JAN 11 1994

SITE INSPECTION

HALLER TESTING LABORATORIES, INC.

AKA: HALLER TESTING COMPANY, INC.

AKA: HALLER AND SHIMEL CONSULTING ENGINEERS, INC.

AKA: HALLER ENGINEERING ASSOCIATES INC.

PLAINFIELD CITY, UNION COUNTY

EPA ID NO.: NJD986578284

New Jersey Department of Environmental Protection and Energy
Division of Publicly Funded Site Remediation
Site Assessment Section

11/1/93

458055

HALLER TESTING LABORATORIES, INC.
AKA: HALLER TESTING COMPANY, INC.
AKA: HALLER ENGINEERING ASSOCIATES INC.
AKA: HALLER AND SHIMEL CONSULTING ENGINEERS, INC.
336 LELAND AVENUE
PLAINFIELD CITY, UNION COUNTY, NEW JERSEY
EPA ID NO. NJD986578284

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NARRATIVE

SITE INSPECTION REPORT

PART I: GENERAL INFORMATION

Site Name: Haller Testing Laboratories, Inc.
Aka: Haller Testing Company, Inc.
Aka: Haller Engineering Associates Inc.
Aka: Haller and Shimel Consulting Engineers, Inc.
Address: 336 Leland Avenue
Municipality: Plainfield City **State:** NJ **Zip Code:** 07061
County: Union
EPA ID No.: NJD986578284
Block: 405 **Lot(s):** 7
Block: 405 **Lot(s):** 14
Block: 152 (old block #) **Lot(s):** 9 (old lot #)
Latitude: 40° 37′ 53" **Longitude:** 74° 24′ 12"
Acreage: 0.45 **SIC Code:** 8731

Current Owner: Haller Testing Laboratories, Inc.
Mailing Address: 336 Leland Avenue
City: Plainfield **State:** NJ **Zip Code:** 07061
Telephone No.: 908-756-4637 (Disconnected)

Current Operator: No operator at this time.
Mailing Address:
City: **State:** **Zip Code:**
Telephone No.:

Owner/Operator History:

NAME	OPERATOR/ OWNER	DATES FROM	TO
Watson Whittlesey	owner	8/1891	unknown
Haller Engineering Associates Inc.	* owner	1927	8/8/1985
Haller and Shimel Consulting Engineers, Inc.	operator	** unknown	unknown
The Haller Testing Laboratories, Inc.	owner	8/8/1985	present
The Haller Testing Laboratories, Inc.	operator	1927	1/1993

* Haller Engineering Associates Inc. may also have been an operator at the site since the name appeared in the 1952 MacRae's Industrial Directory as a commercial testing laboratory.

** Haller and Shimel Consulting Engineers, Inc. was operating in the early 1970s. (Attachment A)

Surrounding Land Use (zoning, adjacent properties):

Haller Testing Laboratories, Inc. lies in a residential and industrial area. The adjacent properties are the A & F Cutter Corporation to the southeast and Specialty Companies to the northwest. The site extends from Leland Avenue to Watson Avenue. Towards Watson Avenue, there are residences on the northwest and southeast side of the property. (Map-3 and Attachment AA)

Distance to Nearest Residence: adjacent
Direction: northwest & southeast
Population Density (residents per square mile): 7,715 (1990 Census)

PART II: SITE OPERATIONS

Discuss all current and past operations at the site.

Haller Testing Laboratories, Inc. operations consisted of the physical testing of concrete cylinders for strength characteristics and asphalt sampling for the construction industry. According to MacRae's Industrial Directory, Haller Testing Laboratories, Inc. operated at the site from approximately 1927 to January 1993 as a researcher and tester of materials used in construction and engineering. In December 1992, the Federal Government placed a lien against the property for failure to pay federal taxes. The buildings are currently vacant.

A review of aerial photographs dating from 1940 to 1991 indicates that the main building was constructed prior to 1940 with the small building being erected between 1941 and 1950. Operations at the site from 1940 to the mid 1970s appear to have been conducted on Block 405 Lot 7. A house was located at the northwest corner of Block 405 Lot 14 from 1940 to the late 1970s. The house was later razed and storage operations extended onto the property.

The quantity of hazardous waste manifested off site in 1990 was 1,773 tons. The waste was identified as spent halogenated solvents, spent solvent mixtures/blends of halogenated solvents and still bottoms from the recovery of the spent solvents and spent solvent mixtures (F002). (Attachment CC)

As part of a ground water investigation of the Plainfield Industrial area, the New Jersey Department of Environmental Protection (NJDEP), Division of Water Resources (DWR) conducted an inspection of the Haller Testing Company, Inc. on August 29, 1985. During the inspection it was observed that waste water from the sink in the asphalt testing room and the wetroom floor drains discharged into an unlined subsurface drainage pit on the northwest

side of the facility; in addition, the sinks in the chemistry lab and the slop sink in the testing machine room discharged into an unlined subsurface drainage pit on the southeast side of the facility. It was also noted during the inspection that the facility used 1,1,1-trichloroethane to dissolve asphalt samples as well as hydrochloric acid to wash concrete samples. (Attachment C)

This inspection led to several sampling episodes within the drainage pits on the southeast and northwest sides of the building. Analytical data from soil sampling conducted at the facility on February 6, 1986 and April 28, 1986 revealed elevated concentrations of volatile organic compounds (VOCs). (Attachments D, F and G)

On January 2, 1986 Mr. Roger Haller was contacted by telephone by a representative of the NJDEP. During that telephone conversation, Mr. Haller stated that the sink in the chemistry lab had been disconnected from the subsurface drainage pit. The sink in the asphalt room was still in use and arrangements were being made to connect to the sanitary sewer or to a holding tank. (Attachment I-3)

On February 3, 1988, a representative of the New Jersey Department of Law and Public Safety, Division of Criminal Justice inspected Haller Testing Laboratories, Inc. and observed that the facility continued to discharge the waste water from the sinks in the chemistry lab and testing machine room into the drainage pits. (Attachment M)

During an inspection in June 1991 at an adjacent facility, Duragraphic Systems, a white, milky liquid discharge was noted emanating from Haller Testing Laboratories, Inc. by Whitman Companies, Incorporated of East Brunswick, New Jersey. The discharge was concrete and rinse water from washing the molds used to make the cylinders and was directed outside the building by a pipe through the wall. The point of discharge was unknown. (Attachment GG)

Haller Testing Laboratories, Inc. had Radioactive Material License # NJSL-10130 which allowed them to possess and use moisture density gauges. Moisture density gauges are sealed radioactive sources that contain radium-226 and beryllium. The instruments were used to measure the moisture content and density of soils, soil-stone aggregates, cement, and asphalt treated bases related to the construction industry. Documentation indicates the facility was licensed and possessed three moisture density gauges; however, an unregistered gauge was discovered on site by the NJDEPE, Division of Facility Wide Enforcement, Bureau of Environmental Radiation (BER) in 1992. Mr. Haller stated that he had no knowledge of where the instrument came from but agreed to properly dispose of it. (Attachments A, B, J, N, O, U, Y and Z)

A Pre-Sampling Assessment (PSA) was conducted by the NJDEPE/DRPSR, BFO/Site Assessment (SA) on June 21, 1993. Two buildings were

located on site. The main building was constructed of brick and masonry and was locked. A small building with two garage doors was located 20 feet south of the main building. The ground surface, except for both outer edges of the site along the wooden fence, was covered by mixed soil and stone. The drainage pits were not located during the PSA. Two 55-gallon drums were located on the rear porch. One drum labeled 1,1,1-trichloroethane was full and the other was half-full and labeled hazardous waste. On the north side of the main building were six galvanized steel tubs (8 feet by 2 feet by 2 feet), two empty 55-gallon drums and one empty 25-gallon drum along the Specialty Company's building wall. There were three large piles of cement cylinders approximately 12 feet west of the main building. Running along the west side wooden fence were the following: an approximately 275-gallon fuel oil above ground storage tank, one empty plastic 55-gallon drum, two trailers, a boat, numerous empty 55-gallon steel drums and a dock constructed of wood beams and empty 55-gallon drums. Running along the east side wooden fence was approximately 30 empty 55-gallon drums and another dock. Adjacent to the southwest wall of the small building were two unlabeled 55-gallon drums and one propane tank. One of the drums had no lid and was filled with dirt and rain water; while, the other drum was empty. Monitoring with a photoionization detector (HNu) and an Organic Vapor Analyzer (OVA) was conducted around the two buildings, drum locations and numerous other areas of the site and no significant readings were observed.

Adjacent to the southeast garage door of the small building, a radiation meter indicated readings of 50 micro Roentgens/hour (R/hr). Background radiation was detected at ~20 micro R/hr. The garage door was unlocked and upon it being opened, a 2.5-foot by 1.5-foot wooden box was observed towards the right side of the building. The box had the following two labels on it: "Special Form Type A, Radioactive Material Sealed Source, U.S.A. DOT 7A" and "Radioactive Material". Within 2 feet of the box, the radiation meter indicated a reading of a 1,000 micro R/hr. Site Assessment contacted the NJDEPE Hot Line, the NJDEPE, DRPSR, Bureau of Emergency Response and the NJDEPE, Division of Facility Wide Enforcement, Bureau of Environmental Radiation regarding an unidentified radiation source. The NJDEPE, Division of Facility Wide Enforcement, BER investigated the incident on June 22, 1993 and identified the radiation source to be the unregistered moisture density gauge. At that time, the small building was secured from unauthorized entry. (Attachment AA)

On September 8, 1993 the NJDEPE/DRPSR/BFO-SA collected 14 soil samples from various areas of the site including the probable locations of the drainage pit areas, a concrete pad along the porch, an above ground fuel oil tank as well as other locations (see Map 2). Details of the sampling episode will be discussed in Part XIII. (Attachment HH)

PART III: PERMITS

A. NJPDES

Number	Discharge Activity	Date Issued	Expiration Date	Formation or Body of Water Discharged To

This facility does/did not maintain a NJPDES permit.

B. New Jersey Air Pollution Control Certificates

Plant ID No.:

The facility does/did not maintain any air pollution permits.

No. of Certificates:
Equipment Permitted:

C. BUST Registration

Registration No.:

The facility does not have any underground storage tanks (UST) registered with the NJDEPE. Review of documentation and a June 21, 1993 NJDEPE/DRPSR/BFO-SA, PSA did not note the presence of an UST.

No. of Tanks: N/A

Tank No.	Capacity (gallons)	Contents of Tank	Integrity
N/A			

D. Other Permits

Agency Issuing Permit	Type of Permit	Permit No.	Date Issued	Expiration Date
NJDEPE, DEQ, BER	License	NJSL-10130	4/8/92	5/1/94

(Attachment BB-12)

PART IV: GROUND WATER ROUTE

A. HYDROGEOLOGY

Describe geologic formations and aquifer(s) of concern. Include interconnections, confining layers, discontinuities, composition and permeability.

The Brunswick Formation is the major aquifer in Union County and

underlies most of the county. The Brunswick Formation consists of thin-bedded shales, mudstone and sandstones which range in color from reddish-brown to gray. The thickness of the formation is 6,000 to 8,000 feet. Water in this formation occurs in joints and fractures. These joints and fractures become progressively tighter and fewer with increasing depth below land surface. Only moderate quantities of water can be stored or transmitted in these fractures.

In the southern part of Union County the rocks are mantled by unconsolidated Pleistocene deposits that contain silt and clay beds. In the lowland areas the silt and clay beds may confine water in the underlying rocks causing artesian conditions. These stratified drift deposits range in thickness from 0 to 60 feet.

Wells tapping the Brunswick Formation generally draw water from several water-bearing zones. In areas where the rocks are exposed or covered by a thin layer of unconsolidated sediments, the shallow water-bearing zones contain unconfined water to depth of about 200 or 300 feet. If wells penetrate to depths between 200 and 600 feet or more, confined zones of greater permeability are intercepted and have the greatest yield. (Attachment FF)

Depth to aquifer of concern: 60 feet
Thickness of aquifer: 6,000 - 8,000 feet (Attachment FF)
Direction of ground water flow: unknown
Karst (Y/N): No
Wellhead Protection Area (Y/N): No **Distance:** N/A

B. MONITORING WELL INFORMATION

Well No.	Screen Depth	Formation	Location

No monitoring wells are present on site.

Identify the upgradient well(s): None

Briefly describe contaminants identified in the monitoring wells. Include Well No., sampling date, sampling agency or company, contaminant levels and cleanup standards.

No monitoring wells are present on site.

C. POTABLE WELL INFORMATION

Distance to nearest potable well: 0.2 mile (Map-5)

Identify all public supply wells within 4 miles of the site:

Water Company	Distance from site (miles)	Depth (feet)	Formation
Elizabethtown Water Company	3.1	350	GTRB
	0.2	500	GTRB
	0.2	400	GTRB
	0.2	300	GTRB
	0.2	304	GTRB
	0.2	350	GTRB
	0.2	350	GTRB
	0.2	350	GTRB
Middlesex Water Co.	2.3	101	GQSD
	2.3	151	GQSD
	2.4	---	GQSD
	2.4	500	GTRB
	2.5	500	GTRB
	2.5	501	GTRB
	2.5	500	GTRB
	2.6	501	GTRB
	2.6	500	GTRB
	2.6	74	GQSD
	2.6	767	GQSD
	2.6	82	GQSD
	2.6	73	GQSD
	2.6	514	GTRB
	2.6	110	GQSD
	2.7	---	GTRB
	2.8	608	GTRB
	2.8	495	GTRB
	3.1	502	GTRB
	3.1	560	GTRB
	3.1	507	GTRB
	3.1	508	GTRB
	3.1	532	GTRB
	3.1	540	GTRB
	3.3	501	GTRB
	3.4	629	GTRB
	3.4	700	GTRB
	3.4	500	GTRB
	3.4	504	GTRB
	3.4	500	GTRB

GTRB = Brunswick Formation
GQSD = Pleistocene - Stratified Drift
--- = information is not available

* Elizabethtown Water Company owns 48 public supply wells within 4.0 miles; however, only eight are in service at this time. (Map-5 and Attachment DD)

Discuss private potable well use within 4 miles of the site. Include depth, formation and distance, if available.

There are no records of private potable well use within the City of Plainfield. There are numerous private potable wells in Green Brook Township, Watchung Township and Warren Township 2.5 to 4 miles from the site. (Attachment EE)

Distance from site (miles)	Population utilizing groundwater
0 - 1/4	20,000
1/4 - 1/2	0
1/2 - 1	0
1 - 2	0
2 - 3	64,170
3 - 4	77,390

(Attachments DD and EE)

Discuss any evidence of contaminated drinking water or wells closed due to contamination.

There is no evidence of contaminated drinking water or wells closed due to contamination from the facility.

Identify industrial/irrigational wells within the vicinity of the site. Include depth, formation, distance and direction, if available.

Industrial Name	Distance (miles)	Direction	Depth (feet)	Formation
Lord & Taylor	2.8	northeast	600	GTRB
Custom Molders Corporation	1.7	north	514	GTRB
Design and Molding Services	4.0	southwest	390	GTRB
	4.0		294	GTRB
Kentile Floors, Inc.	3.5	south	240	GTRB
	3.5		174	GTRB
Macys New Jersey, Inc.	2.2	south	501	GTRB
	2.2		34	GTRB
	2.2		39	GTRB
Reheis Chemical Company, Inc.	3.9	northwest	255	GTRBS
	3.8		303	GTRBS
	3.9		305	GTRBS

Industrial Name	Distance (miles)	Direction	Depth (feet)	Formation
National Starch & Chemical	3.6	southwest	300	GTRB
	3.7		304	GTRB
	3.6		436	GTRB
	4.0		600	GTRB

Irrigational Name	Distance (miles)	Direction	Depth (feet)	Formation
Somerset County Park Commission	3.5	west	115	GTRB
Plainfield Country Club	2.7	south	600	GTRB
	2.7		204	GTRB

GTRB = Brunswick Formation
GTRBS = Triassic Basalt

(Map-5)

D. POTENTIAL

Discuss the potential for ground water contamination, including any other information concerning the ground water contamination route.

Haller Testing Laboratories, Inc. is a probable contributor to the ground water contamination in the Plainfield area. Investigations and sampling by the NJDEP, Division of Water Resources (DWR) determined that the facility discharged waste water without a permit to two unlined subsurface drainage pits. Soil sampling results (Part VIII: Soil Exposure) reveal elevated concentrations of volatile organics (VOs). Chloroform was detected at 36 parts per million (ppm), which is over the Soil Cleanup Criteria of 19 ppm. (Attachments C, D, F, and G)

PART V: SURFACE WATER ROUTE

A. SURFACE WATER

Does a migration pathway to surface water exist (Y/N): No
Flood plain: Areas of minimal flooding **Slope:** < 3%

Does contaminated groundwater discharge to surface water (Y/N): No

Identify known or potentially contaminated surface water bodies. Follow the pathway of the surface water and indicate all adjoining bodies of water along a route of 15 stream miles.

Surface Water Body	Distance from site	Flow(cfs)	Usage(s)
N/A			

Identify drinking water intakes within 15 miles downstream (or upstream in tidal areas) of the site. For each intake identify the distance from the point of surface water entry, the name of the supplier and population served.

N/A

Briefly discuss surface water or sediment sampling conducted in relation to the site. Discuss visual observations if analytical data is not available (include date of observation). Include surface water body, sampling date, sampling agency or company, contaminant.

N/A

Discuss the potential for surface water contamination, include any additional information concerning the surface water route.

N/A

B. SENSITIVE ENVIRONMENTS

Identify all sensitive environments, including wetlands, along the 15 stream-mile pathway from the site:

Environment Type	Surface Water Body	Flow (cfs)
N/A		

PART VI: AIR ROUTE

Discuss observed or potential air release.

There is no evidence in the available documentation of any observed air releases. Being that operations have ceased since January 1993 due to foreclosure, there is no potential for air contamination.

Populations that reside within 4 miles of the site.

Distance (miles)	Population
0 - 1/4	120
1/4 - 1/2	3,060
1/2 - 1	4,320
1 - 2	20,665
2 - 3	26,415
3 - 4	28,280

(GEMS and 1990 Census)

Identify sensitive environments and wetland acreage within 1/2 mile of the site.

There is an area of Palustrine wetlands (approximately 12 acres in size) located approximately 2,000 feet north of the site. (Map-6)

PART VII: SOIL EXPOSURE

Describe soil type. Include soil series, makeup of the soil and permeability of the soil.

The site rests on Boonton - Urban Land complex. The Boonton series consists of deep, well- and moderately well-drained soils. Slope ranges from 0 to 15 percent. The thickness ranges from 40 to 60 inches.

Briefly discuss contaminants identified in the soil. Include sampling date, sampling agency or company, sample locations, depth and contaminant level.

On February 6, 1986 an inspection and soil sampling was conducted at the facility by the NJDEP, Division of Water Resources (DWR). Samples were collected from the top of the sludge in the two small drainage pits that were located on the southeast side and northwest side of the main building. The southeast drainage pit received discharges from the sink in the chemistry lab; while, a pipe outfall from the sink in the asphalt testing room discharged waste water to the northwest drainage pit. At the time of the sampling, the southeast drainage pit contained a red and gray sludge. Sample results did not indicate any volatile organics within the northwest drainage pit. Low levels of volatile organics were detected in the sample collected from the southeast drainage pit. (Attachment C)

On April 28, 1986, the NJDEP, DWR resampled the unlined subsurface drainage pit (southeast side) at a depth of 12 inches below the top of the sludge, and was analyzed by the New Jersey Department of Health (NJDOH) Laboratory. The sample exhibited elevated levels of volatile organics which included 36 ppm chloroform. A complete

summary of the sampling episode will be discussed in Part XIII. (Attachment F)

On September 8, 1993 the NJDEPE/DRPSR/BFO-SA collected 14 soil samples from various areas of the site which included the probable locations of the drainage pit areas, a concrete pad along the porch, an above ground fuel oil tank as well as other locations. (Map-2 and Attachment HH)

Analysis of the samples has indicated elevated levels of base/neutrals and metals. Lead was detected at levels above the NJDEPE Soil Cleanup Criteria of 100 ppm in 10 of the 14 samples collected with levels ranging from 102 ppm (S-12) to 594 ppm (S-8). Additionally, one sample contained high levels of mercury (46.7 ppm). A complete summary of the sampling episode will be discussed in Part XIII. (Attachment II)

If no soil sampling has been conducted, discuss areas of potentially contaminated soil, areas that are visually contaminated or results from soil gas surveys.

Sampling conducted by the NJDEPE/DRPSR/BFO-SA on September 8, 1993 has indicated on-site soils to be contaminated with elevated levels of base/neutrals and metals. (Attachment II)

Number of people that occupy residences or attend school or day care on or within 200 feet of the site: 15 (Map-1)
Number of workers on or within 200 feet of the site: ~20

Does a subsurface gas threat exist? (Y/N): No
If so, discuss the threat (include if in homes or occupied building). N\A

PART VIII: DIRECT CONTACT

Describe accessibility of the site (fencing, site security, evidence of unauthorized entry).

The site offers easy access as the wooden fence in the back of the property (adjacent to Watson Avenue) has fallen. The southwestern part of the property is not fenced. During the June 21, 1993 PSA, evidence of unauthorized entries were observed by the dumping of trash at the back portion of the property. (Attachment AA)

Number of on-site employees: 0

PART IX: FIRE AND EXPLOSION

Discuss all incidents on site which have involved a fire or explosion. Indicate the date of the incident and the materials involved.

There is no evidence in the available documentation of there ever being a fire or an explosion at the site.

Discuss site conditions which indicate a potential exists for fire or explosion (reactivity, incompatibility, ignitability, storage practices, container condition).

There are no evident site conditions which indicate a potential for fire or explosion.

PART X: ADDITIONAL CONSIDERATIONS

Discuss evidence of wildlife or vegetation that has been or could be potentially impacted by on-site operations. Include areas exhibiting stressed vegetation or damage to wildlife.

There is no evidence of wildlife or vegetation that has been or could be potentially impacted by on-site operations as indicated by a Pre-Sampling Assessment conducted by the NJDEPE, DRPSR, BFO, Site Assessment on June 21, 1993. (Attachment AA)

Determine if a contaminant on site displays bioaccumulative properties. Name all bioaccumulative substances that may impact the food chain.

Soil sampling conducted by the NJDEPE/DRPSR/BFO-SA on September 8, 1993 has indicated elevated levels of lead, cadmium and mercury which are known to have bioaccumulative properties. (Attachment II)

Discuss observed or potential damage to off-site property. Consider migration routes from the site to an off-site property via soil, air or runoff.

There is no evidence of Haller Testing Laboratories, Inc. being responsible for damage to off-site property and the potential for such is low.

PART XI: PREVIOUS OR ONGOING REMEDIAL ACTIONS

Discuss for each media all previous and ongoing remedial activities at the site. Include why initiated, type of action, date and present status.

There is no evidence in the available documentation of there ever being a remedial action conducted at the site.

PART XII: ENFORCEMENT ACTIONS

1. **Type of enforcement activity:** Directive
   Issuing agent: NJDEP, Division of Water Resources (DWR)
   Date: September 16, 1985
   Description of violation: Violation of New Jersey Water Pollution Control Act by discharging waste water without a permit. Mr. Haller was directed to cease all unpermitted discharges and to provide access for the sampling of the drainage pits. (Attachment C)

   Follow-up activity: Mr. Haller did not respond to the Directive. On November 27, 1985 another Directive was issued to Haller for failure to reply to the September 16, 1985 Directive. A response to the November 27, 1985 Directive was never received by the NJDEP.

2. **Type of enforcement activity:** Directive
   Issuing agent: NJDEP, DWR
   Date: March 13, 1986
   Description of violation: Haller was directed to immediately cease the unpermitted discharges to the drainage pits and to remove and properly dispose of the sludge contained in the pit on the southeast side of the building. (Attachment D)

   Follow-up activity: Mr. Haller did not respond to the Directive.

3. **Type of enforcement activity:** Order
   Issuing agent: NJDEP, Division of Environmental Quality (DEQ)
   Date: March 19, 1986
   Description of violation: Failure to conduct leak tests on the moisture density gauges at intervals not longer than 6 months pursuant to the provisions of the Radiation Protection Act. (Attachment E)

   Follow-up activity: There was no follow-up activity evident in the documentation.

4. **Type of enforcement activity:** Directive
   Issuing agent: NJDEP, DWR
   Date: May 30, 1986
   Description of violation: Mr. Haller was identified as a probable contributor to the ground water contamination in the

Plainfield area. Mr. Haller was directed to submit a work plan for a soil boring investigation. (Attachment G)

Follow-up activity: There was no follow-up activity evident in the documentation.

5. **Type of enforcement activity:** Directive
Issuing agent: NJDEP, DWR
Date: June 6, 1986
Description of violation: A Directive was issued to Mr. Haller by NJDEP to initiate a soil boring program and submit a work plan by July 8, 1986. (Attachment I-4)

Follow-up activity: Neither the workplan nor a response have ever been received by the NJDEP.

6. **Type of enforcement activity:** Administrative Order and Notice of Civil Administrative Penalty Assessment
Issuing agent: NJDEP, DWR
Date: May 21, 1987
Description of violation: The enforcement activity required that Mr. Haller immediately cease all unpermitted discharges from the facility; remove and dispose all contaminated materials from the drainage pit; submit a draft hydrogeologic remedial investigation work plan; and submit payment of a civil administrative penalty of $5,000. (Attachment I)

Follow-up activity: Mr. Haller did not respond to the enforcement document. The case was referred to the Office of the Attorney General for legal action.

7. **Type of enforcement activity:** Administrative Order
Issuing agent: NJDEP, DEQ
Date: September 17, 1987
Description of violation: Possession of radioactive materials without a valid New Jersey license and failure to comply to survey the instrument calibrations within the 6-month intervals pursuant to the provisions of the Radiation Protection Act. (Attachment K)

Follow-up activity: Haller did not acquire a New Jersey license.

8. **Type of enforcement activity:** Notice of Prosecution
Issuing agent: NJDEP, DEQ
Date: July 5, 1988
Description of violation: Failure to acquire a valid New Jersey license for the radioactive material in possession pursuant to the provisions of the Radiation Protection Act. (Attachment N)

Follow-up activity: Haller did not acquire a New Jersey license.

9. **Type of enforcement activity:** Notice of Prosecution
Issuing agent: NJDEP, DEQ
Date: February 19, 1989
Description of violation: Failure to acquire a valid New Jersey license for the radioactive material in possession pursuant to the provisions of the Radiation Protection Act. (Attachment Q)

Follow-up activity: Haller applied for the license and paid the penalty fee of $1,500.

10. **Type of enforcement activity:** Notice of Prosecution
Issuing agent: NJDEP, DEQ
Date: December 12, 1990
Description of violation: Violations pursuant to the provisions of the Radiation Protection Act are as follows: unauthorized usage of ionizing radiation equipment, failure to conduct leak tests of sealed sources at intervals not longer than 6 months and failure to perform tests of radiation detection and monitoring instruments (calibration surveys) at the 6-month interval. (Attachment V)

Follow-up activity: There was no follow-up activity evident in the documentation.

11. **Type of enforcement activity:** Administrative Order
Issuing agent: NJDEPE, Division of Facility Wide Enforcement
Date: January 8, 1993
Description of violation: Failure to maintain an accurate accounting for all radioactive materials pursuant to the provisions of the Radiation Protection Act. (Attachment Z)

Follow-up activity: There was no follow-up activity evident in the documentation.

PART XIII: SAMPLING DATA

1. a. **Sampling date:** February 6, 1986

   b. **Sampled by:** NJDEP/DWR/Metro Bureau of Regional Enforcement
   2 Babcock Place
   West Orange, New Jersey

   c. **Samples:** (2) soil

   d. **Laboratory:** New Jersey Department of Health (DOH)
   CN 360, Rm 401
   Trenton, New Jersey
   Certification No. 11148

   e. **Parameters:** volatile organics

f. **Sample description:** The soil samples were collected from two small drainage pits that were located on the southeast side and northwest side of the main building. The southeast pit received discharges from the chemistry lab sink and contained red and gray sludge. The northwest pit received discharges from the asphalt testing room. No information regarding sample depths was found in the files reviewed.

g. **Contaminants detected:** No volatile organics were detected in the sample collected from the northwest drainage pit. The sample collected from the southeast pit contained only low levels of volatile organics which included ethylbenzene (0.1 ppm), toluene (1.0 ppm) and p-cymene (1.05 ppm). The NJDEPE Soil Cleanup Criteria for ethylbenzene and toluene is 1,000 ppm, a Cleanup Criteria has not been established for p-cymene.

h. **QA/QC:** No QA/QC information was found in the files reviewed. The New Jersey DOH laboratory is a New Jersey certified laboratory.

i. **File location:** Attachment D
NJDEPE/DPFSR/Site Assessment
Robbinsville, New Jersey

2. a. **Sampling date:** April 28, 1986

b. **Sampled by:** NJDEP/DWR/Metro Bureau of Regional Enforcement
2 Babcock Place
West Orange, New Jersey

c. **Samples:** (1) soil

d. **Laboratory:** New Jersey Department of Health (DOH)
CN360, Rm 401
Trenton, New Jersey
Certification No. 11148

e. **Parameters:** volatile organics

f. **Sample description:** One soil sample (32421) was collected at a depth of approximately 1 foot below the sludge within the southeast drainage pit.

g. **Contaminants detected:** The results, as analyzed by the New Jersey (DOH) Laboratory, are as follows:

CONTAMINANT	LEVEL (ppm)	Soil Cleanup Criteria (ppm)
1,1-dichloroethene	3.22	8
tetrachloroethene	0.14	4
trichloroethene	1.35	23
1,1,-dichloroethane	3.56	570
chloroform	36.0	19

h. **QA/QC:** No QA/QC information was found in the files reviewed. The New Jersey DOH laboratory is a New Jersey certified laboratory.

i. **File location:** Attachments F and G
NJDEPE/DPFSR/Site Assessment
Robbinsville, New Jersey

3. a. **Sampling date:** September 8, 1993

b. **Sampled by:** NJDEPE/DPFSR/Site Assessment
300 Horizon Center
Robbinsville, New Jersey

c. **Samples:** (14) soil

d. **Laboratory:** Industrial Corrosion Management Inc.
1152 Route 10
Randolph, New Jersey
Certification No. 14116

e. **Parameters:** volatile organics, base/neutrals, pesticides, PCBs and metals

f. **Sample description:** Fourteen soil samples were collected from various areas of the site. Sample locations can be found on Map 2. Samples S-1, S-2 and S-14 were collected along a concrete pad/porch area located along the back of the building. Sample depths ranged from 1.0 to 1.5 feet (S-2 and S-14) and 2 to 3 feet (S-1). Refusal was encountered at a depth of 1.5 feet within location S-14.

Sample S-3, S-4 and S-5 were collected in the probable location of the southeast drainage pit area. The

samples ranged in depth from 1.0 (S-3 and S-4) to 3.0 feet (S-5). The soils in this area contained gravel and bits of concrete. The samples were all collected within 3 feet of the building.

Sample S-6 and S-7 were collected in the probable location of the northwest drainage pit area. The samples were collected at depths of 1.0 feet (S-6) and 1.5 to 2.0 feet (S-7). The area contained bricks and terracotta tile.

Samples S-8, S-9, S-10 and S-11 were collected behind the small out building. S-8 was collected at a depth of 1.5 to 2.0 feet. S-9 was collected along the property fence line near the southwest corner of the out building at a depth of 2 to 3 feet. Within this area radiation levels were measured to be approximately 4 to 6 uR/hour above background levels. Samples S-10 and S-11 were collected in an overgrown area at depths 1.5 to 2.0 feet.

Sample S-12 and its duplicate S-13 were collected at the base of a 275-gallon fuel oil tank at a depth of 18 inches.

g. **Contaminants detected:** No volatile organics were detected above the NJDEPE Soil Cleanup Criteria in any of the samples collected.

Only samples S-3, S-6 and S-11 exhibited base/neutrals at levels above the NJDEPE Soil Cleanup Criteria (SCC). Results are summarized below.

COMPOUND	S-3	S-6	S-11	NJDEPE SCC
benzo(a)anthracene	3.3 j	4.3	----	0.9
benzo(b)fluoranthene	3.4 j	2.9	----	0.9
benzo(k)fluoranthene	3.1 j	2.7	----	0.9
benzo(a)pyrene	3.2 j	4.2	0.86	0.66
indeno(1,2,3-cd)pyrene	5.1 j	3.2	1.3	0.9
dibenz(a,h)anthracene	----	1.9 j	----	0.66

all concentrations in ppm
j = estimated concentration
---- = not detected

Sample S-7 exhibited a concentration of Aroclor 1254 of 0.6 ppm which is above the NJDEPE Soil Cleanup Criteria of 0.49 ppm. No pesticides were detected at levels above the NJDEPE Soil Cleanup Criteria in any of the samples collected.

Four metals (beryllium, cadmium, lead and mercury) were detected at levels above their respective NJDEPE Soil Cleanup Criteria. Beryllium was detected in only one sample (S-1) at levels above the NJDEPE Soil Cleanup Criteria (1.0 ppm) with a concentration of 1.1 ppm.

Cadmium was detected at levels above the NJDEPE Soil Cleanup Criteria (1.0 ppm) within samples S-3 (1.5 ppm) and S-8 (2.2 ppm).

Lead was detected at levels above the NJDEPE Soil Cleanup Criteria (100 ppm) in 10 of the 14 samples collected with levels ranging from 102 ppm (S-12) to 594 ppm (S-8).

Sample S-3 exhibited a mercury concentration of 46.7 ppm which is over 300 percent of the 14 ppm NJDEPE Soil Cleanup Criteria for mercury.

h. **QA/QC:** All sampling was conducted following proper protocol. A complete QA/QC review was completed by the NJDEPE/Division of Publicly Funded Site Remediation (DPFSR)/ Bureau of Environmental

Measurements and Quality Assurance (BEMQA). Industrial Corrosion Management is a New Jersey certified laboratory.

i. **File location:** Attachments HH and II
NJDEPE/DPFSR/SA
Robbinsville, New Jersey

PART XIV: CONCLUSIONS AND RECOMMENDATIONS

Soil sampling conducted on September 8, 1993 by the NJDEPE/DPFSR/Site Assessment indicates that on-site soils are contaminated with base/neutrals and metals above the NJDEPE Soil Cleanup Criteria. Additional soil sampling is recommended to delineate the extent of the soil contamination. Ground water samples should be collected in the area of the past drainage pits to determine if a release to ground water has ocurred due to past discharges to these pits.

It is recommended that the site be fenced to prevent unauthorized entry. It is recommended that the two 55-gallon drums noted in a June 21, 1993 NJDEPE/BFO-SA, PSA (a 1,1,1-tirchloroethane and a hazradous waste drum) be properly manifested off-site. It is also recommended that the moisture density gauge be removed from the property and properly secured.

Submitted by: Andrew Cyr
Title: HSMS III
NJDEPE/DPFSR/Site Assessment
Date: November 1993

PART XV: POTENTIALLY RESPONSIBLE PARTIES

NAME	OWNER/OPERATOR/ KNOWN DISCHARGER	CURRENT ADDRESS
Roger W. Haller	owner	25 Bissell Road Lebanon, NJ 08833
Haller Testing Laboratories, Inc.	operator known discharger	336 Leland Avenue Plainfield, NJ 07061 (Not Operating)

SITE NAME: HALLER TESTING LABORATORIES
LOCATION: 336 LELAND AVE. PLAINFIELD
BERGEN COUNTY

SUMMARY OF SAMPLING DATA
VOLATILES

DATE SAMPLED: 9/8/93
MATRIX: SOIL
UNITS: PARTS PER MILLION (PPM)

SAMPLE ID NO:	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13 (Duplicate of S-12)	S-14	FB-T	FB-SS	NJDEPE SCC
CHLOROMETHANE																	
BROMOMETHANE																	
VINYL CHLORIDE																	
CHLOROETHANE																	
METHYLENE CHLORIDE			0.003 BJ	0.003 BJ	0.002 BJ	0.018 B	0.004 J	0.008 J		0.005 J	0.004 J	0.002 BJ	0.016 B	0.006 J	0.003 BJ	0.004 BJ	490
ACETONE			0.013			0.027	0.029								0.014 B		1,000
CARBON DISULFIDE																	
1,1 DICHLOROETHENE																	
1,1 DICHLOROETHANE		0.002 J												0.016			570
1,2 DICHLOROETHENE																	
CHLOROFORM																	
1,2 DICHLOROETHANE														0.006 J			6.0
2 - BUTANONE																	
1,1,1 TRICHLOROETHANE	0.006 J	0.005 J	0.002 J											0.040			210
CARBON TETRACHLORIDE																	
BROMODICHLOROMETHANE																	
1,2 DICHLOROPROPANE																	

J = estimated concentration
* = above the NJDEPE Soil Cleanup Criteria

SITE NAME: HALLER TESTING LABORATORIES
LOCATION: 336 LELAND AVE. PLAINFIELD
BERGEN COUNTY

SUMMARY OF SAMPLING DATA
VOLATILES

DATE SAMPLED: 9/8/93
MATRIX: SOIL
UNITS: PARTS PER MILLION (PPM)

SAMPLE ID NO:	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13 (Duplicate of S-12)	S-14	FB-T	FB-SS	NJDEPE SCC
cis-1,3-DICHLOROPROPENE																	
TRICHLOROETHENE														0.008 J			23
DIBROMOCHLOROMETHANE																	
1,1,2 TRICHLOROETHANE																	
BENZENE		0.011	0.012			0.012 J	0.023							0.048			3.0
trans-1,3-DICHLOROPROPENE																	
BROMOFORM																	
4-METHYL-2-PENTANONE																	
2-HEXANONE																	
TETRACHLOROETHENE			0.002 J														4.0
1,1,2,2 TETRACHLOROETHANE																	
TOLUENE			0.002 J														6,000
CHLOROBENZENE																	
ETHYLBENZENE																	
STYRENE																	
XYLENE (total)																	
TOTAL VOA																	
TOTAL VOA TICs		0.117 J															

SITE NAME: HALLER TESTING LABORATORIES
LOCATION: 336 LELAND AVE. PLAINFIELD
BERGEN COUNTY

SUMMARY OF SAMPLING DATA
SEMIVOLATILES

DATE SAMPLED: 9/8/93
MATRIX: SOIL
UNITS: PARTS PER MILLION (PPM)

SAMPLE ID NO:	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	Duplicate of (S-12) S-13	S-14	NJDEPE SCC	
1,2,4 TRICHLOROBENZENE																
NAPHTHALENE			0.72 J	0.018 J		0.14 J					0.023 J				230	
4-CHLOROANILINE																
HEXACHLOROBUTADIENE																
4-CHLORO-3-METHYLPHENOL																
2-METHYLNAPHTHALENE																
HEXACHLOROCYCLOPENTADIENE																
2,4,6 TRICHLOROPHENOL																
2,4,5 TRICHLOROPHENOL																
2-CHLORONAPHTHALENE																
2-NITROANILINE																
DIMETHYLPHTHALATE																
ACENAPHTHYLENE											0.031 J				@	
2,6-DINITROTOLUENE																
3-NITROANILINE																
ACENAPHTHENE			0.97 J	0.018 J							0.046 J				3400	
2,4-DINITROPHENOL																

SITE NAME: HALLER TESTING LABORATORIES
LOCATION: 336 LELAND AVE. PLAINFIELD
BEREGN COUNTY

SUMMARY OF SAMPLING DATA
SEMIVOLATILES

DATE SAMPLED: 9/8/93
MATRIX: SOIL
UNITS: PARTS PER MILLION (PPM)

SAMPLE ID NO:	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13 (Duplicate of S-12)	S-14	NJDEPE SCC	
4-NITROPHENOL																
DIBENZOFURAN											0.022 J				@	
2,4-DINITROTOLUENE																
DIETHYLPHTHALATE																
4-CHLOROPHENYL-PHENYLETHER																
FLUORENE				0.020 J							0.058 J				2,300	
4-NITROANILINE																
4,6-DINITRO-2-METHYLPHENOL																
N-NITROSODIPHENYLAMINE (1)																
4-BROMOPHENYL-PHENYLETHER																
HEXACHLOROBENZENE																
PENTACHLOROPHENOL																
PHENANTHRENE	0.37 J		4.9 J	0.32 J	0.24 J	1.4 J	0.36 J	0.11 J	0.22 J	0.28 J	0.48				@	
ANTHRACENE				0.049 J	0.028 J	0.33 J			0.039 J	0.032 J	0.17 J				10,000	
CARBAZOLE				0.026 J							0.072 J				@	
DI-N-BUTYLPHTHALATE									0.54						5,700	
FLUORANTHENE	0.51 J	0.046 J	6.0 J	0.55	0.34 J	2.6	0.71 J	0.15 J	0.53	0.44	1.5	0.02 J			2,300	

SITE NAME: HALLER TESTING LABORATORIES
LOCATION: 336 LELAND AVE. PLAINFIELD
BEREGN COUNTY

SUMMARY OF SAMPLING DATA
SEMIVOLATILES

DATE SAMPLED: 9/8/93
MATRIX: SOIL
UNITS: PARTS PER MILLION (PPM)

SAMPLE ID NO:	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	NJDEPE SCC
													Duplicate of S-12		
PYRENE	0.79 J	0.048 J	5.7 J	0.63	0.45	4.1	0.42 J	0.20 J	0.64	0.59	2.0	0.031 J			1,700
BUTYLBENZLPHTHALATE															
3,3'-DICHLOROBENZIDINE															
BENZO(a)ANTHRACENE	0.58 J		* 3.3 J	0.30 J	0.18 J	* 4.3	0.42 J		0.36 J	0.22 J	0.81				0.9
CHRYSENE	0.61 J		4.0 J	0.38	0.24 J	5.1	0.57 J		0.38 J	0.28 J	1.0				9.0
bis(2-ETHYLHEXYL)PHTHALATE				1.1							0.042 J			0.042 J	49
DI-N-OCTYLPHTHALATE				0.42											1,100
BENZO(b)FLUORANTHENE	0.64 J		* 3.4 J	0.28 J	0.28 J	* 2.9	0.75 J	0.18 J	0.22 J	0.19 J	0.67				0.9
BENZO(k)FLUORANTHENE	0.18 J		* 3.1 J	0.30 J	0.061 J	* 2.7	0.29 J	0.12 J	0.36 J						0.9
BENZO(a)PYRENE	0.59 J		* 3.2 J	0.31 J	0.20 J	* 4.2	0.58 J		0.33 J	0.23 J	* 0.86				0.66
INDENO(1,2,3-CD)PYRENE	0.50 J		* 5.1 J	0.34 J	0.21 J	* 3.2	0.59 J		0.48	0.39 J	* 1.3				0.9
DIBENZ(a,h)ANTHRACENE	0.33 J			0.11 J	0.085 J	* 1.9 J			0.19 J	0.14 J	0.32 J				0.66
BENZO(g,h,i)PERYLENE	0.79 J		4.9 J	0.39	0.22 J	3.1	0.93 J		0.35 J	0.29 J	1.1				@
TOTAL SEMIVOLATILES															
TOTAL SEMIVOLATILE TICs	45.5 J	26.5 J	42.0 J	19.7 J	11.3 J	85.1 J	35.2 J	52.2 J	15.5 J	24.6 J	19.0 J	10.6 J	22.2	28.3	

SITE NAME: HALLER TESTING LABORATORIES
LOCATION: 336 LELAND AVE. PLAINFIELD
BERGEN COUNTY

SUMMARY OF SAMPLING DATA
PESTICIDE ORGANICS, PCBs

DATE SAMPLED: 9/8/93
MATRIX: SOIL
UNITS: PARTS PER MILLION (PPM)

SAMPLE ID NO:	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	Duplicate of S-12 S-13	S-14	NJDEPE SCC
alpha-BHC															
beta-BHC															
delta-BHC															
gamma-BHC (LINDANE)															
HEPTACHLOR															
ALDRIN															
HEPTACHLOR EPOXIDE								0.015		0.011					@
ENDOSULFAN I															
DIELDRIN								0.024							0.042
4,4'-DDE										0.081	0.13				2.0
ENDRIN			0.036 J					0.017 J							17
ENDOSULFAN II															
4,4'-DDD			0.019 J			0.026 J		0.014 J		0.019	0.037				3.0
ENDOSULFAN SULFATE			0.030 J												@
4,4'-DDT						0.028 J		0.061		0.12	0.23				2
METHOXYCHLOR															
ENDRIN KETONE						0.081									@

SITE NAME: HALLER TESTING LABORATORIES
LOCATION: 336 LELAND AVE. PLAINFIELD
BEREGN COUNTY

SUMMARY OF SAMPLING DATA
PESTICIDE ORGANICS, PCBs

DATE SAMPLED: 9/8/93
MATRIX: SOIL
UNITS: PARTS PER MILLION (PPM)

SAMPLE ID NO:	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	Duplicate of S-12 S-13	S-14	NJDPERE SCC
ENDRIN ALDEHYDE															
alpha-CHLORDANE										0.026	0.014				②
gamma-CHLORDANE										0.013					②
TOXAPHENE															
AROCLOR-1016															
AROCLOR-1221															
AROCLOR-1232															
AROCLOR-1242															
AROCLOR-1248															
AROCLOR-1254				0.11 J			*0.6								0.49
AROCLOR-1260		0.058 J		0.2											

SITE NAME: HALLER TESTING LABORATORIES
LOCATION: 336 LELAND AVE. PLAINFIELD
BERGEN COUNTY

SUMMARY OF SAMPLING DATA
METALS, CYANIDE

DATE SAMPLED: 9/8/93
MATRIX: SOIL
UNITS: PARTS PER MILLION (PPM)

SAMPLE ID NO:	S-1	S-2	S-3	S-4	S-5	S-6	S-7	NJDERE SCC
ALUMINUM	19,500	5,250	6,430	7,850	13,500	6,290	13,300	①
ANTIMONY								
ARSENIC	11.8	5.7	6.9	4.7	4.6	12.8	8.0	20.0
BARIUM	178	44.6	220	176	145	119	198	700
BERYLLIUM	*1.1 B	0.28 B	0.28 B	0.43 B	0.43 B	0.38 B	0.60 B	1.0
CADMIUM			*1.5	0.94 B			0.40 B	1.0
CALCIUM	10,000	24,800	16,700	14,100	2,420	16,400	26,300	②
CHROMIUM	24.1	44.5	36	27.7	22.6	22.1	53.4	②
COBALT	7.9 B	7.2 B	8.1 B	7.2 B	4.5 B	6.2 B	11.2 B	②
COPPER	390	335	90.2	89.5	305	387	98.4	600
IRON	17,100	13,800	16,200	17,500	16,700	28,600	33,600	②
LEAD	*178	92.1	*590	*232	96.0	*334	*294	100
MAGNESIUM	2,510	12,700	1,650	3,840	2,580	2,060	4,190	②
MANGANESE	332	210	174	300	260	309	407	②
MERCURY	0.19	0.18	*46.7	13.3	8.4	0.30	0.54	14
NICKEL	22.6	20.9	20.6	22.2	13.0	16.8	23.9	②
POTASSIUM	942 B	439 B	454 B	577 B	353 B	683 B	604 B	②

SITE NAME: HALLER TESTING LABORATORIES
LOCATION: 336 LELAND AVE. PLAINFIELD
BERGEN COUNTY

SUMMARY OF SAMPLING DATA
METALS, CYANIDE

DATE SAMPLED: 9/8/93
MATRIX: SOIL
UNITS: PARTS PER MILLION (PPM)

SAMPLE ID NO:	S-1		S-2		S-3		S-4		S-5		S-6		S-7		NJDEPE SCC
SELENIUM		1.2 B				1.1				1.2		1.8			6
SILVER						4.9		2.6		1.3 B					110
SODIUM															
THALLIUM															
VANADIUM		26.3		19.7		22.2		28.2		28.9		31.9		71.9	370
ZINC		212		290		304		374		138		367		360	1,500
CYANIDE															
TOTAL PHCs															

SITE NAME: HALLER TESTING LABORATORIES
LOCATION: 336 LELAND AVE. PLAINFIELD
BERGEN COUNTY

SUMMARY OF SAMPLING DATA
METALS, CYANIDE

DATE SAMPLED: 9/8/93
MATRIX: SOIL
UNITS: PARTS PER MILLION (PPM)

SAMPLE ID NO:	S-8	S-9	S-10	S-11	S-12	S-13	S-14	NJDEPE SCC
					Duplicate of S-12			
ALUMINUM	7,960	18,700	16,500	12,400	17,100	16,100	7,150	@
ANTIMONY								
ARSENIC	9.3	6.2	12.0	7.9	2.3 B	2.5	9.9	20.0
BARIUM	207	125	181	269	67.2	52.9	116	700
BERYLLIUM	0.46 B	0.71 B	0.68 B	0.46 B	0.54 B	0.48 B	0.41 B	1.0
CADMIUM	*2.2						0.87 B	1.0
CALCIUM	7,110	983	5,860	5,470	1,240	1,100 B	52,700	@
CHROMIUM	58.5	20.7	29.2	56.5	47	65.0	23.5	@
COBALT	9.6 B	5.4 B	6.4 B	9.6 B	9.9 B	8.5 B	5.0 B	@
COPPER	169	19.4	60.5	80.2	26.1	22.9	134	600
IRON	34,000	15,400	18,500	31,000	23,600	21,600	25,700	@
LEAD	*594	66.3	*212	*340	*10.2	41.9	*543	100
MAGNESIUM	2,780	2,290	2,710	4,350	4,400	3,780	7,650	@
MANGANESE	483	397	515	482	217	172	278	@
MERCURY	2.8		0.31	0.20			0.95	14
NICKEL	31.7	15.2	18.3	30.2	21.9	35.2	19.2	@
POTASSIUM	659 B	726 B	858 B	680 B	1,040 B	1,020 B	333 B	@

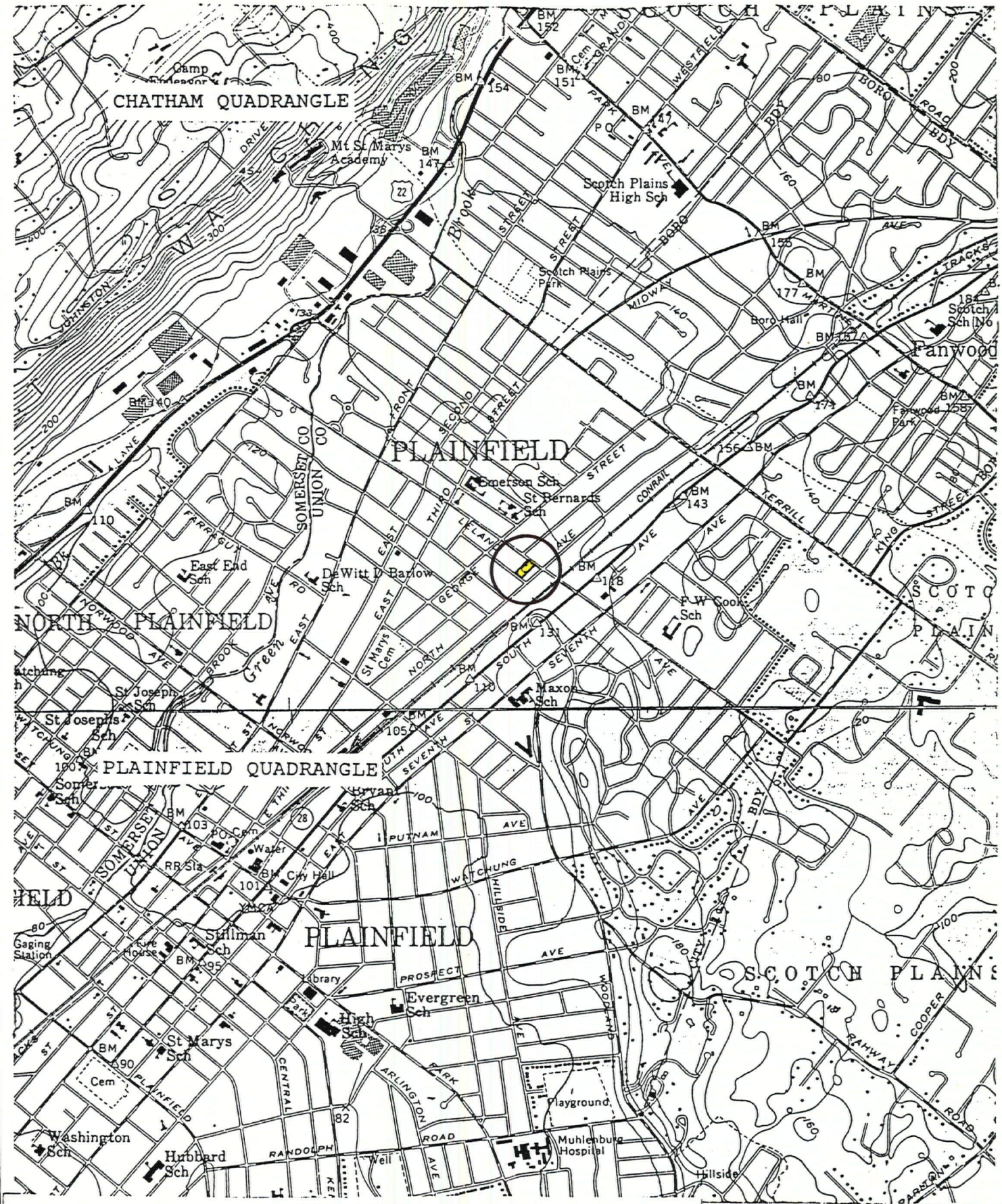
SITE NAME: HALLER TESTING LABORATORIES
LOCATION: 336 LELAND AVE. PLAINFIELD
BERGEN COUNTY

SUMMARY OF SAMPLING DATA
METALS, CYANIDE

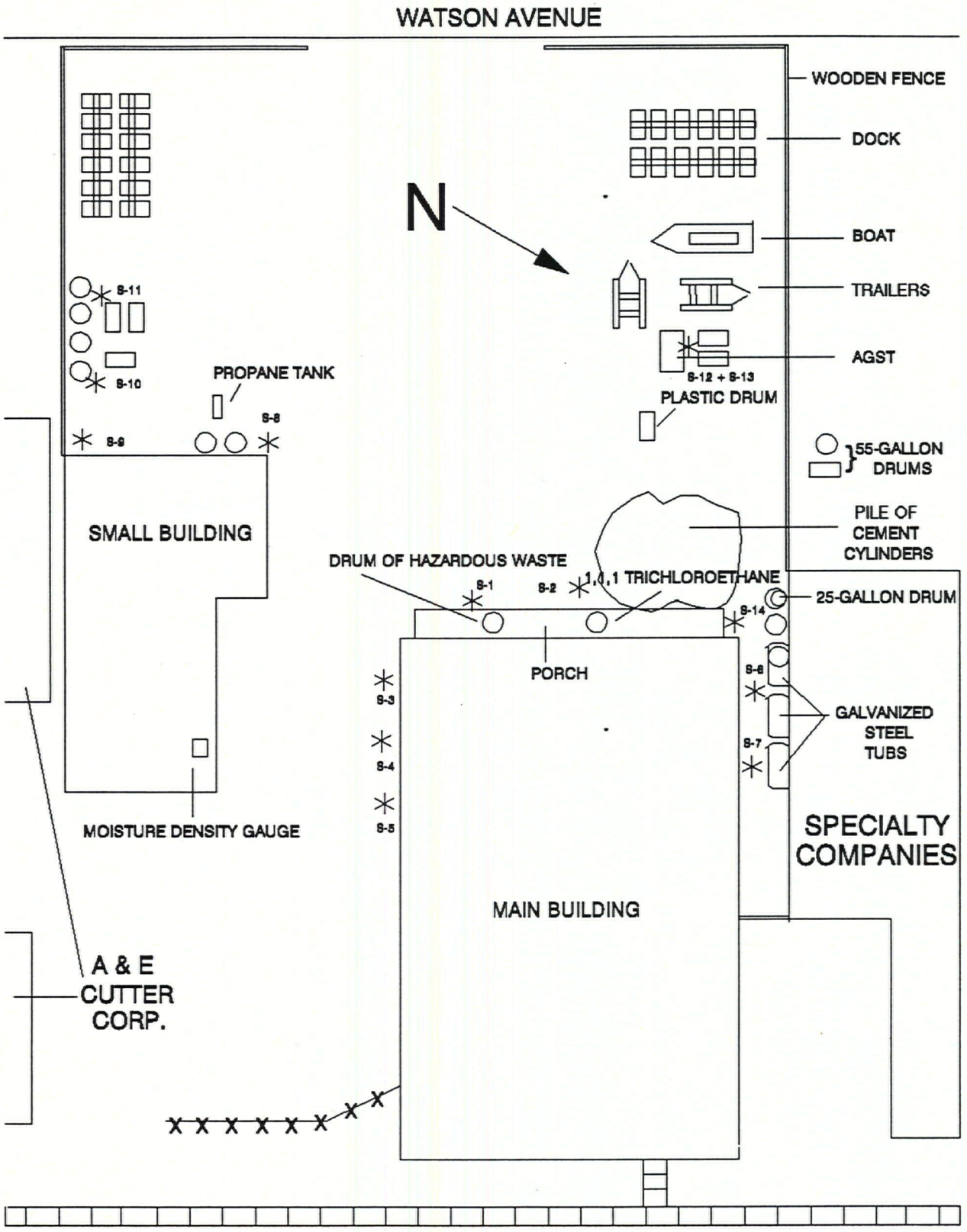
DATE SAMPLED: 9/8/93
MATRIX: SOIL
UNITS: PARTS PER MILLION (PPM)

SAMPLE ID NO:	S-8	S-9	S-10	S-11	S-12	Duplicate of S-12 S-13	S-14	NJDEPE SCC
SELENIUM								
SILVER								
SODIUM							52.4[B]	ⓐ
THALLIUM								
VANADIUM	25.3	27.9	32.6	36.9	30.3	28.3	30.8	370
ZINC	481	77.7	232	255	77.3	61.8	254	1,500
CYANIDE								
TOTAL PHCs								

MAPS



HALLER TESTING LABORATORIES, INC.
336 LELAND AVENUE
PLAINFIELD CITY, UNION COUNTY
USGS TOPOGRAPHIC MAP
MAP 1



NOT TO SCALE

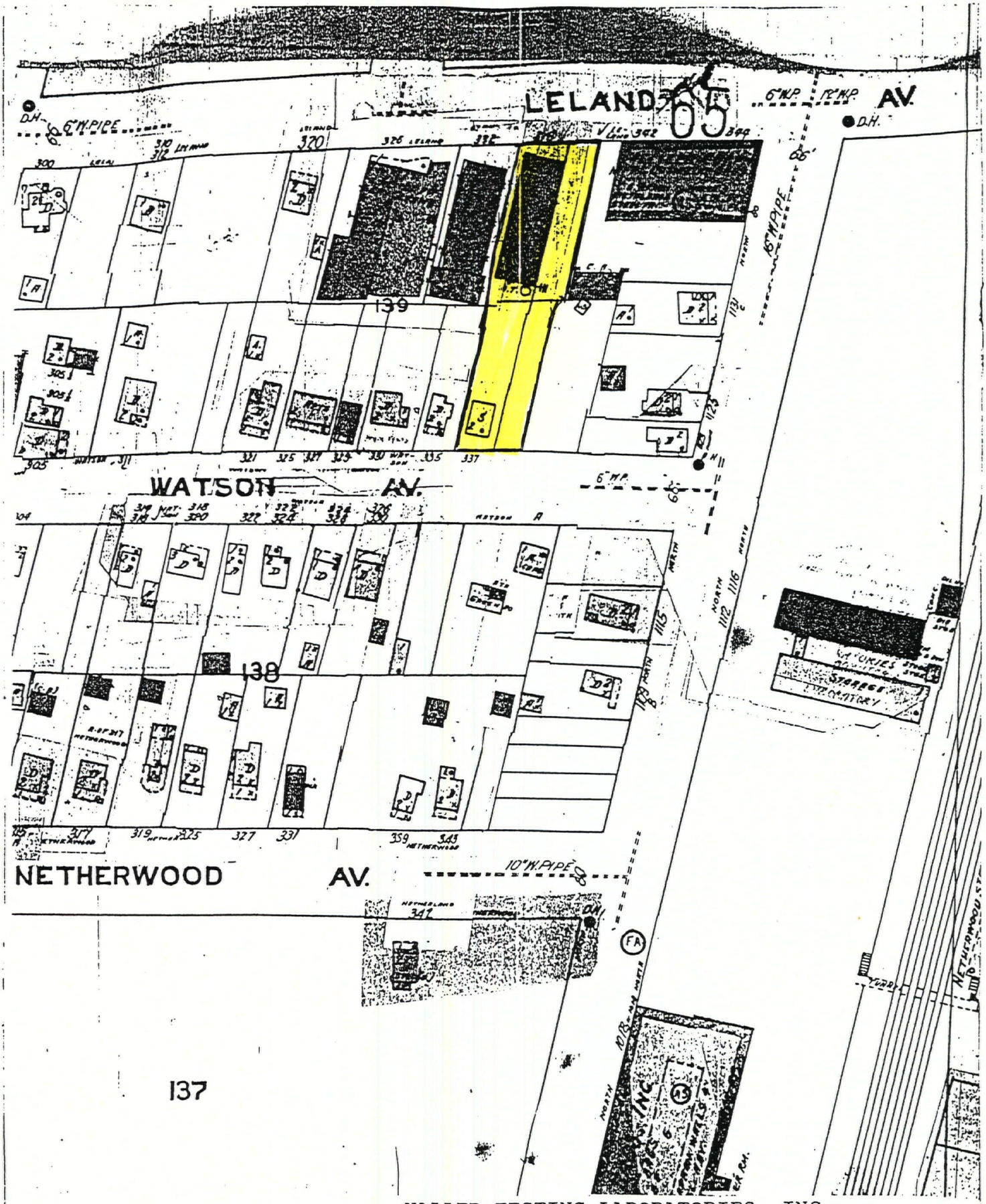
LELAND AVENUE

✳ SAMPLE POINT

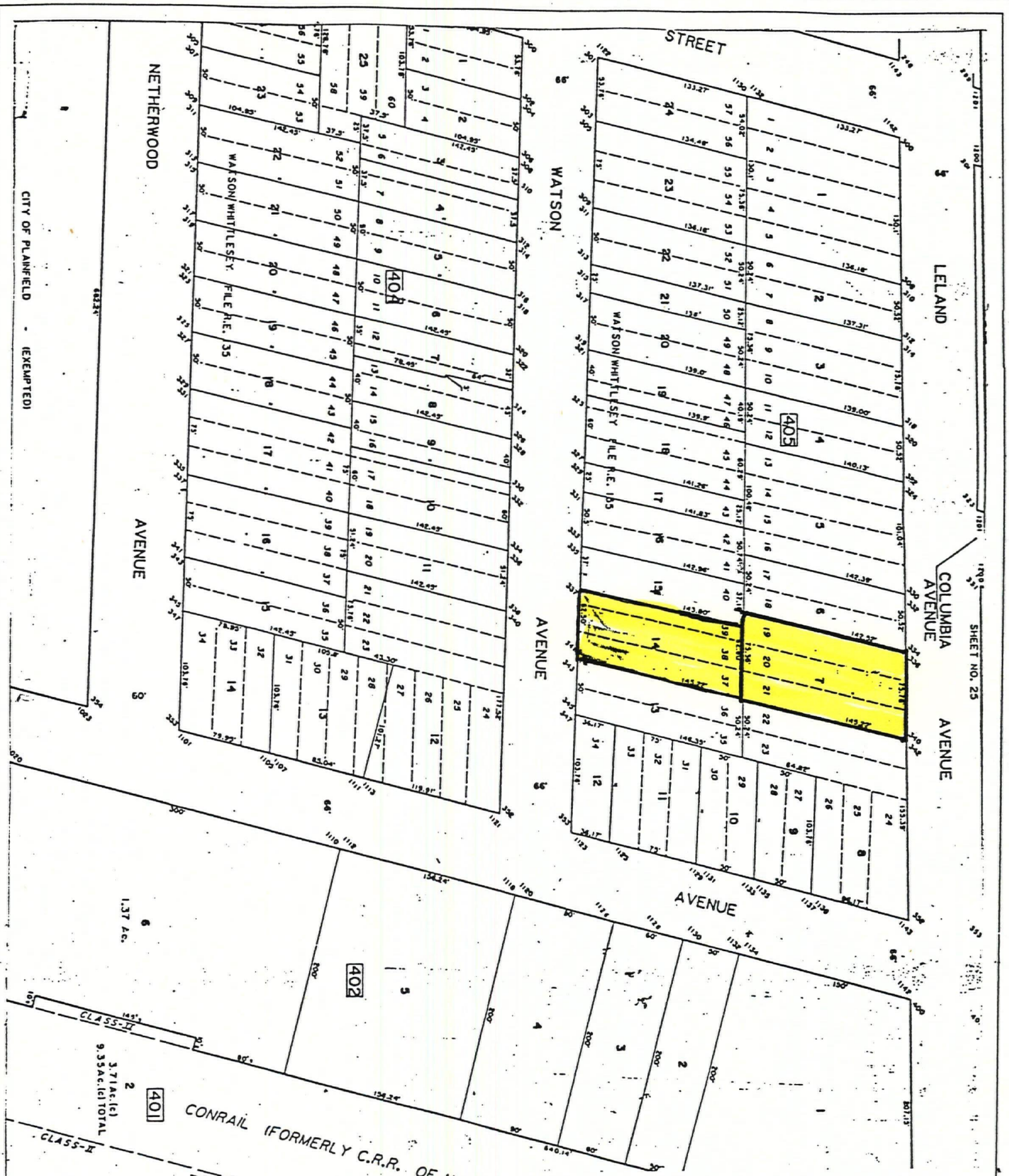
HALLER TESTING LABORATORIES
336 LELAND AVENUE
PLAINFIELD CITY, UNION COUNTY
SITE/SAMPLE MAP 9/8/93

MAP-2

HALLER TESTING LABORATORIES, INC.
336 LELAND AVENUE
PLAINFIELD CITY, UNION COUNTY
SITE MAP - SANBORN FIRE INSURANCE 1910
MAP 2B

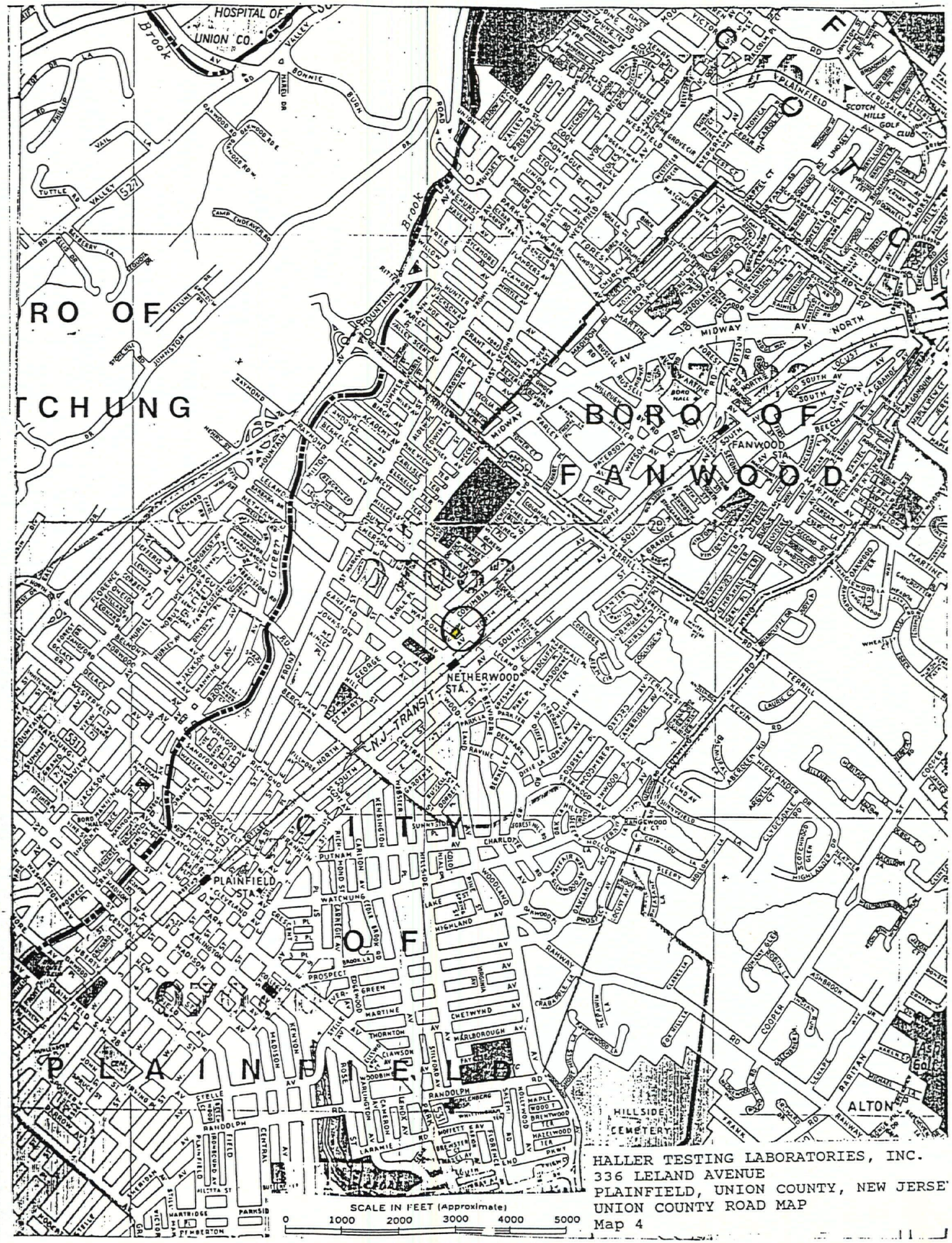


HALLER TESTING LABORATORIES, INC.
336 LELAND AVENUE
PLAINFIELD CITY, UNION COUNTY
SITE MAP - SANBORN FIRE INSURANCE AUG. 1929
MAP 2C



TAX MAP 21
CITY OF PLAINFIELD
UNION COUNTY, NEW JERSEY
SCALE 1"=50' MARCH 24, 1987
RICHARD McKINNEY L.S.
QUINN ASSOCIATES
460 CAREDEAN DR. HORSHAM, PA 19044

HALLER TESTING LABORATORIES, INC.
336 LELAND AVENUE
PLAINFIELD, UNION COUNTY
City OF PLAINFIELD TAX MAP
* REDUCED COPY, NO SCALE
Map 3



HALLER TESTING LABORATORIES, INC.
336 LELAND AVENUE
PLAINFIELD, UNION COUNTY, NEW JERSE'
UNION COUNTY ROAD MAP
Map 4

SUBJECT TO REVISION

WATER WITHDRAWAL
POINTS WITHIN
5.0 MILES OF:

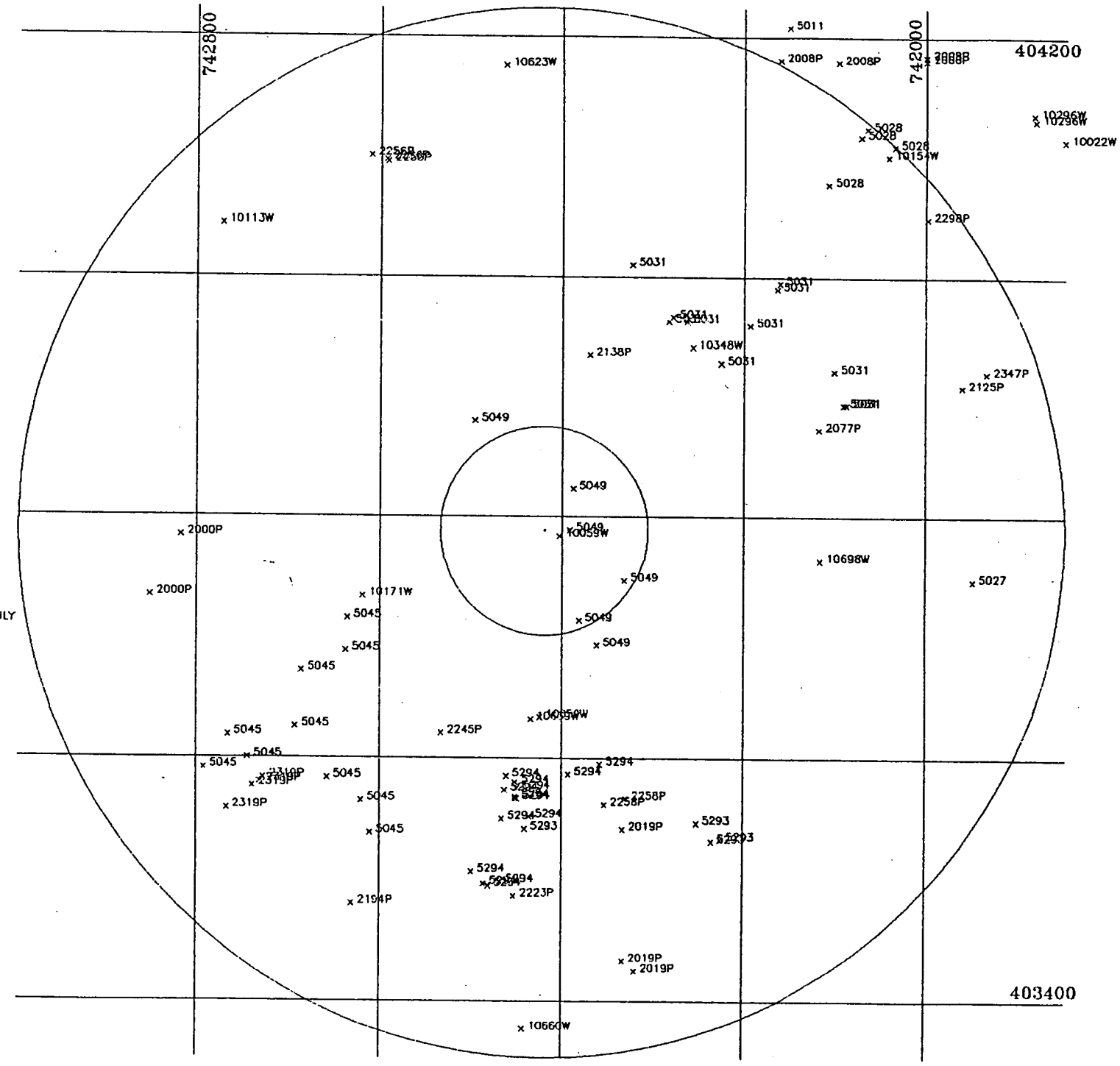
LATITUDE 403753
LONGITUDE 742412

DRAFT

SCALE: 1:63,360
(3/4 inch = 1 MILE)

× 100,000 GPD WATER WITHDRAWAL POINTS ONLY

1 MILE AND 5 MILE RADII INDICATED



PLOT PRODUCED BY:
NJDEPE
WATER TECHNICAL PROGRAMS
BUREAU OF WATER ALLOCATION
CN-426
TRENTON, NJ 08625

DATE: 12/29/92

SUBJECT TO REVISION

 PRELIMINARY SURVEY OF WATER WITHDRAWAL POINTS WITHIN 5.0 MILES OF 403753 LAT. 742412 LON. (IN ORDER BY PERMIT NUMBER) - 12/29/92

NUMBER	NAME	SOURCEID	LOCID	LAT	LON	LLACC	DISTANCE	COUNTY	MUN	DEPTH	GEO1	GEO2	CAPACITY	
10022W	ATLANTIC METAL PRODUCTS INC	2605106	#1	404108	741830	T	6.2	39	17	308	GTRB		100	
10059W	1225 SOUTH CORPORATION	2513694	2	403750	742402		0.2	39	12	400	GTRB		201	
10113W	BERLEX LABORATORIES, INC.	2514092	#1	404026	742743	T	4.2	27	24	500				
10154W	STERLING PLASTICS CO.	2513905	#2	404100	742025	T	4.9	39	10	590	GTRB		215	
10171W	STONY BROOK LAUNDRY, INC.	2519211	#1	403720	742611	T	1.8	35	14	70			75	
10296W	PUBLIC SERVICE ELECT. & GAS CO	2600510	1	404121	741850		6.2	39	17	380	GTRB		75	
	PUBLIC SERVICE ELECT. & GAS CO	2600596	2	404118	741849		6.1	39	17	404	GTRB		125	
10348W	SCOTCH PLAINS RECREATION COMM	2512138	WELL 1	403925	742234	T	2.3	39	16	450	GTRB		150	
10623W	ELECTRICAL INDUSTRIES CORP.	2509445		404145	742438		4.5	39	11	260	GTRB		150	
10659W	MUHLENBERG HOSPITAL	4500042	1	403619	742421	F	1.8	39	12	298	GTRB		160	
	MUHLENBERG HOSPITAL	2510488	3	403620	742415	F	1.8	39	12	502	GTRB		320	
10860W	JERSEY CONCRETE CO.	2523891	1	403346	742426		4.7	23	22	235	GTRB		97	
	JERSEY CONCRETE CO.	2526404	2	403346	742426		4.7	23	22	340	GTRB		82	
10698W	SHACKAMAXON GOLF & CNTRY CLUB		01	403738	742109	M	2.7	39	16		SKYAH	SY	1000	
2000P	SOMERSET COUNTY PARK COMM.	2512669	1	403750	742810	U	3.5	35	20	115	GTRB		236	
	SOMERSET COUNTY PARK COMM.	POND		403720	742830	U	3.8	35	20		SR		660	
2008P	BALTUSROL GOLF CLUB	4500303	1	404150	742000	M	5.8	39	17	203	GTRB		200	
	BALTUSROL GOLF CLUB	4500304	3	404148	742000	M	5.8	39	17	288	GTRB		300	
	BALTUSROL GOLF CLUB	4500305	4	404147	742058	M	5.3	39	17	515	GTRB		90	
	BALTUSROL GOLF CLUB	2509639	5	404148	742136	M	5.0	39	17	626	GTRB		120	
2019P	L.A. DREYFUS COMPANY	4500040	1	403420	742320		4.1	23	05	750	GTRB		500	
	L.A. DREYFUS COMPANY	2521275	2	403415	742312		4.3	23	05	705	GTRB		350	
	L.A. DREYFUS COMPANY	2521034	OBSERVATIO	403525	742320		2.9	23	05	900	GTRB		520	
2077P	LORD & TAYLOR	2510521	1	403844	742110	F	2.8	39	20	600	GTRB		240	
2128P	LERNER PACKAGING CORPORATION	2602649	WELL #1	403905	741936		4.3	39	26	300	GTRB		200	
2138P	CUSTOM MOLDERS CORP.	2512806	1	403921	742342	F	1.7	39	16	514	GTRB		4.46	
2194P	DESIGN AND MOLDING SERVICES	4500252	1	403448	742618	S	4.0	23	17	390	GTRB		120	
	DESIGN AND MOLDING SERVICES	2522656	2	403448	742618	S	4.0	23	17	294	GTRB		120	
2223P	KENTILE FLOORS, INC.	2500845	1	403452	742432	S	3.5	23	22	240	GTRB		250	
	KENTILE FLOORS, INC.	2500846	2	403452	742432	S	3.5	23	22	174	GTRB			
2245P	MACYS NEW JERSEY, INC.	2501922	1	403612	742520	F	2.2	39	12	501	GTRB		400	
	MACYS NEW JERSEY, INC.	2502592	2(DIFFUS.)	403612	742520	F	2.2	39	12	34	GTRB		0	
	MACYS NEW JERSEY, INC.	2502903	3(DIFFUS.)	403612	742520	F	2.2	39	12	39	GTRB		0	
2256P	REHEIS CHEMICAL CO., INC.	2504899	2	404058	742556	F	3.9	39	01	255	GTRBS		200	
	REHEIS CHEMICAL CO., INC.	2513038	4	404057	742555	F	3.8	39	01	303	GTRBS		290	
	REHEIS CHEMICAL CO., INC.	2520573	5	404100	742606	F	3.9	39	01	305	GTRBS		500	
2258P	PLAINFIELD COUNTRY CLUB	2506839	1	403537	742332	F	2.7	23	05	600	GTRB		300	
	PLAINFIELD COUNTRY CLUB	4500307	2	403540	742318	S	2.7	23	05	204	GTRB		75	
2298P	ECHO LAKE COUNTRY CLUB	2604189	2	404029	741959		4.7	39	20	80	GTRB		400	
2319P	NATIONAL STARCH & CHEMICAL	4500312	1	403548	742718	S	3.6	39	12	300	GTRB		350	
	NATIONAL STARCH & CHEMICAL	4500313	2	403546	742723	S	3.7	39	12	304	GTRB		350	
	NATIONAL STARCH & CHEMICAL	2511751	6	403550	742716	S	3.6	39	12	436	GTRB		700	
	NATIONAL STARCH & CHEMICAL	2514905	7	403535	742740	S	4.0	39	12	600	GTRB		450	
2347P	GARWOOD PAPERBOARD MILL	4600192	1	403912	741920		4.5	39	06	136	GTRB		150	
	GARWOOD PAPERBOARD MILL	4600193	2	403912	741920		4.5	39	06	194	GTRB			
	GARWOOD PAPERBOARD MILL	4600194	3	403912	741920		4.5	39	06	235	GTRB		300	
	GARWOOD PAPERBOARD MILL	4600195	4	403912	741920		4.5	39	06	235	GTRB		300	
5011	NEW JERSEY-AMERICAN WATER CO.	4500265	WELL #12	404205	742130		5.4	39	18	300	GTRB		350	
	NEW JERSEY-AMERICAN WATER CO.	4500266	WELL #14	404205	742130		5.4	39	18	300	GTRB		350	
	NEW JERSEY-AMERICAN WATER CO.	4500267	WELL #15	404205	742130		5.4	39	18	300	GTRB		250	
	NEW JERSEY-AMERICAN WATER CO.	4500268	WELL #17	404205	742130		5.4	39	18	369	GTRB		250	
	NEW JERSEY-AMERICAN WATER CO.	4500269	WELL # 18	404205	742130		5.4	39	18	462	GTRB		250	
5027	ELIZABETHTOWN WATER COMPANY	2604751	ELKS CLUB	403728	741929	F	4.2	39	02	59	GOSD		288	
5028	ELIZABETHTOWN WATER COMPANY	2500872	CHARLES 1	404114	742039	F	4.9	39	10	454	GTRB		400	IN SERVICE
	ELIZABETHTOWN WATER COMPANY	4500004	CHARLES 2	404110	742043	F	4.8	39	10	572	GTRB		220	IN SERVICE

NUMBER	NAME	SOURCEID	LOCID	LAT	LON	LLACC	DISTANCE	COUNTY	MUN	DEPTH	GEO1	GEO2	CAPACITY	
	ELIZABETHTOWN WATER COMPANY	2509083	CENTRAL	404046	742104	F	4.3	39	10	300	GTRB		475	
	ELIZABETHTOWN WATER COMPANY	2509206	BRISTOL RD	404105	742021	F	5.0	39	10	315	GTRB		330	
5031	ELIZABETHTOWN WATER COMPANY	2507173	GLENSIDE	404006	742314	F	2.7	39	16	540	GTRB		135	
	ELIZABETHTOWN WATER COMPANY	2500130	JERUSALEM1	403940	742247	F	2.4	39	16	650	GTRB		300	
	ELIZABETHTOWN WATER COMPANY	2500649	JERUSALEM2	403938	742250	F	2.3	39	16	665	GTRB		350	
	ELIZABETHTOWN WATER COMPANY	2500800	JERUSALEM3	403938	742238	F	2.4	39	16	708	GTRB		212	
	ELIZABETHTOWN WATER COMPANY	2509281	MORSE AVE.	403917	742215	F	2.3	39	16	400	GTRB		300	
	ELIZABETHTOWN WATER COMPANY	2504639	WITTKE 1	403954	742138	F	3.2	39	20	506	GTRB		425	
	ELIZABETHTOWN WATER COMPANY	2505083	WITTKE 2	403957	742136	F	3.3	39	20	511	GTRB		520	
	ELIZABETHTOWN WATER COMPANY	2508087	ELM STREET	403913	742100	F	3.2	39	20	525	GTRB		350	
	ELIZABETHTOWN WATER COMPANY	2500873	WESTFIELD1	403856	742052	F	3.2	39	20	523	GTRB		400	
	ELIZABETHTOWN WATER COMPANY	4500005	WESTFIELD2	403856	742054	F	3.1	39	20	502	GTRB		350	
	ELIZABETHTOWN WATER COMPANY	2512960	PROSPECT	403936	742156	F	2.8	39	20	500	GTRB		300	
5045	ELIZABETHTOWN WATER COMPANY	2513106	ROKVW TERR	403709	742621		2.1	39	12	400	GTRB		300	
	ELIZABETHTOWN WATER COMPANY	2513698	ROKVW AVE	403653	742622		2.2	39	12	220	GTRB		300	
	ELIZABETHTOWN WATER COMPANY	4500022	BD. OF ED.	403643	742651		2.7	39	12	300	GTRB		500	
	ELIZABETHTOWN WATER COMPANY	2513248	ROK AVE-PS	403600	742726		3.6	23	17	350	GTRB		250	
	ELIZABETHTOWN WATER COMPANY	2512665	ROK AV GR	403611	742739		3.6	35	09	350	GTRB		350	
	ELIZABETHTOWN WATER COMPANY	4500023	GR BRK #1	403555	742755		4.0	35	09	451	GTRB		520	
	ELIZABETHTOWN WATER COMPANY	4500024	GR BRK #2	403555	742755		4.0	35	09	376	GTRB		520	
	ELIZABETHTOWN WATER COMPANY	4500025	GR BRK #3	403555	742755		4.0	35	09	550	GTRB		150	
	ELIZABETHTOWN WATER COMPANY	4500026	GR BRK $4	403555	742755		4.0	35	09	400	GTRB		400	
	ELIZABETHTOWN WATER COMPANY	2500572	GR BRK #5	403555	742755		4.0	35	09	454	GTRB		600	
	ELIZABETHTOWN WATER COMPANY	2500632	GR BRK #6	403555	742755		4.0	35	09	473	GTRB		600	
	ELIZABETHTOWN WATER COMPANY	2500633	GR BRK #7	403555	742755		4.0	35	09	545	GTRB		300	
	ELIZABETHTOWN WATER COMPANY	2502715	GR BRK #8	403555	742755		4.0	35	09	445	GTRB		400	
	ELIZABETHTOWN WATER COMPANY	2502716	GR BRK #9	403555	742755		4.0	35	09	507	GTRB		300	
	ELIZABETHTOWN WATER COMPANY	4500027	PLNFLD CTY	403615	742655		3.0	39	12		GTRB		400	
	ELIZABETHTOWN WATER COMPANY	2512961	5TH ST	403550	742634		3.1	39	12	350	GTRB		250	IN SERVICE
	ELIZABETHTOWN WATER COMPANY	2512632	8TH ST	403539	742612		3.1	23	22	350	GTRB		450	
	ELIZABETHTOWN WATER COMPANY	2513354	CLINTON AV	403523	742606		3.3	23	22	350	GTRB		450	
	ELIZABETHTOWN WATER COMPANY	2502717	GR BRK #11	403555	742755		4.0	35	09	433	GTRB		400	
5049	ELIZABETHTOWN WATER COMPANY	2508131	TWO GUYS 1	403848	742458		1.2	35	21		GTRB		400	
	ELIZABETHTOWN WATER COMPANY	2508132	TWO GUYS 2	403848	742458		1.2	35	21	325	GTRB		400	
	ELIZABETHTOWN WATER COMPANY	4500009	NW #1	403753	742355		0.2	39	12	350	GTRB		225	
	ELIZABETHTOWN WATER COMPANY	4500010	NW #2	403753	742355		0.2	39	12	500	GTRB		225	IN SERVICE
	ELIZABETHTOWN WATER COMPANY	4500011	NW #3	403753	742355		0.2	39	12	350	GTRB		450	
	ELIZABETHTOWN WATER COMPANY	4500012	NW #4	403753	742355		0.2	39	12	400	GTRB		300	IN SERVICE
	ELIZABETHTOWN WATER COMPANY	4500013	NW #5	403753	742355		0.2	39	12	350	GTRB		350	
	ELIZABETHTOWN WATER COMPANY	4500014	NW #6	403753	742355		0.2	39	12	300	GTRB			IN SERVICE
	ELIZABETHTOWN WATER COMPANY	4500015	NW #7	403753	742355		0.2	39	12	350	GTRB		350	
	ELIZABETHTOWN WATER COMPANY	4500016	NW #8	403753	742355		0.2	39	12	304	GTRB		350	IN SERVICE
	ELIZABETHTOWN WATER COMPANY	4500017	NW #9	403753	742355		0.2	39	12	350	GTRB		350	
	ELIZABETHTOWN WATER COMPANY	4500018	NW #10	403753	742355		0.2	39	12	350	GTRB		350	IN SERVICE
	ELIZABETHTOWN WATER COMPANY	4500019	NW #11	403753	742355		0.2	39	12	350	GTRB		250	
	ELIZABETHTOWN WATER COMPANY	4500020	NW #12	403753	742355		0.2	39	12	350	GTRB		250	
	ELIZABETHTOWN WATER COMPANY	2508185	WATCHUNG A	403708	742349		0.9	39	12	605	GTRB		300	
	ELIZABETHTOWN WATER COMPANY	2509037	PROSPECT A	403656	742337		1.2	39	12	350	GTRB		300	
	ELIZABETHTOWN WATER COMPANY	2512637	ABERDEEN R	403728	742319		0.9	39	16	350	GTRB		390	
	ELIZABETHTOWN WATER COMPANY	4500021	GEORGE ST.	403814	742353		0.5	39	12	350	GTRB		225	
5293	MIDDLESEX WATER COMPANY	2500408	1	403528	742231		3.1	23	05	502	GTRB		567	
	MIDDLESEX WATER COMPANY	2503970	2	403528	742231	U	3.1	23	05	560	GTRB		200	
	MIDDLESEX WATER COMPANY	2502008	3	403528	742231	U	3.1	23	05	507	GTRB		450	
	MIDDLESEX WATER COMPANY	2502009	4	403528	742231		3.1	23	05	508	GTRB		750	
	MIDDLESEX WATER COMPANY	2504516	5	403528	742231		3.1	23	05	532	GTRB		300	
	MIDDLESEX WATER COMPANY	2504517	6	403528	742231		3.1	23	05	540	GTRB		400	

NUMBER	NAME	SOURCEID	LOCID	LAT	LON	LLACC	DISTANCE	COUNTY	MUN	DEPTH	GEO1	GEO2	CAPACITY
	MIDDLESEX WATER COMPANY	2505432	7	403525	742425		2.8	23	05	608	GTRB		300
	MIDDLESEX WATER COMPANY	2505637	8	403520	742215		3.4	23	05	629	GTRB		500
	MIDDLESEX WATER COMPANY	2505965	9	403519	742221		3.4	23	05	700	GTRB		300
5294	MIDDLESEX WATER COMPANY	2509603	SPRAGUE #1	403552	742356		2.3	23	22	101	GOSD		790
	MIDDLESEX WATER COMPANY	2511464	SPRAGUE #2	403557	742335		2.3	23	22	151	GOSD		790
	MIDDLESEX WATER COMPANY	2511823	SPRNG LK 5	403458	742452		3.4	23	22	500	GTRB		600
	MIDDLESEX WATER COMPANY	2511828	SPRNG LK 6	403459	742441		3.4	23	22	504	GTRB		500
	MIDDLESEX WATER COMPANY	2512364	SPRNG LK 8	403504	742500		3.3	23	22	501	GTRB		650
	MIDDLESEX WATER COMPANY	2512365	SPRNG LK 9	403457	742449		3.4	23	22	500	GTRB		350
	MIDDLESEX WATER COMPANY	4500274	PARK AV 18	403540	742430	U	2.6	23	22	74	GOSD		1400
	MIDDLESEX WATER COMPANY	4500275	PARK AV 19	403540	742430	U	2.6	23	22	76	GOSD		1100
	MIDDLESEX WATER COMPANY	4500276	PARK AV 20	403540	742430	U	2.6	23	22	82	GOSD		1450
	MIDDLESEX WATER COMPANY	4500277	PARK AV 21	403540	742430	U	2.6	23	22	73	GOSD		1000
	MIDDLESEX WATER COMPANY	4500278	PARK AV 22	403540	742430	U	2.6	23	22	514	GTRB		320
	MIDDLESEX WATER COMPANY	2509763	PARK AV 23	403551	742437		2.4	23	22		GOSD		700
	MIDDLESEX WATER COMPANY	4500279	PARK AV 24	403540	742430	U	2.6	23	22	110	GOSD		450
	MIDDLESEX WATER COMPANY	2511815	PARK AV 25	403531	742422		2.7	23	22		GTRB		850
	MIDDLESEX WATER COMPANY	2511816	PARK AV 26	403530	742440		2.8	23	22	495	GTRB		400
	MIDDLESEX WATER COMPANY	2511822	PARK AV 27	403540	742431		2.6	23	22	501	GTRB		
	MIDDLESEX WATER COMPANY	2512119	PARK AV 28	403541	742431		2.5	23	22	500	GTRB		250
	MIDDLESEX WATER COMPANY	2512120	PARK AV 29	403544	742438		2.5	23	22	500	GTRB		730
	MIDDLESEX WATER COMPANY	2512130	PARK AV 30	403548	742431		2.4	23	22	500	GTRB		350
	MIDDLESEX WATER COMPANY	2512461	PARK AV 31	403540	742430	U	2.6	23		500	GTRB		425
	MIDDLESEX WATER COMPANY	2512131	PARK AV 32	403545	742430		2.5	23	22	501	GTRB		250

Number of Observations: 135

DESCRIPTION OF WATER WITHDRAWAL POINTS

The Water Withdrawal Points listing contains the following fields:

CAPACITY: the pump capacity in gallons per minute
COUNTY: county the withdrawal point is in
DEPTH: depth of the well or pond
DISTANCE: distance in miles from center of circle
GEO1: the ground or surface water source
GEO2: a secondary source of the water
LAT: latitude of the withdrawal point
LLACC: accuracy of the latitude and longitude estimates
LOCID: the local identification of the withdrawal point, or a continuation of the SOURCEID field for surface water
LON: longitude of the withdrawal point
MUN: the municipality the withdrawal point is in
NAME: name of the permit, certificate, or registration holder
NUMBER: Water Allocation permit, Agricultural Certification, or Registration number
SOURCEID: the well permit number or other identifier for the water withdrawal

The listing that you have requested includes most wells and surface intakes that are in the Water Allocation Permits, and representative sources from most of the Agricultural Certificates. Recognizing the fact that the list will contain errors and omissions, it is advisable to use this resource as a guide and to verify all data. We try to maintain an accurate database; however, we can not yet guarantee reliability. If you spot any errors we would be very grateful to hear about them. Please call or write to us in reference to the "Radius Program" at:

NJDEP
Division of Water Resources
Bureau of Water Allocation
CN-029
Trenton, NJ 08625

(609) 292-2957

Thank you.

Please see the attached sheets for definitions of the codes used in the Water Withdrawal Points listing.

CODES USED IN THE WATER WITHDRAWAL POINTS LISTING

This packet contains information on the database codes that the Bureau of Water Allocation uses in the Water Withdrawal Points Listing.

COUNTY:

01 - Atlantic	15 - Gloucester	29 - Ocean
03 - Bergen	17 - Hudson	31 - Passaic
05 - Burlington	19 - Hunterdon	33 - Salem
07 - Camden	21 - Mercer	35 - Somerset
09 - Cape May	23 - Middlesex	37 - Sussex
11 - Cumberland	25 - Monmouth	39 - Union
13 - Essex	27 - Morris	41 - Warren

GEO:

RECENT	
Surficial Deposits	GRS
PLEISTOCENE	
Glacial Undifferentiated	GQGU
Stratified Drift	GQSD
Terminal Moraine	GQTM
Bridgeton	GQBS
Cape May	GQCM
Holly Beach Mbr.	GQCHB
Estuarine Sand	GQES
Pennsauken	GQPS
TERTIARY	
Beacon Hill	GTBH
Cohansey	GTCH
Cohansey & Kirkwood	GTCK
Kirkwood	GTKW
Upper	GTKWU
Rio Grande	GTKRG
Lower	GTKWL
Piney Point Mbr.	GTKPP
Shark River Marl	GTSR
Manasquan Marl	GTMQ
Vincentown Sand	GTVT
Hornerstown Marl	GTHT
CRETACEOUS	
Red Bank	GKRB
Navesink	GKNS
Mount Laurel	GKML
Wenonah	GKWE
Mount Laurel & Wenonah	GKMW
Marshalltown	GKMT
Englishtown	GKET
Woodbury	GKWB
Merchantville	GKMV
Magothy	GKM

Old Bridge	GKROB
Raritan	GKR
Sayreville Sand	GKRSS
Farrington	GKRF
Raritan/Magothy	GKMR
Potomac	GKP
TRIASSIC	
Brunswick Formation	GTRB
Lockatong Formation	GTRL
Stockton Formation	GTRS
Basalt	GTRBS
Diabase	GTRDB
Conglomerate	GTRCG
DEVONIAN	
Undifferentiated	GD
SILURIAN	
Bossardville Limestone	GSBD
Decker Formation	GSDK
Longwood Shale	GSLS
Poxono Island Fm	GSPI
Greenpond Conglomerate	GSGP
High Falls	GSHF
Shawangunk Fm	GSSG
ORDOVICIAN	
Martinsburg Fm	GOMB
Jacksonburg Fm	GOJB
Kittatinny Group	GOK
Outleaunee Fm	GOKO
Harmonyvale Mbr	GOKOH
Beaver Run Mbr	GOKOB
Epler	GOKE
Rickenbach	GOKR
CAMBRO ORDOVICIAN	
Kittatinny Fm	GCOK
CAMBRIAN	
Hardyston Quartzite	GCH
Allentown Fm	GCKA
Upper Mbr	GCKU
Limeport Mbr	GCKLP
Leithsville Fm	GCKL
Walkill Mbr	GCKLW
Hamburg Mbr	GCKLH
Califon Mbr	GCKLC
PRECAMBRIAN	
Granite	GPCGR
Gneiss	GPCGN
Undifferentiated	GPC

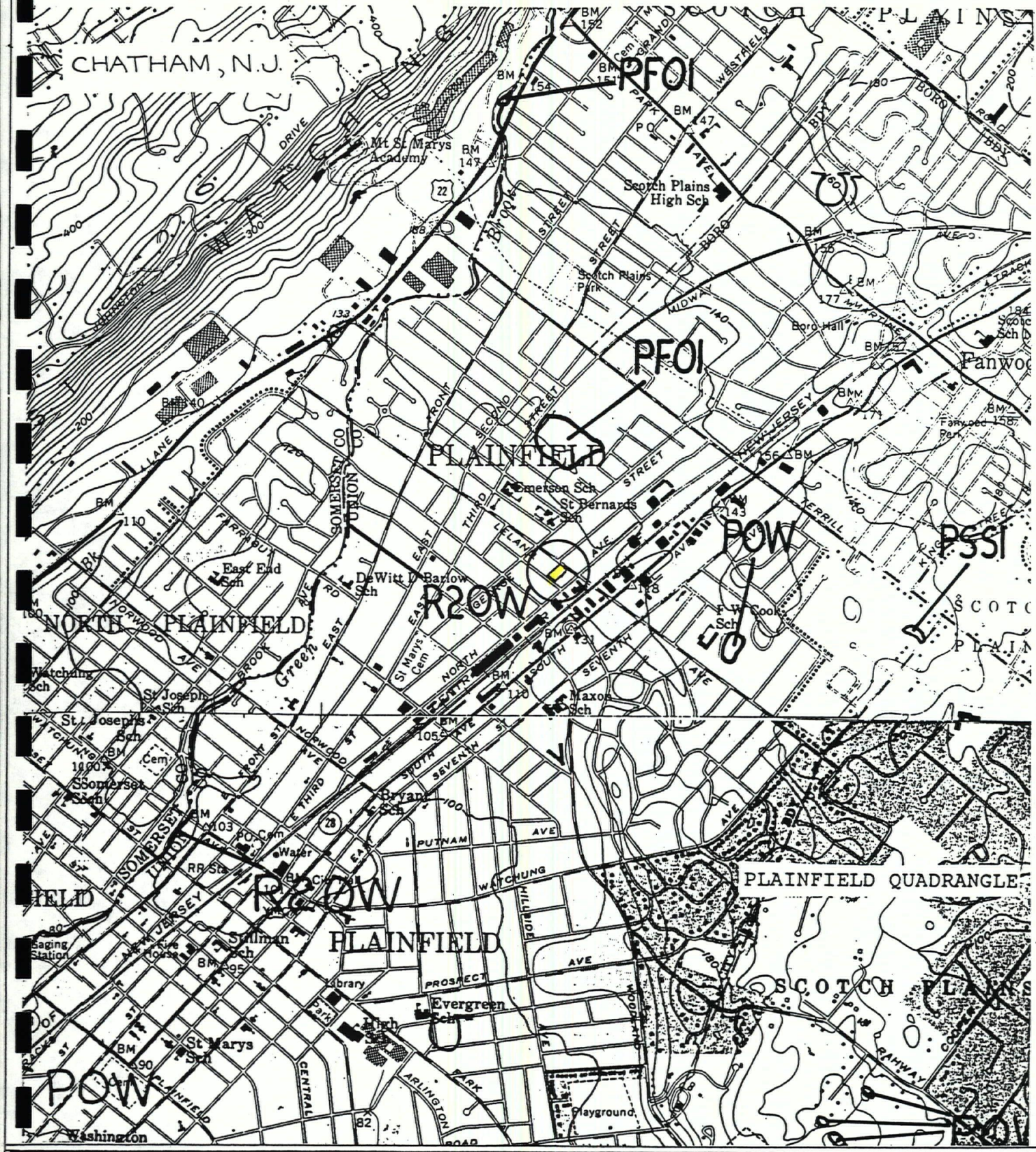
1/87

WATER WITHDRAWAL POINTS
REFERENCE SHEET

THE FOLLOWING CODES DENOTE THE TYPE OF WELL OR SURFACE WATER INTAKE AS LISTED ON WATER WITHDRAWAL POINTS MAPS.

1000D - DEWATERING PERMIT OR TEMPORARY PUMPING PERMIT
2000 - INDUSTRIAL PERMITS, GOLF COURSES AND REMEDIATION PUMPING PERMITS
4000 - SURFACE DIVERSION AND SURFACE WATER INTAKES
5000 - PUBLIC WATER SUPPLY WELLS
10000 - WELLS WITH THE CAPACITY TO PUMP >100,000 GALLONS BUT DO NOT
XX0000 - AGRICULTURAL CERTIFICATION, FIRST TWO LETTERS ARE THE FIRST TWO LETTERS OF THE COUNTY IN WHICH THE PERMIT IS ISSUED.

P - PRIVATE WELL
PS - PRIVATE SURFACE INTAKE



SCALE 1:24000

MILE ½ 0 1

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

CONTOUR INTERVAL 20 FEET
DATUM IS MEAN SEA LEVEL

HALLER TESTING LABORATORIES INC.
336 LELAND AVE.
PLAINFIELD CITY, UNION CO.

EPA ID NO. NJD986578284
WETLANDS MAP MAP-6

ATTACHMENT A

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF ENVIRONMENTAL QUALITY
JOHN FITCH PLAZA, P.O. BOX 1390, TRENTON, N.J. 08625

July 16, 1974

Haller and Shimel Consulting Engineers, Inc.
336 Leland Avenue
P. O. Box 46
Plainfield, New Jersey 07061

Attention: Mr. Charles Shimel, P.E.
President

Dear Mr. Shimel:

The Bureau of Radiation Protection acknowledges receipt of your communication dated July 11, 1974 explaining the incident involving the Troxler density gauge containing the sealed source of Radium 226 - Beryllium and the disposition of the sealed source.

As verbally stated by Mr. Hugh Clokie of this office, it appears that the situation has been satisfactorily resolved and no further action is necessary.

Thank you for your prompt response.

Very truly yours,

Joseph R. Morris

Joseph R. Morris
Acting Licensing Administrator
Bureau of Radiation Protection

JRM:hw

RECEIVED
19 1974

ATTACHMENT B

RECEIVED

OCT 24 1983

THE HALLER TESTING LABORATORIES, INC.

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF ENVIRONMENTAL QUALITY
BUREAU OF RADIATION PROTECTION
380 SCOTCH ROAD TRENTON, N. J. 08625
609-292-5586

October 20, 1983

Mr. Elliot A. Haller, President
Haller Testing Laboratories, Inc.
P. O. Box 46
336 Leland Avenue
Plainfield, New Jersey 07061

Dear Mr. Haller:

As per the "Certificate - Disposition of Radioacitve Materials" received by this Bureau January 8, 1981 from Haller Testing Laboratory, Inc., New Jersey State Radioactive Materials License #10130 is hereby terminated.

Sincerely,

Joseph M. Santarsiero

Joseph M. Santarsiero
Radiation Physicist
Radioactive Materials Section

cab

Testing • Inspection • Consultation

The Haller Testing Laboratories, Inc.

336 LELAND AVENUE PLAINFIELD NEW JERSEY 07061

ROGER W. HALLER
VICE PRESIDENT
201-756-4632

ATTACHMENT B

BRP-19
Jan. 71

NEW JERSEY STATE DEPARTMENT
OF ENVIRONMENTAL PROTECTION

P.O. Box 1390, Trenton, New Jersey 08625

CERTIFICATE - DISPOSITION OF RADIOACTIVE MATERIAL

LICENSEE (Institution, Firm, Hospital, Person, etc.)

THE HALLER TESTING LABORATORIES, INC.
P.O.BOX 46
336 LELAND AVENUE
PLAINFIELD, NEW JERSEY 07061

NEW JERSEY STATE LICENSE NUMBER
NJSL - 10130

Expiration Date: NOVEMBER 30,1983

Address (if same as above write same)

SAME

Department(s)

SOILS ENGINEERING DEPARTMENT

Individual Radioisotope User(s) ELLIOT A. HALLER, PRESIDENT, or SYED R. AHMED

CERTIFICATION

The licensee and any individual executing this certification on behalf of the licensee certify that (check appropriate items(s below):

ALL RADIOACTIVE MATERIAL(S) PROCURED AND /OR POSSESSED BY LICENSEE UNDER RADIOACTIVE MATERIAL LICENSE NO. NJSL _____ HAVE BEEN:

☐ (1) Transferred to (state name) _____ which has New Jersey State Radioactive Material License No. NJSL _____.

☐ (2) Disposed of by decay.

☐ (3) Disposed of in compliance with the New Jersey Radiation Protection Code, RH-20.

REMARKS: (If additional space is needed use reverse side.)
TWO (2) NUCLEAR GAUGES WERE DISPOSED OF, INFORMATION AS TO DISPOSITION IS ATTACHED.

Signature of Certifying Official:
Elliot A. Haller
ELLIOT A. HALLER, PRESIDENT

Date: JANUARY 8,1981

ATTACHMENT B

TELEDYNE ISOTOPES

50 VAN BUREN AVENUE
WESTWOOD, NEW JERSEY 07675
TELEPHONE 201 666 7070

MATERIAL

RADIOACTIVE WASTE DISPOSAL RECORD NO. 05674

P.O. NUMBER _____

PAGE 1 OF 1 PAGES.

COMPANY/INSTITUTION: Hallikerstown Pike

FULL ADDRESS: 336 Kelan Ave
Plainfield N.J.

MATERIAL DESCRIPTION: RADIOACTIVE MATERIAL Special Form N.O.S
(See CFR 49: 172.101)

HAZARD CLASS: RADIOACTIVE MATERIAL —

(1) CONTAINER NUMBER	(2) CONTAINER TYPE 5 GAL.	30 GAL.	30/55 GAL A/C	55 S/P	55 GAL.	OTHER	(3) CUBIC FT.	(4) *	(5) EXTERNAL CONTAMINATION dpm/100cm²	(6) EXTERNAL (mr/hr) @ Surface	@ 1 Meter	(7) ISOTOPES	(8) TRANSPORT GROUPS	(9) PHYSICAL STATE	(10) ACTIVITY (mCi)	(11) SOURCE MAT. (Pounds)	(12) SNM (Grams)	(13) LABEL USED
5674		X		55 S/P	434		4.0	DSM	<1000	80	.2	Cs137	III	Spec. Form	3.015	N/A	N/A	II
(14) TOTALS		1					4.0								3.015	—	—	
(15) REPLACEMENTS		—																

*IF ANIMAL CARCASSES, MARK AC; IF SCINTILLATION VIALS, MARK SV; IF 55 S/P, MARK DW.

(16) TOTALS

ATTACHMENT 123

THIS IS TO CERTIFY THAT THE ABOVE NAMED MATERIALS ARE PROPERLY CLASSIFIED, DESCRIBED, PACKAGED, MARKED, AND LABELED, AND ARE IN PROPER CONDITION FOR TRANSPORTATION ACCORDING TO THE APPLICABLE REGULATIONS OF THE DEPARTMENT OF TRANSPORTATION, AND ARE PACKAGED ACCORDING TO THE APPLICABLE REGULATIONS OF THE BURIAL SITE.

NRC OR AGREEMENT STATE LICENSE NO. _____ AUTHORIZED SIGNATURE Lilia T. A. Hacer

DATE 10/7/80 CARRIER Teledyne, Boston, MA

ATTACHMENT C

+16E

State of New Jersey

JOHN W. GASTON JR., P.E.
DIRECTOR

DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
CN 029
TRENTON, NEW JERSEY 08625

DIRK C. HOFMAN, P.E.
DEPUTY DIRECTOR

September 16, 1985

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr Roger Haller, Owner
Haller Testing Laboratorties Inc.
336 Leland Ave
P.O. Box 46
Plainfield,NJ 07061

Re: Groundwater Investigation
Plainfield / Union County

Dear Mr Haller,

As part of an investigation of possible sources of groundwater contamination in the industrial area of Plainfield, an inspection of the Haller Testing Laboratory facility (HTL), was conducted by a representative of the Division of Water Resources (DWR) on August 29,1985. During the inspection the following observations were made:

1. HTL is currently discharging wastewater from the sink in the asphalt testing room and the wetroom floor drains into a pit on the north side of the facility. The sinks in the chemistry lab and the slop sink in the testing machine room discharge into a pit on the south side of the facility.

2. HTL uses 1,1,1 Trichloroethane to dissolve asphalt samples as well as Hydrochloric Acid to wash concrete samples.

3. HTL does not posses nor has it ever applied for a New Jersey Pollutant Discharge Elimination System (NJPDES) Permit to discharge wastewater from its property in violation of N.J.S.A. 58:10A-6a.

DWR has determined that a potential exists for

ATTACHMENT C

groundwater contamination from the drainage pits located on the north side and south side of the facility. Unpermitted discharges to the groundwater are in violation of N.J.S.A.58:10A-1 et. seq., the New Jersey Water Pollution Control Act, and N.J.S.A. 58:10-23.11c et. seq., the Spill Compensation and Control Act. The elimination of the discharges is of particular importance because the groundwater in this area is used as potable supply. Specificaly several potable water supply wells are located within 1000 feet of your facility.

HTL is therefore DIRECTED to:

1. Immediately cease all unpermitted discharges.

2. Provide access for sampling to the drainage pits which are used for the disposal of the wastewater from your facility. Additional groundwater investigation may be required depending on the outcome of this sampling.

3. Submit a written report to this office within thirty (30) days of the receipt of this letter detailing the corrective actions taken.

Failure to comply with this DIRECTIVE may result in further enforcement action by this office, including the imposition of penalties,pursuant to N.J.S.A. 58:10A-10. Compliance, however,shall not be construed to relieve HTL from appropriate penalties for the cited statutory violations.

If you have any questions concerning this DIRECTIVE, please contact Mr Anthony DeCandia of this office at (201)648-2200.

Very truly yours,

Stefan Sedlak

Stefan D.Sedlak
Asst. Chief
Metro Bureau of Regional Enforcement

E126:G25

cc:Ruby Hodge H.O.
John Trela, GWP
George Caporale, BPA.

bcc: Marianne Montgomery
Steven Madonna

ATTACHMENT C2

ATTACHMENT D

+1 CC

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
METRO BUREAU OF REGIONAL ENFORCEMENT
2 BABCOCK PLACE
WEST ORANGE, NEW JERSEY 07052

JOHN W. GASTON JR., P.E.
DIRECTOR

DIRK C. HOFMAN, P.E.
DEPUTY DIRECTOR

March 13, 1986

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr Roger Haller, Owner
Haller Testing Laboratories Inc.
336 Leland Ave
P.O. Box 46.
Plainfield,NJ 07061

Re: Groundwater Investigation
Plainfield / Union County

Dear Mr Haller,

On February 6, 1986 a reinspection and soil sampling was conducted at the Haller Testing Lab (Haller) facility in Plainfield by representatives of the Division of Water Resources (DWR). During the inspection the following observations were made:

1. The sink in the chemistry lab discharges to a small pit on the south-east side of the facility. This pit contained a red and gray sludge.

2. The sink in the asphalt testing room discharges to the ground on the north-west side of the building.

3. Soil samples taken from the two discharge points gave the following results:

Pit on south-east	Ethyl Benzene	100 ppb
	P Cymene	1050ppb
	Toluene	1000ppb
	5 Unidentified Peaks	
Discharge on north-west side - None Detected		

ATTACHMENT D

On September 16, 1985 Haller was Directed by the DWR to cease unpermitted discharges and submit a written report within thirty (30) days of the receipt of the Directive. On November 27, 1985 DWR again Directed Haller to cease the unpermitted discharges and submit a written report within Twenty (20) days.

On December 12, 1985 in a phone conversation with Mr. Anthony DeCandia of DWR, Mr Roger Haller stated that the discharge from the chemistry lab had been disconnected and that arrangements were being made to cease the discharge from the Asphalt testing room. Mr Haller was also informed by Mr. DeCandia to respond in writing to the Directives.

As of the time of the inspection , Haller has not ceased the abovementioned discharges and has not responded in writing to the outstanding Directives.

DWR has determined that a potential exists for groundwater contamination from hazardous substances. Unpermitted discharges to the ground water are in violation of N.J.S.A. 58:10A-6a, The New Jersey Water Pollution Control Act, and N.J.S.A. 58:10-23.11c et seq., The New Jersey Spill Compensation and Control Act.

Haller is therefore DIRECTED to:

1. Immediately cease all unpermitted discharges.

2. Remove and properly dispose of the sludge contained in the pit on the south-east side of the building within thirty (30) days of the receipt of this letter. The contaminated material are to be disposed of in accordance with N.J.A.C. 7:26-1 et seq.

3. DWR must be notified at least seven (7) days prior to this excavation so that a representative may be present. When the contaminated soil has been removed sample analysis shall be made by a NJ certified laboratory for volatile organics and E.P. Toxicity to evaluate if contaminated soil remains.

4. Submit a written report within forty five (45) days of the receipt of this Directive containing the following information:

   a. method used to eliminate all unpermitted discharges;

   b. the name and registration number of the New Jersey registered hauler contracted to remove contaminated materials from the pit;

   c. the volume of material removed;

ATTACHMENT D2

d. the analytical data used in the classification of the material; and

e. the method used to permanently seal the discharge form the floor drains.

The required report should be addressed to:

Stefan D. Sedlak. Assistant Chief
Metro Bureau of Regional Enforcement
NJDEP - Division of Water Resources
2 Babcock Place
West Orange, NJ 07052

Failure to comply with this DIRECTIVE will result in further enforcement action by this office, including the imposition of penalties, pursuant to N.J.S.A. 58:10A-10. Compliance, however, shall not be construed to relieve Haller from appropriate penalties for the cited statutory violations. Be advised that further requirements for the monitoring and decontamination of ground water affected by the activities of Haller Testing Labs may be imposed.

If you have any questions concerning this DIRECTIVE, please contact Mr. Anthony DeCandia of this office at (201)648-2200.

Very truly yours,

Stefan Sedlak

Stefan D.Sedlak
Assistant Chief
Metro Bureau of
Regional Enforcement

E126

cc: Ruby Hodge H.O.
Richard Cerbone NJGS

bcc: Marianne Montgomery
Steven Madonna

ATTACHMENT D3

Department of Environmental Protection
Division of Water Resources
WATER ANALYSIS

PLEASE TYPE OR PRINT WITH BALLPOINT PEN

MUNICIPALITY: PLAINFIELD	COUNTY: UNION	STREAM:
FACILITY: HALER TESTING LAB	LOCATION: LELAND AVE.	
REPRESENTATIVE: NICK SUGAR	TITLE: LAB. MANAGER	COLL NAME: A. DECANDIA
REMARKS: DLS, PIT, EAST OF BLDG.		A. ARCENAL
SURFACE SOIL SAMPLE		24D 221

BACT. LAB NO.
DATE REC'D.
BOTTLE NO. 32409
DATE REC'D.
STORET ENT. READ

STATION IDENTIFICATION NUMBER: SC, ,
YR. MO. DAY: 860206
HOUR: 1045,

3240

FIELD ANALYSIS

☐ Water Temp °C	P10,	
☐ D.O.-Winkler	P300,	
☐ D.O.-Probe	P299,	
☐ pH (Field)	P400,	
☐ Sample Depth-ft.	P3,	
☐ Gage Height-ft.	P65,	
☐ Spec. Cond. @ 25°C	P95,	
☐ Salinity ⁰/00	P480,	
☐ Tide Stage	P70211,	

BACTERIOLOGICAL - DILUTIONS (REQUESTED)

	10	1	-1 10	-2 10	-3 10	-4 10	-5 10	-6 10
Fecal Coliform / Total Coliform								
Fecal Streptococci								

Fecal coli /100 ml ☐ MPN P31615, ☐ MF P31613,

☐ Fecal Strept MPN /100 ml P31677,

☐ Tot coli MPN /100 ml P31505,

BIOCHEMICAL OXYGEN DEMAND

INITIAL D.O. (lab.) _____ SAMPLE

SEED YES ☐ NO ☐

CONC.%

BOD

☐ BOD ☐ 5-DAY P310, ☐ 6-DAY P312,

ANALYSIS	UNITS	PARAMETER	VALUE	RMK
☒ SOIL V.O. SCAN	ppb	P		
☐		P		
☐ Ethylbenzene		P	100	
☐ p-cymene		P	1050	
☐ Toluene		P	1000	
☐		P		
☐ + 5 unidentified peaks		P		
☐		P		
☐		P		
☐		P		
☐		P		
☐		P		
☐		P		
☐		P		
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☐		P		
☐		P		
☐		P		
☐		P		
☐		P		
☐		P		
☐		P		

CHAIN OF CUSTODY

DATE	TIME	RECEIVED FROM (NAME)	DELIVERED TO (NAME)

REPORT SUBMITTED
FEB 25 1986
NJDOH Environmental Health

RECEIVED
MAR 07 1986
DEPT. ENVIRONMENTAL PROTECTION
NEWARK OFFICE

Chemist Review _____

Part 1 (White) - Water Quality Inventory Copy
Part 2 (Green) - Chemistry Copy
Part 3 (Pink) - Water Resources Copy (For Tra
Part 4 (Yellow) - Bacteriology Copy

ATTACHMENT D4

Form VST-010
8/79

PLEASE TYPE OR PRINT
WITH BALLPOINT PEN

STATE OF NEW JERSEY
Department of Environmental Protection
Division of Water Resources
WATER ANALYSIS

BACT. LAB NO.
DATE REC'D.
BOTTLE NO. 32410
DATE REC'D.
STORET ENT.
READ

MUNICIPALITY PLAINFIELD	COUNTY UNION	STREAM
FACILITY HALER TESTING LAB	LOCATION LELAND AVE.	
REPRESENTATIVE NICK SUGAR	TITLE LAB. MANAGER	COLL NAME A. DECANDIA
REMARKS SURFACE SOIL SAMPLE ; PIPE OUTFALL A. ARCENAL WEST SIDE OF BLDG.	24D 221	

STATION IDENTIFICATION NUMBER: SC,

YR. MO. DAY: 860206

HOUR: 1055.

32410

FIELD ANALYSIS

☐ Water Temp °C	P10,	
☐ D.O.-Winkler	P300,	
☐ D.O.-Probe	P299,	
☐ pH (Field)	P400,	
☐ Sample Depth-ft.	P3,	
☐ Gage Height-ft.	P65,	
☐ Spec. Cond. @ 25°C	P95,	
☐ Salinity 0/00	P480,	
☐ Tide Stage	P70211,	

BACTERIOLOGICAL - DILUTIONS (REQUESTED)

Fecal Coliform / Total Coliform	10	1	-1 10	-2 10	-3 10	-4 10	-5 10	-6 10
Fecal Streptococci	10	1	-1 10	-2 10	-3 10	-4 10	-5 10	-6 10

Fecal coli /100 ml ☐ MPN P31615, ☐ MF P31613,

☐ Fecal Strept MPN/100 ml P31677,

☐ Tot coli MPN/100 ml P31505,

BIOCHEMICAL OXYGEN DEMAND

INITIAL D.O. (lab.) _____ SAMPLE

SEED YES ☐ NO ☐

CONC.% | | |

BOD __ | | |

☐ BOD ☐ 5-DAY P310, ☐ 6-DAY P312,

ANALYSIS	UNITS	PARAMETER	VALUE	RM
☒ SOIL V.O. SCAN		P	NONE	
		P	Detected	
		P		
		P		
		P		
		P		
		P		
		P		
		P		
		P		
		P		
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		P		
		P		
		P		
		P		
		P		
		P		

DATE	TIME	CHAIN OF CUSTODY FROM (NAME)	TO (NAME)
		RECEIVED	REPORT SUBMITTED
		MAR 07 1986	FEB 25 1986
		DEPT. ENVIRONMENTAL PROTECTION NEWARK OFFICE	NJDEPE Environmental Chemistry

Chemist Review _____

Part 1(White) - Water Quality Inventory Copy
Part 2(Green) - Chemistry Copy
Part 3(Pink) - Water Resources Copy (For T
Part 4(Yellow) - Bacteriology Copy

ATTACHMENT D

ATTACHMENT E

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF ENVIRONMENTAL QUALITY
CN 027, TRENTON, NJ 08625

ORDER

TO: Haller Testing Laboratories
336 Leland Avenue
P. O. Box 46
Plainfield, New Jersey 07061
Roger Haller, Owner

Contact/Phone: 201-756-4637
Violation Occurred On
Premises Known As:

336 Leland Avenue, Plainfield,
Union County, New Jersey,
ID #10130

The State Department of Environmental Protection has determined by investigation(s) made pursuant to the provisions of N.J.S.A. 26:2D-1 et seq. that on February 27, 1986, you did violate the New Jersey Administrative Code, Radiation Protection, Title 7, Chapter 28, Subchapter(s) & Section(s) as follows:

9.4(a) - The investigation disclosed that the licensee failed to conduct leak tests of sealed sources at intervals not longer than six months.

YOU ARE HEREBY ORDERED to cease violation of said Subchapter(s) and Section(s) on the premises owned, leased, operated or maintained by you on or before April 19, 1986.

IN ADDITION, you are required to provide written notification to the Bureau of Radiation Protection, 380 Scotch Road, Trenton, New Jersey 08628 on or before April 19, 1986, identifying the steps you have taken to cease the above violations of the New Jersey Administrative Code.

Should you have any questions, contact John Feeney, Licensing Administrator for Radioactive Materials, (609) 530-4025.
Refer to Log #R860331

Dated: March 19, 1986

Allan T. Edwards
Allan T. Edwards
Acting Assistant Director
Enforcement Element

PROGRAM: RADIATION
CERTIFIED MAIL

ATTACHMENT E

ATTACHMENT F

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

INVESTIGATION MEMORANDUM

Persons Conducting Investigation: Anthony DeCandia

Complaint No./NJPDES No.: Haller Testing

Date of Investigation: 4/28/86

Routing: SDJ

Location of Incident: Haller Testing LABS
Leland Ave, Plainfield

Purpose of Investigation: Sampling

Persons Interviewed: Roger Haller, owner

Summary of Findings

Boring's were attempted in the drainage pit on the North-East side of the facility. I was unable to get beyond the foot of sludge - was told by Mr Haller that there was rocks (gravel) underneath.
A sample #32421 was taken at the bottom of the sludge, approx 1 foot below the surface.
Mr. Haller stated the company has been at this location and the lab sink has always discharged to this pit as far as he knows.

Haller

Haller Testing Laboratories, Inc.
Roger W. Haller
President
336 Leland Avenue
P.O. Box 46
Plainfield, New Jersey 0
(201) 756-4637
(212) 233-2360

ATTACHMENT E

Form VST-010
8/79

PLEASE TYPE OR PRINT WITH BALLPOINT PEN

STATE OF NEW JERSEY
Department of Environmental Protection
Division of Water Resources
WATER ANALYSIS

CHAIN OF CUSTO

BACT. LAB NO. ____
DATE REC'D. ____
BOTTLE NO. 3242
DATE REC'D. ____
STORET ENT. ____ READ ____

MUNICIPALITY: Plainfield	COUNTY: Union	STREAM: —
FACILITY: Haller Testing Lab	LOCATION: Leland Ave	
REPRESENTATIVE: Peter Haller, Jr	TITLE: President	COLL NAME: A. DeCandia
REMARKS: Soil Sample, 1 foot below Surface - drainage Pit		221 24D

STATION IDENTIFICATION NUMBER: S C , ,
YR. MO. DAY: 8 6 0 4 2 8
HOUR: 1 0 3 0 ,

3242

FIELD ANALYSIS

☐ Water Temp °C	P10,	
☐ D.O.-Winkler	P300,	
☐ D.O.-Probe	P299,	
☐ pH (Field)	P400,	
☐ Sample Depth-ft.	P3,	
☐ Gage Height-ft.	P65,	
☐ Spec. Cond. @ 25°C	P95,	
☐ Salinity 0/00	P480,	
☐ Tide Stage	P70211,	

BACTERIOLOGICAL - DILUTIONS (REQUESTED)

Fecal Coliform / Total Coliform	10	1	-1 10	-2 10	-3 10	-4 10	-5 10	-6 10
Fecal Streptococci	10	1	-1 10	-2 10	-3 10	-4 10	-5 10	-6 10

Fecal coli /100 ml ☐ MPN P31615, ☐ MF P31613,

☐ Fecal Strept MPN/100 ml P31677,

☐ Tot coli MPN/100 ml P31505,

BIOCHEMICAL OXYGEN DEMAND

INITIAL D.O. (lab.) _____ SAMPLE
SEED YES ☐ NO ☐

CONC.% ____
BOD ____

☐ BOD ☐ 5-DAY P310, ☐ 6-DAY P312,

ANALYSIS	UNITS	PARAMETER	VALUE
V.O. Soil	ppb	P	
		P	
chloroform		P	36000
1,1 dichloroethane		P	3560
1,1 dichloroethene		P	3220
Tetrachloroethene		P	140
Trichloroethene		P	1350

RECEIVED

DATE	TIME	CHAIN OF CUSTODY FROM (NAME)	TO (NAME)
MAY 20 1986			REPORT SUBMITTED
		DEPT. ENVIRONMENTAL PROTECTION NEWARK OFFICE	MAY 12 1986
			NJDS - ENVIRONMENTAL CHEMISTRY LABORATORY

Chemist Review _____

Part 1 - Water Quality Inventory Copy
Part 2 - Chemist Copy
Part 3 - Water Resources Copy (For
Part 4 - Supervisor Copy

ATTACHMENT F-2

ATTACHMENT G

MAY 30, 1986

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr Roger Haller, Owner
Haller Testing Laboratories Inc.
336 Leland Ave
P.O. Box 46
Plainfield, NJ 07061

Re: Groundwater Investigation
Plainfield / Union County

Dear Mr Haller,

As part of a groundwater investigation of the Plainfield Industrial area an inspection of the Haller Testing Labs (Haller) facility was conducted by representatives of the Division of Water Resources (DWR). This inspection lead to several sampling episodes within the drainage pits on the east and west sides of the building. Analytical data from soil sampling conducted at the facility on February 6, 1986 and April 28, 1986 revealed elevated concentrations of volatile organics (see attached list).

Based on these analyses it has been determined that Haller is a probable contributor to the groundwater contamination in the Plainfield area. Haller is therefore DIRECTED to initiate a Soil Boring Investigation for the Haller facility in Plainfield. A work plan for the investigation is to be submitted to DWR for approval. The work plan is to be prepared by a qualified hydrogeologist and is to include at a minimum the following:

1. A history of the facility including types of discharges, solvents used, and number and location of underground tanks.

2. Borings are to be installed in sufficient number and depth to allow full delineation of the extent

ATTACHMENT 6

of soil contamination in the area of the discharge drainage pit as well as the underground tanks.

3. Soil and water sampling and analytical procedures shall be designed to ensure representative monitoring results. At a minimum the program shall include procedures and techniques for :

   i) Sample collection;

   ii) Sample preservation and shipment;

   iii) Analytical procedures; and,

   iv) Chain of Custody control.

4. These procedures shall be incorporated into a quality assurance/quality control (QA/QC) plan using the format designated in the USEPA Document OWRS QA-1 entitled Guidance For Preparation of Combined Work/ Quality Assurance Project Plans for Environmental Monitoring.

5. Samples are to be analyzed for volatile pollutants as listed in N.J.A.C. 7:14A Appendix B, Table II using approved USEPA methods by a laboratory certified pursuant to N.J.A.C. 7:18.1 et seq.

6. A report containing the findings of the investigations shall be prepared and include:

   i) Stratigraphic logs for each boring and test pit;

   ii) Site plan of appropriate scale showing the locations of all borings and test pits;

   iii) Analytical data from all sample analyses;

7. A schedule for the implementation of the Soil Boring Investigation and submission of the report shall be included in the work plan.

8. The Soil Boring Investigation Work Plan shall be submitted to DWR no later than June 26, 1986. Upon DWR's approval of the work plan, Veterans shall implement the Soil Boring Investigation in accordance with the approved time schedule.

9. All submittals called for in this Directive shall be made to :

ATTACHMENT G6

Mr. Stefan D. Sedlak, Assistant Chief
Metro Bureau of Regional Enforcement
Division of Water Resources
2 Babcock Place
West Orange, New Jersey 07052

Failure to comply with this Directive will result in appropriate enforcement action pursuant to the New Jersey Water Pollution Control Act N.J.S.A. 58:10A-1 et seq. and the Spill Compensation and Control Act N.J.S.A. 58:10-23.11 et seq.

If there are any questions concerning this matter please contact Mr. Anthony DeCandia of this office at (201)669-3900.

Very truly yours,

Stefan D. Sedlak
Assistant Chief
Metro Bureau of
Regional Enforcement

EF26

cc: Ruby Hodge, H.O.
Richard Cerbone, NJGS
Randy Visler, ETWN

bcc: Marianne Montgomery
Karen Jantis, DAG

ATTACHMENT G3

SOIL
SAMPLING ANALYSES

HALLER TESTING LABS
PLAINFIELD, NJ

LOCATION	CONTAMINANT	CONCENTRATION
FEBRUARY 6, 1986		
DRAINAGE PIT (East side)	Ethylbenzene	100
	p-cymene	1050
	Toluene	1000
DRAINAGE PIT (West side)	none detected	
APRIL 28, 1986		
DRAINAGE PIT (East side)	1,1 dichloroethene	3220
	Tetrachloroethene	140
	Trichloroethene	1350
	1,1 dichloroethane	3560
	Chloroform	36000

concentration in parts per billion (ppb)

DWR/ad

ATTACHMENT G4

ATTACHMENT H

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

INVESTIGATION MEMORANDUM

Persons Conducting Investigation: A. DeCandia

Complaint No./NJPDES No.: HALLER

Date of Investigation: 8/5/86

Routing: SDS

Location of Incident: Haller Testing LABS
LeLand Ave, Plainfield

Purpose of Investigation:

Persons Interviewed: Roger Haller, owner

Summary of Findings

I met with Mr. Haller and he gave me the following information:

1. Burns and Roe will oversee the drilling of the test borings. Paul Lenik of Burns and Roe will handle the job. Will try and schedule for the week of 8/18/86.

2. I asked Mr. Haller if the lab sink had been disconnected. He stated that it had not. I informed him that this must be done immediately and that a response to the outstanding Directive is required.

ATTACHMENT H

ATTACHMENT I

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
CN 029
TRENTON, NEW JERSEY 08625

GEORGE G. McCANN, P.E.
DIRECTOR

DIRK C. HOFMAN, P
DEPUTY DIRECTO

May 21, 1987

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Roger Haller, President
Haller Testing Laboratories, Inc.
336 Leland Avenue
P.O. Box 46
Plainfield, NJ 07061

Dear Mr. Haller:

Re: Administrative Order and
Notice of Civil Administrative Penalty Assessment
Haller Testing Laboratories, Inc.
Plainfield /Union County

There is enclosed for service upon you an Administrative Order and Notice of Civil Administrative Penalty Assessment issued by the Department pursuant to the provisions of the Water Pollution Control Act, N.J.S.A. 58:10A-10b and d.

If you have any questions concerning this Administrative Order and Notice of Civil Administrative Penalty Assessment please contact Mr. Peter T. Lynch, Chief, Metro Bureau of Regional Enforcement, 2 Babcock Place, West Orange, NJ 07052, or by telephoning (201) 669-3900.

Very truly yours,

James E. Mumman
Assistant Director
Enforcement Element

Enclosure

New Jersey Is An Equal Opportunity Employer

ATTACHMENT I

Let's protect our earth

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
CN 029
TRENTON, NEW JERSEY 08625

GEORGE G. McCANN, P.E.
DIRECTOR

DIRK C. HOFMAN, P
DEPUTY DIRECTO

IN THE MATTER OF :

Haller Testing
Laboratories, Inc.:

Plainfield / Union County:

ADMINISTRATIVE ORDER
AND
NOTICE OF CIVIL ADMINISTRATIVE
PENALTY ASSESSMENT

This Administrative Order and Notice of Civil Administrative Penalty Assessment is issued pursuant to the authority vested in the Commissioner of the New Jersey Department of Environmental Protection (hereinafter "NJDEP" or the"Department") by N.J.S.A. 13:1D-1 et seq. and the Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq., and duly delegated to the Director of the Division of Water Resources pursuant to N.J.S.A. 13:1B-4.

FINDINGS

1. Haller Testing Laboratories, Inc. ("Haller") is the owner and operator of a laboratory facility ("facility") located at 336 Leland Avenue, Plainfield, Union County; Block 152, Lot 9. Haller performs physical testing of concrete and asphalt samples for the construction industry. Mr. Roger Haller is the President of Haller Testing laboratories, Inc.

2. On August 29, 1985 an industrial survey was conducted by representatives of NJDEP at the facility as part of a ground water contamination investigation. As a result of the investigation the following observations were made:

a. Haller was discharging wastewater from the sink in its asphalt testing room into an unlined subsurface drainage pit on the north side of the facility.

ATTACHMENT I

b. Wastewater from the chemistry lab sink and slop sink in the testing machine room discharged to an unlined subsurface drainage pit on the south side of the facility.

c. The abovementioned drainage pits eventually discharge to the ground water of the state.

Haller does not possess nor has it ever applied for a New Jersey Pollutant Discharge Elimination System (NJPDES) Permit to discharge wastewaters from its property to the ground waters of the state in violation of N.J.S.A. 58:10A-6a.

3. On September 16, 1985 a directive was issued to Haller by NJDEP to immediately cease all unpermitted discharges and submit a written report within thirty (30) days outlining the corrective actions taken.

4. On November 27, 1985 a directive was issued to Haller for failure to reply to the September 16, 1985 Directive. Haller was again directed to cease all unpermitted discharges and submit a written report within twenty (20) days detailing the corrective actions taken. A response to the November 27, 1985 directive was never received by NJDEP.

5. On January 2, 1986 Mr. Roger Haller was contacted by telephone by a representative of the NJDEP. During that telephone conversation, Mr. Haller stated that the sink in the chemistry lab had been disconnected from the subsurface drainage pit. The sink in the asphalt room was still in use and arrangements were being made to connect to the sanitary sewer or to a holding tank. During this conversation Mr. Haller was informed that he should respond in writing to the delinquent directives. To date no response has been received.

6. On February 6, 1986 a reinspection was conducted by representatives of NJDEP at the Haller facility. Samples were taken from the top of the sludge in the subsurface drainage pits on the north and south sides of the facility. Samples were analyzed by the New Jersey Department of Health Laboratory (NJDOHL) for volatile organics. The following are the analytical results:

<u>Subsurface Drainage Pit (South)</u>

Ethylbenzene	100 ppb
P-cymene	1050 ppb
Toluene	1000 ppb
5 unidentified peaks	

ATTACHMENT I-3

Subsurface Drainage Pit (North)

- None Detected -

The inspection revealed that the chemistry laboratory sink continued to discharge to the south side subsurface drainage pit.

7. On March 13, 1986 a directive was issued to Haller by NJDEP to:

a. Cease all unpermitted discharges.

b. Remove and properly dispose of the sludge contained in the subsurface drainage pit on the south side of the facility.

c. Submit a written report within forty five (45) days outlining the corrective actions taken.

A written response to the March 13, 1986 Directive was never received by NJDEP.

8. On April 28, 1986 a reinspection of the Haller facility was conducted by representatives of NJDEP. Samples of the sludge were taken from the subsurface drainage pit (South) at a depth of twelve (12) inches below the top of the sludge. The results, as analyzed by NJDOHL are as follows:

Subsurface Drainage Pit (South)

Chloroform	3600 ppb
1,1 dichloroethane	3560 ppb
1,1 dichloroethene	3220 ppb
Tetrachloroethene	140 ppb
Trichloroethene	1350 ppb

9. On June 6, 1986 a directive was issued to Haller by NJDEP to initiate a soil boring program and submit a Work Plan prepared by a qualified professional no later than July 8, 1986.

10. On August 5, 1986 a representative of the NJDEP met with Mr. Haller at the Plainfield facility. At that meeting Mr. Haller stated that a Work Plan and response to the June 6, 1986 directive would be forthcoming. Neither the Work Plan nor the response have ever been received by NJDEP.

11. Based on the facts set forth in these FINDINGS, the Department has determined that Haller has violated the Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq., specifically N.J.S.A. 58:10A-6, and the regulations

promulgated pursuant thereto, N.J.A.C. 7:14A-1 et seq., specifically N.J.A.C. 7:14A-1.2.

O R D E R

NOW, THEREFORE, IT IS HEREBY ORDERED THAT:

12. Haller shall immediately cease all unpermitted discharges including the discharges of wastewater from the chemistry lab sink, the testing machine room slop sink and the asphalt testing room into subsurface drainage pits.

13. Within sixty (60) calendar days after receipt of this Administrative Order and Notice of Civil Administrative Penalty Assessment, Haller shall remove and properly dispose of all contaminated materials from the drainage pit on the south side.

14. Within thirty (30) calendar days after receipt of this Administrative Order and Notice of Civil Administrative Penalty Assessment, Haller shall submit to the Department a detailed draft remedial investigation work plan (hereinafter the "RI Work Plan") in accordance with the scope of work set forth below.

A. A soil boring and monitoring well program designed to delineate the vertical and horizontal extent of the soil contamination ,and assess the adverse effect of contaminants on the ground water associated with the unpermitted discharges referred to above.

B. The RI Work Plan is to be prepared by a qualified hydrogeologist with substantial experience in ground water pollution investigations.

C. The RI Work Plan shall include an implementation time schedule.

D. All soil borings and monitor wells are to be installed by a licensed New Jersey Well Driller, pursuant to N.J.S.A. 58:4A-6. A valid New Jersey permit, issued pursuant to N.J.S.A. 58:4A-14 shall be obtained for each boring and monitor well from the DWR's Water Allocation Office (609) 984-6831.

E. Collection of split spoon samples shall be made during drilling through the overburden according to ASTM Standard Penetration Methods, ASTM D1586-67, continuously to the water table, at changes in soil strata and at all zones which

show obvious signs of pollution at all borings and monitor wells.

F. Selected soil samples as determined by above ambient/background readings on air monitoring equipment, such as HNu or PID, are to be analyzed by a laboratory certified for gas chromatography in water pollution pursuant to N.J.A.C. 7:18-4.1 et seq., according to methods described in USEPA's "Test Methods for the Evaluation of Solid Waste, SW 846" for volatile organics as listed in N.J.A.C. 7:14A-1, Appendix B, Table II.

G. Approved decontamination procedures shall be implemented.

H. Soil and ground water sampling and analyses procedures shall be designed to ensure representative monitoring results. At a minimum the program shall include procedures and techniques for:

i. Sample collection;

ii. Sample preservation and shipment;

iii. Analytical procedures; and,

iv. Chain of Custody control.

I. All soil borings shall be grouted or sealed after drilling pursuant to N.J.A.C. 7:9-9.1 (b) by a licensed New Jersey well sealer.

J. A minimum of three monitor wells shall be installed under the direct supervision of a New Jersey licensed well driller and a qualified hydrogeologist. Wells are to be installed in accordance with the monitor well specifications which are attached hereto and made a part hereof.

K. Monitor wells are to be installed hydraulically upgradient from the on-site subsurface disposal system. Their number, location and depth must ensure that samples from the wells are representative of background ground water quality near the facility and that the samples are not affected by the facility.

L. Monitor wells are to be installed hydraulically downgradient from the on-site subsurface disposal system. Their number, location and

depth must ensure that they intercept any contaminants migrating from these areas. In addition, the number and location of monitor wells must be sufficient to establish ground water flow direction.

These procedures shall be incorporated into a quality assurance/quality control (QA/QC) plan using the format designated in the USEPA Document OWRS QA-1 entitled Guidance For Preparation of Combined Work/Quality Assurance Project Plans For Environmental Monitoring.

15. Within twenty eight (28) calendar days after receipt of the Department's written comments on the draft RI Work Plan, Haller shall modify the draft RI Work Plan to conform to the Department's comments and shall submit the modified RI Work Plan to the Department. The determination as to whether or not the modified RI Work Plan, as resubmitted, conforms to the Department's comments shall be made solely by the Department.

16. Haller shall complete the remedial investigation in accordance with the approved RI Work Plan and the schedule therein.

17. Haller shall submit to the Department a draft Remedial Investigation Report (hereinafter "RI Report") in accordance with the RI Work Plan and the schedule therein. The RI Report shall at a minimum include:

A. Stratigraphic logs and cross-sections for each boring, showing all strata and field observations of contamination encountered. The soil shall be classified according to a standard approved system (i.e. Burmister, Unified).

B. All laboratory reports of soil analyses.

C. Analyze particle size in laboratory to identify grain size and confirm field identification.

D. An assessment of the degree and extent of soil contamination, and any adverse impact on the ground water.

E. Recommendations for further investigation if warranted including the installation of monitor wells.

F. Recommendations for remedial measures designed to eliminate, decontaminate, control or otherwise mitigate ground water pollution.

18. If upon review of the draft RI Report the Department determines that additional remedial investigation is required, Haller shall conduct such additional remedial investigation and submit a second draft RI Report, as directed by the Department.

19. Within twenty eight (28) calendar days after receipt of the Department's written comments on the draft RI Report, Haller shall modify the draft RI Report to conform to the Department's comments and submit the modified RI Report to the Department. The determination as to whether or not the modified RI Report, as resubmitted, conforms with the Department's comments shall be made solely by the Department.

20. If upon review of the RI Report the Department determines that Remedial Action is required to mitigate contamination at the Haller facility, Haller shall prepare and submit Feasibility Studies, a detailed Remedial Action Plan and Financial Assurances in accordance with the requirements of the Department. Haller shall conduct the Remedial Action in accordance with a Remedial Action Plan and schedule approved by the Department.

21. Compliance with the terms of this Administrative Order shall not excuse Haller from obtaining and complying with all applicable federal and state permits, statutes and regulations while carrying out the obligations imposed by this Administrative Order. The execution of this Administrative Order shall not preclude the Department from requiring that Haller obtain and comply with any permit issued by the Department under the authority of the Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq. for the matters covered herein. The terms and conditions of any such permit shall not be pre-empted by the terms and conditions of this Administrative Order.

NOTICE OF CIVIL ADMINISTRATIVE PENALTY ASSESSMENT

22. Pursuant to N.J.S.A. 58:10A-10d and N.J.A.C. 7:14-8.1 et seq. and based upon the above FINDINGS, NJDEP has determined that a civil administrative penalty should be assessed against Haller in the amount of $5,000.

23. Payment of the penalty is due when a final order is issued by the Commissioner subsequent to a hearing if any, or when this Administrative Order and Notice of Civil Administrative Penalty Assessment becomes a final order (see following paragraph). Payment shall be made by check

payable to "Treasurer, State of New Jersey" and shall be submitted to:

Peter T. Lynch, P.E., Chief
Metro Bureau of Regional Enforcement
Division of Water Resources
2 Babcock Place
West Orange, New Jersey 07052

24. If no request for a hearing is received within twenty (20) calendar days from receipt of this Notice of Civil Administrative Penalty Assessment, it shall become a final order upon the twenty-first calendar day following its receipt and the penalty shall be due and payable.

NOTICE OF RIGHT TO A HEARING

25. Pursuant to N.J.S.A. 52:14B-1 et seq. and N.J.S.A. 58:10A-10b and d, Haller is entitled to an administrative hearing. Any hearing request shall be delivered to the address referenced in paragraph 23 within twenty (20) calendar days from receipt of this Administrative Order and Notice of Civil Administrative Penalty Assessment.

26. Pursuant to N.J.S.A. 52:14B-9(b) and N.J.A.C. 1:1-6.1(b), Haller shall, in its request for a hearing, furnish NJDEP with the following:

a. A statement of the legal authority and jurisdiction under which the hearing or action to be taken is to be held;

b. A reference to the particular sections of the statutes and rules involved;

c. A short and plain statement of the matters of fact and law asserted; and

d. The provisions of this Administrative Order and Notice of Civil Administrative Penalty Assessment to which Haller objects, the reasons for such objections, and any alternative provisions proposed.

GENERAL PROVISIONS

27. This Administrative Order and Notice of Civil Administrative Penalty Assessment is binding on Haller, its principals, directors, officers, agents, successors, assigns, any trustee in bankruptcy or other trustee, and any receiver appointed pursuant to a proceeding in law or equity.

28. Haller shall submit all documents required by this Administrative Order and Notice of Civil Administrative Penalty Assessment by certified mail, return receipt requested or by hand delivery to:

Peter T. Lynch, P.E., Chief
Metro Bureau of Regional Enforcement
Division of Water Resources
2 Babcock Place
West Orange, New Jersey 07052

29. Notice is given that violations of any statutes, rules or permits other than those herein cited may be cause for additional enforcement actions, either administrative or judicial, being instituted without further notice. By issuing this Administrative Order and Notice of Civil Administrative Penalty Assessment the Department does not waive its rights to initiate additional enforcement actions.

30. No obligations imposed by this Administrative Order and Notice of Civil Administrative Penalty Assessment (with the exception of paragraph 22, above) are intended to constitute a debt, damage claim, penalty or other civil action which should be limited or discharged in a bankruptcy proceeding. All obligations imposed by this Administrative Order and Notice of Civil Administrative Penalty Assessment shall constitute continuing regulatory obligations imposed pursuant to the police powers of the State of New Jersey, intended to protect the public health, safety, welfare and environment.

31. Notice is given that pursuant to N.J.S.A. 58:10A-10d, NJDEP is authorized to assess a civil administrative penalty of not more than $5,000 for each violation and additional penalties of not more than $500 for each day during which such violation continues after receipt of an administrative order from NJDEP.

32. Notice is further given that pursuant to N.J.S.A. 58:10A-10e, any person who violates N.J.S.A.58:10A-1 et seq. or an administrative order issued pursuant to N.J.S.A. 58:10A-10b or fails to pay the civil administrative penalty in full after it is due shall be subject to a civil penalty not to exceed $10,000 per day of such violation, and each day's continuance of the violation shall constitute a separate violation.

33. Notice is further given that pursuant to N.J.S.A. 58:10A-10f, any person who willfully or negligently violates N.J.S.A. 58:10A-1 et seq. shall, upon conviction, be guilty of a crime in the fourth degree and shall be punished by fine of not less than $2,500 nor more than $25,000 per day of violation or by imprisonment for not more than one year or by both.

ATTACHMENT I/6

ATTACHMENT J

Let's protect our earth

Jorge H. Berkowitz, Ph.D.
Director, DEQ

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF ENVIRONMENTAL QUALITY
BUREAU OF ENVIRONMENTAL RADIATION
CN 411
TRENTON, NEW JERSEY 08625
(609) 530-4001

June 1, 1987

Mr. Roger W. Haller, President
The Haller Testing Laboratories
336 Leland Avenue, P. O. Box 46
Plainfield, New Jersey 07061

Dear Mr. Haller:

SUBJECT: NOTICE OF LICENSE EXPIRATION LICENSE NUMBER NJSL-10130
EXPIRATION DATE: 08.01.87

Our records indicate that your New Jersey State Radioactive Materials License will soon expire on the date shown above.

If you do not wish to renew your license, complete the enclosed "Certificate - Disposition of Radioactive Materials" form and return it to this office.

If you desire to continue your radioactive material(s) program, an application for renewal of the license should be filed with this office in a timely manner. According to NJAC 7:28-4.12, an existing license shall not expire until the Department has acted on the renewal application provided it has been filed in proper form not less than 30 days prior to expiration of the existing license.

In submitting the "Application for Radioactive Materials License", all items must be completed with no reference to previously filed documents. If you wish to support an application through information contained in other documents, you may submit copies of those documents.

Sincerely,

John Feeney
License Administrator
Radioactive Materials Section

cab
Enclosures: (3)
RAMII57

ATTACHMENT J

ATTACHMENT K

Let's protect our earth

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF ENVIRONMENTAL QUALITY
CN 027, TRENTON, NJ 08625

ADMINISTRATIVE ORDER

TO: The Haller Testing Laboratories
336 Leland Avenue
P.O. Box 46
Plainfield, New Jersey 07061
Roger Haller, Owner
LOG: #R871151

Contact/Phone: (201) 756-4636
Violation Occurred On
Premises Known As:

336 Leland Avenue, Plainfield,
Union County, New Jersey,
ID #10130

The New Jersey Department of Environmental Protection (the "Department") has determined by investigation(s) made pursuant to the provisions of the Radiation Protection Act (the "Act") N.J.S.A. 26:2D-1 et seq. that on September 1, 1987, you did violate the New Jersey Administrative Code, Title 7, Chapter 28, Subchapter(s) & Section(s) as follows:

4.2 - The investigation disclosed that the licensee was in possession of radioactive materials without a valid State license. Specifically, the license expired on August 1, 1987.

4.10(d) - The investigation disclosed that the licensee failed to comply with Condition 16A of its radioactive materials license. Specifically, survey instrument calibrations exceed 6 month intervals.

YOU ARE HEREBY ORDERED to cease violation of said Subchapter(s) and Section(s) on the premises owned, leased, operated or maintained by you on or before October 17, 1987.

IN ADDITION, you are required to provide written notification to the Bureau of Radiological Health, CN 411, Trenton, New Jersey 08625 on or before October 17, 1987, identifying the steps you have taken to cease the above violations of the New Jersey Administrative Code.

NOTICE IS HEREBY GIVEN that pursuant to N.J.S.A. 26:2D-13, any person who violates the provisions of the Act, or any rule, regulation or order promulgated or issued pursuant thereto shall be liable to a penalty of up to $2,500 for each offense. If the violation is of a continuing nature, each day during which it continues shall constitute an additional, separate and distinct offense.

Should you have any questions, contact Mr. John Feeney, Bureau of Environmental Radiation, (609)530-4015.

Dated: September 17, 1987

Anthony J. McMahon, Assistant Director
Environmental Enforcement

PROGRAM: RADIATION
CERTIFIED

ATTACHMENT K

NEW JERSEY STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION
FIELD RECORD OF VIOLATIONS

--RADIOACTIVE MATERIALS--

Rec Mod Ord

9-1-87 TIME AT SITE 2:00 a.m. p.m. from 3:30 a.m. p.m. to NJSL NO. 10130

A FULL BUSINESS NAME The Haller Testing Laboratories

MAILING ADDRESS 336 Leland Avenue, P.O. Box 46 (Street) Plainfield (City) 07061 (Zip Code)

PHONE NUMBER 201-756-4636

TYPE OF OWNERSHIP	NAME OF OWNER, PARTNERS, OFFICERS, OFFICIALS	TITLE
Individual X	Roger Haller	Owner
Partnership		
Corporation		
Municipal (type)		
Hospital		

PERSONS INTERVIEWED/COMMENTS/PHONE # Roger Haller, President

B LOCATION ADDRESS 336 Leland Avenue (Street) Plainfield (Municipality) Union (County)

DEPARTMENT Laboratory LOT NO. BLOCK NO.

OWNER Roger Haller (Name) 336 Leland Avenue (Street) Plainfield (City)

CODE REFERENCE: NJAC - CHAPTER 28 TITLE 7

1. Code # Master List RML5 1. Section of NJAC 4.2

August 1, 1987

RECOMMENDED ACTION

Immediately

Device is to remain in storage until renewal license is issued.

R. [illegible] 9.14.87

RS 71151

OVER

ATTACHMENT K

NEW JERSEY STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION
FIELD RECORD OF VIOLATIONS

--RADIOACTIVE MATERIALS--

VIOLATION DATE 9-1-87 TIME AT SITE 2:00 a.m. (p.m.) from 3.30 a.m. (p.m.) to NJSL NO. 10130

PERSON IN VIOLATION

SEC A FULL BUSINESS NAME The Haller Testing Laboratories

MAILING ADDRESS 336 Leland Avenue (Street) P.O. Box 46 (City) Plainfield NJ (Zip Code) 07061

PHONE NUMBER 201-757-4632

TYPE OF OWNERSHIP

Individual X
Partnership ____
Corporation ____
Municipal ____ (type)
Hospital ____

NAME OF OWNER, PARTNERS, OFFICERS, OFFICIALS	TITLE
Roger Haller	owner

PERSONS INTERVIEWED/COMMENTS/PHONE # Roger Haller President

LOCATION OF VIOLATION

SEC B LOCATION ADDRESS same (Street) Plainfield (Municipality) Union (County)

DEPARTMENT Laboratory LOT NO. ____ BLOCK NO. ____

OWNER Roger Haller (Name) same (Street) ____ (City)

DETAILS OF VIOLATION

CODE REFERENCE: NJAC - CHAPTER 28 TITLE 7

1. Code # Master List RML5 1. Section of NJAC 4.2

August 1, 1987

RECOMMENDED ACTION

immediately
Device is to remain in storage until renewal license is issued.

ATTACHMENT K3

ADDITIONAL VIOLATIONS

DETAILS OF VIOLATION

2. Code # Master List RML1 2. Section of NJAC 4.10d

Condition 16A, specifically survey instrument calibrations exceeded 6 month intervals.

RECOMMENDED ACTION

immediately

3. Code # Master List _____ 3. Section of NJAC _____

RECOMMENDED ACTION

Reviewed by [signature] Inspector William P Cleary
Signature

9/3/87
Date

Print Name & Title

9-3-87
Date

☐ Check Here If Continued On Additional Page

ATTACHMENT K

ATTACHMENT L

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF WATER RESOURCES
METRO BUREAU OF REGIONAL ENFORCEMENT
2 BABCOCK PLACE
WEST ORANGE, NEW JERSEY 07052

GEORGE G. McCANN, P.E.
DIRECTOR

DIRK C. HOFMAN, P.E.
DEPUTY DIRECTOR

January 25, 1988

MEMORANDUM

TO: Assistant Director Mumman
Enforcement Element
Division of Water Resources

FROM: Peter T. Lynch, Chief
Division of Water Resources
Metro Bureau of Regional Enforcement

SUBJECT: Haller Testing Laboratories, Inc.
Plainfield/Union County
Administrative Order and Notice of
Civil Administrative Penalty Assessment

On May 21, 1987 an Administrative Order (AO) and Notice of Civil Administrative Penalty Assessment was issued by the Department to Haller Testing Laboratories, Plainfield/Union County. The AO requires that Haller Testing Laboratories immediately cease all unpermitted discharges from the facility; remove and dispose of all contaminated materials from a drainage pit; submit a draft hydrogeologic remedial investigation work plan and submit payment of a civil administrative penalty of $5,000.

To date, Haller Testing Laboratories has failed to comply with the terms of the AO and Notice of Civil Administrative Penalty Assessment. No request for an Administrative Hearing or any other response has been received from Haller Testing Laboratories.

New Jersey Is An Equal Opportunity Employer

ATTACHMENT L

It is therefore recommended that this matter be referred to the Office of the Attorney General for legal action to compel compliance with the terms of the AO, obtain payment of the assessed penalty, and also obtain maximum statutory penalties for failure to comply with the AO.

A copy of our file on this matter is attached.

E119:G25

ATTACHMENT L

ATTACHMENT M

Form DWR-052
3/81

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

REPORT OF PHONE CALL OR VISIT

Bureau or Office METRO ENFORCEMENT

In _____ Out ✓

Date 2/4/88 Time 2:20 pm

File Haller Testing

Routing Steve Sedlak

Person Contacted Investigator Vasquez

Phone No. _____

Affiliation Criminal Justice

Subject of Call/Visit Haller Testing / Plainfield

Summary of Call/Visit

Inv. Vasquez inspected Haller on 2/3/88. Haller continues to discharge. Vasquez will stop at NRRE on 2/5/88 to discuss his inspection and review our file.

Action Recommended _____

Doris J. Kilijanski

Signature

ATTACHMENT M

ATTACHMENT N

Let's protect our earth

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF ENVIRONMENTAL QUALITY
CN 027, TRENTON, NJ 08625

NOTICE OF PROSECUTION

TO: Haller Testing Laboratories
336 Leland Avenue
P.O. Box 46
Plainfield, New Jersey 07061
Roger Haller, President
LCG #R880612

Contact/Phone: (201) 756-4639
Violation Occurred On
Premises Known As:

336 Leland Avenue, Plainfield,
Union County, New Jersey,
ID #10130

The New Jersey State Department of Environmental Protection (the "Department") has determined by investigation(s) made pursuant to the provisions of the Radiation Protection Act (the "Act") N.J.S.A. 26:2D-1 et seq. that on November 19, 1987, you did violate the New Jersey Administrative Code, Title 7, Chapter 28, Radiation Protection, Subchapter and Section as follows:

4.1(b) - The investigation disclosed that you failed to acquire a valid State license issued by the Deparment for the radioactive material in you possession. Specifically, your license expired on August 1, 1987.

NOTICE IS HEREBY GIVEN that pursuant to N.J.S.A. 26:2D-13, any person who violates the provisions of the Act, or any rule, regulation or order promulgated or issued pursuant thereto shall be liable to a penalty of up to $2,500 for each offense. If the violation is of a continuing nature, each day during which it continues shall constitute an additional, separate and distinct offense.

Pursuant to N.J.S.A. 26:2D-13, the Department's offer of settlement for the violation(s) listed above is $1,000.00.

SETTLEMENT: The above offer of settlement must be paid on or before August 1, 1988, by check or money order drawn to the order of the New Jersey Department of Environmental Protection.

If you fail to accept the Department's offer of settlement and/or fail to comply with the requirements of N.J.A.C. 7:28-1 et seq., the matter will be referred to the Office of the Attorney General with the recommendation to seek injunctive relief and maximum penalties for each violation as provided by law.

Should you have any questions, contact us, Gail Palatine, Radiation Enforcement Manager, at (609) 291-1928.

Dated: July 5, 1988

Anthony J. McMahon, Assistant Director
Environmental Enforcement

PROGRAM: RADIATION
CERTIFIED MAIL

ATTACHMENT N

NEW JERSEY STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION
FIELD RECORD OF VIOLATIONS

Rad Nuc Med NOP

--RADIOACTIVE MATERIALS--

VIOLATION DATE 11-19-87 TIME AT SITE 1:30 a.m. p.m. from 2:30 a.m. p.m. to NJSL NO. 10130

SEC A

FULL BUSINESS NAME Haller Testing Laboratories

MAILING ADDRESS 336 Leland Avenue, P.O. Box 46 (Street) Plainfield (City) 07061 (Zip Code)

PHONE NUMBER 201-756-4636

TYPE OF OWNERSHIP	NAME OF OWNER, PARTNERS, OFFICERS, OFFICIALS	TITLE
Individual X	Roger Haller	President
Partnership		
Corporation		
Municipal (type)		
Hospital		

PERSONS INTERVIEWED/COMMENTS/PHONE # Roger Haller (phone conversation); Louis Scotti

SEC B

LOCATION ADDRESS 336 Leland Avenue (Street) Plainfield (Municipality) Union (County)

DEPARTMENT Laboratory LOT NO. BLOCK NO.

OWNER Rober Haller (Name) 336 Leland Avenue, P.O. Box 46 (Street) Plainfield (City)

CODE REFERENCE: NJAC - CHAPTER 28 TITLE 7

1. Code # Master List ~~RML5~~ # 22 1. Section of NJAC 4.1(b) (Formerly 4.2)

August 1, 1987

Specifically your licence expired on August 1, 1987.

RECOMMENDED ACTION

NOP $1000.00

*Follow-up Inspection

R880612

DETAILS OF VIOLATION

ATTACHMENT N2

ATTACHMENT O

Let's protect our earth

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF ENVIRONMENTAL QUALITY
CN 415
Trenton, N.J. 08625-0415
(609) 987-6402
Fax (609) 987-6390

Jorge H. Berkowitz, Ph.D.
Director

Gerald P. Nicholls, Ph.D., Assistant Director
Radiation Protection

January 10, 1989

Mr. Roger Haller, President
Haller Testing Laboratories
336 Leland Avenue
P. O. Box 46
Plainfield, New Jersey 07061

Dear Mr. Haller:

SUBJECT: NOTICE OF LICENSE EXPIRATION LICENSE #NJSL-10130
EXPIRATION 08.01.87

To date, our office has not received a renewal application for your New Jersey State Radioactive Materials License.

This will be the last notice our office will make. If your application is not received by our office by January 17, 1989, the matter will be referred to the Bureau of Enforcement Services with a recommendation for the assessment of a monetary penalty.

Sincerely,

William P. Csaszar

William P. Csaszar
Radiation Physicist
Radioactive Materials Section

WC:102

1-20-89 -
(inspection) -
Device still sealed & on the premise (wpc)

MR. LOUIS SCOTTI
E Scotti me where the device was stored
Mr. Haller was not available.

ATTACHMENT 0

ATTACHMENT P

SUMMARY OF ATTORNEY GENERAL REFERRAL

Haller Testing Laboratories, Inc.
336 Leland Avenue
Plainfield/Union County

As part of an industrial survey conducted by Metro Bureau of Regional Enforcement prompted by the contamination of Plainfield municipal wells, Haller Testing Labs was inspected on August 29, 1985. Several directive letters were subsequently issued for the violation listed below, however, a written response was never received from Haller addressing this matter. Due to noncompliance with NJDEP, it has not been determined if Haller is responsible for the contamination of the local wells.

Violation: Discharge of materials containing various VOCs from lab sinks to a subsurface disposal system (UIC). Haller did not or does not currently have a NJPDES permit.

Enforcement Action: An Administrative Order/ Notice of Civil Administrative Penalty Assessment in the amount of $5,000 was issued on May 21, 1987. This action ordered Haller to cease the discharges, remove and dispose of sludges and initiate a hydrogeological workplan.

Referral: Metro Bureau of Regional Enforcement referred this matter to the Office of the Attorney General due to Haller's failure to comply with the terms of the AO/NCAPA. No contact whatsoever has been made by Haller to NJDEP regarding this matter.

PREPARED BY: Gloria T. Grant

DATE: 2-14-89

ATTACHMENT P

ATTACHMENT Q

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF ENVIRONMENTAL QUALITY
CN 027, TRENTON, NJ 08625

Let's protect our earth

Jorge H. Berkowitz, Ph.D.
Director

Anthony J. McMahon, Assistant Director
Environmental Enforcement

NOTICE OF PROSECUTION

TO: Haller Testing Laboratories
336 Leland Avenue
P.O. Box 46
Plainfield, New Jersey 07061
Roger Haller, President
LOG: #R890067

Contact/Phone: (201) 756-4636
Violation Occurred On
Premises Known As:

336 Leland Avenue, Plainfield,
Union County, New Jersey,
ID #10130

The New Jersey Department of Environmental Protection (the "Department") has determined by investigation(s) made pursuant to the provisions of the Radiation Protection Act (the "Act") N.J.S.A. 26:2D-1 et seq. that on January 20, 1989, you did violate the New Jersey Administrative Code, Title 7, Chapter 28, Subchapter(s) & Section(s) as follows:

4.1(b) - The investigation disclosed that you failed to acquire a valid State license issued by the Department for the radioactive substance you produced, transferred, received, acquired, owned, possessed or used.

NOTICE IS HEREBY GIVEN that pursuant to N.J.S.A. 26:2D-13, any person who violates the provisions of the Act, or any rule, regulation or order promulgated or issued pursuant thereto shall be liable to a penalty of up to $2,500 for each offense. If the violation is of a continuing nature, each day during which it continues shall constitute an additional, separate and distinct offense.

Pursuant to N.J.S.A. 26:2D-13, the Department's offer of settlement for the violation(s) listed above is $1,500.00.

SETTLEMENT: The above offer of settlement must be paid on or before March 10, 1989, by check or money order drawn to the order of the New Jersey Department of Environmental Protection.

If you fail to accept the Department's offer of settlement and/or fail to comply with the requirements of N.J.A.C. 7:28-1 et seq., the matter will be referred to the Office of the Attorney General with the recommendation to seek injunctive relief and maximum penalties for each violation as provided by law.

Should you have any questions, contact Mr. Paul Palatine, Radiation Enforcement Manager, at (609) 292-1928.

Dated: February 10, 1989.

Anthony J. McMahon, Assistant Director
Environmental Enforcement

PROGRAM: RADIATION
CERTIFIED MAIL

* 4-25-89 - Roger HALLER Filled out APPLICATION AND I TOOK IT W/ ME FOR PROCESSING He also GAVE ME THE NOP of $1,500.00 check WRC
He will NOTIFY US when LEAK TEST IS To be performed SO I can remove the STORAGE STICKER + SECURITY WIRE WRC

ATTACHMENT Q

KAD MUC med NOP

NEW JERSEY STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION
FIELD RECORD OF VIOLATIONS

--RADIOACTIVE MATERIALS--

VIOLATION DATE 1-20-89 TIME AT SITE 2:30 a.m. p.m. from 3:30 a.m. p.m. to NJSL NO. 10130

SEC A

FULL BUSINESS NAME Haller Testing Laboratories

MAILING ADDRESS 336 Leland Avenue, P.O. Box 46 Plainfield 07061
Street City Zip Code

PHONE NUMBER 201-756-4636

TYPE OF OWNERSHIP	NAME OF OWNER, PARTNERS, OFFICERS, OFFICIALS	TITLE
Individual X	Roger Haller	President
Partnership		
Corporation		
Municipal (type)		
Hospital		

PERSONS INTERVIEWED/COMMENTS/PHONE # Louis Scotti

SEC B

LOCATION ADDRESS 336 Leland Avenue Plainfield Union
Street Municipality County

DEPARTMENT Laboratory LOT NO. BLOCK NO.

OWNER Roger Haller 336 Leland Avenue Plainfield
Name Street City

CODE REFERENCE: NJAC - CHAPTER 28 TITLE 7

1. Code # Master List 24 1. Section of NJAC 4.1(b)

RECOMMENDED ACTION

NOP $1,500.00 and license is to be renewed immediately.

R Patrick 2-3-89
R890067

ATTACHMENT Q2

ATTACHMENT R

NEW JERSEY STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL RADIATION
CN411, Trenton, New Jersey 08625

APPLICATION FOR RADIOACTIVE MATERIALS LICENSE

INSTRUCTIONS - Complete all items in the application whether for a renewal or an initial application. Do not make reference to documents previously filed with the State or any other government agency. Read each item carefully and answer as completely as possible. All attachments are to be appropriately labeled (e.g. the first attachment for Item 6 should read 6A, the second 6B, the third 6C, etc.) make a copy of the completed application and all attachments for your records. Mail the original to: New Jersey State Department of Environmental Protection, Bureau of Environmental Radiation, Radioactive Materials Section, CN411, Trenton, New Jersey 08625. The information submitted in this application will become part of the terms and conditions of the license. Upon approval of the application, the applicant will receive a radioactive material license issued pursuant to statutory and implementing regulatory authority. This license will be subject to all applicable rules, regulations and orders of all appropriate regulatory agencies now or hereafter in effect and to any conditions specified in the license.

1. FACILITY (Institution, Firm, Hospital, Person, etc.)

NAME THE HALLER TESTING LABORATORIES, INC.

ADDRESS 336 LELAND AVENUE, P.O.BOX 46

CITY, COUNTY, ZIP CODE PLAINFIELD, NJ 07061, UNION COUNTY

PHONE NUMBER 201-756-4637

2. DEPARTMENT(S) THAT WILL STORE AND/OR USE THE RADIOACTIVE MATERIAL (if more space is needed, include as Attachment 2A, 2B, etc.)

NAME INSPECTION DIVISION
THE HALLER TESTING LABORATORIES, INC.

ADDRESS 336 LELAND AVENUE, P.O.BOX 46

CITY, COUNTY, ZIP CODE PLAINFIELD, NJ 07061, UNION COUNTY

PHONE NUMBER 201-756-4637

NAME

ADDRESS

CITY, COUNTY, ZIP CODE

NAME

ADDRESS

CITY, COUNTY, ZIP CODE

3. Have you ever been denied a license for use of radioactive material by any federal or state jurisdiction or has such a license ever been revoked or suspended? NO [X] YES [ ] (If yes, describe details on additional sheet) If this is a renewal, please indicate previous license number.

Previous License Number and Issuing Agency:

License No. 10130

Agency N.J.D.E.P. BUREAU OF ENVIRONMENTAL RADIATION

ATTACHMENT R

4. RADIOACTIVE MATERIAL USER(S). (Name and title of individual(s) who will use, directly supervise or approve the use of radioactive materials. For human use of the radioactive material, the licensed user is an individual who will possess or use radioactive substances, prescribe dosage, administer, or arrange for the administration of said substances to human beings or irradiate, or arrange for the irradiation of human beings by said substances. List training and experience in Item 6)

A. ROGER W. HALLER, PRESIDENT

B. V. REDDY KANCHARLA

C. HENRY BEJGROWICZ

D. LOUIS ESPOSITO

E. SYED HASSAN

F.

5. RADIATION SAFETY. Radiation Safety Officer (Name and title of person designated as radiation safety officer. List training and experience in Item 6.)

Name V. REDDY KANCHARLA Title RSO

If this facility has a Radiation Safety Committee or Isotope Committee, describe the committee's responsibilities, duties, membership and meeting frequency (Label this Attachment 5)

☐ ATTACHMENTS ENCLOSED NOT APPLICABLE

6. TRAINING AND EXPERIENCE. Delineate the training and experience of individuals listed in Item 4 by inclusion of a resume and a summary of training for each individual. For applications for Human-Use licenses, physicians in lieu of documentation of training and experience, may submit proof of certification by an appropriate board or proof of certification as Fellow in an appropriate College or Faculty. (Label these items for each individual as Attachment 6A, 6B, 6C, etc.)

☒ ATTACHMENTS ENCLOSED

7. RADIATION PROTECTION PROGRAM. Describe the radiation protection program at the facility. Include copies of documents relating to radiation protection procedures and control measures (e.g. emergency procedures, spill control, surveys performed and their frequency, etc.) (Label these Attachments 7A, 7B, 7C, etc.)

☒ ATTACHMENTS ENCLOSED

8. FACILITIES AND EQUIPMENT. Describe laboratory facilities, remote handling equipment, storage containers, shielding, fume hoods, etc. Include sketches of facilities. (Label these Attachments 8A, 8B, 8C, etc.)

☒ ATTACHMENTS ENCLOSED

9. PERSONNEL MONITORING PROCEDURES. Describe the methods used for personnel dosimetry including type of dosimeter, frequency of changing, methods for calibration and processing or the name of the supplier. (Label these Attachments 9A, 9B, 9C, etc.)

☐ ATTACHMENTS ENCLOSED R.S.LANDAUER JR.COMPANY
GLENWOOD SERVICE PARK
GLENWOOD,ILLINOIS 60425

ATTACHMENT R2

10A COMPLETE THIS SECTION FOR ALL NON-HUMAN USE RADIONUCLIDES TO BE INCLUDED IN THE LICENSE. (IF THE NUMBER OF NUCLIDES EXCEEDS THIS SPACE AVAILABLE ON ONE SHEET, MAKE COPIES OF THIS SHEET AND COMPLETE.

Radio-nuclide	Chemical and/or Physical Form	Maximum Amount (mCi)	List Users as Identified in Item 4 for each Radio-nuclide (e.g. 4A, 4B, 4D through 4J)	Describe the purpose for which this radioactive material will be used.
RADIUM 226 Be			NOT TO EXCEED	CONSTRUCTION SITES IN N.J.
			25 MILLICURIES	
				SEAMAN NUCLEAR CORPORATION
				MODEL C-75BP
				DENSITY/MOISTURE GAUGE

10B COMPLETE THIS SECTION FOR HUMAN-USE APPLICATION OF RADIOACTIVE MATERIALS. For the Users identified in Item 4 (e.g. 4A, 4B, 4C, etc.), cehck the appropriate HUMAN-USE groups (as per NJAC 7:28-4.7) for which licensing is desired. (If the number of users exceeds the space available on one sheet, make copies of this sheet and complete.)

Users Identified in Item 4	HUMAN - USE GROUPS					
	I	II	III	IV	V	VI
4A						
4B						
4C						
4D			NOT APPLICABLE			
4E						
4F						
4G						
4H						
4I						
4J						
4K						
4L						

ATTACHMENT R3

[redacted] I[redacted] THI[redacted]DIA[redacted] DE[redacted]ION[redacted]STRU[redacted]ATI[redacted]AT [redacted]FAC[redacted]TY. [redacted]ke a[redacted]par[redacted]lis[redacted]r e[redacted] dep[redacted]men[redacted]ste[redacted] [redacted]
in Item 2.

INSTRUMENT Meter/Analyzer (Make & Model)	Probe/Detector (Make & Model)	NO. OF UNITS	RADIATION DETECTED (α, β, γ)	SENSITIVITY RANGE (mR/hr, cpm) mR/hr.	USE: M-Monitor S-Survey Q-Measure	CALIBRATION FREQUENCY Q-Quarterly S-Semi-Annual A-Annual
SOLAR ELECTRONICS INTL. MONITOR 4 SURVEY METER	MONITOR 4 S/N - N/A	1	ALPHA BETA GAMMA X-RAY	0-0.5 0-5.0 0-50. (3 ranges)	MONITOR SURVEY	SEMI-ANNUAL

ATTACHMENT R4

2. INSTRUMENTATION CALIBRATION. Describe the method and frequency of calibration of each instrument listed in Item 11. If a consultant is employed to perform this service, specify the company's name and address. (Label these Attachments 12A, 12B, 12C, etc.) SEMI-ANNUAL CALIBRATION BY CERTIFIED TESTING LABORATORIES
2623 ROBERTS AVENUE,BRONX,NY 10461

ATTACHMENTS ENCLOSED NO

3. WASTE DISPOSAL. Describe the methods which will be used for disposing of radioactive waste and estimate the type and amount of activity involved for each method. If a commercial waste disposal service is employed, give the company's name and address.

ATTACHMENTS ENCLOSED ATTACHMENT ENCLOSED

4. I, CERTIFY UNDER PENALTY OF LAW THAT THE INFORMATION PROVIDED IN THIS DOCUMENT IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT CIVIL AND CRIMINAL PENALTIES FOR SUBMITTING FALSE, INACCURATE OR INCOMPLETE INFORMATION, INCLUDING FINES AND/OR IMPRISONMENT.

ROGER W. HALLER
Applicant Named in Item 1

Roger W. Haller
Signature of Certifying Official

APRIL 25, 1989
Date

ROGER W. HALLER,PRESIDENT
Name and Title of Certifying Official

ATTACHMENT R5

ITEM 7 - RADIATION PROTECTION PROGRAM:

1. Maintenance: All instrument and source maintenance, normal radiation surveys, and leak testing will be performed by the manufacturer, the Seaman Nuclear Corporation. Work will be performed at their facilities under warranty and/or extended service contracts.

2. Accessibility of Use: In addition to the above noted facilities procedures, except while in locked storage the instrument shall remain under the direct supervision of the individual user(s) named in the license, or Radiation Protection Officer.

3. Emergency Procedures: The operator will be familiar with and have a copy of his emergency procedures in his possession whenever the instrument is used. These procedures will include appropriate sections of the state regulations regarding reporting of accidents. The following will also be included:

   a. For accidents in minor damage to the instrument housing, the unit will be returned to the factory for repair.

   b. For accidents resulting in serious damage to the instrument, such that the base is broken and the source or its holder may be damaged:

      1. Seal off and protect the immediate area.

      2. Notify local and/or state authorities so that a survey of the site can be made before the area or instrument are disturbed.

   c. To enable reporting and assistance with accidents, the emergency procedures checklist will include phone numbers for state and local health departments and the Seaman Nuclear Corporation.

4. Personnel Protection: All users shall be provided with film badge type dosimeters to be worn when handling or using the instrument. Authorized personnel shall see to it that other persons are kept away from the instrument during use, transportation, or storage.

5. Duties and Responsibilities: It is the duty and responsibility of the Radiation Protection Officer to:

   a. Coordinate the safe use of the nuclear gauging devices.

   b. Ensure compliance with pertinent state and Department of Transportation regulations.

c. Assure that radioactive materia'- possessed under the license conform to the materiai ,isted on the license.

d. Assure that use of the device, particularly in the field, is under the direct supervision of individuals authorized by the license.

e. Assure that all users wear personnel monitoring equipment, such as film badges or thermoliminescence dosimeters (TLD,) when required.

f. Assure that gauges are properly secured against unauthorized removal at all times when they are not in use.

g. Serve as a point of contact and in case of emergency (i.e., gauge damage, in the field, fire, theft, etc.) give assistance to assure that proper authorities, such as NRC, Local Police, State Health Department, etc., are promptly notified in case of accident or damage to gauges.

h. Assure that the terms and conditions of the license such as periodic leak tests, are met, and that the required records, such as personnel exposure records, leak test records, etc., are periodically reviewed for compliance with applicable state requirements and license conditions.

ITEM 8 - FACILITIES AND EQUIPMENT:

The storage area shall be:

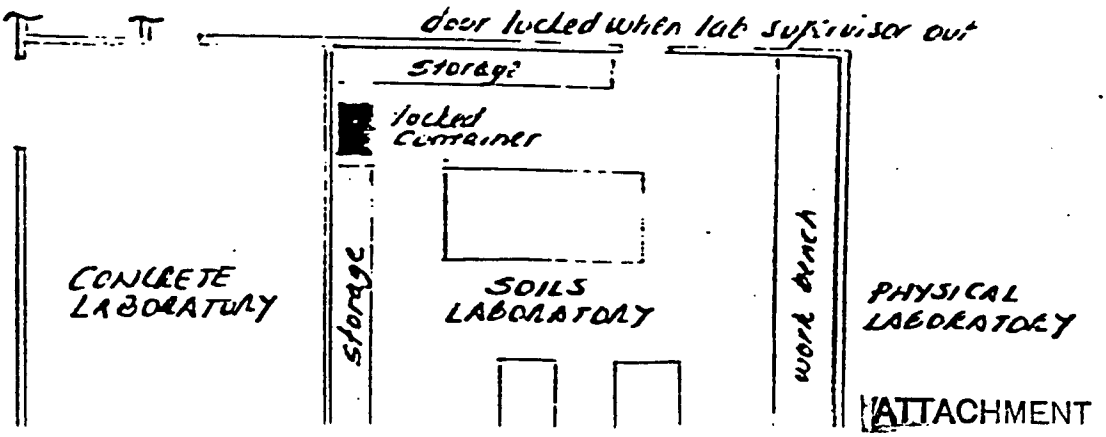
a. A locked area.

b. An area with access limited to, or under the control of, individuals named in the license application.

c. An area located so that persons do not occupy or frequent the area near the meter.

d. An area posted with a CAUTION RADIOACTIVE MATERIALS SIGN.

e. Or temporary field locations with the DOR stored in its shipping container in a secured area. The immediate area surrounding the DOR will be posted with a "CAUTION RADIOACTIVE MATERIALS" SIGN.



ATTACHMENT R7

Methods of carriage shall be:

a. The unit will be transported at all times in the manufacturer's shipping container meeting all applicable D.O.T., Title 49 and IATA regulations for transportation of Radioactive Materials.

b. For local transport the unit will be located in the vehicle so as to be as far from occupants as possible - a minimum of three feet from the outside of the container.

c. Shipments to the manufacturer will be via motor freight lines, or air cargo, use the authorized and properly labeled shipping container.

ITEM 13 - WASTE DISPOSAL:

The instrument manufacturer, Seaman Nuclear Corporation, will provide for removal of the sealed source and appropriate disposition upon return of the instrument for that purpose.

ATTACHMENT S

Haller

The Haller Testing Laboratories, Inc.

336 Leland Avenue P.O. Box 46
Plainfield, New Jersey 07061
(201) 756-4637 (212) 233-2360

May 17, 1989

State of New Jersey
Department of Environmental Protection
Division of Environmental Quality
CN 415
Trenton, New Jersey 08625-0415

Attention: William P. Csaszar
Radiation Physicist

REFERENCE: RADIOACTIVE MATERIALS LICENSE, NO. NJSL-10130

Gentlemen:

This is to bring to your attention a discrepancy in the issuance of Radioactive Materials License, concerning the number of sources we can possess (Item 8).

One moisture/density gauge of Seaman Nuclear Corp., (Model C-75 BP) has only 5 millicuries of radioactive material. Since we are planning to possess more than one gauge in the near future, we requested License for a total of 25 millicuries, so as to account for 5 gauges.

We therefore request that you change Item 8 in the License to read as "5 sources not to exceed a total of 25 millicuries".

Thank you for your earliest attention to this matter.

Should you have any questions, please call our office.

Very truly yours,

THE HALLER TESTING LABORATORIES, INC.

Roger W. Haller, President

RWH/cgf

Certified Mail

RECEIVED

MAY 18 1989

STATE OF NEW JERSEY
BUREAU OF ENVIRONMENTAL RADIATION
DEPARTMENT OF ENVIRONMENTAL PROTECTION

ATTACHMENT S

ATTACHMENT T

Haller

The Haller Testing Laboratories, Inc.

336 Leland Avenue P.O. Box 46
Plainfield, New Jersey 07061
(201) 756-4637 (212) 233-2360

June 19, 1989

State of New Jersey
Department of Environmental Protection
Division of Environmental Quality
CN 415
Trenton, New Jersey 08625-0415

Attention: Mr. John Feeney
License Administrator
Radioactive Materials Section

Gentlemen:

This is in response to your letter dated May 23, 1989, requesting additional information concerning the storage of our radioactive materials equipment. Enclosed please find a diagram of where these units will be stored.

We understand that the storage area shall be locked, with access limited to, or under the control of, individuals named in the license application. We also understand that proper signs should be posted at the entrance and inside the storage room.

Should you need any additional information, please contact this office.

Very truly yours,

THE HALLER TESTING LABORATORIES, INC.

Roger W. Haller, President

RWH/cgf

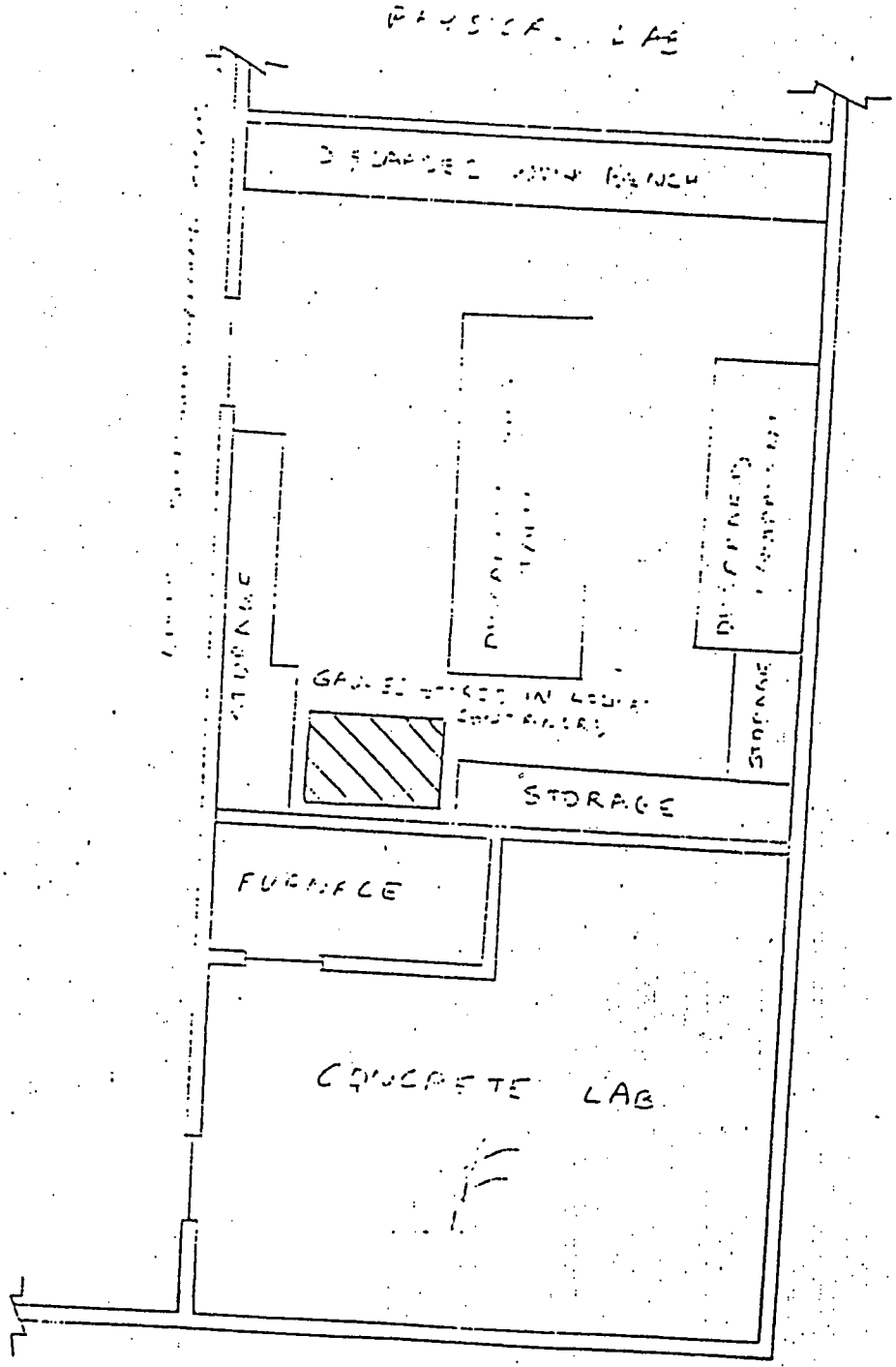
RECEIVED

JUN 22 1989

STATE OF NEW JERSEY
BUREAU OF ENVIRONMENTAL RADIATION
DEPARTMENT OF ENVIRONMENTAL PROTECTION

ATTACHMENT I

The Haller Testing Lal atories, Inc.



ATTACHMENT 12

ATTACHMENT U

Haller

The Haller Testing Laboratories, Inc.

336 Leland Avenue P.O. Box 46
Plainfield, New Jersey 07061
(201) 756-4637 (212) 233-2360

December 4, 1989

State of New Jersey
Department of Environmental Protection
Division of Environmental Quality
CN 415
Trenton, New Jersey 08625-0415

Attention: William P. Csaszar
Radiation Physicist

REFERENCE: RADIOACTIVE MATERIALS LICENSE
NO. NJSL-10130

Gentlemen:

This is to advise you concerning our recent acquistion of two (2) Nuclear Moisture-Density Guages from Seaman Nuclear Corporation, Oak Creek, Wisconsin. This brings the total number of gauges in our possession to three (3). As you may be aware of, we are permitted, by NJDEP Radioactive Materials License No. NJSL-10130, to have up to five (5) guages (not exceeding a total of 25 millicuries) in our possession.

The model numbers and serial numbers of the two (2) gauges that were recently acquired, were as follows:

1) Model No. C-75 Meter S. No. 7276
2) Model No. C-75 Meter S. No. 7324

Enclosed, please find copies of Leak Test Certificates, for the above meters, for your use.

Should you have any questions or need additional information, please contact this office.

THE HALLER TESTING LABORATORIES, INC.

V. R. Kancharla, Materials Engineer
VRK/rw

12/7/89

ATTACHMENT U

LEAK TEST CERTIFICATE

- [ ] MODEL C-200 DENSITY METER
  Americium 241 - 40 mCi
  Cesium 137 - 8 mCi
- [ ] MODEL C-200 DENSITY METER
  Radium 226 - 4.5 mCi
- [ ] MODEL C-100 DENSITY METER
  Radium 226 - 4.5 mCi
- [x] MODEL C-75 DENSITY METER
  Radium 226 - 4.5 mCi
- [ ] MODEL R-75 MOISTURE METER
  Radium 226 - 4.5 mCi
- [ ] MODEL RM-75 MOISTURE METER
  Americium 241 - 40 mCi
- [ ] MODEL R-50 MOISTURE METER
  Americium 241 - 40 mCi
- [ ] MODEL C-75BP DENSITY METER
  Americium 241 - 40 mCi
  Cesium 137 - 8 mCi

METER S/N 7276

CUSTOMER HALLER TESTING LABORATORIES

ADDRESS P.O.Box 46
Plainfield, NJ 07061

DATE SAMPLE COLLECTED 10/30/89

PERSON COLLECTING SAMPLE V.R.KANCHARLA

DATE SAMPLE ANALYZED 11/9/89

PERSON ANALYZING SAMPLE BRIAN K. WAX

SEAMAN NUCLEAR CORPORATION attests that on the above date, leak test smears have been taken on all external joints of the Nuclear Meter.

Analysis of all Smear Test Samples performed by HEALTH PHYSICS ASSOCIATES, LTD. Instrumentation described under Nuclear Regulatory Commission License Number 12-09160-01 and State of Illinois License Number IL-00-244-01.

Results: Less than 0.0001 microcuries

SEAMAN NUCLEAR CORPORATION

Scott Seaman

Scott Seaman
Radiation Safety Officer

NOV 21 1989

THE SEAMAN NUCLEAR CORPORATION

7315 So. First Street

ATTACHMENT U2

LEAK TEST CERTIFICATE

- [ ] MODEL C-200 DENSITY METER
  Americium 241 - 40 mCi
  Cesium 137 - 8 mCi
- [ ] MODEL C-200 DENSITY METER
  Radium 226 - 4.5 mCi
- [ ] MODEL C-100 DENSITY METER
  Radium 226 - 4.5 mCi
- [x] MODEL C-75 DENSITY METER
  Radium 226 - 4.5 mCi
- [ ] MODEL R-75 MOISTURE METER
  Radium 226 - 4.5 mCi
- [ ] MODEL RM-75 MOISTURE METER
  Americium 241 - 40 mCi
- [ ] MODEL R-50 MOISTURE METER
  Americium 241 - 40 mCi
- [ ] MODEL C-75BP DENSITY METER
  Americium 241 - 40 mCi
  Cesium 137 - 8 mCi

METER S/N 7324

CUSTOMER HALLER TESTING LABORATORIES

ADDRESS P.O.Box 46

Plainfield, NJ 07061

DATE SAMPLE COLLECTED 10/31/89

PERSON COLLECTING SAMPLE V.R.KANCHARLA

DATE SAMPLE ANALYZED 11/9/89

PERSON ANALYZING SAMPLE BRIAN K. WAX

SEAMAN NUCLEAR CORPORATION attests that on the above date, leak test smears have been taken on all external joints of the Nuclear Meter.

Analysis of all Smear Test Samples performed by HEALTH PHYSICS ASSOCIATES, LTD. Instrumentation described under Nuclear Regulatory Commission License Number 12-09160-01 and State of Illinois License Number IL-00-244-01.

Results: Less than 0.0001 microcuries

SEAMAN NUCLEAR CORPORATION

Scott Seaman

Scott Seaman
Radiation Safety Officer

NOV 21 1989

THE SEAMAN NUCLEAR CORPORATION

ATTACHMENT U3

ATTACHMENT V

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF ENVIRONMENTAL QUALITY
CN 027, TRENTON, NJ 08625

Let's protect our earth

Anthony J. McManon
Director

Donald F. Patterson, Assistant Director
Environmental Enforcement

NOTICE OF PROSECUTION

TO: Haller Testing Lab
336 Leland Avenue
P.O. Box 46
Plainfield, New Jersey 07061
Roger Haller, Owner
LOG: #R900543 RM

Contact/Phone: (201) 753-4637
Violation Occurred On
Premises Known As:

336 Leland Avenue, Plainfield
Township, Union County, N.J.
ID #10130

The New Jersey Department of Environmental Protection (the "Department") has determined by investigation(s) made pursuant to the provisions of the Radiation Protection Act (the "Act") N.J.S.A. 26:2D-1 et seq. that on November 16 and 26, 1990, you violated the New Jersey Administrative Code, Title 7, Chapter 28, Subchapter(s) & Section(s) as follows:

2.1 - The investigation disclosed that you used and/or permitted others to use sources of ionizing radiation in a manner other than prescribed in this Chapter. Specifically, you permitted Mr. William Dease to utilize the Moisture Density Gauge (model No. C-75 S/N7272) when he was not authorized to do so pursuant to Condition 10 of your state license.

9.4(a) - The investigation disclosed that you failed to conduct leak tests of sealed sources at intervals not longer than six months. Specifically, leak test results for April, 1990 were unavailable for the sealed sources contained in the moisture density gauges.

4.15(a)3 - The investigation disclosed that you failed to perform tests of radiation detection and monitoring instruments as the Department deemed appropriate or necessary for the administration of this Subchapter. Specifically, Condition 16A of your state license requires that survey instrument calibrations must be conducted at six month intervals. Calibration surveys have not been conducted since May 1, 1987.

NOTICE IS HEREBY GIVEN that pursuant to N.J.S.A. 26:2D-13, any person who violates the provisions of the Act, or any rule, regulation or order promulgated or issued pursuant thereto shall be liable to a penalty of up to $2,500 for each offense. If the violation is of a continuing nature, each day during which it continues shall constitute an additional, separate and distinct offense.

Pursuant to N.J.S.A. ~~26:2D-13, the~~ Department's offer of settlement for the violation(s) listed above is $1,350.00.

SETTLEMENT: The above offer of settlement must be paid on or before January 12, 1990 by check or money order payable to the Treasurer, State of New Jersey. Remit payment with the white copy of the enclosed invoice to: New Jersey Department of Environmental Protection, Bureau of Revenue, CN 402, Trenton, New Jersey 08625-0402.

ATTACHMENT V

Waller Testing Lab.
Log #R900543 RM
Page [illegible]

If you fail to accept the Department's offer of settlement and/or fail to comply with the requirements of N.J.A.C. 7:[illegible] et seq., the matter will be referred to the Office of the Attorney General with the recommendation to seek injunctive relief and maximum penalties for each violation as provided by law.

If there are any questions, contact Ms. [illegible]
Radiation Enforcement Manager, at (609) [illegible].

Dated: December [illegible], 199[illegible].

[illegible]
Environmental Enforcement

PROGRAM RADIATION
CERTIFIED MAIL

RECEIVED
STATE OF NEW JERSEY
DEC 1 3 1990
DEPT. OF ENVIRON. PROT.
DIV. OF ENVIRON. [illegible]

ATTACHMENT V2

Page ____ of ____

NEW JERSEY STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION
FIELD RECORD OF VIOLATIONS

--RADIOACTIVE MATERIALS--
Violation Report Form

VIOLATION DATE 11-16-90 11-26-90 TIME AT SITE 7:30 a.m. p.m. from 10:00 a.m. p.m. to NJSL NO. 10120

SEC A FULL BUSINESS NAME Haller Testing Lab

MAILING ADDRESS 336 Leland Avenue (Street) P.O. Box 46 (City) Plainfield 07061 (Zip Code)

PHONE NUMBER 201-753-4637

TYPE OF OWNERSHIP	NAME OF OWNER, PARTNERS, OFFICERS, OFFICIALS	TITLE
Individual X	Roger Haller	owner
Partnership ____		
Corporation ____		
Municipal ____ (type)		
Hospital ____		

PERSONS INTERVIEWED/COMMENTS/PHONE # Roger Haller

B LOCATION ADDRESS 336 Leland Avenue (Street) Plainfield (Municipality) Union (County)

DEPARTMENT Laboratory LOT NO. ____ BLOCK NO. ____

OWNER Roger Haller (Name) 336 Leland Avenue (Street) Plainfield (City)

CODE REFERENCE: NJAC - CHAPTER 28 TITLE 7

1. Code # Master List 1 1. Section of NJAC 2.1

you permitted MR WILLIAM DEASE to utilize the Moisture Density Gauge (Model No C-75 S/N7272) which was not authorized as per condition 10 of your state license

RECOMMENDED ACTION

Issue NOP # 750.00

Total $ 1350.00

R900543RM

ATTACHMENT V3

ADDITIONAL VIOLATIONS

2. Code # Master List 125 2. Section of NJAC 9.4a

Leak test results for April 1990 were not available for the sealed sources contained in the moisture density gauges (Serial No's. 7184, 7276, 7324)

RECOMMENDED ACTION

issue NOP $300.00

3. Code # Master List 57 3. Section of NJAC 4.15(a)3

contrary to condition 16A of your State license survey instruments calibrations were not conducted at 6 month intervals. No survey [illegible] since May 1, 1987. Instrument has not been calibrated since then. This is a repeat violation

RECOMMENDED ACTION

issue NOP $300.00

Reviewed by John Feeney Inspector William P. Cosgrove
Signature

11/28/90
Date

William P. Cosgrove
Print Name & Title

11/28/90
Date

DEC 7 1990

☐ Check Here If Continued On Additional Page

DEC
DEPT. OF ENVIRON. PROTECTION
DIV. OF ENVIRON. QUAL.

ATTACHMENT V4

ATTACHMENT W

State of New Jersey
Department of Environmental Protection and Energy
Environmental Safety, Health and Analytical Programs
CN 415
Trenton, NJ 08625-0415
Tel. # 609-987-2132

Scott A. Weiner
Commissioner

Gerald P. Nicholls, Ph.D.

February 21, 1992

Mr. Roger Haller
Haller Testing Laboratories
336 Leland Avenue, PO Box 46
Plainfield, New Jersey 07061

Dear Mr. Haller:

SUBJECT: NOTICE OF LICENSE EXPIRATION

LICENSE NUMBER NJSL-10130
EXPIRATION DATE - 5/1/91

Our records indicate that your New Jersey State Radioactive Materials License has expired or will expire on the date shown above.

If you do not wish to renew your license, complete the enclosed "Certificate - Disposition of Radioactive Materials" form and return it to this office.

If you desire to continue your radioactive material(s) program, an application for renewal of the license should be filed with this office in a timely manner. According to NJAC 7:28-4.11, an existing license shall not expire until the Department has acted on the renewal application provided it has been filed in proper form not less than 30 days prior to expiration of the existing license.

In submitting the "Application for Radioactive Materials License", all items must be completed with no reference to previously filed documents. If you wish to support an application through information contained in other documents, you may submit copies of those documents.

Sincerely,

John Feeney

John Feeney, License Administrator
Radioactive Materials Section

Enclosures: (3)

New Jersey is an Equal Opportunity Employer
Recycled Paper

ATTACHMENT W

ATTACHMENT X

NEW JERSEY STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL RADIATION
CN415, Trenton, New Jersey 08625

APPLICATION FOR RADIOACTIVE MATERIALS LICENSE

UCTIONS - Complete all items in the application whether for a renewal or an initial ication. Do not make reference to documents previously filed with the State or any er government agency. Read each item carefully and answer as completely as possible. ttachments are to be appropriately labeled (e.g. the first attachment for Item 6 d read 6A, the second 6B, the third 6C, etc.) make a copy of the completed application all attachments for your records. Mail the original to: New Jersey State Department vironmental Protection, Bureau of Environmental Radiation, Radioactive Materials on, CN415, Trenton, New Jersey 08625. The information submitted in this application become part of the terms and conditions of the license. Upon approval of the lication, the applicant will receive a radioactive material license issued pursuant to tory and implementing regulatory authority. This license will be subject to all cable rules, regulations and orders of all appropriate regulatory agencies now or eafter in effect and to any conditions specified in the license.

FACILITY (Institution, Firm, Hospital, Person, etc.)

NAME THE HALLER TESTING LABORATORIES, INC.

ADDRESS 336 LELAND AVENUE, P.O. BOX 46

CITY, COUNTY, ZIP CODE PLAINFIELD, NJ 07061 UNION COUNTY

PHONE NUMBER 908-756-4637

DEPARTMENT(S) THAT WILL STORE AND/OR USE THE RADIOACTIVE MATERIAL (if more space is needed, include as Attachment 2A, 2B, etc.)

NAME INSPECTION DIVISION

ADDRESS THE HALLER TESTING LABORATORIES,INC.
336 LELAND AVENUE, P.O. BOX 46

CITY, COUNTY, ZIP CODE PLAINFIELD, NJ 07061 UNION COUNTY

PHONE NUMBER 908-756-4637

NAME

ADDRESS

CITY, COUNTY, ZIP CODE

NAME

ADDRESS

CITY, COUNTY, ZIP CODE

Have you ever been denied a license for use of radioactive material by any federal or state jurisdiction or has such a license ever been revoked or suspended? NO [X] YES [ ] (If yes, describe details on additional sheet) If this is a renewal, please indicate previous license number.

Previous License Number and Issuing Agency:

License No. 10130

Agency N.J.D.E.P. BUREAU OF ENVIRONMENTAL RADIATION

ATTACHMENT X

RADIOACTIVE MATERIAL USER(S). (Name and title of individual(s) who will use, directly supervise or approve the use of radioactive materials. For human use of the radioactive material, the licensed user is an individual who will possess or use radioactive substances, prescribe dosage, administer, or arrange for the administration of said substances to human beings or irradiate, or arrange for the irradiation of human beings by said substances. List training and experience in Item 6)

A. ROGER W. HALLER, PRESIDENT

B. NICHOLAS J. SUGAR

C. HENRY BEJGROWICZ

D. LOUIS ESPOSITO

E. SYED HASSAN

F.

RADIATION SAFETY. Radiation Safety Officer (Name and title of person designated as radiation safety officer. List training and experience in Item 6.)

Name NICHOLAS J. SUGAR Title RSO

If this facility has a Radiation Safety Committee or Isotope Committee, describe the committee's responsibilities, duties, membership and meeting frequency (Label this Attachment 5)

☐ ATTACHMENTS ENCLOSED NOT APPLICABLE

TRAINING AND EXPERIENCE. Delineate the training and experience of individuals listed in Item 4 by inclusion of a resume and a summary of training for each individual. For applications for Human-Use licenses, physicians in lieu of documentation of training and experience, may submit proof of certification by an appropriate board or proof of certification as Fellow in an appropriate College or Faculty. (Label these items for each individual as Attachment 6A, 6B, 6C, etc.)

☒ ATTACHMENTS ENCLOSED

RADIATION PROTECTION PROGRAM. Describe the radiation protection program at the facility. Include copies of documents relating to radiation protection procedures and control measures (e.g. emergency procedures, spill control, surveys performed and their frequency, etc.) (Label these Attachments 7A, 7B, 7C, etc.)

☒ ATTACHMENTS ENCLOSED

FACILITIES AND EQUIPMENT. Describe laboratory facilities, remote handling equipment, storage containers, shielding, fume hoods, etc. Include sketches of facilities. (Label these Attachments 8A, 8B, 8C, etc.)

☒ ATTACHMENTS ENCLOSED

PERSONNEL MONITORING PROCEDURES. Describe the methods used for personnel dosimetry including type of dosimeter, frequency of changing, methods for calibration and processing or the name of the supplier. (Label these Attachments 9A, 9B, 9C, etc.)

☐ ATTACHMENTS ENCLOSED R.S. LANDAUER JR. COMPANY
GLENWOOD SERVICE PARK
GLENWOOD, ILLINOIS 60425

ATTACHMENT X2

10A COMPLETE THIS SECTION FOR ALL NON-HUMAN USE RADIONUCLIDES TO BE INCLUDED IN THE LICENSE. (IF THE NUMBER OF NUCLIDES EXCEEDS THIS SPACE AVAILABLE ON ONE SHEET, MAKE COPIES OF THIS SHEET AND COMPLETE.

Radio-nuclide	Chemical and/or Physical Form	Maximum Amount (mCi)	List Users as Identified in Item 4 for each Radio-nuclide (e.g. 4A, 4B, 4D through 4J)	Describe the purpose for which this radioactive material will be used.
RADIUM 226 Be			NOT TO EXCEED	CONSTRUCTION SITES IN N.J.
			25 MILLICURIES	
				SEAMAN NUCLEAR CORPORATION
				MODEL C-75BP
				DENSITY/MOISTURE GAUGE

10B COMPLETE THIS SECTION FOR HUMAN-USE APPLICATION OF RADIOACTIVE MATERIALS. For the Users identified in Item 4 (e.g. 4A, 4B, 4C, etc.), cehck the appropriate HUMAN-USE groups (as per NJAC 7:28-4.7) for which licensing is desired. (If the number of users exceeds the space available on one sheet, make copies of this sheet and complete.)

Users Identified in Item 4	HUMAN - USE GROUPS					
	I	II	III	IV	V	VI
4A						
4B						
4C						
4D			NOT APPLICABLE			
4E						
4F						
4G						
4H						
4I						
4J						
4K						
4L						

ATTACHMENT X

[redacted] n [redacted] 2. [redacted] a [redacted] at [redacted] st [redacted] each [redacted] department listed [redacted]

INSTRUMENT Meter/Analyzer (Make & Model)	Probe/Detector (Make & Model)	NO. OF UNITS	RADIATION DETECTED (α, β, γ)	SENSITIVITY RANGE (mR/hr, cpm) mR/hr.	USE: M-Monitor S-Survey Q-Measure	CALIBRATIC FREQUENCY Q-Quarterl S-Semi-Annua A-Annual
SOLAR ELECTRONICS INTL. MONITOR 4 SURVEY METER	MONITOR 4 S/N - N/A	1	ALPHA BETA GAMMA X-RAY	0-0.5 0-5.0 0-50. (3 ranges)	MONITOR SURVEY	SEMI-ANNUAL

ATTACHMENT X4

2. INSTRUMENTATION CALIBRATION. Describe the method and frequency of calibration of each instrument listed in Item 11. If a consultant is employed to perform this service, specify the company's name and address. (Label these Attachments 12A, 12B, 12C, etc.) SEMI-ANNUAL CALIBRATION BY CERTIFIED TESTING LABORATORIES
2623 ROBERTS AVENUE, BRONX, NY 10461

ATTACHMENTS ENCLOSED NO

3. WASTE DISPOSAL. Describe the methods which will be used for disposing of radioactive waste and estimate the type and amount of activity involved for each method. If a commercial waste disposal service is employed, give the company's name and address.

ATTACHMENTS ENCLOSED ATTACHMENT ENCLOSED

4. I, CERTIFY UNDER PENALTY OF LAW THAT THE INFORMATION PROVIDED IN THIS DOCUMENT IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT CIVIL AND CRIMINAL PENALTIES FOR SUBMITTING FALSE, INACCURATE OR INCOMPLETE INFORMATION, INCLUDING FINES AND/OR IMPRISONMENT.

ROGER W. HALLER
Applicant Named in Item 1

Signature of Certifying Official

MARCH 10, 1992
Date

ROGER W. HALLER, PRESIDENT
Name and Title of Certifying Official

ATTACHMENT X5

ITEM 7 - RADIATION PROTECTION PROGRAM:

1. Maintenance: All instrument and source maintenance, normal radiation surveys, and leak testing will be performed by the manufacturer, the Seaman Nuclear Corporation. Work will be performed at their facilities under warranty and/or extended service contracts.

2. Accessibility of Use: In addition to the above noted facilities procedures, except while in locked storage the instrument shall remain under the direct supervision of the individual user(s) named in the license, or Radiation Protection Officer.

3. Emergency Procedures: The operator will be familiar with and have a copy of his emergency procedures in his possession whenever the instrument is used. These procedures will include appropriate sections of the state regulations regarding reporting of accidents. The following will also be included:

   a. For accidents in minor damage to the instrument housing, the unit will be returned to the factory for repair.

   b. For accidents resulting in serious damage to the instrument, such that the base is broken and the source or its holder may be damaged:

      1. Seal off and protect the immediate area.

      2. Notify local and/or state authorities so that a survey of the site can be made before the area or instrument are disturbed.

   c. To enable reporting and assistance with accidents, the emergency procedures checklist will include phone numbers for state and local health departments and the Seaman Nuclear Corporation.

4. Personnel Protection: All users shall be provided with film badge type dosimeters to be worn when handling or using the instrument. Authorized personnel shall see to it that other persons are kept away from the instrument during use, transportation, or storage.

5. Duties and Responsibilities: It is the duty and responsibility of the Radiation Protection Officer to:

   a. Coordinate the safe use of the nuclear gauging devices.

   b. Ensure compliance with pertinent state and Department of Transportation regulations.

c. Assure that radioactive materials possessed under the license conform to the material listed on the license.

d. Assure that use of the device, particularly in the field, is under the direct supervision of individuals authorized by the license.

e. Assure that all users wear personnel monitoring equipment, such as film badges or thermoliminescence dosimeters (TLD,) when required.

f. Assure that gauges are properly secured against unauthorized removal at all times when they are not in use.

g. Serve as a point of contact and in case of emergency (i.e., gauge damage, in the field, fire, theft, etc.) give assistance to assure that proper authorities, such as NRC, Local Police, State Health Department, etc., are promptly notified in case of accident or damage to gauges.

h. Assure that the terms and conditions of the license such as periodic leak tests, are met, and that the required records, such as personnel exposure records, leak test records, etc., are periodically reviewed for compliance with applicable state requirements and license conditions.

ITEM 8 - FACILITIES AND EQUIPMENT:

The storage area shall be:

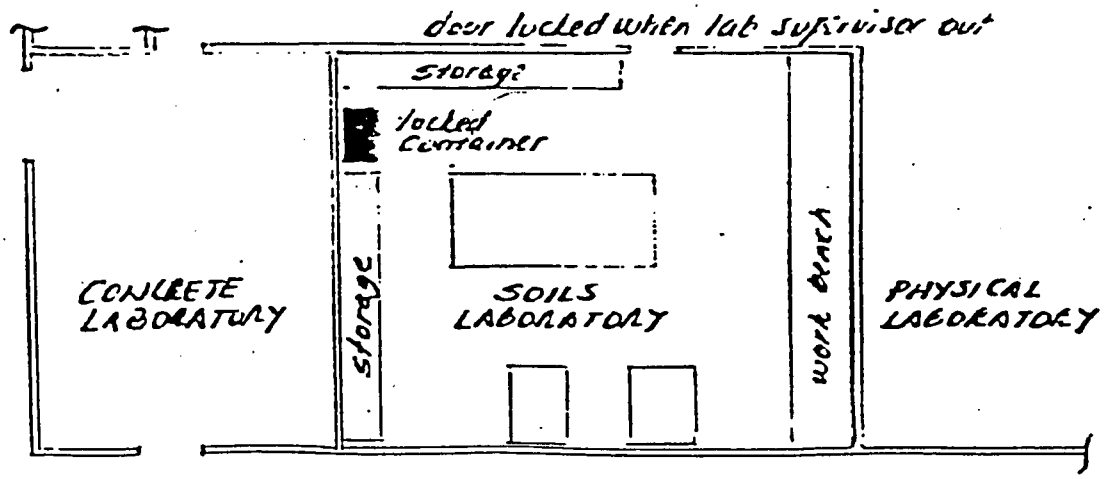
a. A locked area.

b. An area with access limited to, or under the control of, individuals named in the license application.

c. An area located so that persons do not occupy or frequent the area near the meter.

d. An area posted with a CAUTION RADIOACTIVE MATERIALS SIGN.

e. Or temporary field locations with the DOR stored in its shipping container in a secured area. The immediate area surrounding the DOR will be posted with a "CAUTION RADIOACTIVE MATERIALS" SIGN.



ATTACHMENT X7

Methods of carriage shall be:

a. The unit will be transported at all times in the manufacturer's shipping container meeting all applicable D.O.T., Title 49 and IATA regulations for transportation of Radioactive Materials.

b. For local transport the unit will be located in the vehicle so as to be as far from occupants as possible - a minimum of three feet from the outside of the container.

c. Shipments to the manufacturer will be via motor freight lines, or air cargo, use the authorized and properly labeled shipping container.

ITEM 13 - WASTE DISPOSAL:

The instrument manufacturer, Seaman Nuclear Corporation, will provide for removal of the sealed source and appropriate disposition upon return of the instrument for that purpose.

THE HALLER TESTING LABORATORIES, INC.
33: LELAND AVENU . O BOX 4:
TEL 201 . . +63:
PLAINFIELD, NEW JERSEY 07061

TO: STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF ENVIRONMENTAL QUALITY
CN 415, TRENTON,NJ 08625-0415
ATT: MR. WILLIAM P. CSASZAR

DATE: JUNE 5, 1989

RE: RADIOACTIVE MATERIALS
LICENSE NO. NJSL-10130
LEAK TEST CERTIFICATE

WE TRANSMIT THE FOLLOWING:

[X] ENCLOSED [ ] UNDER SEPARATE COVER [ ] ORIGINAL TRACING [ ] PRINT COPIES

[ ] SOIL SAMPLES [ ] SOIL SAMPLES & ROCK CORES [ ] PRELIMINARY FIELD LOGS

[X] COPT COPY OF LEAK TEST CERTIFICATE FOR METER #7184

[ ] SOIL AND ROCK SAMPLES ARE RETAINED BY US FOR 30 DAYS ONLY. PLEASE ADVISE AS TO YOUR WISHES IN DISPOSING OF THE SAMPLES.

VIA: [X] FIRST CLASS MAIL [ ] PARCEL POST [ ] SPECIAL DELIVERY [ ] MESSENGER

REPORT NO.: JOB NO.:

REMARKS:

BY: V. REDDY KANCHARLA
MATERIALS ENGINEER

ATTACHMENT X-9

LEAK TEST CERTIFICATE

- [ ] MODEL C-200 DENSITY METER
  Americium 241 - 40 mCi
  Cesium 137 - 8 mCi
- [ ] MODEL C-200 DENSITY METER
  Radium 226 - 4.5 mCi
- [ ] MODEL C-100 DENSITY METER
  Radium 226 - 4.5 mCi
- [X] MODEL C-75 DENSITY METER
  Radium 226 - 4.5 mCi
- [ ] MODEL R-75 MOISTURE METER
  Radium 226 - 4.5 mCi
- [ ] MODEL RM-75 MOISTURE METER
  Americium 241 - 40 mCi
- [ ] MODEL R-50 MOISTURE METER
  Americium 241 - 40 mCi
- [ ] MODEL C-75BP DENSITY METER
  Americium 241 - 40 mCi
  Cesium 137 - 8 mCi

METER S/N 7184

CUSTOMER THE HALLER TESTING LABS., INC.

ADDRESS 336 Leland Avenue
P.O. Box 46
Plainfield, NJ 07061

DATE SAMPLE COLLECTED 5-15-89

PERSON COLLECTING SAMPLE V.R. KANCHARLA

DATE SAMPLE ANALYZED 5-25-89

PERSON ANALYZING SAMPLE J.R. CANHAM

SEAMAN NUCLEAR CORPORATION attests that on the above date, leak test smears have been taken on all external joints of the Nuclear Meter.

Analysis of all Smear Test Samples performed by HEALTH PHYSICS ASSOCIATES, LTD. Instrumentation described under Nuclear Regulatory Commission License Number 12-09160-01 and State of Illinois License Number IL-00-244-01.

Results: Less than 0.0001 microcuries

SEAMAN NUCLEAR CORPORATION

Scott Seaman

Scott Seaman
Radiation Safety Officer

JUN 2 1989

THE SEAMAN NUCLEAR CORPORATION
7315 So First Street
Oak Creek, Wisconsin 53154 U S A • (414) 762-5100

ATTACHMENT X 10

ATTACHMENT Y

State of New Jersey
Department of Environmental Protection and Energy
Division of Environmental Safety, Health and Analytical Programs
CN 415
Trenton, NJ 08625-0415

Scott A. Weiner
Commissioner

Gerald P. Nicholls, Ph.D.
Director

November 16, 1992

Roger Haller
HALLER TESTING LABORATORIES
336 Leland Avenue
P.O. Box 46
Plainfield, New Jersey 07061

Dear Mr. Haller:

Subject: Inspection Report

This letter is in reference to the inspection conducted on November 13, 1992 by William Csaszar of the Department of Environmental Protection and Energy's Bureau of Environmental Radiation of activities authorized by New Jersey State Radioactive Materials License 10130 and to the discussion of the inspection findings with you and Ms. Marilyn Matthews at the conclusion of the inspection.

The inspection was an examination of activities conducted under your license as they relate to radiation safety and compliance with NJSA Title 26:2D the Radiation Protection Act, NJAC 7:28 the Radiation Protection Code and to conditions of your State Radioactive Materials License.

During the discussions of our findings at the conclusion of the inspection, our inspector informed you and Ms. Matthews that the storage container holding the 3 density gauges will be sealed by our Department and declared in storage. Permission to remove the seal or dispose of the devices must be obtained from the Department.

ATTACHMENT Y

No reply to this report is required. If you should have any questions concerning this inspection or any related matter, please contact this office at 609-987-2132.

Sincerely,

John Feeney

John Feeney, License Administrator
Bureau of Environmental Radiation

c: Marilyn Matthews

ATTACHMENT Y2

ATTACHMENT Z

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY
DIVISION OF FACILITY WIDE ENFORCEMENT
CN 027, TRENTON, NJ 08625-0027

Anthony J. McMahon
Director

Let's protect our earth

Donald F. Patterson
Assistant Director

ADMINISTRATIVE ORDER

TO: Haller Testing Labs
336 Leland Avenue, P.O. Box 46
Plainfield, New Jersey 07061
Roger Haller, Owner
Log: #R930017 RM

Contact/Phone: (201) 753-4637
Violation Occurred On
Premises Known As:

336 Leland Avenue, P.O. Box 46, Plainfield City, Union County, N.J., ID #10130

The New Jersey State Department of Environmental Protection and Energy (the "Department") has determined by investigation(s) made pursuant to the provisions of the Radiation Protection Act (the "Act") N.J.S.A. 26:2D-1 et seq. that on December 21, 1992, you violated the New Jersey Administrative Code, Title 7, Chapter 28, Radiation Protection, Subchapter and Section as follows:

8.3(a) - The investigation disclosed that you failed to maintain an accurate accounting for all radioactive materials. Specifically, a Troxler Ra226 Be moisture density gauge was discovered stored at your facility without your knowledge or records indicating when the device was received.

YOU ARE HEREBY ORDERED TO IMMEDIATELY cease violation of said Subchapter(s) and Section(s) on the premises owned, leased, operated or maintained by you.

IN ADDITION, you are required to provide written notification to the Bureau of Environmental Radiation, CN 415, Trenton, New Jersey 08625 on or before February 8, 1993, identifying the steps you have taken to cease the above violations of the New Jersey Administrative Code.

NOTICE IS HEREBY GIVEN that pursuant to N.J.S.A. 26:2D-13, any person who violates the provisions of the Act, or any rule, regulation or order promulgated or issued pursuant thereto shall be liable to a penalty of up to $2,500 for each offense. If the violation is of a continuing nature, each day during which it continues shall constitute an additional, separate and distinct offense.

If there are any questions, contact Mr. John Feeney, Bureau of Environmental Radiation, at (609)987-2132.

DATED: January 8, 1993

Donald F. Patterson

Donald F. Patterson, Assistant Director
Air and Environmental Quality Enforcement

PROGRAM: RADIATION
CERTIFIED MAIL

ATTACHMENT 2

ATTACHMENT AA

MEMO TO FILE: BUREAU OF FIELD OPERATIONS - SITE ASSESSMENT

PRE-SAMPLING ASSESSMENT

FACILITY: HALLER TESTING LABORATORIES, INC. DATA: JUNE 9, 1993

LOCATION: 336 LELAND AVENUE
PLAINFIELD CITY
UNION COUNTY

WEATHER: SUNNY

INSPECTOR: MATT COEFER

INSPECTION:

At 10:00, Andy Cyr and myself entered the Haller Testing Laboratories, Inc. site. The adjacent properties were A & F Cutter Corporation to the southeast and Specialty Companies to the northwest. The site appeared to extend from Leland Avenue to Watson Avenue. There were residences adjacent to both sides of the site in the back portion of the property. Two buildings were located on site. The main building was constructed of brick and masonry and was locked. A small building with two garage doors was located 20 feet south of the main building. A gravel driveway covered 75% of the ground surface except for both outer edges of the site along the wooden fence. No drainage discharges were observed at the site and are assumed to have been filled in. Two 55-gallon drums were located on the rear porch. One drum was full with the label 1,1,1-Trichloroethane and the other was half full with the label hazardous waste. On the north side of the main building was six galvanized steel tubs (8'x 2'x 2'), 2 empty 55-gallon drums and one empty 25-gallon drum along the Specialty Companies building's wall. There were three large piles of cement cylinders approximately 12 feet west of the main building. Running along the west side wooden fence were the following: approximately 275-gallon fuel oil above ground storage tank, one empty plastic 55 gallon drum, two trailers, a boat, numerous empty 55-gallon steel drums and a dock made out of wood beams and approximately 32 empty 55-gallon drums. Running along the east side wooden fence and was approximately 30 empty 55-gallon drums and another dock made out of drums and wood. Adjacent to the southwest wall of the small building were two 55-gallon drums and one propane tank. We conducted HNu and OVA monitoring around the two buildings, drum locations and numerous other areas of the site and identified no significant readings. Adjacent to the southeast garage door of the small building we encountered readings on the Rad meter of 50 micro R/hr (background was ~20 micro R/hr). Upon the door being opened, we identified a 2.5 foot tall wooden box that had the following two labels: "Special Form Type "A", Radioactive Material Sealed Source, U.S.A. DOT 7A" and "Radioactive Material". Within two feet of the box, the RAD meter indicated a reading of a 1,000 micro R/hr. We immediately exited the area. We later identified the item in the box as a Moisture Density Gauge used in asphalt road construction and measuring the moisture of the asphalt for compaction reasons.

ATTACHMENT A

ATTACHMENT BB

Form DEQ-031
5/79

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF RADIATION PROTECTION
380 SCOTCH ROAD, TRENTON, NEW JERSEY 08628

RADIOACTIVE MATERIALS LICENSE

Pursuant to the New Jersey Radiation Protection Code, and in reliance on statements and representations heretofore made by the licensee designated below, a license is hereby issued authorizing such licensee to transfer, receive, possess and use the radioactive material(s) designated below; and to use such radioactive materials for the purpose(s) and at the place(s) designated below. This license is subject to all applicable rules, regulations, and orders of the State Department of Environmental Protection, now or hereafter in effect, and to any conditions specified below.

LICENSEE	3. License Number
Name The Haller Testing Laboratories	NJSL-10130
Address 336 Leland Avenue P.O. Box 46 Plainfield, New Jersey 07061	4. Expiration Date August 1, 1987
	5. Reference Number

6. Radioactive Materials (element and mass number)	7. Chemical and/or Physical Form	8. Maximum Quantity Licensee May Possess at Any One Time
Radium-226 Beryllium	Sealed source by Amersham Corporation Model RAN, W25	One source not to exceed 25 millicuries (maximum five meters)

9. Authorized Use:

A. Radioactive material specified in Items 6, 7 and 8 are to be used in Seaman Nuclear Corp. moisture/density gauge, Model C-75BP, instrument to evaluate moisture and density throughout the State of New Jersey.

10. Licensee shall comply with the provisions of the New Jersey Radiation Protection Code.

11. Radioactive materials shall be used by or under the supervision of Richard Zaloum, P.E.

12. The licensee shall not open sealed sources containing radioactive material specified in Items 7 and 8 of the license.

13. A. Sealed sources containing Radium 226 shall be tested for leakage and/or contamination at intervals not to exceed six months.

ATTACHMENT BB

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF ENVIRONMENTAL QUALITY
BUREAU OF RADIATION PROTECTION
380 Scotch Road, Trenton, New Jersey 08628

License Number 10130

Amendment No. NEW

RADIOACTIVE MATERIALS LICENSE

Supplementary Sheet

B. The test shall be capable of detecting the presence of 0.005 microcuries of radioactive material on the test sample. The test sample shall be taken from the sealed source or from the surface of the device in which the sealed source is permanently mounted or stored on which one might expect contamination to accumulate.

C. If the test reveals the presence of 0.005 microcuries of removable contamiation, the licensee shall immediately withdraw the sealed source from use and shall cause it to be decontaminated and repaired or to be disposed of in accordance with the Department regulations. Within five days after obtaining results of the test, a report shall be filed with the Department describing the circumstances, the test results and the corrective action taken.

D. The sealed source specified in Items 7 and 8 of the license shall be tested for leakage and/or contamination by Seaman Nuclear Corporation and/or by persons specifically licensed to perform this service.

14. Repair, initial leak test and disposal of sealed source containing radioactive material shall be performed only by the manufacturer or by other persons specifically licensed to perform this service.

15. Except as specifically provided otherwise by this license, the licensee may possess and use radioactive material described in Items 6, 7, and 8 of this license only in accordance with statement, representations and procedures contained in application dated June 7, 1984.

July 30, 1984

For the State of New Jersey
Department of Environmental Protection

By [signature]

ATTACHMENT BB2

rm DEQ-031
../79

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF RADIATION PROTECTION
380 SCOTCH ROAD, TRENTON, NEW JERSEY 08628

RADIOACTIVE MATERIALS LICENSE

Pursuant to the New Jersey Radiation Protection Code, and in reliance on statements and representations heretofore made by the licensee designated below, a license is hereby issued authorizing such licensee to transfer, receive, possess and use the radioactive material(s) designated below; and to use such radioactive materials for the purpose(s) and at the place(s) designated below. This license is subject to all applicable rules, regulations, and orders of the State Department of Environmental Protection, now or hereafter in effect, and to any conditions specified below.

LICENSEE	3. License Number
1. Name: THE HALLER TESTING LABORATORIES	NJSL-10130 Amendment #2 Amended in its entirety
2. Address: 336 Leland Avenue, P.O. Box 46 Plainfield, New Jersey 07061	4. Expiration Date August 1, 1987
	5. Reference Number

6. Radioactive Materials (element and mass number)	7. Chemical and/or Physical Form	8. Maximum Quantity Licensee May Possess at Any One Time
A. Radium 226 Beryllium	A. Sealed Source by Amersham Corp., Model RAN W 25	A. One source not to exceed 25 millicuries

9. Authorized Use:

A. Radium 226 — Radioactive material specified in Items 6, 7, and 8 are to be used in Seaman Nuclear Corp. moisture/density gauge, Model C-75 BP, instrument to evaluate moisture.

10. The sealed sources/devices specified in this license shall be used by trained persons and under the supervision of Richard Zaloum, P.E.

11. The licensee shall not open sealed sources containing radioactive material.

12. Sealed sources shall be tested for leakage and/or contamination at intervals not to exceed six months.

A. The test shall be capable of detecting the presence of 0.005 microcuries of removable radioactive material on the test sample. The test sample shall be taken from the sealed source and from the surface of the device in which the sealed source is permanently mounted or stored.

ATTACHMENT BB3

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF ENVIRONMENTAL QUALITY
BUREAU OF RADIATION PROTECTION
380 Scotch Road, Trenton, New Jersey 08628

License Number 10130
Amendment No. 2
Amended in its entirety

RADIOACTIVE MATERIALS LICENSE
Supplementary Sheet

B. If the test reveals the presence of 0.005 microcuries of removable contamination, the licensee shall immediately withdraw the sealed source from use and shall cause it to be decontaminated and repaired or to be disposed of in accordance with the Department regulations. Within five days after obtaining results of the test, a report shall be filed with the Department describing the circumstances, the test results and the corrective action taken.

C. The sealed sources shall be tested for leakage and/or contamination by appropriately trained personnel.

3. Repair, initial leak tests and disposal of sealed sources containing radioactive material shall be performed only by the manufacturer or by other persons specifically licensed by New Jersey or the Federal Government to perform this service.

14. The licensee shall make the following items available to their staff:

A. Copy of the New Jersey Radiation Protection Code.

B. Copy of the New Jersey State Radioactive Material License.

5. The licensee shall post the following items in an area frequented by employees engaged in the use of licensed materials:

A. Notice to Employees - BRP-14.

B. Appropriate signs and labels in areas and/or containers and equipment in which radiation and/or radioactive material are contained. These postings are to conform to Subchapter 10 of the Code.

6. The following records shall be maintained:

A. Survey instrument calibration at intervals not to exceed six months.

B. Sealed source leak tests at intervals not to exceed six months. Results are to be reported in microcuries.

C. Personnel dosimetry records including but not necessarily limited to name, birthdate, social security number, and prior employment exposure history.

17. The Radiation Safety Officer shall be responsible for ensuring that all individuals using the sealed sources/devices in this license are properly trained in the safe use and handling of the sealed sources/devices.

For the State of New Jersey
Department of Environmental Protection

By _____

ATTACHMENT BB4

DEQ-044

STATE OF NEW JERSEY
'ARTMENT OF ENVIRONMENTAL PROTI ION
DIVISION OF ENVIRONMENTAL QUALIT
BUREAU OF RADIATION PROTECTION
380 Scotch Road, Trenton, New Jersey 08628

License Number 10130
Amendment No. 2
Amended in its entirety

RADIOACTIVE MATERIALS LICENSE
Supplementary Sheet

18. The devices/sealed sources specified in this license shall be stored and transported in a manner to ensure against unauthorized handling, possession and removal. These devices/sealed sources shall be stored and transported in a manner optimizing the distance between the device and personnel.

19. Licensee shall comply with the provisions of the New Jersey Radiation Protection Code.

20. Except as specifically provided by this license, the licensee may possess and use radioactive material described in this license only in accordance with statements, representations and procedures contained in application dated June 7, 1984 and signed by Roger W. Haller, President.

For the State of New Jersey
Department of Environmental Protection

ATTACHMENT BB5

DEQ-031

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF RADIATION PROTECTION
CN 411, TRENTON, NEW JERSEY 08625

RADIOACTIVE MATERIALS LICENSE

Pursuant to the New Jersey Radiation Protection Code, and in reliance on statements and representations heretofore made by e licensee designated below, a license is hereby issued authorizing such licensee to transfer, receive, possess and use the radioactive ..aterial(s) designated below; and to use such radioactive materials for the purpose(s) and at the place(s) designated below. This license is subject to all applicable rules, regulations, and orders of the State Department of Environmental Protection, now or here-ter in effect, and to any conditions specified below.

LICENSEE	3. License Number
Name: THE HALLER TESTING LABORATORIES	NJSL-10130 Amendment #3 Amended in its entirety
2. Address: 336 Leland Avenue, P.O. Box 46 Plainfield, New Jersey 07061	4. Expiration Date May 1, 1991
	5. Reference Number

Radioactive Materials (element and mass number)	7. Chemical and/or Physical Form	8. Maximum Quantity Licensee May Possess at Any One Time
A. Radium 226 Beryllium	A. Sealed Source by Amersham Corp., Model RAN W 25	A. One source not to exceed 25 millicuries

Authorized Use:

A. Radium 226 — Radioactive material specified in Items 6, 7, and 8 are to be used in Seaman Nuclear Corp. moisture/density gauge, Model C-75 BP, instrument to evaluate moisture.

). The sealed sources/devices specified in this license shall be used by trained persons and under the supervision of Roger W. Haller, President, V. Reddy Kancharla, Henry Bejgrowicz, Louis Esposito and Syed Hassan.

The licensee shall not open sealed sources containing radioactive material.

2. Sealed sources shall be tested for leakage and/or contamination at intervals not to exceed six months.

A. The test shall be capable of detecting the presence of 0.005 microcuries of removable radioactive material on the test sample. The test sample shall be taken from the sealed source and from the surface of the device in which the sealed source is permanently mounted or stored.

ATTACHMENT BB6

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF ENVIRONMENTAL QUALITY
BUREAU OF RADIATION PROTECTION
CN 411, Trenton, New Jersey 08625

License Number 10130
Amendment No. 3

RADIOACTIVE MATERIALS LICENSE

Supplementary Sheet

B. If the test reveals the presence of 0.005 microcuries of removable contamination, the licensee shall immediately withdraw the sealed source from use and shall cause it to be decontaminated and repaired or to be disposed of in accordance with the Department regulations. Within five days after obtaining results of the test, a report shall be filed with the Department describing the circumstances, the test results and the corrective action taken.

C. The sealed sources shall be tested for leakage and/or contamination by appropriately trained personnel.

3. Repair, initial leak tests and disposal of sealed sources containing radioactive material shall be performed only by the manufacturer or by other persons specifically licensed by New Jersey or the Federal Government to perform this service.

14. The licensee shall make the following items available to their staff:

A. Copy of the New Jersey Radiation Protection Code.

B. Copy of the New Jersey State Radioactive Material License.

5. The licensee shall post the following items in an area frequented by employees engaged in the use of licensed materials:

A. Notice to Employees - BRP-14.

B. Appropriate signs and labels in areas and/or containers and equipment in which radiation and/or radioactive material are contained. These postings are to conform to Subchapter 10 of the Code.

. The following records shall be maintained:

A. Survey instrument calibration at intervals not to exceed six months.

B. Sealed source leak tests at intervals not to exceed six months. Results are to be reported in microcuries.

C. Personnel dosimetry records including but not necessarily limited to name, birthdate, social security number, and prior employment exposure history.

17. The Radiation Safety Officer shall be responsible for ensuring that all individuals using the sealed sources/devices in this license are properly trained in the safe use and handling of the sealed sources/devices.

For the State of New Jersey
Department of Environmental Protection

ATTACHMENT BB

EQ-044

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF ENVIRONMENTAL QUALITY
BUREAU OF RADIATION PROTECTION
CN 411, Trenton, New Jersey 08625

License Number 10130

Amendment No. 3

RADIOACTIVE MATERIALS LICENSE

Supplementary Sheet

5. The devices/sealed sources specified in this license shall be stored and transported in a manner to ensure against unauthorized handling, possession and removal. These devices/sealed sources shall be stored and transported in a manner optimizing the distance between the device and personnel.

Licensee shall comply with the provisions of the New Jersey Radiation Protection Code.

6. Except as specifically provided by this license, the licensee may possess and use radioactive material described in this license only in accordance with statements, representations and procedures contained in application dated April 25, 1989 signed by Roger W. Haller, President.

May 1, 1987

For the State of New Jersey
Department of Environmental Protection

By John Feeney

ATTACHMENT BB

m DEQ-031
79

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF RADIATION PROTECTION
380 SCOTCH ROAD, TRENTON, NEW JERSEY 08628

RADIOACTIVE MATERIALS LICENSE

Pursuant to the New Jersey Radiation Protection Code, and in reliance on statements and representations heretofore made by the licensee designated below, a license is hereby issued authorizing such licensee to transfer, receive, possess and use the radioactive material(s) designated below; and to use such radioactive materials for the purpose(s) and at the place(s) designated below. This license is subject to all applicable rules, regulations, and orders of the State Department of Environmental Protection, now or hereafter in effect, and to any conditions specified below.

LICENSEE	3. License Number
1. Name: THE HALLER TESTING LABORATORIES	NJSL-10130 Amendment #4 Amended in its entirety
Address: 336 Leland Avenue, P.O. Box 46 Plainfield, New Jersey 07061	4. Expiration Date May 1, 1991
	5. Reference Number

6. Radioactive Materials (element and mass number)	7. Chemical and/or Physical Form	8. Maximum Quantity Licensee May Possess at Any One Time
A. Radium 226 Beryllium	A. Sealed Source by Amersham Corp., Model RAN W 25	A. 5 sources not to exceed 25 millicuries

. Authorized Use:

A. Radium 226 — Radioactive material specified in Items 6, 7, and 8 are to be used in Seaman Nuclear Corp. moisture/density gauge, Model C-75 BP, instrument to evaluate moisture.

. The sealed sources/devices specified in this license shall be used by trained persons and under the supervision of Roger W. Haller, President, V. Reddy Kancharla, Henry Bejgrowicz, Louis Esposito and Syed Hassan.

1. The licensee shall not open sealed sources containing radioactive material.

. Sealed sources shall be tested for leakage and/or contamination at intervals not to exceed six months.

A. The test shall be capable of detecting the presence of 0.005 microcuries of removable radioactive material on the test sample. The test sample shall be taken from the sealed source and from the surface of the device in which the sealed source is permanently mounted or stored.

ATTACHMENT BB9

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF ENVIRONMENTAL QUALITY
BUREAU OF RADIATION PROTECTION
CN 411, Trenton, New Jersey 08625

License Number 10130
Amendment No. 4

RADIOACTIVE MATERIALS LICENSE

Supplementary Sheet

B. If the test reveals the presence of 0.005 microcuries of removable contamination, the licensee shall immediately withdraw the sealed source from use and shall cause it to be decontaminated and repaired or to be disposed of in accordance with the Department regulations. Within five days after obtaining results of the test, a report shall be filed with the Department describing the circumstances, the test results and the corrective action taken.

C. The sealed sources shall be tested for leakage and/or contamination by appropriately trained personnel.

13. Repair, initial leak tests and disposal of sealed sources containing radioactive material shall be performed only by the manufacturer or by other persons specifically licensed by New Jersey or the Federal Government to perform this service.

14. The licensee shall make the following items available to their staff:

A. Copy of the New Jersey Radiation Protection Code.

B. Copy of the New Jersey State Radioactive Material License.

15. The licensee shall post the following items in an area frequented by employees engaged in the use of licensed materials:

A. Notice to Employees - BRP-14.

B. Appropriate signs and labels in areas and/or containers and equipment in which radiation and/or radioactive material are contained. These postings are to conform to Subchapter 10 of the Code.

16. The following records shall be maintained:

A. Survey instrument calibration at intervals not to exceed six months.

B. Sealed source leak tests at intervals not to exceed six months. Results are to be reported in microcuries.

C. Personnel dosimetry records including but not necessarily limited to name, birthdate, social security number, and prior employment exposure history.

17. The Radiation Safety Officer shall be responsible for ensuring that all individuals using the sealed sources/devices in this license are properly trained in the safe use and handling of the sealed sources/devices.

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF ENVIRONMENTAL QUALITY
BUREAU OF RADIATION PROTECTION
CN 411, Trenton, New Jersey 08625

License Number 10130

Amendment No. 4

RADIOACTIVE MATERIALS LICENSE

Supplementary Sheet

18. The devices/sealed sources specified in this license shall be stored and transported in a manner to ensure against unauthorized handling, possession and removal. These devices/sealed sources shall be stored and transported in a manner optimizing the distance between the device and personnel.

19. Licensee shall comply with the provisions of the New Jersey Radiation Protection Code.

20. Except as specifically provided by this license, the licensee may possess and use radioactive material described in this license only in accordance with statements, representations and procedures contained in application dated April 25, 1989 signed by Roger W. Haller, President and amendment request letters dated May 17, 1989 and June 19, 1989.

For the State of New Jersey
Department of Environmental Protection

ATTACHMENT BB

State of New Jersey
Department of Environmental Protection and Energy
Bureau of Radiation Protection
Radioactive Materials Section
CN 415
Trenton, New Jersey 08625-0415
Phone (609)-987-2132

License # : 10130/00

Amendment # : 005

Radioactive Materials Licensee Data

Pursuant to the New Jersey Radiation Code, and in reliance on statements and representations heretofore made by licensee designated below, a license is hereby issued authorizing such licensee to transfer, receive or use the radioactive material(s) designated below; and to such radioactive materials for the purpose(s) and at the place(s) designated below. This license is subject to all applicable rules, regulations, and orders of the State Department of Environmental Protection and Energy, now or hereafter in effect, and to any consitions specified below.

1. License # : NJSL-10130/00/005 2. Expires : 05/01/94

3. Name : HALLER TESTING LABORATORIES

RSO : ROGER HALLER
ADM : ROGER HALLER

4. Address : 336 LELAND AVENUE PO BOX 46

City : PLAINFIELD CITY State : NJ Zip : 07061-0000
County : UNION
Phone : (908)-753-4637

5. Reference : 1395.00

Radioactive Materials Data

6. Radioactive Materials	7. Chemical and/or Physical Form	8. Maximum Quantity Licensee May Possess at Any One Time (mCi)
RA-226	Sealed Source	25.0000

9. Authorized Use:

Radioactive material specified in Items 6, 7, and 8 are to be used in Seaman Nuclear Corp. moisture/density gauge, Model C-75 BP, instrument to evaluate moisture.

ATTACHMENT BB1

Radioactive Materials License

10. Radioactive material shall be stored at 336 Leland Avenue, Plainfield, NJ.

11. The licensee shall not open sealed sources containing radioactive material.

12. Sealed sources shall be tested for leakage and/or contamination at intervals not to exceed six months.

    A. The test shall be capable of detecting the presence of 0.005 microcuries of removable radioactive material on the test sample. The test sample shall be taken from the sealed source or form the surface of the device in which the sealed source is permanently mounted or stored.

    B. If the test reveals the presence of 0.005 microcuries of removable contamination, the licensee shall immediately withdraw the sealed source from use and shall cause it to be decontaminated and repaired or to be disposed of in accordance with the Department regulations. Within five days after obtaining results of the test, a report will be filed with the Department describing the circumstances, the test results and the corrective action taken.

    C. The sealed source shall be tested for leakage and/or contamination by appropriately trained personnel.

13. Repair, initial leak tests and disposal of sealed sources containing radioactive material shall be performed only by the manufacturer or by other persons specifically licensed by New Jersey or the Federal Government to perform this service.

14. The licensee shall post the following items in an area frequented by employees engaged in the use of licensed materials:

    A. Notice to Employees -- RPP-14.

    B. Emergency procedures involving major, minor spills including the names and phone numbers of people to contact.

ATTACHMENT BB

C. Appropriate signs and labels in areas and/or containers and equipment in which radiation and/or radioactive material are contained. These postings are to conform to Subchapter 10 of the Code.

15. The following records shall be maintained:

A. Sealed source leak tests at intervals not to exceed six months. Results are to be reported in microcuries.

B. Personnel dosimetry records including but not necessarily limited to name, social security number, and prior employment exposure history.

C. A log shall be maintained documenting the person(s) using the instrument, the dates the instrument was assigned and name and location of job site.

D. Survey instrument calibration at intervals not to exceed six months.

16. The sealed source(s)/device(s) specified in this license shall be used by trained persons and under the supervision of Roger Haller, Henry Bejgrowicz, Louis Esposito and Syed Hassan.

17. The Radiation Safety Officer and/or Radiation Safety Committee shall be responsible for ensuring that all individuals using the sealed source(s)/device(s) in this license are properly trained in the safe use and handling of the sealed source(s)/material(s).

18. The services/sealed sources specified in this license shall be stored and transported in a manner to ensure against unauthorized handling, possession and removal. These devices/sealed sources shall be stored and transported in a manner optimizing the distance between the device and personnel.

19. The instrument's instruction manual is to remain with the device at all times.

ATTACHMENT BB14

State of New Jersey
Department of Environmental Protection and Energy
Bureau of Environmental Radiation
Radioactive Materials Section
CN 415
Trenton, NJ 08625-0415
Phone (609)-987-2132

License # : 10130

Amendment # : 5

Radioactive Materials License

20. Except as specifically provided by this license, the licensee may possess radioactive material described in this license only in accordance with statements, representatives and procedures contained in application dated March 10, 1992 and signed by Roger W. Haller, President.

21. New Jersey Department of Environmental Protection and Energy Signature

For the State of New Jersey
Department of Environmental Protection and Energy

Date April 8, 1992

By John Feeney

ATTACHMENT B15

ATTACHMENT CC

WASTE MANIFESTED - NEW JERSEY GENERATORS - 01/01/90 - 12/31/90

COUNTY: UNION

GENERATOR	WASTE	WASTE NAME	QUANTITY SHIPPED
NJD000632174 - CONTINUED			
GULF OIL CORPORATION			
MARSCHES DOCK RD			
LINDEN , NJ			
NJD000632174			
	D001	CHARACTERISTIC OF IGNITABILITY	270.00
	F001	SPT HAL SOLV&SLUDG DEGREAS OPE	45.00
	X722	WAST OIL/BTM RES/COMM TANK CLN	36,745.40
	X725	OIL SPILL CLEANUP MATERIAL	5,500.00
		TOTAL	42,560.40
H&H SWISS SCREW MACH PROD CO			
1478 CHESTNUT AVENUE			
HILLSDIE , NJ			
NJD002150209			
	D001	CHARACTERISTIC OF IGNITABILITY	5,838.00
	F001	SPT HAL SOLV&SLUDG DEGREAS OPE	6,338.40
	X726	OIL/MT/ WRK,TURBN,DESEL,QUENCH	166.80
	X900	CHEMICAL PROCESS-LIQUID,NOS	50.04
		TOTAL	12,393.24
HALLER TESTING LABORATORIES			
336 LELAND AVE.			
PLAINFIELD , NJ			
NJD986578284			
	F002	SPT HAL SOLV&STLBTM OF DEGREAS	1,773.00
		TOTAL	1,773.00
HAMMER MFG. CO. INC.			
417 COMMERCE RD.			
LINDEN , NJ			
NJD002187078			
	D001	CHARACTERISTIC OF IGNITABILITY	3,526.20
		TOTAL	3,526.20
HAMPTON INN			
NEWARK AIRPORT			
ELIZABETH , NJ			
NJD986574622			
	X725	OIL SPILL CLEANUP MATERIAL	235,872.00
		TOTAL	235,872.00
HANDLER MFG COMPANY INC			
612 NORTH AVE EAST			
WESTFIELD , NJ			
NJD002146694			
	F005	NONHL SOLV & STLBTM	3,044.10
		TOTAL	3,044.10

ATTACHMENT C

ATTACHMENT DD

COMPLIANCE EVALUATION INSPECTION
PUBLIC COMMUNITY WATER SUPPLY

DATE Feb. 8, 9, 10 1993

GENERAL INFORMATION

PURVEYOR/ FACILITY ELIZABETHTOWN WATER COMPANY

FILE LOCATION Plainfield, UNION COUNTY | PW-ID # 2004002

MAILING ADDRESS 1341 NORTH AVENUE, PLAINFIELD, NJ 07061

ADMIN. NORBERT WAGNER, VICE PRES. OPERATIONS | REQUIRED LICENSES T-4 W-4

BUSINESS TELEPHONE # Admin.: 908-654-1234 Licensed Operators: T-4 Ed MULLEN W-4 FRED YOERG

FACILITY DESCRIPTION

SOURCES: descriptions, locations, capacities(mgd): SURFACE WATER FROM RARITAN RIVER, AND FROM THE DELAWARE AND RARITAN CANAL. THE MILLSTONE RIVER IS USED AS A BACKUP. THERE ARE 24 WELLS IN SOMERSET AND HUNTERDON COUNTY Est Tot Eff Cap: APPENDIX A

TREATMENT: source, type, capacities(mgd): ALL WELLS HAVE HYPOCHLORINATION. GREENBROOK WELL ARE TREATED BY AN AIR-STRIPPER DUE TO VOC CONTAMINATION. SURFACE WATER SUPP HAS SCREENING, THE ADDITION OF ALUM FOR COAGULATION, Potassium PERMANGANATE AND POWDERED ACTIVATED CARBON FOR TASTE AND ODOR CONTROL, CAUSTIC SODA SULPHURIC ACID AND LIME FOR PH ADJUSTMENT, Est Tot Eff Cap: COAGULATION, AND SEDIMENTATION. 30 MULTI-MEDIA FILTERS.

FINISHED WATER STORAGE: descriptions, locations, capacities(mg):

SEE ATTACHED APPENDIX B

Est Tot Cap:

EMERGENCY INTERCONNECTIONS: descriptions, available gallonage(mgd):

SEE ATTACHED APPENDIX C

Est Tot Avail:

AUXILIARY POWER: location, type, capabilities:

SEE ATTACHED APPENDIX D

ATTACHMENT DD

NJDEP - DIVISION OF WATER RESOURCES
PUBLIC COMMUNITY WATER SUPPLY INSPECTION

DELIVERY INFORMATION

PLANT DELIVERED WATER (mgd,month,year) Max 138 MGD 7/92 Min 84.7 MGD 10/92 Annual Average 105.3 MGD 1992

BULK PURCHASES (provider,mgd) NEW JERSEY AMERICAN (.240), NEWARK (.107), ELIZABETH (.009)

BULK SALES (customer, mgd) SEE ATTACHMENT "D" (38.68 MGD)

NUMBER OF SERVICES 171,849 % METERED 100

MUNICIPALITIES SERVED (est. services in each) SEE ATTACHMENT "E"

TOTAL ESTIMATED POPULATION SERVICED 515,523

CURRENT/RECENT WATER RESTRICTIONS NONE

NEW CONSTRUCTION (Project Numbers) NEW TREATMENT PLANT (40 MGD), CANAL RD. FRANKLIN; 14 MG tank, PRINCETON

DISTRIBUTION MAINS: Sizing 4" (min) to 60" (max)
Pressures 45 psi (min) to 120 psi (max)
Hydrants/Flushing Program 12021 hydrants/ yes

MONITORING & REPORTING

PARAMETER(S)	FREQUENCY REQUIRED	FREQUENCY PERFORMED
Lead and Copper	100/6 months 1992	100/6 months
Coliform	210/month	approx. 292/month
Inorganics	1/year	1/year 3/92
SECONDARY	1/year	1/year 3/92
Trihalomethanes	4/year	4/year 1992
Organics	1/3 years	1/year 7/92
Turbidity	Daily	Daily
Sodium	1/year point of ent.	1/year
A-280	2/year/treatment sta	2/year 5/92,11/92
Radiological	4/4 years	4/4 years 3/92
Federal Regulated	4/year/pt. of entry	4/year 1992

NAME OF LABORATORY ELIZABETHTOWN WATER CO. (PLANT LAB) CERTIFICATION # 18024

Q.C. INC., 1205 INDUSTRIAL HIGHWAY, SOUTHHAMPTON, PA. 18966 (cert.# 77166)

COMPLIANCE EVALUATION

SOURCE DEFICIENCIES SPRINGFIELD, ROSELLE, AND WESTFIELD WELL FIELDS HAVE BEEN ABANDONED PURSUANT TO N.J.S.A. 58:4A-4.1 AND HAVE NOT BEEN SEALED. CITY OF PLAINFIELD WELL AND WATCHUNG AVE. WELL HAVE BEEN ABANDONED. POLLUTION HAZARDS EXIST AT THESE WELL FIELDS.

ALSO SEE ATTACHMENT "A"

TREATMENT DEFICIENCIES

NONE

ATTACHMENT DD

ELIZABETHTOWN WATER COMPANY - ATTACHMENT A

WELLS LOCATED IN ESSEX AND UNION COUNTIES

JUN 1 8 1991

WELL REFERENCE NUMBER	WELL	TOWN	WELL STATUS
1	Elks Well	Clark	Out of Service
2	Quinton Avenue	Kenilworth	Out of Service
3	Richfield Avenue		Out of Service
4	Bristol Road	Mountainside	Out of Service
5	Central Avenue		Out of Service
6	Charles Street #1		In Service
7	Charles Street #2		In Service
8	Netherwood #1	Plainfield	Out of Service
9	Netherwood #2		In Service
10	Netherwood #3		Out of Service
11	Netherwood #4		In Service
12	Netherwood #5		Out of Service
13	Netherwood #6		In Service
14	Netherwood #7		Out of Service
15	Netherwood #8		In Service
16	Netherwood #9		Out of Service
17	Netherwood #10		In Service
18	Netherwood #11		In Service
19	Netherwood #12		In Service
20	City of Plainfield		Out of Service
21	Fifth Street		In Service
22	George Street		Out of Service
23	Prospect Avenue		Out of Service
24	Watchung Avenue		Out of Service
25	Walburga #1	Roselle	Out of Service
26	Walburga #2		Out of Service
27	Walburga #3		Out of Service
28	Walburga #4		Out of Service
29	Chandler Avenue		Out of Service
30	First Avenue		Out of Service
31	Aberdeen Road	Scotch Plains	Out of Service
32	Glenside Avenue		Out of Service
33	Jerusalem Road #1		Out of Service
34	Jerusalem Road #2		Out of Service
35	Jerusalem Road #3		Out of Service
36	Morse Avenue		Out of Service
37	Elm Street	Westfield	Out of Service
38	Prospect Street		Out of Service
39	Westfield Office #1		Out of Service
40	Westfield Office #2		Out of Service
41	Wittke #1		Out of Service
42	Wittke #2		Out of Service

ATTACHMENT DD-3

ELIZABETHTOWN WATER COMPANY - ATTACHMENT A

WELLS LOCATED IN ESSEX AND UNION COUNTIES

WELL REFERENCE NUMBER	WELL	TOWN	WELL STATUS
43	Springfield #8R	Springfield	Out of Service
44	Springfield #9R		Out of Service
45	Springfield #11		Out of Service
46	Springfield #12		Out of Service
47	Springfield #21		Out of Service
48	Springfield #23		Out of Service
49	Springfield #24		Out of Service
50	Springfield #32		Out of Service
51	Springfield #36		Out of Service
52	Springfield #41		Out of Service
53	Springfield #42		Out of Service
54	Springfield #47		Out of Service
55	Springfield #48		Out of Service
56	Springfield #55		Out of Service
57	Layne #2		Out of Service
58	Layne #6		Out of Service
	Layne #1, #3, #4, #5		Sealed
59	Ranney Collector	Union	In Service
60	Hummocks #1		Out of Service
61	Hummocks #1A		Out of Service
62	Hummocks #2A		Out of Service
63	Hummocks #3		Out of Service
64	Hummocks #3A		Out of Service
65	Hummocks #4A		Out of Service
66	Hummocks #5		Out of Service
67	Hummocks #5A		Out of Service
68	Hummocks #6AR		In Service
69	Hummocks #7		Out of Service
70	Hummocks #8A		Out of Service
71	Hummocks #9A		Out of Service
72	Hummocks #10		Out of Service
73	Hummocks #10A		Out of Service
74	Hummocks #11A		Out of Service
75	Hummocks #12A		Out of Service
76	Hummocks #17		Out of Service
77	Hummocks #19		Out of Service
78	Hummocks #23		Out of Service
79	Hummocks #26		Out of Service
80	Hummocks #28		Out of Service
81	Hummocks #29		Out of Service
82	Hummocks #41		Out of Service
83	Hummocks #H2		Out of Service
84	Hummocks #H5		Out of Service
85	Hummocks #TB2		Out of Service
86	Hummocks #TB2A		Out of Service
87	Springfield #1A	Millburn	Out of Service
88	Springfield #2A		Out of Service
89	Springfield #5A		Out of Service
90	Springfield #6A		Out of Service
91	Springfield #7A		Out of Service
92	Springfield #53		Out of Service
93	Springfield #54		Out of Service

ATTACHMENT DD-4

Form DWR-143
7/81

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
ENFORCEMENT & REGULATORY SERVICES

COMPLIANCE EVALUATION INSPECTION
PUBLIC COMMUNITY WATER SUPPLY

DATE October 20, 1992

GENERAL INFORMATION

PURVEYOR/FACILITY: Middlesex Water Company / Middlesex

FILE LOCATION: Edison Twp. - end of Fairview Ave off Sutton Ln — PW-ID #: 1225001

MAILING ADDRESS: 1500 Ronson Rd. Iselin, N.J. 08830-0452

ADMIN.: J. Richard Tompkins — REQUIRED LICENSES: T-4, W-4

BUSINESS TELEPHONE # Admin.: 908 634-1500 — Licensed Operators: Rich Risoldi T-4, Donald McCabe W-4

FACILITY DESCRIPTION

SOURCES: descriptions, locations, capacities(mgd): D+R Canal 20mgd + 5 for resale
Edison - Tingly Lane Well field North + South 9 wells (5.712), Thermal Well - ?
South Plainfield - Park Ave. Well Field 15 wells (20.6 all S.P. wells), Sprague Ave. Wells 1+
+ Maple Ave. Well, Spring Lake Park 4 wells — Est Tot Eff Cap: 51.312

TREATMENT: source, type, capacities(mgd): C.J.O. Surface Water Treatment Plant - Fairview Ave
flash mixer; pre-treatment alum, caustic, carbon, polymer; floculation + pre
chlorination; 4 settling basins, tube settlers, 8 sand filters; post chl.,
pH adj, zinc orthophosphate; sulfer dioxide as needed — Est Tot Eff Cap: 51.312

FINISHED WATER STORAGE: descriptions, locations, capacities(mg): 4 tanks
Edison - Grandview Ave. Standpipes 2.0 + 5.0 MG
at plant 10.0 MG ground tank end of Fairview Ave.
Carteret - ground tank 5.0 MG end of Pershing Ave. — Est Tot Cap: 22.0 MG

EMERGENCY INTERCONNECTIONS: descriptions, available gallonage(mgd): All back up sources are from
Elizabethtown Water Comp.; 20" Tingly Lane, 20" Sutton Lane, 16" Randolph Ave,
12" Woodbridge Rd, 16" Wood Ave.,
— Est Tot Avail:

AUXILIARY POWER: location, type, capabilities: Two separate power lines at plant.
Aux. diesel generators at plant storage tank + Carteret storage
tank and at raw water intake.

ATTACHMENT DD

NJDEP - DIVISION OF WATER RESOURCES
PUBLIC COMMUNITY WATER SUPPLY INSPECTION

C.J.O. Plant only

DELIVERY INFORMATION 1991

PLANT DELIVERED WATER (mgd,month,year) Max 1.035 July Min 0.78 Jan. Annual Average 2.95

BULK PURCHASES (provider,mgd) Elizabethtown Water Comp. ≈ 2.0 MGD could do more

BULK SALES (customer, mgd) 16.0 MGD Perth Amboy, Highland Pk., E. Brunswick, Edison, Old Bridge, Sayreville, Marlboro

NUMBER OF SERVICES 51,966 % METERED

MUNICIPALITIES SERVED (est. services in each) parts of Edison, Metuchen, South Plainfield, Woodbridge, Carteret

TOTAL ESTIMATED POPULATION SERVICED ≈ 209,000

CURRENT/RECENT WATER RESTRICTIONS None

NEW CONSTRUCTION (Project Numbers) W-04-92-4609 new Park Ave. treatment, storage, booster, aerator
W-06-91-4468 new interconnections + 48" mains

DISTRIBUTION MAINS: Sizing 4" (min) to 48" (max)
Pressures 30 psi (min) to 115 psi (max)
Hydrants/Flushing Program 4,024 / once a year

MONITORING & REPORTING

All monitoring is done at surface water plant and well fields.

PARAMETER(S)	FREQUENCY REQUIRED	FREQUENCY PERFORMED		
A-280	2/yr. at 4 locations	8/yr	1/92	Source
Coliform	120 a month	≈ 150-170 a month		Distribution
Inorganics	2/3 years	2/3 yrs.	6-22-92	Source
Nitrate	2/3 years	2/3 yrs.	6-22-92	Source
Trihalomethanes	Qtly 4/yr.	Qtly	8-16-92	Source
Organics	1/year	1/yr.	6-29-92	Source
Turbidity	Daily / continuous	Daily		Source
Secondary	1/year	1/yr.	6-29-92	Distribution
Radiological	1/4 years	1/4 yrs.	6-30-91	Source
Special Organic's	1/5 yrs.	1/5 yrs.	12-16-88	Source

NAME OF LABORATORY Accutest Labs — CERTIFICATION # 12129
Garden State Labs — 20044
ADDRESS Middlesex Water Comp. Lab. — 12113

COMPLIANCE EVALUATION

SOURCE DEFICIENCIES None

TREATMENT DEFICIENCIES None

ATTACHMENT DD#6

ATTACHMENT EE

BUREAU OF SITE ASSESSMENT

REPORT OF ~~PHONE CALL~~ Visit

DATE 5/5/92

TIME

SITE NAME 65 Mountain Ave.

LOCATION 65 Mountain Ave. Warren Twp

CALLER

PERSON CONTACTED Ronald Cohen PHONE NO.

AFFILIATION Warren Twp. Board of Health

SUMMARY OF ~~CALL~~ Visit

I asked Mr. Cohen about amount of private wells in ~~M~~ Warren Twp. He stated that of the 3775 municipal properties excluding vacant lots and farms 1488 use private wells while 2287 are supplied by E. Town Water.

SIGNATURE

ATTACHMENT EE-1

Middle-Brook

REGIONAL HEALTH COMMISSION

1200 MOUNTAIN AVENUE
MIDDLESEX, NEW JERSEY 08846

908
~~(201)~~ 356-8090

PARTICIPATING MUNICIPALITIES
BOROUGH OF BOUND BROOK
TOWNSHIP OF GREEN BROOK
BOROUGH OF MIDDLESEX
BOROUGH OF SOUTH BOUND BROOK
BOROUGH OF WATCHUNG
TOWNSHIP OF WARREN

August 17, 1992

New Jersey State
Dept of Environmental Protection & Energy
Bureau of Field Operations
300 Horizon Center
CN 407
Trenton, N.J. 08625-0407

Attn: Andrew Cyr

Re: Well water records for
Green Brook & Watchung

Dear Mr. Cyr:

As per your request, enclosed is a list of all those who tested their well water with the Middle Brook Regional Health Commission since at least 1988.

For a more complete list of residents on well water, you may also want to contact Tom Slazar of Elizabethtown Water Company, Community Development. He can be reached at (908)654-1234.

If more information is needed, please feel free to call.

Very truly yours,

Robyn Key

Robyn Key
Sanitarian

RK:ms
Encs.

ATTACHMENT EE-2

Green Brook

address street	last.name	first.name
	FELDKIRCHNER	SCHOOL
	GREEN BROOK	HIGH SCHOOL
6	BEECHWOOD TERR	[redacted] Ex. 6
1	BEECHWOOD TERRACE	
1	BLUE HILL TERRACE	
40	BLUE RIDGE AVE	
14	BRANDYWINE RISE	
16	BRANDYWINE RISE	
18	BRANDYWINE RISE	
20	BRANDYWINE RISE	
42	BRANDYWINE RISE	
8	BROWN PLACE	
9	BROWN PLACE	
10	COLONIAL DRIVE	
46	DEER RUN	
87	DEER RUN	
12	DOUGLAS RD	
109	EDGEWOOD AVE	
110	EDGEWOOD AVE	
294 GR	EEN BROOK RD	

The redacted information consists of names of private individuals. Disclosure of this information would constitute a clearly unwarranted invasion of personal privacy and thus is exempt from mandatory disclosure by virtue of Exemption 6 of the FOIA, 5 U.S.C. § 552(b)(6).

ATTACHMENT EE-3

Green Brook

13	GREEN BRIER RD	Ex. 6 [redacted]	
5	GREEN BRIER RD		
295	GREEN BROOK RD		
324	GREEN BROOK RD		
33	GREEN BROOK RD		
44	GREEN BROOK RD		
74	GREEN BROOK RD		
12	GREENBRIER RD		
170	GREENBROOK RD	GREEN BROOK	BAPTIST CHURC
9	HOUSER LANE	Ex. 6 [redacted]	
17	HYMAN AVE		
131	JEFFERSON AVE		
135	JEFFERSON AVE		
140	JEFFERSON AVE		
143	JEFFERSON AVE		
148	JEFFERSON AVE		
11	LENOX AVE		
11	LINDA LANE		
1	MAXAL ST		
2	MAXAL ST		
212	MOUNTAIN BLVD		
219	MOUNTAIN PARKWAY		

The redacted information consists of names of private individuals. Disclosure of this information would constitute a clearly unwarranted invasion of personal privacy and thus is exempt from mandatory disclosure by virtue of Exemption 6 of the FOIA, 5 U.S.C. § 552(b)(6).

ATTACHMENT EE-4

Ex. 6

Green Brook

214	MOUNTAIN PKWY WEST
214	MTN PKWY WEST
1130	NORTH WASHINGTON AVE
17	REMROSE LEDGE
NO	RENDA PLACE
10	RENDA PLACE
11	RENDA PLACE
12	RENDA PLACE
13	RENDA PLACE
14	RENDA PLACE
15	RENDA PLACE
5	RENDA PLACE
9	RENDA PLACE
(b) 60	ROCK AVE
(b) 423	ROCK AVE EXT
(b) 424	ROCK AVE EXT
(b) 21	ROCK RD EAST
21	ROCK RD EAST
33	ROCK RD EAST
45	ROCK RD EAST
45	ROCK RD EAST
77	ROCK RD EAST

The redacted information consists of names of private individuals. Disclosure of this information would constitute a clearly unwarranted invasion of personal privacy and thus is exempt from mandatory disclosure by virtue of Exemption 6 of the FOIA, 5 U.S.C. § 552(b)(6).

ATTACHMENT EE-5

Green Brook

84	ROCK RD EAST	Ex. 6 [redacted]	
92	ROCK RD EAST		
92	ROCK RD EAST		
45	ROCK RD. EAST		
100	ROCK ROAD EAST		
155	ROCK ROAD WEST		
42	ROCK ROAD WEST		
55	ROCK ROAD WEST		
	ROUTE 22	GREEN BROOK	MOTEL
251	ROUTE 22 EAST	KING DINETTES	
337	RT 22		
	RT 22 EAST	TIKO TACO	
39	RT 22 EAST	TJ MCTURTLES	
51	RT 22 EAST	VITOS PIZZA	
	RT 22 WEST	BURGER KING	
290	RT 22 WEST	S AND S	EQUITIES
12	SWANSON LANE	Ex. 6 [redacted]	
4	TANGLEWOOD LANE		
2	TUTTLE ST		
119	WARRENVILLE RD		
121	WARRENVILLE RD		
132	WARRENVILLE RD		

The redacted information consists of names of private individuals. Disclosure of this information would constitute a clearly unwarranted invasion of personal privacy and thus is exempt from mandatory disclosure by virtue of Exemption 6 of the FOIA, 5 U.S.C. § 552(b)(6).

ATTACHMENT EE-6

Green Brook

368	WARRENVILLE RD
370	WARRENVILLE RD
405	WARRENVILLE RD
410	WARRENVILLE RD
29	WEST END AVE
17	WICHSER LANE
15	GREENBRIER RD
409	WARRENVILLE RD

Total

Ex. 6

[redacted]

The redacted information consists of names of private individuals. Disclosure of this information would constitute a clearly unwarranted invasion of personal privacy and thus is exempt from mandatory disclosure by virtue of Exemption 6 of the FOIA, 5 U.S.C. § 552(b)(6).

ATTACHMENT EE-7

Watchung

address street	last.name	first.name
	BEST LAKE	
	WATCHUNG HIGH	SCHOOL
114	ANDERSON RD	
139	ANDERSON RD	
195	ANDERSON RD	
69	ANDERSON RD	
15	BIRCHWOOD LANE	
15	BIRCHWOOD LANE	
15	BIRCHWOOD LANE	
25	BIRCHWOOD LANE	
25	BIRCHWOOD LANE	
33	BIRCHWOOD LANE	
154	BONNIE BURN RD	SEPTEMBERS ON THE HILL
371	BONNIE BURN RD	
30	BROOK DR	
97	BROOK DR	
47	BROOK DRIVE	
72	BROOK DRIVE	

Ex. 6 [redacted]

Ex. 6 [redacted]

The redacted information consists of names of private individuals. Disclosure of this information would constitute a clearly unwarranted invasion of personal privacy and thus is exempt from mandatory disclosure by virtue of Exemption 6 of the FOIA, 5 U.S.C. § 552(b)(6).

ATTACHMENT EE-8

Weitchung

515	BUMBLE BEE LANE
51	CARDINAL DRIVE
35	DEER RUN
75	DEER RUN
21	DOGWOOD LANE
44	EATON RD
182	ELLISEN RD
40	GENTIAN LANE
104	HILLCREST RD
125	HILLCREST RD
173	HILLCREST RD
287	HILLCREST RD
65	HILLCREST RD
88	HILLCREST RD
75	HUGUE LANE
1149	JOHNSTON DR
475	JOHNSTON DRIVE
45	JOSHUA LANE
89	KNOLLWOOD DR
67	KNOLLWOOD DRIVE
284 VA	LLEY DRIVE

Ex. 6

[redacted]

The redacted information consists of names of private individuals. Disclosure of this information would constitute a clearly unwarranted invasion of personal privacy and thus is exempt from mandatory disclosure by virtue of Exemption 6 of the FOIA, 5 U.S.C. § 552(b)(6).

ATTACHMENT EE-9

Wedtchung

The redacted information consists of names of private individuals. Disclosure of this information would constitute a clearly unwarranted invasion of personal privacy and thus is exempt from mandatory disclosure by virtue of Exemption 6 of the FOIA, 5 U.S.C. § 552(b)(6).

50	MAREU DR	Ex. 6 [redacted]
77	MAREU DRIVE	
216	MOUNTAIN AVE	
401	MOUNTAIN AVE	
109	MOUNTAIN BLVD	
316	MOUNTAIN BLVD	
650	MOUNTAIN BLVD	
	MTN/STIRLING CORNER	
	NEW PROVIDENCE RD	FANWOOD CRUSHED STONE
115	OAKWOOD RD	Ex. 6 [redacted]
126	OAKWOOD RD	
144	OAKWOOD RD	
175	OAKWOOD RD	
40	OAKWOOD RD	
55	OAKWOOD RD	
144	OAKWOOD RD EAST	
141	OAKWOOD RD WEST	
170	OAKWOOD RD.	
221	OLD SOMERSET RD	
45	OLD SOMERSET RD	
87	Old Somerset Rd.	

TACHMENT EE-10

Watchung

36	PARLIN LANE	
571	PHILLIPS LANE	Ex. 6 [redacted]
18	REDMONT RD	
52	REDMONT RD	
78	REDMONT RD	
67	REDMONT ST	
255	RIDGE RD	
98	RIDGE RD	
17	ROCK AVE	
5	ROCK RD EAST	
	RT 22 WEST	VERDIES SERVICE CENTER INC
40	SCOTT DRIVE	Ex. 6 [redacted]
45	SHOWNEE DR	
	SOMERSET ST	ROMA PIZZA
985	SOMERSET ST	Ex. 6 [redacted]
20	STANI GLEN RD	
2	STANIE BRAE DR	
121	STANIE BRAE DRIVE	
228	STIRLING RD	
249	STIRLING RD	
280	STIRLING RD	

The redacted information consists of names of private individuals. Disclosure of this information would constitute a clearly unwarranted invasion of personal privacy and thus is exempt from mandatory disclosure by virtue of Exemption 6 of the FOIA, 5 U.S.C. § 552(b)(6).

ATTACHMENT EE-11

Watchong.

125	SUNBRIGHT RD
130	VAIL LANE
260	VALLEY DRIVE
284	VALLEY DRIVE
110	VALLEY RD
130	VALLEY RD
164	VALLEY RD
333	VALLEY RD
537	VALLEY RD
737	VALLEY RD
808	VALLEY RD
829	VALLEY RD
832	VALLEY RD
880	VALLEY RD
908	VALLEY RD
976	VALLEY RD
43	VALLEY VIEW RD
205	WASHINGTON ROCK RD
54	WASHINGTON ROCK RD
132	WILDWOOD TERRACE
27	WINANS LANE

Ex. 6

[redacted]

The redacted information consists of names of private individuals. Disclosure of this information would constitute a clearly unwarranted invasion of personal privacy and thus is exempt from mandatory disclosure by virtue of Exemption 6 of the FOIA, 5 U.S.C. § 552(b)(6).

ATTACHMENT EE-D

ATTACHMENT FF

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

By Bronius Nemickas

U.S. GEOLOGICAL SURVEY
Water-Resources Investigations 76–73

Prepared in cooperation with
NEW JERSEY DEPARTMENT OF ENVIRONMENTAL
PROTECTION, DIVISION OF WATER RESOURCES

June 1976

FT-1

ATTACHMENT

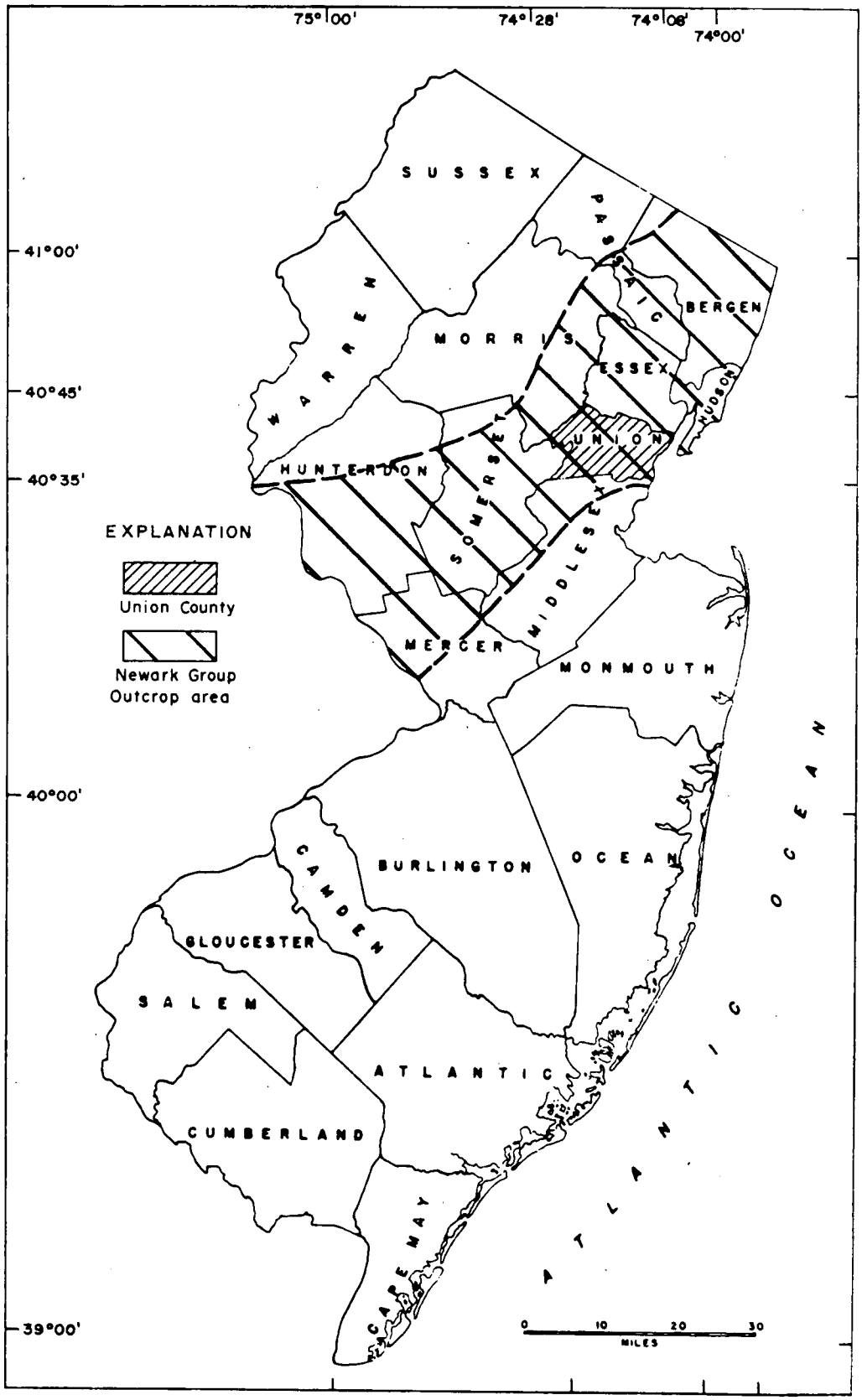


FIGURE 1.--LOCATION OF UNION COUNTY AND OUTCROP AREA OF THE NEWARK GROUP.

ATTACHMENT FF-2

Methods of this Investigation

An inventory was made of public, industrial and domestic wells tapping the Brunswick Formation, Watchung Basalt and Pleistocene deposits. The well records are presented in Table 4 and well locations are shown in figure 2.

Geologic information was obtained from drillers' well logs and representative well logs are given in Table 6. A bedrock map on top of the Brunswick Formation and Watchung Basalt was constructed from well log information and is shown in figure 2. The thickness of the Pleistocene deposits can be determined from figure 2 by subtracting the bedrock elevation from the surface elevation.

Chemical analyses of ground water were made to identify the characteristic chemical and physical properties of the ground water in Union County. The chemical analyses of water samples from 59 wells are presented in Table 5 and their location is shown on figure 2.

Acknowledgments

The author wishes to thank well drillers, State, municipal, and industrial officials, and private individuals who supplied data on which this report is based. Acknowledgment is made for the records and logs of wells that were furnished from the files of the New Jersey Bureau of Geology and Topography and to Elizabethtown Water Company for making the water quality analysis available to the author. The cooperation of many individuals who permitted the use of their wells for water-level observation and collection of water samples is gratefully acknowledged.

GEOGRAPHY

Topography and Drainage

Union County is in the Piedmont Plateau, one of eight major physiographic divisions of the United States. The major topographic features of the Piedmont Plateau in Union County are: (1) the Watchung Mountains, two basaltic ridges with maximum altitudes of about 550 feet, trending parallel to the northwestern boundary of the county; and (2) a gently rolling plain sloping from about 100 to 150 feet at the eastern side of the Watchung Mountains to sea level at Arthur Kill.

The Watchung Mountains extend from Passaic County through Essex and Union Counties and terminate in Somerset County. The ridges are underlain by thick sheets of basaltic lava flows intercalated with the shales and sandstones of the Newark Group. These ridges trend generally northeast-southwest and have steep, rock escarpments on the east and gentle slopes on the west.

ATTACHMENT FF-3

The rolling plain is broken by two topographic features. A broad irregular ridge with maximum altitudes of about 200 feet, an end moraine of the Wisconsin Glaciation, traverses the western edge of the plain area of the county in a roughly north-south direction. This ridge extends from Summit southward to Fanwood to just east of Plainfield (fig. 3). A second end moraine forms a broad low ridge trending roughly east-west in the area of Hillside and Union Townships and in Kenilworth Borough.

Union County lies within five major drainage basins (fig. 4). The western part of the county is drained by the Passaic River and by Green Brook which is within the Raritan River basin. The central part of the county is largely within the Rahway River basin. The eastern part of the county is within the Elizabeth River basin and the Arthur Kill basin.

Climate

The climate of Union County is largely continental with winds coming predominantly from the interior of North America. The summers are controlled by tropical air masses and the winter by polar continental air masses. From October to April the prevailing winds are from the northwest and from May to September the prevailing winds are from the southwest.

Union County has humid, warm summers, and moderately cold winters. Climatological data has been collected at Elizabeth by the U.S. Weather Bureau since 1894. Average annual precipitation is about 48 inches and the annual average temperature is 53°F. The average growing season or frost-free period is 187 days, from April 19 to October 23.

Population and Economy

The population of Union County as of the 1960 census is 504,255. The county is ranked fourth largest in population and second smallest in land area in the state. The population density as of the 1960 census was 4,910 per square mile. It is exceeded in population density only by Hudson and Essex Counties.

There are 21 municipalities in the county of which 8 are townships, 7 are boroughs, 5 are cities, and 1 is a town.

The economy of Union County is primarily industrial. The principal industrial products and the number of establishments are listed below:

ATTACHMENT FF4

Industrial Products	Number of Establishments
Chemicals and allied products	104
Fabricated metal products	226
Machinery, except electrical	275
Food and kindred products	71
Miscellaneous manufacturing	77
Printing and publishing	113
Furniture and fixtures	34
Instruments and related products	25
Textile mill products	14
Stone, clay, and glass products	26
Rubber and plastics products	63
Total	1,424

(New Jersey Department of Environmental Protection, 1967)

GEOLOGY

Newark Group

During the Late Triassic Epoch downfaulting produced a series of northeast-southwest trending basins in the Piedmont Plateau from Nova Scotia to North Carolina. Sedimentary and associated igneous rocks of Triassic age occupy the downfaulted basins and are known as the Newark Group. In New Jersey the Newark Group crops out in a band 16 to 30 miles wide trending northeast-southwest from the Delaware River to the Hudson River (fig. 1). Union County lies entirely within this band.

The Newark Group in New Jersey contains 15,000 to 20,000 feet of non-marine shales, mudstones, sandstones, conglomerates, and basic igneous rocks that unconformably overlie rocks of Paleozoic and Precambrian age. The sedimentary rocks of the Newark Group were largely derived from Paleozoic and Precambrian rocks to the southeast and deposited in a non-marine intermontane basin (Van Houten, 1965). During Triassic time the sedimentary rocks were intruded by a diabase sill, dikes, and covered by several flows of basalt.

The Newark Group underlying Union County consists of the Brunswick Formation and Watchung Basalt. The generalized geologic map (fig. 4) shows the areal distribution of the Triassic rocks underlying Union County. Figure 5 is a generalized section showing the geology and structure of Union County.

ATTACHMENT FF-5

The Brunswick Formation consists of thin-bedded shales, mudstones, and sandstones which range in color from reddish-brown to gray. The reddish-brown color originates from reworked hematite which comprises 5 to 10 percent of the formation (Boch, 1959). The minerals of the Brunswick Formation include quartz, illite, muscovite, feldspar, and small amounts of calcite and gypsum. Primary structures such as ripple marks and mud cracks indicate that the Brunswick Formation was deposited in a shallow-water environment.

The regional strike of the Brunswick Formation in Union County is N50°E with dips 9° to 13°NW. The major joint sets strike approximately N45°E and N75°W and both sets have a vertical dip. The thickness of the formation is 6,000 to 8,000 feet.

The Watchung Basalt consists of three extensive basaltic lava sheets that are intercalated with the sedimentary rocks of the Brunswick Formation. The basalt flows are more resistant to erosion than the shales, mudstones, and sandstones and form prominent ridges. Two of the three lava sheets occur in Union County and form the First and Second Watchung Mountains. The third sheet forms a discontinuous ridge known as Long Hill and Hook Mountain in Morris County to the west of Union County.

The basalt flows are volcanic extrusive rocks which were formed by the outflow of lava onto the land surface. Rapid cooling of the flows produced a dense, aphanitic rock. Phenocrysts are present in the ground mass which give the basalt a porphyritic texture. The phenocrysts are usually augite and in some cases feldspar. The ground mass for the most part consists of augite and feldspar.

The basalt sheets vary in thickness from less than 300 feet in parts of the Long Hill flow to a maximum of about 1,200 feet in parts of the Second Watchung Mountain. The Second Watchung Mountain is a double flow sheet separated by a thin section of the Brunswick Formation. The thickest flow sheet is the upper flow of the Second Watchung Mountain which has a maximum thickness of about 800 feet.

Quaternary Deposits

Unconsolidated sediments deposited by glaciers or by glacial meltwater during the Pleistocene Epoch mantle the bedrock surface in Union County. These deposits consist of clay, silt, sand, gravel, and boulders. They are glacial, glaciolacustrine (deposited by glacial meltwater in lakes), or glacial fluvial (deposited by glacial meltwater in streams) in origin.

The Pleistocene sediments fall into three general classes: (1) end moraine--a moraine jointed across the course of a glacier at its farthest advance; (2) ground moraine--the material carried forward in and beneath the ice and finally deposited from its under surface; and (3) stratified

ATTACHMENT FF-6

drift--deposits from glacial meltwater exhibiting both sorting and stratification. The stratified drift includes lacustrine (deposited in lakes) and fluviatile (deposited in streams) sands and clays.

Figure 3 is a surficial geologic map of Union County showing the extent of the end moraine, ground moraine, and stratified drift. West of the end moraine near Scotch Plains and Plainfield, stratified drift forms an outwash plain (fig. 3).

Before the last glaciation the rivers draining Union County cut deep valleys into the Brunswick Formation (fig. 2). Subsequently the valleys were filled and buried by glacial material. The thickness of the glacial deposits is controlled largely by the underlying bedrock topography. Figure 6 consists of three sections showing the altitudes of the bedrock valley floor and thickness of Pleistocene deposits in the bedrock valleys. These buried channels underlie parts of Hillside, Union, Springfield, Clark, and Scotch Plains Townships, and the Boroughs of Mountainside, New Providence and Kenilworth and the Cities of Summit and Rahway.

The Pleistocene sediments in the bedrock channels consist of unstratified and stratified clay, silt, sand, and gravel. Only the sand and gravel deposits of the stratified drift will yield large quantities of water to wells.

Deposits of Holocene (Recent) age cover only small areas and include river alluvium, and eolian deposits.

The stratigraphic units in Union County and their geologic and hydrologic characteristics are given in Table 1. Table 6 contains representative well logs indicating the variations in the lithologies of the geologic units.

GROUND WATER HYDROLOGY

Introduction

Water is continually being exchanged in a circulatory pattern between the earth and the atmosphere. In general, the amount of precipitation ultimately determines the amount of water available for man's use. Some of the precipitation that falls on land evaporates where it falls, some is absorbed by plants that later transpire the water back to the atmosphere, some flows overland to streams, and some infiltrates into the ground to become ground water. The ground water is discharged to streams, and streams flow to the oceans where the water can be evaporated back to the atmosphere.

ATTACHMENT FF-7

Table 1.--Geology and hydrology of the rock units in Union County, New Jersey

Era	Period	Series	Formation or lithologic unit		Thickness (feet)	Lithology	Hydrologic characteristics
Cenozoic	Quaternary	Holocene	alluvium		0-25	Sand, silt, and mud in and along river channels.	Relatively impermeable deposits; retard intrusion of saline water through river beds.
			eolian deposits		0-10	Sand	Above water table; high rate of infiltration.
		Pleistocene	un-stratified drift (till)		0-200	Unstratified clay, sand and gravel; reddish brown in color. Forms the ground and end moraine deposits. Deposited by glaciers.	Because of low permeability, it is not an important aquifer in the County.
			stratified drift		0-60	Sand and gravel lenses which are stratified. Occurs as lenses in the till in the bedrock channels and inter-bedded with till in the end moraines. Deposited by water.	Important as an aquifer in the City of Rahway and in Union, Hillside and Springfield Townships and in Kenilworth Borough. At the City of Rahway and Hillside Township wells induce recharge from rivers.
						Unconformity	
Mesozoic	Triassic	Upper Triassic	Newark Group	Brunswick Formation	6,000-8,000	Interbedded, soft red shales, mudstones, and sandstones. Adjacent to the Watchung Basalt it is altered to a hornfels.	Most extensive and most important aquifer in Union County. Water stored in and transmitted along fracture and joint systems which decrease in number and volume with depth. Both artesian and water-table conditions exist.
				Watchung Basalt	300-800	Basaltic lava sheets inter-calated with the sedimentary rocks of the Newark Group. Two of the sheets crop out in Union County. The basalt is a dense, aphanitic, extrusive rock. Augite and feldspars are the chief minerals.	Minor aquifer in the county. Well yields are low to moderate.

ATTACHMENT FF8

The specific capacity of a well, the rate of yield per unit drawdown for some time interval, generally gallons per minute per foot of drawdown, can be a good measure of the transmissibility of the rocks. High specific capacities generally suggest a high coefficient of transmissibility, and low specific capacities generally suggest a low coefficient of transmissibility. However, specific capacity also is affected by the coefficient of storage, the thickness and boundary conditions of the aquifer penetrated by the well, and development and construction of the well.

For a more complete discussion of general ground-water hydraulics, the reader is referred to Theis (1935, p. 519-524), Ferris (1949, p. 226-272), Todd (1959, p. 77-114), DeWiest (1965, p. 161-183), and Davis and DeWiest (1966, p. 156-374).

Water-bearing Properties of Major Rock Units

Newark Group

Brunswick Formation

The Brunswick Formation of Late Triassic age is the major aquifer in Union County and underlies most of the county. Water in this formation occurs in joints and fractures. These joints and fractures become progressively tighter and fewer with increasing depth below land surface. Only moderate quantities of water can be stored or transmitted in these fractures.

Ground water occurs under both unconfined and confined conditions in the Brunswick Formation. Unconfined ground water occurs mainly in the upland areas where overlying unconsolidated sediments are thin or absent. In the lowland areas in the southern and eastern part of Union County the rocks are mantled by unconsolidated Pleistocene deposits that, in most places, contain silt and clay beds. In the lowland areas the silt and clay beds may confine water in the underlying rocks. Wherever such confinement occurs, water beneath the impermeable layers is under artesian pressure. In a few areas the artesian head is above land surface resulting in flowing wells. Locally, artesian conditions result from differences in permeability within the rock layers caused by varying degrees of fracturing, or weathering, or a combination of both.

Several pumping tests have been conducted on wells tapping the Brunswick Formation in Union County. The coefficient of transmissibility determined from five of these tests ranged from 5,900 to 25,400 gpd per ft; most of the values lie between 15,000 and 25,000 gpd per ft. The average coefficient of storage computed from these tests is about 0.00005.

Results of pumping tests indicate that the Brunswick Formation is anistropic; that is, its ability to transmit water is not equal in all directions. The greatest drawdowns caused by pumping are observed in wells aligned along the strike of the beds with respect to the pumping well. The smallest drawdowns are observed in wells aligned transverse to the strike (Vecchioli, 1967). These pumping test observations have been interpreted to indicate that joints and factures which strike parallel to the strike of the bedding are better developed and interconnected than joints and fractures which strike in other directions. Therefore, minimum interference between pumping wells in well fields tapping the Brunswick Formation can be achieved by aligning the wells across the strike of the beds rather than parallel to the strike.

The average reported yield of 230 public-supply, industrial, and commercial wells (table 4) tapping the Brunswick Formation is 200 gpm; yields range from 12 to 870 gpm. A better indication of the potential yield of properly located and developed wells tapping the Brunswick Formation can be obtained from analysis of yields of large diameter (10 inch or greater) wells. The large diameter wells, generally the deeper wells, represent attempts to develop the maximum supply of water. The average yield of 109 large diameter wells (table 4) is 310 gpm; yields range from 23 to 870 gpm.

The distribution of well yields is as follows:

Yield (gpm)	230 Wells	109 Large Diameter Wells
0 - 50	18	2
51 - 100	42	9
101 - 150	36	8
151 - 200	32	14
201 - 250	25	10
251 - 300	20	13
301 - 350	16	15
351 - 400	10	7
401 - 450	6	6
451 - 500	9	9
501 - 550	10	10
551 - 600	2	2
600	4	4

FF16

ATTACHMENT 3

Figure 9 shows the cumulative frequency distribution of reported yields of wells in the Brunswick Formation. It can be seen on the graph that 50 percent of the 230 wells have yields equal to or less than 180 gpm; 50 percent of the large diameter wells have yields equal to or less than 300 gpm. Many of the higher yielding wells occur where the Brunswick Formation is overlain by relatively thick, saturated glacial deposits that readily pass water downward into the fractures in the Brunswick Formation.

The specific capacities of 205 wells (6 to 12 inches in diameter) in the Brunswick Formation range from 0.04 to 25 and average 3.5 gpm per foot of drawdown; 14 of the wells have specific capacities greater than 10 gpm per foot of drawdown. The depths of the wells range from 100 to 1,108 feet and average 387 feet.

Figure 10 is a cumulative frequency distribution graph of specific capacities of wells tapping the Brunswick Formation in Union County. In figure 10, specific capacities are related to the well diameter. The larger diameter wells have the higher specific capacities. Median specific capacities are 1.7 for 6 and 8-inch diameter wells, 2.0 for 10 inch diameter wells and 3.1 for 12 inch and larger diameter wells. The higher specific capacities in the larger diameter wells can be attributed to better well development, well site selection and decreased well entrance losses.

In table 2, specific capacities are listed in percentile on the basis of depth of well drilled below land surface. In order to minimize the effect of well diameter on specific capacity, separate listings for larger and smaller diameter wells are given. Wells between 200 and 600 feet deep, in general have higher specific capacities than wells of shallower or greater depths. This relationship suggests that the best water-producing zones in the Brunswick Formation are encountered between depths of 200 and 600 feet. Below 600 feet the fractures and joints are less enlarged and generally drilling to greater depths will not produce significantly greater well yields.

Wells tapping the Brunswick Formation generally draw water from several water-bearing zones. In areas where the rocks are exposed or covered by a thin layer of unconsolidated sediments the shallow water-bearing zones contain unconfined water to a depth of about 200 or 300 feet. If wells penetrate to depths between 200 and 600 feet one or more confined zones of greater permeability are intercepted. The wells that are drilled between 200 to 600 feet in general have the greatest yields.

Watchung Basalt

The Watchung Basalt is a minor aquifer and underlies the western edge of Union County. In this formation vesicles add primary porosity to the secondary porosity developed from the joints and fractures. However, all these openings constitute only a small part of the total volume of the basalt and their capacity to store and transmit water is poor.

FF-11
~~FE-4~~
ATTACHMENT EE4

ATTACHMENT GG

WHITMAN Companies, INC.

4. The unidentified "dirt" pile is composed of dirt and gravel moved during the construction of the concrete loading pad. Four (4) footings were constructed at that time to enable a roof to be placed over the pad at some future date. The dirt and gravel were left in a pile near the building.

5. The pipe from the roof to the driveway discharges storm water from the roof. Other roof drains discharge underground directly into the storm sewer system under Leland Avenue.

6. The white PVC pipe runs from the center of the ceiling into a roof drain. This pipe discharges storm water from a low spot on the roof.

7. All asbestos has been removed from the facility by C. C. Bruns Corp., Newark, New Jersey, a licensed asbestos contractor. C. C. Bruns was hired by the landlord to remove all asbestos from the building. The removal project began on June 7, 1991 making it impossible for us to construct a map showing any asbestos insulation. Final documentation from the contractor will be forwarded to NJDEP upon receipt from the landlord.

8. The white, milky liquid discharge noted was from the adjacent property, Haller Testing Company. Haller tests concrete cylinders for strength characteristics. The discharge is concrete and rinse water from washing the molds used to make the cylinders and is directed outside of their building by a pipe through their wall. Duragraphic Systems has no responsibility for this discharge.

9. Material from the sump, as well as from the bottom of the pit containing the wastewater pretreatment tanks was drummed for disposal. As noted in Item 3, this material was determined to be non-hazardous.

10. Pretreatment tanks have been removed and disposed of. The pit was inspected and found to have a solid, intact concrete bottom.

GG-1

ATTACHMENT

CORPORATE STATUS REPORT

DATE: 020293

CORP. NAME: THE HALLER ENGINEERING ASSOCIATES, INC

CORP TYPE: FR STATUS: ACTIVE STATUS DATE: 000000

INCORPORATION DATE: 0506940 STATE: MA FOLDER NO: OC 014795

CORPORATION NO.: 4303001000 LAST ANNUAL REPORT: 83

REGISTERED AGENT: ROGER W. HALLER

REGISTERED OFFICE: 336 LELAND AVE

PLAINFIELD , NJ 07060

GG-2

CORPORATE STATUS REPORT

DATE: 020293

CORP. NAME: THE HALLER TESTING LABORATORIES

CORP TYPE: DP STATUS: VOID STATUS DATE: 090188

INCORPORATION DATE: 0525927 STATE: NJ FOLDER NO: X 037711

CORPORATION NO.: 4303201000 LAST ANNUAL REPORT: 87

REGISTERED AGENT: ARTHUR H. MILLER

REGISTERED OFFICE: 96 PATERSON ST.

NEW BRUNSWICK , NJ 08901

GG-3

ATTACHMENT F3

ATTACHMENT HH

SAMPLE TRIP REPORT

SITE NAME: Haller Testing Laboratories

AKA: Haller Testing Company Inc.

ADDRESS: 336 Leland Avenue
Plainfield City, Union County

EPA ID NUMBER: NJD 986578284

DATE: 09/08/93

WEATHER CONDITIONS: overcast + rain temp ≅ 80°

NJDEP PERSONNEL:	TITLE:
Andrew Cyr	HSMS III
Rodney Murray	HSMS III
Dave Triggs	HSMS II
Michael Digiore	HSMS III
Neil Nissim	HSMS IV
Matt Coefer	HSMS IV
Nate Byel	HSMS II

SITE REPRESENTATIVES PRESENT: None

ATTACHMENT HH-1

SAMPLE ID	BSA NUMBER	COLLECTION TIME START	COLLECTION TIME FINISH	SAMPLERS	DESCRIPTION/DEPTH/LOCATION
S-1	SA09083970	1045	1055	M Coefer N. Nissim	Brown gravelly silt ~~[illegible]~~ Depth 2-3 Feet Foot of Cement Pad 6 Feet N of SW Corner of Bld.
S-2	SA09083971	1200	1210	N. Nissim M. Coefer	Brown gravelly silt bits of cement. 1.0 - 1.5 Feet 3.5 Feet of concrete Pad
S-3	SA09083972	1025	1034	N. Nissim M. Coefer	Brown silt with gravel + grey + white specs. prior 3 holes refusal at ≈ 1 foot. approx 30 Ft off building
S-4	SA09083973	1037	10:45	M. Disiore N. Byrd	Brown silt with gravel. bit of concrete encountered a sheet of metal. Depth 1 - 1.5 Feet no readings
S-5	SA09083974	1023	10:30	R. Murray D. Triggs	Brown silt with gravel bits of glass 1 Ft off building ≈ 10 Feet from S-4 Depth 3 Feet
S-6	SA09083975	11:40	11:50	R. Murray D. Triggs	~~Brown~~ Dark Brown gravelly silt. Terracotta tile encountered at ≈ 1.0 foot Bricks also, refusal prior 3 sample points. (North Alleyway)
S-7	SA09083976	1200	12:15	R. Murray D. Triggs	Dark Brown silt gravelly terracotta tile + bricks Depth 1.5 - 2 Feet (North alleyway)
S-8	SA09083977	1122	11:35	M. Disiore N. Byrd	Dark brown silt + gravel some clay + organic material Depth 1.5 - 2 Feet 1.0 Foot off NW corner of small cat Bld.
S-9	SA09083978	1205	12:15	M. Disiore N. Byrd	Dark Brown gravely silt. Radiometer read 4-6 uR/Hr above background Depth 2-3 Feet Back found 4-16 south of Bld 18-22
S-10	SA09083979	1:10	1:20	M. Disiore N Byrd	Dark Brown gravelly silt. encountered a hard concrete layer ≈ 1.5 Ft Depth 1.5-2 2 Ft. off fence line
S-11	SA09083980	1:15	1:25	M Coefer N. Nissim	Dark Brown gravelly silt encountered a hard concrete like layer ≈ 1.5 Ft Depth 1.5-2 Feet sample collected near drums.
S-12	SA09083981	1:05	1:20	D Triggs R. Murray	Dark Brown silt some organic matter sample collect 1 Ft from base of Fuel oil AGST on northwest side. depth 18"
S-13	SA09083982	1:05	1:20	D. Triggs R. Murray	Duplicate of S-12
S-14	09083983	12:15	12:25	N. Nissim M. Coefer	Brown gravely silt bits of concrete, prior two borings refusal at ≈ 1.5 Feet. Depth 12-18"
FB-Trowel	SA09083984	9:40	9:42	N. Byrd M. Disiore	Lab DI water over Trowel
FB-SS.	SA09083985	9:44	9:46	N. Byrd M. Disiore	Lab DI water over Split Spoon.

ATTACHMENT HH-2

LABORATORY: Industrial Corrosion Management

ADDRESS: 1152 RT10

Randolph, NJ 07869

CONTACT: Kim Norton (201) 584-0330

FEDERAL EXPRESS AIRBILL NUMBER: _____

NUMBER OF SAMPLES PROPOSED: 16

NUMBER OF SAMPLES SHIPPED - AQUEOUS _____

NON-AQUEOUS 14

FIELD BLANK(S) 2

TRIP BLANK _____

TOTAL 16

LABORATORY: _____

ADDRESS: _____

_____

CONTACT: _____

FEDERAL EXPRESS AIRBILL NUMBER: _____

NUMBER OF SAMPLES PROPOSED: _____

NUMBER OF SAMPLES SHIPPED - AQUEOUS _____

NON-AQUEOUS _____

FIELD BLANK(S) _____

TRIP BLANK _____

TOTAL _____

COMMENTS:
Recommendations will be based upon the analysis of samples collected. All samples were collected with methodologies outlined in the NJDEP/Hazardous Waste Programs Field Sampling Procedures Manual, February 1988.

ATTACHMENT HH-3

ATTACHMENT II

INDUSTRIAL CORROSION MANAGEMENT INC.
1152 Route 10
Randolph, NJ 07869
Phone # (201) 584-0330

TASK IV
NJDEPE-CLP FORMAT
INORGANIC/ORGANIC SAMPLE DATA SUMMARY PACKAGE

HALLER TESTING
SDG NO. 3970

CONTRACT X-26174/A60084
PROFESSIONAL LABORATORY ANALYTICAL
SERVICES FOR NJDEPE

ATTACHMENT II-1

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3970 -S-1

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5.000 (g/mL) G Lab File ID: C5111

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: not dec. 29. Date Analyzed: 09/13/93

GC Column: SP1000 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	14.	U
74-83-9	Bromomethane	14.	U
75-01-4	Vinyl Chloride	14.	U
75-00-3	Chloroethane	14.	U
75-09-2	Methylene Chloride	14.	U
67-64-1	Acetone	14.	U
75-15-0	Carbon Disulfide	14.	U
75-35-4	1,1-Dichloroethene	14.	U
75-34-3	1,1-Dichloroethane	14.	U
540-59-0	1,2-Dichloroethene (total)	14.	U
67-66-3	Chloroform	14.	U
107-06-2	1,2-Dichloroethane	14.	U
78-93-3	2-Butanone	14.	U
71-55-6	1,1,1-Trichloroethane	0.006.	J
56-23-5	Carbon Tetrachloride	14.	U
75-27-4	Bromodichloromethane	14.	U
78-87-5	1,2-Dichloropropane	14.	U
10061-01-5	cis-1,3-Dichloropropene	14.	U
79-01-6	Trichloroethene	14.	U
124-48-1	Dibromochloromethane	14.	U
79-00-5	1,1,2-Trichloroethane	14.	U
71-43-2	Benzene	14.	U
10061-02-6	trans-1,3-Dichloropropene	14.	U
75-25-2	Bromoform	14.	U
108-10-1	4-Methyl-2-Pentanone	14.	U
591-78-6	2-Hexanone	14.	U
127-18-4	Tetrachloroethene	14.	U
79-34-5	1,1,2,2-Tetrachloroethane	14.	U
108-88-3	Toluene	14.	U
108-90-7	Chlorobenzene	14.	U
100-41-4	Ethylbenzene	14.	U
100-42-5	Styrene	14.	U
1330-20-7	Xylene (total)	14.	U

ATTACHMENT II-2

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

3970

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5.000 (g/mL) G Lab File ID: C5111

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: not dec. 29. Date Analyzed: 09/13/93

GC Column: SP1000 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
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ATTACHMENT III

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3970 - S-1

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.1 (g/mL) G Lab File ID: I8358

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: 29. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/04/93

Injection Volume: 2.0 (uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 8.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	2400.	U
111-44-4	bis(2-Chloroethyl)ether	2400.	U
95-57-8	2-Chlorophenol	2400.	U
541-73-1	1,3-Dichlorobenzene	2400.	U
106-46-7	1,4-Dichlorobenzene	2400.	U
95-50-1	1,2-Dichlorobenzene	2400.	U
95-48-7	2-Methylphenol	2400.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	2400.	U
106-44-5	4-Methylphenol	2400.	U
621-64-7	N-Nitroso-di-n-propylamine	2400.	U
67-72-1	Hexachloroethane	2400.	U
98-95-3	Nitrobenzene	2400.	U
78-59-1	Isophorone	2400.	U
88-75-5	2-Nitrophenol	2400.	U
105-67-9	2,4-Dimethylphenol	2400.	U
111-91-1	bis(2-Chloroethoxy)methane	2400.	U
120-83-2	2,4-Dichlorophenol	2400.	U
120-82-1	1,2,4-Trichlorobenzene	2400.	U
91-20-3	Naphthalene	2400.	U
106-47-8	4-Chloroaniline	2400.	U
87-68-3	Hexachlorobutadiene	2400.	U
59-50-7	4-Chloro-3-methylphenol	2400.	U
91-57-6	2-Methylnaphthalene	2400.	U
77-47-4	Hexachlorocyclopentadiene	2400.	U
88-06-2	2,4,6-Trichlorophenol	2400.	U
95-95-4	2,4,5-Trichlorophenol	5900.	U
91-58-7	2-Chloronaphthalene	2400.	U
88-74-4	2-Nitroaniline	5900.	U
131-11-3	Dimethylphthalate	2400.	U
208-96-8	Acenaphthylene	2400.	U
606-20-2	2,6-Dinitrotoluene	2400.	U
99-09-2	3-Nitroaniline	5900.	U
83-32-9	Acenaphthene	2400.	U

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

3970 S-1

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.1 (g/mL) G Lab File ID: I8358

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: 29. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/04/93

Injection Volume: 2.0 (uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 8.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	5900.	U
100-02-7	4-Nitrophenol	5900.	U
132-64-9	Dibenzofuran	2400.	U
121-14-2	2,4-Dinitrotoluene	2400.	U
84-66-2	Diethylphthalate	2400.	U
7005-72-3	4-Chlorophenyl-phenylether	2400.	U
86-73-7	Fluorene	2400.	U
100-01-6	4-Nitroaniline	5900.	U
534-52-1	4,6-Dinitro-2-methylphenol	5900.	U
86-30-6	N-Nitrosodiphenylamine (1)	2400.	U
101-55-3	4-Bromophenyl-phenylether	2400.	U
118-74-1	Hexachlorobenzene	2400.	U
87-86-5	Pentachlorophenol	5900.	U
85-01-8	Phenanthrene	370.	J
120-12-7	Anthracene	2400.	U
86-74-8	Carbazole	2400.	U
84-74-2	Di-n-butylphthalate	2400.	U
206-44-0	Fluoranthene	510.	J
129-00-0	Pyrene	790.	J
85-68-7	Butylbenzylphthalate	2400.	U
91-94-1	3,3'-Dichlorobenzidine	2400.	U
56-55-3	Benzo(a)anthracene	380.	J
218-01-9	Chrysene	610.	J
117-81-7	bis(2-Ethylhexyl)phthalate	2400.	U
117-84-0	Di-n-octylphthalate	2400.	U
205-99-2	Benzo(b)fluoranthene	640.	J
207-08-9	Benzo(k)fluoranthene	180.	J
50-32-8	Benzo(a)pyrene	590.	J
193-39-5	Indeno(1,2,3-cd)pyrene	500.	J
53-70-3	Dibenz(a,h)anthracene	330.	J
191-24-2	Benzo(g,h,i)perylene	790.	J

(1) - Cannot be separated from diphenylamine

ATTACHMENT II-5

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

3970 S-1

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.1 (g/mL) G Lab File ID: I8358

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: 29. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/04/93

Injection Volume: 2.0 (uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 8.2

Number TICs found: 7

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	- -	UNKNOWN ACP	1.00	2000.	BJ A
2.	- -	UNKNOWN ACP	1.62	40000.	BJ A
3.	- -	UNKNOWN ALKANE	16.69	500.	J
4.	- -	UNKNOWN HYDROCARBON	20.43	900.	J
5.	- -	UNKNOWN ALKANE	20.56	700.	J
6.	- -	UNKNOWN ALKANE	21.43	700.	J
7.	- -	UNKNOWN ALKANE	23.08	700.	J
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1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3970 S-1

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 01036

% Moisture: 29. decanted: (Y/N) N Date Received: 09/09/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 09/13/93

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 09/26/93

Injection Volume: 1.0 (uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 8.2 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	4.7	U
319-85-7	beta-BHC	4.7	U
319-86-8	delta-BHC	4.7	U
58-89-9	gamma-BHC (Lindane)	4.7	U
76-44-8	Heptachlor	4.7	U
309-00-2	Aldrin	4.7	U
1024-57-3	Heptachlor epoxide	4.7	U
959-98-8	Endosulfan I	4.7	U
60-57-1	Dieldrin	9.5	U
72-55-9	4,4'-DDE	9.5	U
72-20-8	Endrin	9.5	U
33213-65-9	Endosulfan II	9.5	U
72-54-8	4,4'-DDD	9.5	U
1031-07-8	Endosulfan Sulfate	9.5	U
50-29-3	4,4'-DDT	9.5	U
72-43-5	Methoxychlor	47.	U
53494-70-5	Endrin ketone	9.5	U
7421-93-4	Endrin aldehyde	9.5	U
5103-71-9	alpha-Chlordane	4.7	U
5103-74-2	gamma-Chlordane	4.7	U
8001-35-2	Toxaphene	470.	U
12674-11-2	Aroclor-1016	95.	U
11104-28-2	Aroclor-1221	190.	U
11141-16-5	Aroclor-1232	95.	U
53469-21-9	Aroclor-1242	95.	U
12672-29-6	Aroclor-1248	95.	U
11097-69-1	Aroclor-1254	95.	U
11096-82-5	Aroclor-1260	95.	U

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ATTACHMENT II-7

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

3970 S-1

Lab Name: ICM Contract: A60084

Lab Code: Case No.: SAS No.: SDG No.: 3970

Matrix (soil/water): SOIL Lab Sample ID: 173635

Level (low/med): LOW Date Received: 09/09/93

% Solids: 70.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	19500			P
7440-36-0	Antimony	9.0	U		P
7440-38-2	Arsenic	11.8			F
7440-39-3	Barium	178			P
7440-41-7	Beryllium	1.1	B		P
7440-43-9	Cadmium	0.31	U		P
7440-70-2	Calcium	10000			P
7440-47-3	Chromium	24.1			P
7440-48-4	Cobalt	7.9	B		P
7440-50-8	Copper	390			P
7439-89-6	Iron	17100			P
7439-92-1	Lead	178			F
7439-95-4	Magnesium	2510			P
7439-96-5	Manganese	332			P
7439-97-6	Mercury	0.19		*	CV
7440-02-0	Nickel	22.6			P
7440-09-7	Potassium	942	B		P
7782-49-2	Selenium	1.2	B		F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	7.6	U		P
7440-28-0	Thallium	0.37	U		F
7440-62-2	Vanadium	26.3			P
7440-66-6	Zinc	212			P
	Cyanide	1.4	U		C

Color Before: BROWN Clarity Before: OPAQUE Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

FORM I - IN

ILM03.0

ATTACHMENT D-8

VOLATILE ORGANICS ANALYSIS DATA SHEET

3971 S-2

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5.000 (g/mL) G Lab File ID: C5141

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: not dec. 9. Date Analyzed: 09/14/93

GC Column: SP1000 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11.	U
74-83-9	Bromomethane	11.	U
75-01-4	Vinyl Chloride	11.	U
75-00-3	Chloroethane	11.	U
75-09-2	Methylene Chloride	16.	B
67-64-1	Acetone	11.	U
75-15-0	Carbon Disulfide	11.	U
75-35-4	1,1-Dichloroethene	11.	U
75-34-3	1,1-Dichloroethane	2.	J
540-59-0	1,2-Dichloroethene (total)	11.	U
67-66-3	Chloroform	11.	U
107-06-2	1,2-Dichloroethane	11.	U
78-93-3	2-Butanone	11.	U
71-55-6	1,1,1-Trichloroethane	5.	J
56-23-5	Carbon Tetrachloride	11.	U
75-27-4	Bromodichloromethane	11.	U
78-87-5	1,2-Dichloropropane	11.	U
10061-01-5	cis-1,3-Dichloropropene	11.	U
79-01-6	Trichloroethene	11.	U
124-48-1	Dibromochloromethane	11.	U
79-00-5	1,1,2-Trichloroethane	11.	U
71-43-2	Benzene	11.	
10061-02-6	trans-1,3-Dichloropropene	11.	U
75-25-2	Bromoform	11.	U
108-10-1	4-Methyl-2-Pentanone	11.	U
591-78-6	2-Hexanone	11.	U
127-18-4	Tetrachloroethene	11.	U
79-34-5	1,1,2,2-Tetrachloroethane	11.	U
108-88-3	Toluene	11.	U
108-90-7	Chlorobenzene	11.	U
100-41-4	Ethylbenzene	11.	U
100-42-5	Styrene	11.	U
1330-20-7	Xylene (total)	11.	U

ATTACHMENT II-9

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

3971 S-2

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5.000 (g/mL) G Lab File ID: C5141

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: not dec. 9. Date Analyzed: 09/14/93

GC Column: SP1000 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 5

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. - -	UNKNOWN	28.43	7.	J
2. - -	UNKNOWN	32.46	10.	J
3. - -	UNKNOWN HYDROCARBON	35.86	20.	J
4. - -	UNKNOWN	38.15	10.	J
5. - -	UNKNOWN HYDROCARBON	40.82	70.	J
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ATTACHMENT II-10

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3971 S-2

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.2 (g/mL) G Lab File ID: I8359

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: 9. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/04/93

Injection Volume: 2.0 (uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 8.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	730.	U
111-44-4	bis(2-Chloroethyl)ether	730.	U
95-57-8	2-Chlorophenol	730.	U
541-73-1	1,3-Dichlorobenzene	730.	U
106-46-7	1,4-Dichlorobenzene	730.	U
95-50-1	1,2-Dichlorobenzene	730.	U
95-48-7	2-Methylphenol	730.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	730.	U
106-44-5	4-Methylphenol	730.	U
621-64-7	N-Nitroso-di-n-propylamine	730.	U
67-72-1	Hexachloroethane	730.	U
98-95-3	Nitrobenzene	730.	U
78-59-1	Isophorone	730.	U
88-75-5	2-Nitrophenol	730.	U
105-67-9	2,4-Dimethylphenol	730.	U
111-91-1	bis(2-Chloroethoxy)methane	730.	U
120-83-2	2,4-Dichlorophenol	730.	U
120-82-1	1,2,4-Trichlorobenzene	730.	U
91-20-3	Naphthalene	730.	U
106-47-8	4-Chloroaniline	730.	U
87-68-3	Hexachlorobutadiene	730.	U
59-50-7	4-Chloro-3-methylphenol	730.	U
91-57-6	2-Methylnaphthalene	730.	U
77-47-4	Hexachlorocyclopentadiene	730.	U
88-06-2	2,4,6-Trichlorophenol	730.	U
95-95-4	2,4,5-Trichlorophenol	1800.	U
91-58-7	2-Chloronaphthalene	730.	U
88-74-4	2-Nitroaniline	1800.	U
131-11-3	Dimethylphthalate	730.	U
208-96-8	Acenaphthylene	730.	U
606-20-2	2,6-Dinitrotoluene	730.	U
99-09-2	3-Nitroaniline	1800.	U
83-32-9	Acenaphthene	730.	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

3971

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.2 (g/mL) G Lab File ID: IS359

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: 9. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/04/93

Injection Volume: 2.0 (uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 8.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1800.	U
100-02-7	4-Nitrophenol	1800.	U
132-64-9	Dibenzofuran	730.	U
121-14-2	2,4-Dinitrotoluene	730.	U
84-66-2	Diethylphthalate	730.	U
7005-72-3	4-Chlorophenyl-phenylether	730.	U
86-73-7	Fluorene	730.	U
100-01-6	4-Nitroaniline	1800.	U
534-52-1	4,6-Dinitro-2-methylphenol	1800.	U
86-30-6	N-Nitrosodiphenylamine (1)	730.	U
101-55-3	4-Bromophenyl-phenylether	730.	U
118-74-1	Hexachlorobenzene	730.	U
87-86-5	Pentachlorophenol	1800.	U
85-01-8	Phenanthrene	730.	U
120-12-7	Anthracene	730.	U
86-74-8	Carbazole	730.	U
84-74-2	Di-n-butylphthalate	730.	U
206-44-0	Fluoranthene	46.	J
129-00-0	Pyrene	48.	J
85-68-7	Butylbenzylphthalate	730.	U
91-94-1	3,3'-Dichlorobenzidine	730.	U
56-55-3	Benzo(a)anthracene	730.	U
218-01-9	Chrysene	730.	U
117-81-7	bis(2-Ethylhexyl)phthalate	730.	U
117-84-0	Di-n-octylphthalate	730.	U
205-99-2	Benzo(b)fluoranthene	730.	U
207-08-9	Benzo(k)fluoranthene	730.	U
50-32-8	Benzo(a)pyrene	730.	U
193-39-5	Indeno(1,2,3-cd)pyrene	730.	U
53-70-3	Dibenz(a,h)anthracene	730.	U
191-24-2	Benzo(g,h,i)perylene	730.	U

(1) - Cannot be separated from diphenylamine

ATTACHMENT II-12

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

3971

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.2 (g/mL) G Lab File ID: I8359

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: 9. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/04/93

Injection Volume: 2.0 (uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 8.2

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

Number TICs found: 15

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q	
1.	- -	UNKNOWN ACP	.83	400.	J	A
2.	- -	UNKNOWN ACP	.86	300.	J	A
3.	- -	UNKNOWN ACP	1.01	800.	J	A
4.	- -	UNKNOWN ACP	1.06	200.	BJ	A
5.	- -	UNKNOWN ACP	1.17	400.	BJ	A
6.	- -	UNKNOWN ACP	1.64	20000.	BJ	A
7.	- -	UNKNOWN ACP	2.79	1000.	J	A
8.	57-10-3	HEXADECANOIC ACID	18.38	100.	J	
9.	- -	UNKNOWN ALKANE	19.65	400.	J	
10.	- -	UNKNOWN ALKANE	20.56	400.	J	
11.	- -	UNKNOWN ALKANE	21.42	500.	J	
12.	- -	UNKNOWN ALKANE	22.26	600.	J	
13.	- -	UNKNOWN ALKANE	23.07	500.	J	
14.	- -	UNKNOWN ALKANE	23.85	400.	J	
15.	- -	UNKNOWN ALKANE	24.59	500.	J	
16.						
17.				26500		
18.						
19.						
20.						
21.						
22.						
23.						
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30.						

ATTACHMENT II-13

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3971 S-2

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.7 (g/mL) G Lab File ID: 01037

% Moisture: 9. decanted: (Y/N) N Date Received: 09/09/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 09/13/93

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 09/26/93

Injection Volume: 1.0 (uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 8.2 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	3.6	U
319-85-7	beta-BHC	3.6	U
319-86-8	delta-BHC	3.6	U
58-89-9	gamma-BHC (Lindane)	3.6	U
76-44-8	Heptachlor	3.6	U
309-00-2	Aldrin	3.6	U
1024-57-3	Heptachlor epoxide	3.6	U
959-98-8	Endosulfan I	3.6	U
60-57-1	Dieldrin	7.2	U
72-55-9	4,4'-DDE	7.2	U
72-20-8	Endrin	7.2	U
33213-65-9	Endosulfan II	7.2	U
72-54-8	4,4'-DDD	7.2	U
1031-07-8	Endosulfan Sulfate	7.2	U
50-29-3	4,4'-DDT	7.2	U
72-43-5	Methoxychlor	36.	U
53494-70-5	Endrin ketone	7.2	U
7421-93-4	Endrin aldehyde	7.2	U
5103-71-9	alpha-Chlordane	3.6	U
5103-74-2	gamma-Chlordane	3.6	U
8001-35-2	Toxaphene	360.	U
12674-11-2	Aroclor-1016	72.	U
11104-28-2	Aroclor-1221	140.	U
11141-16-5	Aroclor-1232	72.	U
53469-21-9	Aroclor-1242	72.	U
12672-29-6	Aroclor-1248	72.	U
11097-69-1	Aroclor-1254	72.	U
11096-82-5	Aroclor-1260	38.	J

ATTACHMENT II-4

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

3971 S-2

Lab Name: ICM Contract: A60084

Lab Code: Case No.: SAS No.: SDG No.: 3970

Matrix (soil/water): SOIL Lab Sample ID: 173636

Level (low/med): LOW Date Received: 09/09/93

% Solids: 90.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5250			P
7440-36-0	Antimony	7.0	U		P
7440-38-2	Arsenic	5.7			F
7440-39-3	Barium	44.6			P
7440-41-7	Beryllium	0.28	B		P
7440-43-9	Cadmium	0.24	U		P
7440-70-2	Calcium	24800			P
7440-47-3	Chromium	44.5			P
7440-48-4	Cobalt	7.2	B		P
7440-50-8	Copper	33.5			P
7439-89-6	Iron	13800			P
7439-92-1	Lead	92.1			F
7439-95-4	Magnesium	12700			P
7439-96-5	Manganese	210			P
7439-97-6	Mercury	0.18		*	CV
7440-02-0	Nickel	20.9			P
7440-09-7	Potassium	439	B		P
7782-49-2	Selenium	0.77	U		F
7440-22-4	Silver	0.79	U	N	P
7440-23-5	Sodium	5.9	U		P
7440-28-0	Thallium	0.29	U	W	F
7440-62-2	Vanadium	19.7			P
7440-66-6	Zinc	290			P
	Cyanide	1.1	U		C

Color Before: BROWN Clarity Before: OPAQUE Texture: COARSE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

FORM I - IN

ILM03.0

ATTACHMENT II-5

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3972 S-3

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5.000 (g/mL) G Lab File ID: C5118

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: not dec. 11. Date Analyzed: 09/13/93

GC Column: SP1000 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11.	U
74-83-9	Bromomethane	11.	U
75-01-4	Vinyl Chloride	11.	U
75-00-3	Chloroethane	11.	U
75-09-2	Methylene Chloride	3.	BJ
67-64-1	Acetone	13.	
75-15-0	Carbon Disulfide	11.	U
75-35-4	1,1-Dichloroethene	11.	U
75-34-3	1,1-Dichloroethane	11.	U
540-59-0	1,2-Dichloroethene (total)	11.	U
67-66-3	Chloroform	11.	U
107-06-2	1,2-Dichloroethane	11.	U
78-93-3	2-Butanone	11.	U
71-55-6	1,1,1-Trichloroethane	2.	J
56-23-5	Carbon Tetrachloride	11.	U
75-27-4	Bromodichloromethane	11.	U
78-87-5	1,2-Dichloropropane	11.	U
10061-01-5	cis-1,3-Dichloropropene	11.	U
79-01-6	Trichloroethene	11.	U
124-48-1	Dibromochloromethane	11.	U
79-00-5	1,1,2-Trichloroethane	11.	U
71-43-2	Benzene	12.	
10061-02-6	trans-1,3-Dichloropropene	11.	U
75-25-2	Bromoform	11.	U
108-10-1	4-Methyl-2-Pentanone	11.	U
591-78-6	2-Hexanone	11.	U
127-18-4	Tetrachloroethene	2.	J
79-34-5	1,1,2,2-Tetrachloroethane	11.	U
108-88-3	Toluene	2.	J
108-90-7	Chlorobenzene	11.	U
100-41-4	Ethylbenzene	11.	U
100-42-5	Styrene	11.	U
1330-20-7	Xylene (total)	11.	U

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

3972

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5.000 (g/mL) G Lab File ID: C5118

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: not dec. 11. Date Analyzed: 09/13/93

GC Column: SP1000 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

Number TICs found: 0

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
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29.					
30.					

FORM I VOA-TIC 3/90

ATTACHMENT III-17

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3972 S-3

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 1.000 (g/mL) G Lab File ID: I8382

Level: (low/med) MED Date Received: 09/09/93

% Moisture: 11. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/05/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	11000.	U
111-44-4	bis(2-Chloroethyl)ether	11000.	U
95-57-8	2-Chlorophenol	11000.	U
541-73-1	1,3-Dichlorobenzene	11000.	U
106-46-7	1,4-Dichlorobenzene	11000.	U
95-50-1	1,2-Dichlorobenzene	11000.	U
95-48-7	2-Methylphenol	11000.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	11000.	U
106-44-5	4-Methylphenol	11000.	U
621-64-7	N-Nitroso-di-n-propylamine	11000.	U
67-72-1	Hexachloroethane	11000.	U
98-95-3	Nitrobenzene	11000.	U
78-59-1	Isophorone	11000.	U
88-75-5	2-Nitrophenol	11000.	U
105-67-9	2,4-Dimethylphenol	11000.	U
111-91-1	bis(2-Chloroethoxy)methane	11000.	U
120-83-2	2,4-Dichlorophenol	11000.	U
120-82-1	1,2,4-Trichlorobenzene	11000.	U
91-20-3	Naphthalene	720.	J
106-47-8	4-Chloroaniline	11000.	U
87-68-3	Hexachlorobutadiene	11000.	U
59-50-7	4-Chloro-3-methylphenol	11000.	U
91-57-6	2-Methylnaphthalene	11000.	U
77-47-4	Hexachlorocyclopentadiene	11000.	U
88-06-2	2,4,6-Trichlorophenol	11000.	U
95-95-4	2,4,5-Trichlorophenol	28000.	U
91-58-7	2-Chloronaphthalene	11000.	U
88-74-4	2-Nitroaniline	28000.	U
131-11-3	Dimethylphthalate	11000.	U
208-96-8	Acenaphthylene	11000.	U
606-20-2	2,6-Dinitrotoluene	11000.	U
99-09-2	3-Nitroaniline	28000.	U
83-32-9	Acenaphthene	970.	J

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3972 S-3

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 1.000 (g/mL) G Lab File ID: I8382

Level: (low/med) MED Date Received: 09/09/93

% Moisture: 11. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/05/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	28000.	U
100-02-7	4-Nitrophenol	28000.	U
132-64-9	Dibenzofuran	11000.	U
121-14-2	2,4-Dinitrotoluene	11000.	U
84-66-2	Diethylphthalate	11000.	U
7005-72-3	4-Chlorophenyl-phenylether	11000.	U
86-73-7	Fluorene	11000.	U
100-01-6	4-Nitroaniline	28000.	U
534-52-1	4,6-Dinitro-2-methylphenol	28000.	U
86-30-6	N-Nitrosodiphenylamine (1)	11000.	U
101-55-3	4-Bromophenyl-phenylether	11000.	U
118-74-1	Hexachlorobenzene	11000.	U
87-86-5	Pentachlorophenol	28000.	U
85-01-8	Phenanthrene	4900.	J
120-12-7	Anthracene	11000.	U
86-74-8	Carbazole	11000.	U
84-74-2	Di-n-butylphthalate	11000.	U
206-44-0	Fluoranthene	6000.	J
129-00-0	Pyrene	5700.	J
85-68-7	Butylbenzylphthalate	11000.	U
91-94-1	3,3'-Dichlorobenzidine	11000.	U
56-55-3	Benzo(a)anthracene	3300.	J
218-01-9	Chrysene	4000.	J
117-81-7	bis(2-Ethylhexyl)phthalate	11000.	U
117-84-0	Di-n-octylphthalate	11000.	U
205-99-2	Benzo(b)fluoranthene	3400.	J
207-08-9	Benzo(k)fluoranthene	3100.	J
50-32-8	Benzo(a)pyrene	3200.	J
193-39-5	Indeno(1,2,3-cd)pyrene	5100.	J
53-70-3	Dibenz(a,h)anthracene	11000.	U
191-24-2	Benzo(g,h,i)perylene	4900.	J

(1) - Cannot be separated from diphenylamine

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

3972

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 1.000 (g/mL) G Lab File ID: I8382

Level: (low/med) MED Date Received: 09/09/93

% Moisture: 11. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/05/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.6

Number TICs found: 9

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	- -	UNKNOWN	3.52	4000.	BJ
2.	143-07-7	DODECANOIC ACID	14.17	8000.	BJ
3.	57-10-3	HEXADECANOIC ACID	18.40	8000.	J
4.	27765-96-4	DIHYDRO ETHENOANTHRACENE	19.56	2000.	J
5.	- -	UNKNOWN	19.96	3000.	J
6.	- -	UNKNOWN HYDROCARBON	20.01	3000.	J
7.	238-84-6	BENZOFLUORENE	20.40	2000.	J
8.	205-82-3	BENZOFLUORANTHENE	25.33	9000.	J
9.	- -	UNKNOWN	26.81	3000.	J
10.					
11.				42000	
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
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23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3972 S-3

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.5 (g/mL) G Lab File ID: 01051

% Moisture: 11. decanted: (Y/N) N Date Received: 09/09/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 09/13/93

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 09/26/93

Injection Volume: 1.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 7.6 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	18.	U
319-85-7	beta-BHC	18.	U
319-86-8	delta-BHC	18.	U
58-89-9	gamma-BHC (Lindane)	18.	U
76-44-8	Heptachlor	18.	U
309-00-2	Aldrin	18.	U
1024-57-3	Heptachlor epoxide	18.	U
959-98-8	Endosulfan I	18.	U
60-57-1	Dieldrin	37.	U
72-55-9	4,4'-DDE	37.	U
72-20-8	Endrin	30.	J P
33213-65-9	Endosulfan II	37.	U
72-54-8	4,4'-DDD	19.	J P
1031-07-8	Endosulfan Sulfate	30.	J P
50-29-3	4,4'-DDT	37.	U
72-43-5	Methoxychlor	180.	U
53494-70-5	Endrin ketone	37.	U
7421-93-4	Endrin aldehyde	37.	U
5103-71-9	alpha-Chlordane	18.	U
5103-74-2	gamma-Chlordane	18.	U
8001-35-2	Toxaphene	1800.	U
12674-11-2	Aroclor-1016	370.	U
11104-28-2	Aroclor-1221	730.	U
11141-16-5	Aroclor-1232	370.	U
53469-21-9	Aroclor-1242	370.	U
12672-29-6	Aroclor-1248	370.	U
11097-69-1	Aroclor-1254	370.	U
11096-82-5	Aroclor-1260	370.	U

ATTACHMENT II-21

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

3972 S-3

Lab Name: ICM Contract: A60084

Lab Code: Case No.: SAS No.: SDG No.: 3970

Matrix (soil/water): SOIL Lab Sample ID: 173637

Level (low/med): LOW Date Received: 09/09/93

% Solids: 89.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6430			P
7440-36-0	Antimony	7.1	U		P
7440-38-2	Arsenic	6.9			F
7440-39-3	Barium	220			P
7440-41-7	Beryllium	0.28	B		P
7440-43-9	Cadmium	1.5			P
7440-70-2	Calcium	16700			P
7440-47-3	Chromium	36.0			P
7440-48-4	Cobalt	8.1	B		P
7440-50-8	Copper	90.2			P
7439-89-6	Iron	16200			P
7439-92-1	Lead	590			F
7439-95-4	Magnesium	1650			P
7439-96-5	Manganese	174			P
7439-97-6	Mercury	46.7		*	CV
7440-02-0	Nickel	20.6			P
7440-09-7	Potassium	454	B		P
7782-49-2	Selenium	1.1			F
7440-22-4	Silver	4.9		N	P
7440-23-5	Sodium	6.0	U		P
7440-28-0	Thallium	0.29	U		F
7440-62-2	Vanadium	22.2			P
7440-66-6	Zinc	304			P
	Cyanide	1.1	U		C

Color Before: BROWN Clarity Before: OPAQUE Texture: COARSE

Color After: LT YELLOW Clarity After: CLEAR Artifacts:

Comments:

FORM I - IN

ILM03.0

ATTACHMENT II-22

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3973 S-4

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5.000 (g/mL) G Lab File ID: C5119

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: not dec. 9. Date Analyzed: 09/13/93

GC Column: SP1000 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11.	U
74-83-9	Bromomethane	11.	U
75-01-4	Vinyl Chloride	11.	U
75-00-3	Chloroethane	11.	U
75-09-2	Methylene Chloride	3.	BJ
67-64-1	Acetone	11.	U
75-15-0	Carbon Disulfide	11.	U
75-35-4	1,1-Dichloroethene	11.	U
75-34-3	1,1-Dichloroethane	11.	U
540-59-0	1,2-Dichloroethene (total)	11.	U
67-66-3	Chloroform	11.	U
107-06-2	1,2-Dichloroethane	11.	U
78-93-3	2-Butanone	11.	U
71-55-6	1,1,1-Trichloroethane	11.	U
56-23-5	Carbon Tetrachloride	11.	U
75-27-4	Bromodichloromethane	11.	U
78-87-5	1,2-Dichloropropane	11.	U
10061-01-5	cis-1,3-Dichloropropene	11.	U
79-01-6	Trichloroethene	11.	U
124-48-1	Dibromochloromethane	11.	U
79-00-5	1,1,2-Trichloroethane	11.	U
71-43-2	Benzene	11.	U
10061-02-6	trans-1,3-Dichloropropene	11.	U
75-25-2	Bromoform	11.	U
108-10-1	4-Methyl-2-Pentanone	11.	U
591-78-6	2-Hexanone	11.	U
127-18-4	Tetrachloroethene	11.	U
79-34-5	1,1,2,2-Tetrachloroethane	11.	U
108-88-3	Toluene	11.	U
108-90-7	Chlorobenzene	11.	U
100-41-4	Ethylbenzene	11.	U
100-42-5	Styrene	11.	U
1330-20-7	Xylene (total)	11.	U

ATTACHMENT I 3490

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

3973

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5.000 (g/mL) G Lab File ID: C5119

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: not dec. 9. Date Analyzed: 09/13/93

GC Column: SP1000 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
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FORM I VOA-TIC 3/90

ATTACHMENT II 24

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

3973 S-8 4

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.2 (g/mL) G Lab File ID: I8360

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: 9. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/04/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	360.	U
111-44-4	bis(2-Chloroethyl)ether	360.	U
95-57-8	2-Chlorophenol	360.	U
541-73-1	1,3-Dichlorobenzene	360.	U
106-46-7	1,4-Dichlorobenzene	360.	U
95-50-1	1,2-Dichlorobenzene	360.	U
95-48-7	2-Methylphenol	360.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	360.	U
106-44-5	4-Methylphenol	360.	U
621-64-7	N-Nitroso-di-n-propylamine	360.	U
67-72-1	Hexachloroethane	360.	U
98-95-3	Nitrobenzene	360.	U
78-59-1	Isophorone	360.	U
88-75-5	2-Nitrophenol	360.	U
105-67-9	2,4-Dimethylphenol	360.	U
111-91-1	bis(2-Chloroethoxy)methane	360.	U
120-83-2	2,4-Dichlorophenol	360.	U
120-82-1	1,2,4-Trichlorobenzene	360.	U
91-20-3	Naphthalene	18.	J
106-47-8	4-Chloroaniline	360.	U
87-68-3	Hexachlorobutadiene	360.	U
59-50-7	4-Chloro-3-methylphenol	360.	U
91-57-6	2-Methylnaphthalene	360.	U
77-47-4	Hexachlorocyclopentadiene	360.	U
88-06-2	2,4,6-Trichlorophenol	360.	U
95-95-4	2,4,5-Trichlorophenol	910.	U
91-58-7	2-Chloronaphthalene	360.	U
88-74-4	2-Nitroaniline	910.	U
131-11-3	Dimethylphthalate	360.	U
208-96-8	Acenaphthylene	360.	U
606-20-2	2,6-Dinitrotoluene	360.	U
99-09-2	3-Nitroaniline	910.	U
83-32-9	Acenaphthene	18.	J

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

3973 S-4

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.2 (g/mL) G Lab File ID: I8360

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: 9. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/04/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	910.	U
100-02-7	4-Nitrophenol	910.	U
132-64-9	Dibenzofuran	360.	U
121-14-2	2,4-Dinitrotoluene	360.	U
84-66-2	Diethylphthalate	360.	U
7005-72-3	4-Chlorophenyl-phenylether	360.	U
86-73-7	Fluorene	20.	J
100-01-6	4-Nitroaniline	910.	U
534-52-1	4,6-Dinitro-2-methylphenol	910.	U
86-30-6	N-Nitrosodiphenylamine (1)	360.	U
101-55-3	4-Bromophenyl-phenylether	360.	U
118-74-1	Hexachlorobenzene	360.	U
87-86-5	Pentachlorophenol	910.	U
85-01-8	Phenanthrene	320.	J
120-12-7	Anthracene	49.	J
86-74-8	Carbazole	26.	J
84-74-2	Di-n-butylphthalate	360.	U
206-44-0	Fluoranthene	550.	
129-00-0	Pyrene	630.	
85-68-7	Butylbenzylphthalate	360.	U
91-94-1	3,3'-Dichlorobenzidine	360.	U
56-55-3	Benzo(a)anthracene	300.	J
218-01-9	Chrysene	380.	
117-81-7	bis(2-Ethylhexyl)phthalate	1100.	
117-84-0	Di-n-octylphthalate	420.	
205-99-2	Benzo(b)fluoranthene	280.	J
207-08-9	Benzo(k)fluoranthene	300.	J
50-32-8	Benzo(a)pyrene	310.	J
193-39-5	Indeno(1,2,3-cd)pyrene	340.	J
53-70-3	Dibenz(a,h)anthracene	110.	J
191-24-2	Benzo(g,h,i)perylene	390.	

(1) - Cannot be separated from diphenylamine

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

3973 S-4

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.2 (g/mL) G Lab File ID: I8360

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: 9. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/04/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.7

Number TICs found: 29 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q	
1.	- -	UNKNOWN ACP	.82	100.	J	A
2.	- -	UNKNOWN ACP	.86	70.	J	A
3.	- -	UNKNOWN ACP	1.00	200.	BJ	A
4.	- -	UNKNOWN ACP	1.17	70.	BJ	A
5.	- -	UNKNOWN ACP	1.74	8000.	BJ	A
6.	- -	UNKNOWN ACP	2.82	300.	J	A
7.	- -	UNKNOWN ALKANE	15.60	100.	J	
8.	- -	UNKNOWN ALKANE	16.69	100.	J	
9.	613-12-7	METHYL ANTHRACENE	17.43	70.	J	
10.	203-64-5	CYCLOPENTAPHENANTHRENE	17.62	70.	J	
11.	- -	UNKNOWN HYDROCARBON	17.71	100.	J	
12.	84-65-1	ANTHRACENEDIONE	18.18	70.	J	
13.	- -	UNKNOWN	18.30	200.	J	
14.	57-10-3	HEXADECANOIC ACID	18.45	500.	J	
15.	- -	UNKNOWN ALKANE	19.67	200.	J	
16.	- -	UNKNOWN ALKANE	20.57	500.	J	
17.	- -	UNKNOWN ALKANE	21.45	500.	J	
18.	- -	UNKNOWN ALKANE	22.28	600.	J	
19.	- -	UNKNOWN ALKANE	23.10	700.	J	
20.	- -	UNKNOWN ALKANE	23.87	700.	J	
21.	- -	UNKNOWN PHTHALATE	24.26	800.	J	
22.	- -	UNKNOWN PHTHALATE	24.35	400.	J	
23.	- -	UNKNOWN ALKANE	24.62	1000.	J	
24.	- -	UNKNOWN PHTHALATE	25.67	700.	J	
25.	- -	UNKNOWN ALKANE	26.04	1000.	J	
26.	- -	UNKNOWN PHTHALATE	26.25	1000.	J	
27.	- -	UNKNOWN ALKANE	26.71	400.	J	
28.	- -	UNKNOWN	26.86	500.	J	
29.	- -	UNKNOWN ALKANE	27.37	800.	J	
30.						
				9750		

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3973 S-4

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.9 (g/mL) G Lab File ID: 01040

% Moisture: 9. decanted: (Y/N) N Date Received: 09/09/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 09/13/93

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 09/26/93

Injection Volume: 1.0 (uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 7.7 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.9	U
319-85-7	beta-BHC	8.9	U
319-86-8	delta-BHC	8.9	U
58-89-9	gamma-BHC (Lindane)	8.9	U
76-44-8	Heptachlor	8.9	U
309-00-2	Aldrin	8.9	U
1024-57-3	Heptachlor epoxide	8.9	U
959-98-8	Endosulfan I	8.9	U
60-57-1	Dieldrin	18.	U
72-55-9	4,4'-DDE	18.	U
72-20-8	Endrin	18.	U
33213-65-9	Endosulfan II	18.	U
72-54-8	4,4'-DDD	18.	U
1031-07-8	Endosulfan Sulfate	18.	U
50-29-3	4,4'-DDT	18.	U
72-43-5	Methoxychlor	89.	U
53494-70-5	Endrin ketone	18.	U
7421-93-4	Endrin aldehyde	18.	U
5103-71-9	alpha-Chlordane	8.9	U
5103-74-2	gamma-Chlordane	8.9	U
8001-35-2	Toxaphene	890.	U
12674-11-2	Aroclor-1016	180.	U
11104-28-2	Aroclor-1221	350.	U
11141-16-5	Aroclor-1232	180.	U
53469-21-9	Aroclor-1242	180.	U
12672-29-6	Aroclor-1248	180.	U
11097-69-1	Aroclor-1254	110.	J P
11096-82-5	Aroclor-1260	200.	

FORM I PEST 3/90

ATTACHMENT II-28

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

3973

S-4

Lab Name: ICM Contract: A60084

Lab Code: Case No.: SAS No.: SDG No.: 3970

Matrix (soil/water): SOIL Lab Sample ID: 173638

Level (low/med): LOW Date Received: 09/09/93

% Solids: 91.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7850			P
7440-36-0	Antimony	7.0	U		P
7440-38-2	Arsenic	4.7			F
7440-39-3	Barium	176			P
7440-41-7	Beryllium	0.43	B		P
7440-43-9	Cadmium	0.94	B		P
7440-70-2	Calcium	14100			P
7440-47-3	Chromium	27.7			P
7440-48-4	Cobalt	7.2	B		P
7440-50-8	Copper	89.5			P
7439-89-6	Iron	17500			P
7439-92-1	Lead	232			F
7439-95-4	Magnesium	3840			P
7439-96-5	Manganese	300			P
7439-97-6	Mercury	13.3		*	CV
7440-02-0	Nickel	22.2			P
7440-09-7	Potassium	577	B		P
7782-49-2	Selenium	0.76	U		F
7440-22-4	Silver	2.6		N	P
7440-23-5	Sodium	90.5	B		P
7440-28-0	Thallium	0.29	U		F
7440-62-2	Vanadium	28.2			P
7440-66-6	Zinc	374			P
	Cyanide	1.1	U		C

Color Before: BROWN Clarity Before: OPAQUE Texture: COARSE

Color After: COLORLESS Clarity After: CLEAR Artifacts: YES

Comments:

ARTIFACTS: PEBBLES/ROCKS

FORM I - IN

ILM03.0

ATTACHMENT II-29

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3974 S-5

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5.000 (g/mL) G Lab File ID: C5120

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: not dec. 11. Date Analyzed: 09/13/93

GC Column: SP1000 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11.	U
74-83-9	Bromomethane	11.	U
75-01-4	Vinyl Chloride	11.	U
75-00-3	Chloroethane	11.	U
75-09-2	Methylene Chloride	2.	BJ
67-64-1	Acetone	11.	U
75-15-0	Carbon Disulfide	11.	U
75-35-4	1,1-Dichloroethene	11.	U
75-34-3	1,1-Dichloroethane	11.	U
540-59-0	1,2-Dichloroethene (total)	11.	U
67-66-3	Chloroform	11.	U
107-06-2	1,2-Dichloroethane	11.	U
78-93-3	2-Butanone	11.	U
71-55-6	1,1,1-Trichloroethane	11.	U
56-23-5	Carbon Tetrachloride	11.	U
75-27-4	Bromodichloromethane	11.	U
78-87-5	1,2-Dichloropropane	11.	U
10061-01-5	cis-1,3-Dichloropropene	11.	U
79-01-6	Trichloroethene	11.	U
124-48-1	Dibromochloromethane	11.	U
79-00-5	1,1,2-Trichloroethane	11.	U
71-43-2	Benzene	11.	U
10061-02-6	trans-1,3-Dichloropropene	11.	U
75-25-2	Bromoform	11.	U
108-10-1	4-Methyl-2-Pentanone	11.	U
591-78-6	2-Hexanone	11.	U
127-18-4	Tetrachloroethene	11.	U
79-34-5	1,1,2,2-Tetrachloroethane	11.	U
108-88-3	Toluene	11.	U
108-90-7	Chlorobenzene	11.	U
100-41-4	Ethylbenzene	11.	U
100-42-5	Styrene	11.	U
1330-20-7	Xylene (total)	11.	U

ATTACHMENT II-30

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

3974 S-5

Lab Name: ICM, Inc. • Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5.000 (g/mL) G Lab File ID: C5120

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: not dec. 11. Date Analyzed: 09/13/93

GC Column: SP1000 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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FORM I VOA-TIC 3/90

ATTACHMENT II-31

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3974 S-5

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.3 (g/mL) G Lab File ID: I8361

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: 11. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/04/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	370.	U
111-44-4	bis(2-Chloroethyl)ether	370.	U
95-57-8	2-Chlorophenol	370.	U
541-73-1	1,3-Dichlorobenzene	370.	U
106-46-7	1,4-Dichlorobenzene	370.	U
95-50-1	1,2-Dichlorobenzene	370.	U
95-48-7	2-Methylphenol	370.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	370.	U
106-44-5	4-Methylphenol	370.	U
621-64-7	N-Nitroso-di-n-propylamine	370.	U
67-72-1	Hexachloroethane	370.	U
98-95-3	Nitrobenzene	370.	U
78-59-1	Isophorone	370.	U
88-75-5	2-Nitrophenol	370.	U
105-67-9	2,4-Dimethylphenol	370.	U
111-91-1	bis(2-Chloroethoxy)methane	370.	U
120-83-2	2,4-Dichlorophenol	370.	U
120-82-1	1,2,4-Trichlorobenzene	370.	U
91-20-3	Naphthalene	370.	U
106-47-8	4-Chloroaniline	370.	U
87-68-3	Hexachlorobutadiene	370.	U
59-50-7	4-Chloro-3-methylphenol	370.	U
91-57-6	2-Methylnaphthalene	370.	U
77-47-4	Hexachlorocyclopentadiene	370.	U
88-06-2	2,4,6-Trichlorophenol	370.	U
95-95-4	2,4,5-Trichlorophenol	920.	U
91-58-7	2-Chloronaphthalene	370.	U
88-74-4	2-Nitroaniline	920.	U
131-11-3	Dimethylphthalate	370.	U
208-96-8	Acenaphthylene	370.	U
606-20-2	2,6-Dinitrotoluene	370.	U
99-09-2	3-Nitroaniline	920.	U
83-32-9	Acenaphthene	370.	U

FORM I SV-1

ATTACHMENT II-32 3/90

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

3974 S-5

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.3 (g/mL) G Lab File ID: I8361

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: 11. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/04/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	920.	U
100-02-7	4-Nitrophenol	920.	U
132-64-9	Dibenzofuran	370.	U
121-14-2	2,4-Dinitrotoluene	370.	U
84-66-2	Diethylphthalate	370.	U
7005-72-3	4-Chlorophenyl-phenylether	370.	U
86-73-7	Fluorene	370.	U
100-01-6	4-Nitroaniline	920.	U
534-52-1	4,6-Dinitro-2-methylphenol	920.	U
86-30-6	N-Nitrosodiphenylamine (1)	370.	U
101-55-3	4-Bromophenyl-phenylether	370.	U
118-74-1	Hexachlorobenzene	370.	U
87-86-5	Pentachlorophenol	920.	U
85-01-8	Phenanthrene	240.	J
120-12-7	Anthracene	28.	J
86-74-8	Carbazole	370.	U
84-74-2	Di-n-butylphthalate	370.	U
206-44-0	Fluoranthene	340.	J
129-00-0	Pyrene	450.	
85-68-7	Butylbenzylphthalate	370.	U
91-94-1	3,3'-Dichlorobenzidine	370.	U
56-55-3	Benzo(a)anthracene	180.	J
218-01-9	Chrysene	240.	J
117-81-7	bis(2-Ethylhexyl)phthalate	370.	U
117-84-0	Di-n-octylphthalate	370.	U
205-99-2	Benzo(b)fluoranthene	280.	J
207-08-9	Benzo(k)fluoranthene	61.	J
50-32-8	Benzo(a)pyrene	200.	J
193-39-5	Indeno(1,2,3-cd)pyrene	210.	J
53-70-3	Dibenz(a,h)anthracene	85.	J
191-24-2	Benzo(g,h,i)perylene	220.	J

(1) - Cannot be separated from diphenylamine

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

3974 5-5

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.3 (g/mL) G Lab File ID: I8361

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: 11. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/04/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.3

Number TICs found: 15 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q	
1.	- -	UNKNOWN ACP	.83	100.	J	A
2.	- -	UNKNOWN ACP	1.01	300.	J	A
3.	- -	UNKNOWN ACP	1.07	70.	BJ	A
4.	- -	UNKNOWN ACP	1.18	100.	BJ	A
5.	- -	UNKNOWN ACP	1.75	8000.	BJ	A
6.	- -	UNKNOWN ACP	2.84	600.	J	A
7.	57-10-3	HEXADECANOIC ACID	18.40	200.	J	
8.	238-84-6	BENZOFLUORENE	20.41	100.	J	
9.	629-78-7	HEPTADECANE	23.07	70.	J	
10.	- -	UNKNOWN	23.24	200.	J	
11.	- -	UNKNOWN ALKANE	24.59	200.	J	
12.	- -	UNKNOWN ALKANE	25.32	100.	J	
13.	- -	UNKNOWN ALKANE	26.01	700.	J	
14.	- -	UNKNOWN	26.25	300.	J	
15.	- -	UNKNOWN ALKANE	27.35	300.	J	
16.						
17.				11340		
18.						
19.						
20.						
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ATTACHMENT II-34

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3974 S-5

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.7 (g/mL) G Lab File ID: 01042

% Moisture: 11. decanted: (Y/N) N Date Received: 09/09/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 09/13/93

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 09/26/93

Injection Volume: 1.0 (uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 7.3 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	9.1	U
319-85-7	beta-BHC	9.1	U
319-86-8	delta-BHC	9.1	U
58-89-9	gamma-BHC (Lindane)	9.1	U
76-44-8	Heptachlor	9.1	U
309-00-2	Aldrin	9.1	U
1024-57-3	Heptachlor epoxide	9.1	U
959-98-8	Endosulfan I	9.1	U
60-57-1	Dieldrin	18.	U
72-55-9	4,4'-DDE	18.	U
72-20-8	Endrin	18.	U
33213-65-9	Endosulfan II	18.	U
72-54-8	4,4'-DDD	18.	U
1031-07-8	Endosulfan Sulfate	18.	U
50-29-3	4,4'-DDT	18.	U
72-43-5	Methoxychlor	91.	U
53494-70-5	Endrin ketone	18.	U
7421-93-4	Endrin aldehyde	18.	U
5103-71-9	alpha-Chlordane	9.1	U
5103-74-2	gamma-Chlordane	9.1	U
8001-35-2	Toxaphene	910.	U
12674-11-2	Aroclor-1016	180.	U
11104-28-2	Aroclor-1221	360.	U
11141-16-5	Aroclor-1232	180.	U
53469-21-9	Aroclor-1242	180.	U
12672-29-6	Aroclor-1248	180.	U
11097-69-1	Aroclor-1254	180.	U
11096-82-5	Aroclor-1260	180.	U

FORM I PEST 3/90

ATTACHMENT II-35

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

3974 S-5

Lab Name: ICM Contract: A60084

Lab Code: Case No.: SAS No.: SDG No.: 3970

Matrix (soil/water): SOIL Lab Sample ID: 173639

Level (low/med): LOW Date Received: 09/09/93

% Solids: 89.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	13500			P
7440-36-0	Antimony	7.1	U		P
7440-38-2	Arsenic	4.6			F
7440-39-3	Barium	145			P
7440-41-7	Beryllium	0.43	B		P
7440-43-9	Cadmium	0.25	U		P
7440-70-2	Calcium	2420			P
7440-47-3	Chromium	22.6			P
7440-48-4	Cobalt	4.5	B		P
7440-50-8	Copper	305			P
7439-89-6	Iron	16700			P
7439-92-1	Lead	96.0			F
7439-95-4	Magnesium	2580			P
7439-96-5	Manganese	260			P
7439-97-6	Mercury	8.4		*	CV
7440-02-0	Nickel	13.0			P
7440-09-7	Potassium	353	B		P
7782-49-2	Selenium	1.2			F
7440-22-4	Silver	1.3	B	N	P
7440-23-5	Sodium	6.0	U		P
7440-28-0	Thallium	0.29	U		F
7440-62-2	Vanadium	28.9			P
7440-66-6	Zinc	138			P
	Cyanide	1.1	U		C

Color Before: BROWN Clarity Before: OPAQUE Texture: COARSE

Color After: COLORLESS Clarity After: CLEAR Artifacts: YES

Comments:

ARTIFACTS: PEBBLES/ROCKS

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3975 S-6

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5.000 (g/mL) G Lab File ID: C5140

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: not dec. 35. Date Analyzed: 09/14/93

GC Column: SP1000 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	15.	U
74-83-9	Bromomethane	15.	U
75-01-4	Vinyl Chloride	15.	U
75-00-3	Chloroethane	15.	U
75-09-2	Methylene Chloride	18.	B
67-64-1	Acetone	27.	
75-15-0	Carbon Disulfide	15.	U
75-35-4	1,1-Dichloroethene	15.	U
75-34-3	1,1-Dichloroethane	15.	U
540-59-0	1,2-Dichloroethene (total)	15.	U
67-66-3	Chloroform	15.	U
107-06-2	1,2-Dichloroethane	15.	U
78-93-3	2-Butanone	15.	U
71-55-6	1,1,1-Trichloroethane	15.	U
56-23-5	Carbon Tetrachloride	15.	U
75-27-4	Bromodichloromethane	15.	U
78-87-5	1,2-Dichloropropane	15.	U
10061-01-5	cis-1,3-Dichloropropene	15.	U
79-01-6	Trichloroethene	15.	U
124-48-1	Dibromochloromethane	15.	U
79-00-5	1,1,2-Trichloroethane	15.	U
71-43-2	Benzene	12.	J
10061-02-6	trans-1,3-Dichloropropene	15.	U
75-25-2	Bromoform	15.	U
108-10-1	4-Methyl-2-Pentanone	15.	U
591-78-6	2-Hexanone	15.	U
127-18-4	Tetrachloroethene	15.	U
79-34-5	1,1,2,2-Tetrachloroethane	15.	U
108-88-3	Toluene	15.	U
108-90-7	Chlorobenzene	15.	U
100-41-4	Ethylbenzene	15.	U
100-42-5	Styrene	15.	U
1330-20-7	Xylene (total)	15.	U

ATTACHMENT D-37

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

3975 S-6

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5.000 (g/mL) G Lab File ID: C5140

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: not dec. 35. Date Analyzed: 09/14/93

GC Column: SP1000 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
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FORM I VOA-TIC 3/90

ATTACHMENT II-38

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3975 S-6

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.0 (g/mL) G Lab File ID: I8362

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: 35. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/04/93

Injection Volume: 2.0 (uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 7.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	2600.	U
111-44-4	bis(2-Chloroethyl)ether	2600.	U
95-57-8	2-Chlorophenol	2600.	U
541-73-1	1,3-Dichlorobenzene	2600.	U
106-46-7	1,4-Dichlorobenzene	2600.	U
95-50-1	1,2-Dichlorobenzene	2600.	U
95-48-7	2-Methylphenol	2600.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	2600.	U
106-44-5	4-Methylphenol	2600.	U
621-64-7	N-Nitroso-di-n-propylamine	2600.	U
67-72-1	Hexachloroethane	2600.	U
98-95-3	Nitrobenzene	2600.	U
78-59-1	Isophorone	2600.	U
88-75-5	2-Nitrophenol	2600.	U
105-67-9	2,4-Dimethylphenol	2600.	U
111-91-1	bis(2-Chloroethoxy)methane	2600.	U
120-83-2	2,4-Dichlorophenol	2600.	U
120-82-1	1,2,4-Trichlorobenzene	2600.	U
91-20-3	Naphthalene	140.	J
106-47-8	4-Chloroaniline	2600.	U
87-68-3	Hexachlorobutadiene	2600.	U
59-50-7	4-Chloro-3-methylphenol	2600.	U
91-57-6	2-Methylnaphthalene	2600.	U
77-47-4	Hexachlorocyclopentadiene	2600.	U
88-06-2	2,4,6-Trichlorophenol	2600.	U
95-95-4	2,4,5-Trichlorophenol	6400.	U
91-58-7	2-Chloronaphthalene	2600.	U
88-74-4	2-Nitroaniline	6400.	U
131-11-3	Dimethylphthalate	2600.	U
208-96-8	Acenaphthylene	2600.	U
606-20-2	2,6-Dinitrotoluene	2600.	U
99-09-2	3-Nitroaniline	6400.	U
83-32-9	Acenaphthene	2600.	U

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

3975 S-6

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.0 (g/mL) G Lab File ID: IS362

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: 35. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/04/93

Injection Volume: 2.0 (uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 7.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	6400.	U
100-02-7	4-Nitrophenol	6400.	U
132-64-9	Dibenzofuran	2600.	U
121-14-2	2,4-Dinitrotoluene	2600.	U
84-66-2	Diethylphthalate	2600.	U
7005-72-3	4-Chlorophenyl-phenylether	2600.	U
86-73-7	Fluorene	2600.	U
100-01-6	4-Nitroaniline	6400.	U
534-52-1	4,6-Dinitro-2-methylphenol	6400.	U
86-30-6	N-Nitrosodiphenylamine (1)	2600.	U
101-55-3	4-Bromophenyl-phenylether	2600.	U
118-74-1	Hexachlorobenzene	2600.	U
87-86-5	Pentachlorophenol	6400.	U
85-01-8	Phenanthrene	1400.	J
120-12-7	Anthracene	330.	J
86-74-8	Carbazole	2600.	U
84-74-2	Di-n-butylphthalate	2600.	U
206-44-0	Fluoranthene	2600.	
129-00-0	Pyrene	4100.	
85-68-7	Butylbenzylphthalate	2600.	U
91-94-1	3,3'-Dichlorobenzidine	2600.	U
56-55-3	Benzo(a)anthracene	4300.	
218-01-9	Chrysene	5100.	
117-81-7	bis(2-Ethylhexyl)phthalate	2600.	U
117-84-0	Di-n-octylphthalate	2600.	U
205-99-2	Benzo(b)fluoranthene	2900.	
207-08-9	Benzo(k)fluoranthene	2700.	
50-32-8	Benzo(a)pyrene	4200.	
193-39-5	Indeno(1,2,3-cd)pyrene	3200.	
53-70-3	Dibenz(a,h)anthracene	1900.	J
191-24-2	Benzo(g,h,i)perylene	3100.	

(1) - Cannot be separated from diphenylamine

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

3975 S-6

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.0 (g/mL) G Lab File ID: I8362

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: 35. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/04/93

Injection Volume: 2.0 (uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 7.6

Number TICs found: 25

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q	
1.	- -	UNKNOWN ACP	.98	1000.	BJ	A
2.	- -	UNKNOWN ACP	1.61	40000.	BJ	A
3.	- -	UNKNOWN	5.31	500.	J	
4.	26730-20-1	METHYL HEXADECANE	15.61	500.	J	
5.	832-69-9	METHYL PHENANTHRENE	17.49	500.	J	
6.	203-64-5	CYCLOPENTAPHENANTHRENE	17.63	500.	J	
7.	4505-48-0	PHENYL INDENE	17.72	1000.	J	
8.	- -	UNKNOWN HYDROCARBON	18.24	800.	J	
9.	57-10-3	HEXADECANOIC ACID	18.40	500.	J	
10.	243-17-4	BENZOFLUORENE	20.44	800.	J	
11.	2381-21-7	METHYL PYRENE	20.64	2000.	J	
12.	- -	METHYL PYRENE ISOMER	20.84	500.	J	
13.	- -	UNKNOWN ALKANE	21.44	500.	J	
14.	205-43-6	BENZONAPHTHOTHIOPHENE	21.87	1000.	J	
15.	24360-63-2	METHYL BENZONAPHTHOTHIOPHENE	22.76	1000.	J	
16.	- -	METHYL BENZONAPHTHOTHIOPHENE	22.94	1000.	J	
17.	1705-84-6	METHYL TRIPHENYLENE	23.51	3000.	J	
18.	- -	UNKNOWN	25.33	1000.	J	
19.	198-55-0	PERYLENE	25.43	7000.	J	
20.	- -	UNKNOWN	26.04	2000.	J	
21.	3343-10-0	METHYL BENZACEANTHRYLENE	26.28	7000.	J	
22.	- -	UNKNOWN ALKANE	26.72	3000.	J	
23.	- -	UNKNOWN	26.88	6000.	J	
24.	- -	UNKNOWN	27.37	1000.	J	
25.	- -	UNKNOWN	27.45	3000.	J	
26.						
27.				85100		
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29.						
30.						

FORM I SV-TIC 3/90

ATTACHMENT II-41

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3975 S-6

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.8 (g/mL) G Lab File ID: 01052

% Moisture: 35. decanted: (Y/N) N Date Received: 09/09/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 09/13/93

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 09/26/93

Injection Volume: 1.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 7.6 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	25.	U
319-85-7	beta-BHC	25.	U
319-86-8	delta-BHC	25.	U
58-89-9	gamma-BHC (Lindane)	25.	U
76-44-8	Heptachlor	25.	U
309-00-2	Aldrin	25.	U
1024-57-3	Heptachlor epoxide	25.	U
959-98-8	Endosulfan I	25.	U
60-57-1	Dieldrin	50.	U
72-55-9	4,4'-DDE	50.	U
72-20-8	Endrin	50.	U
33213-65-9	Endosulfan II	50.	U
72-54-8	4,4'-DDD	26.	J
1031-07-8	Endosulfan Sulfate	50.	U
50-29-3	4,4'-DDT	28.	J P
72-43-5	Methoxychlor	250.	U
53494-70-5	Endrin ketone	81.	P
7421-93-4	Endrin aldehyde	50.	U
5103-71-9	alpha-Chlordane	25.	U
5103-74-2	gamma-Chlordane	25.	U
8001-35-2	Toxaphene	2500.	U
12674-11-2	Aroclor-1016	500.	U
11104-28-2	Aroclor-1221	1000.	U
11141-16-5	Aroclor-1232	500.	U
53469-21-9	Aroclor-1242	500.	U
12672-29-6	Aroclor-1248	500.	U
11097-69-1	Aroclor-1254	500.	U
11096-82-5	Aroclor-1260	500.	U

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

3975 S-6

Lab Name: ICM Contract: A60084

Lab Code: Case No.: SAS No.: SDG No.: 3970

Matrix (soil/water): SOIL Lab Sample ID: 173640

Level (low/med): LOW Date Received: 09/09/93

% Solids: 64.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6290			P
7440-36-0	Antimony	9.8	U		P
7440-38-2	Arsenic	12.8			F
7440-39-3	Barium	119			P
7440-41-7	Beryllium	0.38	B		P
7440-43-9	Cadmium	0.34	U		P
7440-70-2	Calcium	16400			P
7440-47-3	Chromium	22.1			P
7440-48-4	Cobalt	6.2	B		P
7440-50-8	Copper	387			P
7439-89-6	Iron	28600			P
7439-92-1	Lead	334			F
7439-95-4	Magnesium	2060			P
7439-96-5	Manganese	309			P
7439-97-6	Mercury	0.30		*	CV
7440-02-0	Nickel	16.8			P
7440-09-7	Potassium	683	B		P
7782-49-2	Selenium	1.8			F
7440-22-4	Silver	1.1	U	N	P
7440-23-5	Sodium	8.3	U		P
7440-28-0	Thallium	0.40	U		F
7440-62-2	Vanadium	31.9			P
7440-66-6	Zinc	367			P
	Cyanide	1.5	U		C

Color Before: BROWN_BLA Clarity Before: OPAQUE Texture: FINE/L

Color After: YELLOW Clarity After: CLEAR Artifacts: YES

Comments:

ARTIFACTS: PEBBLES/ROCKS

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3976 S-7

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5.000 (g/mL) G Lab File ID: C5133

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: not dec. 22. Date Analyzed: 09/14/93

GC Column: SP1000 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	13.	U
74-83-9	Bromomethane	13.	U
75-01-4	Vinyl Chloride	13.	U
75-00-3	Chloroethane	13.	U
75-09-2	Methylene Chloride	4.	J
67-64-1	Acetone	29.	
75-15-0	Carbon Disulfide	13.	U
75-35-4	1,1-Dichloroethene	13.	U
75-34-3	1,1-Dichloroethane	13.	U
540-59-0	1,2-Dichloroethene (total)	13.	U
67-66-3	Chloroform	13.	U
107-06-2	1,2-Dichloroethane	13.	U
78-93-3	2-Butanone	13.	U
71-55-6	1,1,1-Trichloroethane	13.	U
56-23-5	Carbon Tetrachloride	13.	U
75-27-4	Bromodichloromethane	13.	U
78-87-5	1,2-Dichloropropane	13.	U
10061-01-5	cis-1,3-Dichloropropene	13.	U
79-01-6	Trichloroethene	13.	U
124-48-1	Dibromochloromethane	13.	U
79-00-5	1,1,2-Trichloroethane	13.	U
71-43-2	Benzene	23.	
10061-02-6	trans-1,3-Dichloropropene	13.	U
75-25-2	Bromoform	13.	U
108-10-1	4-Methyl-2-Pentanone	13.	U
591-78-6	2-Hexanone	13.	U
127-18-4	Tetrachloroethene	13.	U
79-34-5	1,1,2,2-Tetrachloroethane	13.	U
108-88-3	Toluene	13.	U
108-90-7	Chlorobenzene	13.	U
100-41-4	Ethylbenzene	13.	U
100-42-5	Styrene	13.	U
1330-20-7	Xylene (total)	13.	U

ATTACHMENT II-44

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

3976

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5.000 (g/mL) G Lab File ID: C5133

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: not dec. 22. Date Analyzed: 09/14/93

GC Column: SP1000 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
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FORM I VOA-TIC 3/90

ATTACHMENT II-45

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

3976 S-7

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.0 (g/mL) G Lab File ID: I8363

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: 22. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/04/93

Injection Volume: 2.0 (uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 7.8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	2100.	U
111-44-4	bis(2-Chloroethyl)ether	2100.	U
95-57-8	2-Chlorophenol	2100.	U
541-73-1	1,3-Dichlorobenzene	2100.	U
106-46-7	1,4-Dichlorobenzene	2100.	U
95-50-1	1,2-Dichlorobenzene	2100.	U
95-48-7	2-Methylphenol	2100.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	2100.	U
106-44-5	4-Methylphenol	2100.	U
621-64-7	N-Nitroso-di-n-propylamine	2100.	U
67-72-1	Hexachloroethane	2100.	U
98-95-3	Nitrobenzene	2100.	U
78-59-1	Isophorone	2100.	U
88-75-5	2-Nitrophenol	2100.	U
105-67-9	2,4-Dimethylphenol	2100.	U
111-91-1	bis(2-Chloroethoxy)methane	2100.	U
120-83-2	2,4-Dichlorophenol	2100.	U
120-82-1	1,2,4-Trichlorobenzene	2100.	U
91-20-3	Naphthalene	2100.	U
106-47-8	4-Chloroaniline	2100.	U
87-68-3	Hexachlorobutadiene	2100.	U
59-50-7	4-Chloro-3-methylphenol	2100.	U
91-57-6	2-Methylnaphthalene	2100.	U
77-47-4	Hexachlorocyclopentadiene	2100.	U
88-06-2	2,4,6-Trichlorophenol	2100.	U
95-95-4	2,4,5-Trichlorophenol	5300.	U
91-58-7	2-Chloronaphthalene	2100.	U
88-74-4	2-Nitroaniline	5300.	U
131-11-3	Dimethylphthalate	2100.	U
208-96-8	Acenaphthylene	2100.	U
606-20-2	2,6-Dinitrotoluene	2100.	U
99-09-2	3-Nitroaniline	5300.	U
83-32-9	Acenaphthene	2100.	U

ATTACHMENT II-46

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

3976 S-1

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.0 (g/mL) G Lab File ID: I8363

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: 22. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/04/93

Injection Volume: 2.0 (uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 7.8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	5300.	U
100-02-7	4-Nitrophenol	5300.	U
132-64-9	Dibenzofuran	2100.	U
121-14-2	2,4-Dinitrotoluene	2100.	U
84-66-2	Diethylphthalate	2100.	U
7005-72-3	4-Chlorophenyl-phenylether	2100.	U
86-73-7	Fluorene	2100.	U
100-01-6	4-Nitroaniline	5300.	U
534-52-1	4,6-Dinitro-2-methylphenol	5300.	U
86-30-6	N-Nitrosodiphenylamine (1)	2100.	U
101-55-3	4-Bromophenyl-phenylether	2100.	U
118-74-1	Hexachlorobenzene	2100.	U
87-86-5	Pentachlorophenol	5300.	U
85-01-8	Phenanthrene	360.	J
120-12-7	Anthracene	2100.	U
86-74-8	Carbazole	2100.	U
84-74-2	Di-n-butylphthalate	2100.	U
206-44-0	Fluoranthene	710.	J
129-00-0	Pyrene	920.	J
85-68-7	Butylbenzylphthalate	2100.	U
91-94-1	3,3'-Dichlorobenzidine	2100.	U
56-55-3	Benzo(a)anthracene	420.	J
218-01-9	Chrysene	570.	J
117-81-7	bis(2-Ethylhexyl)phthalate	2100.	U
117-84-0	Di-n-octylphthalate	2100.	U
205-99-2	Benzo(b)fluoranthene	750.	J
207-08-9	Benzo(k)fluoranthene	290.	J
50-32-8	Benzo(a)pyrene	580.	J
193-39-5	Indeno(1,2,3-cd)pyrene	590.	J
53-70-3	Dibenz(a,h)anthracene	2100.	U
191-24-2	Benzo(g,h,i)perylene	930.	J

(1) - Cannot be separated from diphenylamine

ATTACHMENT II-47

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

3976 S-7

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.0 (g/mL) G Lab File ID: I8363

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: 22. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/04/93

Injection Volume: 2.0 (uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 7.8

Number TICs found: 9 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q	
1.	- -	UNKNOWN ACP	.82	600.	BJ	A
2.	- -	UNKNOWN ACP	1.00	1000.	BJ	A
3.	- -	UNKNOWN ACP	1.61	30000.	BJ	A
4.	- -	UNKNOWN HYDROCARBON	12.09	1000.	J	
5.	- -	UNKNOWN	12.57	600.	J	
6.	- -	UNKNOWN ALKANE	15.67	600.	J	
7.	- -	UNKNOWN ALKANE	16.79	400.	J	
8.	- -	UNKNOWN ALKANE	19.67	400.	J	
9.	- -	UNKNOWN ALKANE	23.08	600.	J	
10.						
11.				35,200		
12.						
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FORM I SV-TIC

II-48 3/90

ATTACHMENT

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3976 S-7

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 01046

% Moisture: 22. decanted: (Y/N) N Date Received: 09/09/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 09/13/93

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 09/26/93

Injection Volume: 1.0 (uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 7.8 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	11.	U
319-85-7	beta-BHC	11.	U
319-86-8	delta-BHC	11.	U
58-89-9	gamma-BHC (Lindane)	11.	U
76-44-8	Heptachlor	11.	U
309-00-2	Aldrin	11.	U
1024-57-3	Heptachlor epoxide	11.	U
959-98-8	Endosulfan I	11.	U
60-57-1	Dieldrin	21.	U
72-55-9	4,4'-DDE	21.	U
72-20-8	Endrin	21.	U
33213-65-9	Endosulfan II	21.	U
72-54-8	4,4'-DDD	21.	U
1031-07-8	Endosulfan Sulfate	21.	U
50-29-3	4,4'-DDT	21.	U
72-43-5	Methoxychlor	110.	U
53494-70-5	Endrin ketone	21.	U
7421-93-4	Endrin aldehyde	21.	U
5103-71-9	alpha-Chlordane	11.	U
5103-74-2	gamma-Chlordane	11.	U
8001-35-2	Toxaphene	1100.	U
12674-11-2	Aroclor-1016	210.	U
11104-28-2	Aroclor-1221	430.	U
11141-16-5	Aroclor-1232	210.	U
53469-21-9	Aroclor-1242	210.	U
12672-29-6	Aroclor-1248	210.	U
11097-69-1	Aroclor-1254	600.	P
11096-82-5	Aroclor-1260	210.	U

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

3976 S7

Lab Name: ICM Contract: A60084

Lab Code: Case No.: SAS No.: SDG No.: 3970

Matrix (soil/water): SOIL Lab Sample ID: 173641

Level (low/med): LOW Date Received: 09/09/93

% Solids: 78.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	13300			P
7440-36-0	Antimony	8.2	U		P
7440-38-2	Arsenic	8.0			F
7440-39-3	Barium	198			P
7440-41-7	Beryllium	0.60	B		P
7440-43-9	Cadmium	0.40	B		P
7440-70-2	Calcium	26300			P
7440-47-3	Chromium	53.4			P
7440-48-4	Cobalt	11.2	B		P
7440-50-8	Copper	98.4			P
7439-89-6	Iron	33600			P
7439-92-1	Lead	294			F
7439-95-4	Magnesium	4190			P
7439-96-5	Manganese	407			P
7439-97-6	Mercury	0.54		*	CV
7440-02-0	Nickel	23.9			P
7440-09-7	Potassium	604	B		P
7782-49-2	Selenium	0.89	U		F
7440-22-4	Silver	0.92	U	N	P
7440-23-5	Sodium	6.9	U		P
7440-28-0	Thallium	0.33	U		F
7440-62-2	Vanadium	71.9			P
7440-66-6	Zinc	360			P
	Cyanide	1.3	U		C

Color Before: BROWN Clarity Before: OPAQUE Texture: COARSE

Color After: COLORLESS Clarity After: CLEAR Artifacts: YES

Comments:

ARTIFACTS: PEBBLES/ROCKS

FORM I - IN

ILM03.0

ATTACHMENT II-50

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3977 S-8

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5.000 (g/mL) G Lab File ID: C5131

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: not dec. 13. Date Analyzed: 09/14/93

GC Column: SP1000 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11.	U
74-83-9	Bromomethane	11.	U
75-01-4	Vinyl Chloride	11.	U
75-00-3	Chloroethane	11.	U
75-09-2	Methylene Chloride	8.	J
67-64-1	Acetone	11.	U
75-15-0	Carbon Disulfide	11.	U
75-35-4	1,1-Dichloroethene	11.	U
75-34-3	1,1-Dichloroethane	11.	U
540-59-0	1,2-Dichloroethene (total)	11.	U
67-66-3	Chloroform	11.	U
107-06-2	1,2-Dichloroethane	11.	U
78-93-3	2-Butanone	11.	U
71-55-6	1,1,1-Trichloroethane	11.	U
56-23-5	Carbon Tetrachloride	11.	U
75-27-4	Bromodichloromethane	11.	U
78-87-5	1,2-Dichloropropane	11.	U
10061-01-5	cis-1,3-Dichloropropene	11.	U
79-01-6	Trichloroethene	11.	U
124-48-1	Dibromochloromethane	11.	U
79-00-5	1,1,2-Trichloroethane	11.	U
71-43-2	Benzene	11.	U
10061-02-6	trans-1,3-Dichloropropene	11.	U
75-25-2	Bromoform	11.	U
108-10-1	4-Methyl-2-Pentanone	11.	U
591-78-6	2-Hexanone	11.	U
127-18-4	Tetrachloroethene	11.	U
79-34-5	1,1,2,2-Tetrachloroethane	11.	U
108-88-3	Toluene	11.	U
108-90-7	Chlorobenzene	11.	U
100-41-4	Ethylbenzene	11.	U
100-42-5	Styrene	11.	U
1330-20-7	Xylene (total)	11.	U

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

3977

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5.000 (g/mL) G Lab File ID: C5131

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: not dec. 13. Date Analyzed: 09/14/93

GC Column: SP1000 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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ATTACHMENT II-52

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

3977 S-8

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.1 (g/mL) G Lab File ID: I8364

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: 13. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/04/93

Injection Volume: 2.0 (uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 7.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	1900.	U
111-44-4	bis(2-Chloroethyl)ether	1900.	U
95-57-8	2-Chlorophenol	1900.	U
541-73-1	1,3-Dichlorobenzene	1900.	U
106-46-7	1,4-Dichlorobenzene	1900.	U
95-50-1	1,2-Dichlorobenzene	1900.	U
95-48-7	2-Methylphenol	1900.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	1900.	U
106-44-5	4-Methylphenol	1900.	U
621-64-7	N-Nitroso-di-n-propylamine	1900.	U
67-72-1	Hexachloroethane	1900.	U
98-95-3	Nitrobenzene	1900.	U
78-59-1	Isophorone	1900.	U
88-75-5	2-Nitrophenol	1900.	U
105-67-9	2,4-Dimethylphenol	1900.	U
111-91-1	bis(2-Chloroethoxy)methane	1900.	U
120-83-2	2,4-Dichlorophenol	1900.	U
120-82-1	1,2,4-Trichlorobenzene	1900.	U
91-20-3	Naphthalene	1900.	U
106-47-8	4-Chloroaniline	1900.	U
87-68-3	Hexachlorobutadiene	1900.	U
59-50-7	4-Chloro-3-methylphenol	1900.	U
91-57-6	2-Methylnaphthalene	1900.	U
77-47-4	Hexachlorocyclopentadiene	1900.	U
88-06-2	2,4,6-Trichlorophenol	1900.	U
95-95-4	2,4,5-Trichlorophenol	4800.	U
91-58-7	2-Chloronaphthalene	1900.	U
88-74-4	2-Nitroaniline	4800.	U
131-11-3	Dimethylphthalate	1900.	U
208-96-8	Acenaphthylene	1900.	U
606-20-2	2,6-Dinitrotoluene	1900.	U
99-09-2	3-Nitroaniline	4800.	U
83-32-9	Acenaphthene	1900.	U

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

3977S-8

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.1 (g/mL) G Lab File ID: I8364

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: 13. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/04/93

Injection Volume: 2.0 (uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 7.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	4800.	U
100-02-7	4-Nitrophenol	4800.	U
132-64-9	Dibenzofuran	1900.	U
121-14-2	2,4-Dinitrotoluene	1900.	U
84-66-2	Diethylphthalate	1900.	U
7005-72-3	4-Chlorophenyl-phenylether	1900.	U
86-73-7	Fluorene	1900.	U
100-01-6	4-Nitroaniline	4800.	U
534-52-1	4,6-Dinitro-2-methylphenol	4800.	U
86-30-6	N-Nitrosodiphenylamine (1)	1900.	U
101-55-3	4-Bromophenyl-phenylether	1900.	U
118-74-1	Hexachlorobenzene	1900.	U
87-86-5	Pentachlorophenol	4800.	U
85-01-8	Phenanthrene	110.	J
120-12-7	Anthracene	1900.	U
86-74-8	Carbazole	1900.	U
84-74-2	Di-n-butylphthalate	1900.	U
206-44-0	Fluoranthene	150.	J
129-00-0	Pyrene	200.	J
85-68-7	Butylbenzylphthalate	1900.	U
91-94-1	3,3'-Dichlorobenzidine	1900.	U
56-55-3	Benzo(a)anthracene	1900.	U
218-01-9	Chrysene	1900.	U
117-81-7	bis(2-Ethylhexyl)phthalate	1900.	U
117-84-0	Di-n-octylphthalate	1900.	U
205-99-2	Benzo(b)fluoranthene	180.	J
207-08-9	Benzo(k)fluoranthene	120.	J
50-32-8	Benzo(a)pyrene	1900.	U
193-39-5	Indeno(1,2,3-cd)pyrene	1900.	U
53-70-3	Dibenz(a,h)anthracene	1900.	U
191-24-2	Benzo(g,h,i)perylene	1900.	U

(1) - Cannot be separated from diphenylamine

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

3977 S-8

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.1 (g/mL) G Lab File ID: IS364

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: 13. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/04/93

Injection Volume: 2.0 (uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 7.5

Number TICs found: 18

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q	
1.	- -	UNKNOWN ACP	.80	800.	J	A
2.	- -	UNKNOWN ACP	.84	600.	J	A
3.	- -	UNKNOWN ACP	.99	1000.	J	A
4.	- -	UNKNOWN ACP	1.04	600.	BJ	A
5.	- -	UNKNOWN ACP	1.15	400.	BJ	A
6.	- -	UNKNOWN ACP	1.62	30000.	BJ	A
7.	- -	UNKNOWN ACP	2.78	2000.	J	A
8.	- -	UNKNOWN	13.74	400.	J	
9.	57-10-3	HEXADECANOIC ACID	18.43	600.	J	
10.	- -	UNKNOWN	25.38	1000.	J	
11.	- -	UNKNOWN	25.45	2000.	J	
12.	- -	UNKNOWN	25.90	1000.	J	
13.	- -	UNKNOWN	25.98	800.	J	
14.	- -	UNKNOWN	26.52	2000.	J	
15.	- -	UNKNOWN	24.08	5000.	J	
16.	- -	UNKNOWN	24.15	2000.	J	
17.	- -	UNKNOWN	26.93	1000.	J	
18.	- -	UNKNOWN ALKANE	27.41	1000.	J	
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FORM I SV-TIC 3/90

ATTACHMENT II-55

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3977 S-6

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.7 (g/mL) G Lab File ID: 01048

% Moisture: 13. decanted: (Y/N) N Date Received: 09/09/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 09/13/93

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 09/26/93

Injection Volume: 1.0 (uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 7.5 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	9.3	U
319-85-7	beta-BHC	9.3	U
319-86-8	delta-BHC	9.3	U
58-89-9	gamma-BHC (Lindane)	9.3	U
76-44-8	Heptachlor	9.3	U
309-00-2	Aldrin	9.3	U
1024-57-3	Heptachlor epoxide	15.	P
959-98-8	Endosulfan I	9.3	U
60-57-1	Dieldrin	24.	P
72-55-9	4,4'-DDE	19.	U
72-20-8	Endrin	17.	J P
33213-65-9	Endosulfan II	19.	U
72-54-8	4,4'-DDD	14.	J P
1031-07-8	Endosulfan Sulfate	19.	U
50-29-3	4,4'-DDT	61.	P
72-43-5	Methoxychlor	93.	U
53494-70-5	Endrin ketone	19.	U
7421-93-4	Endrin aldehyde	19.	U
5103-71-9	alpha-Chlordane	9.3	U
5103-74-2	gamma-Chlordane	9.3	U
8001-35-2	Toxaphene	930.	U
12674-11-2	Aroclor-1016	190.	U
11104-28-2	Aroclor-1221	370.	U
11141-16-5	Aroclor-1232	190.	U
53469-21-9	Aroclor-1242	190.	U
12672-29-6	Aroclor-1248	190.	U
11097-69-1	Aroclor-1254	190.	U
11096-82-5	Aroclor-1260	190.	U

FORM I PEST 3/90

II-56

ATTACHMENT

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

3977 S8

Lab Name: ICM Contract: A60084

Lab Code: Case No.: SAS No.: SDG No.: 3970

Matrix (soil/water): SOIL Lab Sample ID: 173642

Level (low/med): LOW Date Received: 09/09/93

% Solids: 87.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7960			P
7440-36-0	Antimony	7.3	U		P
7440-38-2	Arsenic	9.3			F
7440-39-3	Barium	207			P
7440-41-7	Beryllium	0.46	B		P
7440-43-9	Cadmium	2.2			P
7440-70-2	Calcium	7110			P
7440-47-3	Chromium	58.5			P
7440-48-4	Cobalt	9.6	B		P
7440-50-8	Copper	169			P
7439-89-6	Iron	34000			P
7439-92-1	Lead	594			F
7439-95-4	Magnesium	2780			P
7439-96-5	Manganese	483			P
7439-97-6	Mercury	2.8		*	CV
7440-02-0	Nickel	31.7			P
7440-09-7	Potassium	659	B		P
7782-49-2	Selenium	0.79	U		F
7440-22-4	Silver	0.82	U	N	P
7440-23-5	Sodium	6.2	U		P
7440-28-0	Thallium	0.30	U	W	F
7440-62-2	Vanadium	25.3			P
7440-66-6	Zinc	481			P
	Cyanide	1.1	U		C

Color Before: BROWN Clarity Before: OPAQUE Texture: COARSE

Color After: LT YELLOW Clarity After: CLEAR Artifacts: YES

Comments:

ARTIFACTS: PEBBLES/ROCKS

FORM I - IN

ILM03.0

ATTACHMENT II-57

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3978 S9

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5.000 (g/mL) G Lab File ID: C5123

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: not dec. 17. Date Analyzed: 09/14/93

GC Column: SP1000 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12.	U
74-83-9	Bromomethane	12.	U
75-01-4	Vinyl Chloride	12.	U
75-00-3	Chloroethane	12.	U
75-09-2	Methylene Chloride	12.	U
67-64-1	Acetone	12.	U
75-15-0	Carbon Disulfide	12.	U
75-35-4	1,1-Dichloroethene	12.	U
75-34-3	1,1-Dichloroethane	12.	U
540-59-0	1,2-Dichloroethene (total)	12.	U
67-66-3	Chloroform	12.	U
107-06-2	1,2-Dichloroethane	12.	U
78-93-3	2-Butanone	12.	U
71-55-6	1,1,1-Trichloroethane	12.	U
56-23-5	Carbon Tetrachloride	12.	U
75-27-4	Bromodichloromethane	12.	U
78-87-5	1,2-Dichloropropane	12.	U
10061-01-5	cis-1,3-Dichloropropene	12.	U
79-01-6	Trichloroethene	12.	U
124-48-1	Dibromochloromethane	12.	U
79-00-5	1,1,2-Trichloroethane	12.	U
71-43-2	Benzene	12.	U
10061-02-6	trans-1,3-Dichloropropene	12.	U
75-25-2	Bromoform	12.	U
108-10-1	4-Methyl-2-Pentanone	12.	U
591-78-6	2-Hexanone	12.	U
127-18-4	Tetrachloroethene	12.	U
79-34-5	1,1,2,2-Tetrachloroethane	12.	U
108-88-3	Toluene	12.	U
108-90-7	Chlorobenzene	12.	U
100-41-4	Ethylbenzene	12.	U
100-42-5	Styrene	12.	U
1330-20-7	Xylene (total)	12.	U

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

3978

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5.000 (g/mL) G Lab File ID: C5123

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: not dec. 17. Date Analyzed: 09/14/93

GC Column: SP1000 ID: .2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
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FORM I VOA-TIC 3/90

ATTACHMENT II-59

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3978 S9

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.1 (g/mL) G Lab File ID: I8340

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: 17. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/02/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	400.	U
111-44-4	bis(2-Chloroethyl)ether	400.	U
95-57-8	2-Chlorophenol	400.	U
541-73-1	1,3-Dichlorobenzene	400.	U
106-46-7	1,4-Dichlorobenzene	400.	U
95-50-1	1,2-Dichlorobenzene	400.	U
95-48-7	2-Methylphenol	400.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	400.	U
106-44-5	4-Methylphenol	400.	U
621-64-7	N-Nitroso-di-n-propylamine	400.	U
67-72-1	Hexachloroethane	400.	U
98-95-3	Nitrobenzene	400.	U
78-59-1	Isophorone	400.	U
88-75-5	2-Nitrophenol	400.	U
105-67-9	2,4-Dimethylphenol	400.	U
111-91-1	bis(2-Chloroethoxy)methane	400.	U
120-83-2	2,4-Dichlorophenol	400.	U
120-82-1	1,2,4-Trichlorobenzene	400.	U
91-20-3	Naphthalene	400.	U
106-47-8	4-Chloroaniline	400.	U
87-68-3	Hexachlorobutadiene	400.	U
59-50-7	4-Chloro-3-methylphenol	400.	U
91-57-6	2-Methylnaphthalene	400.	U
77-47-4	Hexachlorocyclopentadiene	400.	U
88-06-2	2,4,6-Trichlorophenol	400.	U
95-95-4	2,4,5-Trichlorophenol	1000.	U
91-58-7	2-Chloronaphthalene	400.	U
88-74-4	2-Nitroaniline	1000.	U
131-11-3	Dimethylphthalate	400.	U
208-96-8	Acenaphthylene	400.	U
606-20-2	2,6-Dinitrotoluene	400.	U
99-09-2	3-Nitroaniline	1000.	U
83-32-9	Acenaphthene	400.	U

ATTACHMENT II-60

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

3978

Lab Name: ICM, Inc. Contract: A60Q84

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.1 (g/mL) G Lab File ID: I8340

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: 17. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/02/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1000.	U
100-02-7	4-Nitrophenol	1000.	U
132-64-9	Dibenzofuran	400.	U
121-14-2	2,4-Dinitrotoluene	400.	U
84-66-2	Diethylphthalate	400.	U
7005-72-3	4-Chlorophenyl-phenylether	400.	U
86-73-7	Fluorene	400.	U
100-01-6	4-Nitroaniline	1000.	U
534-52-1	4,6-Dinitro-2-methylphenol	1000.	U
86-30-6	N-Nitrosodiphenylamine (1)	400.	U
101-55-3	4-Bromophenyl-phenylether	400.	U
118-74-1	Hexachlorobenzene	400.	U
87-86-5	Pentachlorophenol	1000.	U
85-01-8	Phenanthrene	230.	J
120-12-7	Anthracene	45.	J
86-74-8	Carbazole	400.	U
84-74-2	Di-n-butylphthalate	570.	
206-44-0	Fluoranthene	670.	
129-00-0	Pyrene	920.	
85-68-7	Butylbenzylphthalate	400.	U
91-94-1	3,3'-Dichlorobenzidine	400.	U
56-55-3	Benzo(a)anthracene	390.	J
218-01-9	Chrysene	390.	J
117-81-7	bis(2-Ethylhexyl)phthalate	38.	J
117-84-0	Di-n-octylphthalate	400.	U
205-99-2	Benzo(b)fluoranthene	660.	
207-08-9	Benzo(k)fluoranthene	230.	J
50-32-8	Benzo(a)pyrene	350.	J
193-39-5	Indeno(1,2,3-cd)pyrene	150.	J
53-70-3	Dibenz(a,h)anthracene	400.	U
191-24-2	Benzo(g,h,i)perylene	120.	J

(1) - Cannot be separated from diphenylamine

FORM I SV-2

ATTACHMENT II-6 3/90

1F

EPA SAMPLE NO.

3978 S-9

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.1 (g/mL) G Lab File ID: I8340

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: 17. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/02/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.2

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

Number TICs found: 25

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q	
1.	- -	UNKNOWN ACP	.76	200.	J	A
2.	- -	UNKNOWN ACP	.93	300.	J	A
3.	- -	UNKNOWN ACP	.99	100.	BJ	A
4.	- -	UNKNOWN ACP	1.10	80.	BJ	A
5.	- -	UNKNOWN ACP	1.62	9000.	BJ	A
6.	- -	UNKNOWN ACP	2.71	400.	J	A
7.	- -	UNKNOWN ACP	8.79	80.	J	A
8.	- -	UNKNOWN	13.02	100.	BJ	
9.	143-07-7	DODECANOIC ACID	14.11	100.	BJ	
10.	- -	UNKNOWN PHTHALATE	17.27	80.	J	
11.	- -	UNKNOWN	17.61	80.	J	
12.	- -	UNKNOWN PHTHALATE	17.75	400.	J	
13.	- -	UNKNOWN PHTHALATE	18.22	600.	J	
14.	57-10-3	HEXADECANOIC ACID	18.37	400.	J	
15.	- -	UNKNOWN	19.53	200.	J	
16.	243-17-4	BENZOFLUORENE	20.35	200.	J	
17.	- -	BENZOFLUORENE ISOMER	20.51	200.	J	
18.	- -	UNKNOWN ALKANE	21.37	100.	J	
19.	- -	UNKNOWN	22.94	300.	J	
20.	- -	UNKNOWN	24.49	800.	J	
21.	- -	UNKNOWN ALKANE	25.95	900.	J	
22.	- -	UNKNOWN ALKANE	27.28	800.	J	
23.	- -	UNKNOWN	27.97	300.	J	
24.	- -	UNKNOWN	28.16	200.	J	
25.	- -	UNKNOWN ALKANE	28.56	700.	J	
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FORM I SV-TIC ATTACHMENT II-62 3/90

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3978 RE

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970 S-9

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.1 (g/mL) G Lab File ID: I8365

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: 17. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/04/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.2

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG 0

CAS NO.	COMPOUND		
108-95-2	Phenol	400.	U
111-44-4	bis(2-Chloroethyl)ether	400.	U
95-57-8	2-Chlorophenol	400.	U
541-73-1	1,3-Dichlorobenzene	400.	U
106-46-7	1,4-Dichlorobenzene	400.	U
95-50-1	1,2-Dichlorobenzene	400.	U
95-48-7	2-Methylphenol	400.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	400.	U
106-44-5	4-Methylphenol	400.	U
621-64-7	N-Nitroso-di-n-propylamine	400.	U
67-72-1	Hexachloroethane	400.	U
98-95-3	Nitrobenzene	400.	U
78-59-1	Isophorone	400.	U
88-75-5	2-Nitrophenol	400.	U
105-67-9	2,4-Dimethylphenol	400.	U
111-91-1	bis(2-Chloroethoxy)methane	400.	U
120-83-2	2,4-Dichlorophenol	400.	U
120-82-1	1,2,4-Trichlorobenzene	400.	U
91-20-3	Naphthalene	400.	U
106-47-8	4-Chloroaniline	400.	U
87-68-3	Hexachlorobutadiene	400.	U
59-50-7	4-Chloro-3-methylphenol	400.	U
91-57-6	2-Methylnaphthalene	400.	U
77-47-4	Hexachlorocyclopentadiene	400.	U
88-06-2	2,4,6-Trichlorophenol	400.	U
95-95-4	2,4,5-Trichlorophenol	1000.	U
91-58-7	2-Chloronaphthalene	400.	U
88-74-4	2-Nitroaniline	1000.	U
131-11-3	Dimethylphthalate	400.	U
208-96-8	Acenaphthylene	400.	U
606-20-2	2,6-Dinitrotoluene	400.	U
99-09-2	3-Nitroaniline	1000.	U
83-32-9	Acenaphthene	400.	U

ATTACHMENT II-63

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

3978-9 RE

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.1 (g/mL) G Lab File ID: I8365

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: 17. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/04/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1000.	U
100-02-7	4-Nitrophenol	1000.	U
132-64-9	Dibenzofuran	400.	U
121-14-2	2,4-Dinitrotoluene	400.	U
84-66-2	Diethylphthalate	400.	U
7005-72-3	4-Chlorophenyl-phenylether	400.	U
86-73-7	Fluorene	400.	U
100-01-6	4-Nitroaniline	1000.	U
534-52-1	4,6-Dinitro-2-methylphenol	1000.	U
86-30-6	N-Nitrosodiphenylamine (1)	400.	U
101-55-3	4-Bromophenyl-phenylether	400.	U
118-74-1	Hexachlorobenzene	400.	U
87-86-5	Pentachlorophenol	1000.	U
85-01-8	Phenanthrene	220.	J
120-12-7	Anthracene	39.	J
86-74-8	Carbazole	400.	U
84-74-2	Di-n-butylphthalate	540.	
206-44-0	Fluoranthene	530.	
129-00-0	Pyrene	640.	
85-68-7	Butylbenzylphthalate	400.	U
91-94-1	3,3'-Dichlorobenzidine	400.	U
56-55-3	Benzo(a)anthracene	360.	J
218-01-9	Chrysene	380.	J
117-81-7	bis(2-Ethylhexyl)phthalate	400.	U
117-84-0	Di-n-octylphthalate	400.	U
205-99-2	Benzo(b)fluoranthene	220.	J
207-08-9	Benzo(k)fluoranthene	360.	J
50-32-8	Benzo(a)pyrene	330.	J
193-39-5	Indeno(1,2,3-cd)pyrene	480.	
53-70-3	Dibenz(a,h)anthracene	190.	J
191-24-2	Benzo(g,h,i)perylene	350.	J

(1) - Cannot be separated from diphenylamine

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

3978 S-9 RE

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.1 (g/mL) G Lab File ID: I8365

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: 17. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/04/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.2

Number TICs found: 22

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q	
1.	- -	UNKNOWN ACP	.84	200.	J	A
2.	- -	UNKNOWN ACP	.87	100.	J	A
3.	- -	UNKNOWN ACP	1.02	300.	J	A
4.	- -	UNKNOWN ACP	1.07	80.	BJ	A
5.	- -	UNKNOWN ACP	1.18	100.	BJ	A
6.	- -	UNKNOWN ACP	1.77	10000.	BJ	A
7.	- -	UNKNOWN ACP	2.56	80.	J	A
8.	- -	UNKNOWN ACP	2.86	800.	J	A
9.	- -	UNKNOWN PHTHALATE	17.34	80.	J	
10.	- -	UNKNOWN PHTHALATE	17.81	400.	J	
11.	57-10-3	HEXADECANOIC ACID	18.42	200.	J	
12.	243-42-5	BENZONAPHTHOFURAN	19.62	200.	J	
13.	238-84-6	BENZOFLUORENE	20.44	100.	J	
14.	- -	BENZOFLUORENE ISOMER	20.59	80.	J	
15.	- -	UNKNOWN	23.21	100.	J	
16.	- -	UNKNOWN HYDROCARBON	24.77	200.	J	
17.	- -	UNKNOWN HYDROCARBON	26.03	400.	J	
18.	- -	UNKNOWN	26.23	300.	J	
19.	- -	UNKNOWN ALKANE	27.36	400.	J	
20.	- -	UNKNOWN	28.25	300.	J	
21.	- -	UNKNOWN ALKANE	28.65	500.	J	
22.	- -	UNKNOWN	28.85	600.	J	
23.						
24.				15520		
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30.						

FORM I SV-TIC 3/90

ATTACHMENT II-65

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3978 S-9

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.5 (g/mL) G Lab File ID: 01038

% Moisture: 17. decanted: (Y/N) N Date Received: 09/09/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 09/13/93

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 09/26/93

Injection Volume: 1.0 (uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 6.2 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	3.9	U
319-85-7	beta-BHC	3.9	U
319-86-8	delta-BHC	3.9	U
58-89-9	gamma-BHC (Lindane)	3.9	U
76-44-8	Heptachlor	3.9	U
309-00-2	Aldrin	3.9	U
1024-57-3	Heptachlor epoxide	3.9	U
959-98-8	Endosulfan I	3.9	U
60-57-1	Dieldrin	7.9	U
72-55-9	4,4'-DDE	7.9	U
72-20-8	Endrin	7.9	U
33213-65-9	Endosulfan II	7.9	U
72-54-8	4,4'-DDD	7.9	U
1031-07-8	Endosulfan Sulfate	7.9	U
50-29-3	4,4'-DDT	7.9	U
72-43-5	Methoxychlor	39.	U
53494-70-5	Endrin ketone	7.9	U
7421-93-4	Endrin aldehyde	7.9	U
5103-71-9	alpha-Chlordane	3.9	U
5103-74-2	gamma-Chlordane	3.9	U
8001-35-2	Toxaphene	390.	U
12674-11-2	Aroclor-1016	79.	U
11104-28-2	Aroclor-1221	160.	U
11141-16-5	Aroclor-1232	79.	U
53469-21-9	Aroclor-1242	79.	U
12672-29-6	Aroclor-1248	79.	U
11097-69-1	Aroclor-1254	79.	U
11096-82-5	Aroclor-1260	79.	U

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

3978 S-9

Lab Name: ICM Contract: A60084

Lab Code: Case No.: SAS No.: SDG No.: 3970

Matrix (soil/water): SOIL Lab Sample ID: 173643

Level (low/med): LOW Date Received: 09/09/93

% Solids: 83.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	18700			P
7440-36-0	Antimony	7.7	U		P
7440-38-2	Arsenic	6.2			F
7440-39-3	Barium	125			P
7440-41-7	Beryllium	0.71	B		P
7440-43-9	Cadmium	0.26	U		P
7440-70-2	Calcium	983	B		P
7440-47-3	Chromium	20.7			P
7440-48-4	Cobalt	5.4	B		P
7440-50-8	Copper	19.4			P
7439-89-6	Iron	15400			P
7439-92-1	Lead	66.3			F
7439-95-4	Magnesium	2290			P
7439-96-5	Manganese	397			P
7439-97-6	Mercury	0.06	U	*	CV
7440-02-0	Nickel	15.2			P
7440-09-7	Potassium	726	B		P
7782-49-2	Selenium	0.84	U		F
7440-22-4	Silver	0.87	U	N	P
7440-23-5	Sodium	6.5	U		P
7440-28-0	Thallium	0.31	U		F
7440-62-2	Vanadium	27.9			P
7440-66-6	Zinc	77.7			P
	Cyanide	1.2	U		C

Color Before: BROWN Clarity Before: OPAQUE Texture: COARSE

Color After: COLORLESS Clarity After: CLEAR Artifacts: YES

Comments:

ARTIFACTS: PEBBLES/ROCKS

FORM I - IN

ILM03.0

ATTACHMENT II-67

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3979 S-10

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5.000 (g/mL) G Lab File ID: C5124

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: not dec. 16. Date Analyzed: 09/14/93

GC Column: SP1000 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12.	U
74-83-9	Bromomethane	12.	U
75-01-4	Vinyl Chloride	12.	U
75-00-3	Chloroethane	12.	U
75-09-2	Methylene Chloride	2.	BJ
67-64-1	Acetone	12.	U
75-15-0	Carbon Disulfide	12.	U
75-35-4	1,1-Dichloroethene	12.	U
75-34-3	1,1-Dichloroethane	12.	U
540-59-0	1,2-Dichloroethene (total)	12.	U
67-66-3	Chloroform	12.	U
107-06-2	1,2-Dichloroethane	12.	U
78-93-3	2-Butanone	12.	U
71-55-6	1,1,1-Trichloroethane	12.	U
56-23-5	Carbon Tetrachloride	12.	U
75-27-4	Bromodichloromethane	12.	U
78-87-5	1,2-Dichloropropane	12.	U
10061-01-5	cis-1,3-Dichloropropene	12.	U
79-01-6	Trichloroethene	12.	U
124-48-1	Dibromochloromethane	12.	U
79-00-5	1,1,2-Trichloroethane	12.	U
71-43-2	Benzene	12.	U
10061-02-6	trans-1,3-Dichloropropene	12.	U
75-25-2	Bromoform	12.	U
108-10-1	4-Methyl-2-Pentanone	12.	U
591-78-6	2-Hexanone	12.	U
127-18-4	Tetrachloroethene	12.	U
79-34-5	1,1,2,2-Tetrachloroethane	12.	U
108-88-3	Toluene	12.	U
108-90-7	Chlorobenzene	12.	U
100-41-4	Ethylbenzene	12.	U
100-42-5	Styrene	12.	U
1330-20-7	Xylene (total)	12.	U

ATTACHMENT II-67

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

3979 S-10

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5.000 (g/mL) G Lab File ID: C5124

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: not dec. 16. Date Analyzed: 09/14/93

GC Column: SP1000 ID: .2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3979 S-10 RE

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5.000 (g/mL) G Lab File ID: C5134

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: not dec. 16. Date Analyzed: 09/14/93

GC Column: SP1000 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12.	U
74-83-9	Bromomethane	12.	U
75-01-4	Vinyl Chloride	12.	U
75-00-3	Chloroethane	12.	U
75-09-2	Methylene Chloride	5.	J
67-64-1	Acetone	12.	U
75-15-0	Carbon Disulfide	12.	U
75-35-4	1,1-Dichloroethene	12.	U
75-34-3	1,1-Dichloroethane	12.	U
540-59-0	1,2-Dichloroethene (total)	12.	U
67-66-3	Chloroform	12.	U
107-06-2	1,2-Dichloroethane	12.	U
78-93-3	2-Butanone	12.	U
71-55-6	1,1,1-Trichloroethane	12.	U
56-23-5	Carbon Tetrachloride	12.	U
75-27-4	Bromodichloromethane	12.	U
78-87-5	1,2-Dichloropropane	12.	U
10061-01-5	cis-1,3-Dichloropropene	12.	U
79-01-6	Trichloroethene	12.	U
124-48-1	Dibromochloromethane	12.	U
79-00-5	1,1,2-Trichloroethane	12.	U
71-43-2	Benzene	12.	U
10061-02-6	trans-1,3-Dichloropropene	12.	U
75-25-2	Bromoform	12.	U
108-10-1	4-Methyl-2-Pentanone	12.	U
591-78-6	2-Hexanone	12.	U
127-18-4	Tetrachloroethene	12.	U
79-34-5	1,1,2,2-Tetrachloroethane	12.	U
108-88-3	Toluene	12.	U
108-90-7	Chlorobenzene	12.	U
100-41-4	Ethylbenzene	12.	U
100-42-5	Styrene	12.	U
1330-20-7	Xylene (total)	12.	U

FORM I VOA

ATTACHMENT II-70 3/90

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

3979 SAD RE

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5.000 (g/mL) G Lab File ID: C5134

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: not dec. 16. Date Analyzed: 09/14/93

GC Column: SP1000 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
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FORM I VOA-TIC 3/90

ATTACHMENT II-71

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

3979 S-10

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.2 (g/mL) G Lab File ID: I8341

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: 16. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/02/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	390.	U
111-44-4	bis(2-Chloroethyl)ether	390.	U
95-57-8	2-Chlorophenol	390.	U
541-73-1	1,3-Dichlorobenzene	390.	U
106-46-7	1,4-Dichlorobenzene	390.	U
95-50-1	1,2-Dichlorobenzene	390.	U
95-48-7	2-Methylphenol	390.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	390.	U
106-44-5	4-Methylphenol	390.	U
621-64-7	N-Nitroso-di-n-propylamine	390.	U
67-72-1	Hexachloroethane	390.	U
98-95-3	Nitrobenzene	390.	U
78-59-1	Isophorone	390.	U
88-75-5	2-Nitrophenol	390.	U
105-67-9	2,4-Dimethylphenol	390.	U
111-91-1	bis(2-Chloroethoxy)methane	390.	U
120-83-2	2,4-Dichlorophenol	390.	U
120-82-1	1,2,4-Trichlorobenzene	390.	U
91-20-3	Naphthalene	390.	U
106-47-8	4-Chloroaniline	390.	U
87-68-3	Hexachlorobutadiene	390.	U
59-50-7	4-Chloro-3-methylphenol	390.	U
91-57-6	2-Methylnaphthalene	390.	U
77-47-4	Hexachlorocyclopentadiene	390.	U
88-06-2	2,4,6-Trichlorophenol	390.	U
95-95-4	2,4,5-Trichlorophenol	980.	U
91-58-7	2-Chloronaphthalene	390.	U
88-74-4	2-Nitroaniline	980.	U
131-11-3	Dimethylphthalate	390.	U
208-96-8	Acenaphthylene	34.	J
606-20-2	2,6-Dinitrotoluene	390.	U
99-09-2	3-Nitroaniline	980.	U
83-32-9	Acenaphthene	390.	U

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

3979

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.2 (g/mL) G Lab File ID: I8341

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: 16. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/02/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	980.	U
100-02-7	4-Nitrophenol	980.	U
132-64-9	Dibenzofuran	390.	U
121-14-2	2,4-Dinitrotoluene	390.	U
84-66-2	Diethylphthalate	390.	U
7005-72-3	4-Chlorophenyl-phenylether	390.	U
86-73-7	Fluorene	390.	U
100-01-6	4-Nitroaniline	980.	U
534-52-1	4,6-Dinitro-2-methylphenol	980.	U
86-30-6	N-Nitrosodiphenylamine (1)	390.	U
101-55-3	4-Bromophenyl-phenylether	390.	U
118-74-1	Hexachlorobenzene	390.	U
87-86-5	Pentachlorophenol	980.	U
85-01-8	Phenanthrene	300.	J
120-12-7	Anthracene	35.	J
86-74-8	Carbazole	27.	J
84-74-2	Di-n-butylphthalate	390.	U
206-44-0	Fluoranthene	570.	
129-00-0	Pyrene	810.	
85-68-7	Butylbenzylphthalate	390.	U
91-94-1	3,3'-Dichlorobenzidine	390.	U
56-55-3	Benzo(a)anthracene	240.	J
218-01-9	Chrysene	310.	J
117-81-7	bis(2-Ethylhexyl)phthalate	56.	J
117-84-0	Di-n-octylphthalate	390.	U
205-99-2	Benzo(b)fluoranthene	550.	
207-08-9	Benzo(k)fluoranthene	160.	J
50-32-8	Benzo(a)pyrene	280.	J
193-39-5	Indeno(1,2,3-cd)pyrene	120.	J
53-70-3	Dibenz(a,h)anthracene	390.	U
191-24-2	Benzo(g,h,i)perylene	110.	J

(1) - Cannot be separated from diphenylamine

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

3979

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.2 (g/mL) G Lab File ID: IS341

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: 16. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/02/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.6

Number TICs found: 27

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	- -	UNKNOWN ACP	.76	200.	BJ A
2.	- -	UNKNOWN ACP	.93	200.	BJ A
3.	- -	UNKNOWN ACP	1.59	10000.	BJ A
4.	- -	UNKNOWN ACP	2.66	80.	J A
5.	- -	UNKNOWN	12.98	100.	BJ
6.	4505-48-0	PHENYL INDENE	17.35	100.	J
7.	84-65-1	ANTHRACENEDIONE	18.10	200.	J
8.	57-10-3	HEXADECANOIC ACID	18.39	900.	J
9.	3674-66-6	DIMETHYL PHENANTHRENE	18.74	100.	J
10.	243-42-5	BENZONAPHTHOFURAN	19.52	80.	J
11.	- -	BENZONAPHTHOFURAN ISOMER	19.81	100.	J
12.	243-17-4	BENZOFLUORENE	20.34	100.	J
13.	- -	BENZOFLUORENE ISOMER	20.49	200.	J
14.	- -	UNKNOWN ALKANE	21.36	100.	J
15.	- -	UNKNOWN ALKANE	22.20	80.	J
16.	- -	UNKNOWN	22.92	400.	J
17.	- -	UNKNOWN PHTHALATE	23.00	300.	J
18.	- -	UNKNOWN ALKANE	23.78	100.	J
19.	- -	UNKNOWN	24.01	200.	J
20.	- -	UNKNOWN	24.49	900.	J
21.	- -	UNKNOWN ALKANE	24.53	300.	J
22.	- -	UNKNOWN ALKANE	25.95	1000.	J
23.	- -	UNKNOWN ALKANE	26.62	200.	J
24.	- -	UNKNOWN	26.87	200.	J
25.	- -	UNKNOWN ALKANE	27.29	2000.	J
26.	- -	UNKNOWN	28.16	300.	J
27.	- -	UNKNOWN ALKANE	28.55	500.	J
28.					
29.					
30.					

FORM I SV-TIC ATTACHMENT II-74 3/90

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3979 RE

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970 S-10

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.2 (g/mL) G Lab File ID: I8366

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: 16. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/04/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	390.	U
111-44-4	bis(2-Chloroethyl)ether	390.	U
95-57-8	2-Chlorophenol	390.	U
541-73-1	1,3-Dichlorobenzene	390.	U
106-46-7	1,4-Dichlorobenzene	390.	U
95-50-1	1,2-Dichlorobenzene	390.	U
95-48-7	2-Methylphenol	390.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	390.	U
106-44-5	4-Methylphenol	390.	U
621-64-7	N-Nitroso-di-n-propylamine	390.	U
67-72-1	Hexachloroethane	390.	U
98-95-3	Nitrobenzene	390.	U
78-59-1	Isophorone	390.	U
88-75-5	2-Nitrophenol	390.	U
105-67-9	2,4-Dimethylphenol	390.	U
111-91-1	bis(2-Chloroethoxy)methane	390.	U
120-83-2	2,4-Dichlorophenol	390.	U
120-82-1	1,2,4-Trichlorobenzene	390.	U
91-20-3	Naphthalene	390.	U
106-47-8	4-Chloroaniline	390.	U
87-68-3	Hexachlorobutadiene	390.	U
59-50-7	4-Chloro-3-methylphenol	390.	U
91-57-6	2-Methylnaphthalene	390.	U
77-47-4	Hexachlorocyclopentadiene	390.	U
88-06-2	2,4,6-Trichlorophenol	390.	U
95-95-4	2,4,5-Trichlorophenol	980.	U
91-58-7	2-Chloronaphthalene	390.	U
88-74-4	2-Nitroaniline	980.	U
131-11-3	Dimethylphthalate	390.	U
208-96-8	Acenaphthylene	390.	U
606-20-2	2,6-Dinitrotoluene	390.	U
99-09-2	3-Nitroaniline	980.	U
83-32-9	Acenaphthene	390.	U

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

3979 RE
S-10

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.2 (g/mL) G Lab File ID: I8366

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: 16. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/04/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	980.	U
100-02-7	4-Nitrophenol	980.	U
132-64-9	Dibenzofuran	390.	U
121-14-2	2,4-Dinitrotoluene	390.	U
84-66-2	Diethylphthalate	390.	U
7005-72-3	4-Chlorophenyl-phenylether	390.	U
86-73-7	Fluorene	390.	U
100-01-6	4-Nitroaniline	980.	U
534-52-1	4,6-Dinitro-2-methylphenol	980.	U
86-30-6	N-Nitrosodiphenylamine (1)	390.	U
101-55-3	4-Bromophenyl-phenylether	390.	U
118-74-1	Hexachlorobenzene	390.	U
87-86-5	Pentachlorophenol	980.	U
85-01-8	Phenanthrene	280.	J
120-12-7	Anthracene	32.	J
86-74-8	Carbazole	390.	U
84-74-2	Di-n-butylphthalate	390.	U
206-44-0	Fluoranthene	440.	
129-00-0	Pyrene	590.	
85-68-7	Butylbenzylphthalate	390.	U
91-94-1	3,3'-Dichlorobenzidine	390.	U
56-55-3	Benzo(a)anthracene	220.	J
218-01-9	Chrysene	280.	J
117-81-7	bis(2-Ethylhexyl)phthalate	390.	U
117-84-0	Di-n-octylphthalate	390.	U
205-99-2	Benzo(b)fluoranthene	190.	J
207-08-9	Benzo(k)fluoranthene	390.	U
50-32-8	Benzo(a)pyrene	230.	J
193-39-5	Indeno(1,2,3-cd)pyrene	390.	J
53-70-3	Dibenz(a,h)anthracene	140.	J
191-24-2	Benzo(g,h,i)perylene	290.	J

(1) - Cannot be separated from diphenylamine

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

3979 RE
S-10

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.2 (g/mL) G Lab File ID: I8366

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: 16. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/04/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.6

Number TICs found: 23

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q	
1.	- -	UNKNOWN ACP	.83	200.	J	A
2.	- -	UNKNOWN ACP	.86	100.	J	A
3.	- -	UNKNOWN ACP	1.00	300.	BJ	A
4.	- -	UNKNOWN ACP	1.17	100.	BJ	A
5.	- -	UNKNOWN ACP	1.70	20000.	BJ	A
6.	- -	UNKNOWN ACP	1.77	80.	J	A
7.	- -	UNKNOWN	2.54	100.	J	
8.	- -	UNKNOWN ACP	2.80	500.	J	A
9.	84-65-1	ANTHRACENEDIONE	18.21	100.	J	
10.	57-10-3	HEXADECANOIC ACID	18.43	400.	J	
11.	243-42-5	BENZONAPHTHOFURAN	19.62	80.	J	
12.	2381-21-7	METHYL PYRENE	20.43	100.	J	
13.	- -	UNKNOWN ALKANE	20.57	200.	J	
14.	- -	UNKNOWN ALKANE	21.44	100.	J	
15.	- -	UNKNOWN	21.52	80.	J	
16.	- -	UNKNOWN HYDROCARBON	21.95	100.	J	
17.	- -	UNKNOWN ALKANE	22.26	200.	J	
18.	- -	UNKNOWN PHTHALATE	23.08	200.	J	
19.	- -	UNKNOWN	23.20	200.	J	
20.	- -	UNKNOWN ALKANE	24.61	200.	J	
21.	- -	UNKNOWN	24.78	300.	J	
22.	- -	UNKNOWN ALKANE	26.03	400.	J	
23.	- -	UNKNOWN ALKANE	27.37	600.	J	
24.						
25.				29640		
26.						
27.						
28.						
29.						
30.						

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3979 S-10

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.8 (g/mL) G Lab File ID: 01039

% Moisture: 16. decanted: (Y/N) N Date Received: 09/09/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 09/13/93

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 09/26/93

Injection Volume: 1.0 (uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 7.6 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	3.8	U
319-85-7	beta-BHC	3.8	U
319-86-8	delta-BHC	3.8	U
58-89-9	gamma-BHC (Lindane)	3.8	U
76-44-8	Heptachlor	3.8	U
309-00-2	Aldrin	3.8	U
1024-57-3	Heptachlor epoxide	11.	P
959-98-8	Endosulfan I	3.8	U
60-57-1	Dieldrin	7.7	U
72-55-9	4,4'-DDE	81.	
72-20-8	Endrin	7.7	U
33213-65-9	Endosulfan II	7.7	U
72-54-8	4,4'-DDD	19.	
1031-07-8	Endosulfan Sulfate	7.7	U
50-29-3	4,4'-DDT	120.	
72-43-5	Methoxychlor	38.	U
53494-70-5	Endrin ketone	7.7	U
7421-93-4	Endrin aldehyde	7.7	U
5103-71-9	alpha-Chlordane	26.	
5103-74-2	gamma-Chlordane	13.	P
8001-35-2	Toxaphene	380.	U
12674-11-2	Aroclor-1016	77.	U
11104-28-2	Aroclor-1221	150.	U
11141-16-5	Aroclor-1232	77.	U
53469-21-9	Aroclor-1242	77.	U
12672-29-6	Aroclor-1248	77.	U
11097-69-1	Aroclor-1254	77.	U
11096-82-5	Aroclor-1260	77.	U

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

3979 S-10

Lab Name: ICM Contract: A60084

Lab Code: Case No.: SAS No.: SDG No.: 3970

Matrix (soil/water): SOIL Lab Sample ID: 173644

Level (low/med): LOW Date Received: 09/09/93

% Solids: 84.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	16500			P
7440-36-0	Antimony	7.5	U		P
7440-38-2	Arsenic	12.0			F
7440-39-3	Barium	181			P
7440-41-7	Beryllium	0.68	B		P
7440-43-9	Cadmium	0.26	U		P
7440-70-2	Calcium	5860			P
7440-47-3	Chromium	29.2			P
7440-48-4	Cobalt	6.4	B		P
7440-50-8	Copper	60.5			P
7439-89-6	Iron	18500			P
7439-92-1	Lead	212			F
7439-95-4	Magnesium	2710			P
7439-96-5	Manganese	515			P
7439-97-6	Mercury	0.31		*	CV
7440-02-0	Nickel	18.3			P
7440-09-7	Potassium	858	B		P
7782-49-2	Selenium	1.2			F
7440-22-4	Silver	0.85	U	N	P
7440-23-5	Sodium	6.4	U		P
7440-28-0	Thallium	0.31	U		F
7440-62-2	Vanadium	32.6			P
7440-66-6	Zinc	232			P
	Cyanide	1.2	U		C

Color Before: BROWN Clarity Before: OPAQUE Texture: COARSE

Color After: COLORLESS Clarity After: CLEAR Artifacts: YES

Comments:

ARTIFACTS: PEBBLES/ROCKS

FORM I - IN

ILM03.0

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3980 S-11

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5.000 (g/mL) G Lab File ID: C5125

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: not dec. 19. Date Analyzed: 09/14/93

GC Column: SP1000 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12.	U
74-83-9	Bromomethane	12.	U
75-01-4	Vinyl Chloride	12.	U
75-00-3	Chloroethane	12.	U
75-09-2	Methylene Chloride	2.	BJ
67-64-1	Acetone	12.	U
75-15-0	Carbon Disulfide	12.	U
75-35-4	1,1-Dichloroethene	12.	U
75-34-3	1,1-Dichloroethane	12.	U
540-59-0	1,2-Dichloroethene (total)	12.	U
67-66-3	Chloroform	12.	U
107-06-2	1,2-Dichloroethane	12.	U
78-93-3	2-Butanone	12.	U
71-55-6	1,1,1-Trichloroethane	12.	U
56-23-5	Carbon Tetrachloride	12.	U
75-27-4	Bromodichloromethane	12.	U
78-87-5	1,2-Dichloropropane	12.	U
10061-01-5	cis-1,3-Dichloropropene	12.	U
79-01-6	Trichloroethene	12.	U
124-48-1	Dibromochloromethane	12.	U
79-00-5	1,1,2-Trichloroethane	12.	U
71-43-2	Benzene	12.	U
10061-02-6	trans-1,3-Dichloropropene	12.	U
75-25-2	Bromoform	12.	U
108-10-1	4-Methyl-2-Pentanone	12.	U
591-78-6	2-Hexanone	12.	U
127-18-4	Tetrachloroethene	12.	U
79-34-5	1,1,2,2-Tetrachloroethane	12.	U
108-88-3	Toluene	12.	U
108-90-7	Chlorobenzene	12.	U
100-41-4	Ethylbenzene	12.	U
100-42-5	Styrene	12.	U
1330-20-7	Xylene (total)	12.	U

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

3980

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5.000 (g/mL) G Lab File ID: C5125

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: not dec. 19. Date Analyzed: 09/14/93

GC Column: SP1000 ID: .2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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3.				
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FORM I VOA-TIC 3/90

ATTACHMENT II-81

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3980 RE

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5.000 (g/mL) G Lab File ID: C5135

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: not dec. 19. Date Analyzed: 09/14/93

GC Column: SP1000 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12.	U
74-83-9	Bromomethane	12.	U
75-01-4	Vinyl Chloride	12.	U
75-00-3	Chloroethane	12.	U
75-09-2	Methylene Chloride	4.	J
67-64-1	Acetone	12.	U
75-15-0	Carbon Disulfide	12.	U
75-35-4	1,1-Dichloroethene	12.	U
75-34-3	1,1-Dichloroethane	12.	U
540-59-0	1,2-Dichloroethene (total)	12.	U
67-66-3	Chloroform	12.	U
107-06-2	1,2-Dichloroethane	12.	U
78-93-3	2-Butanone	12.	U
71-55-6	1,1,1-Trichloroethane	12.	U
56-23-5	Carbon Tetrachloride	12.	U
75-27-4	Bromodichloromethane	12.	U
78-87-5	1,2-Dichloropropane	12.	U
10061-01-5	cis-1,3-Dichloropropene	12.	U
79-01-6	Trichloroethene	12.	U
124-48-1	Dibromochloromethane	12.	U
79-00-5	1,1,2-Trichloroethane	12.	U
71-43-2	Benzene	12.	U
10061-02-6	trans-1,3-Dichloropropene	12.	U
75-25-2	Bromoform	12.	U
108-10-1	4-Methyl-2-Pentanone	12.	U
591-78-6	2-Hexanone	12.	U
127-18-4	Tetrachloroethene	12.	U
79-34-5	1,1,2,2-Tetrachloroethane	12.	U
108-88-3	Toluene	12.	U
108-90-7	Chlorobenzene	12.	U
100-41-4	Ethylbenzene	12.	U
100-42-5	Styrene	12.	U
1330-20-7	Xylene (total)	12.	U

ATTACHMENT II-82

FORM I VOA 3/90

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

3980 RE

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5.000 (g/mL) G Lab File ID: C5135

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: not dec. 19. Date Analyzed: 09/14/93

GC Column: SP1000 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
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FORM I VOA-TIC 3/90

ATTACHMENT II-83

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3980 S-11

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.0 (g/mL) G Lab File ID: I8342

Level: (low/med) LOW Date Received: 09/09/93

Moisture: 19. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/03/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	410.	U
111-44-4	bis(2-Chloroethyl)ether	410.	U
95-57-8	2-Chlorophenol	410.	U
541-73-1	1,3-Dichlorobenzene	410.	U
106-46-7	1,4-Dichlorobenzene	410.	U
95-50-1	1,2-Dichlorobenzene	410.	U
95-48-7	2-Methylphenol	410.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	410.	U
106-44-5	4-Methylphenol	410.	U
621-64-7	N-Nitroso-di-n-propylamine	410.	U
67-72-1	Hexachloroethane	410.	U
98-95-3	Nitrobenzene	410.	U
78-59-1	Isophorone	410.	U
88-75-5	2-Nitrophenol	410.	U
105-67-9	2,4-Dimethylphenol	410.	U
111-91-1	bis(2-Chloroethoxy)methane	410.	U
120-83-2	2,4-Dichlorophenol	410.	U
120-82-1	1,2,4-Trichlorobenzene	410.	U
91-20-3	Naphthalene	25.	J
106-47-8	4-Chloroaniline	410.	U
87-68-3	Hexachlorobutadiene	410.	U
59-50-7	4-Chloro-3-methylphenol	410.	U
91-57-6	2-Methylnaphthalene	410.	U
77-47-4	Hexachlorocyclopentadiene	410.	U
88-06-2	2,4,6-Trichlorophenol	410.	U
95-95-4	2,4,5-Trichlorophenol	1000.	U
91-58-7	2-Chloronaphthalene	410.	U
88-74-4	2-Nitroaniline	1000.	U
131-11-3	Dimethylphthalate	410.	U
208-96-8	Acenaphthylene	88.	J
606-20-2	2,6-Dinitrotoluene	410.	U
99-09-2	3-Nitroaniline	1000.	U
83-32-9	Acenaphthene	53.	J

ATTACHMENT II-84

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

3980

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.0 (g/mL) G Lab File ID: I8342

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: 19. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/03/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1000.	U
100-02-7	4-Nitrophenol	1000.	U
132-64-9	Dibenzofuran	24.	J
121-14-2	2,4-Dinitrotoluene	410.	U
84-66-2	Diethylphthalate	410.	U
7005-72-3	4-Chlorophenyl-phenylether	410.	U
86-73-7	Fluorene	67.	J
100-01-6	4-Nitroaniline	1000.	U
534-52-1	4,6-Dinitro-2-methylphenol	1000.	U
86-30-6	N-Nitrosodiphenylamine (1)	410.	U
101-55-3	4-Bromophenyl-phenylether	410.	U
118-74-1	Hexachlorobenzene	410.	U
87-86-5	Pentachlorophenol	1000.	U
85-01-8	Phenanthrene	940.	
120-12-7	Anthracene	140.	J
86-74-8	Carbazole	92.	J
84-74-2	Di-n-butylphthalate	410.	U
206-44-0	Fluoranthene	1700.	
129-00-0	Pyrene	2700.	
85-68-7	Butylbenzylphthalate	410.	U
91-94-1	3,3'-Dichlorobenzidine	410.	U
56-55-3	Benzo(a)anthracene	830.	
218-01-9	Chrysene	980.	
117-81-7	bis(2-Ethylhexyl)phthalate	160.	J
117-84-0	Di-n-octylphthalate	410.	U
205-99-2	Benzo(b)fluoranthene	1700.	
207-08-9	Benzo(k)fluoranthene	680.	
50-32-8	Benzo(a)pyrene	910.	
193-39-5	Indeno(1,2,3-cd)pyrene	390.	J
53-70-3	Dibenz(a,h)anthracene	120.	J
191-24-2	Benzo(g,h,i)perylene	310.	J

(1) - Cannot be separated from diphenylamine

FORM I SV-2 3/90

ATTACHMENT II-85

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

3980

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.0 (g/mL) G Lab File ID: I8342

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: 19. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/03/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.8

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

Number TICs found: 25

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q	
1.	- -	UNKNOWN ACP	.76	200.	BJ	A
2.	- -	UNKNOWN ACP	.93	300.	BJ	A
3.	- -	UNKNOWN ACP	1.63	9000.	BJ	A
4.	- -	UNKNOWN	2.72	600.	J	
5.	832-64-4	METHYL PHENANTHRENE	17.35	200.	J	
6.	- -	METHYL PHENANTHRENE ISOMER	17.41	200.	J	
7.	203-64-5	CYCLOPENTAPHENANTHRENE	17.54	200.	J	
8.	1961-96-2	PHENYL INDENE	17.59	200.	J	
9.	84-65-1	ANTHRACENEDIONE	18.13	400.	J	
10.	57-10-3	HEXADECANOIC ACID	18.39	700.	J	
11.	3674-66-6	DIMETHYL PHENANTHRENE	18.74	200.	J	
12.	243-42-5	BENZONAPHTHOFURAN	19.53	200.	J	
13.	- -	BENZONAPHTHOFURAN ISOMER	19.82	200.	J	
14.	238-84-6	BENZOFLUORENE	20.10	100.	J	
15.	2381-21-7	METHYL PYRENE	20.35	400.	J	
16.	- -	METHYL PYRENE ISOMER	20.53	300.	J	
17.	- -	UNKNOWN	21.56	100.	J	
18.	195-19-7	BENZOPHENANTHRENE	21.86	200.	J	
19.	- -	UNKNOWN	22.93	300.	J	
20.	- -	UNKNOWN ALKANE	23.00	200.	J	
21.	- -	UNKNOWN	24.48	800.	J	
22.	192-97-2	BENZOPYRENE	25.25	500.	J	
23.	- -	UNKNOWN ALKANE	25.95	2000.	J	
24.	- -	UNKNOWN ALKANE	27.28	2000.	J	
25.	- -	UNKNOWN ALKANE	28.56	900.	J	
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27.						
28.						
29.						
30.						

FORM I SV-TIC ATTACHMENT II-86 3/90

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3980 RE

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970 S-11

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.0 (g/mL) G Lab File ID: I8367

Level: (low/med) LOW Date Received: 09/09/93

Moisture: 19. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/04/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	410.	U
111-44-4	bis(2-Chloroethyl)ether	410.	U
95-57-8	2-Chlorophenol	410.	U
541-73-1	1,3-Dichlorobenzene	410.	U
106-46-7	1,4-Dichlorobenzene	410.	U
95-50-1	1,2-Dichlorobenzene	410.	U
95-48-7	2-Methylphenol	410.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	410.	U
106-44-5	4-Methylphenol	410.	U
621-64-7	N-Nitroso-di-n-propylamine	410.	U
67-72-1	Hexachloroethane	410.	U
98-95-3	Nitrobenzene	410.	U
78-59-1	Isophorone	410.	U
88-75-5	2-Nitrophenol	410.	U
105-67-9	2,4-Dimethylphenol	410.	U
111-91-1	bis(2-Chloroethoxy)methane	410.	U
120-83-2	2,4-Dichlorophenol	410.	U
120-82-1	1,2,4-Trichlorobenzene	410.	U
91-20-3	Naphthalene	23.	J
106-47-8	4-Chloroaniline	410.	U
87-68-3	Hexachlorobutadiene	410.	U
59-50-7	4-Chloro-3-methylphenol	410.	U
91-57-6	2-Methylnaphthalene	410.	U
77-47-4	Hexachlorocyclopentadiene	410.	U
88-06-2	2,4,6-Trichlorophenol	410.	U
95-95-4	2,4,5-Trichlorophenol	1000.	U
91-58-7	2-Chloronaphthalene	410.	U
88-74-4	2-Nitroaniline	1000.	U
131-11-3	Dimethylphthalate	410.	U
208-96-8	Acenaphthylene	31.	J
606-20-2	2,6-Dinitrotoluene	410.	U
99-09-2	3-Nitroaniline	1000.	U
83-32-9	Acenaphthene	46.	J

ATTACHMENT II-87

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

3980 RE

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.0 (g/mL) G Lab File ID: I8367

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: 19. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/04/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1000.	U
100-02-7	4-Nitrophenol	1000.	U
132-64-9	Dibenzofuran	22.	J
121-14-2	2,4-Dinitrotoluene	410.	U
84-66-2	Diethylphthalate	410.	U
7005-72-3	4-Chlorophenyl-phenylether	410.	U
86-73-7	Fluorene	58.	J
100-01-6	4-Nitroaniline	1000.	U
534-52-1	4,6-Dinitro-2-methylphenol	1000.	U
86-30-6	N-Nitrosodiphenylamine (1)	410.	U
101-55-3	4-Bromophenyl-phenylether	410.	U
118-74-1	Hexachlorobenzene	410.	U
87-86-5	Pentachlorophenol	1000.	U
85-01-8	Phenanthrene	980.	
120-12-7	Anthracene	170.	J
86-74-8	Carbazole	72.	J
84-74-2	Di-n-butylphthalate	410.	U
206-44-0	Fluoranthene	1500.	
129-00-0	Pyrene	2000.	
85-68-7	Butylbenzylphthalate	410.	U
91-94-1	3,3'-Dichlorobenzidine	410.	U
56-55-3	Benzo(a)anthracene	810.	
218-01-9	Chrysene	1000.	
117-81-7	bis(2-Ethylhexyl)phthalate	92.	J
117-84-0	Di-n-octylphthalate	410.	U
205-99-2	Benzo(b)fluoranthene	670.	
207-08-9	Benzo(k)fluoranthene	410.	U
50-32-8	Benzo(a)pyrene	860.	
193-39-5	Indeno(1,2,3-cd)pyrene	1300.	
53-70-3	Dibenz(a,h)anthracene	320.	J
191-24-2	Benzo(g,h,i)perylene	1100.	

(1) - Cannot be separated from diphenylamine

FORM I SV-2 3/90

ATTACHMENT II-88

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

3980 RE

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.0 (g/mL) G Lab File ID: I8367

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: 19. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/04/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.8

Number TICs found: 28

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q	
1.	- -	UNKNOWN ACP	.84	200.	J	A
2.	- -	UNKNOWN ACP	1.02	400.	J	A
3.	- -	UNKNOWN ACP	1.07	100.	BJ	A
4.	- -	UNKNOWN ACP	1.18	200.	BJ	A
5.	- -	UNKNOWN ACP	1.77	10000.	BJ	A
6.	- -	UNKNOWN ACP	2.56	80.	J	A
7.	- -	UNKNOWN ACP	2.86	900.	J	A
8.	613-12-7	METHYL ANTHRACENE	17.45	200.	J	
9.	1961-96-2	PHENYL INDENE	17.50	200.	J	
10.	203-64-5	CYCLOPENTAPHENANTHRENE	17.63	200.	J	
11.	832-71-3	METHYL PHENANTHRENE	17.73	200.	J	
12.	- -	UNKNOWN	18.23	400.	J	
13.	57-10-3	HEXANDECANOIC ACID	18.42	500.	J	
14.	3674-66-6	DIMETHYL PHENANTHRENE	18.82	200.	J	
15.	5737-13-3	CYCLOPENTA(DEF)PHENANTHRENON	18.91	200.	J	
16.	243-42-5	BENZONAPHTHOFURAN	19.82	300.	J	
17.	- -	BENZONAPHTHOFURAN ISOMER	19.92	200.	J	
18.	243-17-4	BENZOFLUORENE	20.44	300.	J	
19.	2381-21-7	METHYL PYRENE	20.63	200.	J	
20.	203-12-3	BENZOFLUORANTHENE	21.95	200.	J	
21.	- -	UNKNOWN	22.25	200.	J	
22.	- -	UNKNOWN	23.18	200.	J	
23.	- -	UNKNOWN	23.73	200.	J	
24.	- -	UNKNOWN	24.79	500.	J	
25.	205-82-3	BENZO[J]FLUORANTHENE	25.40	700.	J	
26.	- -	UNKNOWN ALKANE	26.03	700.	J	
27.	- -	UNKNOWN ALKANE	27.36	1000.	J	
28.	- -	UNKNOWN ALKANE	28.66	400.	J	
29.						
30.						

19080

FORM I SV-TIC 3/90

ATTACHMENT II-89

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3980 S-11

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.2 (g/mL) G Lab File ID: 01041

% Moisture: 19. decanted: (Y/N) N Date Received: 09/09/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 09/13/93

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 09/26/93

Injection Volume: 1.0 (uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 6.8 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	10.	U
319-85-7	beta-BHC	10.	U
319-86-8	delta-BHC	10.	U
58-89-9	gamma-BHC (Lindane)	10.	U
76-44-8	Heptachlor	10.	U
309-00-2	Aldrin	10.	U
1024-57-3	Heptachlor epoxide	10.	U
959-98-8	Endosulfan I	10.	U
60-57-1	Dieldrin	21.	U
72-55-9	4,4'-DDE	130.	
72-20-8	Endrin	21.	U
33213-65-9	Endosulfan II	21.	U
72-54-8	4,4'-DDD	37.	
1031-07-8	Endosulfan Sulfate	21.	U
50-29-3	4,4'-DDT	230.	
72-43-5	Methoxychlor	100.	U
53494-70-5	Endrin ketone	21.	U
7421-93-4	Endrin aldehyde	21.	U
5103-71-9	alpha-Chlordane	14.	P
5103-74-2	gamma-Chlordane	10.	U
8001-35-2	Toxaphene	1000.	U
12674-11-2	Aroclor-1016	210.	U
11104-28-2	Aroclor-1221	410.	U
11141-16-5	Aroclor-1232	210.	U
53469-21-9	Aroclor-1242	210.	U
12672-29-6	Aroclor-1248	210.	U
11097-69-1	Aroclor-1254	210.	U
11096-82-5	Aroclor-1260	210.	U

FORM I PEST 3/90

ATTACHMENT II-90

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

3980 S-11

Lab Name: ICM Contract: A60084

Lab Code: Case No.: SAS No.: SDG No.: 3970

Matrix (soil/water): SOIL Lab Sample ID: 173645

Level (low/med): LOW Date Received: 09/09/93

% Solids: 80.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12400			P
7440-36-0	Antimony	7.9	U		P
7440-38-2	Arsenic	7.9			F
7440-39-3	Barium	269			P
7440-41-7	Beryllium	0.46	B		P
7440-43-9	Cadmium	0.27	U		P
7440-70-2	Calcium	5470			P
7440-47-3	Chromium	56.5			P
7440-48-4	Cobalt	9.6	B		P
7440-50-8	Copper	80.2			P
7439-89-6	Iron	31000			P
7439-92-1	Lead	340			F
7439-95-4	Magnesium	4350			P
7439-96-5	Manganese	482			P
7439-97-6	Mercury	0.20		*	CV
7440-02-0	Nickel	30.2			P
7440-09-7	Potassium	680	B		P
7782-49-2	Selenium	0.86	U		F
7440-22-4	Silver	0.89	U	N	P
7440-23-5	Sodium	6.7	U		P
7440-28-0	Thallium	0.32	U		F
7440-62-2	Vanadium	36.9			P
7440-66-6	Zinc	255			P
	Cyanide	1.2	U		C

Color Before: BROWN Clarity Before: OPAQUE Texture: COARSE

Color After: COLORLESS Clarity After: CLEAR Artifacts: YES

Comments:
ARTIFACTS: PEBBLES/ROCKS

FORM I - IN ILM03.0

ATTACHMENT II-91

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3981 S-2

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5.000 (g/mL) G Lab File ID: C5126

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: not dec. 12. Date Analyzed: 09/14/93

GC Column: SP1000 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11.	U
74-83-9	Bromomethane	11.	U
75-01-4	Vinyl Chloride	11.	U
75-00-3	Chloroethane	11.	U
75-09-2	Methylene Chloride	2.	BJ
67-64-1	Acetone	11.	U
75-15-0	Carbon Disulfide	11.	U
75-35-4	1,1-Dichloroethene	11.	U
75-34-3	1,1-Dichloroethane	11.	U
540-59-0	1,2-Dichloroethene (total)	11.	U
67-66-3	Chloroform	11.	U
107-06-2	1,2-Dichloroethane	11.	U
78-93-3	2-Butanone	11.	U
71-55-6	1,1,1-Trichloroethane	11.	U
56-23-5	Carbon Tetrachloride	11.	U
75-27-4	Bromodichloromethane	11.	U
78-87-5	1,2-Dichloropropane	11.	U
10061-01-5	cis-1,3-Dichloropropene	11.	U
79-01-6	Trichloroethene	11.	U
124-48-1	Dibromochloromethane	11.	U
79-00-5	1,1,2-Trichloroethane	11.	U
71-43-2	Benzene	11.	U
10061-02-6	trans-1,3-Dichloropropene	11.	U
75-25-2	Bromoform	11.	U
108-10-1	4-Methyl-2-Pentanone	11.	U
591-78-6	2-Hexanone	11.	U
127-18-4	Tetrachloroethene	11.	U
79-34-5	1,1,2,2-Tetrachloroethane	11.	U
108-88-3	Toluene	11.	U
108-90-7	Chlorobenzene	11.	U
100-41-4	Ethylbenzene	11.	U
100-42-5	Styrene	11.	U
1330-20-7	Xylene (total)	11.	U

ATTACHMENT II-92

FORM I VOA 3/90

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

3981

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5.000 (g/mL) G Lab File ID: C5126

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: not dec. 12. Date Analyzed: 09/14/93

GC Column: SP1000 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
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7.				
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10.				
11.				
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FORM I VOA-TIC 3/90

ATTACHMENT II-93

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE No.

3981 S-12

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.1 (g/mL) G Lab File ID: I8368

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: 12. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/05/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	380.	U
111-44-4	bis(2-Chloroethyl)ether	380.	U
95-57-8	2-Chlorophenol	380.	U
541-73-1	1,3-Dichlorobenzene	380.	U
106-46-7	1,4-Dichlorobenzene	380.	U
95-50-1	1,2-Dichlorobenzene	380.	U
95-48-7	2-Methylphenol	380.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	380.	U
106-44-5	4-Methylphenol	380.	U
621-64-7	N-Nitroso-di-n-propylamine	380.	U
67-72-1	Hexachloroethane	380.	U
98-95-3	Nitrobenzene	380.	U
78-59-1	Isophorone	380.	U
88-75-5	2-Nitrophenol	380.	U
105-67-9	2,4-Dimethylphenol	380.	U
111-91-1	bis(2-Chloroethoxy)methane	380.	U
120-83-2	2,4-Dichlorophenol	380.	U
120-82-1	1,2,4-Trichlorobenzene	380.	U
91-20-3	Naphthalene	380.	U
106-47-8	4-Chloroaniline	380.	U
87-68-3	Hexachlorobutadiene	380.	U
59-50-7	4-Chloro-3-methylphenol	380.	U
91-57-6	2-Methylnaphthalene	380.	U
77-47-4	Hexachlorocyclopentadiene	380.	U
88-06-2	2,4,6-Trichlorophenol	380.	U
95-95-4	2,4,5-Trichlorophenol	940.	U
91-58-7	2-Chloronaphthalene	380.	U
88-74-4	2-Nitroaniline	940.	U
131-11-3	Dimethylphthalate	380.	U
208-96-8	Acenaphthylene	380.	U
606-20-2	2,6-Dinitrotoluene	380.	U
99-09-2	3-Nitroaniline	940.	U
83-32-9	Acenaphthene	380.	U

FORM I SV-1

ATTACHMENT II-94/90

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

3981

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.1 (g/mL) G Lab File ID: IS368

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: 12. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/05/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	940.	U
100-02-7	4-Nitrophenol	940.	U
132-64-9	Dibenzofuran	380.	U
121-14-2	2,4-Dinitrotoluene	380.	U
84-66-2	Diethylphthalate	380.	U
7005-72-3	4-Chlorophenyl-phenylether	380.	U
86-73-7	Fluorene	380.	U
100-01-6	4-Nitroaniline	940.	U
534-52-1	4,6-Dinitro-2-methylphenol	940.	U
86-30-6	N-Nitrosodiphenylamine (1)	380.	U
101-55-3	4-Bromophenyl-phenylether	380.	U
118-74-1	Hexachlorobenzene	380.	U
87-86-5	Pentachlorophenol	940.	U
85-01-8	Phenanthrene	380.	U
120-12-7	Anthracene	380.	U
86-74-8	Carbazole	380.	U
84-74-2	Di-n-butylphthalate	380.	U
206-44-0	Fluoranthene	27.	J
129-00-0	Pyrene	31.	J
85-68-7	Butylbenzylphthalate	380.	U
91-94-1	3,3'-Dichlorobenzidine	380.	U
56-55-3	Benzo(a)anthracene	380.	U
218-01-9	Chrysene	380.	U
117-81-7	bis(2-Ethylhexyl)phthalate	380.	U
117-84-0	Di-n-octylphthalate	380.	U
205-99-2	Benzo(b)fluoranthene	380.	U
207-08-9	Benzo(k)fluoranthene	380.	U
50-32-8	Benzo(a)pyrene	380.	U
193-39-5	Indeno(1,2,3-cd)pyrene	380.	U
53-70-3	Dibenz(a,h)anthracene	380.	U
191-24-2	Benzo(g,h,i)perylene	380.	U

(1) - Cannot be separated from diphenylamine

FORM I SV-2

ATTACHMENT II-95

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

3981

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.1 (g/mL) G Lab File ID: I8268

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: 12. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/05/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.4

Number TICs found: 11

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	- -	UNKNOWN ACP	1.01	100.	BJ A
2.	- -	UNKNOWN ACP	1.19	80.	BJ A
3.	- -	UNKNOWN ACP	1.75	9000.	BJ A
4.	57-10-3	HEXADECANOIC ACID	18.42	200.	J
5.	- -	UNKNOWN	22.18	200.	J
6.	- -	UNKNOWN ALKANE	24.60	80.	J
7.	- -	UNKNOWN	24.75	300.	J
8.	- -	UNKNOWN	25.36	200.	J
9.	- -	UNKNOWN ALKANE	25.02	200.	J
10.	- -	UNKNOWN	26.21	100.	J
11.	- -	UNKNOWN ALKANE	27.35	200.	J
12.					
13.				10660	
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

FORM I SV-TIC

ATTACHMENT II-96

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3981 S-12

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.9 (g/mL) G Lab File ID: 01034

% Moisture: 12. decanted: (Y/N) N Date Received: 09/09/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 09/13/93

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 09/26/93

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.4 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.8	U
319-85-7	beta-BHC	1.8	U
319-86-8	delta-BHC	1.8	U
58-89-9	gamma-BHC (Lindane)	1.8	U
76-44-8	Heptachlor	1.8	U
309-00-2	Aldrin	1.8	U
1024-57-3	Heptachlor epoxide	1.8	U
959-98-8	Endosulfan I	1.8	U
60-57-1	Dieldrin	3.7	U
72-55-9	4,4'-DDE	3.7	U
72-20-8	Endrin	3.7	U
33213-65-9	Endosulfan II	3.7	U
72-54-8	4,4'-DDD	3.7	U
1031-07-8	Endosulfan Sulfate	3.7	U
50-29-3	4,4'-DDT	3.7	U
72-43-5	Methoxychlor	18.	U
53494-70-5	Endrin ketone	3.7	U
7421-93-4	Endrin aldehyde	3.7	U
5103-71-9	alpha-Chlordane	1.8	U
5103-74-2	gamma-Chlordane	1.8	U
8001-35-2	Toxaphene	180.	U
12674-11-2	Aroclor-1016	37.	U
11104-28-2	Aroclor-1221	73.	U
11141-16-5	Aroclor-1232	37.	U
53469-21-9	Aroclor-1242	37.	U
12672-29-6	Aroclor-1248	37.	U
11097-69-1	Aroclor-1254	37.	U
11096-82-5	Aroclor-1260	37.	U

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

3981 S-12

Lab Name: ICM Contract: A60084

Lab Code: Case No.: SAS No.: SDG No.: 3970

Matrix (soil/water): SOIL Lab Sample ID: 173646

Level (low/med): LOW Date Received: 09/09/93

% Solids: 88.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	17100			P
7440-36-0	Antimony	7.2	U		P
7440-38-2	Arsenic	2.3	B		F
7440-39-3	Barium	67.2			P
7440-41-7	Beryllium	0.54	B		P
7440-43-9	Cadmium	0.25	U		P
7440-70-2	Calcium	1240			P
7440-47-3	Chromium	47.0			P
7440-48-4	Cobalt	9.9	B		P
7440-50-8	Copper	26.1			P
7439-89-6	Iron	23600			P
7439-92-1	Lead	102			F
7439-95-4	Magnesium	4400			P
7439-96-5	Manganese	217			P
7439-97-6	Mercury	0.06	U	*	CV
7440-02-0	Nickel	21.9			P
7440-09-7	Potassium	1040	B		P
7782-49-2	Selenium	0.79	U		F
7440-22-4	Silver	0.82	U	N	P
7440-23-5	Sodium	6.1	U		P
7440-28-0	Thallium	0.29	U		F
7440-62-2	Vanadium	30.3			P
7440-66-6	Zinc	77.3			P
	Cyanide	1.1	U		C

Color Before: BROWN_RED Clarity Before: OPAQUE Texture: COARSE

Color After: COLORLESS Clarity After: CLEAR Artifacts: YES

Comments:

ARTIFACTS: PEBBLES/ROCKS

FORM I - IN

ILM03.0

ATTACHMENT II-98

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3982 SB

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5.000 (g/mL) G Lab File ID: C5142

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: not dec. 12. Date Analyzed: 09/14/93

GC Column: SP1000 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11.	U
74-83-9	Bromomethane	11.	U
75-01-4	Vinyl Chloride	11.	U
75-00-3	Chloroethane	11.	U
75-09-2	Methylene Chloride	16.	B
67-64-1	Acetone	11.	U
75-15-0	Carbon Disulfide	11.	U
75-35-4	1,1-Dichloroethene	11.	U
75-34-3	1,1-Dichloroethane	11.	U
540-59-0	1,2-Dichloroethene (total)	11.	U
67-66-3	Chloroform	11.	U
107-06-2	1,2-Dichloroethane	11.	U
78-93-3	2-Butanone	11.	U
71-55-6	1,1,1-Trichloroethane	11.	U
56-23-5	Carbon Tetrachloride	11.	U
75-27-4	Bromodichloromethane	11.	U
78-87-5	1,2-Dichloropropane	11.	U
10061-01-5	cis-1,3-Dichloropropene	11.	U
79-01-6	Trichloroethene	11.	U
124-48-1	Dibromochloromethane	11.	U
79-00-5	1,1,2-Trichloroethane	11.	U
71-43-2	Benzene	11.	U
10061-02-6	trans-1,3-Dichloropropene	11.	U
75-25-2	Bromoform	11.	U
108-10-1	4-Methyl-2-Pentanone	11.	U
591-78-6	2-Hexanone	11.	U
127-18-4	Tetrachloroethene	11.	U
79-34-5	1,1,2,2-Tetrachloroethane	11.	U
108-88-3	Toluene	11.	U
108-90-7	Chlorobenzene	11.	U
100-41-4	Ethylbenzene	11.	U
100-42-5	Styrene	11.	U
1330-20-7	Xylene (total)	11.	U

ATTACHMENT II-99

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

3982

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5.000 (g/mL) G Lab File ID: C5142

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: not dec. 12. Date Analyzed: 09/14/93

GC Column: SP1000 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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FORM I VOA-TIC 3/90

ATTACHMENT II 100

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3982 S-13

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.1 (g/mL) G Lab File ID: I8369

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: 12. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/05/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	380.	U
111-44-4	bis(2-Chloroethyl)ether	380.	U
95-57-8	2-Chlorophenol	380.	U
541-73-1	1,3-Dichlorobenzene	380.	U
106-46-7	1,4-Dichlorobenzene	380.	U
95-50-1	1,2-Dichlorobenzene	380.	U
95-48-7	2-Methylphenol	380.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	380.	U
106-44-5	4-Methylphenol	380.	U
621-64-7	N-Nitroso-di-n-propylamine	380.	U
67-72-1	Hexachloroethane	380.	U
98-95-3	Nitrobenzene	380.	U
78-59-1	Isophorone	380.	U
88-75-5	2-Nitrophenol	380.	U
105-67-9	2,4-Dimethylphenol	380.	U
111-91-1	bis(2-Chloroethoxy)methane	380.	U
120-83-2	2,4-Dichlorophenol	380.	U
120-82-1	1,2,4-Trichlorobenzene	380.	U
91-20-3	Naphthalene	380.	U
106-47-8	4-Chloroaniline	380.	U
87-68-3	Hexachlorobutadiene	380.	U
59-50-7	4-Chloro-3-methylphenol	380.	U
91-57-6	2-Methylnaphthalene	380.	U
77-47-4	Hexachlorocyclopentadiene	380.	U
88-06-2	2,4,6-Trichlorophenol	380.	U
95-95-4	2,4,5-Trichlorophenol	940.	U
91-58-7	2-Chloronaphthalene	380.	U
88-74-4	2-Nitroaniline	940.	U
131-11-3	Dimethylphthalate	380.	U
208-96-8	Acenaphthylene	380.	U
606-20-2	2,6-Dinitrotoluene	380.	U
99-09-2	3-Nitroaniline	940.	U
83-32-9	Acenaphthene	380.	U

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3982

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.1 (g/mL) G Lab File ID: I8369

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: 12. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/05/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	940.	U
100-02-7	4-Nitrophenol	940.	U
132-64-9	Dibenzofuran	380.	U
121-14-2	2,4-Dinitrotoluene	380.	U
84-66-2	Diethylphthalate	380.	U
7005-72-3	4-Chlorophenyl-phenylether	380.	U
86-73-7	Fluorene	380.	U
100-01-6	4-Nitroaniline	940.	U
534-52-1	4,6-Dinitro-2-methylphenol	940.	U
86-30-6	N-Nitrosodiphenylamine (1)	380.	U
101-55-3	4-Bromophenyl-phenylether	380.	U
118-74-1	Hexachlorobenzene	380.	U
87-86-5	Pentachlorophenol	940.	U
85-01-8	Phenanthrene	380.	U
120-12-7	Anthracene	380.	U
86-74-8	Carbazole	380.	U
84-74-2	Di-n-butylphthalate	380.	U
206-44-0	Fluoranthene	380.	U
129-00-0	Pyrene	380.	U
85-68-7	Butylbenzylphthalate	380.	U
91-94-1	3,3'-Dichlorobenzidine	380.	U
56-55-3	Benzo(a)anthracene	380.	U
218-01-9	Chrysene	380.	U
117-81-7	bis(2-Ethylhexyl)phthalate	380.	U
117-84-0	Di-n-octylphthalate	380.	U
205-99-2	Benzo(b)fluoranthene	380.	U
207-08-9	Benzo(k)fluoranthene	380.	U
50-32-8	Benzo(a)pyrene	380.	U
193-39-5	Indeno(1,2,3-cd)pyrene	380.	U
53-70-3	Dibenz(a,h)anthracene	380.	U
191-24-2	Benzo(g,h,i)perylene	380.	U

(1) - Cannot be separated from diphenylamine

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

3982

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.1 (g/mL) G Lab File ID: I8369

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: 12. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/05/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.3

Number TICs found: 16

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q	
1.	- -	UNKNOWN ACP	.71	100.	J	A
2.	108-88-3	METHYL BENZENE	1.00	100.	BJ	
3.	- -	UNKNOWN ACP	1.02	100.	BJ	A
4.	- -	UNKNOWN ACP	1.18	200.	BJ	A
5.	- -	UNKNOWN ACP	1.75	20000.	BJ	A
6.	- -	UNKNOWN ACP	2.56	100.	J	A
7.	- -	UNKNOWN	3.60	80.	BJ	
8.	- -	UNKNOWN	17.68	100.	J	
9.	57-10-3	HEXADECANOIC ACID	18.42	300.	J	
10.	- -	UNKNOWN	23.18	200.	J	
11.	- -	UNKNOWN ALKANE	24.59	100.	J	
12.	- -	UNKNOWN	24.79	200.	J	
13.	- -	UNKNOWN ALKANE	25.31	80.	J	
14.	- -	UNKNOWN ALKANE	26.01	200.	J	
15.	- -	UNKNOWN	26.68	200.	J	
16.	- -	UNKNOWN ALKANE	27.35	200.	J	
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ATTACHMENT II 103

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3982 S13

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.3 (g/mL) G Lab File ID: 01035

% Moisture: 12. decanted: (Y/N) N Date Received: 09/09/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 09/13/93

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 09/26/93

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.3 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.9	U
319-85-7	beta-BHC	1.9	U
319-86-8	delta-BHC	1.9	U
58-89-9	gamma-BHC (Lindane)	1.9	U
76-44-8	Heptachlor	1.9	U
309-00-2	Aldrin	1.9	U
1024-57-3	Heptachlor epoxide	1.9	U
959-98-8	Endosulfan I	1.9	U
60-57-1	Dieldrin	3.7	U
72-55-9	4,4'-DDE	3.7	U
72-20-8	Endrin	3.7	U
33213-65-9	Endosulfan II	3.7	U
72-54-8	4,4'-DDD	3.7	U
1031-07-8	Endosulfan Sulfate	3.7	U
50-29-3	4,4'-DDT	3.7	U
72-43-5	Methoxychlor	19.	U
53494-70-5	Endrin ketone	3.7	U
7421-93-4	Endrin aldehyde	3.7	U
5103-71-9	alpha-Chlordane	1.9	U
5103-74-2	gamma-Chlordane	1.9	U
8001-35-2	Toxaphene	190.	U
12674-11-2	Aroclor-1016	37.	U
11104-28-2	Aroclor-1221	75.	U
11141-16-5	Aroclor-1232	37.	U
53469-21-9	Aroclor-1242	37.	U
12672-29-6	Aroclor-1248	37.	U
11097-69-1	Aroclor-1254	37.	U
11096-82-5	Aroclor-1260	37.	U

FORM I PEST 3/90

ATTACHMENT II 104

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

3982 S-13

Lab Name: ICM Contract: A60084

Lab Code: Case No.: SAS No.: SDG No.: 3970

Matrix (soil/water): SOIL Lab Sample ID: 173647

Level (low/med): LOW Date Received: 09/09/93

% Solids: 88.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	16100			P
7440-36-0	Antimony	7.2	U		P
7440-38-2	Arsenic	2.5			F
7440-39-3	Barium	52.9			P
7440-41-7	Beryllium	0.48	B		P
7440-43-9	Cadmium	0.25	U		P
7440-70-2	Calcium	1100	B		P
7440-47-3	Chromium	65.0			P
7440-48-4	Cobalt	8.5	B		P
7440-50-8	Copper	22.9			P
7439-89-6	Iron	21600			P
7439-92-1	Lead	41.9			F
7439-95-4	Magnesium	3780			P
7439-96-5	Manganese	172			P
7439-97-6	Mercury	0.06	U	*	CV
7440-02-0	Nickel	35.2			P
7440-09-7	Potassium	1020	B		P
7782-49-2	Selenium	0.79	U		F
7440-22-4	Silver	0.82	U	N	P
7440-23-5	Sodium	6.1	U		P
7440-28-0	Thallium	0.29	U		F
7440-62-2	Vanadium	28.3			P
7440-66-6	Zinc	61.8			P
	Cyanide	1.1	U		C

Color Before: BROWN_RED Clarity Before: OPAQUE Texture: COARSE

Color After: COLORLESS Clarity After: CLEAR Artifacts: YES

Comments:

ARTIFACTS: PEBBLES/ROCKS

FORM I - IN

ILM03.0

ATTACHMENT II 105

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3983 S-14

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5.000 (g/mL) G Lab File ID: C5143

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: not dec. 15. Date Analyzed: 09/14/93

GC Column: SP1000 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12.	U
74-83-9	Bromomethane	12.	U
75-01-4	Vinyl Chloride	12.	U
75-00-3	Chloroethane	12.	U
75-09-2	Methylene Chloride	20.	B
67-64-1	Acetone	12.	U
75-15-0	Carbon Disulfide	12.	U
75-35-4	1,1-Dichloroethene	12.	U
75-34-3	1,1-Dichloroethane	33.	
540-59-0	1,2-Dichloroethene (total)	12.	U
67-66-3	Chloroform	12.	U
107-06-2	1,2-Dichloroethane	10.	J
78-93-3	2-Butanone	12.	U
71-55-6	1,1,1-Trichloroethane	73.	
56-23-5	Carbon Tetrachloride	12.	U
75-27-4	Bromodichloromethane	12.	U
78-87-5	1,2-Dichloropropane	12.	U
10061-01-5	cis-1,3-Dichloropropene	12.	U
79-01-6	Trichloroethene	13.	
124-48-1	Dibromochloromethane	12.	U
79-00-5	1,1,2-Trichloroethane	12.	U
71-43-2	Benzene	180.	
10061-02-6	trans-1,3-Dichloropropene	12.	U
75-25-2	Bromoform	12.	U
108-10-1	4-Methyl-2-Pentanone	12.	U
591-78-6	2-Hexanone	12.	U
127-18-4	Tetrachloroethene	2.	J
79-34-5	1,1,2,2-Tetrachloroethane	12.	U
108-88-3	Toluene	2.	J
108-90-7	Chlorobenzene	12.	U
100-41-4	Ethylbenzene	12.	U
100-42-5	Styrene	12.	U
1330-20-7	Xylene (total)	12.	U

ATTACHMENT II-106

3/90

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

3983

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5.000 (g/mL) G Lab File ID: C5143

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: not dec. 15. Date Analyzed: 09/14/93

GC Column: SP1000 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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FORM I VOA-TIC 3/90

ATTACHMENT II-107

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3983 RE

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970 S-14

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5.000 (g/mL) G Lab File ID: C5165

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: not dec. 15. Date Analyzed: 09/15/93

GC Column: SP1000 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12.	U
74-83-9	Bromomethane	12.	U
75-01-4	Vinyl Chloride	12.	U
75-00-3	Chloroethane	12.	U
75-09-2	Methylene Chloride	6.	J
67-64-1	Acetone	12.	U
75-15-0	Carbon Disulfide	12.	U
75-35-4	1,1-Dichloroethene	12.	U
75-34-3	1,1-Dichloroethane	16.	
540-59-0	1,2-Dichloroethene (total)	12.	U
67-66-3	Chloroform	12.	U
107-06-2	1,2-Dichloroethane	6.	J
78-93-3	2-Butanone	12.	U
71-55-6	1,1,1-Trichloroethane	40.	
56-23-5	Carbon Tetrachloride	12.	U
75-27-4	Bromodichloromethane	12.	U
78-87-5	1,2-Dichloropropane	12.	U
10061-01-5	cis-1,3-Dichloropropene	12.	U
79-01-6	Trichloroethene	8.	J
124-48-1	Dibromochloromethane	12.	U
79-00-5	1,1,2-Trichloroethane	12.	U
71-43-2	Benzene	48.	
10061-02-6	trans-1,3-Dichloropropene	12.	U
75-25-2	Bromoform	12.	U
108-10-1	4-Methyl-2-Pentanone	12.	U
591-78-6	2-Hexanone	12.	U
127-18-4	Tetrachloroethene	12.	U
79-34-5	1,1,2,2-Tetrachloroethane	12.	U
108-88-3	Toluene	12.	U
108-90-7	Chlorobenzene	12.	U
100-41-4	Ethylbenzene	12.	U
100-42-5	Styrene	12.	U
1330-20-7	Xylene (total)	12.	U

ATTACHMENT II 3/108

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

3983 RE

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5.000 (g/mL) G Lab File ID: C5165

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: not dec. 15. Date Analyzed: 09/15/93

GC Column: SP1000 ID: .2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
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FORM I VOA-TIC 3/90

ATTACHMENT II/109

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3983 S-14

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.0 (g/mL) G Lab File ID: I8370

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: 15. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/05/93

Injection Volume: 2.0 (uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 7.9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	780.	U
111-44-4	bis(2-Chloroethyl)ether	780.	U
95-57-8	2-Chlorophenol	780.	U
541-73-1	1,3-Dichlorobenzene	780.	U
106-46-7	1,4-Dichlorobenzene	780.	U
95-50-1	1,2-Dichlorobenzene	780.	U
95-48-7	2-Methylphenol	780.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	780.	U
106-44-5	4-Methylphenol	780.	U
621-64-7	N-Nitroso-di-n-propylamine	780.	U
67-72-1	Hexachloroethane	780.	U
98-95-3	Nitrobenzene	780.	U
78-59-1	Isophorone	780.	U
88-75-5	2-Nitrophenol	780.	U
105-67-9	2,4-Dimethylphenol	780.	U
111-91-1	bis(2-Chloroethoxy)methane	780.	U
120-83-2	2,4-Dichlorophenol	780.	U
120-82-1	1,2,4-Trichlorobenzene	780.	U
91-20-3	Naphthalene	780.	U
106-47-8	4-Chloroaniline	780.	U
87-68-3	Hexachlorobutadiene	780.	U
59-50-7	4-Chloro-3-methylphenol	780.	U
91-57-6	2-Methylnaphthalene	780.	U
77-47-4	Hexachlorocyclopentadiene	780.	U
88-06-2	2,4,6-Trichlorophenol	780.	U
95-95-4	2,4,5-Trichlorophenol	1900.	U
91-58-7	2-Chloronaphthalene	780.	U
88-74-4	2-Nitroaniline	1900.	U
131-11-3	Dimethylphthalate	780.	U
208-96-8	Acenaphthylene	780.	U
606-20-2	2,6-Dinitrotoluene	780.	U
99-09-2	3-Nitroaniline	1900.	U
83-32-9	Acenaphthene	780.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3983

Lab Name: ICM, Inc. Contract: AG0084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.0 (g/mL) G Lab File ID: I8370

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: 15. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/05/93

Injection Volume: 2.0 (uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 7.9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1900.	U
100-02-7	4-Nitrophenol	1900.	U
132-64-9	Dibenzofuran	780.	U
121-14-2	2,4-Dinitrotoluene	780.	U
84-66-2	Diethylphthalate	780.	U
7005-72-3	4-Chlorophenyl-phenylether	780.	U
86-73-7	Fluorene	780.	U
100-01-6	4-Nitroaniline	1900.	U
534-52-1	4,6-Dinitro-2-methylphenol	1900.	U
86-30-6	N-Nitrosodiphenylamine (1)	780.	U
101-55-3	4-Bromophenyl-phenylether	780.	U
118-74-1	Hexachlorobenzene	780.	U
87-86-5	Pentachlorophenol	1900.	U
85-01-8	Phenanthrene	780.	U
120-12-7	Anthracene	780.	U
86-74-8	Carbazole	780.	U
84-74-2	Di-n-butylphthalate	780.	U
206-44-0	Fluoranthene	780.	U
129-00-0	Pyrene	780.	U
85-68-7	Butylbenzylphthalate	780.	U
91-94-1	3,3'-Dichlorobenzidine	780.	U
56-55-3	Benzo(a)anthracene	780.	U
218-01-9	Chrysene	780.	U
117-81-7	bis(2-Ethylhexyl)phthalate	92.	J
117-84-0	Di-n-octylphthalate	780.	U
205-99-2	Benzo(b)fluoranthene	780.	U
207-08-9	Benzo(k)fluoranthene	780.	U
50-32-8	Benzo(a)pyrene	780.	U
193-39-5	Indeno(1,2,3-cd)pyrene	780.	U
53-70-3	Dibenz(a,h)anthracene	780.	U
191-24-2	Benzo(g,h,i)perylene	780.	U

(1) - Cannot be separated from diphenylamine

FORM I SV-2

ATTACHMENT II-1 3/90

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

3983

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.0 (g/mL) G Lab File ID: I8370

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: 15. decanted: (Y/N) N Date Extracted: 09/18/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 10/05/93

Injection Volume: 2.0 (uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 7.9

Number TICs found: 16

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	- -	UNKNOWN ACP	.82	300.	J A
2.	- -	UNKNOWN ACP	1.00	800.	J A
3.	- -	UNKNOWN ACP	1.05	300.	BJ A
4.	- -	UNKNOWN ACP	1.17	500.	BJ A
5.	- -	UNKNOWN ACP	1.68	20000.	BJ A
6.	- -	UNKNOWN ACP	1.75	200.	J A
7.	- -	UNKNOWN ACP	2.80	900.	J A
8.	- -	UNKNOWN ACP	3.67	200.	J A
9.	57-10-3	HEXADECANOIC ACID	18.38	200.	J
10.	- -	UNKNOWN ALKANE	19.65	500.	J
11.	- -	UNKNOWN ALKANE	20.56	600.	J
12.	- -	UNKNOWN ALKANE	21.42	800.	J
13.	- -	UNKNOWN ALKANE	22.26	1000.	J
14.	- -	UNKNOWN ALKANE	23.07	700.	J
15.	- -	UNKNOWN ALKANE	23.85	600.	J
16.	- -	UNKNOWN ALKANE	24.59	700.	J
17.					
18.				28300	
19.					
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22.					
23.					
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29.					
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ATTACHMENT II-112

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3983 S-14

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30.9 (g/mL) G Lab File ID: 01047

% Moisture: 15. decanted: (Y/N) N Date Received: 09/09/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 09/13/93

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 09/26/93

Injection Volume: 1.0 (uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 7.9 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	9.5	U
319-85-7	beta-BHC	9.5	U
319-86-8	delta-BHC	9.5	U
58-89-9	gamma-BHC (Lindane)	9.5	U
76-44-8	Heptachlor	9.5	U
309-00-2	Aldrin	9.5	U
1024-57-3	Heptachlor epoxide	9.5	U
959-98-8	Endosulfan I	9.5	U
60-57-1	Dieldrin	19.	U
72-55-9	4,4'-DDE	19.	U
72-20-8	Endrin	19.	U
33213-65-9	Endosulfan II	19.	U
72-54-8	4,4'-DDD	19.	U
1031-07-8	Endosulfan Sulfate	19.	U
50-29-3	4,4'-DDT	19.	U
72-43-5	Methoxychlor	95.	U
53494-70-5	Endrin ketone	19.	U
7421-93-4	Endrin aldehyde	19.	U
5103-71-9	alpha-Chlordane	9.5	U
5103-74-2	gamma-Chlordane	9.5	U
8001-35-2	Toxaphene	950.	U
12674-11-2	Aroclor-1016	190.	U
11104-28-2	Aroclor-1221	380.	U
11141-16-5	Aroclor-1232	190.	U
53469-21-9	Aroclor-1242	190.	U
12672-29-6	Aroclor-1248	190.	U
11097-69-1	Aroclor-1254	190.	U
11096-82-5	Aroclor-1260	190.	U

FORM I PEST 3/90

ATTACHMENT II-113

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

3983 S114

Lab Name: ICM Contract: A60084

Lab Code: Case No.: SAS No.: SDG No.: 3970

Matrix (soil/water): SOIL Lab Sample ID: 173648

Level (low/med): LOW Date Received: 09/09/93

% Solids: 85.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7150			P
7440-36-0	Antimony	7.4	U		P
7440-38-2	Arsenic	9.9			F
7440-39-3	Barium	116			P
7440-41-7	Beryllium	0.41	B		P
7440-43-9	Cadmium	0.87	B		P
7440-70-2	Calcium	52700			P
7440-47-3	Chromium	23.5			P
7440-48-4	Cobalt	5.0	B		P
7440-50-8	Copper	134			P
7439-89-6	Iron	25700			P
7439-92-1	Lead	543			F
7439-95-4	Magnesium	7650			P
7439-96-5	Manganese	278			P
7439-97-6	Mercury	0.95		*	CV
7440-02-0	Nickel	19.2			P
7440-09-7	Potassium	333	B		P
7782-49-2	Selenium	0.81	U		F
7440-22-4	Silver	0.84	U	N	P
7440-23-5	Sodium	52.4	B		P
7440-28-0	Thallium	0.30	U		F
7440-62-2	Vanadium	30.8			P
7440-66-6	Zinc	254			P
	Cyanide	1.2	U		C

Color Before: BROWN Clarity Before: OPAQUE Texture: COARSE

Color After: COLORLESS Clarity After: CLEAR Artifacts: YES

Comments:

ARTIFACTS: PEBBLES/ROCKS

FORM I - IN

ILM03.0

ATTACHMENT II-114

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3984 FB Travel

Lab Name: ICM, Inc. Contract: A50084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: C5202

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: not dec._____ Date Analyzed: 09/17/93

GC Column: SP1000 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	3.	BJ
67-64-1	Acetone	14.	B
75-15-0	Carbon Disulfide	10.	U
75-35-4	1,1-Dichloroethene	10.	U
75-34-3	1,1-Dichloroethane	10.	U
540-59-0	1,2-Dichloroethene (total)	10.	U
67-66-3	Chloroform	10.	U
107-06-2	1,2-Dichloroethane	10.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	10.	U
56-23-5	Carbon Tetrachloride	10.	U
75-27-4	Bromodichloromethane	10.	U
78-87-5	1,2-Dichloropropane	10.	U
10061-01-5	cis-1,3-Dichloropropene	10.	U
79-01-6	Trichloroethene	10.	U
124-48-1	Dibromochloromethane	10.	U
79-00-5	1,1,2-Trichloroethane	10.	U
71-43-2	Benzene	10.	U
10061-02-6	trans-1,3-Dichloropropene	10.	U
75-25-2	Bromoform	10.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	10.	U
79-34-5	1,1,2,2-Tetrachloroethane	10.	U
108-88-3	Toluene	10.	U
108-90-7	Chlorobenzene	10.	U
100-41-4	Ethylbenzene	10.	U
100-42-5	Styrene	10.	U
1330-20-7	Xylene (total)	10.	U

FORM I VOA ATTACHMENT II-115 3/90

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

3984

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: C5202

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: not dec._____ Date Analyzed: 09/17/93

GC Column: SP1000 ID: .2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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FORM I VOA-TIC 3/90

ATTACHMENT II-116

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3985 FBSD

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: C5213

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: not dec._____ Date Analyzed: 09/17/93

GC Column: SP1000 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	4.	BJ
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	10.	U
75-35-4	1,1-Dichloroethene	10.	U
75-34-3	1,1-Dichloroethane	10.	U
540-59-0	1,2-Dichloroethene (total)	10.	U
67-66-3	Chloroform	10.	U
107-06-2	1,2-Dichloroethane	10.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	10.	U
56-23-5	Carbon Tetrachloride	10.	U
75-27-4	Bromodichloromethane	10.	U
78-87-5	1,2-Dichloropropane	10.	U
10061-01-5	cis-1,3-Dichloropropene	10.	U
79-01-6	Trichloroethene	10.	U
124-48-1	Dibromochloromethane	10.	U
79-00-5	1,1,2-Trichloroethane	10.	U
71-43-2	Benzene	10.	U
10061-02-6	trans-1,3-Dichloropropene	10.	U
75-25-2	Bromoform	10.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	10.	U
79-34-5	1,1,2,2-Tetrachloroethane	10.	U
108-88-3	Toluene	10.	U
108-90-7	Chlorobenzene	10.	U
100-41-4	Ethylbenzene	10.	U
100-42-5	Styrene	10.	U
1330-20-7	Xylene (total)	10.	U

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

3985

Lab Name: ICM, Inc. Contract: A60084

Lab Code: ICM Case No.: SAS No.: SDG No.: 3970

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: C5213

Level: (low/med) LOW Date Received: 09/09/93

% Moisture: not dec._____ Date Analyzed: 09/17/93

GC Column: SP1000 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
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FORM I VOA-TIC 3/90

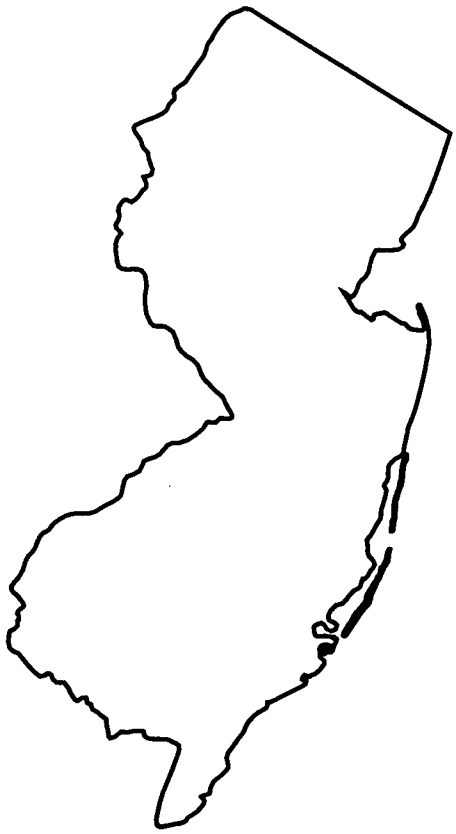
ATTACHMENT II-18

ATTACHMENT JJ

ATTACHMENT KK

Water Resources Data
New Jersey
Water Year 1992

Volume 1. Surface-Water Data



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NJ-92-1
Prepared in cooperation with the New Jersey Department
of Environmental Protection and Energy and with other agencies

ATTACHMENT KK-1

01403060 RARITAN RIVER BELOW CALCO DAM, AT BOUND BROOK, NJ

LOCATION.--Lat 40°33'05", long 74°32'54", Somerset County, Hydrologic Unit 02030105, on right bank 1,000 ft downstream from Calco Dam and Cuckold Brook, 1,400 ft upstream of bridge on Interstate 287, 1.2 mi downstream from Millstone River, and 1.2 mi southwest of Bound Brook.

DRAINAGE AREA.--785 mi^2 (includes 11 mi^2 which drains into the Delaware and Raritan Canal).

PERIOD OF RECORD.--September 1903 to March 1909, October 1944 to current year. Monthly discharge only for some periods, published in WSP 1302. Prior to October 1966 published as "Raritan River at Bound Brook" (station 01403000).

REVISED RECORDS.--WSP 1552: 1903-07, 1946(M), 1949, 1952(P).

GAGE.--Water-stage recorder. Datum of gage is sea level. Sept. 12, 1903 to Mar. 31, 1909, nonrecording gages at highway bridge, 1.2 mi downstream at different datum. October 1944 to Sept. 30, 1966, water-stage recorder and concrete control at site 1,000 ft upstream at datum 18.06 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are fair. Water diverted 1.2 mi above station by Elizabethtown Water Co. for municipal supply (see Raritan River basin, diversions). Flow regulated by Spruce Run and Round Valley Reservoirs (see Raritan River basin, reservoirs in). Diversions to and releases from Round Valley Reservoir (see Raritan River basin, diversions and station 01399690). Slight diurnal fluctuations at low flow. Several measurements of water temperature were made during the year. New Jersey Water Supply Authority and National Weather Service gage-height telemeters at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 12,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
June 6	1600	*15,000	*26.98	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	283	163	270	e452	e372	528	1060	316	2160	218	1360	147
2	233	170	328	e422	e310	477	919	310	998	171	534	141
3	210	167	4290	e415	e324	438	773	281	638	194	315	171
4	198	149	6230	759	e328	405	694	259	448	445	276	418
5	195	155	2510	1130	e302	375	628	259	1400	339	242	344
6	214	159	1360	848	e287	358	548	233	12100	462	199	188
7	230	149	984	688	e281	556	512	213	6010	318	156	183
8	200	147	768	547	e298	1480	505	269	2630	211	140	222
9	164	147	655	520	e275	903	456	563	2700	1230	231	182
10	166	180	1320	650	e216	736	464	503	1290	586	352	222
11	191	238	1070	556	e274	2770	674	488	896	299	337	414
12	233	282	782	468	e269	1790	683	393	715	228	467	311
13	218	217	774	420	e220	1090	505	306	616	203	307	200
14	191	195	1000	869	e306	882	457	278	532	362	349	152
15	211	191	871	1230	e364	750	442	258	447	349	319	171
16	365	186	696	705	1700	600	442	514	390	565	293	159
17	465	169	543	479	1090	533	561	549	348	315	324	135
18	1200	172	481	e503	753	500	719	427	321	297	550	126
19	589	187	e317	e415	784	623	775	378	349	269	480	139
20	371	180	e363	e354	805	738	680	317	1270	182	372	126
21	275	184	e425	e364	700	820	585	249	1390	165	293	119
22	229	651	e396	e344	559	848	543	204	983	149	227	158
23	214	2340	e380	e454	506	843	658	181	532	277	203	289
24	200	1050	e365	2060	476	800	528	208	418	483	179	208
25	180	624	e321	1110	474	813	566	256	485	305	169	151
26	195	447	e262	e720	1160	1270	500	239	392	228	173	382
27	184	352	e248	e525	1130	5690	443	239	315	469	236	466
28	174	303	e231	e529	807	2760	429	215	305	346	272	470
29	161	262	536	e457	671	1690	383	187	244	211	217	291
30	150	249	1110	e405	---	1260	342	179	226	167	164	207
31	169	---	730	e403	---	1210	---	915	---	269	146	---
TOTAL	8258	10065	30616	19801	16041	34536	17474	10186	41548	10312	9882	6892
MEAN	266	335	988	639	553	1114	582	329	1385	333	319	230
MAX	1200	2340	6230	2060	1700	5690	1060	915	12100	1230	1360	470
MIN	150	147	231	344	216	358	342	179	226	149	140	119

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 1992, BY WATER YEAR (WY)

MEAN	661	1057	1454	1583	1721	2090	1761	1292	792	688	684	678
MAX	2953	3684	4172	5825	3232	3858	5326	3862	3883	4624	3576	3158
(WY)	1904	1973	1974	1979	1971	1978	1983	1989	1972	1975	1955	1975
MIN	113	138	178	179	485	454	230	329	117	84.7	69.9	76.1
(WY)	1958	1966	1966	1981	1980	1985	1985	1992	1965	1955	1957	1957

ATTACHMENT KK-2

01403300 RARITAN RIVER AT QUEENS BRIDGE AT BOUND BROOK, NJ
(National stream-quality accounting network)

LOCATION.--Lat 40°33'34", long 74°31'41", Somerset County, Hydrologic Unit 02030105, at Queens Bridge on Main street in Bound Brook, 1.7 mi upstream of Fieldsville Dam.

DRAINAGE AREA.--804 mi^2.

PERIOD OF RECORD.--Water years 1964-69, 1971-73, 1978, 1981 to current year. Published as "at Bound Brook" (station 01403000) 1964-66, and as "below Calco Dam at Bound Brook" (station 01403060) 1967-69.

REMARKS.--Instantaneous discharges are determined at Raritan River below Calco Dam at Bound Brook (station 01403060).

WATER QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
NOV 1991										
21...	1100	E160	346	7.7	9.5	1.2	12.6	111	>600	460
FEB 1992										
25...	1100	E470	310	7.6	3.0	3.0	13.6	101	K980	700
MAY										
29...	1130	E170	352	7.5	19.5	2.3	10.8	117	350	K11
AUG										
14...	1230	E340	287	7.5	23.0	2.0	9.6	112	K450	84

DATE	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE IT-FLD (MG/L AS HCO3)	ALKA-LINITY, CARBON-ATE IT-FLD (MG/L - CACO3)	ALKA-LINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
NOV 1991										
21...	110	27	9.9	22	4.0	--	--	*63	48	32
FEB 1992										
25...	87	22	7.8	21	1.4	--	--	*49	36	38
MAY										
29...	98	25	8.6	24	3.4	77	63	63	44	38
AUG										
14...	80	20	7.3	21	3.4	52	42	42	37	29

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)
NOV 1991									
21...	0.3	3.0	197	0.02	0.02	2.7	2.7	0.10	0.09
FEB 1992									
25...	0.1	6.8	173	0.02	0.02	2.0	2.1	0.39	0.41
MAY									
29...	0.2	7.0	203	0.04	0.04	2.9	2.9	0.26	0.26
AUG									
14...	0.2	5.1	160	0.02	0.02	2.2	2.3	0.03	0.03

DATE	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV 1991									
21...	0.70	3.4	0.44	0.36	0.38	0.36	3	--	100
FEB 1992									
25...	0.90	2.9	0.24	0.18	0.18	0.18	22	--	86
MAY									
29...	0.70	3.6	0.38	0.35	0.37	0.33	68	--	40
AUG									
14...	0.40	2.6	0.37	0.35	0.30	0.29	6	--	--

*Laboratory determination.

ATTACHMENT KK3

01403400 GREEN BROOK AT SEELEY MILLS, NJ

LOCATION.--Lat 40°39'53", long 74°24'10", Somerset County, Hydrologic Unit 02030105, on right bank at Seeley Mills, 250 ft downstream from Blue Brook, 300 ft downstream from bridge on Diamond Hill Road, and 0.5 mi northwest of Scotch Plains.

DRAINAGE AREA.--6.23 mi^2.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1959-64, 1969: annual maximum, water years 1969-79. June 1979 to current year. Fragmentary records 1944-53 in the files of the Geological Survey. Crest-stage data 1927-38, 1958-68 in files of Union County Park Commission.

REVISED RECORDS.--WDR-NJ 81-1: 1979(M). WDR-NJ 87-1: 1971(M), 1973(M), 1975(M).

GAGE.--Water-stage recorder. Datum of gage is 184.44 ft above sea level. From 1944 to 1953, water-stage recorder and masonry dam about 400 ft downstream above lower Seeley Mills dam at different datum. From July 1969 to May 1979, crest-stage gage about 450 ft downstream below lower Seeley Mills dam (washed out May 29, 1968) at different datum.

REMARKS.--Records good except for estimated daily discharges and from Feb. 24 to Apr. 1, which are fair. Several measurements of water temperature were made during the year. Rain-gage and gage-height radio telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 23, 1938 reached an elevation of 196.5 ft, New Jersey Geological Survey datum, above lower Seeley Mills dam, discharge, 5,840 ft^3/s, computed by State Water Policy Commission.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
June 5	1945	*1,150	*5.29	Aug. 27	1500	424	3.39
July 9	0245	730	4.28				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	3.1	4.9	5.7	3.6	5.0	7.0	5.1	12	3.4	4.9	2.6
2	3.4	3.1	5.1	5.8	3.2	4.0	7.6	5.2	6.8	3.2	2.5	2.6
3	3.1	3.1	63	5.6	3.2	4.0	7.1	4.9	5.4	7.1	2.8	4.9
4	3.1	3.1	30	17	3.3	4.0	6.7	4.8	4.4	7.9	2.5	3.3
5	4.0	3.1	8.2	9.1	3.3	4.0	6.4	5.3	357	3.9	2.2	2.7
6	4.7	3.1	6.2	7.1	3.2	4.0	6.2	4.7	134	5.9	2.1	2.6
7	3.2	3.1	5.2	6.1	3.3	11	6.0	4.6	29	3.4	2.0	3.0
8	2.9	3.1	4.7	5.1	3.5	8.0	5.7	8.2	19	3.2	2.0	2.7
9	3.0	3.1	5.1	6.6	3.2	6.0	5.7	7.4	15	64	2.8	2.6
10	3.0	3.2	13	6.1	3.1	9.0	5.6	7.5	12	5.2	2.1	22
11	3.5	5.5	6.2	5.4	3.2	23	8.7	5.8	9.8	4.3	2.6	11
12	3.2	3.6	5.1	5.1	3.1	9.0	6.3	5.3	8.4	4.1	2.1	3.5
13	3.0	3.2	8.4	4.8	3.0	9.0	5.6	5.1	6.9	4.6	2.0	3.1
14	2.9	3.1	8.4	13	3.5	7.0	5.5	4.8	6.0	22	3.9	3.0
15	4.5	3.1	6.9	6.7	15	6.0	5.3	4.8	5.5	11	2.4	2.9
16	3.5	3.0	6.0	5.1	22	5.0	7.0	13	5.0	11	2.7	2.9
17	11	2.8	5.5	4.5	e5.9	5.0	7.8	5.9	4.8	5.3	2.6	2.9
18	4.5	2.9	5.4	4.3	e5.7	5.0	7.3	5.3	4.6	5.7	4.5	2.8
19	3.0	2.8	4.6	3.9	e7.1	7.0	7.1	4.7	8.0	4.5	2.3	2.8
20	2.8	2.8	4.6	3.8	e6.0	7.0	6.6	4.4	5.6	4.1	2.0	2.8
21	2.8	2.9	4.9	3.9	e4.7	6.0	6.4	4.2	4.5	4.0	1.9	3.0
22	2.8	39	4.8	3.9	e4.3	6.0	6.8	3.9	4.2	3.9	1.9	4.6
23	2.8	16	4.8	18	e4.2	7.0	7.6	3.8	4.0	10	1.9	4.9
24	2.8	5.4	4.5	14	7.0	6.0	6.4	6.1	5.9	4.8	1.9	2.8
25	2.8	4.8	4.4	4.9	6.0	9.0	6.3	4.8	4.2	4.1	2.0	3.2
26	2.8	4.8	4.2	4.4	17	55	5.9	4.2	4.0	4.3	2.0	14
27	2.9	4.5	4.3	4.0	7.0	76	5.8	4.0	3.9	4.5	32	6.2
28	3.0	4.5	4.3	3.8	6.0	20	5.5	3.7	3.7	3.9	4.3	4.2
29	3.1	4.6	11	3.7	5.0	11	5.3	3.7	3.5	3.7	3.3	3.3
30	3.1	4.8	8.1	3.7	---	9.0	5.2	3.6	3.4	3.7	2.8	3.1
31	3.1	---	6.3	3.7	---	11	---	54	---	12	2.7	---
TOTAL	107.8	155.2	268.1	198.8	168.6	358.0	192.4	212.8	700.5	242.7	109.7	136.0
MEAN	3.48	5.17	8.65	6.41	5.81	11.5	6.41	6.86	23.3	7.83	3.54	4.53
MAX	11	39	63	18	22	76	8.7	54	357	64	32	22
MIN	2.8	2.8	4.2	3.7	3.0	4.0	5.2	3.6	3.4	3.2	1.9	2.6
CFSM	.56	.83	1.39	1.03	.93	1.85	1.03	1.10	3.75	1.26	.57	.73
IN.	.64	.93	1.60	1.19	1.01	2.14	1.15	1.27	4.18	1.45	.66	.81

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 1992, BY WATER YEAR (WY)

MEAN	7.06	10.5	12.4	10.9	12.0	15.0	19.6	14.8	8.25	7.25	5.30	6.12
MAX	22.8	22.4	46.9	20.6	20.9	36.5	41.1	42.0	23.3	18.9	16.1	24.6
(WY)	1990	1986	1984	1991	1984	1983	1983	1989	1992	1984	1990	1989
MIN	1.72	2.04	2.57	1.67	2.95	5.11	3.50	4.48	2.74	1.89	1.33	1.85
(WY)	1983	1982	1981	1981	1980	1985	1985	1986	1981	1980	1981	1982

ATTACHMENT KF-4

01403400 GREEN BROOK AT SEELEY MILLS, NJ--Continued

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1979 - 1992		
ANNUAL TOTAL	3316.7		2850.6				
ANNUAL MEAN	9.09		7.79		10.8		
HIGHEST ANNUAL MEAN					18.2		1984
LOWEST ANNUAL MEAN					5.16		1981
HIGHEST DAILY MEAN	115	Mar 4	357	Jun 5	407	Apr 5	1984
LOWEST DAILY MEAN	2.6	Jul 17	1.9	Aug 21	.00	Sep 11	1981
ANNUAL SEVEN-DAY MINIMUM	2.7	Jul 14	1.9	Aug 20	.05	Sep 24	1981
INSTANTANEOUS PEAK FLOW			1150	Jun 5	6240a	Aug 2	1973
INSTANTANEOUS PEAK STAGE			5.29	Jun 5	16.10b	Aug 2	1973
INSTANTANEOUS LOW FLOW			1.8	Aug 7	.00	Sep 11	1981
ANNUAL RUNOFF (CFSM)	1.46		1.25		1.73		
ANNUAL RUNOFF (INCHES)	19.80		17.02		23.47		
10 PERCENT EXCEEDS	15		11		20		
50 PERCENT EXCEEDS	5.1		4.6		5.4		
90 PERCENT EXCEEDS	3.0		2.8		1.6		

a From rating curve extended above 600 ft^3/s on basis of slope-area measurement of peak flow.
b Site and datum then in use.
e Estimated.

ATTACHMENT KKS