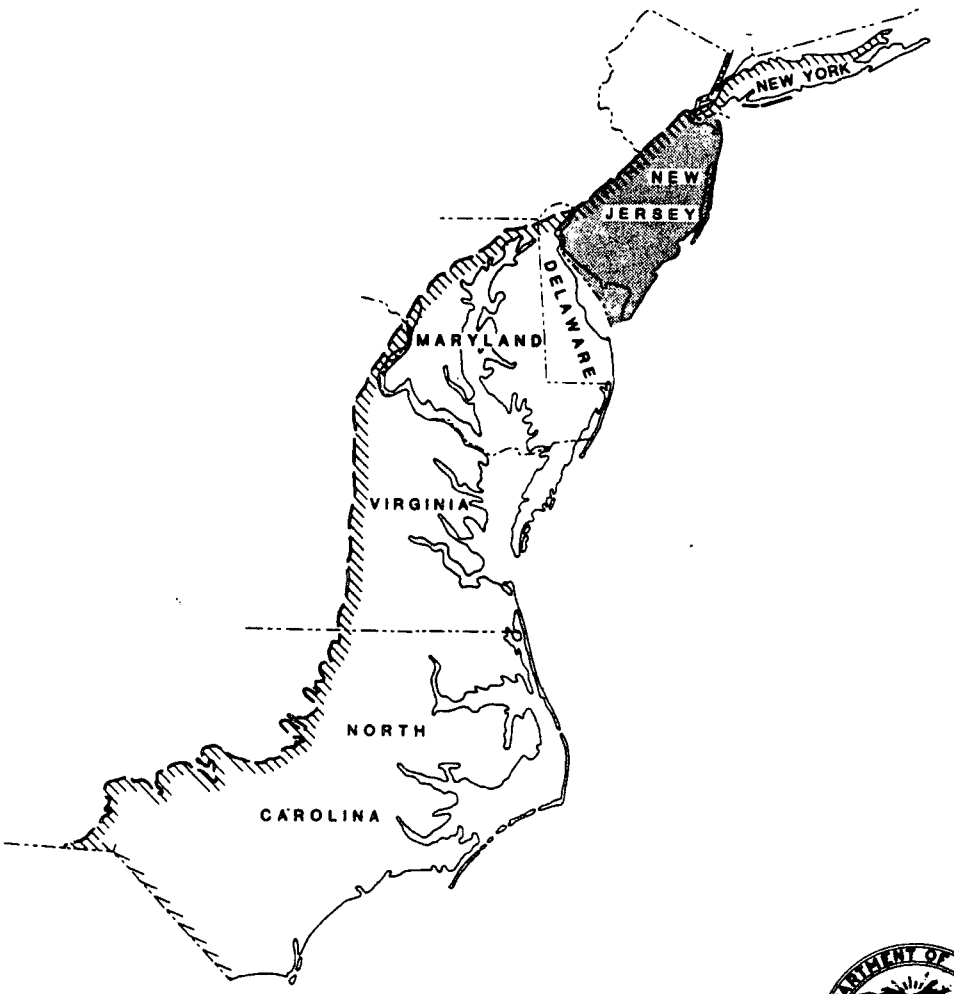
NUS 087 REVISED 0581

REFERENCE #19

HYDROGEOLOGIC FRAMEWORK OF THE NEW JERSEY COASTAL PLAIN

REGIONAL AQUIFER-SYSTEM ANALYSIS

U.S. GEOLOGICAL SURVEY
Open-File Report 84-730



HYDROGEOLOGIC FRAMEWORK OF THE NEW JERSEY COASTAL PLAIN

By Otto S. Zapecza

Open-File Report 84-730

Trenton, New Jersey
1984

UNITED STATES DEPARTMENT OF THE INTERIOR

DONALD PAUL HODEL, Secretary

GEOLOGICAL SURVEY

Dallas L. Peck, Director

For additional information
write to:

U.S. Geological Survey
District Chief
Room 409, Federal Building
402 East State Street
Trenton, New Jersey 08608

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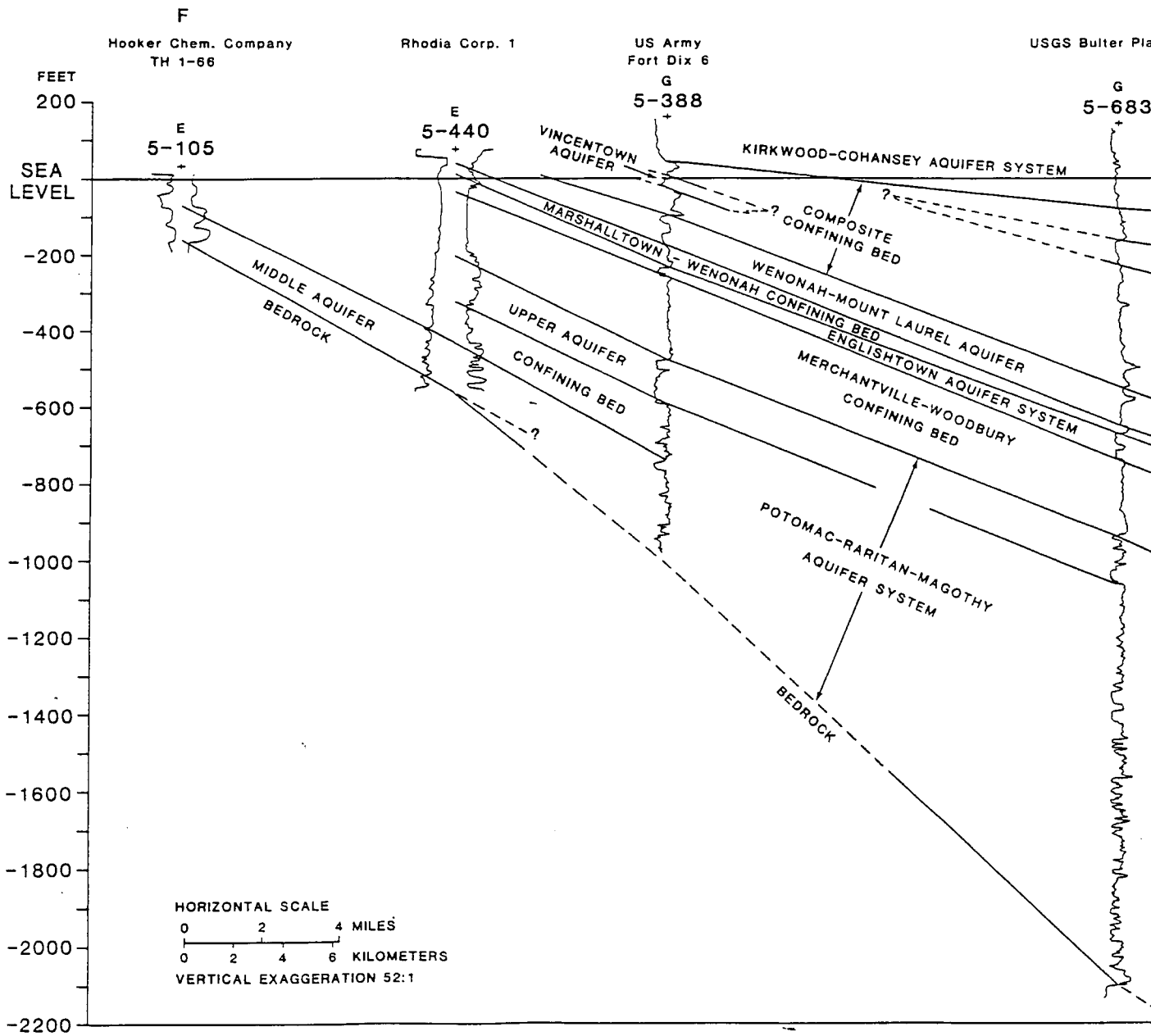
Denver, Colorado 80225
(Telephone: [303] 236-7476)

1

HYDROGEOLOGIC SECTIONS, COASTAL PLAIN, NEW JERSEY



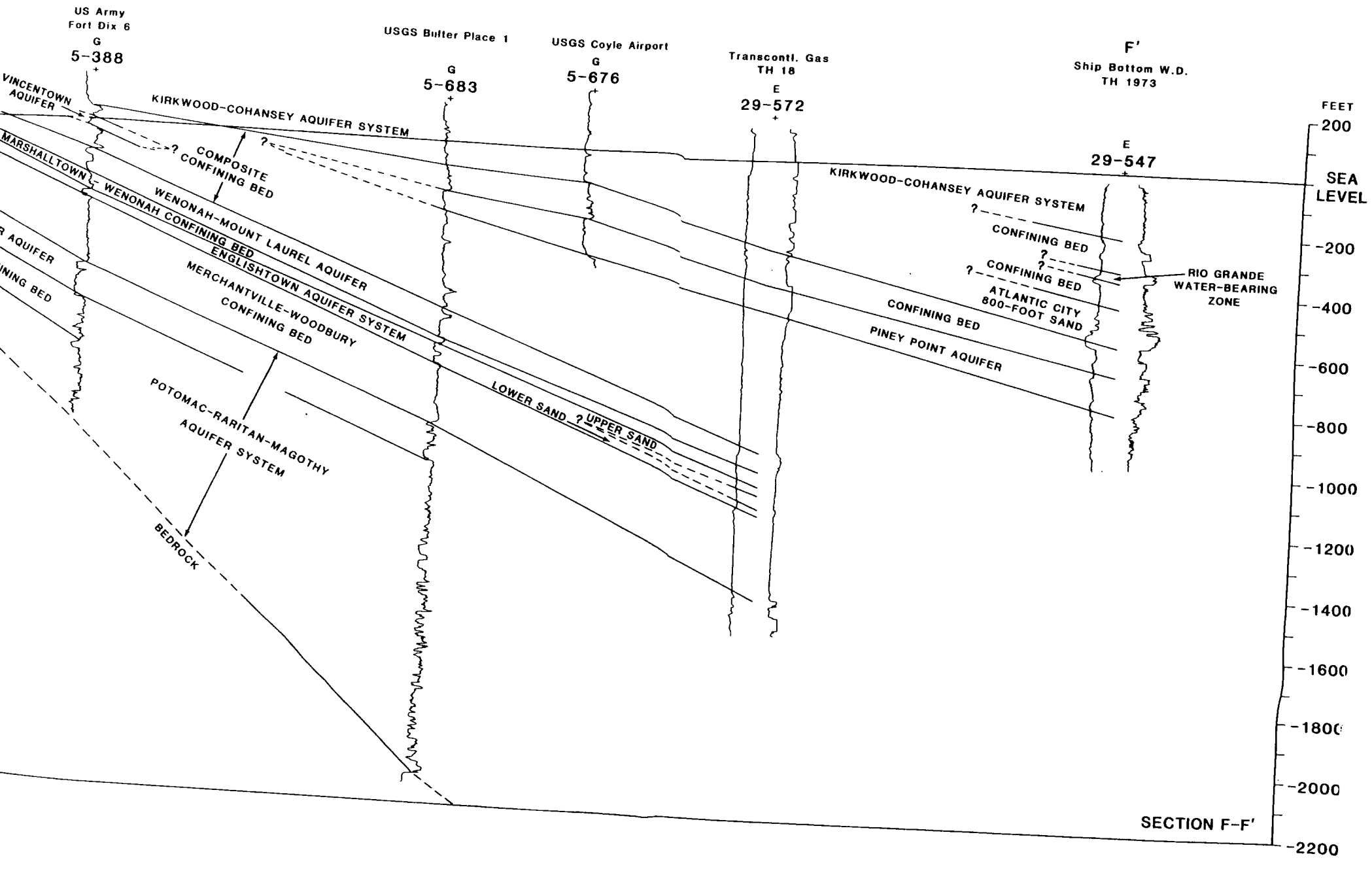

US Army
Fort Dix 6
G
5-388
USGS Butter Place 1
G
5-683
USGS Coyle Airport
G
5-676
Transcontl. Gas
TH 18
E
29-572
F'
Ship Bottom W.D.
TH 1973
E
29-547
FEET
200
SEA LEVEL
-200
-400
-600
-800
-1000
-1200
-1400
-1600
-1800
-2000
-2200
VINCENTOWN AQUIFER
KIRKWOOD-COHANSEY AQUIFER SYSTEM
COMPOSITE CONFINING BED
MARSHALLTOWN
WENONAH-MOUNT LAUREL AQUIFER
WENONAH CONFINING BED
ENGLISHTOWN AQUIFER SYSTEM
MERCHANTVILLE-WOODBURY CONFINING BED
POTOMAC-RARITAN-MAGOTHY AQUIFER SYSTEM
BEDROCK
LOWER SAND
UPPER SAND
KIRKWOOD-COHANSEY AQUIFER SYSTEM
CONFINING BED
CONFINING BED
ATLANTIC CITY 800-FOOT SAND
CONFINING BED
PINEY POINT AQUIFER
RIO GRANDE WATER-BEARING ZONE
SECTION F-F'
J-J'

PLATE 4

OPEN-FILE REPORT 84-730

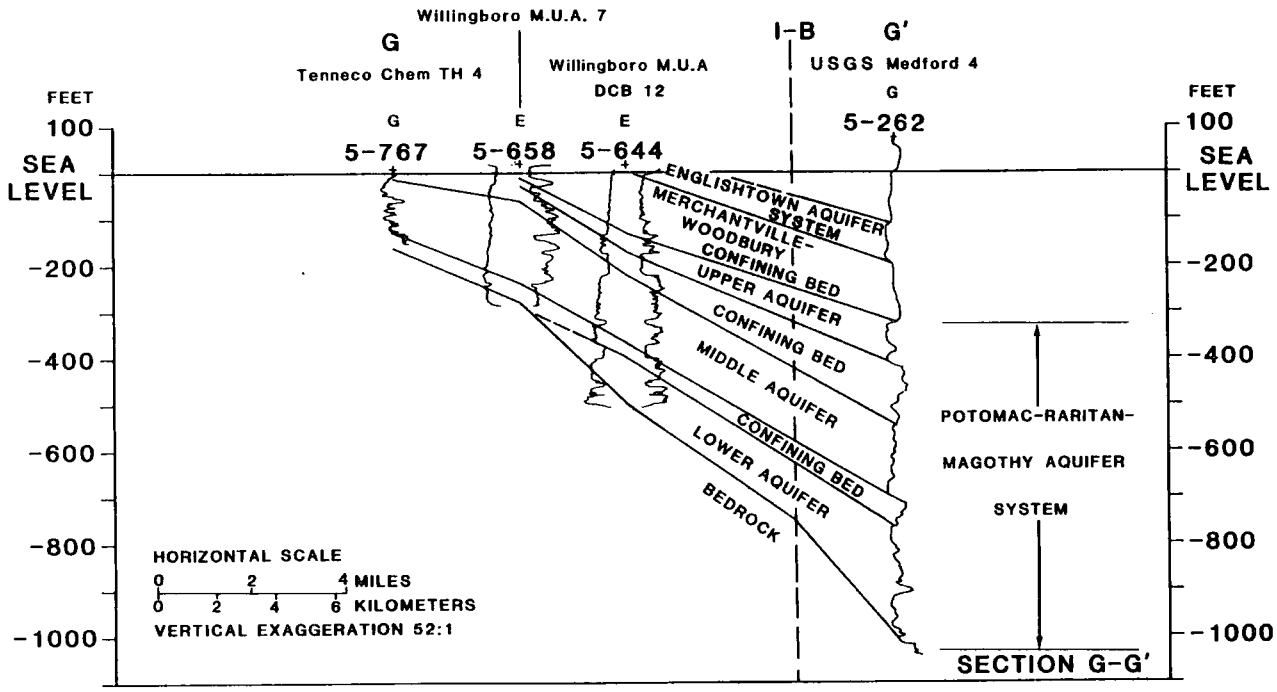


Table 4.--Altitudes of top and base of hydrogeologic units.
[In feet above or below sea level]

Well number	Altitude of land surface	Kirkwood-Cohansey aquifer system	Atlantic City 800-foot sand		Piney Point aquifer		Vincentown aquifer		Wenonah-Mount Laurel aquifer		Englishtown aquifer system		Potomac-Raritan-Magothy aquifer system: Upper aquifer		Potomac-Raritan-Magothy aquifer system: Middle aquifer		Potomac-Raritan-Magothy aquifer system: Lower aquifer	
		Base	Top	Base	Top	Base	Top	Base	Top	Base	Top	Base	Top	Base	Top	Base	Top	Base
1- 22	10	-398	-698	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1- 37	10	-399	-692	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1- 39	10	-326	-651	-785	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1-116	45	-160	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1-117	45	-157	-304	-393	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1-180	27	-200	-491	-627	-717	-767	--	--	--	--	--	--	--	--	--	--	--	--
1-219	60	-248	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1-227	10	-200	-278	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1-349	59	-143	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1-366	5	-280	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1-369	5	-303	-645	-800	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1-566	12	-258	-512	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1-578	10	-266	-560	-692	-808	-862	--	--	--	--	--	--	--	--	--	--	--	--
1-605	110	-173	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1-648	7	-393	-681	-835	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1-649	5	-312	-647	-780	-902	-964	--	--	--	--	--	--	--	--	--	--	--	--
1-650	20	-221	-300	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1-700	40	-136	-200	-298	-446	-531	--	--	--	--	--	--	--	--	--	--	--	--
1-701	118	-154	--	--	-272	--	--	--	--	--	--	--	--	--	--	--	--	--
5- 5	18	--	--	--	--	--	--	--	-980	-1076	--	--	-1401	--	--	--	--	--
5- 11	19	-307	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5- 30	92	-268	--	--	-367	-504	--	--	--	--	--	--	--	--	--	--	--	--
5-105	33	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5-117	95	--	--	--	--	--	--	--	--	--	41	-3	-171	--	-75	-165	--	--
5-127	35	--	--	--	--	--	--	--	--	--	--	--	--	-22	-65	-167	-239	-287
5-164	110	--	--	--	--	--	80	30	-34	-98	-146	-162	-350	-450	-560	-635	--	--
5-198	10	--	--	--	--	--	--	--	-24	-72	-92	-140	-322	--	--	--	--	--
5-209	73	--	--	--	--	--	--	--	--	--	--	39	-123	-207	--	--	--	--
5-212	82	--	--	--	--	--	--	--	--	--	60	17	-142	-231	--	--	--	--
5-221	10	--	--	--	--	--	--	--	--	--	--	--	--	--	-157	-203	--	--
5-228	40	--	--	--	--	--	--	--	--	--	--	--	-93	-176	-232	-282	-390	-471
5-249	55	--	--	--	--	--	--	--	-95	-165	-223	-241	-453	--	--	--	--	--
5-262	74	--	--	--	--	--	--	--	6	-79	-108	-192	-322	-414	-544	-703	-764	-1022
5-274	40	--	--	--	--	--	--	--	--	--	--	--	-10	-90	--	--	--	--
5-290	15	--	--	--	--	--	--	--	--	--	--	-73	-240	-360	-511	-613	--	--

Table 4.--Altitudes of top and base of hydrogeologic units--Continued.
[In feet above or below sea level]

Well number	Altitude of land surface	Kirkwood-Cohansey aquifer system	Atlantic City 800-foot sand		Piney Point aquifer		Vincentown aquifer		Wenonah-Mount Laurel aquifer		Englishtown aquifer system		Potomac-Raritan-Magothy aquifer system: Upper aquifer		Potomac-Raritan-Magothy aquifer system: Middle aquifer		Potomac-Raritan-Magothy aquifer system: Lower aquifer	
		Base	Top	Base	Top	Base	Top	Base	Top	Base	Top	Base	Top	Base	Top	Base	Top	Base
5-293	60	--	--	--	--	--	--	--	--	34	-3	-73	-224	-306	--	--	--	--
5-303	20	--	--	--	--	--	--	--	--	--	--	-30	-142	-207	-250	-376	-460	--
5-332	150	--	--	--	--	--	--	40	-26	-90	-153	-178	-384	-516	--	--	--	--
5-334	165	--	--	--	--	--	135	50	-29	-98	-137	-191	-363	--	-670	--	--	--
5-340	126	--	--	--	--	--	--	--	6	-68	-124	-174	-354	-507	-654	-710	--	--
5-344	136	--	--	--	--	--	--	--	74	6	-34	-113	-288	-344	-454	-528	--	--
5-368	90	10	--	--	--	--	--	--	-200	--	--	--	--	--	--	--	--	--
5-378	65	--	--	--	--	--	--	--	-123	-227	-263	-298	--	--	--	--	--	--
5-385	30	--	--	--	--	--	--	--	-30	-130	-170	-212	-450	-500	-710	-818	--	--
5-388	160	44	--	--	--	--	1	-28	-98	-180	-233	-259	-476	-592	-740	--	--	--
5-417	48	-137	--	--	-164	--	--	--	--	--	--	--	--	--	--	--	--	--
5-436	96	--	--	--	--	--	--	--	32	-60	-95	-141	-315	-422	--	--	--	--
5-440	75	--	--	--	--	--	--	--	--	33	8	-36	-206	-325	-434	-566	--	--
5-448	40	--	--	--	--	--	--	--	--	--	--	--	-22	-104	-153	--	--	--
5-451	67	-116	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5-454	67	-100	--	--	-135	--	--	--	--	--	--	--	--	--	--	--	--	--
5-464	130	--	--	--	--	--	--	--	-230	--	--	--	--	--	--	--	--	--
5-465	98	-53	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5-485	51	-305	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5-488	35	-269	--	--	-340	-429	--	--	--	--	--	--	--	--	--	--	--	--
5-598	34	-150	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5-608	63	-165	--	--	-234	--	--	--	--	--	--	--	--	--	--	--	--	--
5-612	41	-183	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5-635	65	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5-644	18	--	--	--	--	--	--	--	--	--	--	5	-130	-177	-223	--	--	--
5-648	34	--	--	--	--	--	--	--	--	--	--	-2	-132	-175	-222	-370	-401	-498
5-658	19	--	--	--	--	--	--	--	--	--	--	--	-81	-120	-168	--	--	--
5-668	48	--	--	--	--	--	--	--	--	--	--	--	-12	-29	-62	-238	--	--
5-672	90	-135	--	--	-266	-361	--	--	-750	-840	-860	--	-1182	-1291	-44	-200	--	--
5-676	197	-111	--	--	-231	-350	--	--	--	--	--	--	--	--	--	--	--	--
5-678	112	-88	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5-681	108	-102	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5-683	132	-90	--	--	-175	-240	--	--	-558	-662	-681	-750	-948	-1074	--	--	--	--
5-691	109	-56	--	--	--	--	--	--	-347	-461	-501	-543	-751	--	--	--	--	--
5-695	111	-47	--	--	--	--	--	--	-297	-401	--	--	--	--	--	--	--	--

Table 4.--Altitudes of top and base of hydrogeologic units--Continued.
[In feet above or below sea level]

Well number	Altitude of land surface	Kirkwood-Cohansey aquifer system	Atlantic City 800-foot sand		Piney Point aquifer		Vincentown aquifer		Wenonah-Mount Laurel aquifer		Englishtown aquifer system		Potomac-Raritan-Magothy aquifer system: Upper aquifer		Potomac-Raritan-Magothy aquifer system: Middle aquifer		Potomac-Raritan-Magothy aquifer system: Lower aquifer	
		Base	Top	Base	Top	Base	Top	Base	Top	Base	Top	Base	Top	Base	Top	Base	Top	Base
5-696	124	-56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5-697	144	-56	--	--	--	--	--	--	-436	-530	-592	-638	--	--	--	--	--	--
5-699	117	-56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5-724	43	--	--	--	--	--	--	--	-147	-257	-294	--	--	--	--	--	--	--
5-737	75	25	--	--	--	--	--	--	-195	--	--	--	--	--	--	--	--	--
5-739	80	--	--	--	--	--	--	--	--	--	50	-10	-146	-230	--	--	--	--
5-741	35	--	--	--	--	--	--	--	--	--	--	-28	-165	--	--	--	--	--
5-752	45	--	--	--	--	--	35	-11	-61	-151	-182	-194	-393	--	--	--	--	--
5-767	10	--	--	--	--	--	--	--	--	--	--	--	--	--	-13	-129	--	--
7- 8	80	--	--	--	--	--	--	--	--	--	--	--	-101	-189	-242	-320	-370	-480
7- 19	145	-10	--	--	--	--	--	--	-151	-225	-285	-315	-485	-568	--	--	--	--
7- 78	22	--	--	--	--	--	--	--	--	--	--	--	--	-1	-19	-57	-80	-149
7-117	156	--	--	--	--	--	112	78	24	-8	-80	-94	-271	-417	--	--	--	--
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7-146	40	--	--	--	--	--	--	--	--	--	--	10	-126	-198	-226	-390	-425	-483
7-163	32	--	--	--	--	--	--	--	--	--	--	--	-71	-142	-183	-278	-338	-438
7-170	55	--	--	--	--	--	25	-21	-69	--	--	--	--	--	--	--	--	--
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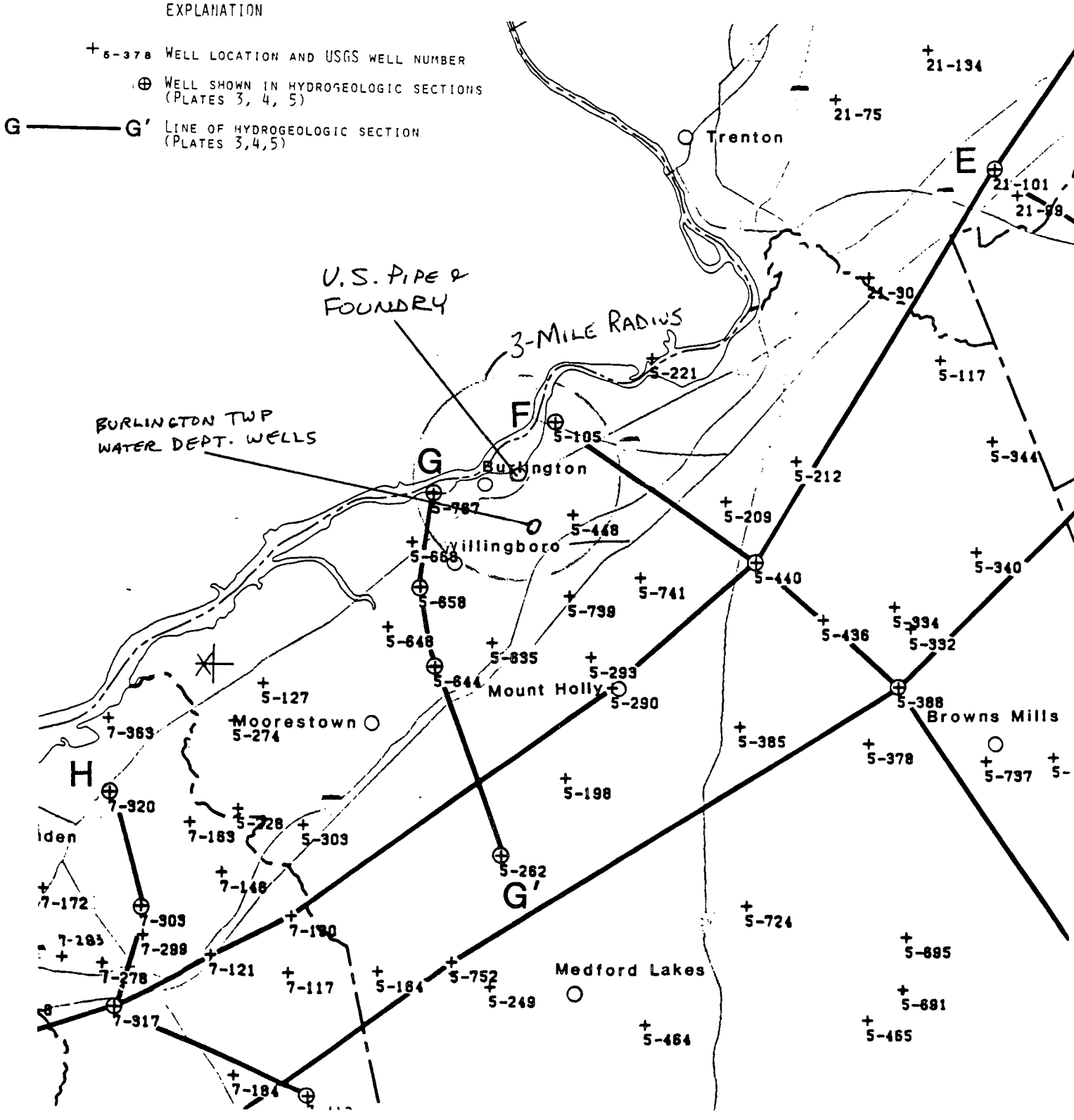
7-299	75	--	--	--	--	--	--	--	--	--	--	--	-119	-214	-254	-388	-472	-535
7-303	55	--	--	--	--	--	--	--	--	--	--	--	-98	-188	-229	-325	-387	-461
7-317	68	--	--	--	--	--	--	--	--	38	-1	-57	-184	-302	-336	-426	-501	--
7-320	65	--	--	--	--	--	--	--	--	--	--	--	--	-21	-59	-123	-153	--
7-363	14	--	--	--	--	--	--	--	--	--	--	--	--	-4	-19	-48	-66	-144
7-392	150	--	--	--	--	--	--	--	-112	-204	-246	-282	-443	-535	--	--	--	--
7-412	150	60	--	--	--	--	20	-24	-71	-161	-184	-246	-398	-504	-532	-660	-802	-1076
7-430	94	-86	--	--	-162	--	--	--	--	--	--	--	--	--	--	--	--	--
7-451	122	-56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

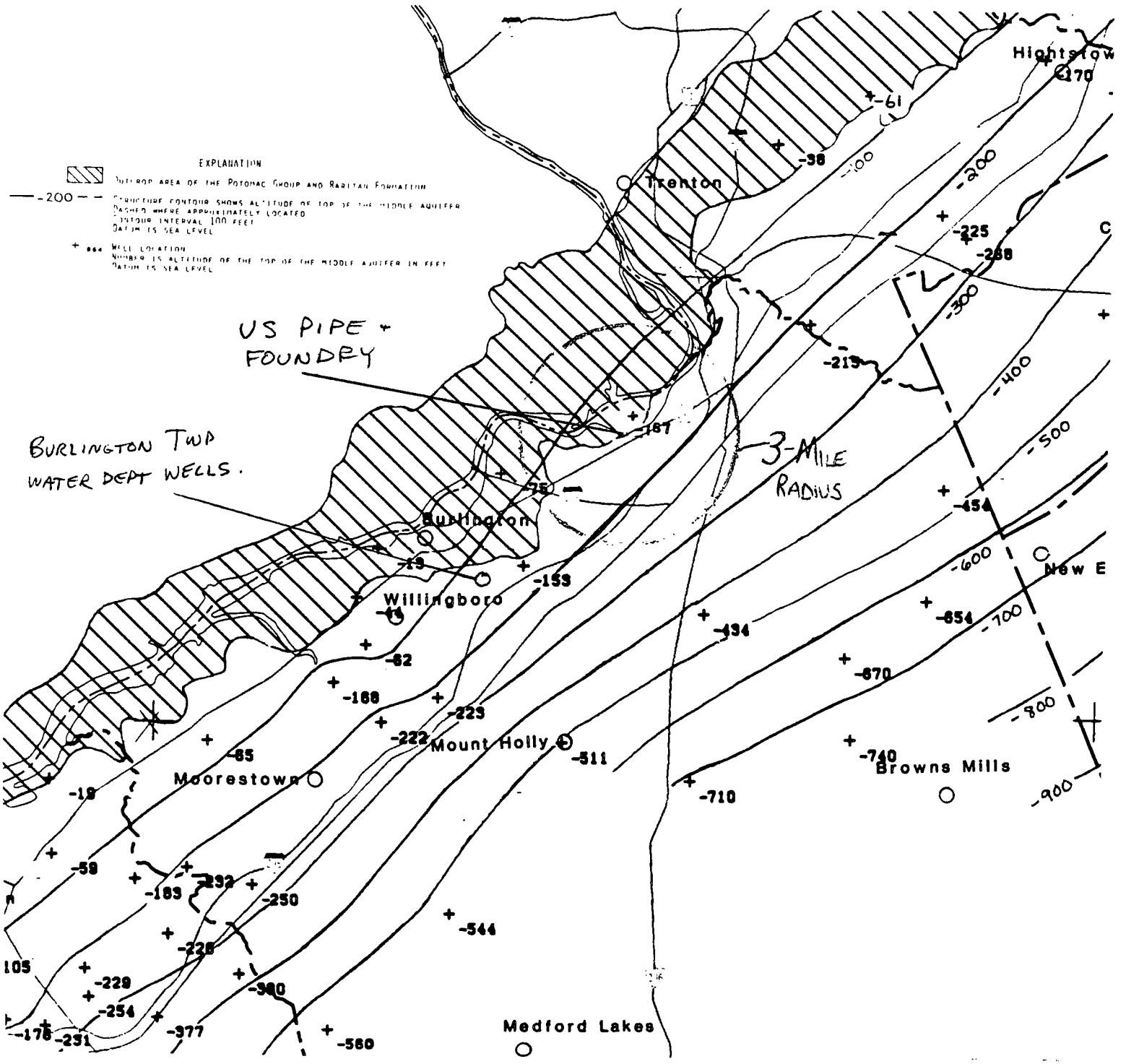
LOCATION MAP OF WELLS AND LINES OF HYDROGEOLOGIC SECTIONS, COASTAL PLAIN, NEW JERSEY.



OPEN-FILE REPORT 84-730
PLATE 7

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

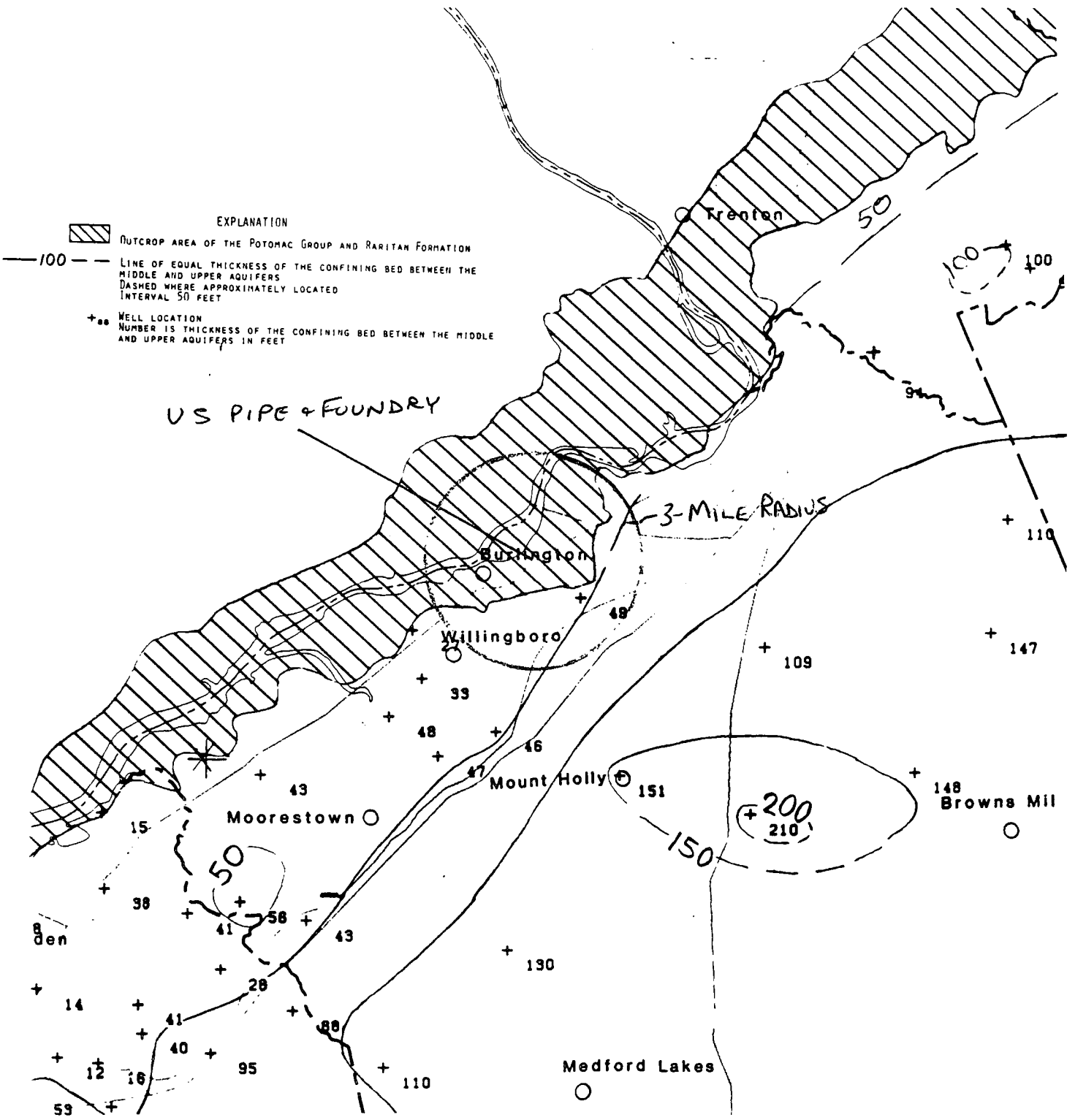
STRUCTURE CONTOURS OF THE TOP OF THE MIDDLE AQUIFER OF THE POTOMAC-RARITAN-MAGOTHY AQUIFER SYSTEM, NEW JERSEY.



OPEN-FILE REPORT 84-730
PLATE 9

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

THICKNESS OF THE CONFINING BED BETWEEN THE MIDDLE AND UPPER AQUIFERS OF THE POTOMAC-RARITAN-MAGOTHY AQUIFER SYSTEM, NEW JERSEY.



REFERENCE #20

TELECON N

CONTROL NO 0017-C 02-8706-13 | DATE 10/22/87 | TIME 1000

DISTRIBUTION
US Pipe and Foundry

BETWEEN
David Chichilitti | OF Bristol Borough Water & Sewer Authority | PHONE (215) 785-455

AND
Donna Restivo

DISCUSSION:
I asked Mr. Chichilitti how many people were on the Bristol surface water supply. He said approximately 25,000. I also asked him where the US Steel Mill was and he said it was 7 or 8 miles North of Bristol. I asked about Rohm and Haas and he told me they receive drinking water from Bristol and their industrial water is from wells.
I asked Mr. Chichilitti about Well #10 use and he said that the well's use was discontinue in January.

Donna J. Restivo

ACTION ITEMS:

NUS 067 REVISED 0581

TELECON NO

CONTROL NO 0018-C
02-8706-13

DATE 10/21/87

TIME 1400 and 1440

DISTRIBUTION
US Pipe and Foundry

BETWEEN
David Chichilitti

OF Bristol Borough Water & Sewer Authority

PHONE (215) 785-4551

AND
Donna Restivo

DISCUSSION:
I asked Mr. Chichilitti where the Edgely Well Fields were and he said that they were just east of Edgely Road and north of 3M Airport. Following the topographic map with him, I discovered sub stations which he said were where the well field is located. He said there are seven wells in the well field, but only 3 are on and used for drinking water purposes. These wells serve approximately 3,000 households, pumping about one-million gallons/day. He also mentioned that well water is combined with river water before being distributed. The depth to water is 30 feet. He mentioned a study had been done on the well field and the information was in the office.

ACTION ITEMS:
I also asked Mr. Chichilitti about surface water intakes. He told me Mr. Huxley of the Lower Bucks Surface Water Authority (215-945-1170 or 215-547-5842) would be a good source of information. He knew of intakes at Edgely, 1/4 mile from Edgely, Bristol, Marsville and Neshaminy Creek.

Donna J. Restivo

NUS 067 REVISED 0581

REFERENCE #21

TELECON N

CONTROL NO 0019-C 02-8706-13 | DATE 10/22/87 | TIME 910

DISTRIBUTION

US Pipe and Foundry

BETWEEN Mr. Huxley | OF Lower Bucks Surface Water Authority | PHONE (215) 945-1170

AND. Donna Restivo

DISCUSSION:

I asked Mr. Huxley about surface water intakes along the Delaware River downstream from Burlington, NJ. He said he only knew of Bristol, the US Steel Mill, and possibly Rohm & Haas. He also said that there was an intake on the Neshaminy Creek, but it was upstream on the creek.

Donna J. Restivo

ACTION ITEMS:

NUS 067 REVISED 0581