SDMS Document
115848

ADVANCED CHEMICAL TECHNOLOGY
AKA: RUSSELL STANLEY CORPORATION
RIVER AVENUE AND E. STATE STREET, CAMDEN
CAMDEN COUNTY, NEW JERSEY
EPA ID # NJD071455141

GENERAL INFORMATION AND SITE HISTORY

Advanced Chemical Technology is located on Block 847, Lot 2 in the rear portion of the building on the eastern corner of East State Street and River Road, Camden, New Jersey. The general site area is urbanized and the immediate area industrialized. Approximately one million people reside within 4 miles of the site.

Harrison Avenue Landfill is located approximately 1750 feet northwest of the site bordering the Delaware and Cooper Rivers.

The site was previously owned by the Record Company of America (RCA) who manufactured cassettes and plastic record discs from 1942 until they sold the property to Camden Properties, Inc. in 1970. Camden Properties leased the site in February 1974 to Advanced Chemical Technology (ACT), a subsidary of Plant Industries, Inc. ACT manufactured plastic industrial containers. On January 12, 1984, ACT sold all equipment and assets to Russell-Stanley East, Inc. who continued the same operation at the site. Although the operators at the site had changed, Camden Properties, Inc. remained the owner. The sale of the industrial establishment from ACT to Russell-Stanley was, and still is, subject to the provisions of the Environmental Cleanup Responsibility Act (ECRA). On May 11, 1989, the majority shareholders of the Russell-Stanley Corporation, the parent corporation of Russell-Stanley East, Inc., entered into an agreement to sell the stock of the Russell-Stanley Corporation to Vestar/R-S Holdings Corporation. Russell-Stanley East, Inc., will continue to operate the Camden facility.

SITE OPERATIONS OF CONCERN

ACT manufactured plastic drums through the use of three molding machines. Materials used included plastic resin beads, ethylene glycol used as a coolant and oil for lubrication of the three molding machines. The plastic resin beads are stored in above-ground silos outside of the building. The beads are taken from the silos and melted to form "sock-like" sacks which drop into the molding machines. The molds close and air is blown into the heated plastic, forming the drum. The only hazardous substance involved in the process is ethylene glycol which flows around the mold cavity never touching the drum. It cools and hardens the drum and is employed in a recirculating, closed system in much the same way antifreeze in a car returns to the radiator.

The facility has three above ground storage tanks (275 gallons each) inside the building that store spent oil and hydraulic fluid. The waste oil is generated either through maintenance work which is periodically done on the molding machines or through accidental equipment failure which may cause a release of oil and/or coolant. The company does not have any gasoline storage tanks on their property.

On the northern boundary of the site, a filled area is apparent. The area contained scrap metal, wood palates, paper refuse and remnants of a

concrete structure. Aerial photographs from 1946 reveal a long, narrow building on the adjacent northern lot and two separate piles of debris between the long building and the site. Sometime between 1962 and 1965 the long, narrow building was demolished and a parking lot covered the area. In 1978, an area of debris and possible dumping was observed at the extreme north eastern corner of the facility. In a 1979 aerial photo, the north corner and a southeast corner of the site appeared to have oil stained areas.

An inspection of the facility on January 28, 1985 by the NJDEP, Division of Hazardous Waste Management (DHWM), Bureau of Environmental Evaluation and Cleanup Responsibility Assessment (BEECRA), noted that two of the molding machines had concrete pits in the floor to collect oil or coolant if a spill should occur. The collection pits were approximately 3 feet wide and 5 feet deep. At the time of inspection, Molding Machine No. 3 did not have a collection pit for spill containment. Without any containment around the machine, oil runs onto the floor and outside onto the rail siding loading dock. Approximately 37 55-gallon plastic drums of waste oil stored in open top drums in a waste storage area inside the building were also noted. An EPA I.D. number was required for the removal of the waste oil since the waste oil stored on site exceeded the 1,000 gallon limit.

ACT has three air permits in connection with operations at the facility (NJDEP Plant ID No. 50102).

Permit/Certificate #017175 pertains to the vent on the silo holding the plastic resin beads. The original date of approval was November 6, 1974 but the current owner, Russell-Stanley, has renewed the permit until April 10, 1995.

Permit/Certificate #017174 is related to the pneumatic equipment (vacuum system) used to convey the resin beads from the silo to blowmolding machines. The original date of approval was April 10, 1975 and the permit expires on February 21, 1990.

Permit/Certificate #022246 is also for equipment used to load resin into the blowmolding machines. It was originally approved on August 11, 1981 and expires on August 11, 1991.

ACT does not have a NJPDES permit.

An ECRA inspection in February 1984 revealed oil contaminated soil around a dumpster in the rear of the facility and also along the railroad siding on the southern portion of the site. The probable cause of oil stained soil around the dumpster was from the disposal of oil absorbent speedy-dry material as trash.

In December 1984, two inspections of the ACT facility were made by the NJDEP, Division of Waste Management. A black oil-like substance was noticed coming from a blowmolding machine which flowed onto the floor, under the loading dock door, across the loading dock and down onto the ground. Also observed were oily-like puddles and oil saturated soil around the railroad siding behind the building.

GROUNDWATER ROUTE

ACT lies within a major physiograpic division, the Atlantic Coastal Plain

of New Jersey. The Atlantic Coastal Plain is characterized by a wedge of unconsolidated sediments that thicken and dip southeast toward the Atlantic Ocean. The oldest of these sediments are the Potomac Group and Raritan and Magothy Formations of early to late Cretaceous Age that overlie crystalline bedrock.

The Potamac-Raritan-Magothy aquifer system (PRM) is the largest water bearing stratum in the area and in fact, the most heavily used aquifer in New Jersey. The width of the outcrop ranges from 2 to 3 miles forming a wedge-shaped body which ranges in thickness from about 200 feet to over 1,000 feet. The system consists of aquifer units composed of sand and gravel and confining units of silt and clay. According to well logs, the upper 8 to 10 feet of strata consist of medium coarse to fine sand which grades into silty clays and then into a dense clay. Three major aquifers, identified as the lower, middle and upper units, have been defined within the aquifer system. The hydrogeology of this system is extremely complex with several clay layers exhibiting discontinuities throughout the upper and middle aquifers. The lower aquifer may also receive recharge vertically through the leaky confining unit.

Groundwater is encountered ~~of~~ at depths ranging from 2.3 to 7.9 feet below grade at the site. The direction of groundwater flow is to the east within the northern portion of the site and to the southeast within the southern portion. A clay stratum level exists at ACT approximately 6 feet below the surface and may be responsible for the high water table.

Originally, the natural groundwater flow was westerly, towards the Delaware River. Increased pumpage in the PRM aquifer system has reversed the groundwater direction toward the pumping centers whereas now the Delaware River is a recharge boundary.

Because of the possibility of the known soil contaminants migrating into the shallow groundwater table, the NJDEP, DHWM, BEECRA required ACT to install monitoring wells near the areas of concern. During the initial phase of the investigation (February 1988), six groundwater monitoring wells (MW-1 to MW-6) were installed at the site.

WELL #	DEPTH TO SCREEN (ft.)	LENGTH OF SCREEN (ft.)	DEPTH TO GROUNDWATER (ft.)
MW-1	2.7	7.0	3.3
MW-2	3.0	7.0	3.7
MW-3	4.0	10.0	7.7
MW-4	4.5	10.0	DRY
MW-5	2.5	7.0	3.1
MW-6	4.0	7.0	4.0

Due to site constraints, wells MW-5 and MW-6 were installed with 2-inch diameter PVC screen and casing material. All other wells were constructed with 4-inch diameter PVC screen and casing material. The screen interval was decreased in certain wells so that the wells are completed within the first groundwater zone and the confining substratum is not penetrated.

Well MW-4 is a "dry well" and no stabilized water has been measured in the well during several monitoring visits although a thin saturated zone was encountered above the lower confining strata. The well may be dry due to

the smearing of cuttings from the clay strata along the sidewalls of the boring. Another possibility is MW-4 is located on an area that seems to have been filled at one time with concrete and wood construction debris.

The first round of groundwater sampling occurred on March 8, 1988, approximately two weeks following well installation by J.M. Sorge Inc. Groundwater samples were obtained from five wells (excluding MW-4) and were analyzed for base neutrals + 15 (BN + 15), acid extractables + 10 (AE + 10), priority pollutant metals (PM13), petroleum hydrocarbons (PHC) and ethylene glycol. The sample analysis identified elevated levels of PHC in MW-5 only (2 ppm). Trace levels of lead and cadmium were also detected although their levels were below NJDEP clean-up levels. Acid extractables and ethylene glycol were not detected at all. Sampling results are discussed below.

A second round of groundwater sampling (Phase II) was conducted in October 1988, also by J.M. Sorge Inc. Five wells (excluding MW-4) were sampled and analyzed for BN + 15, PM13 and PHC in accordance with the approved Sampling Plan Addendum. Trace concentrations of several metals were found in all samples. Groundwater samples from MW-2 and MW-6 contained 0.062 ppm and 0.086 ppm of chromium, respectively, exceeding NJDEP Action Levels for groundwater. Sample MW-6 also exhibited an elevated cadmium concentration (0.013 ppm). Results of sampling are discussed below.

A third round of groundwater sampling is scheduled approximately two weeks after the ongoing soil remediation is completed. The sampling will include the installation of an additional monitoring well (MW-7) downgradient of the dumpster area. It will also include flushing out the dry well, MW-4, for the proper acceptance of groundwater and if that does not yield results, another monitoring well will be installed adjacent to it.

There are numerous public supply wells within a 5 mile radius of the site. There are no private potable wells in the area.

The City of Camden owns seven water supply wells ranging in depth from 155 feet to 181 feet within 1 mile of the site. The closest public supply well is Camden's City Well #16, approximately 750 feet north of the ACT facility. Well #16, closed from production in 1980, is 180 feet deep and currently used as a monitoring well. The remaining city wells within 1 mile are either sealed, abandoned or used for groundwater monitoring. Camden also owns 15 additional wells within 5 miles ranging in depth from 118 to 401 feet in depth which supply the potable water to some 50,000 residents.

The New Jersey Water Company (serving 36,500 residents) owns nine public supply wells within a 1 mile radius of the site. The wells range from 171 to 399 feet in depth.

Also, the Merchantville-Pennsauken Water Commission (serving approximately 50,000 residents) owns nine wells from 139 to 300 feet deep and the Borough of Collingswood (serving 20,600 residents) owns five wells from 294 to 370 feet deep within 5 miles.

Our Lady of Lourdes Hospital owns a 277-foot well about 1.5 miles south of the site. Because of high levels of VOCs, the hospital is not currently using the well and is connected to the public water lines of Camden.

There are seven industrial wells within a 1 mile radius and 22 other industrial wells within a 5 mile radius.

Conrail owns five shallow monitoring wells (30 to 35 ft.) 1,980 feet south of the site and Weston, Speitel and Watermation own a 21-foot monitoring well 3,960 feet north of the facility.

The potential for groundwater contamination exists due to known PHC and metal contamination in the soil. New monitoring wells and another sampling round are scheduled to occur in February 1990.

SURFACE WATER ROUTE

The Cooper River lies approximately 2,000 feet to the southwest and the Delaware River is located about 3,000 feet northwest of the site. There has been no qualitative evidence of release to surface water.

Both the Cooper and the Delaware River are used for recreational purposes. The State and Federally endangered shortnose sturgeon inhabits the Delaware River.

The potential for surface water contamination exists from runoff entering storm sewers and eventually the Cooper and Delaware Rivers.

ACT has no permits or violations for surface water discharge.

AIR ROUTE

Polyethylene dust is the only air contaminant produced from the pneumatic equipment conveying resin beads to the blowmolding machines. The vacuum chambers are equipped with 300 micron self-cleaning filters and the vacuum pump is equipped with a dry type inlet filter. The air contaminant removal efficiency is 99.8% and the volume of gas discharged into open air is 100 cubic feet per minute.

ACT held three permits for operating equipment at the facility. Permit #017175 is related to the venting system on the silo holding the plastic resin beads and permit #'s 017174 and 022246 are related to equipment used to convey the beads into the blowmolding machines.

A potential exists for polyethylene dust entering the air via malfunction of filter or through continued use.

An Order was issued to ACT by the NJDEP, Division of Environmental Quality on September 6, 1974 for failure to obtain the proper permit before installing a polyethylene storage silo in excess of a 2,000 cubic foot capacity. (Attachment FF).

SOIL

As part of the ECRA review process, ACT was inspected by the NJDEP, DHWM, BEECRA in February 1984. During the inspection, it was observed that soil contamination existed around the dumpster on the east side of the building and along the railroad siding on the southern portion of the site. The contamination around the dumpster probably occurred when the oil absorbent material, vermiculite, was disposed of with the trash. This area consists of soil overlaying an asphalt base, which extends to the building to the perimeter fence. BEECRA recommended a Sampling and Cleanup Plan be drafted by ACT to delineate the extent of soil contamination.

ACT hired Stablex-Reutter Inc. to sample the property. In February and March of 1984 Stablex-Reutter sampled the two main areas of concern, the rail siding and dumpster area, for petroleum hydrocarbons (PHCs), priority pollutant metals and polychlorinated biphenyls (PCBs). Transformer areas on site were also sampled for PCBs. PHC levels around the dumpster reached 170 ppm, exceeding NJDEP Soil Action Cleanup Levels. Other areas that exceeded the NJDEP guidelines included much of the rail siding area which contained high amounts of lead in the soil. No PCBs were found. Sampling results are discussed below.

The NJDEP, BEECRA, approved the Cleanup Plan dated March 27, 1984 prepared by Stablex Reutter.

Between the period of May 4 and May 12, 1984, some 382 tons of contaminated soil were removed from the site and transported to Northwood, Ohio for disposal. The cleanup that occurred at the site removed only a portion of the contaminated soil leaving unacceptable levels of PHCs on site. The NJDEP, BEECRA required ACT to provide a new sampling plan in August of 1984. The Sampling Plan was approved and the results of the sampling proved that high levels of PHCs still remained in the soil.

An inspection in January 1985 by the NJDEP, BEECRA noted soil contamination still existed in the area where the soil was excavated and removed. Also noted was contaminated soil around the railroad tracks from a recent oil spill.

In October 1985, the NJDEP, BEECRA requested a revised cleanup plan by ACT that addressed the vertical and horizontal extent of soil contamination. The NJDEP also required ACT to submit a Sampling Plan for all areas of known or suspected PHC contamination in the soil and to propose a groundwater investigation to determine if groundwater contamination exists.

The Sampling and Cleanup Plans were delayed due to certain financial arrangements that had to be worked out between the parties involved.

In June 1988, a report by J.M. Sorge, Inc. identified the nature and approximate extent of contamination in the soil at ACT (Phase I). The vertical extent of contamination had been delineated in all three areas of concern, however, the horizontal extent of soil contamination had not been completely determined. The areas of concern are as follows:

Railroad Siding Area - Area 1
Dumpster Area - Area 2
Oil Stained Area - Area 3
Background Area - Area 4

Phase II of the site investigation occurred during the week of October 17, 1988 and further delineated the areas of concern. The contamination identified in the railroad siding and dumpster areas was primarily surficial in extent and appeared to have been derived from oil staining associated with railroad operations and storage of wastes in the dumpster. The petroleum and metal contaminants present in the stained area indicated more extensive soil contamination than previously assumed.

Area 1, located in back of the plant, was found to have PHC, metal and base neutral compound contamination. The PHC contamination was identified in

the area below grade of the railroad siding (570 to 8,300 ppm) and extended to a depth of 1.5 feet. However, a deeper boring of 4 feet also showed PHC levels (160 to 210 ppm) exceeding NJDEP Soil Action Levels. Metal contamination consisted of antimony (2.7 to 3.2 ppm), cadmium (4.1 to 20 ppm), copper (200 to 8,800 ppm), lead (330 to 530 ppm) and zinc (590 to 710 ppm). A base neutral concentration of 16.3 ppm was identified in an area adjacent to the loading dock.

The contaminants detected in Area 2, located on the east side of the building, included PHCs and metals. This area consisted of soil overlying an asphalt base. The surface soil along with the asphalt base has been removed and disposed of properly prior to samplng. PHCs were found up to 1.5 feet below the surface at concentrations up to 31,000 ppm. Metals detected in both phases of the site investigation included antimony (2.7 to 5.6 ppm), cadmium (3.1 to 6.7 ppm), lead (320 to 1,900 ppm), silver (33 ppm) and zinc (480 ppm). All metals except antimony exceeded NJDEP Soil Action Levels. Additional sampling was required east of the fence line to determine the horizontal extent of contaminants that may have migrated off the ACT property.

Area 3, located at the eastern corner of the building, contained elevated concentrations of PHCs, metals and base neutrals. The PHC contamination was found up to depths of 5.5 feet below grade with concentrations ranging from 110 to 1,400 ppm. The priority pollutant metals detected in the area included antimony (2.8 to 3.0 ppm), cadmium (3.1 to 4,500 ppm), chromium (140 ppm), beryllium (1.1 to 1.9 ppm), copper (400 ppm), lead (260 ppm), nickel (150 ppm), silver (5.6 to 73 ppm) and zinc (600 ppm). Base neutral concentrations ranged from 10.26 to 81 ppm.

Area 4, located at the northern corner of the property, displayed significantly elevated concentrations of base neutral compounds (total of 34.6 ppm), including 32.0 ppm of bis-2-ethylhexyl phthalate. Slightly elevated levels of three metals (arsenic, beryllium and cadmium) were also detected. The base neutral contamination is possibly related to macadam and fly-ash from an adjacent roofing tar manufacturer.

Results of this sampling episode are discussed below.

After reviewing the sampling results the NJDEP, BEECRA required an additional Cleanup Plan be submitted by ACT to address the remaining soil and possible groundwater contamination. A Cleanup Plan dated March 1989 was submitted by J.M. Sorge, Inc., revisions were made by the NJDEP and the Plan was implemented by January 1990. The site is currently in the cleanup process.

DIRECT CONTACT

There are no reported incidents of direct contact by employees of ACT or residents of the area. There is a potential for workers to come into contact with the contaminated soils. The site is adequately fenced.

FIRE AND EXPLOSION

There have been no reported incidents of fire and explosion at the facility but there is a potential due to operations and materials used on site.

ADDITIONAL CONSIDERATIONS

There has been no documented damage to flora or fauna, contamination of

food chain or damage to off-site property but there is a potential due to past disposal practices and materials used on site.

ENFORCEMENT ACTIONS

ACT was issued an Order on September 21, 1974 by NJDEP, Division of Environmental Quality for installing a storage silo in excess of 2000 cubic feet without obtaining a permit to construct.

On December 21, 1984 the Russell-Stanley Corporation was issued a Notice of Violation for failure to notify the NJDEP of a discharge of hazardous Waste. The Notice also called for the contaminated areas to be excavated, analyzed, classified and disposed of properly. Lawyers for Russell-Stanley discussed the Notice with the NJDEP, Bureau of Industrial Site Evaluation and it was decided to disregard the Notice and require ACT to clean up its former site under ECRA.

In May 1985 ACT was issued a Notice of Violation and Penalty Settlement Offer for failure to implement an approved Cleanup Plan. ACT failed to correct deficiencies such as delineating the horizontal and vertical extent of soil contamination on site.

On June 18, 1985 Judge Skillman issued a Court Order requiring ACT to submit a revised Cleanup Plan by July 17, 1985. ACT failed to comply with the Court Order. Due to ACT's failure to comply and lack of cooperation, the case was referred to the Deputy Attorney General for the appropriate legal action.

SUMMARY OF SAMPLING DATA

1.	Sampling date:	February 25, 1984
	Sampled by:	Stablex-Reutter Inc. Ninth and Cooper Streets Camden, New Jersey 08101
	Samples:	Two composite soil samples in the loading dock area and eight composite soil samples in the dumpster area.
	Laboratory:	Stablex-Reutter Inc. Ninth and Cooper Streets Camden, New Jersey 08101 Lab Certification #04012
	Parameters:	Petroleum hydrocarbons (PHCs), polychlorinated biphenyls (PCBs), base neutral and acid extractable organics, priority pollutant metals and purgeable organics.
	Sample description:	Twenty soil samples from the loading dock were collected at a depth of 3 to 4 inches and composited into one sample (Composite #1). Another twenty soil samples were collected from the loading dock area and

composited into one sample (Composite #2). The dumpster area was measured off into eight sections and twenty samples were composited at each section for a total of eight composite soil samples in the dumpster area. For PCB sampling in the dumpster area, two samples were collected combining composites 1 through 4 and 5 through 8.

Contaminants detected:

LOADING DOCK AREA

PARAMETER (ppm)	COMPOSITE #1	COMPOSITE #2
antimony	270*	<1.0
arsenic	20*	11
chromium	23	32
copper	58	66
lead	1,600*	180
mercury	<0.2	<0.2
nickel	18	13
zinc	150	300
acid extractable organics	<25	<25
base/neutral extractable organics	<10	<10
purgeable organics	<10	<10
PCBs	<5	<5

DUMPSTER AREA

	PHC (ppm)	PCB (ppm)
Composite Sample #1	3.3	<5**
Composite Sample #2	1.7	
Composite Sample #3	54	
Composite Sample #4	10	
Composite Sample #5	76	<5**
Composite Sample #6	31	
Composite Sample #7	120*	
Composite Sample #8	170*	

* exceeded NJDEP Soil Action/Cleanup Levels
** numbers represent composite samples #'s 1 through 4 and 5 through 8

QA/QC: Organic and Inorganic Quality Assurance Data was provided by Stablex-Reutter Inc.

File locations: NJDEP, DHWM, Bureau of Planning and Assessment, 65 Prospect Street, Trenton, New Jersey
NJDEP, DHWM, BEECRA
401 E. State Street, Trenton, New Jersey

2. Sampling dates: March 15 and 19, 1984

Sampled by: Stablex-Reutter, Inc.
Ninth and Cooper Streets
Camden, New Jersey 08101

Samples: Thirty-four composited soil samples

Laboratory: Stablex-Reutter, Inc.
Ninth and Cooper Streets
Camden, New Jersey 08101
Lab Certification #04012

Parameters: Lead analysis

Sample description: Samples 1 through 11 were composited from five samples collected 1 to 6 inches in depth at each of the eleven sections at the loading dock area. Samples 12 through 16 were composited from soils 1 to 12 inches in depth at the south and northeast side of the plant. Samples 17 through 21 were composited from soils 1 to 12 inches in depth at the northeast side of the plant. A background area (Sample 22) is located on the northern end of the property and is a composite of ten samples ranging in depth from 1 to 11 inches. Samples 23 and 24 were composited from the dumpster area and were formerly Areas 7 and 8. Samples 25 through 34 were also gathered at the loading dock. The ten samples were composited from soil 1 to 6 inches in depth.

Contaminants detected:

SAMPLE DESIGNATION	LEAD, TOTAL (ppm)
Area #1	55
Area #2	110
Area #3	160
Area #4	160
Area #5	140
Area #6	200
Area #7	170
Area #8	140
Area #9	110
Area #10	150
Area #11	120
Area #12	97
Area #13	120
Area #14	120
Area #15	93
Area #16	110
Area #17	230
Area #18	230
Area #19	200
Area #20	140

Area #21	96
Area #22	60
Area #23	150
Area #24	200
Area #25	320*
Area #26	410*
Area #27	160
Area #28	120
Area #29	120
Area #30	160
Area #31	110
Area #32	150
Area #33	170
Area #34	170

* exceeded NJDEP Action/Cleanup Levels

QA/QC: Spike, blank and duplicate analysis were included with the sampling results.

File location: NJDEP, DHWM, BEECRA
401 E. State Street
Trenton, New Jersey

3. Sampling dates: June 11, 13 and 15, 1984

Sampled by: Stablex-Reutter, Inc.
28 Springdale Road
Cherry Hill, New Jersey 08034

Samples: June 11 - Eight soil samples
June 13 - Ten soil samples
June 15 - Twenty-four soil samples

Laboratory: Stablex-Reutter, Inc.
28 Springdale Road
Cherry Hill, New Jersey 08034
Lab Certification #04012

Parameters: Oil and Grease

Sample description: All soil samples were collected from the south side of the building around the dumpster area. Depths of samples ranged from 0 to 36 inches. Refer to Attachment II for section locations.

Contaminants detected:

SAMPLE DESIGNATION	DEPTH OF SAMPLE (inches)	OIL and GREASE (ppm) JUNE 11	JUNE 13	JUNE 15
Section #1	0-6	NA	NA	3,300
	6-12	NA	NA	2,300
	12-18	NA	NA	460

	18-24	NA	NA	30
Section #2	0-6	NA	NA	7,100
	6-12	NA	NA	1,400
	12-18	NA	NA	1,400
	18-24	NA	NA	450
	24-30	NA	350	NA
	30-36	NA	190	NA
Section #3	0-6	NA	NA	3,200
	6-12	NA	NA	5,100
	12-18	NA	NA	1,700
	18-24	NA	NA	1,100
	24-30	NA	930	NA
	30-36	NA	2,200	NA
Section #4	0-6	NA	NA	3,100
	6-12	NA	NA	1,700
	12-18	NA	NA	2,400
	18-24	NA	NA	620
	24-30	NA	830	NA
	30-36	NA	520	NA
Section #5	0-6	89,000	NA	NA
	6-12	35,000	NA	NA
	12-18	13,000	NA	NA
	18-24	5,000	NA	NA
Section #6	0-6	60,000	NA	NA
	6-12	8,500	NA	NA
	12-18	14,000	NA	NA
	18-24	2,200	NA	NA
Section #7	0-6	NA	NA	22,500
	6-12	NA	NA	9,100
	12-18	NA	NA	5,300
	18-24	NA	NA	1,800
	24-30	NA	520	NA
	30-36	NA	910	NA
Section #8	0-6	NA	NA	19,800
	6-12	NA	NA	23,600
	12-18	NA	NA	26,800
	18-24	NA	NA	26,800
	24-30	NA	8,300	NA
	30-36	NA	7,600	NA

NA - not analyzed

QA/QC: The June 11 and 15 sampling episodes contained duplicate analysis. No other QA/QC data was found.

File location: NJDEP, DHWM, BEECRA
401 E. State Street
Trenton, New Jersey

4. Sampling date: November 15, 1984

Sampled by: Stablex-Reutter
28 Springdale Road
Cherry Hill, New Jersey 08003

Samples: Twenty-four soil samples

Laboratory: Stablex-Reutter, Inc.
Ninth and Cooper Streets
Camden, New Jersey 08101
Lab Certification #04012

Parameters: Petroleum hydrocarbons

Sample description: Twenty-four soil samples collected from eight sections at the southern end of the building around the dumpster. Depths of samples ranged from 0 to 36 inches. Refer to Attachment II for section locations.

Contaminants detected:

	PETROLEUM HYDROCARBONS (ppm)		
SAMPLE LOCATION	SAMPLED AT A DEPTH OF 0 TO 12 IN.	SAMPLED AT A DEPTH OF 12 TO 24 IN.	SAMPLED AT A DEPTH OF 24 TO 36 IN.
Section 1	8,700*	1,500*	1,300*
Section 2	1,200*	80	<10
Section 3	8,500*	1,400*	720*
Section 4	12,000*	8,400*	6,000*
Section 5	12,000*	2,600*	710*
Section 6	9,400*	13,000*	5,000*
Section 7	13,000*	6,500*	880*
Section 8	15,000*	11,000*	1,800*

* exceeded NJDEP Soil Action/Cleanup Level

QA/QC: Duplicates and spiked sample provided

File location: NJDEP, DHWM, BEECRA
401 E. State Street
Trenton, New Jersey

5. Sampling date: August 12, 1985

Sampled by: S-R Analytical Inc.
28 Springdale Road
Cherry Hill, New Jersey 08003

Samples:	Twenty-four soil samples
Laboratory:	S-R Analytical Inc. 28 Springdale Road Cherry Hill, New Jersey 08003 Lab Certification # 04012
Parameters:	Petroleum hydrocarbons and priority pollutant metals.
Sample description:	Twenty-four soil samples collected from ten soil borings ranging in depth from 4 feet to 10 feet 6 inches soil borings on site but exact locations are unknown.

CONTAMINANTS DETECTED:

SAMPLE BORING	DEPTH TO SAMPLE	PARAMETERS (ppm)								
		PETROLEUM HYDROCARBON	Ar	Ba	Cd	Cr	Pb	Hg	Se	Ag
BORING # 1	4'-4'6"	<20								
	6'-6'6"	<20	<0.5	0.24	<0.1	<0.5	<0.5	<0.02	<0.1	<0.5
	8'-8'6"	74								
	10'-10'6"	<20								
BORING # 3	4'-4'6"	130*								
	6'-6'6"	60								
BORING # 4	4'-4'6"	1,600*	<0.5	0.53	<0.1	<0.5	<0.5	<0.02	<0.1	<0.5
	6'-6'6"	84								
	8'-8'6"	100*								
	10'-10'6"	80								
BORING # 5	4'-4'6"	<20								
	6'-6'6"	460*								
BORING # 6	4'-4'6"	78	<0.5	0.22	<0.1	<0.5	<0.5	<0.02	<0.1	<0.5
	6'-6'6"	<20								
	8'-8'6"	<20								
	10'-10'6"	54								
BORING # 7	4'-4'6"	1,300*								
	6'-6'6"	<20	<0.5	0.30	<0.1	<0.5	<0.5	<0.02	<0.1	<0.5
BORING # 8	4'-4'6"	1,200*								
	6'-6'6"	26								
	8'-8'6"	<20	<0.5	0.19	<0.1	<0.5	<0.5	<0.02	<0.1	<0.5
	10'-10'6"	<20								
BORING # 10	4'-4'6"	230*								
BORING # 11	4'-4'6"	16								

* - EXCEEDED NJDEP SOIL ACTION/CLEANUP LEVELS
BLANK INDICATE NO SAMPLING

	QA/QC:	Trip blank, field blank, duplicates and spike included in lab report.
	File location:	NJDEP, DHWM, BEECRA 401 E. State Street Trenton, New Jersey
6.	Sampling dates:	February 15, 16, 17, 18, 1988
	Sampled by:	J.M. Sorge, Inc. 3301 U.S. Highway 22 Somerville, New Jersey 08876
	Samples:	Eighty-four soil samples
	Laboratory:	Unknown
	Parameters:	Priority pollutant metals, petroleum hydrocarbons, base neutrals.
	Sample description:	Soil samples collected from four areas at depths from 0.5 to 6.5 feet.

CONTAMINANTS DETECTED:

DUMPSTER AREA - SAMPLED 2-16-88

SAMPLE #	12A	12B	13A	16A	17A	21A	22A	22B	23A
DEPTH(ft)	0.5	1.5	0.5	0.5	0.5	0.5	0.5	1.5	0.5
METALS (ppm)									
ANTIMONY	.56	.22	.51	.96	.44	2.7*	4.9*	.2	1.5
ARSENIC	4.8	8	11	3.6	3.9	6.4	7.1	1.9	6.2
BERYLLIUM	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	.75	< 0.50	.51
CADMIUM	3.3*	6.4*	2	3.1*	3.5*	1.1	1.8	.52	1.2
CHROMIUM	17	24	18	17	31	17	31	8.5	20
COPPER	27	35	30	43	36	52	85	4	37
LEAD	180	1,900*	250*	190	180	1,900*	560*	43	320*
MERCURY	.13	1*	.21	< 0.10	.11	.32	.29	< 0.10	.19
NICKEL	9.4	22	8.4	9.4	11	6.2	14	< 4.0	10
SELENIUM	.3	.3	.45	.33	.29	.49	1	.13	.66
SILVER	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
THALLIUM	.21	.26	.22	< 0.10	< 0.10	.13	.18	.11	.17
ZINC	110	270	120	140	85	110	480*	22	59
PHC (ppm)	130*	70	120*	310*	520*	77	7,900*	31,000*	50
BASE NEUTRALS (ppb)									
BENZO (A) ANTHRACENE					ND		ND	ND	820
BENZO (A) PYRENE					ND		130	ND	630
BENZO (B) FLUORANTHENE					ND		ND	ND	670
BENZO (K) FLUORANTHENE					ND		ND	ND	690
BIS(2-ETHYLHEXYL) PHTHALATE					ND		1,600	ND	ND
BUTYL BENZYL PHTHALATE					ND		490	ND	1,100
CHRYSENE					ND		170	ND	1,100
DI-N-BUTYL PHTHALATE					4900		460	350	190
FLUORANTHENE					ND		180	ND	ND
PHENANTHRENE					ND		200	ND	1,200
PYRENE					ND		600	ND	2,800
TOTAL BASE NEUTRALS (ppm)					ND		4.13	.35	9.1

ND - NONE DETECTED
* - EXCEEDED NJDEP SOIL ACTION/CLEANUP LEVELS
BLANK SPACES INDICATE NO SAMPLING

CONTAMINANTS DETECTED:

Dumpster Area
Sampled 2-18-88

SAMPLE #	14A	14B	14C	15A	15B	18A	18B	19A	20C
DEPTH(ft)	0.5	1.5	3.5	0.5	1.5	0.5	1.5	0.5	2.5
METALS (ppm)									
ANTIMONY	.32	.16	.27	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
ARSENIC	2.7	1.6	2.4	6.2	2.7	5	4.6	2.8	2.5
BERYLLIUM	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.[illegible]
CADMIUM	<0.50	<0.50	.7	3	<0.50	1.9	.76	<0.50	<0.[illegible]
CHROMIUM	15	12	18	23	16	19	13	11	18
COPPER	15	7.3	3.2	61	5.9	25	7.4	4.6	<2.0
LEAD	41	6.8	4.4	180	5.8	470*	110	16	3.9
MERCURY	<0.10	<0.10	<0.10	<0.10	<0.10	.11	<0.10	<0.10	<0.10
NICKEL	6.1	4.5	7	12	7.2	7.8	4.9	5.2	6.5
SELENIUM	.14	.11	.14	.43	.13	.34	.35	.24	.12
SILVER	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
THALLIUM	.22	.21	.24	.36	.25	.41	.59	.36	.38
ZINC	20	14	28	120	16	210	30	13	17
PHC (ppm)	75	150*	62	1900*	9,500*	350*	52	6,500*	86
BASE NEUTRALS (ppb)									
BENZO (A) ANTHRACENE	ND		ND		ND		ND		ND
BENZO (A) PYRENE	ND		ND		ND		ND		ND
BENZO (B) FLUORANTHENE	ND		ND		ND		ND		ND
BENZO (K) FLUORANTHENE	ND		ND		ND		ND		ND
BIS(2-ETHYLHEXYL) PHTHALATE	ND		ND		ND		120		ND
BUTYL BENZYL PHTHALATE	ND		ND		ND		ND		ND
CHRYSENE	ND		ND		ND		ND		ND
DI-N-BUTYL PHTHALATE	250		200		360		ND		720
FLUORANTHENE	ND		ND		ND		ND		ND
PHENANTHRENE	ND		ND		ND		ND		ND
PYRENE	ND		ND		ND		100		ND
TOTAL BASE NEUTRALS (ppm)	ND		ND		ND		0.1		ND

ND - NONE DETECTED
* - EXCEEDED NJDEP SOIL ACTION/CLEANUP LEVELS
BLANK SPACES INDICATE NO SAMPLING

CONTAMINANTS DETECTED:

Railroad Siding Area
Sampled 2-15, 2-18-88

SAMPLE #	1A	1B	1C	2B	5A	7A	7B	7C	8A	8B	10A	11A
DEPTH(ft)	0.5	1.5	2.5	0.5	0.5	0.5	1.5	4.0	0.5	1.5	0.5	0.5
METALS (ppm)												
ANTIMONY	1.9	3*	2.7*	.25	1.9	.86	.27	.25	.44	.2	.56	3.2*
ARSENIC	4.2	17	4	2.9	7.5	6.4	2	1.9	6.8	4.4	5.6	1.6
BERYLLIUM	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	2
CADMIUM	5.6*	7.3*	2.1	<0.50	2.9	<0.50	<0.50	<0.50	<0.50	1.3	20*	4
CHROMIUM	48	49	19	13	57	15	14	19	10	16	12	49
COPPER	8800*	570*	30	5.6	200*	22	<2.0	<2.0	24	17	430*	130
LEAD	250*	530*	180	25	330*	140	4	4.7	68	59	250*	190
MERCURY	<0.10	.5	.42	<0.10	.53	<0.10	<0.10	<0.10	<0.10	.15	<0.10	<0.10
NICKEL	18	27	7	<4.0	21	6.4	6.3	6.5	21	13	17	3.8
SELENIUM	.47	1.4	.32	.23	.57	.23	<0.10	<0.10	.11	.19	.31	1
SILVER	1.7	1.1	40	<1.0	2.1	<1.0	<1.0	<1.0	1.5	<1.0	<1.0	<1.0
THALLIUM	.22	.54	.23	.14	.31	.23	.2	.2	.24	.27	.25	.2
ZINC	710*	650*	100	25	270	49	12	13	54	95	290	590*
PHC (ppm)	8300*	570*	<50	<50	60	170*	160*	210*	200*	160*	<50	1200*
BASE NEUTRALS (ppb)												
BENZO (A) ANTHRACENE	ND		ND		700			ND				ND
BENZO (A) PYRENE	ND		ND		890			ND				ND
BENZO (B) FLUORANTHENE	ND		ND		990			ND				N
BENZO (K) FLUORANTHENE	ND		ND		820			ND				ND
BIS(2-ETHYLHEXYL) PHTHALATE	ND		ND		960			ND				15000
BUTYL BENZYL PHTHALATE	ND		ND		ND			ND				1300
CHRYSENE	ND		120		840			ND				ND
DI-N-BUTYL PHTHALATE	12000		220		5100			260				7000
FLUORANTHENE	ND		210		1500			ND				ND
PHENANTHRENE	ND		280		620			ND				ND
PYRENE	ND		360		1000			ND				ND
TOTAL BASE NEUTRALS (ppm)	ND		1.19		8.32			ND				16.3*

ND - NONE DETECTED
* - EXCEEDED NJDEP SOIL ACTION/CLEANUP LEVELS
BLANK SPACES INDICATE NO SAMPLING

CONTAMINANTS DETECTED:

Oil Stained Area
Sampled 2-18-88

SAMPLE # / DEPTH(ft)	24A 0.5	24B 1.5	24C 3.5	25A 0.5	25B 1.5	25C 2.5	26A 0.5	26B 1.5	26C 3.5
METALS (ppm)									
ANTIMONY	.4	1.6	.37	.49	.3	<0.10	.29	.31	.42
ARSENIC	2.4	10	3.3	2.3	5.2	2.9	8.5	3	4.9
BERYLLIUM	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
CADMIUM	3.8 *	4500 *	55 *	3.9 *	4.3 *	2.9	3.3 *	3.1 *	4.7 *
CHROMIUM	17	140 *	20	15	20	17	18	18	24
COPPER	22	400 *	90	35	73	8.9	12	17	32
LEAD	47	240	71	55	260 *	39	150	68	100
MERCURY	<0.10	.54	.19	<0.10	<0.10	.12	<0.10	<0.10	<0.10
NICKEL	8.5	150 *	37	7.1	8.1	7.1	6.4	7	10
SELENIUM	.25	.59	.24	.16	.26	.22	3	.1	.3
SILVER	<1.0	73 *	41 *	<1.0	<1.0	<1.0	12 *	<1.0	5.6 *
THALLIUM	.35	.62	.36	.35	.42	.45	.52	.33	.38
ZINC	50	600 *	120	64	150	36	36	55	74
PHC (ppm)	64	370 *	190 *	730 *	160 *	310 *	<50	110 *	1,400 *
BASE NEUTRALS (ppb)									
BENZO (A) ANTHRACENE			1900	330		870			
BENZO (A) PYRENE			1400	370		700			
BENZO (B) FLUORANTHENE			2500	420		780			
BENZO (K) FLUORANTHENE			1700	380		380			
BIS(2-ETHYLHEXYL) PHTHALATE			1100	ND		ND			
BUTYL BENZYL PHTHALATE			ND	ND		2600			
CHRYSENE			2300	360		930			
DI-N-BUTYL PHTHALATE			2200	750		17000			
FLUORANTHENE			5200	1000		900			
PHENANTHRENE			2200	350		1600			
PYRENE			2300	420		2000			
TOTAL BASE NEUTRALS (ppm)			22.64 *	4.3		11.17 *			

ND - NONE DETECTED
* - EXCEEDED NJDEP SOIL ACTION/CLEANUP LEVELS
BLANK SPACES INDICATE NO SAMPLING

CONTAMINANTS DETECTED:

Background

Sampled 2-17-88

SAMPLE #	27A	27B	27C
DEPTH(ft)	0.5	2.5	6.5
METALS (ppm)			
ANTIMONY	.12	.47	.22
ARSENIC	2.1	1.5	1.2
BERYLLIUM	<0.50	.54	<0.50
CADMIUM	<0.50	.54	<0.50
CHROMIUM	11	13	13
COPPER	5.4	3.5	3.4
LEAD	14	2.4	2.7
MERCURY	<0.10	<0.10	<0.10
NICKEL	<4.0	5	6.6
SELENIUM	.11	<0.10	<0.10
SILVER	<1.0	<1.0	<1.0
THALLIUM	.17	.15	.16
ZINC	24	24	15
PHC (ppm)	56	<50	76
BASE NEUTRALS (ppb)			
BENZO (A) ANTHRACENE			
BENZO (A) PYRENE			
BENZO (B) FLUORANTHENE			
BENZO (K) FLUORANTHENE			
BIS(2-ETHYLHEXYL) PHTHALATE	32000	ND	440
BUTYL BENZYL PHTHALATE	1300	ND	900
CHRYSENE	360	ND	ND
DI-N-BUTYL PHTHALATE	480	280	700
FLUORANTHENE			
PHENANTHRENE			
PYRENE			
TOTAL BASE NEUTRALS (ppm)	34.6*	.41	1.34

ND - NONE DETECTED
* - EXCEEDED NJDEP SOIL ACTION/CLEANUP LEVELS
BLANK SPACES INDICATE NO SAMPLING

	QA/QC:	Field blank and trip blank included
	File location:	NJDEP, DHWM, BEECRA 401 E. State Street Trenton, New Jersey
7.	Sampling date:	March 8, 1988
	Sampled by:	J.M. Sorge, Inc. 3301 U.S. Highway 22 Somerville, New Jersey 08876
	Samples:	Five groundwater samples
	Laboratory:	Accutest Laboratories 2235 Rt. 130, Building B Dayton, New Jersey 08810 Lab Certification #12129
	Parameters:	Priority pollutant metals, petroleum hydrocarbons, base neutrals, acid extractables and ethylene glycol.
	Sample description:	Groundwater samples from five on-site monitoring wells. Refer to Map 3 for exact locations.

CONTAMINANTS DETECTED:

PARAMETER	MONITORING WELLS				
	MW-1	MW-2	MW-3	MW-5	MW-6
METALS (ppm)					
ANTIMONY	<.001	<.001	.001	.001	<.001
ARSENIC	<.001	<.001	<.001	<.001	.002
BERYLLIUM	<.005	<.005	<.005	<.005	<.005
CADMIUM	.007	.008	<.005	<.005	<.005
CHROMIUM	<.025	<.025	<.025	<.025	.005
COPPER	<.020	<.020	<.020	<.020	<.020
LEAD	.001	<.001	.003	.003	.003
MERCURY	<.001	<.001	<.001	<.001	<.001
NICKEL	<.040	<.040	<.040	<.040	<.040
SELENIUM	<.001	<.001	<.001	<.001	<.001
SILVER	<.010	<.010	<.010	<.010	<.010
THALLIUM	<.001	<.001	<.001	<.001	<.001
ZINC	<.050	<.050	<.050	<.050	.060
PETROLEUM HYDROCARBONS(ppm)	<1.0	<1.0	<1.0	2*	<1.0
BASE NEUTRALS (ppb)	ND	ND	ND	ND	ND
ACID EXTRACTABLES (ppb)	ND	ND	ND	ND	ND
ETHYLENE GLYCOL	ND	ND	ND	ND	ND

ND - NONE DETECTED
* - ABOVE NJDEP GROUNDWATER CLEANUP/ACTION LEVEL
NOTE: THERE WERE SEVERAL UNIDENTIFIED COMPOUNDS ALSO FOUND

	QA/QC:	Field blank and trip blank included
	File location:	NJDEP, DHWM, BEECRA 401 E. State Street Trenton, New Jersey
8.	Sampling dates:	October 19, 20, 21, 26, 1988
	Sampled by:	J.M. Sorge, Inc. 3301 U.S. Highway 22 Somerville, New Jersey 08876
	Samples:	Six groundwater samples and fifty-four soil samples.
	Laboratory:	Accutest Laboratories 2235 Rt. 130, Building B Dayton, New Jersey 08810 Lab Certification #12129
	Parameters:	Petroleum hydrocarbons, priority pollutant metals and base neutral extractables.
	Sample description:	Soils were sampled from three areas on site and ranging in depth from 0.5 to 8.5 feet. The groundwater samples were obtained from the five monitoring wells on site.

CONTAMINANTS DETECTED: Background Area

DATE SAMPLED SAMPLE # DEPTH(ft)	10-20-88 44A 0.5	10-20-88 44B 1.5	10-20-88 44C 8.5	10-20-88 45A 0.5	10-20-88 45B 1.5	10-20-88 45C 8.5	10-20-88 46A 0.5	10-20-88 46B 1.5	10-20-88 46C 8.25
METALS (ppm)									
ANTIMONY									
ARSENIC	4.3			2.9			2.9		
BERYLLIUM	0.84			0.94			0.93		
CADMIUM	1.8			3.6*			1.6		
CHROMIUM									
COPPER									
LEAD									
MERCURY									
NICKEL									
SELENIUM									
SILVER									
THALLIUM									
ZINC									
PHC (ppm)	<50	<50	<50	<50	<50	<50	<50	<50	<50
BASE NEUTRALS (ppb)									
ACENAPHTHENE	110	ND		ND	ND		ND	ND	
ACENAPHTHYLENE	ND	ND		ND	ND		ND	ND	
BENZO(A)ANTHRACENE	1500	ND		390	ND		ND	ND	
BENZO(A)PYRENE	1400	ND		ND	ND		190	ND	
BENZO(B)FLUORANTHENE	2200	ND		780	ND		160	ND	
BENZO(K)FLUORANTHENE	680	ND		ND	ND		150	ND	
BENZO(G,H,I)PERYLENE	1200	ND		320	ND		100	ND	
BIS(2-ETHYLHEXYL)PHTHALATE	59	ND		ND	ND		ND	ND	
CHRYSENE	1900	ND		440	ND		180	ND	
DIBENZO(A,H)ANTHRACENE	74	ND		ND	ND		ND	ND	
DI-N-BUTYL PHTHALATE	730	310		1200	340		540	360	
DI-N-OCTYL PHTHALATE	ND	ND		ND	ND		ND	ND	
FLUORANTHENE	2800	ND		570	ND		210	ND	
INDENO(1,2,3-CD)PYRENE	1300	ND		330	ND		ND	ND	
PHENANTHRENE	1000	ND		290	ND		120	ND	
PYRENE	1700	ND		590	ND		230	ND	
TOTAL BASE NEUTRALS (ppb)	16653*	310		4910	340		1880	360	

ND - NONE DETECTED
* - EXCEEDED NJDEP ACTION/CLEANUP LEVELS
BLANK SPACES INDICATE NO SAMPLING

CONTAMINANTS DETECTED:

Background Area (cont)

DATE SAMPLED SAMPLE # DEPTH(ft)	10-20-88 47A 0.5	10-20-88 47B 1.5	10-20-88 47C 8.25	10-20-88 48A 0.5	10-20-88 48B 1.5	10-20-88 48C 8.25	10-20-88 49A 0.5	10-20-88 49B 1.5	10-20-88 49C 8.0
METALS (ppm)									
ANTIMONY	0.96			0.47			0.53		
ARSENIC	23 *	16		3.6			2.3		
BERYLLIUM	<0.50			1.2 *	0.67		<0.50		
CADMIUM	2.0			13 *	0.94		0.59		
CHROMIUM	20			26			28		
COPPER	44			32			17		
LEAD	85			160			29		
MERCURY	0.11			<0.10			<0.10		
NICKEL	12			7.0			5.1		
SELENIUM	0.65			0.18			<0.10		
SILVER	1.1			1.2			<1.0		
THALLIUM	0.52			0.20			0.21		
ZINC	170			74			46		
PHC (ppm)	<50	<50	<50	<50	<50	<50	<50	<50	<50
BASE NEUTRALS (ppb)									
ACENAPHTHENE	ND			ND		ND	ND		
ACENAPHTHYLENE	ND			ND		ND	ND		
BENZO(A)ANTHRACENE	180			400		ND	ND		
BENZO(A)PYRENE	210			460		ND	ND		
BENZO(B)FLUORANTHENE	240			830		ND	ND		
BENZO(K)FLUORANTHENE	170			ND		ND	ND		
BENZO(G,H,I)PERYLENE	ND			360		ND	ND		
BIS(2-ETHYLHEXYL)PHTHALATE	95			150		ND	ND		
CHRYSENE	310			520		ND	ND		
DIBENZO(A,H)ANTHRACENE	ND			74		ND	ND		
DI-N-BUTYL PHTHALATE	680			1900		730	220		
DI-N-OCTYL PHTHALATE	76			110		ND	ND		
FLUORANTHENE	280			720		ND	ND		
INDENO(1,2,3-CD)PYRENE	140			370		ND	ND		
PHENANTHRENE	170			310		ND	ND		
PYRENE	320			530		ND	ND		
TOTAL BASE NEUTRALS	2871			6734		730	220		

ND - NONE DETECTED
* - EXCEEDED NJDEP ACTION/CLEANUP LEVELS
BLANK SPACES INDICATE NO SAMPLING

CONTAMINANTS DETECTED:

Oil Stained Area

DATE SAMPLED SAMPLE # DEPTH(ft)	10-19-88 33A .5	10-20-88 33B 3.5	10-20-88 33C 5.5	10-19-88 34A 0.5	10-19-88 34B 3.5	10-20-88 34C 5.5	10-19-88 35A 0.5	10-20-88 35B 3.5	10-20-88 35C 5.5
METALS (ppm)									
ANTIMONY	.46	<.10		<0.10	.25		.6	.42	
ARSENIC	2.8	8.7		5.0	20		4.4	6.7	
BERYLLIUM	<0.50	<0.50		.84	1.9*		<0.50	<0.50	
CADMIUM	1.5	46*	1.5	3.2*	3.6*	1.6	1.6	22*	8.0*
CHROMIUM	20	51		24	44		22	24	
COPPER	14	40		29	15		94	49	
LEAD	22	80		28	19		49	43	
MERCURY	<0.10	<0.10		<0.10	.34		<0.10	<0.10	
NICKEL	7.3	39		8.0	18		8.2	49	
SELENIUM	.14	.20		.13	.22		.12	<0.10	
SILVER	<1.0	7.8	<1.0	<1.0	1.6	<1.0	<1.0	8.4*	45*
THALLIUM	.11	.17		<0.10	.28		.12	.31	
ZINC	37	160		49	59		54	85	
PHC (ppm)	<50	620*	<50	<50	<50	<50	<50	63	180*
BASE NEUTRALS (ppb)									
ACENAPHTHENE	ND		ND				ND		
ACENAPHTHYLENE									
BENZO(A)ANTHRACENE	69		ND				320		
BENZO(A)PYRENE	70		ND				380		
BENZO(B)FLUORANTHENE	71		ND				410		
BENZO(K)FLUORANTHENE	64		ND				360		
BENZO(G,H,I)PERYLENE	61		ND				290		
BIS(2-ETHYLHEXYL)PHTHALATE	590		1900				2200		
CHRYSENE	83		ND				430		
DIBENZO(A,H)ANTHRACENE	ND		ND				ND		
DI-N-BUTYL PHTHALATE	4800		1500				2300		
DI-N-OCTYL PHTHALATE									
FLUORANTHENE	140		ND				500		
INDENO(1,2,3-CD)PYRENE	ND		ND				240		
PHENANTHRENE	90		ND				280		
PYRENE	110		ND				590		
BUTYL BENZYL PHTHALATE	970		2000				2300		
TOTAL BASE NEUTRALS(ppm)	7.118		5.4				10.64*		

ND - NONE DETECTED
* - EXCEEDED NJDEP ACTION/CLEANUP LEVELS
BLANK SPACES INDICATE NO SAMPLING

CONTAMINANTS DETECTED:

Oil Stained Area (cont)

DATE SAMPLED SAMPLE # DEPTH(ft)	10-19-88 36A 0.5	10-19-88 36B 3.5	10-19-88 36C 5.5	10-19-88 37A 0.5	10-19-88 37B 3.5	10-19-88 37C 5.5	10-19-88 38A 0.5	10-19-88 38B 3.5	10-19-88 38C 5.5
METALS (ppm)									
ANTIMONY	.32	.24		.84	<0.10		3.0*	<0.10	
ARSENIC	6.8	20		17	3.5		8.5	1.7	
BERYLLIUM	<0.50	.75		1.1*	.95		<0.50	<0.50	
CADMIUM	1.2	1.2	1.2	66	3.3	4.2	4.1	.89	1.9
CHROMIUM	21	29		33	33		30	17	
COPPER	150	18		130	2.5		39	<2.0	
LEAD	63	14		180	<10		18	<10	
MERCURY	.14	.1		<0.10	<0.10		.13	<0.10	
NICKEL	13	13		34	10		11	5.2	
SELENIUM	.21	.20		.46	<0.10		.57	.1	
SILVER	1.1	<01.0	<1.0	19*	<1.0	2.6	1.8	<1.0	<1.0
THALLIUM	<0.10	.28		.17	.23		<0.10	<0.10	
ZINC	90	17		98	32		160	23	
PHC (ppm)	82	<50	<50	<50	<50	<50	84	<50	<50
BASE NEUTRALS (ppb)									
ACENAPHTHENE				780		ND	ND		
ACENAPHTHYLENE									
BENZO(A)ANTHRACENE				6400		ND	760		
BENZO(A)PYRENE				5000		ND	750		
BENZO(B)FLUORANTHENE				5600		ND	870		
BENZO(K)FLUORANTHENE				4100		ND	690		
BENZO(G,H,I)PERYLENE				3500		ND	600		
BIS(2-ETHYLHEXYL)PHTHALATE				1300		ND	170		
CHRYSENE				6900		ND	1200		
DIBENZO(A,H)ANTHRACENE				1400		ND	200		
DI-N-BUTYL PHTHALATE				4000		3500	4100		
DI-N-OCTYL PHTHALATE									
FLUORANTHENE				14000		ND	1900		
INDENO(1,2,3-CD)PYRENE				3000		ND	480		
PHENANTHRENE				11000		ND	1200		
PYRENE				8900		ND	1500		
BUTYL BENZYL PHTHALATE				1700		510	490		
TOTAL BASE NEUTRALS (ppm)				80.82*		4.01	15.01*		

ND - NONE DETECTED
* - EXCEEDED NJDEP ACTION/CLEANUP LEVELS
BLANK SPACES INDICATE NO SAMPLING

CONTAMINANTS DETECTED: Oil Stained Area

DATE SAMPLED SAMPLE # DEPTH(ft)	10-20-88 35D 7.5	10-19-88 39A 6	10-19-88 42A 6	10-19-88 43A 6	10-20-88 40B 3.5	10-19-88 42C 5.5	10-19-88 41B 3.5	10-19-88 42B 3.5	10-19-88 42C 5.5
METALS (ppm)									
ANTIMONY		2.8							
ARSENIC									
BERYLLIUM									
CADMIUM	0.60			3.1*	17*		1.6	1.5	1.6
CHROMIUM									
COPPER									
LEAD									
MERCURY									
NICKEL									
SELENIUM									
SILVER	<1.0			<1.0				<1.0	<1.0
THALLIUM									
ZINC									
PHC (ppm)	<50				60	<50			
BASE NEUTRALS (ppb)									
ACENAPHTHENE		220	ND	ND					
ACENAPHTHYLENE		220	ND	ND					
BENZO(A)ANTHRACENE		7300	ND	460					
BENZO(A)PYRENE		5500	66	510					
BENZO(B)FLUORANTHENE		4800	91	520					
BENZO(K)FLUORANTHENE		5500	ND	460					
BENZO(G,H,I)PERYLENE		3000	ND	310					
BIS(2-ETHYLHEXYL)PHTHALATE		ND	1100	ND					
CHRYSENE		7400	ND	550					
DIBENZO(A,H)ANTHRACENE		1100	ND	ND					
DI-N-BUTYL PHTHALATE		4700	4700	4900					
DI-N-OCTYL PHTHALATE		ND	ND	ND					
FLUORANTHENE		18000	120	660					
INDENO(1,2,3-CD)PYRENE		2900	ND	280					
PHENANTHRENE		11,000	61	400					
PYRENE		9300	120	870					
TOTAL BASE NEUTRALS (ppb)		89,280*	7,458	10,263*					

ND - NONE DETECTED
* - EXCEEDED NJDEP ACTION/CLEANUP LEVELS
BLANK SPACES INDICATE NO SAMPLING

CONTAMINANTS DETECTED:

Dumpster Area
Sampled 10-20-88

SAMPLE # / DEPTH(ft)	30A 0.5	30B 1.5	30C 7.5	31A 0.5	31B 1.5	31C 7.5	32A 0.5	32B 1.5	32C 6.5
METALS (ppm)									
ANTIMONY	0.58	0.13	<0.10	5.6 *	0.78	<0.10	1.2	0.10	0.34
ARSENIC	4.2	2.7	1.3	5.0	3.5	2.6	5.4	0.10	3.9
BERYLLIUM	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	<0.5
CADMIUM	1.6	0.68	0.57	1.7	0.67	1.2	0.99	0.50	0.[illegible]
CHROMIUM	23	13	12	24	15	47	27	2.5	30
COPPER	14	10	3.4	45	14	<2.0	50	2.0	<2.0
LEAD	70	130	120	160	67	22	210	10	18
MERCURY	<0.10	0.14	<0.10	0.25	0.25	<0.10	0.66	0.10	<0.10
NICKEL	6.9	4.2	5.8	13	7.5	3.7	3.5	4.0	7.8
SELENIUM	0.29	0.14	<0.10	0.19	0.17	0.20	0.38	0.10	<0.10
SILVER	1.1	<1.0	<1.0	1.3	<1.0	<1.0	1.2	1.0	<1.0
THALLIUM	<0.10	0.21	<0.10	0.30	0.20	0.22	0.23	0.10	0.23
ZINC	51	20	24	93	50	33	45	5.0	36
PHC (ppm)	180 *	<50	<50	<50	200 *	<50	130	<50	<50
BASE NEUTRALS (ppb)									
BENZO (A) ANTHRACENE									
BENZO (A) PYRENE									
BENZO (B) FLUORANTHENE									
BENZO (K) FLUORANTHENE									
BIS(2-ETHYLHEXYL) PHTHALATE									
BUTYL BENZYL PHTHALATE									
CHRYSENE									
DI-N-BUTYL PHTHALATE									
FLUORANTHENE									
PHENANTHRENE									
PYRENE									
TOTAL BASE NEUTRALS									

ND - NONE DETECTED
* - EXCEEDED NJDEP SOIL ACTION/CLEANUP LEVELS
BLANK SPACES INDICATE NO SAMPLING

CONTAMINANTS DETECTED:

Monitoring Wells

DATE SAMPLED SAMPLE # DEPTH(ft)	10-21-88 MW-1	10-21-88 MW-2	10-21-88 MW-3	10-21-88 10-26-88 MW-5	10-21-88 MW-6				
METALS (ppm)									
ANTIMONY	<0.001	<0.001	<0.001	<0.001	<0.001				
ARSENIC	0.002	0.009	0.001	0.002	0.049				
BERYLLIUM	<0.005	<0.005	<0.005	<0.005	<0.005				
CADMIUM	<0.005	0.006	<0.005	<0.005	0.013 *				
CHROMIUM	<0.025	0.062*	<0.025	<0.025	0.086 *				
COPPER	<0.020	0.039	0.020	<0.020	<0.020				
LEAD	0.003	0.006	<0.001	0.001	0.001				
MERCURY	<0.001	<0.001	<0.001	<0.001	<0.001				
NICKEL	<0.040	<0.040	<0.040	<0.040	0.058				
SELENIUM	<0.001	<0.001	0.005	<0.001	<0.001				
SILVER	<0.010	<0.010	<0.010	<0.010	<0.010				
THALLIUM	<0.001	<0.001	<0.001	<0.001	<0.001				
ZINC	0.062	0.24	0.054	0.064	0.12				
PHC (ppm)	<1	<1	<1	<1	<1				
BASE NEUTRALS (ppb)									
ACENAPHTHENE	ND	ND	ND	ND	ND				
ACENAPHTHYLENE	ND	ND	ND	ND	ND				
BENZO(A)ANTHRACENE	ND	ND	ND	ND	ND				
BENZO(A)PYRENE	ND	ND	ND	ND	ND				
BENZO(B)FLUORANTHENE	ND	ND	ND	ND	ND				
BENZO(K)FLUORANTHENE	ND	ND	ND	ND	ND				
BENZO(G,H,I)PERYLENE	ND	ND	ND	ND	ND				
BIS(2-ETHYLHEXYL)PHTHALATE	ND	ND	ND	ND	ND				
CHRYSENE	ND	ND	ND	ND	ND				
DIBENZO(A,H)ANTHRACENE	ND	ND	ND	ND	ND				
DI-N-BUTYL PHTHALATE	ND	1.1	ND	ND	ND				
DI-N-OCTYL PHTHALATE	ND	ND	ND	ND	ND				
FLUORANTHENE	ND	ND	ND	ND	ND				
INDENO(1,2,3-CD)PYRENE	ND	ND	ND	ND	ND				
PHENANTHRENE	ND	ND	ND	ND	ND				
PYRENE	ND	ND	ND	ND	ND				
TOTAL BASE NEUTRALS									

ND - NONE DETECTED
* - EXCEEDED NJDEP ACTION/CLEANUP LEVELS
BLANK SPACES INDICATE NO SAMPLING

ADVANCED CHEMICAL TECHNOLOGY
AKA: RUSSELL STANLEY CORPORATION
RIVER AVENUE AND E. STATE STREET, CAMDEN
CAMDEN COUNTY, NEW JERSEY
EPA ID # NJD071455141

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7. NEW JERSEY ATLAS WATER SUPPLY MAP
8. NEW JERSEY ATLAS GEOLOGIC OVERLAY
9. COMPUTER GENERATED WATER WITHDRAWAL MAP

ATTACHMENTS

A. ACT LETTER TO NJDEP, DHWM, BEECRA EXPLAINING SITE HISTORY, OWNERSHIP AND PROCESSES. NJDEP, DHWM, BEECRA.

B. SITE EVALUATION SUBMISSION (SES) FROM NJDEP. NJDEP, DHWM, BEECRA.

C. MEMO TO NJDEP, OFFICE OF REGULATORY SERVICES FROM THE DEPUTY ATTORNEY GENERAL CONCERNING THE SALE OF ACT. NJDEP, DHWM, BEECRA.

D. LEASE AGREEMENT BETWEEN ACT AND CAMDEN PROPERTIES, INC., MARCH 15, 1974. NJDEP, DHWM, BEECRA.

E. NJDEP, DIVISION OF WASTE MANAGEMENT SITE INVESTIGATION OF ACT, JANUARY 9, 1985. NJDEP, DHWM, BEECRA.

F. ADMINISTRATIVE CONSENT ORDER FROM NJDEP INVOLVING THE TRANSFER OF OWNERSHIP FROM RUSSELL-STANLEY CORPORATION TO VESTAR/R-S HOLDINGS CORPORATION, MAY 17, 1989. NJDEP, DHWM, BEECRA.

G. NJDEP, BISE REPORT OF INSPECTION, JANUARY 28, 1985. NJDEP, DHWM-SFO/ENF.

H. MEMO FROM JENNIFER ECK, GEOLOGIST, BGWDC TO MIKE NALBONE, CASE MANAGER, BEECRA. NJDEP, DHWM, BEECRA.

I. ACT LETTER TO NJDEP CONCERNING TYPES OF WASTES STORED AT THE FACILITY. NJDEP, DEQ-SFO/ENF.

J. ECRA INSPECTION OF ACT, FEBRUARY 23, 1984. NJDEP, DHWM, BEECRA.

K. AIR PERMIT #17174 FOR ACT AND RUSSELL-STANLEY CORPORATION. NJDEP, DEQ-SFO/ENF.

L. AIR PERMIT #17175 FOR ACT AND RUSSELL-STANLEY CORPORATION. NJDEP, DEQ-SFO/ENF.

M. AIR PERMIT #22246 FOR ACT AND RUSSELL-STANLEY CORPORATION. NJDEP, DEQ-SFO/ENF.

N. PROPOSED SAMPLING AND ANALYSIS PLAN FOR ACT PREPARED BY J.M. SORGE, INC. NOVEMBER 1986. NJDEP, DHWM, BEECRA.

O. MONITORING WELL DESCRIPTIONS AND DIAGRAMS BY J.M. SORGE, INC. NJDEP, DHWM, BEECRA.

P. SAMPLING AND ANALYSIS PLAN RESULTS AND ADDITIONAL SAMPLING PLAN BY J.M. SORGE, INC., JUNE 1988. NJDEP, DHWM, BEECRA.

Q. PROPOSED CLEANUP PLAN BY J.M. SORGE INC., MARCH, 1989. NJDEP, DHWM, BEECRA.

R. LETTERS CONCERNING MONITORING WELLS AT THE ACT FACILITY. NJDEP, DHWM, BEECRA.

S. REQUEST FOR HYDROGEOLOGIC ASSESSMENT-ECRA PROGRAM. NJDEP, DWR, NJGS.

T. LETTER CONCERNING A CLEANUP PLAN AT ACT. NJDEP, DHWM, BEECRA.

U. LETTER CONCERNING THE REMOVAL OF CONTAMINATED SOIL FROM THE ACT SITE, FEBRUARY 21, 1985. NJDEP, DHWM, BEECRA.

V. SITE CLEANUP PLAN AND APPROVAL LETTER FROM NJDEP, MARCH 27, 1984. NJDEP, DHWM, BEECRA.

W. NJDEP LETTER REQUIRING ACT TO SUBMIT A NEW CLEANUP PLAN, AUGUST 7, 1984. NJDEP, DHWM, BEECRA.

X. LETTER CONCERNING POSSIBLE GROUNDWATER CONTAMINATION AT THE ACT SITE. OCTOBER 21, 1985. NJDEP, DHWM, BEECRA.

Y. NJDEP LETTER APPROVING THE SEPTEMBER 13, 1984 SAMPLING PLAN. NJDEP, DHWM, BEECRA.

Z. LETTER CONCERNING WELL INSTALLATION, FEBRUARY 1, 1988. NJDEP, DHWM, BEECRA.

AA. LETTER RELATED TO SOIL SAMPLING, JUNE 14, 1988. NJDEP, DHWM, BEECRA.

BB. NOTICE OF VIOLATION, DECEMBER 21, 1984. NJDEP, DHWM, BEECRA.

CC. LETTER FROM ACT'S LAWYERS CONCERNING THE DECEMBER 21, 1984 NOTICE OF VIOLATION. NJDEP, DHWM, BEECRA.

DD. NOTICE OF VIOLATION AND PENALTY ASSESSMENT OFFER, MAY 1, 1985. NJDEP, DHWM-SFO/ENF.

EE. LETTER REFERRING TO A JUNE 18, 1985 COURT ORDER. NJDEP, DHWM, BEECRA.

FF. FIELD RECORD OF VIOLATION AND ORDER DATED SEPTEMBER 21, 1974. NJDEP, DEQ-SFO/ENF.

GG. SOIL SAMPLING ANALYSIS BY STABLEX-REUTTER ON FEBRUARY 25, 1984. NJDEP, DHWM, BEECRA.

HH. SOIL SAMPLING ANALYSIS BY STABLEX-REUTTER ON MARCH 15 AND 19, 1984. NJDEP, DHWM, BEECRA.

II. SOIL SAMPLING RESULTS BY STABLEX-REUTTER ON JUNE 11, 1984. NJDEP, DHWM, BEECRA.

JJ. SOIL SAMPLING RESULTS BY STABLEX-REUTTER ON NOVEMBER 15, 1984. NJDEP, DHWM, BEECRA.

KK. SOIL SAMPLING RESULTS BY S-R ANALYTICAL INC., AUGUST 12, 1985. NJDEP, DHWM, BEECRA.

LL. SOIL SAMPLING RESULTS FROM J.M. SORGE ON FEBRUARY 15, 16, 17 AND 18, 1988. NJDEP, DHWM, BEECRA.

MM. GROUNDWATER SAMPLING RESULTS FROM J.M. SORGE ON MARCH 8, 1988. NJDEP, DHWM, BEECRA.

NN. GROUNDWATER AND SOIL SAMPLING RESULTS FROM J.M. SORGE ON OCTOBER 19, 20, 21 AND 26, 1988. NJDEP, DHWM, BEECRA.

OO. MEMO TO FILES, SITE VISIT BY DAN MALTESE, MARCH 28, 1990. NJDEP, DHWM, BPA.

GEMS DATA FOR ADVANCED CHEMICAL

SITE_NAME ID	RING_DISTANCE	RING_TOTAL
SITE # 1	0.400000	935
SITE # 1	0.800000	5632
SITE # 1	1.61000	21043
SITE # 1	3.24000	60067
SITE # 1	4.85000	117233
SITE # 1	6.47000	265177

Received 11/91 from EPA Information Systems

CAMDEN QUADRANGLE
NEW JERSEY–PENNSYLVANIA
7.5 MINUTE SERIES (TOPOGRAPHIC)

SCALE 1:24 000

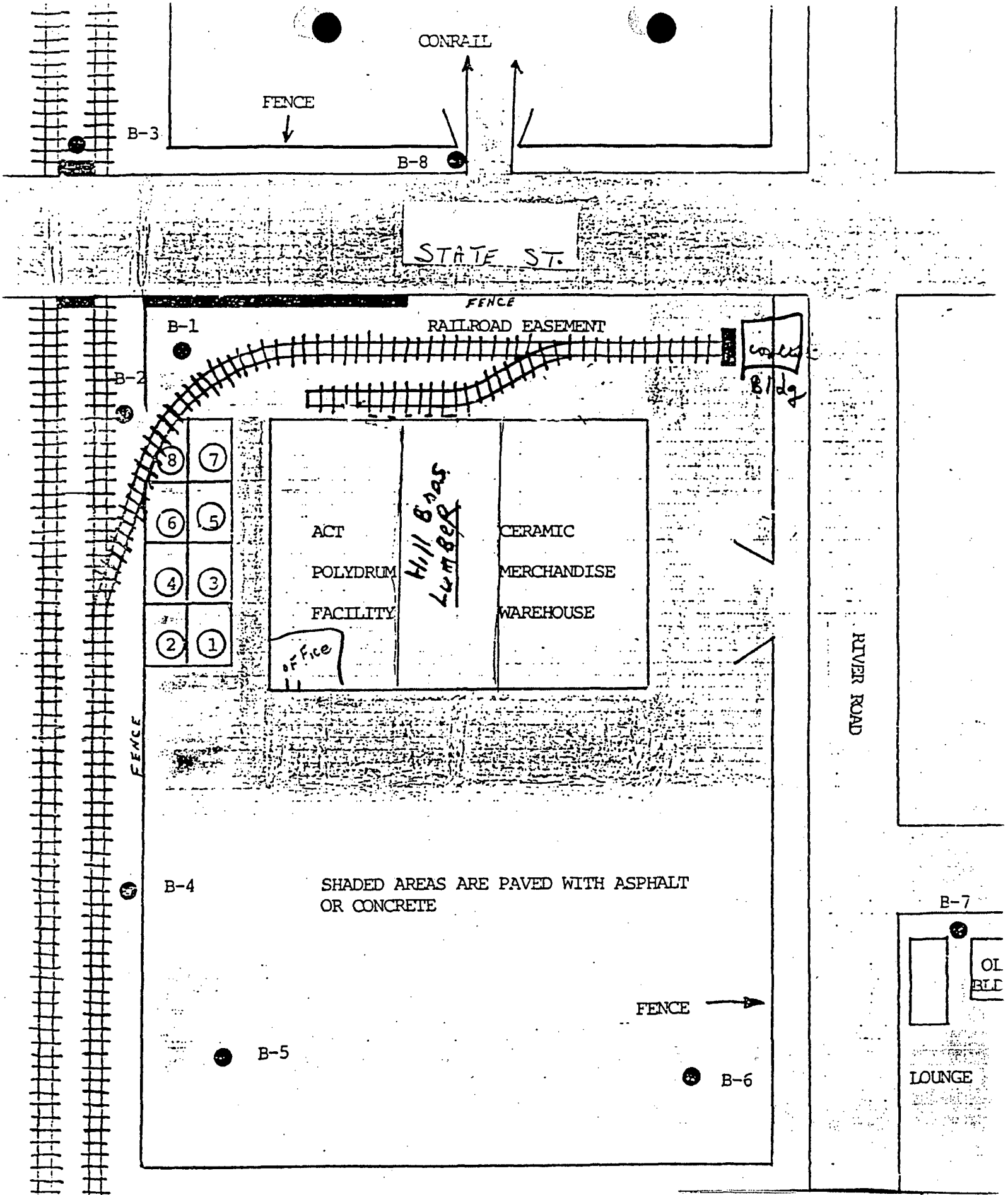
1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

Advanced Chemical Technology
aka: Russell-Stanley Corp.
River Ave. and East State St.
Camden, Camden County, New Jersey
Lat: 39 56 55 Lon: 75 05 57

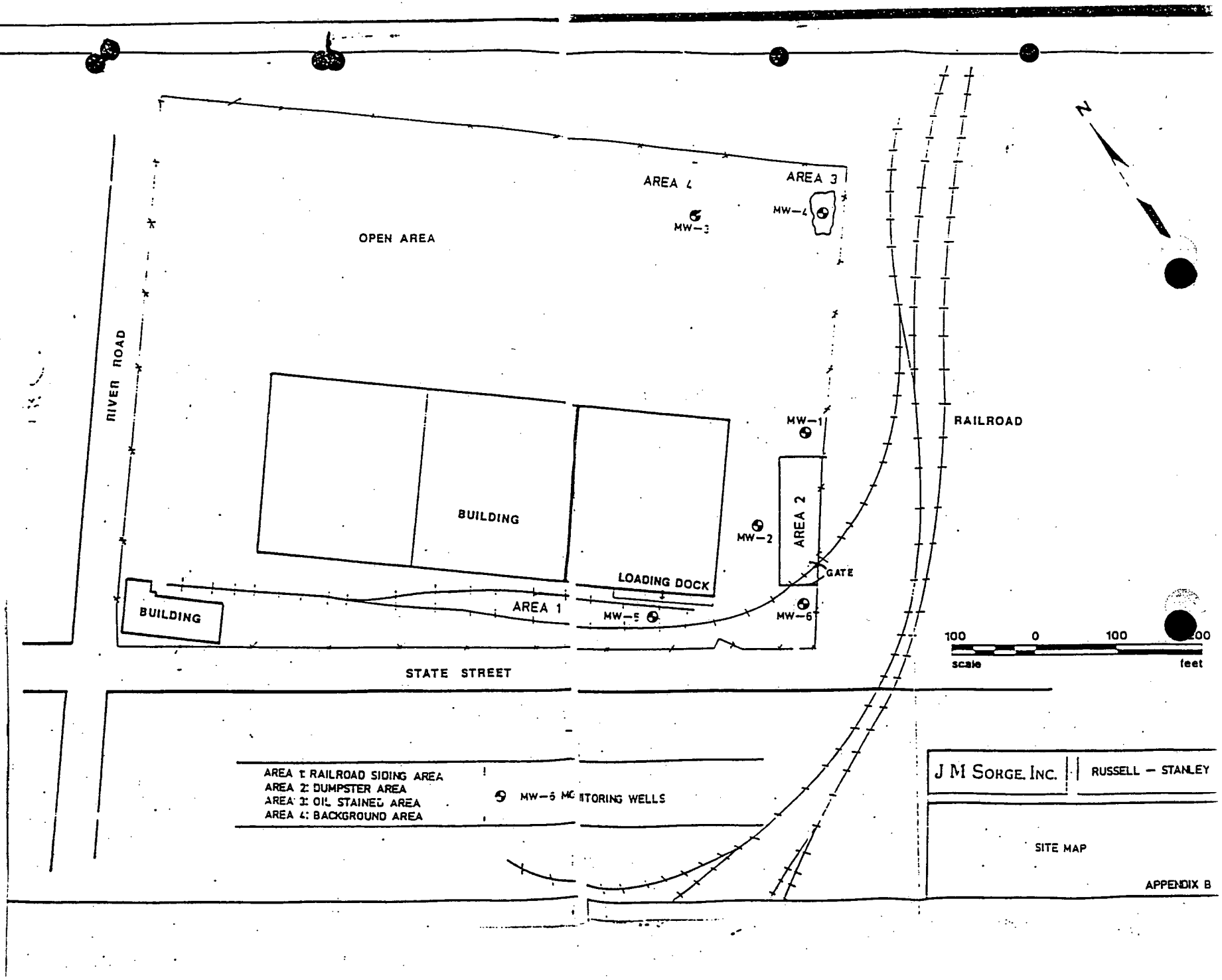
ATTACHMENT Map 1



no scale

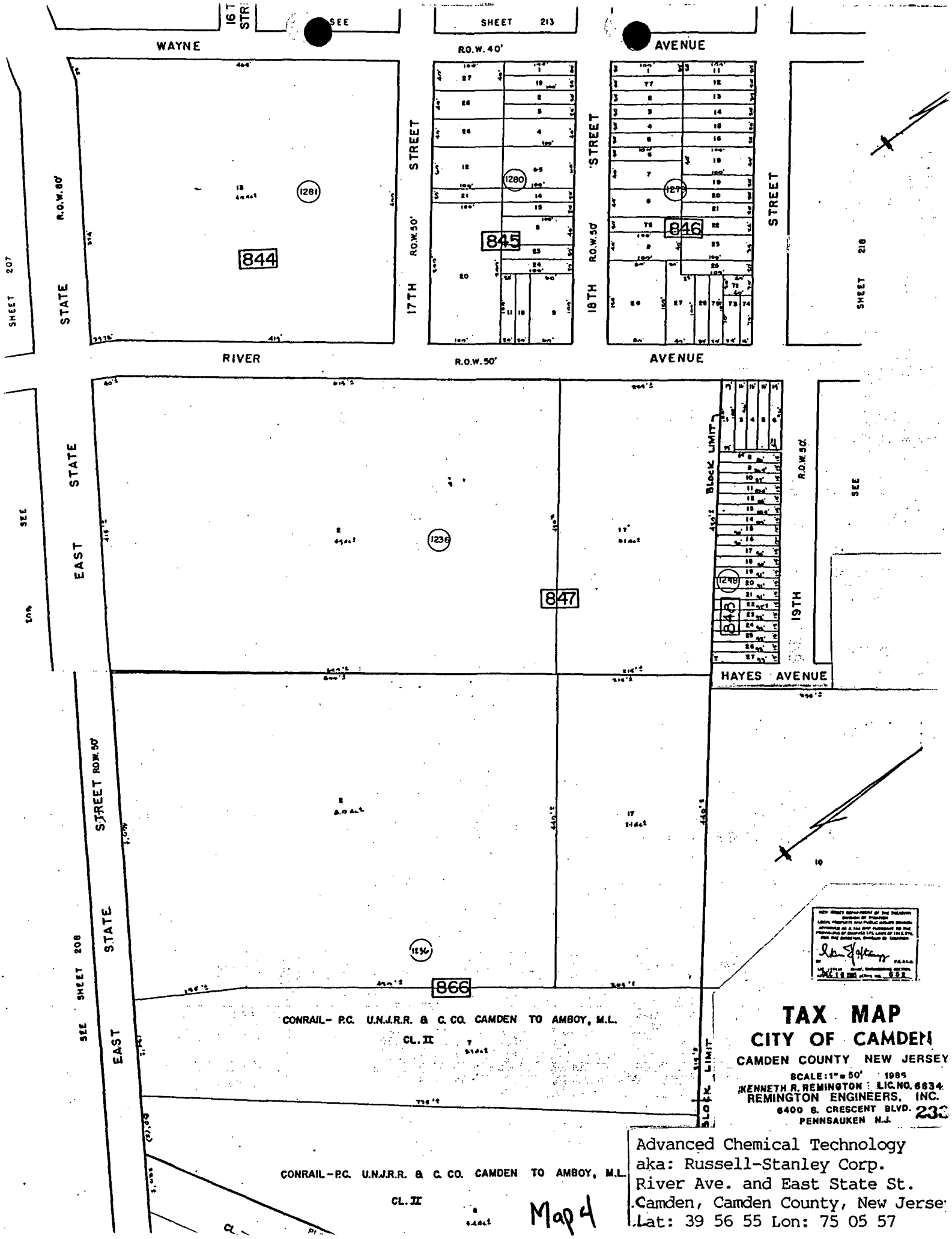
ATTACHMENT Map2

Advanced Chemical Technology
aka: Russell-Stanley Corp.
River Ave. and East State St.
Camden, Camden County, New Jerse
Lat: 39° 56 55 Lon: 75 05 57

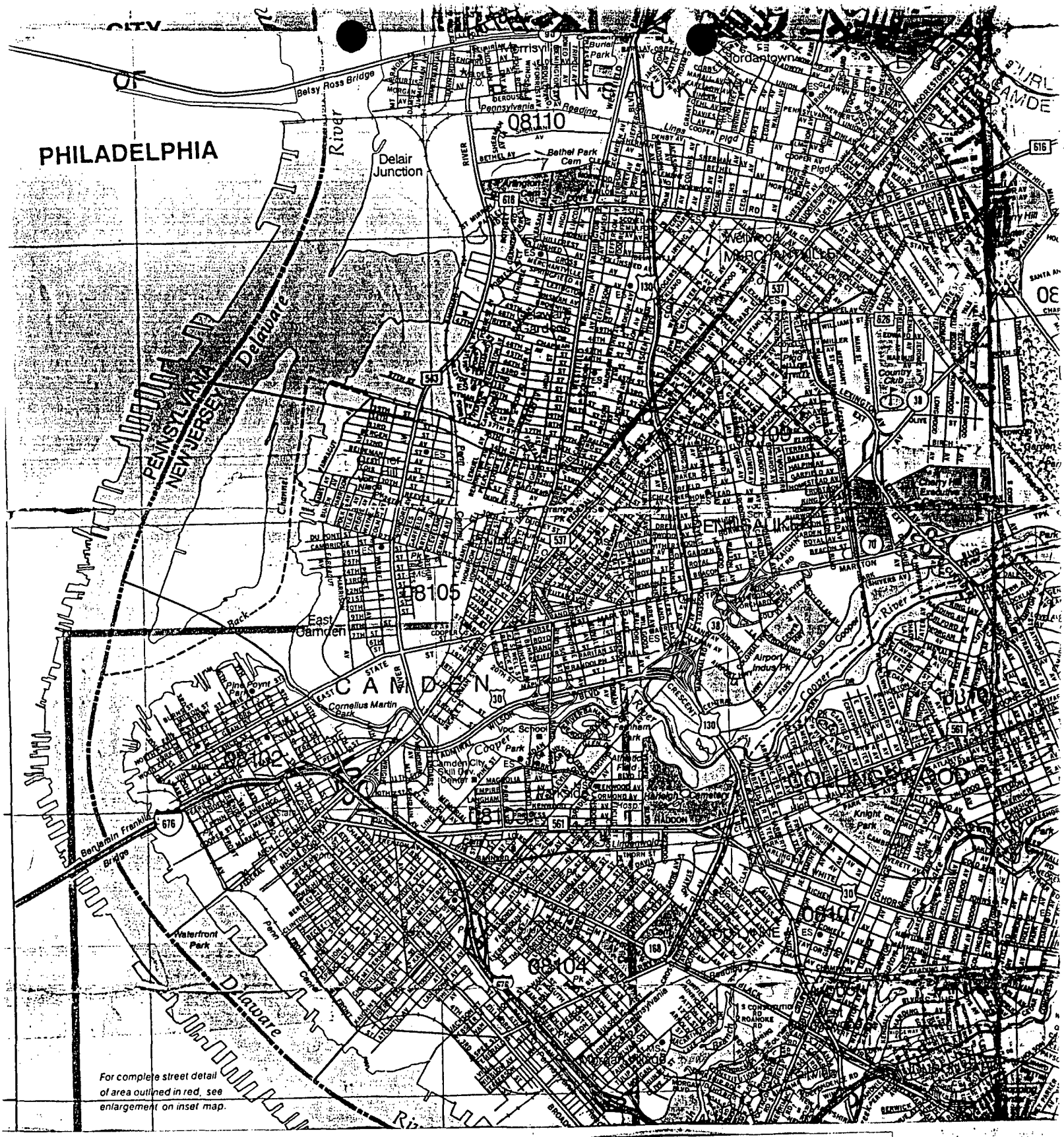


Advanced Chemical Technology
aka: Russell-Stanley Corp.
River Ave. and East State St.
Camden, Camden County, New Jersey
Lat: 39 56 55 Lon: 75 05 57

ATTACHMENT Map 3



Advanced Chemical Technology
aka: Russell-Stanley Corp.
River Ave. and East State St.
Camden, Camden County, New Jerse
Lat: 39 56 55 Lon: 75 05 57



Camden County
New Jersey

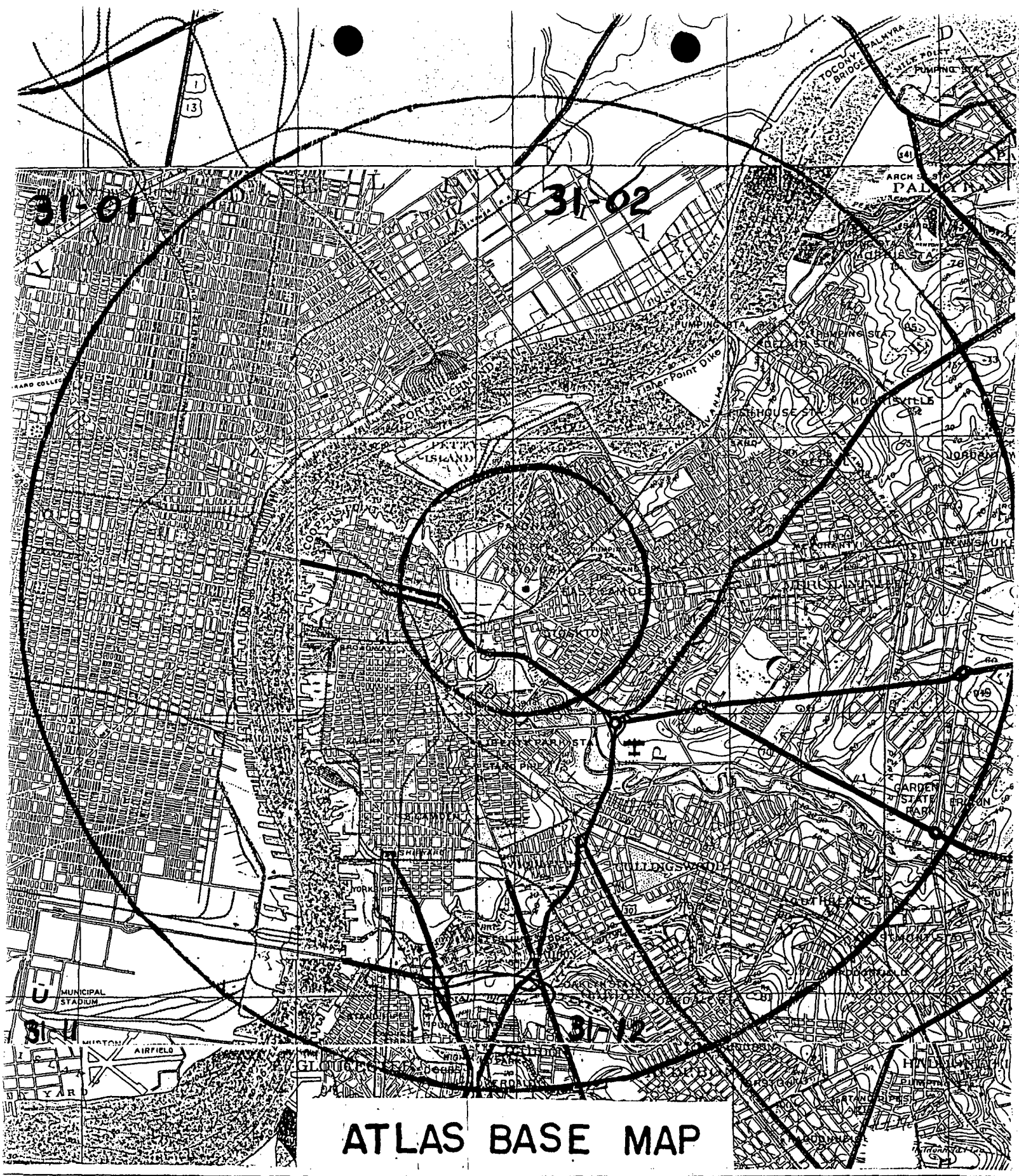
Scale in Feet (Approx.)

2,000 0 2,000 4,000 6,000 8,000 10,000

1 Mile

Advanced Chemical Technology
aka: Russell-Stanley Corp.
River Ave. and East State St.
Camden, Camden County, New Jersey
Lat: 39 56 55 Lon: 75 05 57

ATTACHMENT Map 5



ATLAS BASE MAP

Scale: 1 Mile to an Inch.

Miles: 1 ¾ ½ ¼ 0 1 2 3

Yards: 1000 500 0 1000 2000 3000

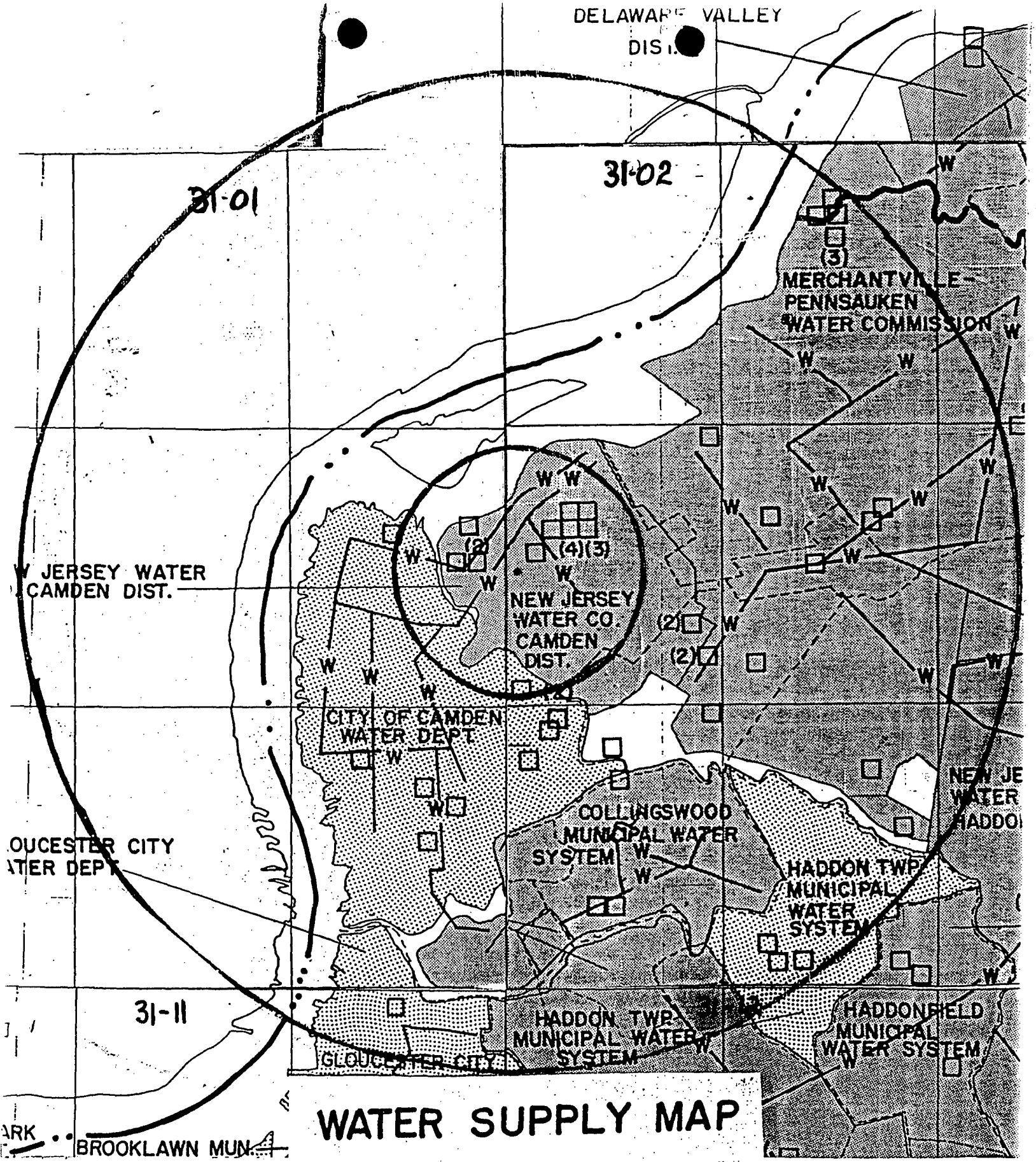
Meters: 1000 500 0 1000 2000 3000

A MOEN & CO BALTIMORE, MD

Contour Interval: 20 feet

Advanced Chemical Technology
aka: Russell-Stanley Corp.
River Ave. and East State St.
Camden, Camden County, New Jersey
Lat: 39 56 55 Lon: 75 05 57

ATTACHMENT Map 6



Scale: 1 Mile to an Inch.

Miles: 1 3/4 1/2 1/4 0 1 2 3

Yards: 1000 500 0 1000 2000 3000

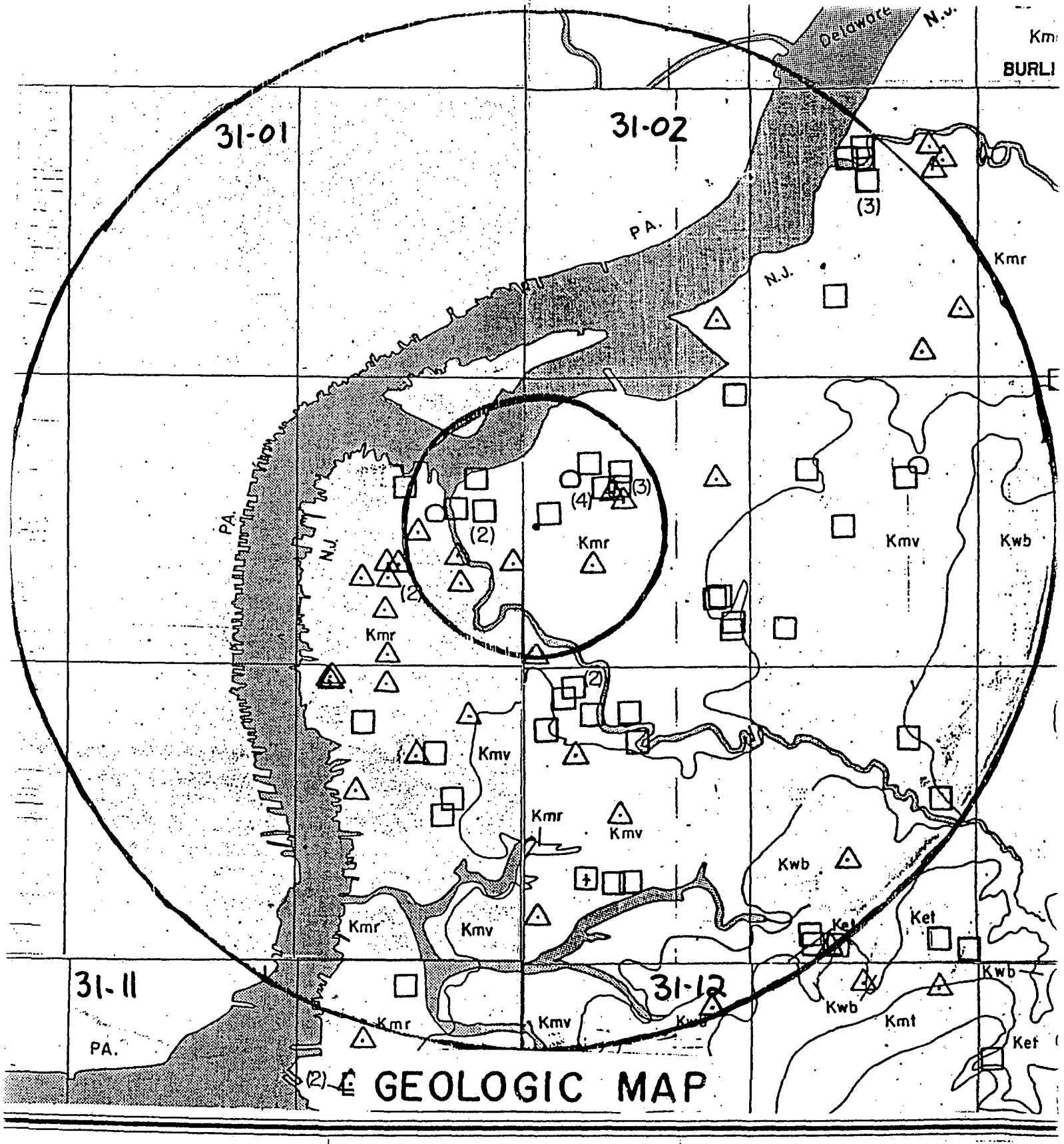
Meters: 1000 500 0 1000 2000 3000

A. HOEN & CO. BALTIMORE, MD.

Contour Interval: 20 feet

Advanced Chemical Technology
aka: Russell-Stanley Corp.
River Ave. and East State St.
Camden, Camden County, New Jersey
Lat: 39 56 55 Lon: 75 05 57

ATTACHMENT Map 1



Scale: 1 Mile to an Inch.

Miles 1 3/4 1/2 1/4 0 1 2 3

Yards 1000 500 0 1000 2000 3000

Meters 1000 500 0 1000 2000 3000

Contour Interval: 20 feet

Advanced Chemical Technology
aka: Russell-Stanley Corp.
River Ave. and East State St.
Camden, Camden County, New Jersey
Lat: 39 56 55 Lon: 75 05 57

ATTACHMENT Map 8

LEGEND FOR ATLAS SHEET

△ INDUSTRIAL WELL YIELD OVER 70 GALLONS PER MINUTE

□ PUBLIC SUPPLY WELL YIELDING OVER 70 GALLONS PER MINUTE

⊕ UNSUCCESSFULL ROCK WELL YIELDING LESS THAN 70 GALLONS PER MINUTE

⊙ UNSUCCESSFULL SAND WELL YIELDING LESS THAN 70 GALLONS PER MINUTE

[T] NO TEST – NO DATA ON YIELD

——— FAULT (DASHED WHERE INFERRED)

——— CONTACT (DASHED WHERE INFERRED)

PIEDMONT / COASTAL PLAIN — PHYSIOGRAPHIC PROVINCE BOUNDARY

WATER SUPPLY TRANSMISSION LINE

SEDIMENTARY ROCKS

TERTIARY

Tbh	BEACON HILL GRAVEL
Tch	COHANSEY SAND
Tkw	KIRKWOOD SAND
Tmq	MANASQUAN MARL
Tvt	VINCENTOWN SAND
Tht	HORNERSTOWN MARL

CRETACEOUS

Krb	RED BANK
Krbt	RED BANK (TRANSITIONAL UNIT)
Krbg	RED BANK (GLAUCONITE SAND UNIT)
Kns	NAVESINK MARL
Kml	MOUNT LAUREL SAND
Kw	WENONAH SAND
Kmt	MARSHALLTOWN FORMATION
Ket	ENGLISHTOWN SAND
Kwb	WOODBURY CLAY
Kmv	MERCHANTVILLE CLAY
Kmr	MAGOTHY AND RARITAN FORMATIONS
Km	MAGOTHY FORMATION
Kr	RARITAN FORMATION

ATTACHMENT Map B

LEGEND

WATER SUPPLY

- AREA SERVED BY PRIVATE WATER SERVICE COMPANIES
- AREA SERVED BY REGIONALLY OWNED WATER SERVICE COMPANIES
- AREA SERVED BY MUNICIPALLY OWNED WATER SERVICE COMPANIES
- AREA NOT PRESENTLY SERVED BY WATER SERVICE
- PUBLIC SUPPLY WELLS
- WATER MAIN ACROSS HIGHWAY FOR FUTURE USE
- SURFACE WATER INTAKE
- —W— MAJOR WATER MAINS

SEWAGE, LANDFILL

- AREA SERVED BY PUBLIC SEWAGE SERVICE
- AREA NOT PRESENTLY SERVED BY SEWAGE SERVICE
- SANITARY LANDFILLS
- SEWAGE TREATMENT PLANTS (CAPACITY <0.3mgd)
- SEWAGE TREATMENT PLANTS (CAPACITY ≥0.3mgd)
- —S— MAJOR SEWAGE TRANSMISSION LINES

DRAINAGE BASIN

- DRAINAGE BASIN BOUNDARY
- RIVER BASIN BOUNDARY
- HUDSON DRAINAGE BASIN NAME
- STREAMS AND RIVERS
- FLOOD PRONE AREAS

POPULATION

- COUNTY BOUNDARY
- MUNICIPAL BOUNDARY
- ( ) POPULATION DENSITY IN PERSONS PER SQUARE MILE
- [ ] AREA IN SQUARE MILES
- % PERCENT AREA OF MUNICIPALITY ON BLOCK
- MARKET ROADS
- BUILT UP AREAS
- STATE BOUNDARY

ATTACHMENT Map 8

I. Water Well Records

Location	Owner	Year Drilled	Screen Setting or Depth of Casing	Total Depth	g/m Yield	Formation
1 mile						
1 mile						
31-01-652	City of Camden, #5	1963	134-169	171	1000	Kmr
31-01-655	H. Kohnstamm & Co., Inc.	1954	116-136	136	150	"
31-01-656	U.S. Gasket, #1	1953	130-141	153	100	"
31-01-657	Savar Amusement Corp.	1950	82-113	113	500*	Kr
31-01-657	Stanley Corp. of America	1949	118-138	150	200*	"
31-01-662	City of Camden, #15	1954	116-136	155	1000	"
31-01-664	Camden Water Dept., #1-A	1953	135-170	175	1000	"
31-01-665	City of Camden, Test Well #1	1950	129-150	166	300	"
31-01-665	" #14	1953	105-145	164	1000	"
31-01-667	Sungil Co.	1947	147-157	157	100	"
31-01-669	Paris Produce Co.	1964	150-166	167	100	Kmr
31-01-673	Lintonia Pure Food Shop, Inc.	1950	102-123	128	315*	"
31-01-681	Savar Amusement Corp., #2	1950	110-130	130	500*	Kr
31-01-681	Camden Trust Co.	1949	93-123	127	430*	"
31-01-684	Stanley Corp. of America	1949	110-130	152	600*	"
31-01-687	Savar Amusement Corp.	1949	114-134	138	600	"
31-01-691	Baltimore Markets, #2	1950	138-170	170	1200*	"
31-01-912	Public Service Elec.& Gas Co.	1950	120-146	149	600	"
31-01-912	"	1954	113-145	145	350	"
31-01-916	City of Camden, #2-B	1953	111-136	204	1000	"
31-01-921	Stanley Corp. of America	1949	86-150	163	250*	"
31-01-928	Samuel Adelson	1952	92-102	102	200	"
31-01-929	Camden Water Dept.	1948	111-136	165	1012	"
31-01-934	Liberty Theatre #1	1949	112-130	130	150	"
31-01-943	MacAndrews & Forbes Co.	1951	82-103	114	350	"
31-01-956	Camden Water Dept.,#7	1966	123-163	167	1023	"
31-01-961	City of Camden, #11	1942	124-154	166	1005	"

*Indicates use as a recharge well.

J. Geodetic Control Survey monuments described in Index Map 48; Adjacent Index Maps 44,54

ATTACHMENT Map 8c

I. Water Well Records

Location	Owner	Year Drilled	Screen Setting or Depth of Casing	Total Depth	g/m Yield	Formation
31-02-195	Paragon Oil Co., #1	1961	51-61	61	100	Kmr
31-02-225	City of Camden, #4-A	1960	95-130	134	1585	"
31-02-227	" #5-NA	1960	79-114	121	1529	"
31-02-228	" #3	1953	73-107	136	1000	"
31-02-228	" #8	1953	89-124	141	1000	"
31-02-228	" #10	1960	75-115	118	1529	"
31-02-235	Kingston Trap Rock	1955	55-65	68	125	"
31-02-238	" #2	1966	115-123	127	200	"
31-02-238	Atlantic Blue Diamond Corp.	1958	100-110	110	180	"
31-02-281	City of Camden	1975	140-180	190	1200	"
31-02-293	Meadow Brook Swim Club	1963	97-107	107	200	"
31-02-297	H&H Industries	1959	71-81	81	100	"
31-02-331	Riverton-Palmyra Water Co.#16	1965	144-176	192	1034	"
31-02-331	" #13	1963	166-197	206	610	"
31-02-361	Delaware Valley Water Co.,#28	1969	225-260	264	1200	"
31-02-363	" #31	1970	215-261	267	1002	"
within 1 mile — 31-02-419	New Jersey Water Co.,#50	1958	139-170	176	1000	"
31-02-427	" #25	1961	305-367	399	1050	"
31-02-433	Merchantville-Pennsauken Water Co.	1968	109-139	139	882	"
31-02-442	City of Camden, Test #6	1954	153-175	181	210	Kr
31-02-443	New Jersey Water Co.,#44	1950	154-186	187	1400	Kmr
31-02-443	" #45	1950	141-173	173	955	"
31-02-443	" #46	1950	148-178	179	1400	"
31-02-443	" #48	1954	122-164	171	1412	"
31-02-444	City of Camden, #16	1954	149-179	181	1000	"
31-02-449	Savar Amusement Corp.	1949	169-189	189	450	"
31-02-451	H. Kohnstomm & Co.,Inc.,#5-A	1967	163-184	194	200	"
31-02-451	"	1959	133-158	158	250	"
31-02-451	New Jersey Water Co.,#52	1965	147-198	198	1404	"
31-02-451	" #38	1933	126-162	166	846	"
31-02-451	" #47	1953	159-175	177	1012	"
31-02-462	Parks Dairies	1958	154-170	172	200	"
31-02-477	Camden Co. Park Commission	1950	186-217	217	1200	"
31-02-492	Merchantville-Pennsauken Water Comm., #9	1956	107-137	141	875	"
31-02-492	" #10	1963	223-258	262	1000	"
31-02-496	" #2-A	1965	110-140	143	900	"
31-02-496	" #1-R	1971	132-152	159	875	"
31-02-519	" Test Well	1963	118-138	160	400	"
31-02-537	" Test Well #1	1956	247-268	293	317	"
31-02-554	" #2	1962	245-285	300	1040	"
31-02-561	" #6	1957	242-277	283	1020	"
31-02-575	Camden Co.Board of Ed.	1967	322-401	401	320	"
31-02-621	Merchantville-Pennsauken Water Comm., #7	1958	240-275	330	1000	"
31-02-692	" #8	1960	207-237	240	875	"
31-02-694	New Jersey Water Co.,#22	1960	371-453	497	1067	"
31-02-697	" #24	1961	112-167	186	1051	"
31-02-699	"	1967	376-427	430	1030	"

ATTACHMENT Map 8D

31-02-712	City of Camden, Test #5	1953	205-225	277	280	Kmr
31-02-712	"	1953	185-225	243	1000	"
31-02-712	" #17	1954	230-265	274	1000	"
31-02-714	"	1953	90-115	123	1000	"
31-02-716	Our Lady of Lourdes Hospital	1963	237-257	261	275	"
31-02-718	A. N. Stoll Werck, Inc.	1950	111-131	136	210	"
31-02-725	Boro.of Collingswood, #3-R	1960	257-287	294	1000	Kr
31-02-728	" #2-B	1960	248-278	308	1000	Kmr
31-02-754	Friendship Dairy, #1	1955	143-164	164	100	"
31-02-773	Boro.of Collingswood,Test #1	1964	307-333	370	-	"
31-02-774	A.M.Ellis Theatres,Inc.,#3	1961	83-103	115	250*	"
31-02-781	Boro.of Collingswood, "B"	1965	224-313	336	1034	"
31-02-782	" "A"	1965	219-312	331	1034	"
31-02-837	New Jersey National Guard	1956	96-111	111	150	"
31-02-857	Morgan Brothers, Inc.	1967	431-451	451	302	"
31-02-865	Joe's Trailer Camp	1955	112-122	122	70	"
31-02-879	Twp. of Haddon, #4	1965	417-448	455	1000	"
31-02-879	" #3	1956	432-469	490	800	"
31-02-887	" Bd.of Ed.,#1	1966	142-162	165	200	"
31-02-887	" New #1	1968	401-479	481	870	"
31-02-898	Boro.of Haddonfield,Test #1	1965	490-510	510	350	"
31-02-899	"	1967	307-372	380	1029	"
31-02-982	New Jersey Water Co.,#23	1960	321-378	405	1001	"
31-02-982	" #13	1953	491-527	527	1200	"
31-02-986	Hunt Tract Swimming Club	1957	232-243	243	90	"

*Indicates use as a recharge well.

J. Geodetic Control Survey monuments described in Index Map 48; Adjacent Index Maps 44,49,54,55

ATTACHMENT Map 8a

I. Water Well Records

Location	Owner	Year Drilled	Screen Setting or Depth of Casing	Total Depth	g/m Yield	Formation
31-11-319	Atlantic Ice Mfg. Co.	1962	205-240	242	200	Kmr
31-11-322	City of Gloucester	1965	225-265	270	1034	"
31-11-343	"	1961	221-261	280	1000	"
31-11-343	New Jersey Zinc Co.	1958	223-253	275	600	"
31-11-343	"	1958	249-279	285	600	"
31-11-348	Borough of Brooklawn	1961	307-327	327	400	"
31-11-349	"	1927	101-141	152	225	"
31-11-349	"	1927	114-157	165	225	"
31-11-353	City of Gloucester	1958	161-185	188	500	"
31-11-373	Borough of Brooklawn	1969	288-321	324	App.300	"
31-11-378	Borough of Westville	1957	286-313	323	1205	Kr
31-11-382	Borough of Bellmawr	1956	334-359	423	800	Kmr
31-11-422	Borough of National Park	1950	-	87	175	Qsd
31-11-422	"	1956	241-282	307	636	Kr
31-11-448	West Deptford Little League	1958	62-72	72	100	Qsd
31-11-497	Polyrez Co.	1959	134-166	166	503	Kmr
31-11-514	Texaco Co.	1973	266-306	329	1001	"
31-11-515	Twp. of West Deptford	1961	307-353	363	752	"
31-11-565	General Engines Co.	1954	38-43	43	100	Ket
31-11-612	Steinberger	1959	-	170	-	Km
31-11-628	Deptford Twp.	1971	282-361	361	752	Kmr
31-11-659	John G. Baleter	1960	-	200	-	Km
31-11-671	Child Care Center	1967	216-236	294	100	Kmr
31-11-678	Woodbury Asso.Market Co.	1966	201-221	221	400	"
31-11-744	Colonial Pipeline Co.	1963	127-137	137	150	Ket
31-11-751	Twp. of West Deptford	1973	388-345	480	1012	Kmr
31-11-754	"	1972	392-412	412	151	"
31-11-759	Greenfield Water Co.	1963	241-288	336	608	"
31-11-818	Lynn Const. Co.	1959	158-169	172	100	"
31-11-822	City of Woodbury	1960	405-457	462	1016	"
31-11-824	John Johanson	1953	-	148	-	"
31-11-857	Deptford Twp.Mun.Util.Auth.	1956	252-273	400	503	"
31-11-913	Albert Boginsky	1958	-	152	-	Ket

J. Geodetic Control Survey monuments described in Index Maps 48,54

ATTACHMENT Map 8F

I. Water Well Records

Location	Owner	Year Drilled	Screen Setting or Depth of Casing	Total Depth	g/m Yield	Formation
31-12-135	Imperial Gold & Silver Kid Co. △	1948	140-170	170	250	Kmr
31-12-156	New Jersey Zinc Co.,#18	1958	144-191	201	708	"
31-12-167	" #33	1967	422-484	500	850	"
31-12-222	Green Valley Farms	1965	195-215	227	151	"
31-12-232	Haddon Ice & Coal Co.	1957	190-221	225	360	"
31-12-249	N. J. Water Co., #14	1954	506-598	606	1018	"
31-12-272	" #34	1967	288-377	390	1050	"
31-12-273	" #30	1965	224-275	279	811	"
31-12-281	" #15	1956	455-597	634	1100	"
31-12-281	" #1	1968	480-490	517	133	"
31-12-317	Borough of Haddonfield,#2	1956	206-246	254	1001	"
31-12-355	Tavistock Country Club	1968	219-246	246	300	"
31-12-414	Borough of Bellmawr	1966	380-557	580	1016	"
31-12-417	Miller International Co.	1963	250-260	263	150	"
31-12-428	Trap Rock Industries	1963	195-221	350	254	Ket
31-12-465	N. J. Water Co., #19	1958	297-339	340	1900	Kmr
31-12-499	RCA	1964	180-190	212	125	Ket
31-12-523	Weyerhauser Corp.	1969	243-273	285	243	Kmr
31-12-525	Owens-Corning Fiberglass Co., #2 Test	1964	563-618	685	900	"
31-12-526	#1 Test	1964	107-137	140	170	Ket
31-12-526	#3 Test	1964	-	515	500	Kmr
31-12-534	#1	1956	285-315	502	1045	"
31-12-534	#2	1946	290-320	344	1000	"
31-12-534	Laurel Springs Water Co.	1964	428-510	524	710	"
31-12-572	N. J. Water Co., #29	1965	612-712	722	1050	Kr
31-12-584	Owens-Corning Fiberglass Co.	1957	-	306	100	Kmr
31-12-646	Tracy Val Inc.	1972	294-303	303	100	"
31-12-652	Abbotts Dairies Inc.	1960	354-375	447	200	"
31-12-658	Laurel Springs Water Co.	1956	398-441	500	709	Kr
31-12-786	Gloucester Twp.Mun.Util.Auth.	1971	334-359	359	75	Kmr
31-12-938	Laurel Springs Water Co.,#13	1954	394-456	555	800	"
31-12-938	" #15	1964	395-473	481	650	"
31-12-974	Garden State Water Co., #1 Test	1970	457-467	514	75	"

J. Geodetic Control Survey monuments described in Index Maps 48,54; adjacent Index Maps 49,55

ATTACHMENT Map 86

Page 1 of NJGS CASE INDEX SITES WITHIN 5.0 MILES OF 395655 LAT. 750557 LON. AS OF 12/22/87 (IN ORDER BY DECREASING LONGITUDE) - 02/21/90

SITENUM	NAME	LAT	LON	DISTANCE	CONTAM	FMCODE1	FMCODE2	STATUS1	STATUS2
236	MONK'S AMOCO, CAMDEN CO.	395610	750720	1.5	51	103	2080	5	
382	CAMDEN MUNICIPAL WELLS, CAMDEN CITY, CAMDEN CO.	395716	750620	0.5	00	0102	2080	1	
727	HARRISON AVE. LANDFILL, CAMDEN, CAMDEN CO.	395713	750620	0.5	0	2080	0	9	
1268	ADVANCED CHEMICAL TECHNOLOGY, CAMDEN CITY, CAMDEN CO.	395655	750605	0.1	66	0102	2080	1	B
450	CONRAIL, PAVONIA YARD, CAMDEN, CAMDEN CO.	395648	750558	0.1	53	103	160	1	
802	LANGSTON DIV-MOLINS MACHINE CO., CAMDEN, CAMDEN CO.	395727	750511	0.9	00	2080		1	B
1077	BOB'S EXTRA STATION, COLLINGSWOOD, CAMDEN CO	395505	750428	2.5	51	2080	0	F	
527	SGL MODERN HARD CHROME SERVICE, PENNSAUKEN, CAMDEN CO.	395742	750400	1.9	39	2080	0	9	
1148	SHELL SERVICE STATION, RT 130 & BORWING RD, PENNSAUKEN, CAMDEN CO.	395748	750347	2.1	51			3	
990	WESTMONT MOBIL, WESTMONT, CAMDEN CO.	395447	750328	3.3	0	0	0	3	
1269	ADVANCED PROCESS SUPPLY, PENNSAUKEN, CAMDEN CO.	395830	750316	3.0	00	2080		1	B
657	CAMDEN'S PUCHACK WELL FIELD, CAMDEN CO.	395840	750255	3.3	39	2080	0	1	
1088	GARDEN STATE MOTORS, PENNSAUKEN, CAMDEN CO.	395845	750234	3.6	53	2080	0	1	B
911	PENLAR ANODIZING, PENNSAUKEN, CAMDEN CO.	395850	750230	3.7	00	2080	0	1	C
566	SWOPE OIL AND CHEMICAL, PENNSAUKEN, CAMDEN CO.	395856	750208	4.1	00	2080	0	1	E
910	MERCHANTVILLE/PENNSAUKEN WATER COMMISION, PENNSAUKEN, CAMDEN CO.	395853	750202	4.1	00	0102	2080	1	C

Number of Observations: 16

ATTACHMENT Map 9a

Page 1 of NJGS CASE INDEX SITES WITHIN 5.0 MILES OF 395635 LAT. 750557 LON. AS OF 12/22/87 (IN ORDER BY SITE NUMBER) - 02/21/90

SITENUM	NAME	LAT	LON	DISTANCE	CONTAM	FMCODE1	FMCODE2	STATUS1	STATUS2
236	MONK'S AMOCO, CAMDEN CO.	395610	750720	1.5	51	103	2080	5	
382	CAMDEN MUNICIPAL WELLS, CAMDEN CITY, CAMDEN CO.	395716	750620	0.5	00	0102	2080	1	
450	CONRAIL, PAVONIA YARD, CAMDEN, CAMDEN CO.	395648	750558	0.1	53	103	160	1	
527	SBL MODERN HARD CHROME SERVICE, PENNSAUKEN, CAMDEN CO.	395742	750400	1.9	39	2080	0	9	
566	SWOPE OIL AND CHEMICAL, PENNSAUKEN, CAMDEN CO.	395556	750208	4.1	00	2080	0	1	E
657	CAMDEN'S PUCHACK WELL FIELD, CAMDEN CO.	395840	750255	3.3	39	2080	0	1	
727	HARRISON AVE. LANDFILL, CAMDEN, CAMDEN CO.	395713	750620	0.5	0	2080	0	9	
802	LANGSTON DIV-MOLINS MACHINE CO., CAMDEN, CAMDEN CO.	395727	750511	0.9	00	2080		1	B
910	MERCHANTVILLE/PENNSAUKEN WATER COMMISION, PENNSAUKEN, CAMDEN CO.	395853	750202	4.1	00	0102	2080	1	C
911	PENLAR ANODIZING, PENNSAUKEN, CAMDEN CO.	395850	750230	3.7	00	2080	0	1	C
990	WESTMONT MOBIL, WESTMONT, CAMDEN CO.	395447	750328	3.3	0	0	0	3	
1077	BOB'S EXTRA STATION, COLLINGSWOOD, CAMDEN CO	395505	750423	2.5	51	2080	0	F	
1088	GARDEN STATE MOTORS, PENNSAUKEN, CAMDEN CO.	395245	750234	3.6	53	2080	0	1	B
1148	SHELL SERVICE STATION, RT 130 & BORWING RD, PENNSAUKEN, CAMDEN CO.	395748	750347	2.1	51			3	
1268	ADVANCED CHEMICAL TECHNOLOGY, CAMDEN CITY, CAMDEN CO.	395655	750605	0.1	68	0102	2080	1	B
1269	ADVANCED PROCESS SUPPLY, PENNSAUKEN, CAMDEN CO.	395830	750316	3.0	00	2090		1	B

Number of Observations: 16

ATTACHMENT Map 9

NUMBER	NAME	SOURCEID	LOCID	LAT	LON	LLACC	DISTANCE	COUNTY	MUN	DEPTH	GEO1	GEO2	CAPACITY
BU0058	SOLD	STREAM 1	STREAM 1	395805	750015	F	5.2	05	24		SDRAN		
BU0058	SOLD	POND 1	POND 1	395805	750015	F	5.2	05	24	15	GKET		

Number of Observations: 114

ATTACHMENT Map 9c

Page 2 of PRELIMINARY SURVEY OF WATER WITHDRAWAL POINTS WITHIN 5.0 MILES OF 395655 LAT. 750557 LON. (IN ORDER BY DECREASING LONGITUDE) - 02/21/90

NUMBER	NAME	SOURCEID	LOCID	LAT	LON	LLACC	DISTANCE	COUNTY	MUN	DEPTH	GEO1	GEO2	CAPACITY
5302	CAMDEN CITY, WATER DIVISION	3115745	MORRIS 11	395900	750325		3.3	07	27	149	GKMR		2030
5302	CAMDEN CITY, WATER DIVISION	3116814	MORRIS 12	395914	750324		3.5	07	27	122	GKMR		2030
5202	NEW JERSEY-AMERICAN WATER CO.	3101124	HADDON 14	395242	750323		5.3	07	18	598	GKMR		905
5202	NEW JERSEY-AMERICAN WATER CO.	5100008	HADDON 11	395243	750320		5.3	07	18	272	GKMR		700
5202	NEW JERSEY-AMERICAN WATER CO.	3103375	HADDON 20	395240	750320		5.4	07	18	267	GKMR		100
10221W	HADDON TOWNSHIP BOARD OF ED.	3104986	1	395405	750318	T	4.0	07	16	165	GKMR		100
5202	NEW JERSEY-AMERICAN WATER CO.	5100009	HADDON 12	395240	750318		5.4	07	18	267	GKMR		700
5202	NEW JERSEY-AMERICAN WATER CO.	3104798	HADDON 30	395238	750318		5.4	07	18	279	GKMR		905
5302	CAMDEN CITY, WATER DIVISION	5100051	MORRIS 6	395900	750318		3.3	07	27	138	GKMR		1700
5202	NEW JERSEY-AMERICAN WATER CO.	3102434	HADDON 15	395236	750316		5.4	07	18	597	GKMR		805
5235	HADDON TOWNSHIP WATER DEPT.	3105243	1A	395405	750315		4.0	07	16	481	GKMR		870
5302	CAMDEN CITY, WATER DIVISION	5100076	MORRIS 9	395906	750313		3.5	07	27	148	GKMR		1670
5302	CAMDEN CITY, WATER DIVISION	5100056	PUCHACK 1	395845	750312		3.2	07	27	141	GKMR		1500
5302	CAMDEN CITY, WATER DIVISION	5100057	PUCHACK 2	395842	750312		3.2	07	27	169	GKMR		1000
10372W	MORGAN BROTHERS, INC.	3105138	1	395444	750309	F	3.5	07	16	451	GKMR		300
5302	CAMDEN CITY, WATER DIVISION	5100069	PUCHACK 5	395835	750308		3.1	07	27	186	GKMR		1324
5302	CAMDEN CITY, WATER DIVISION	3100944	MORRIS 8	395910	750307		3.6	07	27	128	GKMR		1670
5302	CAMDEN CITY, WATER DIVISION	5100058	PUCHACK 3	395840	750307		3.2	07	27	176	GKMR		1280
5305	MERCHANTVILLE-PENNSAUKEN	3104642	WOODBINE 1	395652	750307		2.5	07	24	288	GKMR		1000
5305	MERCHANTVILLE-PENNSAUKEN	3114563	WOODBINE 2	395652	750307		2.5	07	24	227	GKMR		1000
5302	CAMDEN CITY, WATER DIVISION	5100052	MORRIS 7	395916	750303		3.7	07	27	125	GKMR		1680
5302	CAMDEN CITY, WATER DIVISION	3104251	MORRIS 10	395919	750302		3.8	07	27	118	GKMR		1400
5302	CAMDEN CITY, WATER DIVISION	3108526A	PUCHACK 7	395835	750302		3.2	07	27	180	GKMR		2260
5302	CAMDEN CITY, WATER DIVISION	3104252	MORRIS 4	395929	750253		4.0	07	27	134	GKMR		1600
5302	CAMDEN CITY, WATER DIVISION	3100945	MORRIS 3	395933	750229		4.3	07	27	107	GKMR		1800
5173	MERCHANTVILLE-PENNSAUKEN WATER	3102915	MARION 1	395720	750225		3.1	07	27	279	GKMR		1000
5173	MERCHANTVILLE-PENNSAUKEN WATER	3104641	MARION 2	395711	750220		3.2	07	27	262	GKMR		1000
10262W	SCHAEVITZ ENGINEERING	3103338	1	395816	750218	T	3.5	07	27		GKMR		
10262W	SCHAEVITZ ENGINEERING	3103437	2	395816	750218	T	3.5	07	27		GKMR		
10262W	SCHAEVITZ ENGINEERING	3103444	3	395816	750218	T	3.5	07	27		GKMR		
10434W	GARDEN STATE RACE TRACK, INC.	5100094	1	395514	750213	T	3.8	07	09	154	GKR		300
5302	CAMDEN CITY, WATER DIVISION	5100050	MORRIS 1	395944	750211		4.6	07	27	107	GKMR		1600
5152	HADDONFIELD BOROUGH	3105108	6	395404	750202		4.7	07	17	372	GKMR		1000
10434W	GARDEN STATE RACE TRACK, INC.	5100095	2	395500	750200	M	4.1	07	09	150	GKR		400
5152	HADDONFIELD BOROUGH	3102570	1A	395322	750158		5.4	07	17	273	GKMR		1000
5173	MERCHANTVILLE-PENNSAUKEN WATER	3105110	NATL HWY 1	395902	750153		4.3	07	27	231	GKMR		1000
10549W	SYCAMORE RIDGE APARTMENTS	3127629	3	395725	750151	T	3.6	07	27		GKMR		45
5152	HADDONFIELD BOROUGH	3102130	5	395319	750140		5.6	07	17	577	GKMR		1000
5152	HADDONFIELD BOROUGH	3109694	7	395326	750140		5.5	07	17	600	GKMR		1000
5152	HADDONFIELD BOROUGH	5100062	2	395324	750138		5.5	07	17	577	GKMR		1000
10363W	CHERRY HILL INN	UNKNOWN	1	395610	750136	T	3.9	07	16	179	GKMR		400
5173	MERCHANTVILLE-PENNSAUKEN WATER	3114564	PARK AVE 6	395755	750127		4.1	07	27	270	GKMR		1000
5173	MERCHANTVILLE-PENNSAUKEN WATER	3119207	NATL HWY 2	395915	750125		4.8	07	27	211	GKMR		1000
5173	MERCHANTVILLE-PENNSAUKEN WATER	3100011	PARK AVE 5	395800	750120		4.2	07	27	290	GKMR		1005
5173	MERCHANTVILLE-PENNSAUKEN WATER	3103534	PARK AVE 3	395801	750119		4.2	07	27	277	GKMR		1000
5173	MERCHANTVILLE-PENNSAUKEN WATER	5100064	PARK AVE 2	395800	750118		4.3	07	27	262	GKMR		1000
5173	MERCHANTVILLE-PENNSAUKEN WATER	3100010	PARK AVE 1	395800	750117		4.3	07	27	274	GKMR		1005
5203	NEW JERSEY-AMERICAN WATER CO.	3100684	ELLIS 13	395442	750100		5.0	07	09	527	GKMR		1000
5203	NEW JERSEY-AMERICAN WATER CO.	3103305	ELLIS 16	395441	750100		5.0	07	09	220	GKMR		1180
5203	NEW JERSEY-AMERICAN WATER CO.	3104098	ELLIS 23	395440	750100		5.0	07	09	378	GKMR		1200
5195	NEW JERSEY-AMERICAN WATER CO.	3104576	13HIGHLAND	400002	750044		5.8	05		197	GKMR		700
5195	NEW JERSEY-AMERICAN WATER CO.	3104864	27HIGHLAND	400002	750044		5.9	05		176	GKMR		1000
5203	NEW JERSEY-AMERICAN WATER CO.	3105033	COLUMBIA31	395609	750028		4.9	07	09	427	GKMR		1050
RDWSE	LONGPORT BOROUGH	3104051	COLUMBIA22	395609	750028		4.9	07	09	453	GKMR		1050
10580W	STAR GAS SERVICE	3129179	1	395846	750027		5.3	05	19		GKMR		50
10074W	HUSSMANN CORP.	3102946	1	395238	750018	F	7.0	07	17	308	GKMR		

ATTACHMENT Map 9

 PRELIMINARY SURVEY OF WATER WITHDRAWAL POINTS WITHIN 5.0 MILES OF 395635 LAT. 750557 LON. (IN ORDER BY DECREASING LONGITUDE) - 02/21/90

NUMBER	NAME	SOURCEID	LOCID	LAT	LON	LLACC	DISTANCE	COUNTY	MUN	DEPTH	GED1	GED2	CAPACITY
2165P	SES GLOUCESTER COMPANY, L.P.	DELAWARE RIVER	RM 95.2	395247	750832	T	5.3	20	15		SDDEL		
2165P	G & W NATURAL RESOURCES GROUP	BIG TIMBER CR.		395308	750800	U	4.7	07	14		SDBIG		
4027PS	GENERAL ELECTRIC CO.	DELAWARE RIVER		395652	750754	T	1.7	07	08		SDDEL		
2165P	G & W NATURAL RESOURCES GROUP	3104454	5	395306	750749	F	4.6	07	14	274	GKR		600
2165P	G & W NATURAL RESOURCES GROUP	3106642	1R	395314	750748	F	4.5	07	14	261	GKR		600
2148P	MACANDREWS & FORBES GROUP, INC	5100035	2	395500	750745		2.7	07		99	GKMR		350
2165P	G & W NATURAL RESOURCES GROUP	3103402	4	395308	750744	F	4.6	07	14	281	GKR		600
2148P	MACANDREWS & FORBES GROUP, INC	DELAWARE RIVER		395506	750740	U	2.6	07	08		SDDEL		
5030	BROOKLAWN BOROUGH WATER DEPT.	3119765	4	395247	750737	F	5.0	07	07	293	GKMR		350
5030	BROOKLAWN BOROUGH WATER DEPT.	3104325	1	395251	750732	F	4.9	07	07	327	GKMR		350
2148P	MACANDREWS & FORBES GROUP, INC	3100290	1	395507	750729	F	2.5	07	08	103	GKMR		300
5030	BROOKLAWN BOROUGH WATER DEPT.	3114471	3	395246	750729	F	4.9	07	07		GKMR		350
2148P	MACANDREWS & FORBES GROUP, INC	3123580	2R	395508	750728	F	2.4	07	08	140	GKMR		350
1096D	CAMDEN CO ENERGY RECOVERY ASSO	WELL POINTS		395438	750705	T	2.8	07	08	40	GKMR		
5010	GLOUCESTER CITY	3127737	WELL #41	395359	750654		3.5	07	14	269	GKMR		1000
5010	GLOUCESTER CITY	3118822	WELL #43	395346	750653		3.7	07	14	260	GKMR		1000
5010	GLOUCESTER CITY	3105242	WELL #42	395343	750652		3.8	07	14	306	GKMR		1000
5010	GLOUCESTER CITY	3104306	WELL #40	395349	750651		3.6	07	14	262	GKMR		1000
10063W	GLOUCESTER CITY BD. OF ED.	3104482	1	395300	750645	F	4.5	07	14		GKMR		
5302	CAMDEN CITY, WATER DIVISION	5100060	CITY 7	395457	750640		2.3	07	08	163	GKMR		1500
5302	CAMDEN CITY, WATER DIVISION	5100061	CITY 11	395512	750640		2.1	07	08	159	GKMR		1010
5302	CAMDEN CITY, WATER DIVISION	3104649	CITY 5	395457	750640		2.3	07	08	171	GKMR		1100
10456W	CONCORD CHEMICAL CO., INC.	5100154	1	395635	750605	F	0.4	07	08	140	GKMW		400
5302	CAMDEN CITY, WATER DIVISION	3109574	CITY 18	395550	750537		1.3	07	08	290	GKMR		1200
2038P	GENERAL COLOR CO.	3119275	7	395735	750535		0.9	07	08	194	GKR		180
5302	CAMDEN CITY, WATER DIVISION	3100904	CITY 13	395557	750535		1.2	07	08	230	GKMR		1200
5302	CAMDEN CITY, WATER DIVISION	3101250	CITY 17	395546	750533		1.4	07	08	270	GKMR		1500
10064W	OUR LADY OF LOURDES MED. CENT.	3104620	1	395532	750525	F	1.7	07	08	257	GKMR		250
5201	NEW JERSEY-AMERICAN WATER CO.	3104847	52	395715	750519		0.7	07	08	198	GKMR		1050
5201	NEW JERSEY-AMERICAN WATER CO.	3103456	50	395726	750518		0.8	07	08	170	GKMR		700
5201	NEW JERSEY-AMERICAN WATER CO.	3120270	55	395718	750518		0.7	07	08	176	GKMR		1050
5209	COLLINGSWOOD BOROUGH	NEWTON CREEK		395425	750515		2.9	07	12		SDLOO		1000
5209	COLLINGSWOOD BOROUGH	3104797	8	395426	750514		2.9	07	12	318	GKMR		1000
5201	NEW JERSEY-AMERICAN WATER CO.	3104780	51	395720	750513		0.8	07	08	192	GKMR		1300
2038P	GENERAL COLOR CO.	3105064	6	395718	750507		0.9	07	08	184	GKR		0
5201	NEW JERSEY-AMERICAN WATER CO.	3118947	53	395728	750502		1.0	07	08	194	GKMR		1000
10465W	WEST BANK OIL	DELAWARE	RIVER	395750	750500	F	1.3	07	27		SDDEL		
5201	NEW JERSEY-AMERICAN WATER CO.	3118944	54	395731	750458		1.1	07	08	195	GKMR		1000
5209	COLLINGSWOOD BOROUGH	3100079	5	395521	750439		2.1	07	12	311	GKMR		650
5209	COLLINGSWOOD BOROUGH	3104799	7	395521	750439		2.1	07	12	312	GKMR		1000
5209	COLLINGSWOOD BOROUGH	5100030	4	395521	750435		2.2	07	12	304	GKMR		870
5202	NEW JERSEY-AMERICAN WATER CO.	3103308	EGBERT 18	395248	750433		4.9	07	18	190	GKMR		700
5202	NEW JERSEY-AMERICAN WATER CO.	3105054	EGBERT 35	395247	750432		4.9	07	18	484	GKMR		700
5209	COLLINGSWOOD BOROUGH	3104053	2R	395519	750432		2.2	07	12	281	GKMR		700
5209	COLLINGSWOOD BOROUGH	3104054	3R	395522	750432		2.2	07	12	290	GKMR		800
5209	COLLINGSWOOD BOROUGH	5100031	6	395526	750424		2.2	07	12	281	GKMR		1000
5173	MERCHANTVILLE-PENNSAUKEN WATER	3101417	DEL GARD 2	395800	750417		1.9	07	27	147	GKMR		700
10250W	BISHOP EUSTACE PREP SCHOOL	3117884	1	395547	750413	T	2.0	07	27	150	GKMR		200
5173	MERCHANTVILLE-PENNSAUKEN WATER	3104836	BROWNING2A	395628	750406		1.7	07	27	140	GKMR		900
5173	MERCHANTVILLE-PENNSAUKEN WATER	3105641	BROWNING1A	395627	750404		1.7	07	24	152	GKMR		875
5302	CAMDEN CITY, WATER DIVISION	5100054	DELAIR 2	395851	750355		2.8	07	27	146	GKMR		1830
5302	CAMDEN CITY, WATER DIVISION	5100055	DELAIR 3	395853	750348		2.9	07	27	135	GKMR		1830
5302	CAMDEN CITY, WATER DIVISION	5100053	DELAIR 1	395848	750347		2.9	07	27	141	GKMR		1680
1010BW	CAMDEN CO VOC. & TECH. SCHOOLS	3105139	1	395620	750344	F	2.1	07	15	401	GKMR		
5302	CAMDEN CITY, WATER DIVISION	3116813	MORRIS 13	395905	750333		3.3	07	27	135	GKMR		2060
5235	HADDON TOWNSHIP WATER DEPT.	3104855	4	395405	750325		3.9	07	16	448	GKMR		1000

ATTACHMENT Map 9E

NUMBER	NAME	SOURCEID	LOCID	LAT	LON	LLACC	DISTANCE	COUNTY	MUN	DEPTH	GEO1	GEO2	CAPACITY
BU0058	SOLD	STREAM 1	STREAM 1	395905	750015	F	5.2	05	24		SDRAN		
	SOLD	POND 1	POND 1	395905	750015	F	5.2	05	24	15	GRET		
ROWES	LONGPORT BOROUGH	3104051	COLUMBIA22	395609	750028		4.9	07	09	453	GMR		1050

Number of Observations: 114

ATTACHMENT Map

NUMBER	NAME	SOURCEID	LOCID	LAT	LON	LLACC	DISTANCE	COUNTY	MUN	DEPTH	GEO1	GEO2	CAPACITY
	NEW JERSEY-AMERICAN WATER CO.	3104864	27HIGHLAND	400002	750044		5.8	05		176	GKMR		1000
5201	NEW JERSEY-AMERICAN WATER CO.	3103456	50	395726	750518		0.8	07	08	170	GKMR		700
	NEW JERSEY-AMERICAN WATER CO.	3104780	51	395720	750513		0.8	07	08	192	GKMR		1300
	NEW JERSEY-AMERICAN WATER CO.	3104847	52	395715	750519		0.7	07	08	196	GKMR		1050
	NEW JERSEY-AMERICAN WATER CO.	3118947	53	395728	750502		1.0	07	08	194	GKMR		1000
	NEW JERSEY-AMERICAN WATER CO.	3118944	54	395731	750458		1.1	07	08	195	GKMR		1000
	NEW JERSEY-AMERICAN WATER CO.	3120270	55	395718	750518		0.7	07	08	176	GKMR		1050
5202	NEW JERSEY-AMERICAN WATER CO.	5100008	HADDON 11	395243	750320		5.3	07	18	272	GKMR		700
	NEW JERSEY-AMERICAN WATER CO.	5100009	HADDON 12	395240	750318		5.4	07	18	267	GKMR		700
	NEW JERSEY-AMERICAN WATER CO.	3101124	HADDON 14	395242	750323		5.3	07	18	598	GKMR		805
	NEW JERSEY-AMERICAN WATER CO.	3102434	HADDON 15	395239	750316		5.4	07	18	597	GKMR		805
	NEW JERSEY-AMERICAN WATER CO.	3103375	HADDON 20	395240	750320		5.4	07	18	267	GKMR		100
	NEW JERSEY-AMERICAN WATER CO.	3104798	HADDON 30	395238	750318		5.4	07	18	279	GKMR		805
	NEW JERSEY-AMERICAN WATER CO.	3103308	EGBERT 18	395248	750433		4.9	07	18	190	GKMR		700
	NEW JERSEY-AMERICAN WATER CO.	3105054	EGBERT 35	395247	750432		4.9	07	18	484	GKMR		700
5203	NEW JERSEY-AMERICAN WATER CO.	3105033	COLUMBIA31	395609	750028		4.9	07	09	427	GKMR		1050
	NEW JERSEY-AMERICAN WATER CO.	3100684	ELLIS 13	395442	750100		5.0	07	09	527	GKMR		1000
	NEW JERSEY-AMERICAN WATER CO.	3103305	ELLIS 16	395441	750100		5.0	07	09	220	GKMR		1180
	NEW JERSEY-AMERICAN WATER CO.	3104098	ELLIS 23	395440	750100		5.0	07	09	378	GKMR		1200
5209	COLLINGSWOOD BOROUGH	3104053	2R	395519	750432		2.2	07	12	281	GKMR		700
	COLLINGSWOOD BOROUGH	3104054	3R	395522	750432		2.2	07	12	290	GKMR		800
	COLLINGSWOOD BOROUGH	5100030	4	395521	750435		2.2	07	12	304	GKMR		870
	COLLINGSWOOD BOROUGH	3100079	5	395521	750439		2.1	07	12	311	GKMR		650
	COLLINGSWOOD BOROUGH	5100031	6	395526	750424		2.2	07	12	281	GKMR		1000
	COLLINGSWOOD BOROUGH	3104799	7	395521	750439		2.1	07	12	312	GKMR		1000
	COLLINGSWOOD BOROUGH	3104797	8	395426	750514		2.9	07	12	318	GKMR		1000
	COLLINGSWOOD BOROUGH	NEWTON CREEK		395425	750515		2.9	07	12		SDL00		1000
5235	HADDON TOWNSHIP WATER DEPT.	3105243	1A	395405	750315		4.0	07	16	481	GKMR		870
	HADDON TOWNSHIP WATER DEPT.	3104855	4	395405	750325		3.9	07	16	448	GKMR		1000
5302	CAMDEN CITY, WATER DIVISION	5100050	MORRIS 1	395944	750211		4.6	07	27	107	GKMR		1600
	CAMDEN CITY, WATER DIVISION	3100945	MORRIS 3	395933	750229		4.3	07	27	107	GKMR		1800
	CAMDEN CITY, WATER DIVISION	3104252	MORRIS 4	395929	750253		4.0	07	27	134	GKMR		1600
	CAMDEN CITY, WATER DIVISION	5100051	MORRIS 6	395900	750318		3.3	07	27	138	GKMR		1700
	CAMDEN CITY, WATER DIVISION	5100052	MORRIS 7	395916	750303		3.7	07	27	125	GKMR		1680
	CAMDEN CITY, WATER DIVISION	3100944	MORRIS 8	395910	750307		3.6	07	27	128	GKMR		1670
	CAMDEN CITY, WATER DIVISION	3104251	MORRIS 10	395919	750302		3.8	07	27	118	GKMR		1400
	CAMDEN CITY, WATER DIVISION	5100076	MORRIS 9	395906	750313		3.5	07	27	148	GKMR		1670
	CAMDEN CITY, WATER DIVISION	3116814	MORRIS 12	395914	750324		3.5	07	27	122	GKMR		2030
	CAMDEN CITY, WATER DIVISION	3115745	MORRIS 11	395900	750325		3.3	07	27	149	GKMR		2030
	CAMDEN CITY, WATER DIVISION	3116813	MORRIS 13	395905	750333		3.3	07	27	135	GKMR		2060
	CAMDEN CITY, WATER DIVISION	5100053	DELAIR 1	395848	750347		2.9	07	27	141	GKMR		1680
	CAMDEN CITY, WATER DIVISION	5100054	DELAIR 2	395851	750355		2.8	07	27	146	GKMR		1830
	CAMDEN CITY, WATER DIVISION	5100055	DELAIR 3	395853	750348		2.9	07	27	135	GKMR		1830
	CAMDEN CITY, WATER DIVISION	5100056	PUCHACK 1	395845	750312		3.2	07	27	141	GKMR		1500
	CAMDEN CITY, WATER DIVISION	5100057	PUCHACK 2	395842	750312		3.2	07	27	169	GKMR		1000
	CAMDEN CITY, WATER DIVISION	5100058	PUCHACK 3	395840	750307		3.2	07	27	176	GKMR		1280
	CAMDEN CITY, WATER DIVISION	5100059	PUCHACK 5	395835	750308		3.1	07	27	186	GKMR		1324
	CAMDEN CITY, WATER DIVISION	3108526A	PUCHACK 7	395835	750302		3.2	07	27	180	GKMR		2260
	CAMDEN CITY, WATER DIVISION	5100060	CITY 7	395457	750640		2.3	07	08	163	GKMR		1500
	CAMDEN CITY, WATER DIVISION	5100061	CITY 11	395512	750640		2.1	07	08	159	GKMR		1010
	CAMDEN CITY, WATER DIVISION	3100904	CITY 13	395557	750535		1.2	07	08	230	GKMR		1200
	CAMDEN CITY, WATER DIVISION	3101250	CITY 17	395546	750533		1.4	07	08	270	GKMR		1500
	CAMDEN CITY, WATER DIVISION	3109574	CITY 18	395550	750537		1.3	07	08	290	GKMR		1200
	CAMDEN CITY, WATER DIVISION	3104649	CITY 5	395457	750640		2.3	07	08	171	GKMR		1100
5305	MERCHANTVILLE-PENNSAUKEN	3104642	WOODBINE 1	395652	750307		2.5	07	24	288	GKMR		1000
	MERCHANTVILLE-PENNSAUKEN	3114563	WOODBINE 2	395652	750307		2.5	07	24	227	GKMR		1000

ATTACHMENT M 96

 PRELIMINARY SURVEY OF WATER WITHDRAWAL POINTS WITHIN 5.0 MILES OF 395455 LAT. 750857 LON. (IN ORDER BY PERMIT NUMBER) - 02/21/90

NUMBER	NAME	SOURCEID	LOCID	LAT	LON	LLACC	DISTANCE	COUNTY	MUN	DEPTH	GEO1	GEO2	CAPACITY
10063W	GLOUCESTER CITY BD. OF ED.	3104462	1	395300	750645	F	4.5	07	14		GKMR		
10064W	OUR LADY OF LOURDES MED. CENT.	3104620	1	395332	750525	F	1.7	07	08	257	GKMR		250
10074W	HUSSMANN CORP.	3102946	1	395238	750018	F	7.0	07	17	308	GKMR		
10109W	CAMDEN CO VOC. & TECH. SCHOOLS	3105139	1	395620	750344	F	2.1	07	15	401	GKMR		
10221W	HADDON TOWNSHIP BOARD OF ED.	3104986	1	395405	750318	T	4.0	07	16	165	GKMR		100
10250W	BISHOP EUSTACE PREP SCHOOL	3117884	1	395547	750413	T	2.0	07	27	150	GKMR		200
10262W	SCHAEVITZ ENGINEERING	3103338	1	395816	750218	T	3.5	07	27		GKMR		
	SCHAEVITZ ENGINEERING	3103437	2	395816	750216	T	3.5	07	27		GKMR		
	SCHAEVITZ ENGINEERING	3103444	3	395816	750218	T	3.5	07	27		GKMR		
10363W	CHERRY HILL INN	UNKNOWN	1	395610	750136	T	3.9	07	16	179	GKMR		400
10372W	MORGAN BROTHERS. INC.	3105138	1	395444	750309	F	3.5	07	16	451	GKMR		300
10434W	GARDEN STATE RACE TRACK, INC.	5100094	1	395514	750213	T	3.8	07	09	154	GKR		300
	GARDEN STATE RACE TRACK, INC.	5100095	2	395500	750200	M	4.1	07	09	150	GKR		400
10456W	CONCORD CHEMICAL CO.. INC.	5100154	1	395635	750605	F	0.4	07	08	140	GKMW		400
10465W	WEST BANK OIL	DELAWARE	RIVER	395750	750500	F	1.3	07	27		SDDEL		
10549W	SYCAMORE RIDGE APARTMENTS	3127629	3	395725	750151	T	3.6	07	27		GKMR		45
10580W	STAR GAS SERVICE	3129179	1	395846	750027		5.3	05	19		GKMR		50
1096D	CAMDEN CO ENERGY RECOVERY ASSO	WELL POINTS		395438	750705	T	2.8	07	08	40	GKMR		
2038P	GENERAL COLOR CO.	3119275	7	395735	750535		0.8	07	08	194	GKR		180
	GENERAL COLOR CO.	3105064	6	395718	750507		0.9	07	08	184	GKR		0
2148P	MACANDREWS & FORBES GROUP, INC	3100290	1	395507	750729	F	2.5	07	08	103	GKMR		300
	MACANDREWS & FORBES GROUP, INC	5100035	2	395500	750745		2.7	07		99	GKMR		350
	MACANDREWS & FORBES GROUP, INC	3123580	2R	395508	750728	F	2.4	07	08	140	GKMR		350
	MACANDREWS & FORBES GROUP, INC	DELAWARE RIVER		395506	750740	U	2.6	07	08		SDDEL		
2165P	G & W NATURAL RESOURCES GROUP	3106642	1R	395314	750748	F	4.5	07	14	261	GKR		600
	G & W NATURAL RESOURCES GROUP	3103402	4	395308	750744	F	4.6	07	14	281	GKR		600
	G & W NATURAL RESOURCES GROUP	3104454	5	395308	750749	F	4.6	07	14	274	GKR		600
	G & W NATURAL RESOURCES GROUP	BIG TIMBER CR.		395308	750800	U	4.7	07	14		SDBIG		
2365P	SES GLOUCESTER COMPANY, L.P.	DELAWARE RIVER	RM 95.2	395247	750832	T	5.3	20	15		SDDEL		
4027PS	GENERAL ELECTRIC CO.	DELAWARE RIVER		395652	750754	T	1.7	07	08		SDDEL		
5010	GLOUCESTER CITY	3104306	WELL #40	395349	750651		3.6	07	14	262	GKMR		1000
	GLOUCESTER CITY	3127737	WELL #41	395339	750654		3.5	07	14	269	GKMR		1000
	GLOUCESTER CITY	3105242	WELL #42	395343	750652		3.8	07	14	306	GKMR		1000
	GLOUCESTER CITY	3118822	WELL #43	395346	750653		3.7	07	14	260	GKMR		1000
5030	BROOKLAWN BOROUGH WATER DEPT.	3104325	1	395251	750732	F	4.9	07	07	327	GKMR		350
	BROOKLAWN BOROUGH WATER DEPT.	3114471	3	395246	750729	F	4.9	07	07		GKMR		350
	BROOKLAWN BOROUGH WATER DEPT.	3119765	4	395247	750737	F	5.0	07	07	293	GKMR		350
5152	HADDONFIELD BOROUGH	3102570	1A	395322	750158		5.4	07	17	273	GKMR		1000
	HADDONFIELD BOROUGH	5100062	2	395324	750138		5.5	07	17	577	GKMR		1000
	HADDONFIELD BOROUGH	3102130	5	395319	750140		5.6	07	17	577	GKMR		1000
	HADDONFIELD BOROUGH	3109694	7	395326	750140		5.5	07	17	600	GKMR		1000
	HADDONFIELD BOROUGH	3105108	6	395404	750202		4.7	07	17	372	GKMR		1000
5173	MERCHANTVILLE-PENNSAUKEN WATER	3105641	BROWNING1A	395627	750404		1.7	07	24	152	GKMR		875
	MERCHANTVILLE-PENNSAUKEN WATER	3101417	DEL GARD 2	395800	750417		1.9	07	27	147	GKMR		700
	MERCHANTVILLE-PENNSAUKEN WATER	3102915	MARION 1	395720	750225		3.1	07	27	279	GKMR		1000
	MERCHANTVILLE-PENNSAUKEN WATER	3104641	MARION 2	395711	750220		3.2	07	27	262	GKMR		1000
	MERCHANTVILLE-PENNSAUKEN WATER	3104836	BROWNING2A	395628	750406		1.7	07	27	140	GKMR		900
	MERCHANTVILLE-PENNSAUKEN WATER	3105110	NATL HWY 1	395902	750153		4.3	07	27	231	GKMR		1000
	MERCHANTVILLE-PENNSAUKEN WATER	3100010	PARK AVE 1	395800	750117		4.3	07	27	274	GKMR		1005
	MERCHANTVILLE-PENNSAUKEN WATER	5100064	PARK AVE 2	395800	750118		4.3	07	27	262	GKMR		1000
	MERCHANTVILLE-PENNSAUKEN WATER	3103334	PARK AVE 3	395801	750119		4.2	07	27	277	GKMR		1000
	MERCHANTVILLE-PENNSAUKEN WATER	3100011	PARK AVE 5	395800	750120		4.2	07	27	290	GKMR		1005
	MERCHANTVILLE-PENNSAUKEN WATER	3114564	PARK AVE 6	395755	750127		4.1	07	27	270	GKMR		1000
	MERCHANTVILLE-PENNSAUKEN WATER	3119207	NATL HWY 2	395915	750125		4.8	07	27	211	GKMR		1000
5195	NEW JERSEY-AMERICAN WATER CO.	3104576	13HIGHLAND	400002	750044		5.8	05		197	GKMR		700

ATTACHMENT Map 9b

(31)

ADVANCED CHEMICAL TECHNOLOGY
A Subsidiary of

PLANT INDUSTRIES, INC.

NJD 071455141

February 15, 1984

BY HAND

Mr. Anthony McMahon
ECRA Office
Division of Waste Management
New Jersey Department of Environmental
Protection
CN-028
Trenton, New Jersey 08625

Dear Mr. McMahon:

By letter, dated February 8, 1984, we advised you that we have entered into a contract to sell all our assets located at our Camden, New Jersey facility (the "Camden Facility") and the business related thereto, to Russell-Stanley Corp. ("Russell-Stanley"), a New Jersey corporation located in Woodbridge, New Jersey. In that letter we also declared that there has been no discharge of hazardous substances or hazardous wastes (as those terms are defined in the Environmental Cleanup Responsibility ACT ("ECRA")), and, because of our present financial condition, asked you to please consider approving our negative declaration on an expedited basis.

This letter is in response to your suggestion to our attorney, Stephen J. Gulotta, Jr. of Shea & Gould, that we study the regulations you forwarded to him and address the concerns of the Environmental Protection Agency (the "EPA") as outlined therein. The following is intended to respond directly to the "Initial ECRA notice requirements" set forth in Section 7:1 - 3,7(d) of the regulations:

1. The Camden Facility is located in the rear portion of the main building at the southeasterly side of State Street and River Road, Camden, New Jersey 08105 (Camden County). We lease the Camden Facility from Camden Properties, Inc.

777 Terrace Avenue • Hasbrouck Heights, New Jersey 07604 • (201) 288-8440

ATTACHMENT A.

2. There are no areas where hazardous substances or wastes have been or currently are generated, manufactured, refined, transported, stored, handled or disposed on site, above and below ground.

3. Operations and processes at this site involve no hazardous substances and include no emissions of hazardous wastes. Plastic resin in the form of beads is taken from silos and melted to form "sock"-like sacks which drop into molding machines. The molds close and air is blown from within the plastic "sock", forming the drum. No hazardous gas or other waste escapes during this procedure. Further, the only solvent involved is ethylene glycol used in the chilling process to cool and harden the drum. This flows around the mold cavity (never touching the drum) and is employed in a recirculating, closed system in much the same way antifreeze in a car returns to the radiator. Oil is used to lubricate the machinery.

4. Hazardous substances or waste are not stored at the Camden Facility. (OIL STORAGE TANK ON SITE) TM.

5. We have leased the Camden Facility from Camden Properties, Inc. since February 15, 1974. We are not aware of the names and current addresses of previous lessees. The property was deeded to Camden Properties, Inc. from RCA Corporation on December 14, 1970.

6. No hazardous substances or wastes are inventoried at the Camden Facility.

7. There have been no spills of hazardous substances or wastes at the Camden Facility.

8, 9. Based upon the responses to item 1-7 above, we do not believe there is a need for a soil, groundwater and surface water sampling plan or for any decontamination procedures relative to the Camden Facility.

10. We have applied for and received the following Federal and State environmental permits in connection with our operations at the Camden Facility:

(a) Permit/Certificate #017175 DEP Plant I.D. #50102, relative to vent on silo holding plastic resin. Original approval November 6, 1974; expiration date April 10, 1985.

ATTACHMENT A2

(b) Permit/Certificate #22246 DEP Plant I.D. #50102, relative to operation of loading resin into blowmolding machines. Original approval August 11, 1976; expiration date August 11, 1986.

(c) Permit/Certificate #017174 DEP Plant I.D. #50102, relative to pneumatic equipment to convey resin from silos to blowmolding machines. Original approval date: November 6, 1974: expiration date February 21, 1985.

11. There has been no Department or other governmental enforcement actions for any violation or any applicable Federal, state or local environmental laws or regulations during our operation of the Camden Facility.

12. Not applicable.

13. The agreement of sale relative to the Camden Facility was executed on January 12, 1984. The full name and address of the acquiring company is:

Russell-Stanley Corp.
P.O. Box 458
Convery Blvd. and Amboy Ave.
Woodbridge, New Jersey 07095

14. Not applicable.

15. Robert L. Hall, President of Advanced Chemical Technology, is the individual to contact concerning our responsibilities under ECRA. His address and telephone number are:

c/o Plant Industries, Inc.
777 Terrace Avenue
Hasbrouck Heights, New Jersey 07604
(201) 288-8440

16. There have been no soil, groundwater or surface water samplings conducted at the Camden Facility during our operation thereof.

ATTACHMENT A3

Plastic drums of the type manufactured at the Camden facility fall under Standard Industrial Classification major group 30. Sections 7:1 - 3.4(3) and 7:1 - 3.20 indicate that, based upon the foregoing, we should be exempt from classification as an industrial establishment, and we hereby request such an exemption. In the alternative we hereby reaffirm the declaration made in our February 8th letter that there has been no discharge of hazardous substances or hazardous wastes (as those terms are defined in ECRA) at the Camden facility.

Once again, given the effect that any delay in obtaining an exemption from ECRA or your approval thereunder may have on our ability to consummate the subject sale and to continue in business, we would appreciate it if you would give this matter your prompt attention.

Very truly yours,

ADVANCED CHEMICAL TECHNOLOGY

Douglas E. Goepfert
Secretary

STATE OF NEW JERSEY)
) ss
COUNTY OF BERGEN)

On this 15th day of February, 1984, before me the undersigned, personally appeared Douglas E. Goepfert known personally to me to be the Secretary of ADVANCED CHEMICAL TECHNOLOGY, and that he, as such officer, being authorized so to do, executed the foregoing document by signing the name of the corporation by himself as such officer.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal.

NANCY E. HUNICH
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires Oct. 1, 1984

ATTACHMENT A1

ECRA-002
12/87

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT
INDUSTRIAL SITE EVALUATION ELEMENT
CN 028, TRENTON, N.J. 08625

ENVIRONMENTAL CLEANUP RESPONSIBILITY ACT (ECRA)

INITIAL NOTICE

SITE EVALUATION SUBMISSION (SES)

This is the second part of a two-part application form. This information must be submitted within 45 days following any applicable situation as specified at N.J.A.C. 7:26B-1.5 or any triggering event as specified at N.J.A.C. 7:26B-1.6. Please refer to the instructions and N.J.A.C. 7:26B-3.2 before filling out this form. Answer all questions. Should you encounter any problems in completing this form, we recommend that you discuss the matter with a representative from the Element. Submitting incorrect or insufficient data may cause processing delays and possible postponement of your transaction. Please call (609) 633-7141 between the hours of 8:30 a.m. and 4:30 p.m. to request assistance.

PLEASE PRINT OR TYPE

Date August 8, 1989

1. Industrial Establishment

Name Russell - Stanley East, Inc.

Address River Road & State Street

City or Town Camden Zip Code 08105

Municipality Camden County Camden

A. Operational and Ownership History: *(Attach additional sheets if necessary)*

Name	Owner/ Operator	From	To	Current Address
RCA	Owner Operator	>1964	1973	Unknown
Advanced Chemical Tech.	Operator	1972	1982	Unknown
Plants Industries, Inc.	Operator	1984	1984	P.O.Box 1596 Waltham, MA
Russell - Stanley Corp.	Operator	1984	Present	River Road & State St.
Camden Property, Inc.	Owner	1973	Present	Camden

B. Brief description of past operation(s) conducted on site *(Attach additional sheets if necessary)*

Record Company of America (RCA) plant was involved in the manufacturing of cassett tapes and plastic record disc. Advance Chemical Technology and Plant Industries, Inc. were involved in the manufacturing of plastic industrial container The operation conducted by ACT and Plant was the same as the current operation.

ATTACHMENT B1

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12/87

2. List all federal and state environmental permits applied for, or received, or both, at this facility *(Attach additional sheets if necessary)*

Check here if no permits are involved _____

A. New Jersey Bureau of Air Pollution Control

Permit Number	Certificate Number	Date of Approval or Denial	Reason for Denial (If applicable)	Expiration Date
022246	022246	08/11/81	N/A	08/11/91
017174	017174	04/10/75	N/A	02/21/90
017175	017175	11/06/74	N/A	04/10/90

B. New Jersey Pollutant Discharge Elimination System (NJPDES)

Number	Discharge Activity	Date Issued or Denied	Expiration Date	Body of Water Discharged Into
N/A				

C. United State Environmental Protection Agency (EPA) Identification Number and copy of the most recent generator Annual Report prepared pursuant to the New Jersey Hazardous Waste Regulations. *(If applicable)*

ID # NJD 980789929

Is a copy of the Annual Report attached? _____ Yes (See Attachment #_____) X *No (see below)

D. Resource, Conservation, Recovery Act (RCRA) Permit # N/A

E. Bureau of Underground Storage Tank Registration Number(s) N/A

F. All other federal, state, local governmental permits.

Agency Issuing Permit	Permit No.	Date of Approval or Denial	Expiration Date
N/A			

* No hazardous waste was manifested for year 1988. Therefore, an Annual Report is not available. EPA ID # was obtained for disposal of the waste oil in 1985. Since that time spent oil is recycled on-site by an outside contractor (petro-Chem or Safety Kleen Corporation). Waste oil removal/recycling related documents

ATTACHMENT B2

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3. Summary of Enforcement Actions for Violation of Environmental Laws or Regulations:

Check here if no enforcement actions are involved _____

A. Date of Action 12/21/84

Section of Law or Statute violated 58:10-23.11c; 58:10-23.11e

Type of Enforcement Action -

Description of the Violation Discharge of a hazardous substance (oil or Hydraulic Fluid); failure to immediatley notify DEP.

How was the violation resolved? Containment wall or dike was constructed as required by the violation notice. Contaminated areas were addressed in ECRA case #84011. Note that this violation was occurred during the previous tenure.

B. Date of Action _____

Section of Law or Statute violated _____

Type of Enforcement Action _____

Description of the Violation _____

How was the violation resolved? _____

4. Site Map

Is this map enclosed? X Yes (See Attachment # B) ____ No

If No, state the reason _____

(Attach additional pages, if necessary)

ATTACHMENT B3

ECRA-002
12/87

5. Decription of Operations:

Is this report enclosed? X Yes (See Attachment # C) ____ No

If No, state the reason _____

6. Description of Building Heating System:

A. How is the Industrial Establishment currently heated? (Oil, Gas, Electric) Gas/Electric

How long has the Industrial Establishment been heated by the above fuel/energy source: 25 years

B. Was the Industrial Establishment heated by fuel oil at any time: ____ Yes X No

Is information on the decommissioning of underground fuel oil tanks included with item No. 14 of this form?

____ Yes X No If no, explain below: N/A

C. Are the results of the Integrity Evaluation for Existing Underground Fuel Oil Tanks enclosed?

____ Yes (See Attachment #_____) X No If no, state the reason N/A

7. Summary of Industrial Establishment Wastewater Discharges of Sanitary and/or Industrial Waste:

A. Discharge Period

From	To	Discharge Type	Treatment By
Prior to 1964	Present	Sanitary Waste	CCMUA

B. If the Industrial Establishment discharges sanitary and/or industrial wastes to a publicly-owned treatment plant, provide the name/address of that facility.

Name Camden County Municipal Utility Authority Telephone # (609) 541-5200

Street Address 1645 Ferry Ave., P.O. Box 1432

Municipality Camden State NJ Zip Code 08101

Date(s) of Discharge	Nature of Discharge
1. Prior to 1964-Present	Sanitary Waste
2.	
3.	

ATTACHMENT B4

8. Hazardous Substance and Waste Containment Description: *(Attach additional sheets if necessary)*

Type of Storage Unit	Date Installed	Area or Volumetric Capacity (include units)	Material Stored	Construction Type	Location Reference	Decommissioning or Sampling Reference
(3) AGST	1973	275 Gallons	Spent Oil/ Hydrulic Fluid	Steel	Appendix B	N/A*

* Tanks are located on concrete floor within facility building.

9. Hazardous Substance/Waste Inventory:

Material Name	Quantity (Indicate units)	Location Reference	Storage Method Container Type/Size	Typical Annual Usage	To Remain on Site (Yes or No)
Ethylene Glycol	550 gal.	Haz. Mat. Storage Area	55-Gallon Steel Drum	550 gal.	Yes
Hydrulic Oil	900 gal.	Haz. Mat. Storage Area	55-Gallon Steel Drum	900 gal.	Yes
Consol Cleaner	165 gal.	Haz. Mat. Storage Area	55-Gallon Steel Drum	165 gal.	Yes
Polyethylene	500,000 lb.	Silos & Manuf. Area	170 klb. Vertical Silo	6 m. lb.	Yes
Pellets (Assorted colors)			and Cardboard Boxes		
	See Appendix B for location				

ATTACHMENT B5

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10. Discharge History of Hazardous Substances and Wastes:

A. Have there been any discharges of hazardous substances and wastes?
X Yes (Complete Item B below) ____ No (Go to Item 10C)

B. Summary of Discharges and Resolutions

Description of Discharge Event	Response and Resolutions
Discharge of oil and hydraulic fluid from the injection molder.	Containment wall has been constructed around the injection molder. All contaminated soils resulting from the discharge have been addressed in ECRA Case # 84011

C. Is this Industrial Establishment subject to Spill Prevention Control and Countermeasure (SPCC) per 40 CFR Part 112 or Discharge Prevention, Containment and Countermeasure (DPCC) Plan per NJAC 7:1E-4.1 requirements?

____ Yes X No A copy of the Plan(s) may be required at the discretion of the Department.

11. Sampling Plan Proposal

A. Is sampling proposed at the facility? ____ Yes (See Attachment #_____) No X

If sampling is not proposed, please explain below. *(Attach additional sheets if necessary)*

Sampling activity at the site was addressed in ECRA Case # 84011. Required soil (and groundwater) sampling has been implemented. The facility Cleanup Plan is currently being reviewed by the BEECRA.

B. Is groundwater sampling proposed? ____ Yes X No Additional groundwater sampling plan has been approved under ECRA Case # 84011. The plan will be implemented at the completion of soil cleanup program.

Note: If groundwater sampling is proposed under the plan, you must complete ECRA Form 002A "Request for Hydrogeologic Assessment" and submit it with the application.

ATTACHMENT B6

ECRA-002
12/87

10. Discharge History of Hazardous Substances and Wastes:

A. Have there been any discharges of hazardous substances and wastes?
X Yes (Complete Item B below) ____ No (Go to Item 10C)

B. Summary of Discharges and Resolutions

Description of Discharge Event	Response and Resolutions
Discharge of oil and hydraulic fluid from the injection molder.	Containment wall has been constructed around the injection molder.
Minor oil leakage from dumpster.	All contaminated soils resulting from the discharge have been addressed in the Cleanup Plan foe ECRA Case # 84011

C. Is this Industrial Establishment subject to Spill Prevention Control and Countermeasure (SPCC) per 40 CFR Part 112 or Discharge Prevention, Containment and Countermeasure (DPCC) Plan per NJAC 7:1E-4.1 requirements?

____ Yes X No A copy of the Plan(s) may be required at the discretion of the Department.

11. Sampling Plan Proposal

A. Is sampling proposed at the facility? ____ Yes (See Attachment # ____) No X

If sampling is not proposed, please explain below. *(Attach additional sheets if necessary)*

Sampling activity at the site was addressed in ECRA Case # 84011. Required soil (and groundwater) sampling has been implemented. The facility Cleanup Plan is currently being reviewed by the BEECRA.

B. Is groundwater sampling proposed? ____ Yes X No Additional groundwater sampling plan has been approved under ECRA Case # 84011. The plan will be implemented at the completion of soil cleanup program.

Note: If groundwater sampling is proposed under the plan, you must complete ECRA Form 002A "Request for Hydrogeologic Assessment" and submit it with the application.

ATTACHMENT B1

12. Decontamination/Decommissioning Plan

A. Is the facility Decontamination/Decommissioning Plan enclosed?

____Yes (See Attachment #_____) __X__No

B. If no, specify why decontamination/decommissioning is not considered necessary.

The operation is continuing, therefore no decontamination/ decommissioning is required.

13. Historical Data on environmental quality at the Industrial Establishment

A. Were sampling results obtained on Environmental Quality for the Industrial Establishment?

__X__Yes (See Attachment #_____) ____No

B. If sampling results were obtained but are not part of this application, please explain below:

Sampling results obtained have been presented in ECRA Case # 84011.

14. List any other information you are submitting or which has been formally requested by the Department:

Description	Attachment #
Material Safety Data Sheet (MSDS)	D

FEE CHECKLIST

Include below a breakdown of the total fee submitted with this application. (See N.J.A.C. 7:26B-1.10 for the appropriate fees.)

Item	Amount ($)
1. Initial Notice Review	
i. Without Sampling Plan	$2000.00
ii. With Sampling Plan that includes only underground storage tank analysis without groundwater monitoring	
iii. With Sampling Plan other than ii. above or iv. below	
iv. With Sampling Plan that includes any groundwater monitoring	
2. Sampling Data Review	
3. Negative Declaration Review	
4. Cleanup Plan Review	
5. Oversight of Cleanup Plan Implementation	
TOTAL FEE ENCLOSED	$$2,000.00

ARE FEES ENCLOSED? __X__YES

ATTACHMENT B8

ECRA-002
12/87

CERTIFICATIONS:

A. The following certification shall be signed by the highest ranking individual at the site with overall responsibility for that site or activity. Where there is no individual at the site with overall responsibility for that site or activity, this certification shall be signed by the individual having responsibility for the overall operation of the site or activity.

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 penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of N.J.S.A. 13:1K-6 et seq., I am personally liable for the penalties set forth at N.J.S.A. 13:1K-8.

Typed/Printed Name William Lima Title President

Signature [signature] Date 8/10/89

Sworn to and Subscribed Before Me
on this 10th
Date of August 19 89
Eileen J. Paulovich
Notary

EILEEN J. PAULOVICH
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires Mar. 1, 1994

B. The following certification shall be signed as follows:

1. For a corporation, by a principal executive officer of at least the level of vice president;
2. For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
3. For a municipality, State, Federal or other public agency, by either a principal executive officer or ranking elected official.

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate, or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of N.J.S.A. 13:1K-6 et seq., I am personally liable for the penalties set forth at N.J.S.A. 13:1K-8.

Typed/Printed Name William Lima Title President

Signature [signature] Date 8/10/89

Sworn to and Subscribed Before Me
on this 10th
Date of August 19 89
Eileen J. Paulovich
Notary

EILEEN J. PAULOVICH
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires Mar. 1, 1994

ATTACHMENT B9

ATTACHMENT A

WASTE OIL REMOVAL/RECYCLING DOCUMENTATION

PETROTECH, INC. ON SITE OIL RECLAMATION

111 McLEAR BLVD. FARMINGDALE N.Y. 11735 TEL. (516) 454-7200

CUSTOMER: Russel Stanley

ADDRESS: Salem & River Rd. Camden N.J.
NO. & STREET TOWN STATE ZIP

BILLING ADDRESS: Same
NO. & STREET TOWN STATE ZIP

CUSTOMER P.O. #:
DATE:
DATES: START: 5/3/81 COMPLETE: 5/3/81

DIRECT CHARGES:

1. GALLONS OF OIL PROCESSED 500 x $1.35 /GAL. = $675.00
OR MINIMUM CHARGE OF $500.00

SURCHARGES:

1. GAL. OF H_2O IN EXCESS OF 2% ____ x $0. /GAL. = $ N/A
2. QTY. OF FILTER ELEMENTS IN EXCESS OF ___ PER EACH 250 GAL. OF OIL PROCESSED ____ x $. /ELEM. = $ N/A
3. QTY. OF DRUMS REQS. SERVICE ____ x $. /DRUM = $ N/A
4. HOURS OF STANDBY: ____ x $. /HR. = $ N/A
5. CANCELLATION CHARGE: $250.00

TOTAL CHARGES: $675.00

PERFORMED BY: George B
DRIVER / OPERATOR PETROTECH, INC.

P-1
TRUCK NO.

ACCEPTED BY:
TITLE:
REPRESENTING: B. Ballesci
NAME OF COMPANY

NOTWITHSTANDING ANYTHING TO THE CONTRARY CONTAINED HEREIN, OR IN ANY STATUTE, ORDINANCE, RULE OR REGULATION TO THE CONTRARY, ALL WASTE PRODUCT SHALL REMAIN THE PROPERTY OF THE CUSTOMER, INCLUDING BUT NOT LIMITED TO, WATER, UNRECLAIMED OIL, HYDROCARBONS, CONTAMINANTS OF ALL KINDS AND DESCRIPTIONS, FILTERS UTILIZED IN THE RECLAMATION PROCESS WHICH CONTAIN ANY OF THE FOREGOING, AND ALL OTHER BY-PRODUCTS OF EVERY KIND AND DESCRIPTION INCLUDING THE FILTER ELEMENTS CONTAINING THE SAME. IT SHALL BE THE CUSTOMERS SOLE DUTY AND RESPONSIBILITY TO DISPOSE OF THE SAME IN CONFORMITY WITH ALL APPLICABLE LAWS, RULES AND REGULATIONS AND THE CUSTOMER SHALL HOLD PETROTECH™ HARMLESS FROM ALL LIABILITY ARISING FROM THE DISPOSAL OF SAID ITEMS AND THE CUSTOMER SHALL INDEMNIFY PETROTECH™ FOR ANY COSTS AND EXPENSES INCURRED BY PETROTECH™ IN CONNECTION WITH ANY CLAIMS ASSERTED AGAINST PETROTECH™ ARISING FROM THE USE OR DISPOSAL OF SAID ITEMS.

PETROTECH™ IS A SERVICE MARK OF PETROTECH, INC. A SUBSIDIARY OF AQUANETICS, INC.

CUSTOMER COPY

ATTACHMENT B11

PETROTECH, INC. ON SITE OIL RECLAMATION

111 NOLEAR BLVD. FARMINGDALE N.Y. 11735 TEL. (516) 454-7000

TOMER: Russel Stanley

DRESS: Rt. 9 & State St. Carteret N.J.
NO. & STREET TOWN STATE ZIP

LLING DRESS: Same
NO. & STREET TOWN STATE ZIP

CUSTOMER P.O. #:
DATE:
DATES: START: 6/6/87 COMPLETE: 6/6/87

RECT CHARGES:

1. GALLONS OF OIL PROCESSED 600 x $1.35 /GAL. = $810.00
OR MINIMUM CHARGE OF $500.00

URCHARGES:

1. GAL. OF H_2O IN EXCESS OF 2% _____ x $0. /GAL. = $ N/A
2. QTY. OF FILTER ELEMENTS IN EXCESS OF ___ PER EACH 250 GAL. OF OIL PROCESSED _____ x $. /ELEM. = $ N/A
3. QTY. OF DRUMS REQ'D SERVICE _____ x $. /DRUM = $ N/A
4. HOURS OF STANDBY: _____ x $. /HR. = $ N/A
5. CANCELLATION CHARGE: $250.00

TOTAL CHARGES: $810.00

PERFORMED BY: George B.
DRIVER / OPERATOR PETROTECH, INC.

TRUCK NO.

ACCEPTED BY: _____ TITLE: _____
REPRESENTING: Ken Marell
NAME OF COMPANY

NOTWITHSTANDING ANYTHING TO THE CONTRARY CONTAINED HEREIN, OR IN ANY STATUTE, ORDINANCE, RULE OR REGULATION TO THE CONTRARY, ALL WASTE PRODUCT SHALL REMAIN THE PROPERTY OF THE CUSTOMER, INCLUDING BUT NOT LIMITED TO, WATER, UNRECLAIMED OIL, HYDROCARBONS, CONTAMINANTS OF ALL KINDS AND DESCRIPTIONS, FILTERS UTILIZED IN THE RECLAMATION PROCESS WHICH CONTAIN ANY OF THE FOREGOING, AND ALL OTHER BY-PRODUCTS OF EVERY KIND AND DESCRIPTION INCLUDING THE FILTER ELEMENTS CONTAINING THE SAME. IT SHALL BE THE CUSTOMERS SOLE DUTY AND RESPONSIBILITY TO DISPOSE OF THE SAME IN CONFORMITY WITH ALL APPLICABLE LAWS, RULES AND REGULATIONS AND THE CUSTOMER SHALL HOLD PETROTECH™ HARMLESS FROM ALL LIABILITY ARISING FROM THE DISPOSAL OF SAID ITEMS AND THE CUSTOMER SHALL INDEMNIFY PETROTECH™ FOR ANY COSTS AND EXPENSES INCURRED BY PETROTECH™ IN CONNECTION WITH ANY CLAIMS ASSERTED AGAINST PETROTECH™ ARISING FROM THE USE OR DISPOSAL OF SAID ITEMS.

PETROTECH™ IS A SERVICE MARK OF PETROTECH, INC. A SUBSIDIARY OF AQUANETICS, INC.

CUSTOMER COPY

ATTACHMENT B12

safety-kleen

0762 - R2271
LUID RECOVERY SERVICE
ONTROL #: 041158

PRE/SHIP ANALYSIS - COMPLETE 07/21/89
CUSTOMER SURVEY
* * * FLUID RECOVERY SERVICE * * *

REVISED DATE 07/21/89
SAMPLE #: 050343

RUSSELL STANLEY CORP
STATE ST & RIVER RD
CAMDEN NJ 08105

EDERAL EPA ID: NJD980789929 COUNTY: CAMDEN NATURE OF BUSINESS: MFG OF POLY CONTAINERS
TATE EPA: IL.: MO. ID: . ID: SIC #:
ANIFEST ADDRESS IS BILLING MANIFEST TO

ATERIAL DESCRIPTION:
WASTE OIL,SLUDGE
PROCESS DESCRIPTION:
MACHINE COOLING LUBRICATION

VOLUME : 55 GALS PER QUARTER
VOLUME ON HAND : 900
STORAGE CAPACITY : 1000 IN DRUMS
SHIPPING FREQUENCY:QTR IN DRUMS
COLOR : TAN/CLEAR
LAYERS : TWO
PHYSICAL STATE: LIQUID
VISCOSITY : LOW

MATERIAL COMPOSITION (VOL%):	MIN	MAX	TYPICAL
OIL			70.0
WATER			30.0
NON-VOLATILE MATERIAL			
SETTLED SOLIDS			

RESTRICTED SUBSTANCES: NONE

D.O.T HAZARDOUS MATERIAL DESCRIPTION: CUSTOMER REQUESTS ASSISTANCE
PROPER SHIPPING NAME:
HAZARD CLASS: HAZARD NO. :

EPA HAZARDOUS WASTE DESCRIPTION: CUSTOMER REQUESTS ASSISTANCE
NO(S):
CODES:

P.O. NO: TYPE OF SAMPLE: COMPOSITE #DRUMS: 6 TAKEN BY: SALESREP
CONTACT: CHARLES MORELLI TITLE: PLANT MGR PHONE: 609/541-2376
COMMENT: #1 OF 2 SAMPLES.
SALESPERSON: FLUID RECOVERY SERVICES TERRITORY: 6666 BRANCH #: 213904 DATE: 07/03/89

LAB REVIEW:
ACCEPT SEG CODE: RELEASED: 07/19/89
ANALYST: CP REVIEWER: CP ANALYZED: 07/17/89

CORPORATE REVIEWS:	DISPOSITION	REVIEWER	DATE
TECHNICAL:	ACCEPT	EJE	07/18/89
REGULATORY:	ACCEPT	TAL	07/18/89
OPERATING:	ACCEPT	JWH	07/18/89

TRACKING INFO	DATE	FACILITY
RECEIVED:	07/11/89	SK TECHNICAL CENTER

HANDLING CODES:
S02/T50

SK D.O.T. #: 0001011 DRUM OR BULK
RQ WASTE COMBUSTIBLE LIQUID N.O.S.
NA1993 (EPA D001) 1011

0000999 SPECIAL NOTICE
PROPER DOT/EPA SHIPPING DESCRIPTION WAS NOT DETERMINED FROM THE ANALYSIS BUT IS BASED ON KNOWLEDGE OF SIMILIAR WASTES.

APPROVED FACILITIES:	654	658	635
	SAFETY-KLEEN CORP	SAFETY-KLEEN CORP	SAFETY-KLEEN CORP
	633 EAST 138TH ST	STATE HWY 146	1200 SYLVAN ST
	DOLTON IL 60419	NEWCASTLE KY 40050	LINDEN NJ 07036
FEDERAL EPA NO:	ILD980613913	KYD053348108	NJD002182897
STATE EPA NO:	0310690006		
TELEPHONE:	312/849-4850 AUTH# 000161	502/845-2453	201/862-2000

COMMENT: OK FOR FUEL. FRS CAT I. PRICING CODE: F1

THIS SERVES AS NOTICE PER, 40CFR264.12(B), THAT THE FACILITY(IES) NOTED ABOVE HAS THE APPROPRIATE PERMITS AND IS WILLING TO RECEIVE THE MATERIAL DESCRIBED.

ATTACHMENT B13

PRE/SHIP ANALYSIS - COMPLETE
MATERIAL ANALYSIS
* * * FLUID RECOVERY SERVICE * * *

REVISED DATE 07/21/89

FLUID RECOVERY SERVICE
RUSSELL STANLEY CORP

CONTROL #: 041158
SAMPLE #: 050343

GENERAL COMPOSITION (VOL%):
BY APPEARANCE
AQUEOUS PHASE: 47.0 %
ORGANIC PHASE: 53.0 %
BOTTOM SLUDGE: 0.0 %
BOTTOM SOLID : 0.0 %

GENERAL ANALYSIS: TOTAL SAMPLE
COLOR : GRN BRWN/CLR LT BRWN
WATER CONTENT: 47.7 WT%
NON-VOLATILE : 52.7 WT%
PH: DIRECT BY METER 4.5
VISCOSITY : 208 CPS

SPECIFIC GRAVITY AT 72 F 0.974
API GRAVITY : 0.0
FLAMMABILITY : NO FLASH AT 142 F BY SETAFLASH
RADIOACTIVITY: N.D.
PCB : N.D. < PPM

FUEL EVALUATION (WT%): TOTAL SAMPLE
HEAT CONTENT: 11300 BTU/LB
HALOGENS:
ASH: < 0.1 %
CHLORINE: < 0.1 %
BROMINE: < 0.1 %
FLUORINE: < 0.1 %
SULFUR: 0.1 %
PHOSPHORUS:

VOLATILE ORGANIC COMPOSITION: TOTAL SAMPLE BY FID UNITS: WEIGHT %
ONLY TRACE VOLATILE ORGANICS DETECTED 100.0 0.0

SUMMARY:	ALCOHOLS	0.0	KETONES	0.0	CHLORINATED SOLVENTS	0.0
	ESTERS	0.0	ALIPHATIC HYDROCARBONS	0.0	AROMATIC HYDROCARBONS	0.0
	NITROGEN COMPOUNDS	0.0	GLYCOL ETHERS	0.0	ETHERS	0.0
	INHIBITORS	0.0	OTHERS	100.0	MISCELLANEOUS	0.0

ADDITIONAL ANALYTICAL INFO: NVR OIL.

ATTACHMENT B14

SAFETY-KLEEN®
777 BIG TIMBER ROAD • ELGIN, ILLINOIS 60123

DUNS NO. 05106-0408
FED. ID NO. 39-6090019

GENERATOR/LOCATION

NAME: RUSSELL STANDARD CORP
DELIVERY ADDRESS: STATE ST AND RIVER RD
INFORMATION/ATTENTION LINE:
CITY & STATE: CAMDEN NJ
ZIP: 08105
TAX CODE:
USA EPA ID NO.: NJD980787929
STATE ID NO.:

BILL TO (IF DIFFERENT FROM LOCATION)

NAME:
DELIVERY ADDRESS:
INFORMATION/ATTENTION LINE:
CITY & STATE:
ZIP:
TAX CODE:

CUSTOMER NO.

DATE PLACED	SERIAL NO.	BRANCH	TYPE OF OUTLET
7/3/89	020-88888	2-139-04	09

PLACEMENT INFORMATION

SALES REP. NO.	BLITZ CODE	PROD. TAX %	CHAIN	SVC P/S	PROD. P/S

SERVICE INTERVAL (WEEKS)	CUSTOMER'S P.O. NUMBER	SALES TAX EXEMPTION NO.	GENERATOR/CUSTOMER TELEPHONE NUMBER AREA CODE	SPECIAL HANDLING	CREDIT CODE
04	☐ BLANKET ☐ TEMPORARY		609-541-2376		

SERVICE ESTIMATE

WASTE DESCRIPTION	DRUMS/YEAR	COST/DRUM
ANTIFREEZE / OIL	2	AS PER
ANTIFREEZE / OIL / SLUDGE	2	ANALYSIS

The Service Estimate on this Placement Form is based on the Customer's description of its waste materials. The estimate is not binding upon Safety-Kleen Corp. and is subject to change by Safety-Kleen Corp. Upon Safety-Kleen Corp.'s completion of its analysis of the Customer's waste materials, Safety-Kleen Corp. will deliver to the Customer its Waste Handling Agreement with a firm and binding service fee.

X Wm Larkins
SALES REPRESENTATIVE

PRODUCT SALES SECTION

PRODUCT NUMBER	DESCRIPTION	FEE	UNIT OF MEASURE	QUANTITY DELIVERED	TOTAL FEE	TAX	LINE TOTAL
82100	SAMPLE ANALYSIS	295.00	EA	2	590.00	—	590.00

PAYMENT RECEIVED SECTION

CASH ☐ CHECK NUMBER	TOTAL RECEIVED	APPLY PAYMENT TO:
		☐ TODAY'S SERVICE/SALE ☐ PREVIOUS BALANCE AS FOLLOWS

INV. # _____ AMOUNT $ _____
INV. # _____ AMOUNT $ _____
INV. # _____ AMOUNT $ _____

TOTAL SAMPLE FEE (INCLUDING TAX) $ 590.00

CHARGE MY ACCOUNT FOR THIS TRANSACTION UNLESS OTHERWISE INDICATED IN THE PAYMENT RECEIVED SECTION. ALSO, I HAVE NOTED THE PRESENCE OF ADDITIONAL TERMS AND CONDITIONS ON THE REVERSE SIDE.

X [signature]
GENERATOR/CUSTOMER SIGNATURE

PLEASE SEE REVERSE SIDE FOR ADDITIONAL TERMS AND CONDITIONS

ATTACHMENT B15

BRANCH	ENVIROSYSTEMS
☒ FRS ☐ DC	☐ FUEL
☐ PC ☐ PR	☐ RECYCLE
☐ IC ☐ QC	☐ TOLLING
☐ BRESLUBE	☐ QC
OTHER	

safety-kleen®

MATERIAL SURVEY

SK USE ONLY
SK Control No: _____
Date Received: _____

A. Company Name Russell Stanley Corp
EPA ID No. (Federal) NJ0980128219
County Camden

Billing Address
Street State St & River Rd
City Camden State NJ Zip 08105

Facility Address
Street _____
City _____ State _____ Zip _____

Nature of Business Manufacture Poly Containers
S.I.C. Number _____
State ID Numbers: Illinois ID _____ Missouri ID _____ State _____ ID _____
Manifest Address: ☒ Billing Address ☐ Facility Address Manifest to: ☐ Safety-Kleen ☐ Other _____

B. Material Description Waste Antifreeze, Oil
Process Description Machine Coolant
Volume (gal.) 55 / ☐ Wk ☐ Mth ☒ Qtr ☐ Yr ☐ Once
Volume on Hand (gal.) 400
Storage Capacity (gal.) 1,000 In ☒ Drums ☐ Bulk
Shipping Frequency Quarter In ☒ Drums ☐ Bulk

C. Physical Description Color Tan / Clear
Layers ☐ One ☒ Two ☐ Three
Physical State ☒ Liquid ☐ Semisolid ☐ Solid
Liquid Viscosity ☒ Low ☐ Medium ☐ High

D. Material Composition (vol%)

	Min	Max	Typical
~~Antifreeze~~			
Oil			80
Water			20
Non-volatile Material			
Settled Solids			

E. Attach material safety data sheets for material components requiring employee communication under OSHA (Ref. 29 CFR 1910.1200).
Attach any current analysis of the material. ☐ MSDS attached ☐ Analysis attached ☒ No attachments

F. Check all of the following substances which may be in the material.

	Identify if present	Amount	Units
☐ DOT Corrosives, Poisons, Forbiddens, Radioactives, Explosives, or Gases.			
☐ TSCA regulated materials (PCB, PBB, Chlorinated dibenzodioxins or furans).			
☐ Materials used exclusively as pesticides, herbicides, insecticides, etc.			
☐ OSHA carcinogens above exclusion levels (Ref. 29 CFR 1910.1001-).			
☐ Toxic components with OSHA PEL or ACGIH TLV less than 2 ppm or 8 mg/m³.			
☐ Toxic metals (Arsenic, Beryllium, Cadmium, Mercury, Selenium).			
☐ Reactive components (Sulfides, Cyanides, Shock Sensitives, Pyrophorics, etc.).			
☐ Water reactive components (Isocyanates, Acid Chlorides, Anhydrides, etc.).			
☐ Biological hazards (Pathogenics, Infectious agents, Etiologic agents, etc.).			

☒ **None of the above** ☐ Special Handling Required _____

G. DOT Hazardous Material Description (Ref. 49 CFR 172.101)
Proper Shipping Name _____
Hazard Class _____ Number _____
☐ Not DOT Hazardous Material ☒ Need assistance to determine

H. EPA Hazardous Waste Description (Ref. 40 CFR 261)
Waste Number(s) ☐ D001 ☐ D002 ☐ F001 ☐ F002 ☐ F003 ☐ F004 ☐ F005 _____
Hazard Code(s) ☐ I ☐ T ☐ C ☐ R ☐ E ☐ H
☐ Not EPA Hazardous Waste ☒ Need assistance to determine

I. Safety-Kleen requires a sample and charges a fee for the qualification of all new material. Purchase Order No. _____
Type of sample: ☐ grab ☐ tank ☒ composite of 60 #drums Sample taken by ☐ Customer ☒ Safety-Kleen Representative

J. To the best of my knowledge, this is an accurate material description and the sample submitted is representative of the material.

Name Charles Morelli Title Plant Mgr
Signature Charles Morelli Date 7/3/89 Phone (609) 541-2376

Comments _____

Sales Representative Name Wm. Larkins Representative # _____ Branch # 2-139-04

FORM 200.08.10 CUSTOMER 37572 REV. 2-2-88 ATTACHMENT B16

BRANCH	ENVIROSYSTEMS
[X] FRS [ ] DC	[ ] FUEL
[ ] PC [ ] PR	[ ] RECYCLE
[ ] IC [ ] QC	[ ] TOLLING
[ ] BRESLUBE	[ ] QC
OTHER	

safety-kleen®

MATERIAL SURVEY

SK USE ONLY
SK Control No: _____
Date Received: _____

A. Company Name Russell-Stanley Corp. EPA ID No. (Federal) NJD 780 789 129 County Camden

Billing Address
Street State St & River Rd
City Camden State NJ Zip 08105

Facility Address
Street _____
City _____ State _____ Zip _____

Nature of Business Manufacture of Poly Containers S.I.C. Number _____

State ID Numbers: Illinois ID _____ Missouri ID _____ State _____ ID _____

Manifest Address: [X] Billing Address [ ] Facility Address Manifest to: [ ] Safety-Kleen [ ] Other _____

B. Material Description Waste Antifreeze Oil Sludge

Process Description Machine Cooling, Lubrication

Volume (gal.) 55 / [ ] Wk [ ] Mth [X] Qtr [ ] Yr [ ] Once

Volume on Hand (gal.) 300

Storage Capacity (gal.) 1000 In [X] Drums [ ] Bulk

Shipping Frequency Quarter In [X] Drums [ ] Bulk

C. Physical Description Color Tan/Clear

Layers [ ] One [X] Two [ ] Three

Physical State [X] Liquid [ ] Semisolid [ ] Solid

Liquid Viscosity [X] Low [ ] Medium [ ] High

D. Material Composition (vol%)

	Min	Max	Typical
~~Antifreeze~~			
Oil			70
Water			
Non-volatile Material			30
Settled Solids			

E. Attach material safety data sheets for material components requiring employee communication under OSHA (Ref. 29 CFR 1910.1200). Attach any current analysis of the material. [ ] MSDS attached [ ] Analysis attached [X] No attachments

F. Check all of the following substances which may be in the material.

	Identify if present	Amount	Units
[ ] DOT Corrosives, Poisons, Forbiddens, Radioactives, Explosives, or Gases.			
[ ] TSCA regulated materials (PCB, PBB, Chlorinated dibenzodioxins or furans).			
[ ] Materials used exclusively as pesticides, herbicides, insecticides, etc.			
[ ] OSHA carcinogens above exclusion levels (Ref. 29 CFR 1910.1001-).			
[ ] Toxic components with OSHA PEL or ACGIH TLV less than 2 ppm or 8 mg/m³.			
[ ] Toxic metals (Arsenic, Beryllium, Cadmium, Mercury, Selenium).			
[ ] Reactive components (Sulfides, Cyanides, Shock Sensitives, Pyrophorics, etc.).			
[ ] Water reactive components (Isocyanates, Acid Chlorides, Anhydrides, etc.).			
[ ] Biological hazards (Pathogenics, Infectious agents, Etiologic agents, etc.).			

[X] **None of the above** [ ] Special Handling Required _____

G. DOT Hazardous Material Description (Ref. 49 CFR 172.101)

Proper Shipping Name _____

Hazard Class _____ Number _____

[ ] Not DOT Hazardous Material [X] Need assistance to determine

H. EPA Hazardous Waste Description (Ref. 40 CFR 261)

Waste Number(s) [ ] D001 [ ] D002 [ ] F001 [ ] F002 [ ] F003 [ ] F004 [ ] F005

Hazard Code(s) [ ] I [ ] T [ ] C [ ] R [ ] E [ ] H

[ ] Not EPA Hazardous Waste [X] Need assistance to determine

I. Safety-Kleen requires a sample and charges a fee for the qualification of all new material. Purchase Order No. _____

Type of sample: [ ] grab [ ] tank [X] composite of 6 #drums Sample taken by [ ] Customer [X] Safety-Kleen Representative

J. To the best of my knowledge, this is an accurate material description and the sample submitted is representative of the material.

Name Charles Morelli Title Plant Mgr

Signature [signature] Date 7/3/89 Phone (609) 541-2376

Comments _____

Sales Representative Name Wm Larkins Representative # _____ Branch # 2-139-04

FORM 200 08-10 CUSTOMER 37572 REV 2-2-88 ATTACHMENT B17

STATE OF NEW JERSEY
DEPARTMENT OF LAW AND PUBLIC SAFETY
DIVISION OF LAW

MEMORANDUM

DATE: September 21, 1987

TO: Gerard Burke
Director, Office of Regulatory Services

FROM: Francine Schott
Deputy Attorney General

SUBJECT: Russell Stanley v. Plant and Act

SEP 23 1987

(PRIVELEGED AND CONFIDENTIAL)

The purpose of this memo is to inquire as to the DEP's wishes with respect to a procedural matter which has arisen in the above-captioned case. Specifically, the Department has been given until October 1, 1987 to decide whether it wishes to intervene in a pending federal action. The federal action will determine rights with respect to the proceeds from two promissory notes given as part of the purchase price for assets located in California. The California asset purchase was related to another asset purchase transaction in New Jersey. With reference to the New Jersey purchase ECRA compliance was required but not achieved.

Prior to the enactment of ECRA, Russell Stanley Corporation agreed to purchase the assets of a business operated by a company known as Advanced Chemical Technology (ACT) located in Camden, New Jersey. ACT was a lessee of the premises. The premises were and are owned by Camden Properties, Inc. The closing on the Camden asset purchase agreement was held on February 24, 1984. At the closing an escrow account was created from sale proceeds, in the amount of $50,000, for purposes of funding the potential costs of any ECRA mandated cleanup. The parent corporation of ACT, Plant Industries (Plant) is a signator to that asset purchase agreement. Pursuant to that agreement Plant and ACT agreed to indemnify the buyer (Russell Stanley) against any and all liabilities arising out of the transaction. The principal of Plant and ACT appears to be an individual named Robert Bregman. The purchase price of $1.3 dollars for the Camden assets was paid by Russell Stanley with no promissory notes being given to purchase those assets.

Some two months after the closing on the sale of the New Jersey assets Russell Stanley West (a company related to Russell Stanley) purchased other assets of ACT located in the City of Industry, California. The purchase price for the assets located in California was $4.5 dollars. The purchase price for the California assets was paid by Russell Stanley West, in part, by the giving of two promissory notes. One note is in the face amount of $500,000. The other is in the face amount of $250,000. The $250,000 note contained a provision allowing Russell Stanley West a set off

ATTACHMENT C1

against the note for any of ACT's debts which Russell Stanley might be called upon to answer.

Russell Stanley and Russell Stanley West commenced suit in March of 1985 against Plant and ACT when it appeared that Plant and ACT had ceased to continue to undertake compliance with ECRA. The Russell Stanley corporations sought, among other things, the right to set off against both notes such amounts as would be necessary for ECRA compliance. At the same time Russell Stanley also sued the DEP to force DEP to take enforcement action against Plant and/or ACT. In a precursor to the Superior Air decision, the complaint against DEP was dismissed for failure to state a claim. On April 8, 1986, DEP filed a complaint in intervention against Plant, ACT and Robert Bregman seeking compliance with ECRA.

Prior to our intervention as a plaintiff, Russell Stanley persuaded the Court to create an escrow of the sums due on the two promissory notes given in connection with the California purchase. My review of the file indicates that the Court was persuaded to do so based on Russell Stanley's representations that a fund should be created for purposes of effectuating the ECRA cleanup, as well as to satisfy various ACT and Plant obligations that Russell Stanley was being called upon to answer. Just prior to the Court ordering the creation of the escrow, Marine Midland Bank notified Russell Stanley that somehow Marine Midland had come into possession of the notes. The notes became due and payable in September of 1985. The notification by Marine Midland to Russell Stanley of Marine's possession of the notes came sometime just prior to January 1986 when the court order creating the escrow was entered. Despite numerous previous motions by Russell Stanley to take a set-off against the notes, Plant and ACT had not previously notified the court of any assignment of the note. (The plot thickens!)

Subsequently, Plant, ACT and Bregman hired new counsel (Shanley and Fisher), who made a motion for reconsideration of the order creating the escrow. Plant and ACT also moved to have the complaint against Plant dismissed, claiming that Plant was not a responsible entity under ECRA. We opposed the motion arguing that the relationship between Plant and ACT was at least prima facia so interconnected that it was possible that piercing the corporate veil would be necessary and appropriate. The Court agreed and refused to grant Plant's summary judgment motion. The Court also refused to reconsider its earlier decision concerning the escrowed funds.

To keep things interesting Plant and ACT filed bankruptcy in June 1987 in Massachusetts. Bregman has not filed. Because two lawsuits in two different courts are not sufficient, Marine Midland filed a lawsuit in federal court in New Jersey against Russell Stanley seeking to collect on the two promissory notes. Marine Midland claimed to be a holder in due course of the notes.

ATTACHMENT Ca

34

SPECIAL LEASE—Adopted by the Camden County Board of Realtors. (121) S. Chew & Sons Co., Inc. Law Legal Blanks, Camden, N. J. 08101

This Indenture, MADE THIS

15th day of February A. D. Nineteen Hundred and Seventy-four

Between CAMDEN PROPERTIES, INC., a New Jersey corporation

hereinafter called Lessor, of the one part, and

ADVANCED CHEMICAL TECHNOLOGY, a California corporation

hereinafter called Lessee, of the other part,

Witnesseth, that the Lessor hath let and by these presents doth grant, demise and to farm let unto the said Lessee all that CERTAIN rear portion of the main building at the Southeasterly side of River Road and State Street, Camden, New Jersey, containing approximately 25,600 square feet of space delineated by red outline on the sketch attached hereto and made a part hereof, being a part of the entire premises at the said Southeasterly corner of River Road and State Street, Camden, New Jersey, more particularly described in deed from RCA Corporation (formerly Radio Corporation of America) to Camden Properties, Inc., dated December 14, 1970, recorded in the Register of Deeds office of Camden County on December 14, 1970, in book 3176 of deeds, pages 1189&c.

with the appurtenances, for the term of Four Years and Eleven Months from the ~~first~~ fifteenth (15th) mk day of March A. D. Nineteen Hundred and Seventy-four for the total rent or sum of One Hundred Fifty-Seven Thousand Two Hundred Thirty-five ($157,235.00) Dollars payable in equal monthly installments of $2,665.00 per month on the ~~xxxxx~~ fifteenth day of each and every month in advance, together with other items of rental during the said term, or any renewal thereof, which the Lessee hereby covenants to pay without demand ~~at~~ to Ellis Goodman & Co., 427 Market Street, Camden, New Jersey or at such other place as Lessor may from time to time direct. Rent to begin from the ~~1st~~ 15th day of March, 1974 and first payment thereof to be made upon the execution of this lease.

It is hereby expressly covenanted and agreed between Lessor and Lessee as follows:

FIRST. That Lessee will not assign this lease nor sub-let the said premises or any part thereof, and will use and occupy the same, ~~xxxx~~ for the manufacture of plastic products and for no other purpose without the written consent of Lessor first had and obtained. It being agreed that any, levy or sale or execution or other legal process against Lessee or any assignment or sale in bankruptcy, or appointment of a receiver or insolvency of Lessee, may at the option of the Lessor, be deemed and taken to be an assignment within the meaning of this lease.

SECOND. Lessee shall pay the rent hereby reserved on the days and times and at the place hereinbefore mentioned, and shall keep, and at the expiration or prior termination of this lease, peaceably deliver up the premises, free from any and all rubbish, ashes, dirt and other refuse matter, in the like good order and condition as they now are, ordinary wear and tear and casualties by accidental fire alone excepted.

THIRD. Lessee will not do or cause or suffer to be done any act or thing contrary to the conditions or stipulations of the policy or policies of insurance which are now or may hereafter be placed on the demised premises or any part thereof, or on the building or any part thereof of which the said premises may be a part, or whereby said policy or policies shall become void or suspended, or whereby the insurance rate on said premises or any part thereof or on the building or any part thereof of which said premises may be a part, shall be rendered higher than at the date of execution of this lease or the date of the Lessee taking possession hereunder, should that be after the date of execution hereof. In case of the breach of this covenant (in addition to all other remedies given to Lessor in case of a breach of any of the conditions or covenants of this lease), Lessee agrees that Lessee will pay to Lessor as rent any and all increase or increases of premiums on all the insurance which shall be carried by owner for the whole of the premises, whether this lease covers same or only a part thereof caused by reason of such breach as soon as Lessee is given notice thereof by Lessor. In case the nature of Lessee's occupancy of the demised premises or the trade or occupation pursued by Lessee in said demised premises as herein provided, shall cause an increase or increases in the insurance rate now existing on said demised premises or any part thereof, or on the building or any part thereof of which the said premises may be a part, Lessee agrees that Lessee will pay to Lessor as additional rents all increased premium thereby resulting, immediately upon demand.

ATTACHMENT D

Charlie FYI - Carl

DIVISION OF WASTE MANAGEMENT

INVESTIGATION

Case # 84-11-30-035

Inspector: J.D. MANUEL Date: 1-9-85 Time: —

Business Name: A.C.T. DRUM CO. / Camden Properties Telephone No.: _____
(Responsible Party)

Business Location: River Rd & State St., Camden

INCIDENT LOCATION

Street: River Rd. & State St.

Town: Camden City

County: Camden

Lot: 2 Block: 1241 Type Ownership: corporate - rental

Local Health Department Representative Contacted: Dave Sweeney

Date: 12-7-84 Time: 11:35 Affiliation: C.C.H.D.

Origin of Complaint: Julie Gandy (609) 767-7235

Complaint: Waste Oil behind building; 4-5' deep

Findings: This is a composite report of all information obtained on this case to date. Upon assignment to the case, I made many attempts to contact Julie Gandy (complainant) with no success. Mr. Sweeney, of C.C.H.D. also tried to contact Ms. Gandy with no success. An inspection of the site was conducted on 12-10-84 at 13:45 hours. The entire property was generally a mess, with debris and old trucks strewn about. Proceeding to the rear of the building, I noticed a railroad siding along a loading dock; this area was saturated with a black oil-like substance, in some areas this was puddled. There is a sump or drain in the bottom of the siding. An oily substance seemed to be flowing from the building, across the loading dock and down onto the ground.

ATTACHMENT E1

INVESTIGATIVE REPORT
NARRATIVE

BUSINESS NAME ACT Drum Co. / Camden Properties Inc. **DATE** 1-9-85
LOCATION River Rd & State St.; Camden **TIME** —
CASE NUMBER 84-11-30-035

I then proceeded to the back of the property, where the railroad passed through a chain link fence. This area was also saturated and very damp with an oil-like substance.

At this time, I entered the ACT Drum Co. and spoke with Charles Morrelli, the manager. Mr. Morrelli stated that he did not know anything about the oil-like material. I questioned him as to who owned the property - he stated that they rented their space and their contact was Mr. Robert Kaplan (215) 925-1191. Morrelli stated that he had not been at that location very long (since last Feb.). At this time, I secured from the site.

On 12-11-84, at 14:00, I spoke to Mr. Kaplan by phone - he stated that he knew nothing about any saturated ground and seemed very evasive. He informed me that the former owner was RCA and that they left about 10-15 years ago. I informed Mr. Kaplan that there was a problem on the property and that I would set-up a date to meet him on site and call him back. At 14:40, I called Kaplan back - at this time he stated that he represented the company that owned the property, Camden Properties, Inc.; he also stated that any problem we had would have to be dealt with by the tenant. I informed him that another investigator and I would be at the site on Dec. 21 to meet with him or a representative of his firm, but Kaplan gave no indication that anyone would attend. I also notified Dave Sweeney (CCHD) of the meeting on 12-21-84.

On 12-14-84, I called Kaplan again - he stated that he was about to leave on vacation and would not attend meeting; he referred me to Mr. George Weimoth (609) 964-0680.

James D. Manner
INSPECTOR

ATTACHMENT E2

INVESTIGATIVE REPORT
NARRATIVE

BUSINESS NAME ACT Drum Co. / Camden Properties, Inc. **DATE** 1-9-85

LOCATION River Rd. + State St., Camden **TIME** —

CASE NUMBER 84-11-30-035

I called Mr. Weimoth's number on 12-20-84 at 09:00; the phone was answered by a secretary who identified the office as a "law office" - she stated that Weimoth was not available and would not return my call because he was going on vacation.

Mr. Sweeney (C.C.H.D.) called on 12-20-84. to inform me that he had checked tax records; Camden Properties bought the site on 12-14-70 and that the previous owner was RCA, since 1942.

On 12-21-84, Mike Tompkins and I arrived on site. We looked at the contaminated areas, then proceeded inside to speak to Mr. Morelli. Morelli stated at this time, that ACT was the former owner of the drum company and that his outfit had bought them out. He identified the company owner as Stanley Bey. Mike and I requested a tour of the facility and this was conducted by Morelli. One large machine, near the loading dock door appeared to have leaked a hydraulic fluid onto the floor, which flowed out under the door and onto the loading dock. A room in back was observed to contain many open top drums containing hydraulic fluid or oil - this room had floor drains. Mr. Tompkins and I informed Morelli that the discharge from his machine was flowing onto the ground and that we would want him to construct some type of containment to prevent this. We also requested the building plans which show the floor drainage system. Morelli was informed that the contaminated soil would have to be cleaned-up - an N.O.V. was issued citing NJSA 58:10-23.11 c + e and addressed to Stanley Bey through Charles Morelli.

No further action on this case due to ECRA involvement.

James D. Manuel

ATTACHMENT E3

WM-008 B

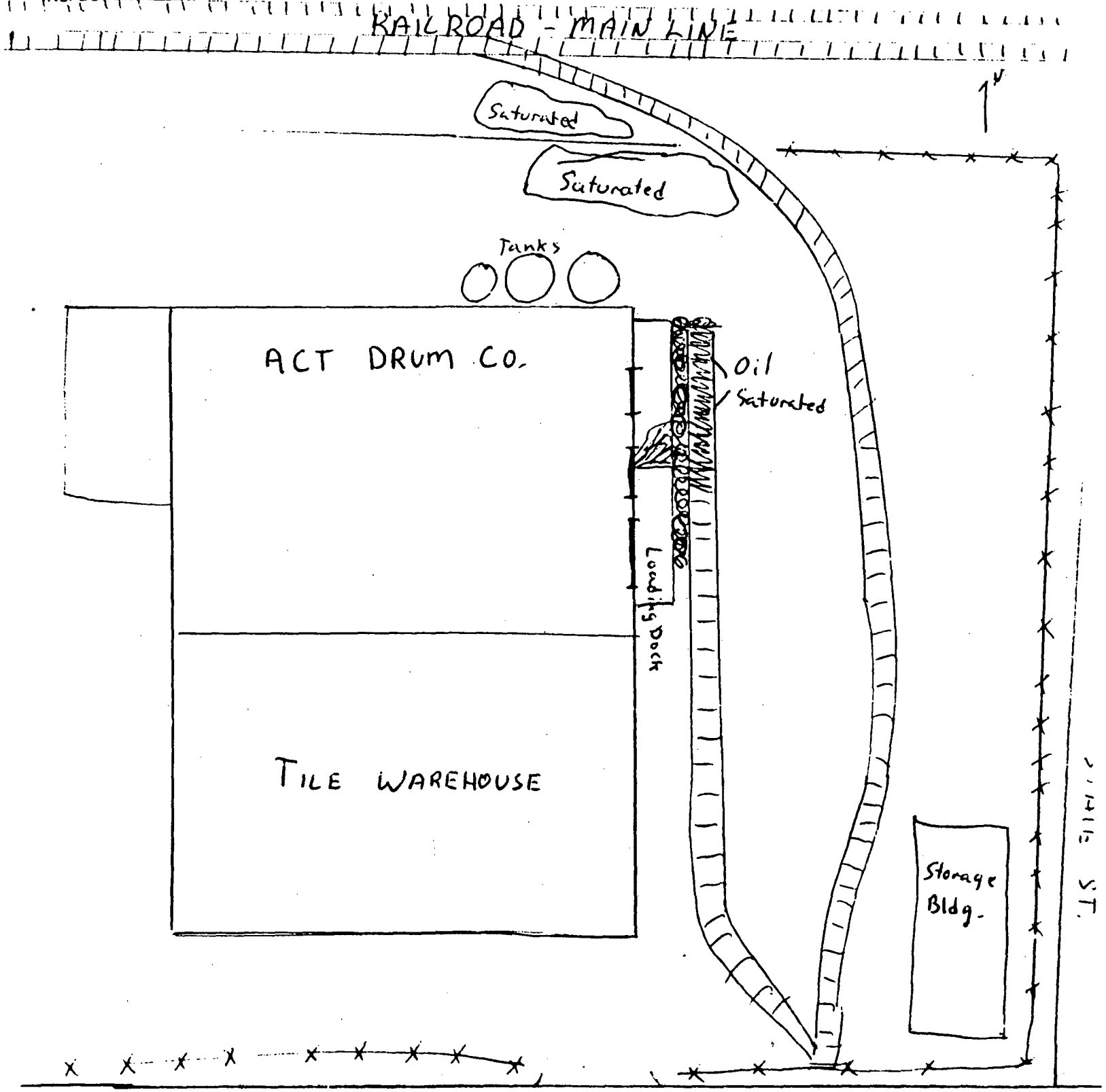
NEW J[illegible]Y DEPARTMENT OF ENVIRONMENTAL [illegible]ECTION
DIVISION OF WASTE MANAGEMENT

INSPECTION REPORT

SKETCH

NAME OF FACILITY A.C.T. DRUM Co. / Camden Properties, Inc. DATE 12-10-84

INSPECTOR, J. D. MANUEL DEP-DWM



RIVER RD. ATTACHMENT E4

(4)

CN 028
Trenton, N.J. 08625-0028

(609)633-7141

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State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF HAZARDOUS WASTE MANAGEMENT

Michele M. Putnam
Deputy Director
Hazardous Waste Operations

John J. Trela, Ph.D., Director

Lance R. Miller
Deputy Director
Responsible Party Remedial Action

IN THE MATTER OF : ADMINISTRATIVE
RUSSELL-STANLEY EAST, INC. : CONSENT ORDER
AND RUSSELL-STANLEY CORPORATION
ECRA CASE #'s 89375 and 89376

The following FINDINGS are made and ORDER is issued pursuant to the authority vested in the Commissioner of the New Jersey Department of Environmental Protection (hereinafter "NJDEP") by N.J.S.A. 13:1D-1 et seq. and the Environmental Cleanup Responsibility Act, N.J.S.A. 13:1K-6 et seq., and duly delegated to the Assistant Director for the Industrial Site Evaluation Element within the Division of Hazardous Waste Management pursuant to N.J.S.A. 13:1B-4.

FINDINGS

1. The Environmental Cleanup Responsibility Act, N.J.S.A. 13:1K-6 et seq. ("ECRA" or "the Act"), was signed into New Jersey state law by Governor Thomas H. Kean on September 2, 1983, and took effect on December 31, 1983.

2. ECRA required the NJDEP to adopt rules and regulations to implement the Act. On December 21, 1987, NJDEP adopted the Final ECRA Regulations, N.J.A.C. 7:26B ("Regulations") in compliance with the Administrative Procedure Act, N.J.S.A. 52:14B-1 et seq., upon acceptance for filing by the Office of Administrative Law pursuant to N.J.A.C. 1:30-4.4(d). On January 1, 1988, the Regulations became effective and concurrently repealed N.J.A.C. 7:1-3, the Interim ECRA Regulations.

3. ECRA requires that the owner or operator of an industrial establishment planning to sell or close or transfer operations (a) notify the NJDEP in writing within five (5) days of the execution of the agreement of sale or public release of its decision to close pursuant to N.J.A.C. 7:26B-1.6, (b) submit within sixty (60) days prior to transfer of title or closing operations, a Negative Declaration or Cleanup Plan to the NJDEP for approval, and (c) obtain, upon approval of any necessary Cleanup Plan by the NJDEP, a surety bond or other financial security approved by the NJDEP guaranteeing performance of the Cleanup Plan in an amount equal to the cost estimate for the approved Cleanup Plan.

4. N.J.S.A. 13:1K-13 provides that failure to submit a Negative Declaration or Cleanup Plan pursuant to ECRA is grounds for voiding the sale by NJDEP. Any person who knowingly gives or causes to be given any false information or who fails to comply with the provisions of

ATTACHMENT F1

ECRA is liable for a penalty of not more than $25,000.00 for each occurrence, and each day of a violation of a continuing nature constitutes an additional and separate offense as specified in N.J.A.C. 7:26B-9.3. Furthermore, any officer or management official of an industrial establishment who knowingly directs or authorizes the violation of any provisions of the Act shall be personally liable for the $25,000.00 penalties for each violation described above.

5. On May 17, 1989, Russell-Stanley East, Inc. ("Ordered Party"), submitted to NJDEP an application for an Administrative Consent Order ("ACO") pursuant to N.J.A.C. 7:26B-7.2. The ACO application is incorporated herein by reference and includes the following information:

A. Industrial Establishments: See Attachment A

B. Transaction:

Seller: Russell-Stanley Corporation, a New Jersey Corporation
Buyers: Vestar/R-S Holdings Corporation, a Delaware Corporation

Description:

On May 11, 1989, the majority shareholders of Russell-Stanley Corporation, the parent corporation of Russell-Stanley East, Inc., entered into an agreement to sell the stock of Russell-Stanley Corporation to Vestar/R-S Holdings Corporation. Russell-Stanley East, Inc., will continue to operate at the Woodbridge and Camden facilities.

6. The Transaction described in Paragraph 5.B. above is the sale, transfer and/or closing of Industrial Establishments as defined by ECRA and the Regulations. NJDEP and the Ordered Party(ies) expressly agree that the Transaction is subject to ECRA and the Regulations. The Ordered Party(ies) has requested that NJDEP prepare an ACO which, when effective, will allow the Transaction to be consummated prior to the completion of all administrative requirements.

7. In circumstances as referenced in N.J.A.C. 7:26B-7.1(a) through 10, NJDEP, in its discretion, may enter into an ACO so that the closing, terminating or trasferring of operations may occur prior to completing the ECRA obligations. The ACO specifies a time schedule for completion of ECRA requirements by the Ordered Party(ies) and provides for financial assurance in a form and amount acceptable to NJDEP prior to consummation of any transactions subject to ECRA. Failure to fully comply with all the terms and conditions of the ACO shall subject the Ordered Party(ies) to the full range of penalties and remedies prescribed in the Act, the Regulations, specifically N.J.A.C. 7:26B-9.3 and the ACO.

ORDER

NOW, THEREFORE, IT IS ORDERED AND AGREED THAT:

8. NJDEP and the Ordered Party(ies) expressly agree that the terms and conditions of this ACO, including the financial assurance requirements,

ATTACHMENT F2

set forth in Paragraphs 9, 10, 11, and 17 below, shall apply separately to each of the Ordered Party(ies) facilities. Furthermore, NJDEP and the Ordered Party(ies) agree to administer and complete all applicable ECRA program requirements, including exercise of the financial assurance requirements and any other remedial measures pursuant to the ACO and ECRA, separately for each subject Industrial Establishment.

9. ECRA Program Requirements for the Ordered Party(ies) Facilities

A. The Ordered Party(ies) shall complete the Initial Notice (commonly referred to as ECRA I and ECRA II) for each subject Industrial Establishment required by N.J.A.C. 7:26B-3 within thirty (30) days from the effective date of this ACO.

B. Within one hundred twenty (120) days from receipt of NJDEP's written approval of the Sampling Plan(s) prepared pursuant to N.J.A.C. 7:26B-3.2(b)11 and N.J.A.C. 7:26B-4.2, the Ordered Party(ies) shall initiate, complete, and submit to NJDEP the results from any NJDEP-approved Sampling Plan(s) including, but not limited to, complete delineation of environmental contamination on-site, and any off-site environmental contamination resulting from discharges of hazardous wastes or substances on or from the Industrial Establishment. These results shall be accompanied by a proposed negative declaration, cleanup plan or revised sampling plan pursuant to 7:26B-4.3. Any negative declaration or cleanup plan submitted to NJDEP shall conform to 7:26B-5.

C. NJDEP and the Ordered Party(ies) recognize that additional sampling may be necessary during the various stages of the implementation of this ACO and ECRA, including during the implementation of a Cleanup Plan(s), at any of the subject Industrial Establishments to delineate fully the nature and extent of environmental contamination on-site, and any off-site environmental contamination resulting from discharges of hazardous substances or wastes on or from any of the subject Industrial Establishments. Therefore, the Ordered Party(ies) agrees to submit any additional sampling plans for NJDEP review and approval required by NJDEP in writing during the various stages of the implementation of this ACO and ECRA, including during the implementation of a Cleanup Plan(s), to further delineate the nature and extent of environmental contamination on or from any of the subject Industrial Establishments. NJDEP and the Ordered Party(ies) mutually agree that the Ordered Party(ies) shall submit to NJDEP any required additional sampling plans for review and approval within thirty (30) days of the receipt of said written request. Within ninety (90) days from receipt of NJDEP's written approval of any additional sampling plans(s), the Ordered Party(ies) shall initiate, complete and submit to NJDEP the results from any additional NJDEP-approved Sampling Plan(s) required pursuant to this paragraph accompanied by a proposed negative declaration, cleanup plan, or revised sampling plan pursuant to N.J.A.C. 7:26B-4.3.

ATTACHMENT F3

D. The Ordered Party(ies) shall implement any NJDEP-approved Cleanup Plan(s) in accordance with the approved time schedule or defer implementation of all or part of the Cleanup Plan(s) subject to NJDEP approval pursuant to N.J.A.C. 7:26B-5.5.

E. Should NJDEP determine that any submittal made under Paragraph 9 of this ACO is inadequate or incomplete, then NJDEP shall provide the Ordered Party(ies) with written notification of the deficiency(ies), and the Ordered Party(ies) shall revise and resubmit the required information within a reasonable period of time not to exceed thirty (30) days from receipt of such notification.

F. All submissions required pursuant to Paragraph 9 or any other provision of this ACO shall be accompanied by all appropriate fees required pursuant N.J.A.C. 7:26B-1.10.

10. Conditions for Financial Assurance

A. The Ordered Party(ies) shall obtain and provide to NJDEP separate financial assurances in forms acceptable to NJDEP for each subject Industrial Establishment in the amounts specified in Attachment A. The financial assurances must conform with the requirements of N.J.S.A. 13:1K-9(b)3, N.J.A.C. 7:26B-6 and this ACO. These financial assurances shall be submitted to NJDEP along with a fully executed ACO pursuant to Paragraph 17.A of this ACO.

B. The Ordered Party(ies) shall establish and submit to NJDEP for each subject Industrial Establishment separate standby trust funds pursuant to N.J.A.C. 7:26B-6.7 within five (5) calendar days from the effective date of this ACO. The financial institution(s) which issues the financial assurance(s) shall agree to promptly and directly deposit all amounts up to the total value of the financial assurance(s) into the standby trust fund(s) upon demand by NJDEP.

C. Upon NJDEP approval of a Cleanup Plan(s) for any of the subject Industrial Establishments, the Ordered Party(ies) shall amend the amount of the financial assurance(s), specified in Attachment A for any or all of the Ordered Party(ies')'s facilities as the case may be, to equal the estimated cost of implementation of the approved Cleanup Plan(s), or shall provide such other financial assurance(s) as may be approved by NJDEP in an amount(s) equal to the estimated cost of implementation of the approved Cleanup Plan(s).

D. In the event that NJDEP determines that the Ordered Party(ies) has failed to perform any of its obligations under this ACO or ECRA, at any of the Ordered Party(ies')'s facilities, NJDEP may draw on the financial assurance(s) for that subject Industrial Establishment(s); provided, however, that before any such demand is made, NJDEP shall notify the Ordered Party(ies) in writing of the obligation(s) with which it has not complied, and the Ordered Party(ies) shall have reasonable time, not to exceed fourteen (14)

ATTACHMENT F4

days, to perform such obligation(s) to NJDEP's satisfaction. Nothing in this paragraph shall prevent NJDEP from collecting stipulated penalties pursuant to the terms of this ACO for cause.

E. Upon NJDEP's written approval of a Negative Declaration(s), the Ordered Party(ies) shall be relieved of any further obligation to maintain in full force and effect the financial assurance(s) required by this ACO for the facility(ies) which is the subject of the NJDEP-approved Negative Declaration(s). Upon NJDEP's written approval of the completion of any cleanup(s) required by this ACO, as verified by final site inspection(s) pursuant to N.J.A.C. 7:26B-5.7, and upon the Ordered Party(ies')'s satisfaction of all financial obligations in connection therewith, the Ordered Party(ies) shall be relieved of any further obligation to maintain in full force and effect the financial assurance(s) required by this ACO for the facility(ies) at which the approved cleanup(s) has been completed.

11. Additional Conditions of Consent

A. The Ordered Party(ies) shall allow NJDEP access to each subject Industrial Establishment(s) pursuant to N.J.A.C. 7:26B-1.12 for the purpose of undertaking all necessary monitoring and environmental cleanup activities. The Ordered Party(ies) has provided NJDEP with appropriate documentation that the Buyer shall allow the NJDEP access required herein.

B. Compliance with the terms of this ACO shall not excuse the Ordered Party(ies) from obtaining and complying with any applicable federal, state or local permits, statutes, regulations and/or orders while carrying out the obligations imposed by ECRA through this ACO. The execution of this ACO shall not excuse the Ordered Party(ies) from compliance with all other applicable environmental permits, statutes, regulations and/or orders and shall not preclude NJDEP from requiring that the Ordered Party(ies) obtain and comply with any permits, and/or orders issued by NJDEP under the authority of the Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq., the Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq., and the Spill Compensation and Control Act ("Spill Act") N.J.S.A. 58:10-23.11 et seq., for the matters covered herein. The terms and conditions of any such permit shall not be preempted by the terms and conditions of this ACO if the terms and conditions of any such permit are more stringent than the terms and conditions of this ACO. Should any of the measures to be taken by the Ordered Party(ies) during the remediation of any ground water and surface water pollution result in a new or modified discharge as defined in the New Jersey Pollutant Discharge Elimination System ("NJPDES") regulations, N.J.A.C. 7:14A-1 et seq., then the Ordered Party(ies) shall obtain a NJPDES permit or permit modification from NJDEP prior to commencement of said activity.

C. NJDEP reserves the right to stop any construction, improvement(s), or change(s) at the Industrial Establishment(s) subject to this

ATTACHMENT F5

ACO, due to the presence of hazardous substances or wastes, the disturbance of which, prior to implementation of NJDEP-approved Cleanup Plan, has the potential to cause harm to public health, safety and welfare as determined by the NJDEP.

D. NJDEP agrees that it will not bring any action, nor will it recommend that the Attorney General's Office bring any action, including monetary penalties, for the Ordered Party's(ies') failure to comply with (a) the time requirements in N.J.S.A. 13:1K-9(b)1 that NJDEP be notified within five (5) days of execution of an agreement of sale or public release of its decision to close, and (b) the time requirement in N.J.S.A. 13:1K-9(b)2 that a Negative Declaration or Cleanup Plan be submitted sixty (60) days prior to transfer of title or closing operations for the transaction described in paragraph 5.B above.

E. No obligations imposed by this ACO (other than by Paragraph 11.G below) are intended to constitute a debt, claim, penalty or other civil action which could be limited or discharged in a bankruptcy proceeding. All obligations imposed by this ACO shall constitute continuing regulatory obligations imposed pursuant to the police power of the State of New Jersey, intended to protect the public health, safety and welfare.

F. This ACO imposes certain requirements and deadlines upon the Ordered Party(ies). The Ordered Party(ies) agrees to use its best efforts to comply with said requirements and NJDEP agrees not to act unreasonably in the enforcement and implementation of this ACO.

G. In the event that the Ordered Party(ies) fails to comply with any of the provisions of this ACO, the Ordered Party(ies) shall pay to NJDEP stipulated penalties in the amount not less than $1,000.00 nor more than $5,000.00 as specified in N.J.A.C. 7:26B-7.4(a) for each of the subject Industrial Establishments for each day on which the Ordered Party(ies) fails to comply with any obligation under this ACO. No such stipulated penalty shall be payable by the Ordered Party(ies) with respect to such period that said failure to comply results from Force Majeure. The Ordered Party(ies) waives its rights to contest NJDEP's exercise of discretion concerning the amount of any penalty assessed by NJDEP pursuant to N.J.A.C 7:26B-9.3 and N.J.A.C. 7:26B-7.4(b).

H. The provisions of this ACO shall be binding upon the Ordered Party(ies) and its successors in interest, assigns, tenants, and any trustee in bankruptcy or receiver appointed pursuant to a proceeding in law or equity. Any officer or management official of the Ordered Party(ies) who knowingly directs or authorizes the violation of any provision of ECRA or the Regulations shall be personally liable for the penalty established pursuant to N.J.S.A. 13:1K-13 and N.J.A.C. 7:26B-9.3.

I. Any signatory to this ACO, who is executing this ACO on behalf of an entity other than that individual, shall provide to NJDEP appropriate documentary evidence as specified in N.J.A.C 7:26B-7.5

ATTACHMENT F6

authorizing the signatory to bind the entity to the provisions of this ACO. This documentary evidence shall be submitted to NJDEP along with a fully executed ACO pursuant to Paragraph 17.A of this ACO.

J. NJDEP and the Ordered Party(ies) expressly agree that NJDEP will not exercise its right to void the transfer of any or all of the subject Industrial Establishments, as the case may be, included in the Transaction described in Paragraph 5.B above, except in the event that the Ordered Party(ies) fails to submit an approvable Negative Declaration(s) or Cleanup Plan(s) for that facility(ies) pursuant to Paragraph 9.D above. NJDEP's right to void the subject sale or transfer shall terminate upon NJDEP's written approval of an appropriate Negative Declaration(s) or Cleanup Plan(s) for any or all of the subject Industrial Establishments, as the case may be, submitted by the Ordered Party(ies) pursuant to this ACO and ECRA.

K. Any Ordered Party to this ACO shall provide to NJDEP at least thirty (30) days prior written notice of the dissolution of its corporate identity or liquidation of its assets, and shall provide immediate written notice to NJDEP of filing of a petition for bankruptcy no later than the day after filing. Upon receipt of notice of dissolution of corporate identity, liquidation of assets or filing of a petition for bankruptcy, NJDEP may request and within fourteen (14) days of NJDEP's written request the Ordered Party(ies) shall obtain and submit to NJDEP, additional financial assurance pursuant to this ACO.

L. Any submission to be made to NJDEP in accordance with this ACO shall be directed to:

Karl J. Delaney, Assistant Director
Industrial Site Evaluation Element
Division of Hazardous Waste Management
CN 028 Trenton, NJ 08625

12. Force Majeure

If any fire, flood, storm, riot, strike, or other circumstance determined by NJDEP to be beyond the control of the Ordered Party(ies) occurs which causes or may cause delays in the achievement of any deadline contained in this ACO, the Ordered Party(ies) shall notify NJDEP in writing within ten (10) days of the delay or anticipated delay, as appropriate, referencing this Paragraph and describing the anticipated length, precise cause or causes, measures taken or to be taken and the time required to minimize the delay. The Ordered Party(ies) shall adopt all necessary measures to prevent or minimize any delay. If any delay or anticipated delay has been or will be caused by fire, flood, storm, riot, strike or other circumstances determined by NJDEP to be beyond the control of the Ordered Party(ies), then the time for performance hereunder shall be extended by NJDEP for a period no longer than the delay resulting from such circumstances, provided that NJDEP may grant additional extensions for

ATTACHMENT F7

good cause. If the events causing such delay are not found by NJDEP to be beyond the control of the Ordered Party(ies), failure to comply with the provisions of the ACO shall constitute a breach of the ACO's requirements. The burden of proving that any delay is caused by circumstances beyond the Ordered Party(ies')'s control and the length of such delay attributable to those circumstances shall rest with the Ordered Party(ies). Increases in the costs or expenses incurred in fulfilling the requirements contained herein shall not be a basis for an extension of time. Similarly, delay in completing an interim requirement shall not automatically justify or excuse delay in the attainment of subsequent requirements.

13. Reservation of Rights

This ACO shall be fully enforceable in the New Jersey Superior Court having jurisdiction over the subject matter and signatory parties upon the filing of a summary action for compliance pursuant to ECRA. This ACO may be enforced in the same manner as an Administrative Order issued by NJDEP pursuant to other statutory authority and shall not preclude NJDEP from taking whatever action it deems appropriate to enforce the environmental protection laws of the State of New Jersey. It is expressly recognized by NJDEP and the Ordered Party(ies) that nothing in this ACO shall be construed as a waiver by NJDEP of its rights with respect to enforcement of ECRA on bases other than those set forth in the ECRA Program Requirements section of this ACO. Furthermore, nothing in this ACO shall constitute a waiver of any statutory right of NJDEP to require the Ordered Party(ies) to implement additional remedial measures should NJDEP determine that such measures are necessary to protect the public health, safety and welfare.

14. The Ordered Party(ies) agrees not to contest the authority or jurisdiction of the Department to issue the ACO and also agrees not to contest the terms of this ACO.

15. The execution of this ACO shall not release Camden Properties, Inc. from any responsibilities Camden Properties, Inc. has pursuant to ECRA and the Regulations. NJDEP may exercise its discretion as to enforcement of the ACO and enforcement of the statutory obligation Camden Properties, Inc. under ECRA and the Regulations.

16. Responsibility of the Ordered Parties

A. The Ordered Parties have informed NJDEP that Russell-Stanley East, Inc., shall be the lead party for contact with NJDEP and for compliance with the terms and conditions of this ACO. NJDEP and the Ordered Parties have agreed that the Ordered Parties shall be repsonsible, each of them jointly, severally and individually, for performance of all obligations listed in this ACO.

B. NJDEP and the Ordered Parties mutually agree that in the event that Russell-Stanley East, Inc., or Russell-Stanley Corporation fails or refuses to perform any ECRA obligations, as determined by NJDEP, NJDEP may exercise full discretion concerning the ECRA obligations of the Ordered Parties for ECRA compliance. The

ATTACHMENT F8

Ordered Parties expressly agree that in the event that Russell-Stanley East, Inc., or Russell-Stanley Corporation fails or refuses to perform any obligation(s) under this ACO as determined by NJDEP, NJDEP shall have the right to exercise any option or combination of options available to NJDEP under this ACO, ECRA, the Regulations or any other stature to ensure full and complete ECRA compliance by Russell-Stanley East, Inc., and/or Russell-Stanley Corporation.

17. A. This ACO shall be effective upon the execution of this ACO by the NJDEP and the Ordered Party(ies). The Ordered Party(ies) shall return a fully executed ACO to NJDEP together with the financial assurance and signature authorization required within five (5) calendar days from the effective date.

B. This ACO shall be null and void unless executed by the Ordered Party(ies) within 30 days of NJDEP signing.

C. Upon the effective date of this ACO, the Ordered Party(ies) may complete the Transaction described in Paragraph 5.B above subject to the conditions of this ACO.

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

Date: June 6, 89

By: Ronald T. Corey for
KARL J. DELANEY, ASSISTANT DIRECTOR
INDUSTRIAL SITE EVALUATION ELEMENT

RUSSELL-STANLEY EAST, INC.
(Ordered Party)

Date: 6/12/89

By:

Name: William Lima

Title: President

RUSSELL-STANLEY CORPORATION
(Ordered Party)

Date: 6/12/89

By:

Name: William Lima

Title: President

ATTACHMENT F9

ATTACHMENT A

A. ECRA Case #89375 SIC #: 3412 Financial Assurance: $250,000.00
Facility Name: Russell-Stanley East, Inc.
"Woodbridge facility"

Facility Location: Convery Blvd. & Bey Street
Woodbridge, Middlesex County

Block: 253.8 Lots: 11

Initial Notice Status: Incomplete
Owner: Russell-Stanley Corporation, a New Jersey Corporation
Operator: Russell-Stanley East, Inc., a New Jersey Corporation

B. ECRA Case #89376 SIC #: 3079 Financial Assurance: $500,000.00
Facility Name: Russell-Stanley East, Inc.
"Camden facility"

Facility Location: River Road & State Street
Camden, Camden County

Block: 847 Lot: 2

Initial Notice Status: Incomplete
Owner: Camden Properties, Inc., New Jersey Corporation
Operator: Russell-Stanley East, Inc., a New Jersey Corporation

ATTACHMENT F10

(3)

CN 028
Trenton, N.J. 08625-0028

(609)633-7141

Let's protect our earth

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT

Michele M. Putnam
Deputy Director
Hazardous Waste Operations

John J. Trela, Ph.D., Director

Lance R. Miller
Deputy Director
Responsible Party Remedial Action

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

JUL 21 1989

Peter J. Herzberg
Greenbaum Rowe Smith Ravin Davis & Bergstein
Metro Corporate Campus One
P.O. Box 5600
Woodbridge, NJ 07095-0988

Dear Mr. Herzberg:

RE: Request for an Extension, Administrative Consent Order
In the Matter of RUSSELL-STANLEY EAST, INC. AND RUSSELL-STANLEY CORPORATION ("Russell ACO"), ECRA CASE #s 89375 & 89376

This is in response to Roger A. Greenbaum's letter dated July 12, 1989 requesting an extension for submission of the Site Evaluation Submission (SES) for each of the above referenced ECRA Cases pursuant to Paragraph 9.A of the Russell ACO. Your request has been granted until August 11, 1989.

This letter is only an extension and does not relieve the Ordered Parties of any obligations or responsibilities set forth in the Russell ACO.

If the Ordered Parties fail to submit the SESs on or before the indicated submission date, NJDEP reserves the right to implement full enforcement measures pursuant to the Russell ACO, including the right to assess penalties from the original due date established under the Russell ACO.

Please contact Mr., Michael Mandracchia at (609) 633-7141 if you have any further questions on this matter.

Sincerely,

Karl J. Delaney, Assistant Director
Industrial Site Evaluation Element

c: T. O'Brien, BEAC

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ATTACHMENT F11

GREENBAUM, ROWE, SMITH, RAVIN, DAVIS & BERGSTEIN

ROBERT S. GREENBAUM
ARTHUR M. GREENBAUM
ALLEN RAVIN
PAUL A. ROWE
WENDELL A. SMITH
ALAN E. DAVIS
MELVYN H. BERGSTEIN
DAVID L. BRUCK
MICHAEL B. HIMMEL
JOHN P. DONOHOE
ROBERT C. SCHACHTER
MARTIN L. LEPELSTAT
DENNIS A. ESTIS
WILLIAM D. GRAND
DONALD KATZ

BENJAMIN D. LAMBERT, JR.
DOUGLAS K. WOLFSON
ALAN S. NAAR
HARRIET F. KLEIN
MARK H. SOBEL
HAL W. MANDEL
MARIANNE McKENZIE
PETER J. HERZBERG
BARRY S. GOODMAN
THOMAS J. DENITZIO, JR.
KENNETH T. BILLS
THOMAS C. SENTER
MARGARET GOODZEIT
ROBERT J. KIPNEES
W. RAYMOND FELTON
KENNETH S. GOODKIND

WM. L. GREENBAUM (1914-1983)

METRO CORPORATE CAMPUS ONE
P. O. BOX 5600
WOODBRIDGE, NEW JERSEY 07095-0988
(201) 549-5600
TELECOPIER (201) 549-1881
ABA NET 2529

DELIVERY ADDRESS:
99 WOOD AVE. SOUTH
ISELIN, NEW JERSEY 08830-9998

900 THIRD AVENUE
NEW YORK, NEW YORK 10022-4728
(212) 755-0606
TELECOPIER (212) 755-2591

GIANNI DONATI
CHRISTINE F. LI
BRUCE D. GREENBERG
MERYL A. G. GONCHAR
MICHAEL K. FEINBERG
GARY A. KOTLER
SUSAN BARRY
ROGER A. GREENBAUM
CARLTON T. SPILLER
JOSEPH M. ORIOLO
SUZANNE M. LAROBARDIER
KERRY BRIAN FLOWERS
JEFFREY KANTOWITZ
SABRINA A. KOGEL
BRUCE M. COHEN*
PAUL J. TRAINA
JACQUELINE M. PRINTZ
THOMAS A. WALDMAN
CYNTHIA N. SCHARF
MICHAEL H. HURWITZ
SHAUN BRODERICK

PETER J. RESCIGNO
DEBORAH A. SILODOR
ALICE BEIRNE
PATRICIA STUART ROACH
SHERYL M. SCHWARTZ
NANCY ISAACSON
LAWRENCE H. WERTHEIM
DREW M. HURLEY
SUSAN J. OKIN
MITCHELL J. GREENHILL
KAREN GRECO-BUTA
ESTHER B. FENDRICK
TYRONE M. McDONNELL
EDWARD G. GABELMANN, JR.
GARY K. WOLINETZ
ZLATKO BATISTICH
MICHELE S. LINDER
JUDITH MENDELSON RICHMAN
PERRY C. VALLONE
JOHN P. BRENNAN, JR.

OF COUNSEL
MYRON STEIN*
SAMUEL J. SPAGNOLA

*MEMBER NY BAR ONLY

REPLY TO: WOODBRIDGE
DIRECT DIAL NUMBER
(201) 906- 7736

July 12, 1989

VIA TELECOPY AND U.S. MAIL

Mr. Michael J. Mandracchia, Supervisor
New Jersey Department of Environmental Protection
Division of Hazardous Waste Management
Industrial Site Evaluation Element
401 East State Street
CN 028
Trenton, New Jersey 08625-0028

Re: Russell-Stanley East, Inc. and
Russell-Stanley Corp. - ACO
ECRA Case Nos. 89375 and 89376
Woodbridge and Camden, New Jersey Facilities

Dear Mr. Mandracchia:

I represent Russell-Stanley East, Inc. and Russell-Stanley Corp., the Ordered Parties in the above ECRA cases.

The Ordered Parties are in the process of diligently compiling and reviewing the information and materials needed for submission of the ECRA-2 as required under an Administrative Consent Order covering both ECRA cases. We hereby request an extension of thirty (30) days from today, July 12, to and through August 11, 1989, for submission of the ECRA-2 with respect to each of the above ECRA cases. This is needed to ensure completeness in the papers to be filed.

Thank you in advance for your consideration.

Very truly yours,

Roger A. Greenbaum

RAG/cb
cc: William Lima
Thomas Comollo
Nicholas A. Adrianas
W. Raymond Felton
Alan E. Davis

RECEIVED

ATTACHMENT F12

18 DHWM

84Bureau of Industrial Site Evaluation
Environmental Cleanup Responsibility Act

Report of Inspection

ECRA Case #84-11 Date of Inspection 1/28/85
Inspection Category: Interim
Inspector: Mike Nalbone

Industrial Establishment: Advanced Chemical Technology (ACT)

Location: River Rd. and State Street
Camden, NJ

Individuals Involved: Jim Manuel, DWM Enforcement
Charlie Morelli, Russell Stanley, Plant Manager

NARRATIVE DESCRIPTION

On January 28, 1985 a joint inspection was made with Jim Manuel of DWM Enforcement, at the above location. The reason for this inspection was to determine whether the oil contaminated soil around the concrete loading platform was from Russell Stanley due to the spill noted on 11/30/84 or from Plant Industries. Mr. Manuel and I spoke with Mr. Charles Morelli, who identified himself as the plant manager. I informed Mr. Morelli why we were onsite and requested a tour of the operations. Mr. Morelli was cooperative and gave Mr. Manuel and I a tour of the facility. I was informed that the company manufactures plastic drums. This is done through the use of three molding machines. The materials used during the manufacturing process are plastic resin in the form of beads, ethylene glycol used as a coolant which allows for the newly formed plastic drum to harden quicker and oil, which is used as a lubricant for the machines. The plastic resin beads are stored in above ground silo's. According to Mr. Morelli, all other materials are stored in the original steel fifty-five gallon drums as shipped from the manufacturer. proc.

Waste oil is generated either through maintenance work which is periodically done on the molding machines or through accidental equipment failure which may cause a release of oil and or coolant.

Two of the molding machines have concrete pits in the floor to collect oil or coolant if a spill should occur. The collection pits are approximately three feet wide and five feet deep. Molding machine number three does not have a collection pit for spill containment. Without any containment around the machine, oil runs onto the floor and out onto the rail siding loading dock. Mr. Morelli informed Mr. Manuel and I that concrete block was purchased to be used as a containment wall which will resolve the problem. I observed the concrete block next to the molding machine, but additional construction work is needed to establish a secure containment structure around the machine.

I observed the railroad loading platform leading to the tracks. The platform was clean with no visible sign of contamination. Mr. Manuel informed me he observed oil flowing from the building, across the loading platform and onto the tracks. Mr. Morelli was reluctant at this time to say that oil never flowed on the ground. The soil next to the loading platform near the railroad tracks was

ATTACHMENT G1

determined contaminated with lead and petroleum hydrocarbons, as per the sampling results received on September 21, 1984. This area was cleaned up to levels acceptable by DEP according to Stablex Reutter representative Bill Hartmen. From the observations made by Mr. Manuel during his site inspection on 12/10/84, any additional contamination onsite near the loading dock is from the current ongoing drum manufacturing operation.

Mr. Morelli, Mr. Manuel and I reviewed the waste storage area inside the building. I noted approximately thirty-seven (37) fifty-five gallon plastic drums of waste oil stored in open top drums. Mr. Morelli indicated that the waste oil generated onsite contains a large percentage of water. Mr. Morelli became aware of this when a representative from Flowen Oil, a waste oil hauler, pumped out 500 gallons of waste oil on November 6, 1984. A copy of the receipt was given to Mr. Manuel confirming the pickup of waste oil on November 6, 1984 by FLowen Oil.

It was determined that because the amount of waste oil stored on site exceeded the 1,000 gallon limit, an EPA I.D. number is required for removal. According to Mr. Morelli, the company does not have an EPA I.D. number. I recommended he call the USEPA in New York so the company can obtain an EPA I.D. number prior to removing the waste oil on site.

I observed the area next to the fence where soil was excavated and removed due to the presence of petroleum hydrocarbons. The soil still appeared black and contamination still exists. I recommend that the contaminated soil be removed to the level acceptable by the Department. Prior to leaving, Jim Manuel informed Mr. Morelli that open top drums can not be used for the storage of waste oil. Mr. Manuel also informed Mr. Morelli that he would send a copy of the DEP hazardous waste generator regulations providing the proper storage methods acceptable by the Department.

DEFICIENCIES NOTED

1. Waste oil on site improperly stored and requires removal.
2. Company is a generator of hazardous waste but has no EPA I.D.number.
3. Containment area around molding machine #3 not completed.
4. Soil along tracks next to loading dock contaminated with oil.
5. Excavate soil near fence levels acceptable to the Department.

ACTIONS REQUIRED ON THE PART OF THE APPLICANT

1. Use proper containers for waste oil and store hazardous waste per DEP regulations.
2. Obtain a USEPA I.D. number establishing the company as a generator of hazardous waste.
3. Complete containment wall around molding machine #3.
4. Clean up the contaminated soil around tracks from recent oil spill.
5. Excavate soil near fence to levels acceptable by the Department.

ATTACHMENT G2

(5)

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
BUREAU OF GROUND WATER DISCHARGE CONTROL

MEMORANDUM

TO: Mike Nalbone, Case Manager
BEECRA

THROUGH: Karen Fell, Section Chief
Bureau of Ground Water Discharge Control

FROM: Jennifer Eck, Geologist
Bureau of Ground Water Discharge Control

SUBJECT: *Advanced Chemical Technology*
Camden, Camden County
ECRA #84011

DATE: DEC 0 1 1988

NARRATIVE DESCRIPTION

Advanced Chemical Technology began operation at the site in 1974 and was sold to Russell-Stanley Corp. in 1984. Russell-Stanley continued the same opertion at the site which was (and still is) also occupied by Hills Brothers Lumber and Ceramic Merchandise Warehouse.

Advanced Chemical Technology was engaged in the manufacturing of plastic drums. Materials used included plastic resin beads, ethylene glycol (a coolant which allows the plastic drums to harden quicker) and oil (for lubrication of the three molding machines).

Areas of environmental concern include a railroad siding/loading dock area, a dumpster area and an oil-stained area. These areas have high levels of essentially surficial soil contamination (TPHC, BN's and PPM).

The site is located in a very highly industrialized area, however five shallow municipal wells exist within 2000 feet of the site. In addition, one NJ Water Supply well, five NJ Water Co. wells and two City of Camden wells exist within 2640 feet, 5340 feet and 9500 feet of the site respectively.

The site is underlain by the Potomac-Raritan-Magothy aquifer system which consists of sands and gravels interbedded with confining units of silts and clays. According to the well logs, the upper 8 to 10 feet of stratigrapphy consists of medium coarse to fine sand which grades into silty clays and then into a dense clay. Underlying the dense clay at a depth of about 13 feet is coarse sand. Ground water is encountered at depths ranging from 2.3 to 7.9 feet below grade at the site. The direction of ground

ATTACHMENT H.

water flow is to the east within the northern portion of the site and to the southeast within the southern portion of the site. This is contrary to the expected flow direction to the west (towards the Delaware River) and is most likely due to local pumping operations. The hydraulic gradient is approximately 0.01.

Six monitoring wells have been installed (please refer to the attached map for locations) and one round of ground water sampling and analysis has been completed for all wells with the exception of MW-4. Due to smearing of cuttings from the clay strata along the sidewalls of the boring, MW-4 is a "dry well". Ground water samples were analyzed for TPHC, BN+15, AE+10, PPM, ethylene glycol, TDS, specific conductance and pH.

Results indicate that TPHC was only elevated in MW-5 (at 2 ppm). Trace levels of petroleum compound derrivatives were identified in the BN forward search at total concentrations ranging from 5 to 101 ppb. These compounds were also detected in the blanks, however. Trace levels of lead and cadmium were detected although their levels were below NJDEP clean-up levels. AE's and ethylene glycol were not detected at all.

A second round of ground water sampling is proposed; ground water is proposed to be analyzed for PHC, PPM and BN+15. No further investigatory work is proposed.

COMMENTS

As requested, I have reviewed the Analytical Data which was received by this Bureau on July 5, 1988. I have visited the site on October 21, 1988. The above referenced submission is acceptable given the following conditions:

Although there are three (#1, 2, 6) wells in the vicinity of Area 2 (the dumpster area), a review of the ground water contour maps indicates that none of these wells are located downgradient of this area of environmental concern. Another well must be installed so as to be downgradient of Area 2. Please refer to the attached map designating an acceptable location for this well (MW-7).

Monitoring well #4 should be flushed out in order for it to accept ground water and function properly. If flushing of the well does not yield results, then another monitoring well must to be installed immediatley adjacent to MW-4. MW-4 would have to be properly sealed as well (please refer to the attached specifications for closure of an abandoned well.

All additional wells must be installed in accordance with the attached NJDEP unconsolidated monitoring well specifications, by a NJ licensed driller and supervised by a qualified hydrogeologist. The DEP should be notified at least two weeks prior to the installation of any monitoring wells to allow a

ATTACHMENT H2

geologist to assist in determining well locations and screen elevations.

Two rounds of ground water samples from MW-4 (or another well located immediately adjacent to it) and MW-7 must be analyzed for TPHC (EPA method 418.1), BN+15 (EPA method 625), VO+15 (EPA method 624), PPM, ethylene glycol, TDS, specific conductance and pH. These rounds must be sampled a minimum of thirty days apart.

A second round of ground water sampling from MW-3, MW-5 and MW-6 must be analyzed for VO+15, (EPA method 624), ethylene glycol, TDS, specific conductance and pH in addition to the other parameters proposed. A second round of sampling and analysis from MW-1 and MW-2 is not necessary.

Monitoring Well Certification Forms A (As-Built Certification) and B (Location Certification) must be completed for each monitoring well installed. Form A must be submitted within thirty days after completion of each maonitoring well. Because additional wells are sometimes required to complete a hydrogeologic investigation, Form B may be submitted after completion of the installation of all required monitoring wells, unless required prior to that time by the Department.

It must be determined if ground water from the five wells owned by Conrail (numbered 7 through 11 on the Request for Hydrogeologic Assessment) is used for human consumption.

If you have any questions concerning this case, you may contact me at 2-0424.

WQM254

c: Bureau Chief Steve Johnson, BGWDC
Bureau Chief Ken Hart, BEECRA
Ed Demerest, BEERA
File (KF)

Attachments

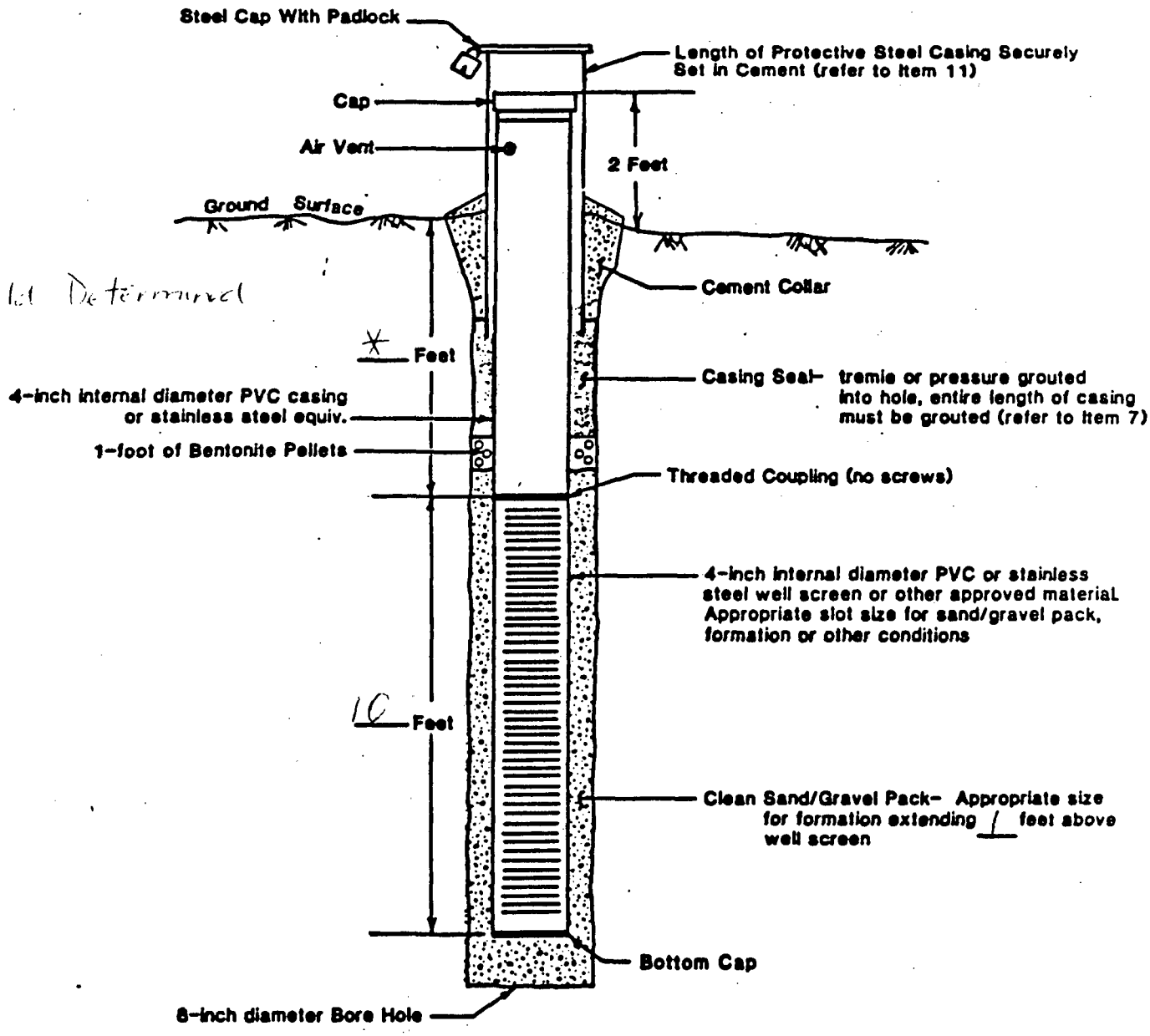
ATTACHMENT H3

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
MONITOR WELL SPECIFICATIONS FOR
UNCONSOLIDATED FORMATIONS

SITE NAME : Advanced Chemical Technology

LOCATION : Camden, Camden Co.

DATE : Nov. 1988



NOT TO SCALE

NJGS Revised 9-87

ATTACHMENT Hq

(22) Air permits

ACT ADVANCED CHEMICAL TECHNOLOGY POLY-DRUM DIVISION
STATE STREET & RIVER ROAD, CAMDEN, NEW JERSEY 08105 • (609) 541-2341

June 28, 1980

Mr. Julius Tivald
Southern Field Office
Department of Environmental Protection
100 Larwin Road
Cherry Hill, New Jersey 08034

Dear Mr. Tivald:

As per our telephone conversation, the following information is submitted.

We at Advanced Chemical Technology, located at State Street and River Road in Camden, New Jersey, do not store, transfer, use or manufacture toxic volatile organic substances or any chemicals listed under NJAC 7:27-17.3. Therefore Form VEM-029 and Form VEM-030 do not apply to our company.

Thank you for your cooperation.

Sincerely,

ADVANCED CHEMICAL TECHNOLOGY
Poly Drum Division

John C. Demore

John C. Demore
Plant Manager

JCD:lr

RECEIVED
RECEIVED
AUG 1 1980
N.J. STATE DEPT. OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR POLLUTION CONTROL
SOUTHERN FIELD OFFICE
N.J. STATE DEPT. OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR POLLUTION CONTROL
SOUTHERN FIELD OFFICE

ATTACHMENT I.

Form DEQ-003

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR POLLUTION CONTROL

REPORT OF FIELD INVESTIGATION

DATE 6/29/81 TIME 11:30-1:00 FILE # REFERENCE TO CHAPTER 16

FULL BUSINESS NAME Advanced Chemical Technology

Location State Street & River Road, Camden, N.J.
No. Street Municipality

Mailing Address — —
No. Street Post Office Zip Code

Person (s) Interviewed
Mr. Jack Stephens — Title Quality control manager

Comments

Report Requested by Program
Title

Purpose of Investigation
Sub-16 Compliance

Observations
This company has 3 sources including one Silo which contains polyethylene (Plastic dry) used to mold various size drums from 5 gallons to 57 gallons. These drums are finished product. The company does not store any VOS material and they have no gasoline storage tanks on their property.

Conclusions
In compliance with Sub 16.

Recommendations
File for future reference

Investigated by Charles A. Mellon SES
Signed
Lawrence C. Pelny ES
Title

ATTACHMENT I2

16 MAR 1984

TO: Anthony McMahon, Chief

FROM: Lawrence Muzyka, Principal Environmental Specialist

SUBJECT: Advanced Chemical Technology
River Road and State Street
Camden City

OBJECTIVE

To conduct an ECRA inspection

COMMENTS

On Thursday, February 23, 1984 Richard Gervasio and Lawrence Muzyka inspected the ACT Camden Facility. We met with Ken Benson, (609-541-2341), the plant manager, and Doug Goepfert, the representative from the parent company Plant Industries. We were informed that Plant Industries was selling the ACT Camden site to Russell Stanley Corporation.

An inspection of the site revealed that the operation is basically a polyethylene blow molding operation with the final product being storage drums. We observed that two (2) above ground #2 fuel oil tank (275 gallons) were used to fuel the boiler. No leak testing was recommended.

The production operation utilizes pellet form polyethylene and a solid pellet dye. Hydraulic oil from the equipment that is released from the system is collected in a sump and pumped out by an oil recovery hauler (Frowen Oil). The oil areas are cleaned up with speedy dry "vermiculite" and had been discarded with the trash in a dumpster. As a result an observable soil contamination exists in the rear of the facility around the dumpster and along the RR siding on the southern portion of the site, a cleanup is warranted.

On the northern boundary of the site, a filled area is apparent, but no visible signs of hazardous waste exists. Mr. Benson & Mr. Goepfert did not know the nature of the fill material.

CONCLUSION

An inspection revealed the following:

1) Oil contaminated soil
2) Disposal of oil absorbent contaminated with speedy dry as trash
3) An area of the site that had been filled in the past

I notified Mr. Benson and Mr. Goepfert that these issues must be resolved prior to sale.

RECOMMENDATION

I recommend a cleanup of the oil contaminated soil at the site, and a discontinuation of the practice of oil absorbent material as trash.

ATTACHMENT J

The issue of the fill area requires a better history of the site to determine if hazardous waste disposal on site is a possibility. Information should be provided concerning the nature of previous operations or else sampling of the fill would be warranted to assure that the area has not been used for hazardous waste disposal.

ATTACHMENT J2

Form VEM-017
12/84

DEQ, Air

21

NEW JERSEY STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF ENVIRONMENTAL QUALITY
AIR POLLUTION CONTROL PROGRAM
BUREAU OF ENGINEERING AND TECHNOLOGY

All Correspondence must indicate your APC PLANT ID NUMBER

Permit/Certificate Number 017174 APC PLANT ID 50102

(Mailing Address)	(Plant Location)
RUSSELL-STANLEY CORPORATION STATE ST. & RIVER RD. CAMDEN NJ 08105	POLY DRUM DIV. STATE ST. & RIVER RD. CAMDEN CITY

Applicant's Designation of Equipment 10 HP VACUUM LOADER M56
N.J. Stack No. 001 No. of Stacks 001 No. of Sources 01
Original Approval 04/10/75 Effective 02/21/85 Expiration 02/21/90

CERTIFICATE TO OPERATE CONTROL APPARATUS OR EQUIPMENT (5 YEAR RENEWAL)

THIS (5 YEAR RENEWAL) CERTIFICATE IS BEING ISSUED UNDER THE AUTHORITY OF CHAPTER 106, P.L. 1967 (N.J.S.A.26:2C-9.2). THE POSSESSION OF THIS DOCUMENT DOES NOT RELIEVE YOU FROM THE OBLIGATION OF COMPLYING WITH ALL OTHER PROVISIONS OF TITLE 7, CHAPTER 27, OF THE NEW JERSEY ADMINISTRATIVE CODE.

YOU MAY BE ENTITLED TO AN EXEMPTION OF TAXATION IF YOUR EQUIPMENT IS TAXED AND IS CONSIDERED TO BE AN AIR POLLUTION ABATEMENT FACILITY. A TAX EXEMPTION APPLICATION MAY BE OBTAINED FROM THIS SECTION.

IF IT IS NECESSARY TO AMEND YOUR EMERGENCY STANDBY PLANS, PLEASE CONSULT WITH THE APPROPRIATE FIELD OFFICE. (SEE OTHER SIDE).

THIS DOCUMENT MUST BE READILY AVAILABLE FOR INSPECTION AT THE PLANT.

RECEIVED
DEC 03 1985
N.J. DEPT. OF ENVIRONMENTAL PROTECTION
DIVISION OF ENVIRONMENTAL QUALITY

N.J. Department of Environmental Protection
Division of Environmental Quality
CN-027
Trenton, New Jersey 08625

Approved by: _____
Supervisor
New Source Review Section

ATTACHMENT K
11/21/85-12

CAMDEN COUNTY DEPARTMENT OF
HEALTH AND COMMUNITY SERVICES

Form VEM-017
6/83

Southern
201-634-6000
541-5016
Rhada Morelli

NEW JERSEY STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF ENVIRONMENTAL QUALITY
AIR POLLUTION CONTROL PROGRAM
BUREAU OF ENGINEERING AND TECHNOLOGY

All Correspondence must indicate your DEP PLANT ID NUMBER

Permit/Certificate Number 017174 DEP PLANT ID 50102

(Mailing Address)

RUSSELL-STANLEY CORPORATION
STATE ST. & RIVER RD.
CAMDEN NJ 08105

(Plant Location)

POLY DRUM DIV.
STATE ST. & RIVER RD.
CAMDEN CITY

Applicant's Designation of Equipment 10 HP VACUUM LOADER -56
N.J. Stack No. 001 No. of Stacks 001 No. of Sources 01
Original Approval 04/10/75 Effective 02/21/80 Expiration 02/21/85

PERMIT TO CONSTRUCT, INSTALL OR ALTER CONTROL APPARATUS OR EQUIPMENT
AND
CERTIFICATE TO OPERATE CONTROL APPARATUS OR EQUIPMENT (TRANSFER)

THIS PERMIT AND CERTIFICATE IS TRANSFERRED FROM THE FORMER OWNER TO YOU.

IT IS NOW YOUR RESPONSIBILITY TO OPERATE THIS EQUIPMENT IN ACCORDANCE WITH THE CONDITIONS OF THE PERMIT AND CERTIFICATE APPLICATION.

THIS DOCUMENT MUST BE READILY AVAILABLE FOR INSPECTION AT THE PLANT.

RECEIVED
AUG 30 1984
N.J. STATE DEPT. OF ENVIRONMENTAL PROTECTION
DIVISION OF ENVIRONMENTAL QUALITY

N.J. Department of Environmental Protection
Division of Environmental Quality
CN-027
Trenton, New Jersey 08625

Approved by: _____
Supervisor
New Source Review Section

ATTACHMENT K2
08/22/84-08

Form VEM-024 T
3/80

NJ

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF ENVIRONMENTAL QUALITY
BUREAU OF AIR POLLUTION CONTROL

CERTIFICATE TO OPERATE CONTROL APPARATUS OR EQUIPMENT (5 YEAR)

Permit and Certificate Number 017174 DEP Plant ID 50102

(Mailing Address)	(Plant Location)
Advanced Chemical Technology State St. & River Road Camden NJ 08105	Same Camden County

Applicant's Designation of Equipment Pnumatic Conveying to Blow Molding Machine

N.J. Stack No. 0 0 1 No. of Stacks 0 1 No. of Sources 0 0 1

Approval 11 (Mo.) 06 (Day) 74 (Year) Start Up ___ (Mo.) ___ (Day) ___ (Year) Expiration 2 (Mo.) 21 (Day) 85 (Year)

THIS PERMANENT (5YEAR) CERTIFICATE IS BEING ISSUED UNDER THE AUTHORITY OF CHAPTER 106,P.L.1967(NJSA26:2C-9.2). THE POSSESSION OF THIS DOCUMENT DOES NOT RELIEVE YOU FROM THE OBLIGATION OF COMPLYING WITH ALL OTHER PROVISIONS OF TITLE 7, CHAPTER 27, OF THE NEW JERSEY ADMINISTRATIVE CODE.

YOU MAY BE ENTITLED TO AN EXEMPTION OF TAXATION IF YOUR EQUIPMENT IS TAXED AND IS CONSIDERED TO BE AN AIR POLLUTION ABATEMENT FACILITY. A TAX EXEMPTION APPLICATION MAY BE OBTAINED FROM THIS SECTION.

IF IT IS NECESSARY TO AMEND YOUR EMERGENCY STANDBY PLANS, PLEASE CONSULT WITH THE APPROPRIATE FIELD OFFICE. (SEE OTHER SIDE)

QUESTIONS ABOUT THIS DOCUMENT SHOULD BE DIRECTED TO THE PERMITS AND CERTIFICATES SECTION AT 609 - 292 - 6716 OR THE ADDRESS BELOW.

William F. Hart

NOTE: This document must be readily available for inspection at the source location.

Approved by: William F. Hart
Supervisor
Permits & Certificates Section

D.M.

MAY 27 1980

N.J. Department of Environmental Protection
Bureau of Air Pollution Control
CN-027
Trenton, N.J. 08625

ATTACHMENT K3

Air-30
Nov. 70

NJ#1

NEW JERSEY STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION

APPLICATION FOR CERTIFICATE TO OPERATE CONTROL APPARATUS OR EQUIPMENT

TO: New Jersey State Department of Environmental Protection
Bureau of Air Pollution Control
P. O. Box 1390
Trenton, New Jersey 08625

Date 10/22/74

Use Instructions, Air-D-14

Sec. A	1. Reference Permit No. P-17174 SIC No. ____ 2. Full Business Name ADVANCED CHEMICAL TECHNOLOGY 3. Address of equipment and/or control apparatus: E. STATE ST. + RIVER RD. CAMDEN, N.J. 08105 No. Street Municipality County 4. Location on premises (Bldg., Dept., area, etc.) 20 ft. FROM RIGHT CORNER OF BUILDING
Sec. B	1. Identify process equipment ____ 2. List air pollution control apparatus 10.H.P. VACUUM LOADER W/3-40LB CHAMBERS. 3. Date equipment to be put in use SEPT. 25, 1974
Sec. C	Plant Contact: JOHN M. RAWLINS — Name (Print or Type) 609-541-2341 — Telephone No. PLANT MANAGER — Title Telephone Extension

This application is submitted in accordance with the provisions of N.J.S.A. 26:2C-9.2, and to the best of my knowledge and belief is true and correct.

ADVANCED CHEMICAL TECHNOLOGY
E. STATE ST. + RIVER RD.
CAMDEN, N.J. 08105
Mailing Address, Zip

John M. Rawlins
Signature – all copies

JOHN M. RAWLINS
Name (Print or Type)

PLANT MANAGER
Title

DO NOT WRITE BELOW

CERTIFICATE TO OPERATE CONTROL APPARATUS OR EQUIPMENT

TEMPORARY DURATION	5 YEAR DURATION
Certificate No. ____	Certificate No. CT 17174
Date Approved ____	Date Approved FEB 21 1975
Expiration date ____	Expiration date ~~FEB 21 1980~~
Approved by: ____ Supervisor, Permits & Certificates	Approved by: Joe Supervisor, Permits & Certificates

ATTACHMENT K4

Air-27
Nov 70

NEW JERSEY STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION

APPLICATION FOR PERMIT TO CONSTRUCT, INSTALL OR ALTER CONTROL APPARATUS OR EQUIPMENT

TO: New Jersey State Department of Environmental Protection
Bureau of Air Pollution Control
P. O. Box 1390
Trenton, New Jersey 08625

Date 10/22/74

Use instructions, Air-D13

Sec. A

1. Full Business Name ADVANCED CHEMICAL TECHNOLOGY
2. Address of equipment and/or control apparatus E. STATE ST. + RIVER RD. CAMDEN, NEW JERSEY 08105
   No. Street Municipality County
3. Location on premises (Bldg., Dept., area etc.) SOUTH-WEST CORNER BLDG. 56
4. Nature of Business PLASTIC DRUM MAN. SIC No.

Sec. B

1. ☑ New process equipment and new air pollution control apparatus
   ☐ New air pollution control apparatus on existing process equipment
   ☐ New process equipment with no control apparatus
   ☐ Other:
2. Prior permit numbers covering this installation. Specify.
3. Estimated starting date JUNE 74 Estimated completion END- SEPT.

Sec. C

1. Description of operation VACUUM LOADG. OF P.E. FOR A BLOW-MOLDING MACHINE
2. Identify process equipment 10 HP VAC. LOADER W/3-40 LB CHAMBERS
3. Raw materials (names) HMWPE (POLYETHYLENE - POWER)

   Total pounds per hour 1500 LBS Total pounds per batch 100,000
4. Operating procedure:
   ☑ Continuous: 20 hrs. per day 6 days per ☑ week ☐ month
   ☐ Batch: _____ hrs. per batch _____ Batches per ☐ day ☐ week

Sec. D

Physical and chemical nature of air contaminants which must evolve from operation and be emitted into the open air:

AIR CONTAMINANTS	AMOUNTS OF CONTAMINANTS	
	With Control Apparatus	Without Control Apparatus
POLYETHYLENE DUST	LESS THAN 0.5 PER HR	50 lb per hr.

(Continue on reverse side)

ATTACHMENT 17174

1. Describe air pollution control apparatus VACUUM CHAMBERS EQUIPPED With 300 MICRON SELF CLEANING FILTERS. VACUUM PUMP EQUIPPED WITH DRY TYPE INLET FILTER

2. Efficiency of control apparatus: 99.8 %

3. Height of discharge above ground 1/2 ft.

4. Distance from discharge to nearest property line 150 ft.

5. Volume of gas discharged into open air 100 cu. ft. per min. at stack conditions

6. Exit linear velocity at point of discharge 800 ft. per minute at stack conditions

7. Temperature at point of discharge 80 °F

8. Will emissions comply with existing local requirements? YES

9. Initial cost of control apparatus $ 5000.—

10. Estimated annual operating cost $ 500.—

Sec. E

This application is submitted in accordance with the provisions of N.J.S.A. 26:2C-9.2, and to the best of my knowledge and belief is true and correct.

ADVANCED CHEMICAL TECHNOLOGY
E. STATE St. + RIVER Rd.
CAMDEN, NEW JERSEY
Mailing Address 08105
Zip Code

John M. Rawlins
Signature – all copies
John M. RAWLINS
Name (Print or type)
PLANT MANAGER
Title
609-541-2341
Telephone No.

DO NOT WRITE BELOW

PERMIT TO CONSTRUCT, INSTALL OR ALTER CONTROL APPARATUS OR EQUIPMENT

Application for permission to construct, install or alter the equipment and/or control apparatus as set forth above is APPROVED.

Date NOV 6 1974

PERMIT NO. P 17174

Approved by Leo R. Ivey
Supervisor, Permits & Certificates

Submit original and three (3) copies

M5379

ATTACHMENT K

Nov. 70

NEW JERSEY STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION

APPLICATION FOR PERMIT TO CONSTRUCT, INSTALL OR ALTER CONTROL APPARATUS OR EQUIPMENT

TO: New Jersey State Department of Environmental Protection
Bureau of Air Pollution Control
P. O. Box 1390
Trenton, New Jersey 08625

Date December 23, 1975

Use instructions, Air-D13

Sec. A

1. Full Business Name ADVANCED CHEMICAL TECHNOLOGY - Poly Drum Division
2. Address of equipment and/or control apparatus:
State Street & River Road, Camden, New Jersey 08105 Camden
No. Street Municipality County
3. Location on premises (Bldg., Dept., area etc.) Southwest Corner - Bldg. 56 (rear)
4. Nature of Business Plastic drum manufacturer SIC No.

Sec. B

1. [X] New process equipment and new air pollution control apparatus
   [ ] New air pollution control apparatus on existing process equipment
   [ ] New process equipment with no control apparatus
   [ ] Other:
2. Prior permit numbers covering this installation. Specify.
3. Estimated starting date Feb. 2, 1976 Estimated completion

Sec. C

1. Description of operation Vacuum loads of PE for a blowmolding machine
2. Identify process equipment 10 HP Vac. Loader w/3-40 LE Chambers
3. Raw materials (names) HMWPE (Polyethylene Powder)
Total pounds per hour 1500 lbs. Total pounds per batch 100,000 lbs.
4. Operating procedure:
   [X] Continuous: 20 hrs. per day 6 days per [X] week [ ] month
   [ ] Batch: hrs. per batch Batches per [ ] day [ ] week

Sec. D

Physical and chemical nature of air contaminants which must evolve from operation and be emitted into the open air:

AIR CONTAMINANTS	AMOUNTS OF CONTAMINANTS	
	With Control Apparatus	Without Control Apparatus
Polyethylene Dust	less than 0.5 per Hour	50 lbs./hour

(Continue on reverse side)

ATTACHMENT K7

P22246

Sec. E

1. Describe air pollution control apparatus: Vacuum Chambers equipped with 300 micron self-cleaning filters. Vacumm pump equipped with dry type inlet filters.

2. Efficiency of control apparatus: 99.8 %

3. Height of discharge above ground: ½ ft.

4. Distance from discharge to nearest property line: 150 ft.

5. Volume of gas discharged into open air: 100 cu. ft. per min. at stack conditions

6. Exit linear velocity at point of discharge: 800 ft. per minute at stack conditions

7. Temperature at point of discharge: 80 °F

8. Will emissions comply with existing local requirements? Yes

9. Initial cost of control apparatus $ ~~5,000.00~~

10. Estimated annual operating cost $ ~~500.00~~

This application is submitted in accordance with the provisions of N.J.S.A. 26:2C-9.2, and to the best of my knowledge and belief is true and correct.

ADVANCED CHEMICAL TECHNOLOGY
Poly Drum Division
State Street & River Road
Camden, New Jersey
Mailing Address

08105
Zip Code

John M. Rawlins
Signature – all copies

John M. Rawlins
Name (Print or type)

Plant Manager
Title

(609) 541-2341
Telephone No.

DO NOT WRITE BELOW

PERMIT TO CONSTRUCT, INSTALL OR ALTER CONTROL APPARATUS OR EQUIPMENT

Application for permission to construct, install or alter the equipment and/or control apparatus as set forth above is APPROVED.

Date: FEB 25 1976

PERMIT NO. P 22246

Approved by: Lee R. Dery
Supervisor, Permits & Certificates

Submit original and three (3) copies

M5379

ATTACHMENT K8

Form VEM-017

NEW JERSEY STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF ENVIRONMENTAL QUALITY
AIR POLLUTION CONTROL PROGRAM

All Correspondence must indicate your APC PLANT ID NUMBER

Certificate Number 017175 APC PLANT ID 50102

(Mailing Address)

RUSSELL-STANLEY CORPORATION
STATE ST. & RIVER RD.
CAMDEN NJ 08105

(Plant Location)

POLY DRUM DIV.
STATE ST. & RIVER RD.
CAMDEN CITY

Applicant's Designation of Equipment SILO VENT-FLEX KLEEN-
N.J. Stack No. 002 No. of Stacks 001 No. of Sources 01
Approval 11/06/74 Effective 04/10/80 Expiration 04/10/95

* CERTIFICATE TO OPERATE CONTROL APPARATUS OR EQUIPMENT *

* FIVE YEAR RENEWAL *

THIS RENEWED FIVE YEAR CERTIFICATE IS BEING ISSUED UNDER THE AUTHORITY OF CHAPTER 106, P.L. 1967 (N.J.S.A.26:2C-9.2). THE POSSESSION OF THIS DOCUMENT DOES NOT RELIEVE YOU FROM THE OBLIGATION OF COMPLYING WITH ALL PROVISIONS OF THE NEW JERSEY ADMINISTRATIVE CODE, TITLE 7, CHAPTER 27.

IN ACCORDANCE WITH N.J.S.A. 54:4-3.56 TO 3.58, YOU MAY BE ENTITLED TO AN EXEMPTION OF TAXATION IF YOUR EQUIPMENT IS TAXED AND IS CONSIDERED TO BE AN AIR POLLUTION CONTROL DEVICE. A TAX EXEMPTION APPLICATION MAY BE OBTAINED FROM THE BUREAU OF NEW SOURCE REVIEW.(SEE OTHER SIDE)

IF IT IS NECESSARY TO AMEND YOUR EMERGENCY STANDBY PLANS, PLEASE CONSULT WITH THE APPROPRIATE REGIONAL OFFICE. (SEE OTHER SIDE)

IN ACCORDANCE WITH N.J.A.C. 7:27-8.3(D), THIS CERTIFICATE MUST BE READILY AVAILABLE FOR INSPECTION ON THE OPERATING PREMISES.

RECEIVED
SOUTHERN REGIONAL OFFICE
DEC - 4 1989
NJ DEPT. OF ENVIRONMENTAL PROTECTION
DIV. OF ENVIRONMENTAL QUALITY

N.J. Department of Environmental Protection
Division of Environmental Quality
CN-027, 401 East State Street
Trenton, New Jersey 08625

Approved by: _____

ATTACHMENT 4
11/13/89-12

SRO - CAMDEN COUNTY DEPARTMENT OF
HEALTH AND COMMUNITY SERVICES

Form VEM-017
6/83

Dep Air

NEW JERSEY STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF ENVIRONMENTAL QUALITY
AIR POLLUTION CONTROL PROGRAM
BUREAU OF ENGINEERING AND TECHNOLOGY

All Correspondence must indicate your DEP PLANT ID NUMBER

Permit/Certificate Number 017175 Outside system DEP PLANT ID 30102

(Mailing Address)	(Plant Location)
RUSSELL-STANLEY CORPORATION STATE ST. & RIVER RD. CAMDEN NJ 08105	POLY DRUM DIV. STATE ST. & RIVER RD. CAMDEN CITY

Applicant's Designation of Equipment SILO VENT-FLEX KLEEN-
N.J. Stack No. 002 No. of Stacks 001 No. of Sources 01
Original Approval 11/06/74 Effective 04/10/80 Expiration 04/10/90

CERTIFICATE TO OPERATE CONTROL APPARATUS OR EQUIPMENT (5 YEAR RENEWAL)

THIS (5 YEAR RENEWAL) CERTIFICATE IS BEING ISSUED UNDER THE AUTHORITY OF CHAPTER 106, P.L. 1967 (N.J.S.A.26:2C-9.2). THE POSSESSION OF THIS DOCUMENT DOES NOT RELIEVE YOU FROM THE OBLIGATION OF COMPLYING WITH ALL OTHER PROVISIONS OF TITLE 7, CHAPTER 27, OF THE NEW JERSEY ADMINISTRATIVE CODE.

YOU MAY BE ENTITLED TO AN EXEMPTION OF TAXATION IF YOUR EQUIPMENT IS TAXED AND IS CONSIDERED TO BE AN AIR POLLUTION ABATEMENT FACILITY. A TAX EXEMPTION APPLICATION MAY BE OBTAINED FROM THIS SECTION.

IF IT IS NECESSARY TO AMEND YOUR EMERGENCY STANDBY PLANS, PLEASE CONSULT WITH THE APPROPRIATE FIELD OFFICE. (SEE OTHER SIDE).

THIS DOCUMENT MUST BE READILY AVAILABLE FOR INSPECTION AT THE PLANT.

RECEIVED
JAN 17 1985
N.J. STATE DEPT. OF ENVIRONMENTAL PROTECTION
DIVISION OF ENVIRONMENTAL QUALITY

N.J. Department of Environmental Protection
Division of Environmental Quality
CN-027
Trenton, New Jersey 08625

Approved by: _____
Supervisor
New Source Review Section

ATTACHMENT 2
01/05/85-12

VEM-017

/2

NEW JERSEY STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF ENVIRONMENTAL QUALITY
AIR POLLUTION CONTROL PROGRAM
BUREAU OF ENGINEERING AND TECHNOLOGY

All Correspondence must indicate your DEP PLANT ID NUMBER

Permit/Certificate Number 017175 DEP PLANT ID 50102

(Mailing Address)

RUSSELL-STANLEY CORPORATION
STATE ST. & RIVER RD.
CAMDEN NJ 08105

(Plant Location)

POLY DRUM DIV.
STATE ST. & RIVER RD.
CAMDEN CITY

Applicant's Designation of Equipment SILO VENT-FLEX KLEEN-
N.J. Stack No. 002 No. of Stacks 001 No. of Sources 01
Original Approval 11/06/74 Effective 04/10/80 Expiration 04/10/85

PERMIT TO CONSTRUCT, INSTALL OR ALTER CONTROL APPARATUS OR EQUIPMENT
AND
CERTIFICATE TO OPERATE CONTROL APPARATUS OR EQUIPMENT (TRANSFER)

THIS PERMIT AND CERTIFICATE IS TRANSFERRED FROM THE FORMER OWNER TO YOU.

IT IS NOW YOUR RESPONSIBILITY TO OPERATE THIS EQUIPMENT IN ACCORDANCE WITH THE CONDITIONS OF THE PERMIT AND CERTIFICATE APPLICATION.

THIS DOCUMENT MUST BE READILY AVAILABLE FOR INSPECTION AT THE PLANT.

RECEIVED
AUG 30 1984
N.J. STATE DEPT. OF ENVIRONMENTAL PROTECTION
DIVISION OF ENVIRONMENTAL QUALITY

N.J. Department of Environmental Protection
Division of Environmental Quality
CN-027
Trenton, New Jersey 08625

Approved by: _____
Supervisor
New Source Review Section

ATTACHMENT 13
08/22/84-DB

Form VEM-017
6/83

2

NEW JERSEY STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION

RECEIVED
OCT 12 1984
N.J. STATE DEPT. OF ENVIRONMENTAL PROTECTION
DIVISION OF ENVIRONMENTAL QUALITY

DIVISION OF ENVIRONMENTAL QUALITY
AIR POLLUTION CONTROL PROGRAM
BUREAU OF ENGINEERING AND TECHNOLOGY

All Correspondence must indicate your DEP PLANT ID NUMBER

Permit/Certificate Number 017175 DEP PLANT ID 50102

(Mailing Address)

RUSSELL-STANLEY CORPORATION
STATE ST. & RIVER RD.
CAMDEN NJ 08105

(Plant Location)

POLY DRUM DIV.
STATE ST. & RIVER RD.
CAMDEN CITY

Applicant's Designation of Equipment SILO VENT-FLEX KLEEN-
N.J. Stack No. 002 No. of Stacks 001 No. of Sources 01
Original Approval 11/06/74 Effective 04/10/80 Expiration 04/10/85

CERTIFICATE TO OPERATE CONTROL APPARATUS/EQUIPMENT (EXPIRATION NOTICE)

THIS CERTIFICATE EXPIRES ON THE DATE NOTED ABOVE. CHECK THE APPROPRIATE BOX AND FOLLOW THE INSTRUCTIONS GIVEN.

-- TO RENEW THE CERTIFICATE, SIGN AND RETURN THE YELLOW COPY AND EN-
| | CLOSE THE $20 SERVICE FEE AT LEAST 90 DAYS BEFORE THE EXPIRATION.
--

-- TO TRANSFER OWNERSHIP AND RENEW THE CERTIFICATE, SIGN AND RETURN
| | THE YELLOW COPY WITH $30 AT LEAST 90 DAYS BEFORE THE EXPIRATION.
-- MAKE THE NECESSARY NAME AND ADDRESS CHANGES ABOVE.

-- TO TERMINATE THE CERTIFICATE, SIGN AND RETURN THE YELLOW COPY.
| | (YOU MAY BE ELIGIBLE FOR BANKING THE EMISSIONS REDUCTION IN
-- ACCORDANCE WITH N.J.A.C. 7:27-18.7. IF INTERESTED, RETURN A WRITTEN REQUEST WITH THE YELLOW COPY.)

SIGNATURE _____ TITLE _____ DATE _____

NOTE: IF YOU OPERATE YOUR EQUIPMENT BEYOND THE EXPIRATION DATE WITHOUT OBTAINING A RENEWAL, YOU MAY BE LIABLE FOR A PENALTY OF $2500 PER DAY AND/OR A COURT ORDER AS PROVIDED IN N.J.A.C. 26:2C-19. ALL FEES MUST BE EITHER A CERTIFIED CHECK OR MONEY ORDER PAYABLE TO THE STATE OF NEW JERSEY: PLEASE KEEP THE WHITE COPY FOR YOUR RECORDS. MAIL THE YELLOW COPY AND FEE TO: N.J. DEPT. OF ENVIRONMENTAL PROTECTION, BUREAU OF COLLECTIONS AND LICENSING CN402, TRENTON, N.J. 08625

- -

TRANSACTION |N| ACTION TYPE |R|E|N| NOTIFICATION LETTER |/|2|

TIME UNITS |0|0|0|3| FEE |0|0| |0|

ACTION DATE |_|_|_|_|_|_| PERSONNEL CODE |9|9|9| TR NO. |_|_|_|_|_|_|

N.J. Department of Environmental Protection
Division of Environmental Quality
CN-027
Trenton, New Jersey 08625

Approved by: _____
Supervisor
New Source Review Section

ATTACHMENT L4

09/26/84-06

Air-30
Nov. 70

NJ#2

NEW JERSEY STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION

APPLICATION FOR CERTIFICATE TO OPERATE CONTROL APPARATUS OR EQUIPMENT

TO: New Jersey State Department of Environmental Protection
Bureau of Air Pollution Control
P. O. Box 1390
Trenton, New Jersey 08625

Date 11/14/74

Use Instructions, Air-D-14

Sec. A

1. Reference Permit No. P-17175 SIC No.
2. Full Business Name ADVANCED CHEMICAL TECHNOLOGY
3. Address of equipment and/or control apparatus: E. STATE ST. + RIVER RD. CAMDEN, N.J. 08105
   No. Street Municipality County
4. Location on premises (Bldg., Dept., area, etc.) 20 FT FROM RIGHT CORNER OF THE BUILDING.

Sec. B

1. Identify process equipment PLASTIC BLOW MOLDING OF 55 GALLON POLYETHYLENE DRUMS
2. List air pollution control apparatus 10 h/p VACUUM UNIT WITH 3/40 LB CHAMBERS EQUIPTED WITH (300) MICRON SELF CLEANING DRY INLET TYPE FILTERS.
3. Date equipment to be put in use SEPT. 25-1974

Sec. C

Plant Contact:

JOHN M. RAWLINS — Name (Print or Type)
609-541-2341 — Telephone No.
PLANT MANAGER — Title
Telephone Extension

This application is submitted in accordance with the provisions of N.J.S.A. 26:2C-9.2, and to the best of my knowledge and belief is true and correct.

ADVANCED CHEMICAL TECHNOLOGY
E. STATE ST. + RIVER Rd
CAMDEN, N.J. 08105
Mailing Address, Zip

John M. Rawlins
Signature – all copies
JOHN M. RAWLINS
Name (Print or Type)
PLANT MANAGER
Title

DO NOT WRITE BELOW

CERTIFICATE TO OPERATE CONTROL APPARATUS OR EQUIPMENT

TEMPORARY DURATION	5 YEAR DURATION
Certificate No.	Certificate No. CT-17,175
Date Approved	Date Approved APR 10 1975
Expiration date	Expiration date APR 10 1980
Approved by: Supervisor, Permits & Certificates	Approved by: Supervisor, Permits & Certificates

ATTACHMENT L5

Air-29,
Nov. 70

NEW JERSEY STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION

APPLICATION FOR PERMIT TO CONSTRUCT, INSTALL OR ALTER CONTROL APPARATUS OR EQUIPMENT

TO: New Jersey State Department of Environmental Protection
Bureau of Air Pollution Control
P. O. Box 1390
Trenton, New Jersey 08625

Date 10/22/74

Use instructions, Air-D13

Sec. A

1. Full Business Name Advanced Chemical Technology
2. Address of equipment and/or control apparatus:
E. State St. + River Rd Camden, New Jersey 08105
No. Street Municipality County
3. Location on premises (Bldg., Dept., area etc.) Right Rear of Building
4. Nature of Business Blow Molding Plastic Drums SIC No.

Sec. B

1. [X] New process equipment and new air pollution control apparatus
   [ ] New air pollution control apparatus on existing process equipment
   [ ] New process equipment with no control apparatus
   [ ] Other:
2. Prior permit numbers covering this installation. Specify.
3. Estimated starting date July 1974 Estimated completion Sept. 25th

Sec. C

1. Description of operation Filling Silo with Polyethelene Powder By Vacuum Process
2. Identify process equipment Poly Stoerage Silo Cap. 5670 cu/ft 200,000 lbs
3. Raw materials (names) Polyethylene Powder DMT HSS
   Total pounds per hour 6000 LBS/HR Total pounds per batch 100,000
4. Operating procedure:
   [ ] Continuous: 18 hrs. per day 1 days per [X] week [ ] month
   [ ] Batch: 18 hrs. per batch 1 Batches per [ ] day [X] week

Sec. D

Physical and chemical nature of air contaminants which must evolve from operation and be emitted into the open air:

AIR CONTAMINANTS	AMOUNTS OF CONTAMINANTS	
	With Control Apparatus	Without Control Apparatus
Polyethylene Powder	~~[illegible]~~ Less 0.5 per H/R	20 LBS/HR

(Continue on reverse side)

ATTACHMENT L6

Sec. E

1. Describe air pollution control apparatus "FLEX KLEEN" DUST COLLECTOR, MODEL # 84-BV9-1, SER. #33-11-5694-3, FILTER AREA 90 FT² COTTON-SATIN WITH AUTO'Y PULSED AIR CLEAN OUT
2. Efficiency of control apparatus: 99.9 %
3. Height of discharge above ground 56 ft.
4. Distance from discharge to nearest property line 100 ft.
5. Volume of gas discharged into open air 5 cu. ft. per min. at stack conditions } VACUUM LOADING
6. Exit linear velocity at point of discharge APPR. 2 ft. per minute at stack conditions }
7. Temperature at point of discharge AMBIENT °F
8. Will emissions comply with existing local requirements? YES
9. Initial cost of control apparatus $ 1500.-
10. Estimated annual operating cost $ 500.-

This application is submitted in accordance with the provisions of N.J.S.A. 26:2C-9.2, and to the best of my knowledge and belief is true and correct.

Advanced Chemical Technology — John M. Rawlins
Signature — all copies

L. State St. & River Rd — John M. Rawlins
Name (Print or type)

Camden, New Jersey — Plant Manager
Mailing Address — Title

08105 — 609-541-2341
Zip Code — Telephone No.

DO NOT WRITE BELOW

PERMIT TO CONSTRUCT, INSTALL OR ALTER CONTROL APPARATUS OR EQUIPMENT

Application for permission to construct, install or alter the equipment and/or control apparatus as set forth above is APPROVED.

Date NOV 6 1974 — Approved by: Lee R. Ivey

PERMIT NO. P 17175 — Supervisor, Permits & Certificates

Submit original and three (3) copies

M5379

ATTACHMENT L7

Form VEM-017
12/84

DEQ, AIR

3

NEW JERSEY STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF ENVIRONMENTAL QUALITY
AIR POLLUTION CONTROL PROGRAM
BUREAU OF ENGINEERING AND TECHNOLOGY

All Correspondence must indicate your APC PLANT ID NUMBER

Permit/Certificate Number 022246 APC PLANT ID 50102

(Mailing Address)

RUSSELL-STANLEY CORPORATION
STATE ST. & RIVER RD.
CAMDEN NJ 08105

(Plant Location)

POLY DRUM DIV.
STATE ST. & RIVER RD.
CAMDEN CITY

Applicant's Designation of Equipment 10 HP VAC LOADER-BLDG 56
N.J. Stack No. 003 No. of Stacks 001 No. of Sources 01
Original Approval 08/11/81 Effective 08/11/81 Expiration 08/11/91

CERTIFICATE TO OPERATE CONTROL APPARATUS OR EQUIPMENT (5 YEAR RENEWAL)

THIS (5 YEAR RENEWAL) CERTIFICATE IS BEING ISSUED UNDER THE AUTHORITY OF CHAPTER 106, P.L. 1967 (N.J.S.A.26:2C-9.2). THE POSSESSION OF THIS DOCUMENT DOES NOT RELIEVE YOU FROM THE OBLIGATION OF COMPLYING WITH ALL OTHER PROVISIONS OF TITLE 7, CHAPTER 27, OF THE NEW JERSEY ADMINISTRATIVE CODE.

YOU MAY BE ENTITLED TO AN EXEMPTION OF TAXATION IF YOUR EQUIPMENT IS TAXED AND IS CONSIDERED TO BE AN AIR POLLUTION ABATEMENT FACILITY. A TAX EXEMPTION APPLICATION MAY BE OBTAINED FROM THIS SECTION.

IF IT IS NECESSARY TO AMEND YOUR EMERGENCY STANDBY PLANS, PLEASE CONSULT WITH THE APPROPRIATE FIELD OFFICE. (SEE OTHER SIDE).

THIS DOCUMENT MUST BE READILY AVAILABLE FOR INSPECTION AT THE PLANT.

RECEIVED
MAY 01 1986
N.J. DEPT. OF ENVIRONMENTAL PROTECTION
DIVISION OF ENVIRONMENTAL QUALITY

N.J. Department of Environmental Protection
Division of Environmental Quality
CN-027
Trenton, New Jersey 08625

Approved by: _____
Supervisor
New Source Review Section

ATTACHMENT M
04/22/86-12

CAMDEN COUNTY DEPARTMENT OF
HEALTH AND COMMUNITY SERVICES

Form VEM-017
6/83

3

NEW JERSEY STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF ENVIRONMENTAL QUALITY
AIR POLLUTION CONTROL PROGRAM
BUREAU OF ENGINEERING AND TECHNOLOGY

All Correspondence must indicate your DEP PLANT ID NUMBER

Permit/Certificate Number 022246 DEP PLANT ID 50102

(Mailing Address)

RUSSELL-STANLEY CORPORATION
STATE ST. & RIVER RD.
CAMDEN NJ 08105

(Plant Location)

POLY DRUM DIV.
STATE ST. & RIVER RD.
CAMDEN CITY

Applicant's Designation of Equipment 10 HP VAC LOADER-BLDG 56
N.J. Stack No. 003 No. of Stacks 001 No. of Sources 01
Original Approval 08/11/81 Effective 08/11/81 Expiration 08/11/86

PERMIT TO CONSTRUCT, INSTALL OR ALTER CONTROL APPARATUS OR EQUIPMENT
AND
CERTIFICATE TO OPERATE CONTROL APPARATUS OR EQUIPMENT (TRANSFER)

THIS PERMIT AND CERTIFICATE IS TRANSFERRED FROM THE FORMER OWNER TO YOU.

IT IS NOW YOUR RESPONSIBILITY TO OPERATE THIS EQUIPMENT IN ACCORDANCE WITH THE CONDITIONS OF THE PERMIT AND CERTIFICATE APPLICATION.

THIS DOCUMENT MUST BE READILY AVAILABLE FOR INSPECTION AT THE PLANT.

RECEIVED
AUG 30 1984
N.J. STATE DEPT. OF ENVIRONMENTAL PROTECTION
DIVISION OF ENVIRONMENTAL QUALITY

N.J. Department of Environmental Protection
Division of Environmental Quality
CN-027
Trenton, New Jersey 08625

Approved by: _____
Supervisor
New Source Review Section

ATTACHMENT M
08/22/84-08

3

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF ENVIRONMENTAL QUALITY
BUREAU OF AIR POLLUTION CONTROL

CERTIFICATE TO OPERATE CONTROL APPARATUS OR EQUIPMENT (5 YEAR)

Permit and Certificate Number 22246

DEP Plant ID 50102

(Mailing Address)

Advanced Chemical Technology
State Street & River RD
Camden, New Jersey 08105

(Plant Location)

Same
Camden County

Applicant's Designation of Equipment Loading blow mold machine

No. of Sources

N.J. Stack No. 0 0 3

No. of Stacks

Expiration 8 (Mo.) 11 (Day) 86 (Year)

Approval (Mo.) (Day) (Year)

Start Up (Mo.) (Day) (Year)

THIS PERMANENT (5YEAR) CERTIFICATE IS BEING ISSUED UNDER THE AUTHORITY OF CHAPTER 106,P.L.1967(NJSA26:2C-9.2). THE POSSESSION OF THIS DOCUMENT DOES NOT RELIEVE YOU FROM THE OBLIGATION OF COMPLYING WITH ALL OTHER PROVISIONS OF TITLE 7, CHAPTER 27, OF THE NEW JERSEY ADMINISTRATIVE CODE. AND OTHER APPLICABLE LOCAL, STATE OR FEDERAL REGULATIONS YOU MAY BE ENTITLED TO AN EXEMPTION OF TAXATION IF YOUR EQUIPMENT IS TAXED AND IS CONSIDERED TO BE AN AIR POLLUTION ABATEMENT FACILITY. A TAX EXEMPTION APPLICATION MAY BE OBTAINED FROM THIS SECTION.

IF IT IS NECESSARY TO AMEND YOUR EMERGENCY STANDBY PLANS, PLEASE CONSULT WITH THE APPROPRIATE FIELD OFFICE. (SEE OTHER SIDE)

QUESTIONS ABOUT THIS DOCUMENT SHOULD BE DIRECTED TO THE PERMITS AND CERTIFICATES SECTION AT 609 - 292 - 6716 OR THE ADDRESS BELOW.

RECEIVED
JUN 26 1981
N.J. STATE DEPT. OF ENVIRONMENTAL PROTECTION
DIVISION OF ENVIRONMENTAL QUALITY

NOTE: This document must be readily available for inspection at the source location.

Approved by: William F. Hartwell
Supervisor
Permits & Certificates Section

N.J. Department of Environmental Protection
Bureau of Air Pollution Control
CN-027
Trenton, N.J. 08625

NJ3

Form VEM-026 T
1/79

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF ENVIRONMENTAL QUALITY
BUREAU OF AIR POLLUTION CONTROL

CERTIFICATE TO OPERATE CONTROL APPARATUS OR EQUIPMENT (EXPIRATION NOTICE)

Permit and Certificate Number 022246 DEP Plant ID 50102

(Mailing Address)

Advanced Chemical Technology
State Street & River Rd.
Camden, N. J. 08105

(Plant Location)

Same
Camden County

Applicant's Designation of Equipment Plastic blow molding of 55- gallon Polyethylene

N.J. Stack No. 003 No. of Stacks 01 No. of Sources 001

Approval 8 (Mo.) 11 (Day) 76 (Year) Start Up ___ (Mo.) ___ (Day) ___ (Year) Expiration 8 (Mo.) 11 (Day) 81 (Year)

THIS CERTIFICATE WILL EXPIRE ON THE DATE NOTED ABOVE. IF YOU WISH TO HAVE THIS CERTIFICATE RENEWED PLEASE:

1) COMPLETE AND SUBMIT TO THIS SECTION THE APPLICATION FORMS VEM-003 AND VEM-004 (FORMS AND INSTRUCTIONS ATTACHED) AND

2) SUBMIT A $20.00 RENEWAL FEE (CERTIFIED CHECK OR MONEY ORDER MADE PAYABLE TO THE NEW JERSEY BUREAU OF AIR POLLUTION CONTROL).

RENEWALS SHOULD BE SUBMITTED TO THIS SECTION AT LEAST 90 DAYS PRIOR THE EXPIRATION DATE OF THIS CERTIFICATE.

IF YOU OPERATE YOUR EQUIPMENT BEYOND THE EXPIRATION DATE WITHOUT OBTAINING A CERTIFICATE RENEWAL, YOU WILL BE LIABLE FOR A PENALTY OF $2,500 PER DAY AND/OR AN INJUNCTIVE ORDER OF THE COURTS AS PROVIDED IN N.J.S.A. 26:2C-19.

QUESTIONS ABOUT THIS DOCUMENT SHOULD BE DIRECTED TO THE PERMITS AND CERTIFICATES SECTION AT 609 - 292 - 6716 OR THE ADDRESS BELOW.

RECEIVED
APR 13 1981
N.J. STATE DEPT. OF ENVIRONMENTAL PROTECTION
DIVISION OF ENVIRONMENTAL QUALITY

NOTE: This document must be readily available for inspection at the source location.

Approved by: William F. Hart
Supervisor
Permits & Certificates Section

N.J. Department of Environmental Protection
Bureau of Air Pollution Control
CN-027

ATTACHMENT M

Air-30
Nov. 70

NJ#3

NEW JERSEY STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION

APPLICATION FOR CERTIFICATE TO OPERATE CONTROL APPARATUS OR EQUIPMENT

TO: New Jersey State Department of Environmental Protection
Bureau of Air Pollution Control
P. O. Box 1390
Trenton, New Jersey 08625

Date December 23, 1975

Use Instructions, Air-D-14

Sec. A

1. Reference Permit No. ~~P-17175~~ 22246 SIC No.
2. Full Business Name ADVANCED CHEMICAL TECHNOLOGY - Poly-Drum Div.
3. Address of equipment and/or control apparatus:
   State Street & River Road Camden, New Jersey 08105
   No. Street Municipality County
4. Location on premises (Bldg., Dept., area, etc.) 80 ft. from right corner of Bldg. 56

Sec. B

1. Identify process equipment Plastic blow molding of 55-gallon Polyethylene drums.
2. List air pollution control apparatus 10 HP Vacuum Unit w/3/40 Lb. Chambers equipped with 300 mickon self-cleaning filters. ~~(Dry inlet type)~~
3. Date equipment to be put in use February 2, 1976

Sec. C

Plant Contact:

John M. Rawlins	Plant # 609-541-2341
Name (Print or Type)	*Telephone No.*
Plant Manager	Home # 609-~~XX~~ 654-6292
Title	*Telephone Extension*

This application is submitted in accordance with the provisions of N.J.S.A. 26:2C-9.2, and to the best of my knowledge and belief is true and correct.

ADVANCED CHEMICAL TECHNOLOGY
Poly Drum Division
State Street & River Road
Camden, New Jersey 08105
Mailing Address, Zip

John M. Rawlins
Signature – all copies
John M. Rawlins
Name (Print or Type)
Plant Manager
Title

DO NOT WRITE BELOW

CERTIFICATE TO OPERATE CONTROL APPARATUS OR EQUIPMENT

TEMPORARY DURATION	5 YEAR DURATION
Certificate No.	Certificate No. CT 22246
Date Approved	Date Approved AUG 11 1976
Expiration date	Expiration date AUG 11 1981
Approved by: Supervisor, Permits & Certificates	Approved by: Supervisor, Permits & Certificates

Submit original and seven (7) copies

ATTACHMENT

37

Nov 19 10 00 AM '86

PROPOSED

SAMPLING AND ANALYSIS PLAN

FOR

ADVANCED CHEMICAL TECHNOLOGY (PLANT INDUSTRIES)

CAMDEN, NEW JERSEY

Prepared by:

J M Sorge, Inc.
3301 U.S. Highway 22
Somerville, NJ

November 1986

ATTACHMENT N1

1.0 INTRODUCTION

J M Sorge, Inc. has been retained to conduct investigations related to the Environmental Clean-Up Responsibility Act (ECRA) regarding the site formerly operated by Plant Industries and Advanced Chemical Technology located at River Road and State Street in Camden, New Jersey. The following presents the Sampling and Analysis Plan developed for the Advanced Chemical Technology (ACT) Polydrum facility. The program detailed below addresses the additional Sampling Plan requested by the Bureau of Industrial Site Evaluation (BISE) letter dated 21 October, 1985. The purpose of the Plan is to determine the nature and the horizontal and vertical extent of the soil contamination present at the site; a groundwater investigation is also proposed to determine if groundwater contamination exists at the site.

2.0 ENVIRONMENTAL SETTING

2.1 GENERAL

ACT site is located in the north-northeastern part of the city of Camden (Figure 1). The major land uses in the study area are urban, industrial, commercial and residential. The closest residential area is located north-northeast of the property. No public or private water wells are located within 1/4 mile of the site.

2.2 FACILITY BACKGROUND

ACT started operation at the facility in 1974 and was sold to Russell-Stanley Corporation in February, 1984. Russell-Stanley continued the same operation at the site. The remaining portion of the facility building is occupied by Hill Bros. Lumber and Ceramic Merchandise Warehouse.

ACT was engaged in the manufacturing of plastic drums. The materials used during the manufacturing process are plastic resin beads; ethylene glycol is used as a coolant which allowed for the newly-formed plastic drums to harden quicker. Oil is used as a lubricant for three (3) molding machines utilized in the manufacturing process.

The plastic resin beads are stored in above-ground silos. All other materials are stored in the original 55-gallon steel drums as shipped from the manufacturer. The waste oil generated either through periodic maintenance of the molding machines or through accidental equipment failures are stored in 55-gallon drums and shipped off-site to Flowen Oil Delaware Valley, Inc. of Camden, New Jersey for reclamation/disposal.

ATTACHMENT N2

2.3 SOILS

Approximately one-half of the property area is covered with asphalt/concrete pavement and the building. The remaining open area in the north has been filled with construction debris, etc. As seen from remnants of the concrete structure and the asphalt pavements, it appears that a building was situated in this area and demolished in the historic past; no further information, however, is available.

The soils beneath the surface overburden are comprised of fine sands with intermittent clay to silty/sandy clay strata. This part of Camden County has not been included in the soil survey conducted by the Soil Conservation Service (SCS Series 1961, No. 42, Camden County, New Jersey). However, the site area was included in a similar survey conducted by Rutgers University. These unconsolidated, stratified alluvial deposits are mapped as AM-24 (Engineering Soil Survey of New Jersey, Report No. 17, Rutgers University, 1955). The soils exhibit usually good to excellent surface drainage because of the rolling to undulating plains topography.

2.4 GEOLOGY/HYDROGEOLOGY

2.4.1 Regional Geology/Hydrogeology

ACT site lies within a major physiographic division, the Atlantic Coastal Plain of New Jersey (Figure 2). The New Jersey Coastal Plain is characterized by a wedge of unconsolidated sediments that thicken and dip southeast toward the Atlantic Ocean. The oldest of these sediments are the Potomac Group and Raritan and Mogothy Formations of the Cretaceous Age which overlie crystalline bedrock.

The Potomac-Raritan-Mogothy aquifer system consists of aquifer units composed of sand and gravel and confining units of silt and clay. Rapid changes in the character of these formations are extremely common. In and near outcrop areas, the clay units are generally composed of dense, tough plastic clays. The clay beds are often lignitic and contain pyrite (Barksdale et al, 1958). The sand units are usually well sorted, and vary in texture from very fine-grained sands in Mogothy to medium- and/or coarse-grained sands to fine-grained gravels into the Raritan. Three (3) major aquifer units, identified as the lower, middle, and upper units, have been defined within the aquifer system in the area. A typical geohydrologic section is illustrated in Figure 3.

The aquifer system is confined from below by crystalline bedrock and from above by the thick clay of the Merchantville-Woodbury confining unit. The Potomac-Raritan-Mogothy aquifer is under artesian conditions, except in parts of the outcrop area where the upper and middle aquifers are under water-table conditions.

ATTACHMENT N3

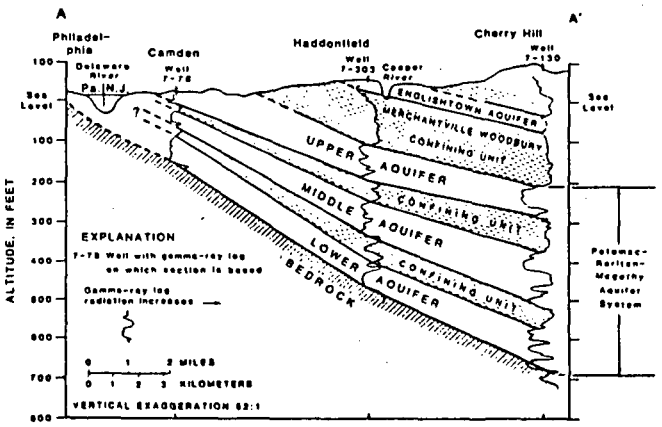


Figure 3. Geohydrologic section through the study area.
(after Fusillo, Hochreiter Jr.,Lord, 1985, figure 2)

ATTACHMENT N4

The lower aquifer is not thought to occur as a water-table aquifer in New Jersey but may in areas of Pennsylvania. The lower aquifer may also receive recharge vertically through the leaky confining unit between the middle and lower aquifer. Potentiometric heads in the middle and lower aquifers are similar in much of the coastal plain and generally are lower than potentiometric heads in the upper aquifer (Walker, 1983).

The hydrogeology is more complex within the outcrop area than the downdip of the outcrop. In the outcrop area, the confining units are thinner, making hydraulic connections between aquifer units more likely. There are also numerous lenses of sand and clay that are present which occur locally. In many parts of the outcrop area, the Cretaceous aquifer system is overlain by Pleistone or Recent deposits, most of which are hydraulically connected to the underlying aquifer system. The artificial removal of large quantities of water has considerably altered the flow pattern of groundwater. Originally, the flow in the areas along the river was probably entirely towards the river. However, the pumping of water from wells in the area along the river has intercepted all or part of this flow. It is probable that some recharge from the river has been induced wherever moderate or heavy pumping is occurring in areas very near to the Delaware River.

2.4.3 Site-Specific Geology/Hydrogeology

The soil boring information from the earlier investigations by Stablex-Reutter (S-R), Inc. at the site indicate that a layer of fine sands occur to a depth of about five (5) feet below grade. This deposit is underlain by an intermittent clay to silty/sandy clay strata, which in turn appears to grade into a fine sand again. This type of stratigraphy is common in this area owing to fluvial depositional processes. Groundwater appears to have been encountered between three (3) and five (5) feet below the land surface; however, no groundwater studies were undertaken at the site. The detailed site specific geologic and hydrogeologic characteristics will be determined during the implementation of the proposed sampling program and will be presented with the sampling plan results. A detailed site stratigraphy describing lithology and thickness of the soil horizons encountered during soil borings will be included. The hydrogeologic information will include depth to the water table, the direction of groundwater flow and other pertinent information.

A request for Hydrogeological Assessment is included in Appendix A. Also included is a map showing well locations in 1/2 mile and 1-mile radius of the site.

ATTACHMENT N5

TABLE 1

Sampling Plan Summary

Location	Matrix	Sample Depth (Units)	Analytical Parameters
Railroad Siding Area			
Borings B-1 to B-6	Soil	1.0-1.5 feet	Petroleum Hydrocarbons, Heavy Metals
		3.0-3.5 feet	Petroleum Hydrocarbons, Heavy Metals
		5.0-5.5 feet	Petroleum Hydrocarbons, Heavy Metals
Borings B-7 to B-12	Soil	1.0-1.5 feet	Petroleum Hydrocarbons, Heavy Metals
		4.0-4.5 feet	Petroleum Hydrocarbons, Heavy Metals
Dumpster Area			
Borings B-13 to B-23	Soil	1.0-1.5 feet	Petroleum Hydrocarbons, Heavy Metals
		4.0-4.5 feet	Petroleum Hydrocarbons, Heavy Metals
		7.0-7.5 feet	Petroleum Hydrocarbons, Heavy Metals
Oil-Stained Area			
Borings B-24 to B-26	Soil	1.0-1.5 feet	Petroleum Hydrocarbons
		3.0-3.5 feet	Petroleum Hydrocarbons

ATTACHMENT N6

Background Sample

Boring B-27	Soil	1.0-1.5 feet	Petroleum Hydrocarbons, Heavy Metals
		3.0-3.5 feet	Petroleum Hydrocarbons, Heavy Metals
		4.0-4.5 feet	Petroleum Hydrocarbons, Heavy Metals
		7.0-7.5 feet	Petroleum Hydrocarbons, Heavy Metals

Groundwater Monitoring

MW-1 to MW-5	Water	Water Table (-5 feet)	Petroleum Hydrocarbons, Heavy Metals, Total Dissolved Solids, Specific Conductance, pH

ATTACHMENT N1

TABLE 2

Number of Samples by Area

Matrix	Area	No. of Samples	Analytical Parameters
Soil (Total - 73)	Railroad Siding Area	30	Petroleum Hydrocarbons, Heavy Metals
	Dumpster Area	33	Petroleum Hydrocarbons, Heavy Metals
	Oil-Stained Area	6	Petroleum Hydrocarbons
	Background Samples	4	Petroleum Hydrocarbons, Heavy Metals
Water (Two Rounds)	Monitoring Wells	10	Petroleum Hydrocarbons, Heavy Metals, Total Dissolved Solids, Specific Conductance, pH

ATTACHMENT N8

TABLE 3

Sampling Plan Schedule

Task	Weeks											
	1	2	3	4	5	6	7	8	9	10	11	12
Monitoring Well Installation	-	-	-									
Soil Sampling		-	-	-								
Groundwater Sampling												
1st Round			X									
2nd Round							X					
Laboratory Analysis (Soil samples and two rounds of water samples)			-	-	-	-	-	-	-	-		
Report Preparation									-	-	-	-

ATTACHMENT No

I. Introduction

Previous investigations conducted at the site identified an area of oil-contaminated soil approximately 150 ft. by 40 ft. adjacent to the dumpster storage area. In accordance with the initial Site Cleanup Plan, the surficial soil was removed from the contaminated area and some 382 tons of contaminated soil was transported from the site. Subsequent sampling of the site adjacent to the dumpster storage area revealed evidence of oil contamination at depths of 2 to 3 ft. below the surface. Additional soil samples were taken at the site on 8/12 and 8/13/85 at eleven locations in and around the contaminated area as shown on Figure 1. The soil samples were analyzed for petroleum hydrocarbon content (PHC) and EP Extractable metals, subsurface conditions were evaluated, the presence of a soil layer of low permeability was confirmed, and tests were conducted to evaluate the rate of permeability of this soil layer.

Test results and soil evaluations can be found in S-R Analytical, Inc. test report SR11868 and Site Engineer's, Inc. report dated 9/12/85, copies of which are attached.

II. Interpretation

A. Chemical Analyses

Twenty-six soil samples were taken at depths from 4 to 10 ft. below existing grade. The PHC of the soil samples ranged from a low of less than 20 ppm to a high of 1600 ppm. As can be seen on Figure 2, the depths at which the PHC values in the soil samples did not exceed the cleanup limit of 100 ppm ranged from 2 to 6 ft. below existing grade.

Based on these test results, the estimated amount of soil at this location containing more than 100 ppm of petroleum hydrocarbons is approximately 1000 cubic yards. Results of the PHC and EP Toxicity tests indicate that for disposal purposes the oil-contaminated soil would be classified as an ID 27 material and not a hazardous waste.

* contamination exists but no indication of removal of soil

ATTACHMENT N10

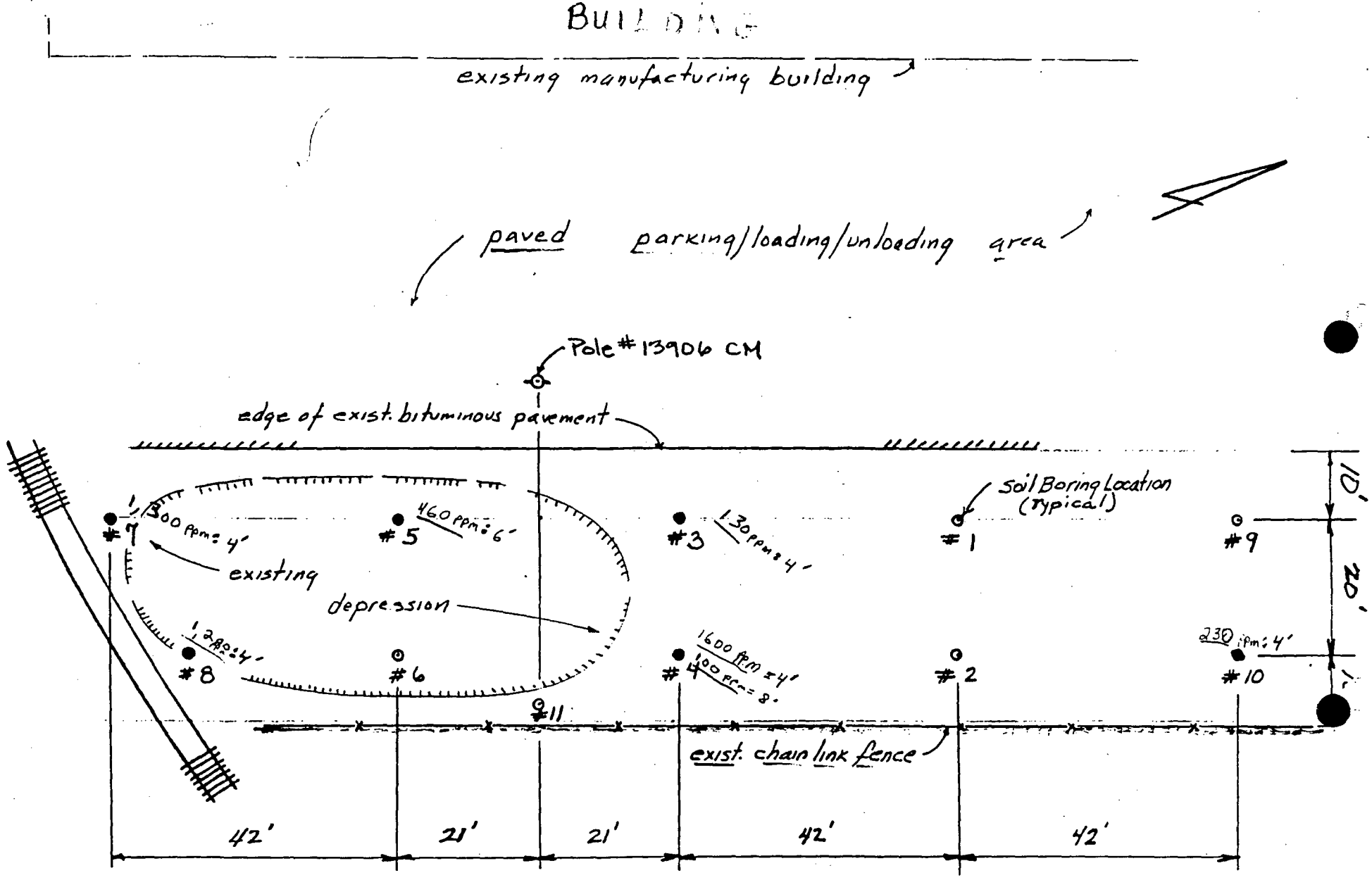


FIGURE 1

SOIL BORING LOCATIONS

0 10' 20' 30' 40'

ATTACHMENT N-1

SOIL BORING NO.

	7	5	3	1	9
0					
1'	13,000	12,000	8,500	8,700	
2'	6,500	2,000	1,400	1,500	
3'	880	710	720	1,300	
4'	1,300	<20	130	<20	
5'					
6' D	<20	460	60	<20	
7' E					
8' P				74	
9' T					
10' H				<20	
11'					
12'					
13'					
14'					
15'					
16'					

	8	6	11	4	2	10
0						
1'	15,000	9,400		12,000	1,200	
2'	11,000	13,000		8,400	80	
3'	1,800	5,000		6,000	<10	
4'	1,200	78	16	1,600		230
5'						
6' D	26	<20		84		
7' E						
8' P	<20	<20		100		
9' T						
10' H	<20	54		80		
11						
12'						
13'						
14'						
15'						
16'						

FIGURE 2

PETROLEUM HYDROCARBON VALUES
(in ppm)

ATTACHMENT N12

B. Soils Analyses

The results of the field and laboratory tests indicate that the contaminated area is underlain by a low permeability clay (4×10^{-6} ft./min.). The clay stratum was encountered at depths of 6 to 9 ft. below existing grade and varied in thickness from 4.5 to 8 ft. as illustrated on Figure 3.

As can also be seen from Figure 3, the PHC of the soil was determined to be less than 100 ppm in samples taken above the clay stratum and samples taken in the clay stratum did not show PHC levels above 100 ppm. This indicates that the clay layer is effectively preventing further migration of the oil contamination into the underlying ground water.

III. Cleanup Plan

A. Method of Cleanup

No mention of soil being removed.

The method considered was to seal the surface of the contaminated area with a bituminous pavement to prevent contact between the contaminated soils and any infiltrating water. In combination with the underlying clay strata, this method would: (1) effectively contain the oil-contaminated soil; (2) prevent contact with the contaminated soil; (3) prevent any further migration of the contamination.

ATTACHMENT N13

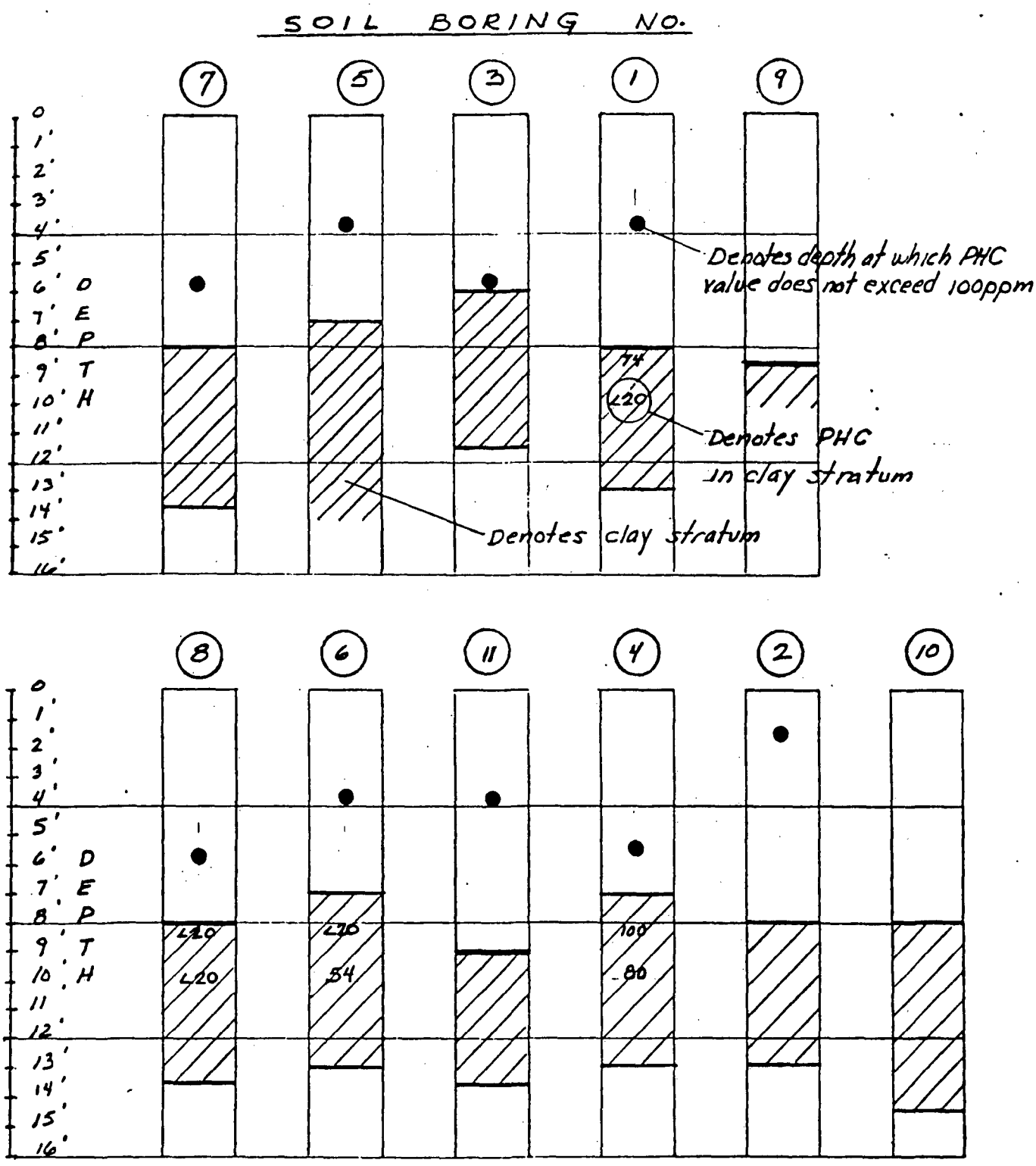


FIGURE 3

LOCATIONS OF CLAY STRATUM

ATTACHMENT N14

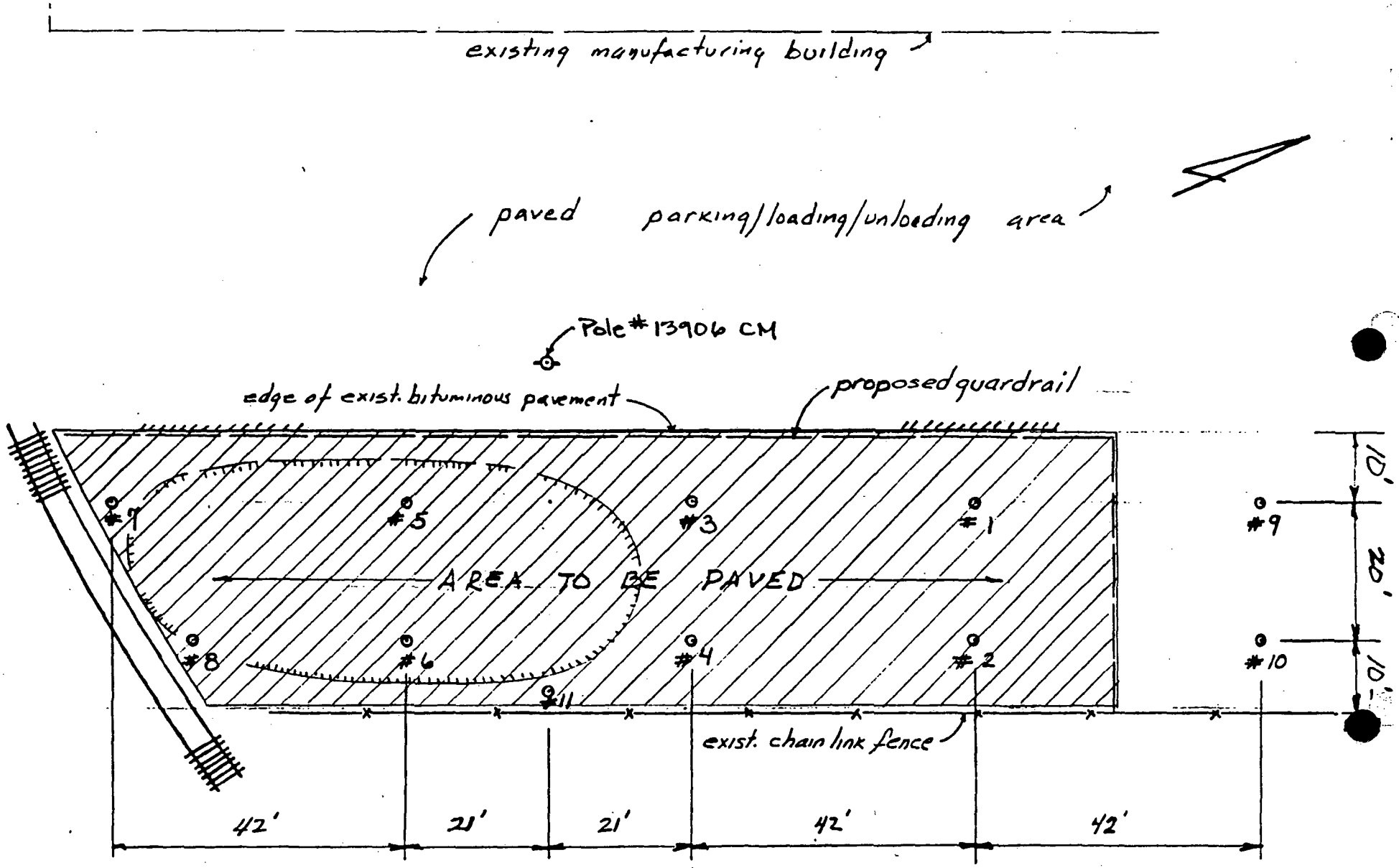


FIGURE 4

PROPOSED AREA TO BE PAVED

0 10' 20' 30' 40'

ATTACHMENT N-16

C. Cleanup Schedule

Item	Time Required
1. Site design and local approvals	2-3 months
2. Contractor procurement	1-2 months
3. Construct pavement and guardrail	1-2 months

D. Maintenance of Sealed Area

Since a total thickness of 8-inches of bituminous concrete will be installed over the contaminated area and the area will not be subjected to wearing by traffic or other sources, it is not expected that significant pavement degradation over time would occur to materially impair the sealing characteristics of the pavement.

Long-term monitoring of the underlying groundwater is not thought to be necessary for the following reasons:

(1) The test results indicate that the underlying clay stratum is effectively preventing migration of the oil contamination.

(2) The contaminants are neither priority pollutants nor toxic chemicals.

(3) The nature and extent of the contamination is such that it does not pose a significant threat to the groundwater system in the area.

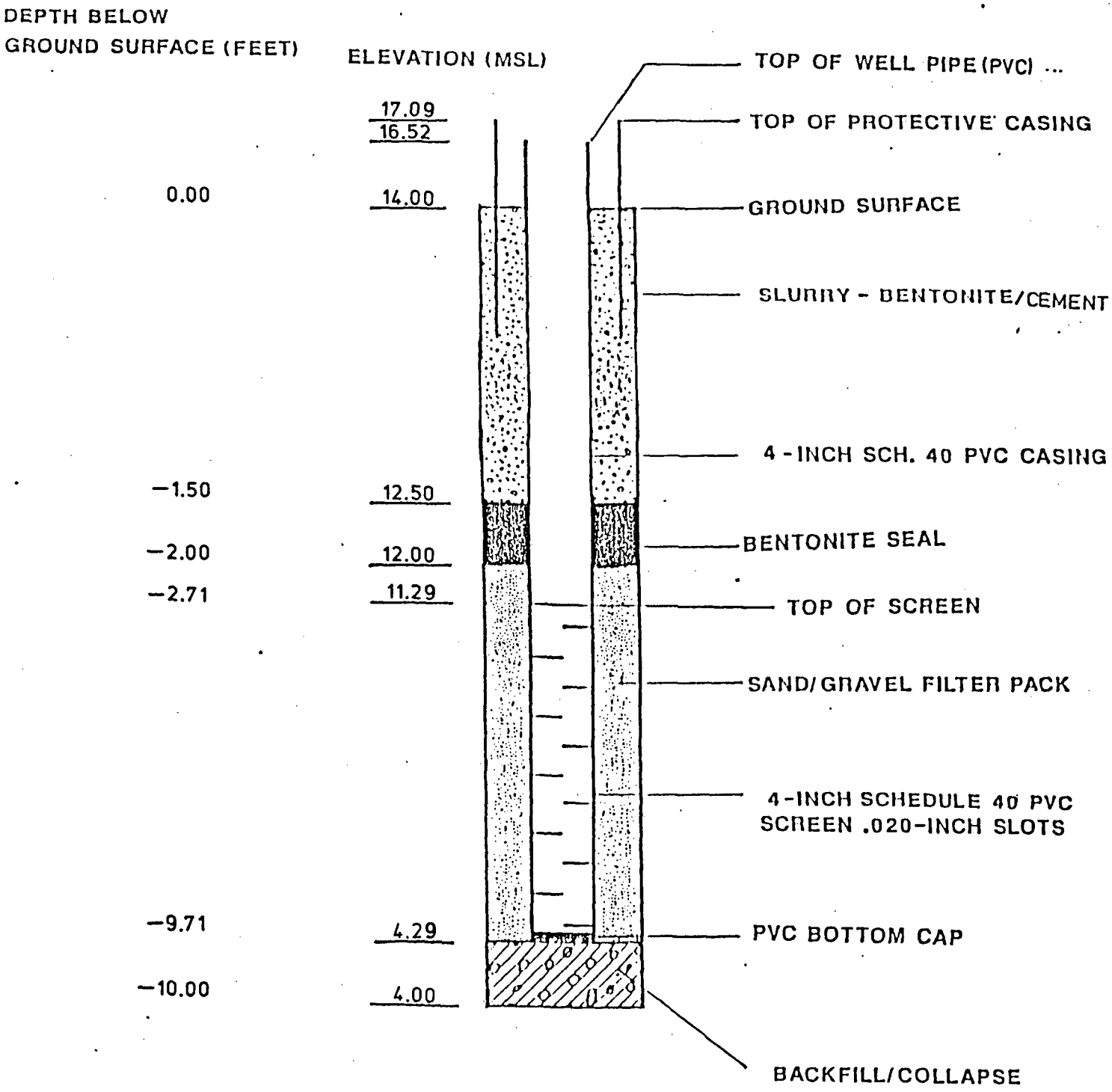
ATTACHMENT N11

(39)

TITLE: MONITORING WELL DIAGRAM	PROJECT NO.: 86013 PROJECT NAME: ADVANCED CHEMICAL TECHNOLOGY	PAGE 1 OF 1

MONITORING WELL MW 1

CONSTRUCTION DETAIL



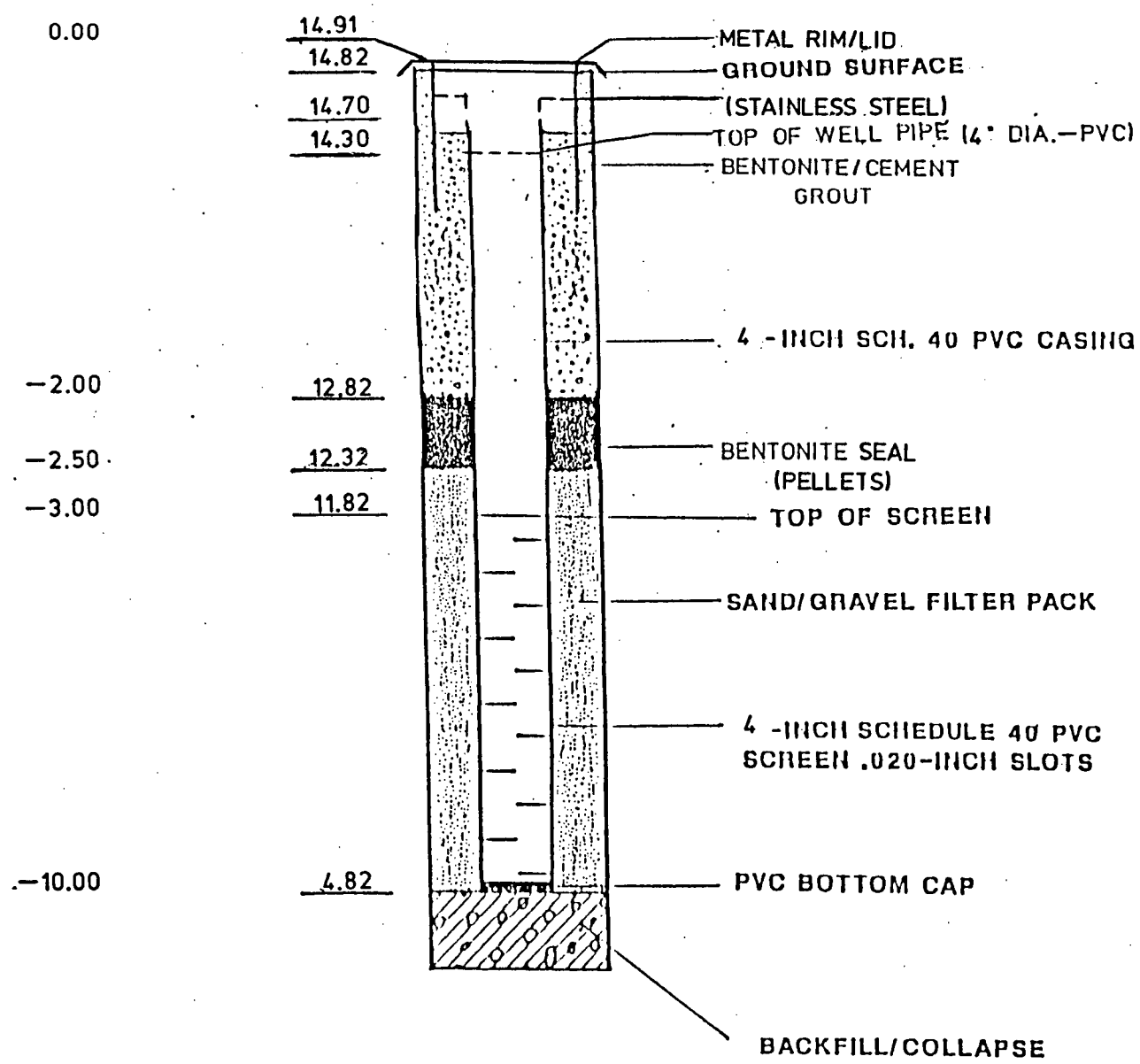
BY: CG DATE: 6/14/88	CHECKED BY: JC DATE: 6/14/88	J M SORGE, INC.

ATTACHMENT 01

TITLE: MONITORING WELL DIAGRAM	PROJECT NO.: 86013 PROJECT NAME ADVANCED CHEMICAL TECHNOLOGY	PAGE 1 OF 1

MONITORING WELL MW 2

FLUSH MOUNT CONSTRUCTION DETAIL



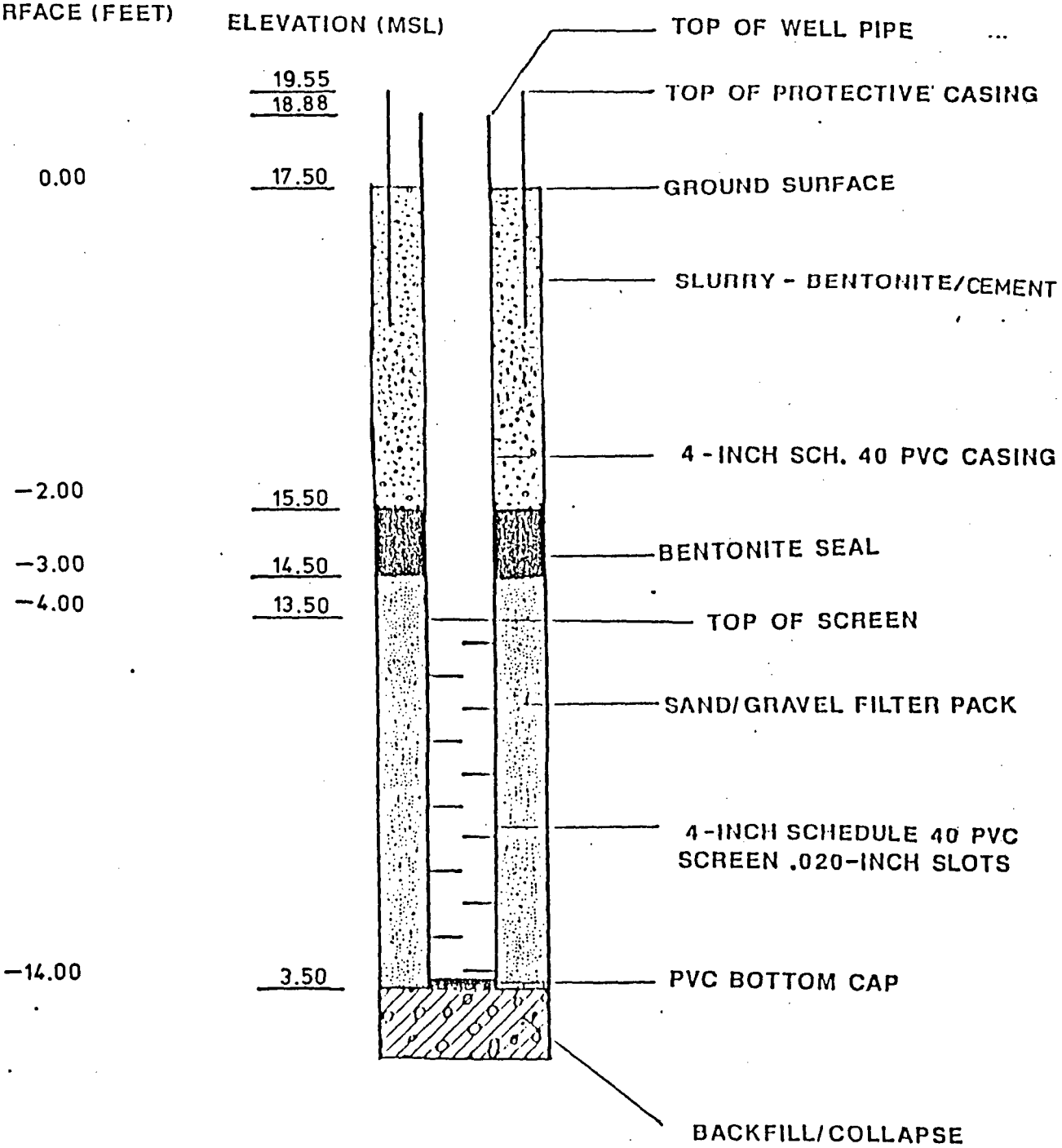
BY: RG DATE: 6/14/88	CHECKED BY: RK DATE: 6/14/88	J M SORGE, INC.

ATTACHMENT D2

TITLE: MONITORING WELL DIAGRAM	PROJECT NO.: 86013 PROJECT NAME: ADVANCED CHEMICAL TECHNOLOGY	PAGE 1 OF 1

MONITORING WELL MW 3

CONSTRUCTION DETAIL



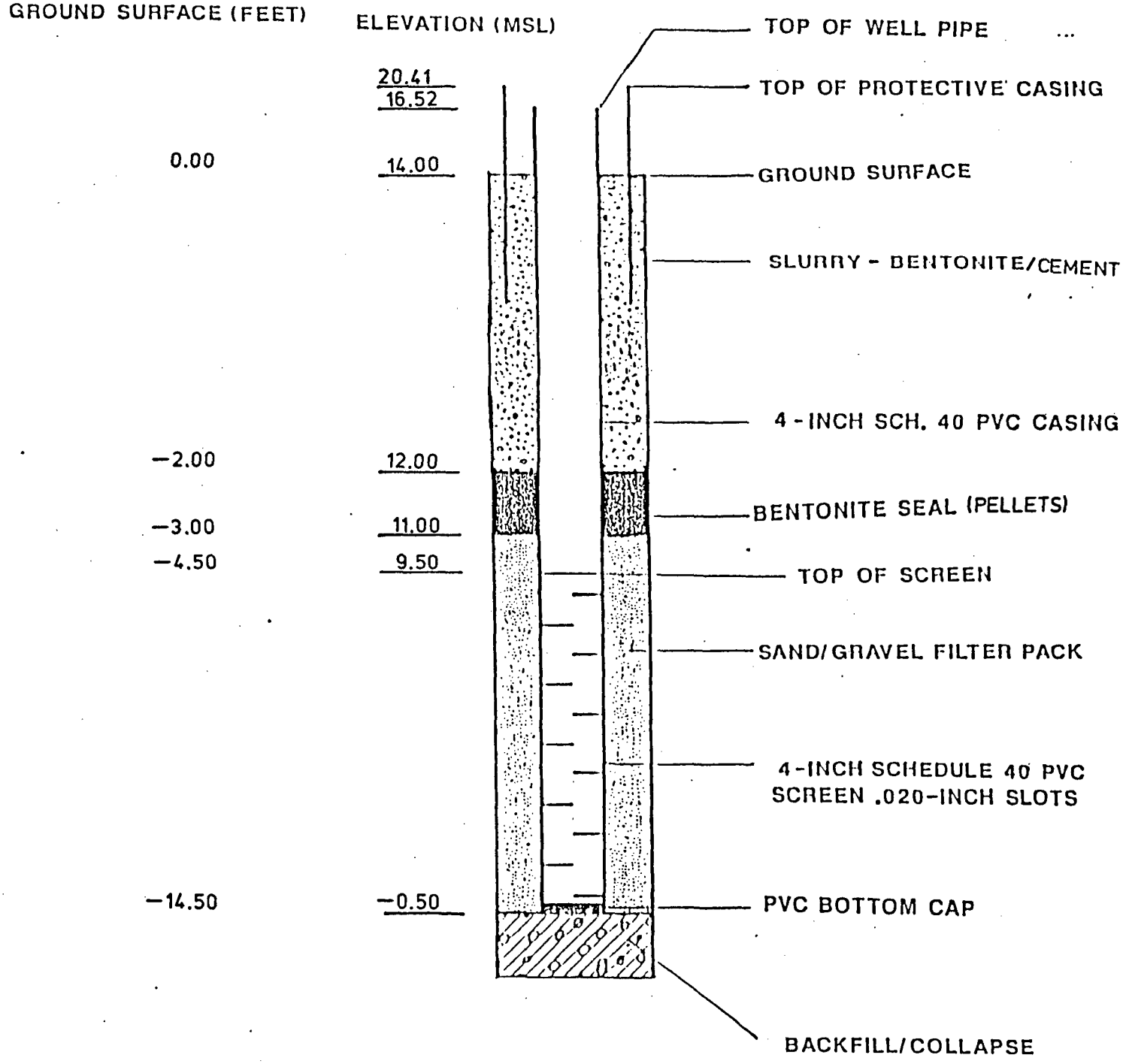
BY: PCG DATE: 6/14/88	CHECKED BY: WC DATE: 6/14/88	J M SORGE, INC.

ATTACHMENT 03

TITLE: MONITORING WELL DIAGRAM	PROJECT NO.: 86013 PROJECT NAME: ADVANCED CHEMICAL TECHNOLOGY	PAGE 1 OF 1

MONITORING WELL MW 4

CONSTRUCTION DETAIL



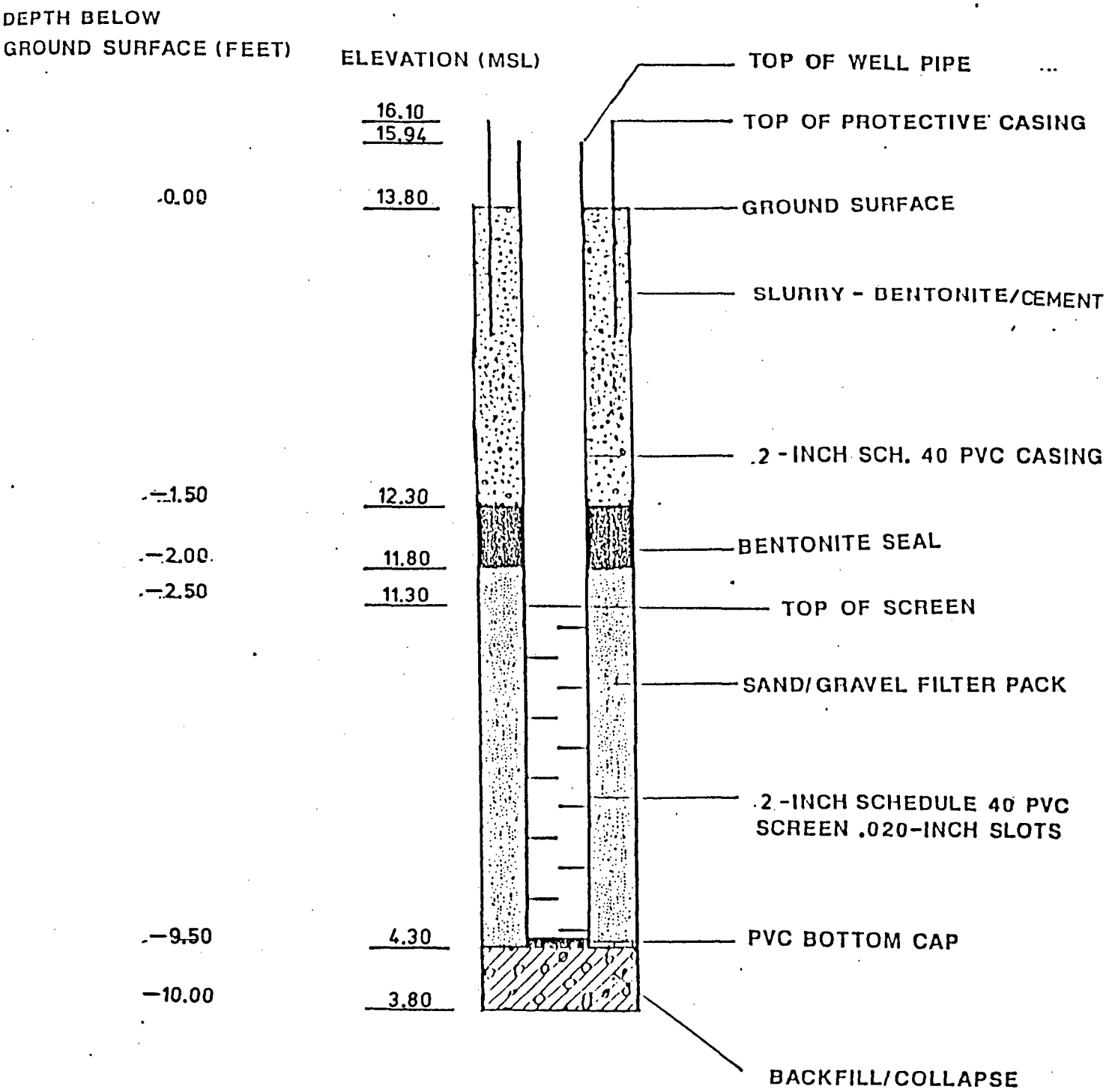
BY: PLG DATE: 6/14/88	CHECKED BY: WC DATE: 6/14/88	J M SORGE, INC.

ATTACHMENT 04

TITLE: MONITORING WELL DIAGRAM	PROJECT NO.: 86013 PROJECT NAME: ADVANCED CHEMICAL TECHNOLOGY	PAGE 1 OF 1

MONITORING WELL MW 5

CONSTRUCTION DETAIL

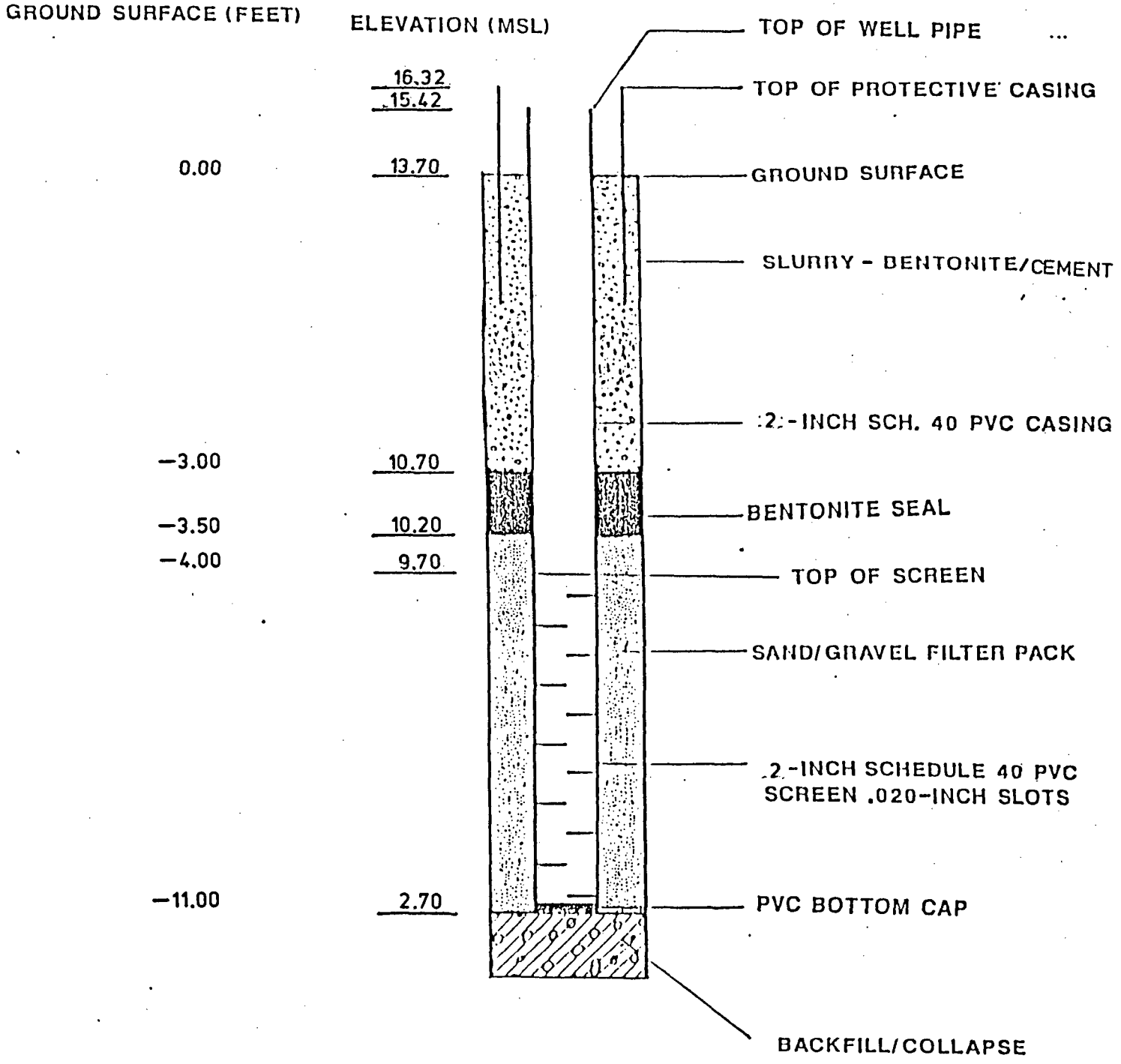


BY: RLG DATE: 6/14/88	CHECKED BY: JVC DATE: 6/14/88	J M SORGE, INC. ATTACHMENT 05

TITLE: MONITORING WELL DIAGRAM	PROJECT NO.: 86013 PROJECT NAME: ADVANCED CHEMICAL TECHNOLOGY	PAGE 1 OF 1

MONITORING WELL MW 6

CONSTRUCTION DETAIL



BY: [illegible] DATE: 6-14-88	CHECKED BY: [illegible] DATE: 6/14/88	J M SORGE, INC.

ATTACHMENT 0c

TABLE 11

Advanced Chemical Technology
ECRA Case # 84011

COMPARISON OF GROUNDWATER AND TOP OF WELL SCREEN ELEVATIONS

Well No.	Top of Well Casing (PVC)*	Top of Screen*	Depth to Groundwater** 2/18/88°	3/8/88	3/31/88		Groundwater Elevation 2/18/88°	3/8/88	3/31/88*
MW-1	16.52	11.29	2.94	3.33	3.68	3.31 ave.	11.06	10.67	10.32
MW-2	14.70#	11.82	3.36	3.67	4.04	3.69	11.46	11.15	10.78
MW-3	18.88	13.50	7.60	7.52	7.88	7.66	9.90	9.98	9.62
MW-4	16.52	9.50		- DRY -				- DRY -	
IW-5	15.94	11.30	2.29	2.65	4.28	3.07	11.51	11.15	9.52
IW-6	15.42	9.70	3.59	3.93	4.58	4.03	10.11	9.77	9.12

* - NJGSC datum

** - Feet below ground surface

o - Measurements taken prior to well deveelopment

\# - Readings obtained from top of below grade protective metal casing which is 0.4 feet above top of PVC casing

ATTACHMENT 0

TABLE 12

Advanced Chemical Technology
ECRA Case #84011

FIELD WATER SAMPLE ANALYSIS SUMMARY

Date	Well No.	Volatile Vapor Content (ppm)	PH (Units)	SP Cond (umhos)	TDS (mg/l)
3/8/88	MW-1	0.1	7.30	113	86
3/8/88	MW-2	7.0	7.05	340	259
3/8/88	MW-3	0.6	7.55	111	85
3/8/88	MW-4	--	Dry	Dry	Dry
3/8/88	MW-5	1.2	7.50	310	287
3/8/88	MW-6	0.2	7.60	520	393

ATTACHMENT 08

(39)

SAMPLING AND ANALYSIS PLAN RESULTS

AND

ADDITIONAL SAMPLING PLAN

FOR

ADVANCED CHEMICAL TECHNOLOGY
(PLANT INDUSTRIES)

CAMDEN, NEW JERSEY

ECRA CASE # 84011

Prepared By

J M Sorge, Inc.
3301 U.S. Highway 22
Somerville, NJ 08876

June 1988

ATTACHMENT P1

(39)

are obtained from MW-5 and MW-6, resulting in a slightly exaggerated groundwater flow to the southeast. Unfortunately, these capillary effects are impossible to measure quantitatively. However, these capillary effects are most likely insignificant, and would not materially effect the overall assessment of the groundwater regime at the site.

Pleistocene and recent fluvial deposits underlie the entire ACT site. Also, much of the northern side of the property is covered with fill materials. The well borings at the ACT site indicate the upper 8 - 10 feet of stratigraphy consists of fine to medium coarse sands grading into silty clays and finally to a dense clay. The exploratory Boring EPI-1 was extended below the lower confining clay strata into a coarse sand at about 13 feet in depth.

4.4 GROUNDWATER SAMPLING

On March 8, 1988, approximately 2 weeks following completion of the well development, a groundwater sample was obtained from each monitoring well except for MW-4 which is "dry". The sample locations and analytical parameters are summarized on Table 1. Refer to Table 10 for a summary of the analytical results for the groundwater samples.

Prior to collecting the sample, the static water level depth was determined in each well. Water level measurements were obtained using an electric water level indicator manufactured by Slope Indicator Company of Seattle, Washington. A minimum of three (3) well volumes of water were removed from each well with a stainless steel bailer prior to well sampling. The wells were allowed to recover with fresh formation water to near static levels before sampling. For each well, a dedicated stainless steel bailer was used for purging and sampling. The detailed sampling procedures were described in Section 4 of the approved Sampling Plan.

4.4.1 Groundwater Sample Analysis Protocol

Groundwater samples were analyzed for total petroleum hydrocarbons (PHC), priority pollutant metals (PM13), acid extractables plus a forward library search (AE+10), base neutrals plus a forward library search (BN+15) and ethylene glycol. The samples were also field analyzed for pH, specific conductance and total dissolved solids. The field blank and trip blank samples were both analyzed for the parameters listed above. The groundwater sampling results are summarized on Table 10. The field sampling data is included as Table 12.

ATTACHMENT P2

4.4.2 Groundwater Sampling Results

The sample analyses of the first round of groundwater samples obtained from the ACT monitoring wells indicate only a slightly elevated level of PHC in MW-5 at 2 ppm. No other contaminants above the NJDEP action limit guidelines were identified. Trace levels of petroleum compound derivatives were identified in the base neutral forward search at total concentrations ranging from 5 - 82 ppb. Trace levels of lead and cadmium metals were detected in some water samples; however, the concentrations detected (Table 10) are well below NJDEP cleanup levels. No AE or ethylene glycol contamination levels were identified. It should be noted that these compounds were also identified during the laboratory analyses of the field and trip blank samples (Table 10).

4.4.3 Groundwater Analysis Summary/Additional Sampling

The groundwater investigation has adequately established the groundwater flow at the site to the east and southeast. The initial well data confirms that minor groundwater contamination is present only in the one (1) well located in the railroad siding area. Since no other contaminants were identified in the sample analyses, no additional hydrogeologic investigation is required at the site.

Groundwater has not been significantly affected by site operations at the ACT site. The results obtained from Wells MW-1, MW-2 and MW-6, located downgradient from the railroad siding area, did not indicate any significant contamination. Note also that the analysis of the background sample (MW-3) identified comparable trace levels and compounds. The extensive soil boring and sample analyses conducted during this phase has confirmed that the contamination existing at the site is relatively surficial and in most cases does not extend to the water table.

ATTACHMENT P3

neutral analyses will be extracted within 14 days of sampling as required; the base neutral analyses will be conducted within 40 days of sample extraction. If the results of the first round of analyses are insufficient to adequately delineate the contamination, the remaining samples will also be analyzed for the parameters listed above.

During the field sampling program, the soils encountered in each boring will be screened with an Hnu photoionization meter. If any of the optional samples contain detectable volatile organic vapor levels or staining/odor, the samples will be included for the laboratory analyses.

5.3 ADDITIONAL GROUNDWATER SAMPLING

As discussed in Section 4.0, no groundwater contamination (except for slight PHC contamination identified in Well MW-5) was determined during the groundwater investigation conducted at the site. Therefore, no additional hydrogeologic investigation is required at the site.

A second round of groundwater sampling will be conducted in order to confirm the groundwater quality data obtained during this field investigation. The sampling procedures will be identical to those used previously and are detailed in the approved Sampling Plan. The samples obtained during the second round of groundwater sampling will be analyzed only for PHC, PM13 and BN+15. Since no acid extractable compounds or ethylene glycol was detected in the first round of analyses in any of the groundwater samples, no additional sampling is required for these parameters. A field and trip blank will also be analyzed for the parameters listed above. An addendum to this report will be forwarded to the Department with all appropriate groundwater sampling results (as well as the results of the soil sampling proposed in Section 4.0 and a Soil Cleanup Plan) and QA/QC documentation.

5.4 SUMMARY REPORT

At the completion of the additional soil and water sampling as discussed above, a Proposed Soil Cleanup Plan will be prepared and submitted to NJDEP for review. Also, the report will present a summary of all activity and the laboratory results related to the soil and groundwater sampling program outlined above. The report will include:

- An area-by-area discussion of the soil contamination;
- A description of the excavation process;
- The proposed lateral and vertical extent of the excavation;

ATTACHMENT P4

(F)

PROPOSED CLEANUP PLAN

Prepared for

Advanced Chemical Technology
(Plant Industries)
Camden, New Jersey

ECRA Case #84011

Prepared by

J M Sorge, Inc.
50 County Line Road
Somerville, 08876

March 1989

ATTACHMENT Q1

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ATTACHMENT Q3

1.0 INTRODUCTION

J M Sorge, Inc. (JMS) has completed a detailed Environmental Cleanup Responsibility Act (ECRA) related investigation at the Advanced Chemical Technology (ACT) facility located at River Road and State Street in Camden, New Jersey (ECRA Case #84011). The results of the two-phased soil and groundwater investigation were included in the Sampling and Analysis Plan Results (JMS submittal dated June 14, 1988) and the Sampling Plan Addendum Results (JMS submittal dated February 1989). Based upon the sampling results obtained from the site investigations, the delineation of the horizontal and vertical extent of all residual contamination on the site has been sufficiently completed. The following sections provide a brief summary of each of the four (4) areas of environmental concern on the site. The location of each area is shown in the site map (Figure 1). Areas of environmental concern include:

1. Railroad Siding Area
2. Dumpster Area
3. Oil Stained Area
4. Background Area

The information gathered in implementing the sampling plan has been used to prepare this cleanup plan. This cleanup plan has been formatted to follow the "Components of a Cleanup Plan" as outlined in Comment 14 of the Bureau of Environmental Evaluation and Cleanup Responsibility Assessment (BEECRA) letter dated September 26, 1988.

The proposed Site Cleanup Plan includes programs for full soil contamination remediation within the railroad siding and dumpster areas and a partial remediation in the oil stained area. The remainder of contamination identified in the Oil Stained Area is unrelated to the ACT operation. As outlined in Section 2.1.4 of this report, cleanup is not required for the background area. Also, based on sampling results to date, no further groundwater investigation is required at the site.

ATTACHMENT Q4

2.0 COMPLETED INVESTIGATION SUMMARY

Prior to JMS involvement at the ACT property, site investigations were conducted by Stablex-Reutter, Inc. of Camden, New Jersey. The previous site investigations included an extensive soil sampling and cleanup program involving soil removal and disposal from the railroad siding and dumpster areas (Areas 1 and 2) at the site. Details on the completed cleanup program were provided in a series of submittals prepared earlier in the ECRA compliance program (1984 and 1985), and very briefly summarized in the facility Sampling Plan (JMS submittal dated November 1986).

As discussed in the JMS submittal dated June 14, 1988 (Sampling and Analysis Plan Results Report), JMS conducted an extensive initial investigation to characterize soil contamination existing at the ACT site. The nature of contamination present in each area of concern was determined during the initial investigation phase. Also, the horizontal and vertical extent of contamination in the railroad siding (Area 1) and, to some extent, the dumpster storage area (Area 2), was determined during the initial investigation. The petroleum hydrocarbon (PHC) and metal contamination identified in these two (2) areas was primarily restricted to shallow surficial soils. No significant base neutral (BN) contamination was detected in these areas. This initial investigation also adequately delineated the extent of the PHC and metal contamination present in the railroad siding area. This area was, therefore, excluded from the subsequent investigation.

During the initial investigation, the oil stained area (Area 3) was discovered to exhibit moderate PHC, metals and BN concentrations. This area, however, was not adequately delineated. In addition, elevated concentrations of BN compounds were identified in the background area, designated Area 4. Note, however, as discussed later in this report, that the contaminants identified in these two (2) areas are unrelated to ACT operations.

GW During the initial phase, a hydrogeological investigation, involving the installation of six (6) shallow monitoring wells, was implemented. The sample results from the initial groundwater investigation identified only slightly elevated PHC contamination in one (1) well.

The second phase of investigation involved delineation of the PHC and metals contamination to the east of the dumpster storage area (Area 2), and further definition of the horizontal and vertical extent of the oil stained area (Area 3) contaminants, specifically, PHC, metals and BN. A two-stage sample analysis program was utilized for the Area 3 delineation. Also, the BEECRA-requested investigation of the phthalate levels previously identified in the background area (Area 4) was conducted during the additional phase. A two-stage sample analysis program, similar to that conducted in Area 3, was also utilized for this area. The second round of groundwater sampling identified traces of one or two metals in certain samples.

ATTACHMENT Q5

Results of the second phase of the site investigation, including additional groundwater sampling results, are discussed in detail in the JMS submittal dated February 1989 (Sampling Plan Addendum Results).

The JMS site investigations have adequately determined the nature and extent of the contaminants in each of the four (4) areas of environmental concern. The following sections briefly describe each area of concern and summarize the contamination present in those areas. The proposed cleanup measures are presented in Section 3.0.

2.1 SOILS INVESTIGATION

2.1.1 Railroad Siding Area - Area 1

The petroleum hydrocarbon (PHC) contaminants, identified in the railroad siding area, were determined to extend to surficial depths only. This contamination is apparently derived primarily from oil staining associated with former railroad operations in the area. Low to moderate PHC contamination was identified in the area of below grade railroad siding (570 - 8,300 ppm), and extended to a maximum depth of 1.5 feet below grade. The metal contamination was detected only in the vicinity of Boring PI-1, and consisted of antimony (2.7 - 3.2 ppm), cadmium (4.1 - 20 ppm), copper (200 - 8,800 ppm), lead (330 - 530 ppm) and zinc (590 - 710 ppm). The metal contamination was restricted to surficial depth of 2.5 feet. In addition, a slightly elevated BN concentration of 16.3 ppm was identified in one (1) location, PI-11 (0 - 0.5 feet). This area is located immediately adjacent to the loading dock.

Also, minor PHC contamination was present, to a depth of 4.0 feet, in the vicinity of Borings PI-7 and PI-8 at low concentrations ranging from 160 - 210 ppm (Figure 2).

The delineation of contamination present in the railroad siding area was completed during the initial investigations. JMS proposes to excavate and remove the contaminated soils as outlined in the Cleanup Plan provided in this report (Section 3.1).

2.1.2 Dumpster Area - Area 2

The JMS investigation of the dumpster area has identified the presence of PHC and metals contamination. Significant levels of PHC contamination detected in this area was restricted to the surface (0 - 0.5 feet), except in Borings PI-15 (9,500 ppm) and PI-22 (31,000 ppm), where it extended to a maximum depth of 1.5 feet below grade. On the eastern side of the property line, on Conrail property, the surficial PHC concentrations decrease greatly with distance from the dumpster area. The concentrations at location PI-30 to PI-32 ranged from 130 ppm to 200 ppm and did not extend below 1.5 feet depth.

ATTACHMENT Q6

The presence of minor metal contamination was also determined during the sampling program. These metals included antimony (2.7 - 5.6 ppm), cadmium (3.1 - 6.7 ppm), lead (320 - 1,900 ppm), silver (33 ppm) and zinc (480 ppm). The metal contamination identified was restricted to shallow depths (<1.5 feet) except in Sample PI-29C (2.0 - 2.5 feet depth). Note also that the only metals encountered during the second phase of investigation in the dumpster area were antimony (5.6 ppm) and cadmium (6.7 ppm) which extended only to 1.5 feet depth.

Vertical and horizontal delineation of the PHC and metals contamination in the dumpster area has been completed, except in the area of Borings PI-30 to PI-32. The concentrations identified at these three (3) locations are only slightly above the BEECRA cleanup level; the post-excavation sampling will confirm the complete removal of contamination. Refer to Section 3.2 of this report for a discussion of the cleanup and verification sampling program proposed for the dumpster area.

2.1.3 Oil Stained Area - Area 3

The initial and two-stage additional soils investigation conducted in the oil stained area have adequately delineated the low to moderate PHC, metals and BN contamination in the area. Refer to the Sampling Plan Addendum Results Report (JMS submittal dated February 1989), for a detailed discussion of the sampling program and results for the oil stained area. The PHC contamination was identified at concentrations of 110 - 1400 ppm and extended to a general depth of 3.5 feet, with maximum depth of 5.5 feet below grade at Boring PI-35 (Figure 3).

The elevated concentrations of priority pollutant metals detected in the area included antimony (2.8 - 3.0 ppm), cadmium (3.1 - 4500 ppm), chromium (140 ppm), beryllium (1.1 - 1.9 ppm), copper (400 ppm), lead (260 ppm), nickel (150 ppm), silver (5.6 - 73 ppm) and zinc (600 ppm). It should be noted that , except for cadmium and silver, the vertical extent of the metals contamination was determined during the initial phase of investigation (3.5 feet depth). During the subsequent two-stage investigation, the vertical delineation of all metal contamination was completed to the BEECRA levels. Also the extent of the beryllium and cadmium contamination has been delineated to background levels.

The moderate BN contamination present in the oil stained area appears to be related to an off-site source rather than oil-related derivative materials. The BN concentrations range from 10.26 ppm to 81 ppm. Note, however, the microscopic analyses and review of the ion chromatogram of the BN analyses indicate that the BN compounds detected were macadam materials, and the material is believed to have originated from the neighboring roof-tar manufacturer. This is discussed in detail in Section 3.2 of the February 1989 JMS submittal.

ATTACHMENT Q1

As mentioned in the previous submittal, the BN and metal contamination present in the oil stained area is apparently derived from coal/macadam materials and historic filling operations, respectively. The airborne residues and fly-ash from the neighboring roofing tar manufacturer to the northeast were deposited in adjacent area of the ACT site. The metals levels identified are only slightly elevated above NJDEP action limits and are believed to be derived from previous filling of the area. These contaminants are near to background level concentrations and are unrelated to ACT operations. Therefore, no remediation is proposed for contaminants other than PHC in this area . However, the PHC soil cleanup proposed will also remediate the majority of these other contaminants. See Section 3.3 for proposed soil cleanup procedures.

2.1.4 Background Area - Area 4

During the initial site investigation and sampling program (Phase 1), analysis of the surface sample (PI-27A) obtained from the background boring identified significantly elevated concentrations of BN compounds (total of 34.6 ppm), including 32.0 ppm of bis-2-ethylhexyl phthalate. Only trace levels of BN compounds (0.41 - 1.34 ppm) were detected in the two (2) deeper samples, 2.0 -2.5 and 6.0 - 6.5 feet, respectively. No PHC or metals were detected at significant concentrations.

In order to further define the phthalate contamination identified in the background area, the BEECRA recommended sampling for phthalates at three (3) locations, approximately 50 feet from the previous background boring (PI-27). In addition to those borings, three (3) additional sampling locations were selected, at 5.0 feet from Boring PI-27. A two-stage sampling and analysis program was conducted in the background area similar to that utilized in the oil stained area (Area 3). The detailed sampling results are discussed in Section 3.3 of the previously submitted Sampling Plan Addendum Results Report (JMS submittal dated February 1989).

The additional analyses conducted on the background area samples identified no significant BN contamination. Also, BN concentration of 16.87 ppm, slightly above the ECRA guideline, was detected at surficial depth (0 - 0.5 feet) in one (1) sample (PI-44A). The remaining eight (8) samples from the area contained trace levels (0.3 - 6.73 ppm) of BN. Slightly elevated levels of three (3) metals, [arsenic (23 ppm), beryllium (1.2 ppm) and cadmium (3.6 - 13 ppm)] were also detected in certain samples (Figure 3).

ATTACHMENT Q9

As discussed previously for Area 3, the BN contamination identified in the background area is apparently related to macadam and fly-ash originating from the adjoining facility, rather than from plasticizer materials utilized at the site. Microscopic analysis of the background sample indicates a high macadam content. Since the soil contamination identified in the background area is unrelated to the ACT operations, no further action or cleanup is proposed.

2.1.5 Soils Investigation Summary

The two-phased soil boring and sample analyses program conducted by JMS at the ACT facility has adequately delineated the nature and extent of contamination present at the site. The petroleum and metals contamination present at the railroad siding and dumpster staging area is primarily surficial in extent, and is derived from oil staining associated with the railroad operations and storage of industrial wastes in the dumpster. No significant BN contamination has been identified in these two areas; only one (1) sample contained elevated levels of BN.

Similarly, certain soil contamination, specifically the PHC identified in the oil stained area, appears to have resulted from the site operations. The BN contamination noted appears to be related to macadam particles in the sample. The source of the macadam present is probably associated with an adjacent roofing material production facility and is not associated with ACT operations.

The site Cleanup Plan detailed in the later section addresses the remediation of the ACT related soil contamination found in the above areas.

The BN and metal contamination identified in the oil stained area and the background area is unrelated to the ACT operations. The contamination identified in these two (2) areas appears to have resulted from an off-site source (BN contamination) or the previous filling of the area by construction debris (metals contamination). Since the contamination is unrelated to ACT operation, no further action is proposed.

2.2 GROUNDWATER INVESTIGATION

An extensive groundwater investigation, involving the installation of six (6) monitoring wells (MW-1 to MW-6), and two (2) rounds of groundwater sampling, has been conducted at the site. No significant groundwater contamination has been identified during the two (2) sampling events.

The first round of groundwater sample obtained from the five (5) wells were analyzed for base neutrals +15 (BN+15), acid extractables +10, priority pollutant metals (PM13), petroleum hydrocarbons (PHC) and ethylene glycol. The sample analyses identified only a slightly elevated level of PHC in Well MW-5 at 2 ppm.

ATTACHMENT Q9

The sample results from the second round of groundwater sample analyses identified no detectable concentrations of PHC or BN compounds. Groundwater samples MW-2 and MW-6, however, contained 0.062 ppm and 0.086 ppm of chromium, respectively. Sample MW-6 also exhibited a slightly elevated cadmium concentration (0.013 ppm).

The wells were installed at the BEECRA approved location in accordance with the NJDEP specification for wells in unconsolidated formations. Due to site constraints, two (2) wells (MW-5 and MW-6) were installed with 2-inch diameter PVC screen and casing material. The presence of a lower confining strata of dense clay encountered at varying depths of 8.0 to 12.0 feet across the site required certain modifications during the well construction. The screened interval was decreased in certain wells so that the wells are completed within the first groundwater zone and the confining substratum is not penetrated. These modifications were approved by the NJDEP geologist present on the site during well installation.

Also, a thin saturated zone was encountered above the lower confining strata in Well MW-4; however, no stabilized water has been measured in the well during several monitoring visits. The base of the 10-foot screen is located at 12 feet depth. It should be noted that the well is located in an area which has been filled with concrete and wood construction debris. An extensive soil boring program has been completed in the area during the two (2) phases. However, no groundwater has been encountered in any of these fifteen (15) borings installed to a depth of up to 7.5 feet. The water level measured in remaining on-site wells is generally between 2.5 to 4.0 feet depth range, except for Well MW-3. Groundwater occurs at about 7.5 to 8.0 feet in MW-3. Therefore, we believe that Well MW-4 is dry due to the nature of fill material, rather than improper construction.

2.2.1 Groundwater Quality Summary

The completed groundwater investigation has adequately established groundwater flow at the site to the south. The two (2) rounds of sampling data confirm that only minor contamination is present at one (1) or two (2) wells. The extensive soil boring ad sample analysis program has determined that the soil contamination present on the site is primarily surficial and in most cases does not extend to the water table. Therefore, as discussed in the February 1989 submittal, no further groundwater investigation is proposed.

ATTACHMENT Q10

3.0 PROPOSED CLEANUP PLAN

The following sections provide a description of the proposed cleanup activities for each area of concern identified in Section 2.1. Specific details regarding the proposed extent of soil cleanup is discussed below. The plan also provides a description of the the proposed verification sampling program for each area of concern. The soils cleanup program at the former ACT facility will be accomplished using the excavation and verification sampling procedures presented in this section. Please note that an extensive verification sampling program is not required following the removal program since,the approximate extent of contamination has been delineated during the previous program.

3.1 RAILROAD SIDING AREA - AREA 1

The total petroleum hydrocarbons (PHC) and metals contamination identified in the railroad siding area will be excavated from two (2) separate locations. The smaller of the two excavations, (Area-1A), located in the vicinity of soil Borings PI-7 and PI-8 (Figure 2), will address the slight PHC contamination present in the area to a depth of 4.0 feet. The larger excavation, (Area-1B), located adjacent to the loading dock, will remediate the PHC and metal contamination identified in the area of Borings PI-1, PI-2, PI-5, PI-10 and PI-11.

3.1.1 Area-1A

JMS proposes to excavate an area approximately 60 feet long by 40 feet wide in the area of soil Borings PI-7 and PI-8 (Figure 2). The depth of the excavation will vary based upon the maximum depth of known PHC contamination and occurrence of groundwater in the area. Approximately 300 cubic yards of soils will be removed from Area-1A.

As shown on Figure 2, the northeastern side of the excavation will be extended to groundwater occurrence or 5.0 feet depth, whereas the southeastern side will be extended to a depth of approximately 2.5 feet (1.0 foot deeper than the maximum vertical extent of known PHC contamination). Following removal of contaminated soils, a total of six (6) post-excavation, verification samples, VI-1 to VI-6, will be collected. The six (6) samples (0 - 0.5 feet depth) will be analyzed for PHC.

As shown on Figure 2, the northern portion of Area-1A will be excavated to the top of the groundwater table, which was encountered at a depth of 4.0 feet in Boring PI-7. In the event that groundwater is not encountered, the excavation will be extended to a depth of 5.0 feet and a post-excavation sample (5.0 - 5.5 feet depth) will be conducted to determine the vertical extent. (Sample VI-8, Figure 2).

ATTACHMENT Q4

The southern half of Area-1A will be excavated to a depth of 2.5 feet; no verification sample will be required at the base of the excavation since the PHC concentration detected in Sample <PI-8B was only slightly above ECRA levels and the deeper sample, PI-8C (3.5 - 4.0 feet) was below ECRA action levels. Sample VI-7 will be collected at depth interval of 3.5 to 4.0 feet as a confirmation sample. All verification samples will be analyzed for PHC from the excavation in the vicinity of PI-7 and PI-8 since PHC is the only contaminant identified in the area.

3.1.2 Area-1B

The proposed large excavation (Area-1B) is located in the vicinity of the loading dock, and will measure approximately 225 feet long by 25 to 60 feet wide (Figure 2). Approximately 500 cubic yards of soils will be removed from excavation Area-1B. The excavation, except for the area in the immediate vicinity of Boring PI-1, will be extended to a depth of 1.0 foot since contamination in this area (PHC, metals) has been vertically delineated at a maximum depth of 0.5 feet. Verification Samples VI-9 to VI-15 will be obtained from the excavation sidewalls at a depth of 0 - 0.5 feet to insure complete removal of contamination. The excavation area adjacent to the loading dock, however, will be extended to approximately 3.5 feet or the first groundwater occurrence depth (Figure 2).

Samples VI-9 to VI-15 (Figure 2), will be collected from the sidewalls at 0 - 0.5 foot depth interval to verify lateral extent of excavation. Also, an additional sample (VI-16) will be collected in the deeper area excavation, if groundwater is not encountered prior to the depth of 3.5 feet. Sample VI-16 will be collected at depth interval of 3.5 - 4.0 feet.

Verification Samples VI-9 to VI-16 will be analyzed for PHC and target priority pollutant metals, (cadmium, copper, and lead). The specific analytical parameters are summarized on Table 1. Additionally, since slightly elevated BN concentrations were detected in Sample PI-11A, verification Sample VI-15 will also be analyzed for base neutrals plus a forward library search (BN+15). The sample locations and analytical parameters are depicted on Figure 2.

3.2 DUMPSTER AREA - AREA 2

The dumpster area is located on the eastern side of the ACT building, adjacent to the fence bordering the property (Figure 1). A preliminary soil removal program was implemented by others in the dumpster area. Due to surficial run-off, the contamination appears to have migrated onto the Conrail property.

ATTACHMENT Q12

Therefore, extensive surficial cleanup will be required for both on and off-site areas; the areas are designated as Area-2A and Area-2B, respectively. The soil excavation on the conrail property requires special work permits with severe restrictions imposed by Conrail.

3.2.1 Area-2A

In order to address the low to moderate PHC and metals contamination identified in the dumpster storage area, (Area-2A, Figure 2), JMS proposes to excavate an area approximately 200 feet long by 110 feet wide. The depth of the excavation will be 1.5 feet below grade since the contamination in the area extends to a maximum depth of 1.5 feet and the seasonally high occurrence of groundwater in the area. Approximately 1,200 cubic yards of soils will be removed from the on-site area.

JMS proposes to collect a total of five (5) verification samples (Samples VI-17 to VI-21) along the sidewalls of the excavation. As shown on Figure 2, all confirmatory samples will be collected from the first 0 - 0.5 feet of native soils encountered. In the paved portions of the dumpster area, (i.e.,Samples VI-17, VI-18 and VI-19), the samples will be collected in 6-inch intervals immediately below the pavement. All of the post-excavation, verification samples obtained from the dumpster area excavation will be analyzed for PHC and target metals (antimony, cadmium, and lead) as summarized on Table 1. The verification sample locations and proposed extent of excavation is shown on Figure 2.

Due to the fact that vertical delineation of the contamination in the area has already been adequately established at the depth of the groundwater table (1.5 feet), no samples will be obtained from the base of the excavation. However, in the event groundwater is not encountered at 1.5 feet, a sample (VI-22) will be collected in the area of Boring PI-15.

3.2.2 Area-2B

Area-2B, located on the Conrail property, measures about 125 feet long by 50 feet wide. The area will be excavated to the top of groundwater, or to a depth of about 2.5 feet. During the initial site investigation, groundwater was encountered at a depth of 1.5 feet, however, the water was encountered at a deeper level during a subsequent phase. Therefore, based on the previous sampling results and shallow depth to groundwater, the excavation will be completed to a depth of 2.5 feet. About 500 cubic yards of contaminated soils present on the Conrail property area will require removal.

ATTACHMENT Q13

Upon completion of the soil removal program, four (4) sidewall samples (Samples VI-23 to VI-26) will be collected at 0 - 0.5 foot depth intervals to verify the lateral extent of excavation. If the groundwater is not encountered above 2.5 feet depth, two (2) optional samples (Samples VI-27 and VI-28) will be located in the vicinity of previous Borings PI-21 and PI-22, respectively. PHC levels were elevated in the previous samples collected from the two (2) borings. Thus, the optional samples V-27 and VI-28 will determine the vertical extent of the excavation. As summarized on Table 1, the verification sampling will be analyzed for PHC and target metals.

3.3 OIL STAINED AREA - AREA 3

As discussed previously in Section 2.1.3 of this report, the cleanup program proposed for the oil stained area will concentrate on the PHC contamination in the area rather than the macadam-related BN and fill-related metal contaminants. Although not specifically targeted, the majority of the BN and metal contamination will be remedied during the removal program. The proposed excavation will measure approximately 80 feet long by 60 feet wide, and extend to a depth of 4.5 feet in the southeastern half of the excavation and 6.5 feet in the northwestern half (Figure 3). About 975 cubic yards of soils and construction debris will be removed from the area.

JMS proposes to obtain a total of four (4) post-excavation samples (Samples VI-29 to VI-32) from the oil stained area excavation as located on Figure 3. No sidewall samples (except for Sample VI-32) will be collected since a complete horizontal delineation of the contamination has been obtained during previous sampling. Since there is still uncertainty regarding the vertical extent of contamination in the vicinity of Boring PI-35, three (3) samples, VI-29 to VI-32, will be collected from the base of the excavation at 2.0 - 2.5 feet, 4.0 - 4.5 feet, and 6.5 - 7.0 feet, respectively. A surface sample VI-32 (0 - 0.5 feet) will be collected to verify the northern limit of the excavation. All samples obtained from the oil stained area excavation will be analyzed for PHC, the only contaminant attributable to ACT operation.

4.0 PROPOSED CLEANUP LEVELS

The areas identified as requiring soil remediation in Section 3.0 will be cleaned to the ECRA action or background soil contamination levels, whichever is higher. The cleanup level for lead at the ACT site will be 250 ppm. The BN and metal contaminants present in the oil stained area and the background area will not be remedied, since the contamination identified is unrelated to ACT operations. A detailed description on the BN and metal levels found in these areas was provided in our February 1989 report.

ATTACHMENT Q14

No groundwater cleanup is proposed since all results obtained to date indicate that only very slight levels of groundwater contaminants are present.

5.0 PROPOSED CLEANUP WORK PLAN

The proposed cleanup actions required at the ACT facility are quite simple, requiring only contaminated soils excavation, and verification sampling. The waste characterization sample analyses will be conducted for the stockpiled material, which will be disposed at an offsite facility . Based on the sampling results obtained to date, the material can be classified as non-hazardous industrial wastes (ID-27). Specific details regarding the proposed excavation in each area of concern have been defined in Section 3.0 of this report. The general excavation and sampling procedures are described below. A cleanup schedule is provided in Section 7.0.

All site excavations will be conducted utilizing a rubber-tired backhoe. All contaminated soils removed during the site cleanup program will be stockpiled in a paved portion of the facility property. Soils will be placed on 6-mil plastic sheeting and covered with plastic to minimize run-off. Following completion of the excavation of all contaminated soils, the stockpile will be sampled for waste classification analysis in order to obtain landfill approval for soils disposal. The waste classification sampling procedures are outlined in Appendix A. The samples will be analyzed for RCRA characteristics and other parameters as required by the disposal facility. Figures 2 and 3 provide the proposed extent of excavation in each of the three (3) areas of concern addressed in this cleanup plan and the location of all proposed verification sampling points. Table 1 summarizes the proposed verification sample locations and analytical parameters by area of concern. Verification sampling and decontamination procedures for hand auger and hand trowel sample collection are outlined in Appendix B.

Under the supervision of a JMS geologist, contaminated soils will be excavated and removed until clean soil is encountered, as determined by visual observations and Hnu scanning. At that point, an additional 1.0 foot of soil will be removed to insure complete contamination removal. As discussed in Section 2.1, horizontal and vertical delineation of the soil contamination has been obtained in most site areas. Therefore, an extensive post-excavation sampling program is not proposed. However, a limited sample analyses will be conducted to complete horizontal and vertical delineation, as appropriate.

Post-excavation, verification samples, and waste characterization sample analyses will be conducted by Accutest Laboratories of Dayton, New Jersey (NJDEP Laboratory Certification #12129). The need for any additional excavation in the areas will be based upon the results of the verification sample results. A prolonged site excavation program is not anticipated since the horizontal

ATTACHMENT Q15

and vertical extent of soil contamination in each of the areas has already been adequately determined. Following verification of complete contamination removal, each excavation will be back-filled utilizing laboratory certified clean or virgin fill material which is of the same nature as native soils in the area. A final site cleanup verification report, including all appropriate sample results and soil disposal documentation, will be forwarded to NJDEP for review following completion of the site cleanup program.

6.0 POST-EXCAVATION MONITORING PLAN

No monitoring will be required in any of the soil excavation areas, since complete removal of all contaminated soil is anticipated. Also, as discussed in the February 1989 report, no groundwater investigations is required.

7.0 CLEANUP PROGRAM SCHEDULE

A brief description of the cleanup program tasks and milestones is provided for evaluation. Please note that the start-up date for implementation of the proposed cleanup plan is contingent upon obtaining work permits from Conrail. The proposed plan includes extensive cleanup in and around the railroad lines, both on and off ACT property. It is anticipated that cleanup will be accomplished in 3 months, with final data results and the cleanup verification report submitted within 4 months of NJDEP approval and work permits obtained from Conrail.

TASK 1: GENERAL EXCAVATION

The final soils excavation program has been split into two (2) phases. The first phase consists of excavation of the dumpster storage area (Area 2). This larger area will be addressed first in order to insure that sufficient time is available to evaluate verification sampling results and re-excavate, if necessary. Thus, Area 2 will be excavated first, followed by the cleanup of Area 1 and then Area 3. Verification samples will be collected on an area by area basis as soon as the excavation phase is completed. We anticipate that the initial excavation program will remove all contaminated soils within the three (3) areas of concern outlined in the cleanup program. The extensive soil sample analyses conducted to date has approximated the extent of contamination in each area. The excavation activities are estimated to take about 3 - 4 weeks.

ATTACHMENT Q16

TASK 2: DATA ANALYSIS, SOIL DISPOSAL, SITE RESTORATION

The verification sample analysis data will be evaluated for quality assurance acceptability upon receipt from the contract laboratory. Following acceptance, the data will be analyzed to determine if further excavation is required for each of the cleanup areas. If further excavation is required, the field excavation schedule will be modified to incorporate re-excavation of the area of concern as soon as possible. If the verification sampling results confirm that cleanup is completed, the final report will be prepared.

Soil disposal will be handled in bulk. Based upon the available sampling results, one (1) soil waste type will be generated consisting of low to moderate PHC, metals and BN contamination. Waste soil sampling and classification will proceed simultaneously with the completion of the excavation phase to insure that landfill disposal approval will be received shortly after completion of the excavation program.

The restoration of the site will be accomplished by backfilling all excavations with certified clean or virgin fill materials which will be of a similar nature to native soils in the area. The backfilling will proceed as soon as laboratory analysis results have been evaluated and the quality assurance review is completed. We anticipate receipt of laboratory results within one month of completion of the excavation program. Soil disposal will require an additional month to coordinate landfill approval, trucking, etc. The backfilling operation will be completed during this one-month period.

TASK 3: REPORT PREPARATION

A final report will be prepared documenting all cleanup activities completed. The report will include all laboratory data results (verification) in summary as well as original form. The report will also include all waste soil manifest and backfill soils documentation. We estimate that the final cleanup verification report will be submitted for review approximately 1 month following completion of Task 2.

ATTACHMENT Q17

The following milestones have been included in the project schedule:

Milestone 1 - Site preparation, permits acquisition from Conrail will be completed in 2 - 3 weeks following NJDEP approval. NJDEP will be notified of the project start-up immediately following receipt of Conrail permits. A written notification will be provided at least 5 days prior to start-up.

Milestone 2 - Task 1 will be completed 1-month following project startup, (i.e. 2-months following NJDEP approval).
exception

Milestone 3 - Task 2 will be completed 3 months following project start-up. 3 month grade (60 days)

Milestone 4 - Task 3 and the entire soils program will be completed 4 months following project start-up.

8.0 PROGRESS REPORTS

A monthly progress report will be submitted to NJDEP during the soils cleanup program. The report will include any anticipated deviations from the proposed cleanup schedule.

ATTACHMENT Q1B

TABLE 1
ADVANCED CHEMICAL TECHNOLOGY - ECRA CASE #84011
PROPOSED VERIFICATION SAMPLE ANALYSIS SUMMARY

LOCATION	SAMPLE NO.	SAMPLE DEPTH (ft. below ground)	ANALYTICAL PARAMETERS *
AREA 1: RAILROAD SIDING / LOADING DOCK AREA			
AREA-1A	VI-1	0-0.5'	PHC
	VI-2	0-0.5'	PHC
	VI-3	0-0.5'	PHC
	VI-4	0-0.5'	PHC
	VI-5	0-0.5'	PHC
	VI-6	0-0.5'	PHC
	VI-7	3.5-4.0'	PHC
	VI-8 (OPTIONAL)	5.0-5.5'	PHC
AREA-1B	VI-9	0-0.5'	PHC, Cd
	VI-10	0-0.5'	PHC, Cu, Pb
	VI-11	0-0.5'	PHC, Cu, Pb
	VI-12	0-0.5'	PHC
	VI-13	0-0.5'	PHC
	VI-14	0-0.5'	PHC, Cd, Cu
	VI-15	0-0.5'	PHC, BN+15
	VI-16 (OPTIONAL)	3.5-4.0'	Sb
AREA 2: DUMPSTER AREA			
AREA-2A	VI-17	0-0.5'	PHC
	VI-18	0-0.5'	Pb
	VI-19	0-0.5'	PHC, Cd
	VI-20	0-0.5'	PHC
	VI-21	0-0.5'	PHC, Cd, Pb
	VI-22 (OPTIONAL)	1.5-2.0'	PHC

ATTACHMENT Q20

TABLE 1
ADVANCED CHEMICAL TECHNOLOGY - ECRA CASE #84011
PROPOSED VERIFICATION SAMPLE ANALYSIS SUMMARY
(continued)

LOCATION	SAMPLE NO.	SAMPLE DEPTH (ft. below ground)	ANALYTICAL PARAMETERS *
AREA-2B	VI-23	0-0.5'	PHC, Pb
	VI-24	0-0.5'	PHC, Sb, Cd
	VI-25	0-0.5'	PHC
	VI-26	0-0.5'	PHC, Sb, Cd
	VI-27 (OPTIONAL)	2.5-3.0'	PHC, Sb, Cd
	VI-28 (OPTIONAL)	2.5-3.0'	PHC, Pb
AREA 3 - OIL STAINED AREA			
AREA-3	VI-29	2.0-2.5'	PHC
	VI-30	4.0-4.5'	PHC
	VI-31	6.5-7.0'	PHC
	VI-32	0-0.5'	PHC

* NOTES:
- Cd - CADMIUM
- Cu - COPPER
- Pb - LEAD
- SB - ANTIMONY
- PHC - TOTAL PETROLEUM HYDROCARBONS
- BN+15 - BASE NEUTRAL EXTRACTABLES WITH LIBRARY SEARCH

ATTACHMENT Q21

CN 028
Trenton, N.J. 08625-0028

(609)633-7141

Let's protect our earth

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF HAZARDOUS WASTE MANAGEMENT

Michele M. Putnam
Deputy Director
Hazardous Waste Operations

John J. Trela, Ph.D., Director

Lance R. Miller
Deputy Director
Responsible Party Remedial Action

JAN 31 1989

Robert Marshall, DAG
Justice Complex
Dept. of Law and Public Safety
Trenton, N.J.

Dear Mr. Marshall:

RE: Status of Advanced Chemical Technology
Camden City, Camden County
ECRA #84011

This is in response to your letter dated January 5, 1989 regarding the status of the Advanced Chemical Technology (ACT) case. This case is currently in the investigatory stage of ECRA. Based on the review of data submitted as the result of the implementation of an approved Sampling Plan dated November 19, 1986 and the information gained during an October 1988 NJDEP site inspection, the Department determined that additional ground water investigation must be conducted.

The Bureau of Environmental Evaluation and Cleanup Responsibility Assessment (BEECRA) has drafted a letter detailing the required additional ground water investigation. The above mentioned letter should be received by ACT prior to January 27, 1989. The results of this investigation must be submitted to NJDEP ninety (90) days after receipt of the letter. For your information, following are the major points of investigation that ACT must address prior to the approval of a Cleanup Plan.

1. Install one additional monitoring well (MW-7) downgradient of Area 2 (dumpster area). Significant petroleum hydrocarbon contamination of soils has been identified in Area 2.

2. Flush out monitoring well MW-4 for proper acceptance of ground water; or, if that does not yield results, install another well adjacent to it. Previous attempts of sampling MW-4 has determined that the well is dry.

3. Two rounds of sampling at monitoring wells MW-4 and MW-7.

4. One additional round of sampling at monitoring wells MW-3, MW-5 and MW-6. To complete an ECRA investigation two rounds of analytical data from each monitoring well is required.

5. Use determination of a nearby private industrial well. This data is necessary to assess the potential human impact of ground water contamination migrating off site.

This letter was prepared by Case Manager, Stephen Maybury. If you have any questions please contact the Case Manager at (609) 633-7141.

Very truly yours,

Kenneth T. Hart, Chief
Bureau of Environmental Evaluation
and Cleanup Responsibility Assessment

SEM/ng

ATTACHMENT R2

CN 028
Trenton, N.J. 08625-0028

(609)633-7141

Let's protect our earth

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT

Michele M. Putnam
Deputy Director
Hazardous Waste Operations

John J. Trela, Ph.D., Director

Lance R. Miller
Deputy Director
Responsible Party Remedial Action

APR 05 1989

Robert Bregman, President
Plant Industries, Inc.
400-2 Totten Pond Road
P.O. Box 1596
Waldtham, Mass. 02254

Dear Mr. Bregman:

Re: Advanced Chemical Technology
Camden City, Camden County
ECRA Case #84011
Sampling Plan Addendum Results Dated: February 1989

The Department has completed its review of Advanced Chemical Technology (ACT) ground water proposal provided in the above mentioned document. Please be advised that ACT's proposal not to implement the ground water investigation required in the BEECRA letter dated January 11, 1989 is unacceptable. It is clearly the Departments position that ground water on site has not been adequately monitored. Specifically, there are no monitoring wells downgradient of two significant areas of concern (AEC 2 and 3).

Following is a point by point response to your comments with modifications to the original required investigation. Enclosed as attachment A and B are copies of your comments and the BEECRA letter dated January 11, 1989, respectively.

1. Monitoring Well (MW-7) must be installed in Area 2 as previously directed. However, well installation may proceed after remediation is complete in this area.

2. Sampling of Monitoring Well (MW-4) must be conducted as previously stated. However, if MW-4 cannot be developed and properly sampled than a new well may be installed after remediation is complete in this area. Be advised that it is the Departments position that the only way to positively determine if ground water has been impacted is through ground water sampling data.

3. Ground water sampling at Monitoring Wells MW-3, MW-5, MW-6 and proposed wells MW-4 and MW-7 must be conducted as previously requested except that ethylene glycol may be deleted as a parameter for MW-3, MW-5 and MW-6. Volatile organic (VOs), analysis is required because VOs may be

ATTACHMENT R3

associated with oily waste. It is the Departments position that monitoring petroleum hydrocarbon sources other than number 4 and 6 fuel oil must include analysis for volatile compounds.

4. The information you provided regarding surrounding well use is sufficient.

Please reply within ten (10) days regarding your acceptance of the above mentioned ground water investigation requirements. The results of this investigation shall be due ninety (90) days after the completion of soils cleanup in Area 2 and 3. This investigation is a requirement for a fully approvable Cleanup Plan. If ACT does not reply within the specified timeframe or fails to implement the above requirements the Department shall view this as unresponsive and refer the case to the Compliance Bureau.

Please contact the Case Manager, Stephen Maybury at 609-633-7141 with any questions.

Sincerely,

John A. DeFina, Section Chief
Bureau of Environmental Evaluation
and Cleanup Responsibility Assessment

SEM/dg
c: Bharat Patel, J.M. So
Jennifer Eck, BGWDC

ATTACHMENT R4

14, 1988 report. The groundwater sampling results are summarized on Table 9. The field blank sampling results for the Phase 2 investigation are provided as Table 10. The groundwater elevation measured prior to the sampling is indicated for each well on the potentiometric map (Figure 4).

During the second round of groundwater sample analyses program, no detectable levels of BN and PHC concentrations were found in the samples (Table 9). Trace level (6 and 9 ppb, respectively) of only one (1) non-priority pollutant base neutral compound was found in Samples MW-5 and MW-6.

Trace concentration levels of several metals were found in all samples. However, only two (2) samples (Wells MW-2 and MW-6) contained levels of one (1) or two (2) metals in concentrations above the ECRA action level. Slightly elevated level of chromium was found in both samples. Samples MW-2 and MW-6 contained 0.062 ppm and 0.086 ppm, respectively; NJDEP guideline for chromium contamination is 0.05 ppm. Sample MW-6 also contained a slightly elevated level (0.013 ppm) of cadmium; the NJDEP guideline for cadmium contamination in the groundwater is 0.01 ppm.

4.3 PROPOSED GROUNDWATER INVESTIGATION

The completed groundwater investigation has adequately established groundwater flow at the site. The two (2) rounds of sampling data confirm that only minor contamination is present at one (1) or two (2) wells. The extensive soil boring and sample analysis program has determined that the soil contamination present on the site is primarily surficial and in most cases does not extend to the water table. Therefore, no additional hydrogeologic investigation is required at the site.

4.3.1 Response to BEECRA Letter Dated January 11, 1989

BEECRA correspondence dated January 11, 1989, has requested an additional groundwater investigation at the site. The following provides a brief discussion of BEECRA concerns.

Item 1 requires installation of a well (MW-7) in the dumpster area. As discussed in Section 3.2 above, a soil remediation program will be required for this area of concern. The BEECRA requested location is within the known area of contamination. Therefore, any wells installed may be damaged during the soil remedial program.

As discussed above in Section 4.1, Well MW-4, located in the oil stained area (Area 3) is dry. The well is located in a filled portion of the property. No groundwater has been encountered to a depth of 7.5 feet in the soil borings installed in the area. The soil contamination is restricted to a depth of less than 3.5 feet, except for location PI-35 (Figure 3). Only minor contamination extends to a depth of 5.0 - 5.5 feet at location

PI-35; however, no contamination was found in the deeper sample. Therefore, there is no potential for any groundwater contamination. Thus, the investigation required in Item 2 of the letter, specifically the flushing of the well in an effort to yield groundwater or a replacement well is not warranted. Also, a replacement well (if installed) may be damaged during the soil remediation program.

Item 5 of the BEECRA letter requires an additional round of groundwater sampling for MW-3, MW-5 and MW-6 for VO+15 and ethylene glycol analyses. However, the previous PP+40 analyses conducted by others during the early phases of ECRA compliance program has established that VO is not a concern at the ACT site. The materials utilized during the operations conducted at the site do not include VO compounds. Also, the two (2) rounds of completed groundwater sampling was conducted in accordance with the analytical parameters specified by the previously assigned geologist and approved by BEECRA. Therefore, the additional sampling for VO+15 analysis is not warranted based on available site data. The initial round of groundwater sampling included analyses for ethylene glycol. No concentration levels of the analyte above method detection limit have been identified. Thus, additional sampling for ethylene glycol is not warranted.

A Hydrogeological Assessment Request was included as Appendix A of the facility Sampling Plan (dated November 1986). The request included an inventory of wells located within a 1-mile radius of the site. No domestic water wells are located in the 1-mile area. Also, no public water supply wells are located downgradient to the site. The records available at the NJDEP Trenton offices indicate that the five (5) wells, owned by Conrail (numbered 7 to 11 on the request) are monitoring wells, and not used for human consumption. No further action is necessary to satisfy Item 7 of the BEECRA letter.

ATTACHMENT R6

ATTACHMENT B

Let's protect our earth

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Trenton, N.J. 08625-0028

(609)633-7[illegible]

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT

Michele M. Putnam
Deputy Director
Hazardous Waste Operations

John J. Trela, Ph.D., Director

Lance R. Miller
Deputy Director
Responsible Party, Remedial [illegible]

JAN [illegible] 1989

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
Robert Bregman, President
Plant Industries, Inc.
411 Hackensack Avenue
Hackensack, N.J. 97601

Dear Mr. Bregman:

RE: Advanced Chemical Technology
Camden City, Camden County
ECRA Case #84011
Data Results Dated: June, 1988

The Bureau of Environmental Evaluation and Cleanup Responsibility Assessment has completed its review of the ground water data received June 16, 1988. In addition, a site visit conducted by the Department on October 21, 1988 as part of this review has determined that additional ground water investigation is required.

Please be advised that Advanced Chemical Technology shall continue to investigate ground water as conditioned below:

I. Ground Water

1. A review of the ground water contour maps indicates that none of the wells located in the vicinity of Area 2 (dumpster area) are downgradient of this area of environmental concern. Advanced Chemical Technology shall install another well downgradient of Area 2. Please refer to the attached map designating an acceptable location for this well (MW-7).

2. Advanced Chemical Technology shall flush out monitoring well #4 in order for it to accept ground water and function properly. If flushing of the well does not yield results, then another monitoring well shall be installed.

   The location of this new well if necessary shall be immediately adjacent to MW-4. Advanced Chemical Technology will have to properly seal well #4 per NJDEP specifications for closure of an abandoned well.

3. Advanced Chemical Technology shall install all additional wells in accordance with the attached NJDEP unconsolidated monitoring well

specifications by a NJ licensed driller and supervised by a qualified hydrogeologist. Advanced Chemical Technology shall notify this office at least two weeks prior to the installation of any monitoring wells to allow a geologist to assist in determining well locations and screen elevations.

DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT

4. Advanced Chemical Technology shall conduct two rounds of ground water samples from MW-4 (or another well located immediately adjacent to it) and MW-7. Advanced Chemical Technology shall analyze these water samples for total petroleum hydrocarbons (TPHC), base neutrals +15 (BN+15), volatile organics +15 (VO+15), priority pollutant metals (PPM), ethylene glycol, total dissolved solids (TDS), specific conductance and pH. These rounds shall be sampled at a minimum of thirty days apart.

5. Advance Chemical Technology shall further conduct an additional round of ground water sampling from MW-3, MW-5 and MW-6 and analyze for VO+15 , ethylene gylcol, TDS, specific conductance and pH.

   NOTE: Additional investigation or sampling from ground water monitoring well MW-1 and MW-2 is not necessary.

6. Advanced Chemical Technology shall determine if ground water from the five (5) wells owned by Conrail (numbered 7 through 11 on the request for hydrogeologic assessment) is used for human consumption.

7. Advanced Chemical Technology shall submit the information/sampling results in triplicate within ninety (90) days of receipt of this letter.

II. <u>ECRA Standards for Data Requirements, Presentation and Proposals</u>

8. <u>Data Requirements</u>

   - The following monitoring well information shall be included with the results of sampling.

     a. Monitoring Well Certification Forms: Form A (As-Built Certification) and Form B (Location Certification) for each ground water monitoring well installed. Form A is due within thirty (30) days after completion of each monitoring well. Because additional wells are sometimes required to compete a hydrogeologic investigation, Form B may be submitted after completion of the installation of all required ground water monitoring wells, unless required prior to that time by the Department.

     b. Two ground water contour maps based on measurements taken at least three weeks apart. Any corrections made to the static water level due to the presence of free product must be reported.

   - Upon completion of sampling the following information shall be included with the sampling results:

ATTACHMENT R8

a. Provide in a tabular format the results of sampling. Include the sample number, location, interval and depth of sample, sample matrix, and the analytical methods used.

b. A site map which lists the concentrations of all significant contamination found (above ECRA action levels) at all sampling locations. The labelling of data should be keyed to facilitate interpretation, especially at locations where more than one type of contaminant is found.

9. Data/Results Presentation

a. Presentation of sampling results shall be in accordance with the format specified in the "ECRA Draft Sampling Plan Guide". Failure to provide the information noted, in the format outlined within the guide shall constitute reason to return the submittal for correction and resubmission, thus causing further delay in case processing.

b. Results of laboratory analyses shall be accompanied by the appropriate quality control/quality assurance data (QA/QC) as specified in Attachment II of the guide. ECRA Tier II deliverables must be identified and separated from the submittals, discussion, conclusions and data summary sheets.

c. All submittals of text/data shall be forwarded in triplicate and shall be properly paginated, bear a table of contents and be bound (1 copy may be unbound for filing purposes).

d. Failure to organize submittal information as outlined above can constitute reason to return the submittal to the consultant for correction and resubmission, thus causing further delay in case processing.

e. Failure to address these conditions and provide documentation were required shall constitute non-compliance with ECRA, no final approvals or case closure will occur until these issues are resolved.

10. If it is determined from the ground water investigation through sampling results submitted to the Department that a ground water cleanup is required, Advanced Chemical Technology shall submit a Cleanup Plan that will effectively investigate and address any contamination identified on or from the subject industrial establishment. As a guide to this process, the following elements should be included in the formation of the plan both for ground water and soils cleanup:

a. Introduction
b. Table of Contents
c. Summary of Environmental Concerns. Include the results of previous sampling.

ATTACHMENT Rq

d. The proposed remedial actions. Include the evaluation of any alternative remedial actions if appropriate.
e. Cleanup levels to be achieved. Be specific with regard to media and parameters.
f. A Work Plan must detail the specific activities that will be used to complete the proposed cleanup objectives.
g. A post remediation sampling and monitoring plan.
h. A specific time table for implementation of the Cleanup Plan which includes milestones in the project.
i. Progress reports, dependant on the duration of the cleanup.
j. Estimate costs for cleanup:

   i. Capital Costs;
   ii. operation and maintenance costs;
   iii. monitoring system costs;
   iv. laboratory costs;
   v. engineering, legal, and administrative costs; and
   vi. contingency costs.

11. Please be advised that, according to N.J.A.C. 7:26B-4.3, sampling results shall be accompanied by:

    a. a proposed Negative Declaration; or
    b. a proposed Cleanup Plan; or
    c. a revised Sampling Plan to further delineate the extent and degree of contamination on or from the industrial establishment.

12. Advanced Chemical Technology shall submit all necessary fees with the results of sampling, as required by N.J.A.C. 7:26B-1.10.

This document was prepared by the Case Manager, Stephen Maybury. If you have any questions, please contact the Case Manager at (609) 633-7141.

Very truly yours,

John A. DeFina, Supervisor
Bureau of Environmental Evaluation
and Cleanup Responsibility Assessment

MAN/ng
c: Ed Demarest, BEERA
Jennifer Eck, BGWDC
Bharat Patel, J.M. Sorge, Inc.

ATTACHMENT R10

(36)

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
NEW JERSEY GEOLOGICAL SURVEY

Appendix # A

REQUEST FOR HYDROGEOLOGIC ASSESSMENT – ECRA PROGRAM

(To be completed whenever groundwater sampling is proposed or required as part of a Sampling Plan)

Preparer J M Sorge Inc. Date November 1986

Name of Industrial Establishment Advanced Chemical Technology

Address River Road and State Street

City/Township Camden County Camden

USGS Quadrangle Camden

Latitude 39° 5 6" , 55 " Longitude 75 06 , 5 "

1. Attach a site map or photo copy of the USGS "Quad" with the location of the site circled or outlined in RED and any relevant information (e.g., analyses, well logs, etc.)

2. A. Are wells nearby? ☒ Yes ☐ No Nearest supply well is 2240 feet from the site

   B. Are wells contaminated? ☐ Yes ☐ No Unknown

   C. Is there an imminent health hazard to your knowledge? ☐ Yes ☒ No

   D. Mark the location of any known wells near the facility, and complete the following if such information is available. (Use back of sheet for additional remarks.)

	WELL OWNER	DISTANCE FROM SITE (ft) 5,281 = 1 mile	DEPTH	USE*	REMARKS
1.	Weston, Speitel & Watermation	6,600'	10'	M	
2.	U. S. Gasket Co.	3,300'	131'4"	I	
3.	H. Kohnstamm & Co., Inc.	6,600'	116'	I	
4.	Weston, Speitel & Watermation	3,960'	21'10"	M	
5.	NJ Water Supply	2,640'	170'4"	P	

CONTINUED - SEE ATTACHMENT A

* *P = Public Supply F = Irrigation I = Industrial M = Monitoring D = Domestic*

3. Briefly describe the nature of the operation active/inactive at this facility.

ACT is engaged in the manufacturing of plastic drums. The materials used in the manufacturing are plastic resin beads. See Section 2.2 for details.

ATTACHMENT S1

ATTACHMENT A

Well No.	Well Owner	Distance From Site	Depth	Use
6.	Paris Produce Co.	2,220'	166'	I
7.	Conrail	1,980'	30'	M
8.	Conrail	1,980'	35'	M
9.	Conrail	1,980'	35'	M
10.	Conrail	1,980'	34.5'	M
11.	Conrail	1,980'	35'	M
12.	N.J. Water Co.	5,280'	181'	P
13.	N.J. Water Co.	5,340'	195'	P
14.	N.J. Water Co.	5,340'	174' 10"	P
15.	N.J. Water Co.	5,340'	198' 2"	P
16.	N.J. Water Co.	5,340'	194'	P
17.	H. Kohnstamm Co.	6,300'	194'	I
18.	Camden Trust Co.	5,400'	127'	I
19.	Weston, Speitel, Watermation	5,500'	21' 10"	M
20.	Weston, Speitel, Watermation	7,110'	22'	M
21.	Liberty Theatre	7,920'	130'	I
22.	Lintonia Pure Food	6,600'	166'	I
23.	City of Camden	9,500'	140'	P
24.	City of Camden	9,500'	180'	P

ATTACHMENT 5a

4. Check known or suspected sources of groundwater or soil contamination:

- ☐ Drums
- ☐ Septic Tank(s)
- ☐ Below-ground Storage
- ☐ Landfill(s)
- ☐ Discharge(s) onto Ground
- ☒ Spill(s)
- ☐ Lagoon(s)
- ☐ Seepage Pit(s)
- ☐ Above-ground Storage
- ☐ Industrial Accident
- ☐ Other – *Explain Below*

5. Additional Comments

_____

_____

_____

_____

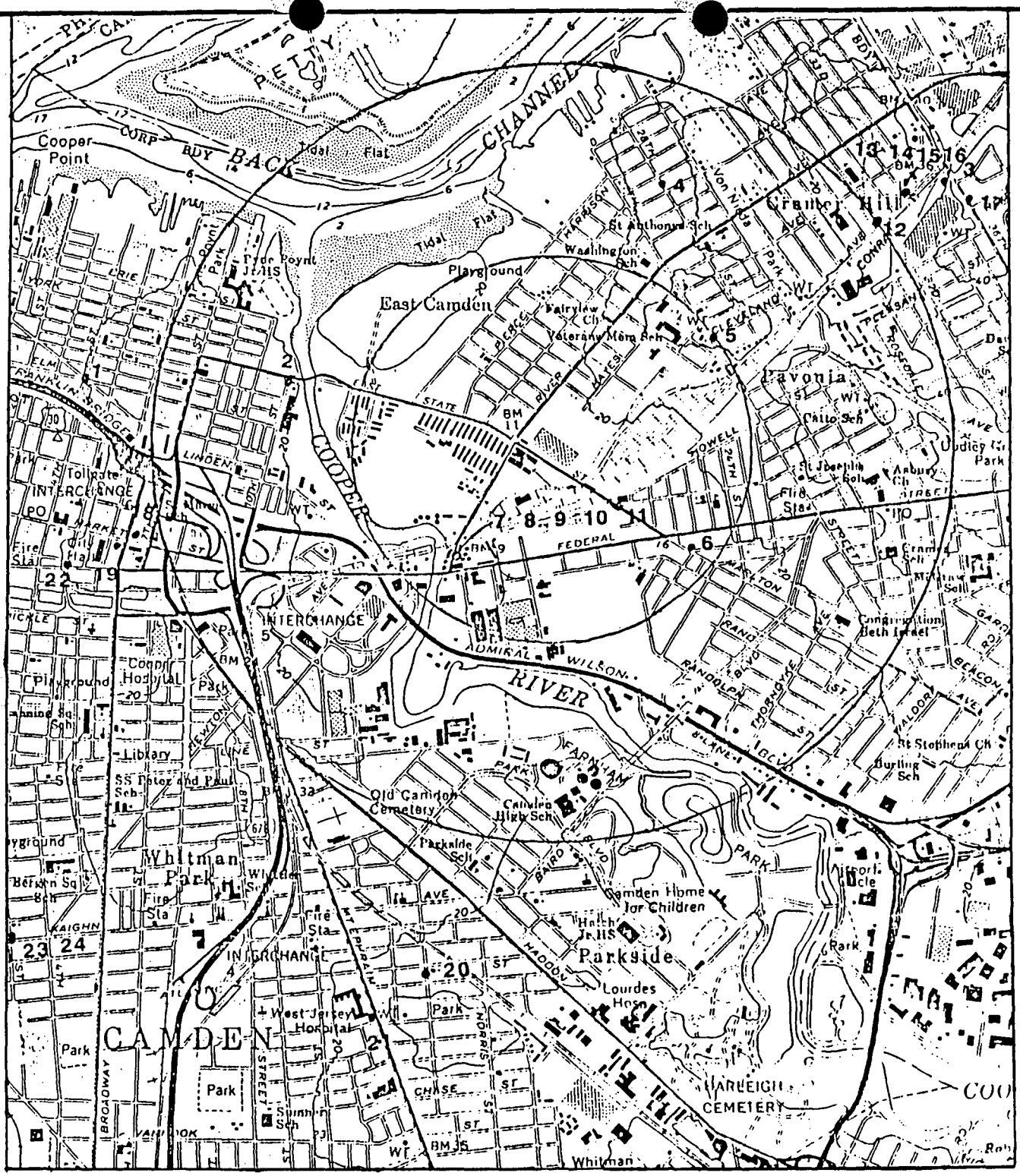
_____

_____

_____

_____

ATTACHMENT S3



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SOURCE:

U.S.G.S. CAMDEN, NEW JERSEY QUADRANGLE TOPOGRAPHIC MAP

MN GN
11° 196 MILS
0°17' 5 MILS

UTM GRID AND 1970 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

J M SORGE, INC.	**ADVANCE CHEMICAL TECHNOLOGY**

WELL LOCATIONS IN 1/2 AND 1 MILE RADIUS

126568

BREWER ASSOCIATES

ATTACHMENT 3A

(11)

NJ Corporate Guarantee and Trust Company
1 Centennial Square
P.O. Box 180
Haddonfield, NJ 08033

RE: Camden Properties

Dear Sir:

On September 2, 1983, Governor Thomas Kean signed into law the Environmental Cleanup Responsibility Act (ECRA), N.J.S.A. 13:1K-6 et seq. which became effective December 31, 1983. The Act applies to Industrial Establishments with operations that fall within Standard Industrial Classification major group numbers 22-39, 46-49, 51 or 76 and are involved in the generation, manufacture, refining, transportation, treatment, storage, handling or disposal of hazardous substances or wastes. The owners or operators of these establishments must notify this Department of the sale and provide assurances that the Industrial Establishment is environmentally acceptable upon sale, transfer or closing of operations. If the property is contaminated, the owner or operator must provide and implement a cleanup plan.

On February 6, 1984, this office was notified that Advanced Chemical Technology, a subsidiary of Plant Industries, Inc. and a tenant on property owned by Camden Properties, entered into a contract to sell its business and assets located at their facility at the southeast corner of River Road and State Street, Camden, New Jersey, to Russell-Stanley Corp. It was determined from this notification that Advanced Chemical Technology was the operator of the industrial establishment and that the sale would be subject to the provisions of ECRA.

As part of the Environmental Responsibility Cleanup Act review process, Advanced Chemical Technology was inspected by a representative of this Bureau. During

ATTACHMENT T1

that inspection it was observed that soil contamination existed on-site. Personnel from Advanced Chemical Technology, with the assistance of a consulting firm, acknowledged that two areas outside the building were heavily contaminated with petroleum hydrocarbons.

A letter from this office was issued to Advanced Chemical Technology on April 2, 1984 approving a Cleanup Plan to remove all contaminated soil on-site. The cleanup that did occur on-site removed only a portion of the contaminated soil. Soil which is contaminated with petroleum hydrocarbons above a level found acceptable by the Department still remains on-site.

It has also brought to our attention that the current tenant (Russell Stanley) has contributed to the contamination problem when oil from machinery spilled onto the railroad siding. The machinery was repaired but the contaminated soil was never removed.

See insert

In accordance with N.J.S.A. 13:1K et seq. the owner or operator of the industrial establishment is responsible for complying with ECRA. See Insert This responsibility is shared equally by the owner and operator. To date, this office has dealt with Advanced Chemical Technology, the former operator, however, it is becoming apparent that final cleanup of the site may not be completed by them. On April 30, 1985, a Notice of Violation was sent to Advanced Chemical Technology for their failure to implement the cleanup plan. If Advanced Chemical Technology continues to fail to clean up the site, NJDEP may look to Camden Properties, as owners of the industrial establishment, to complete the cleanup.

You should also be aware that pursuant to that Camden Properties, as owners of the contaminated property, may hold responsibility for cleanup of the site.

ATTACHMENT T2

Insert

This is to notify you that, in accordance with N.J.S.A. 13:1K-6 et seq., the owner or operator of the subject industrial establishment is responsible for complying with the provisions of ECRA. Therefore, you are hereby advised that NJDEP may look to Camden Properties, as owners of the site at River Road and State Street in Camden, to submit a cleanup plan and implement a cleanup of its property. Thus, it would be in your interest to contact your past and present tenants to arrange for cleanup. Failure to respond to this notice within fourteen (14) days of receipt will result in this Department initiating enforcement action against you.

ATTACHMENT T3

35

S-R ANALYTICAL INC.
28 Springdale Rd., Cherry Hill, N.J. 08003
(609) 751-1122 (215) 923-2068

February 21, 1985

NJDEP
Division of Waste Management
Bureau of Industrial Site Evaluation
428 E. State Street
Trenton, NJ 08608

Attention: Ms. Deborah A. Boyea

Reference: Advanced Chemical Technology
River Road and State Street
Camden, Camden County
ECRA Case #84-11

Gentlemen:

We have been authorized by Plant Industries, Inc. to provide you with the attached documentation which reflects that during the period of 5/5/84 to 5/12/84 some 382 tons of contaminated soil was removed from the subject site and transported to Northwood, Ohio for disposal (see copies of attached NJDEP Hazardous Waste Manifests) and that, to date, over $97,000 has been expended in cleaning up the site (see copies of attached S-R Analytical invoices).

If we can be of further assistance in this matter, please contact me.

Very truly yours,

STABLEX-REUTTER, INC.

William M. Hartman (WMH)
William M. Hartman
Marketing Manager

WMH/md
cc: Mr. Robert Bregman, President
Plant Industries

received
22 FEB 1985

ATTACHMENT U

(2)

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF WASTE MANAGEMENT

HAZARDOUS SITE MITIGATION ADMINISTRATION

CN 028, Trenton, N.J. 08625

MARWAN M. SADAT, P.E.
DIRECTOR

JORGE H. BERKOWITZ, PH.D
ADMINISTRATOR

April 2, 1984

Mr. Douglas E. Goepfert, Secretary
Plant Industries, Inc.
777 Terrace Avenue
Hasbrouck Heights, N.J. 07604

Re: Advanced Chemical Technology
Camden City, Camden County

Dear Mr. Goepfert:

The cleanup plan dated March 27, 1984 prepared by Stablex Reutter, Inc. for the subject industrial establishment has been reviewed by this Department for technical merit and is herewith approved.

Further, it is our determination that, in view of the relatively small volumes and short time-frame involved, the requirement for financial assurance defined at N.J.A.C. 7:1-3.13 will be waived upon the condition that all aspects of the approved plan are completed within 21 calendar days of this letter.

Compliance with this condition will be considered established upon receipt in this office not later than April 23, 1984 of final sampling data as described on page 8 of the plan and will be confirmed through final inspection by our staff.

Should you have any questions or should problems develop, please let me know.

Sincerely,

Anthony J. McMahon, Chief
Bureau of Industrial Site
Evaluation

HS38/sje

ATTACHMENT V

Stablex-Reutter Inc.

OLUTIONS
START
HERE"

Ninth and Cooper Streets
P.O. Box 499
Camden, New Jersey 08101

Phone: 609-541-6700
Telex: 834477

ENVIRONMENTAL CLEANUP RESPONSIBILITY ACT

SITE CLEANUP PLAN

Prepared For

ADVANCED CHEMICAL TECHNOLOGIES
State Street and River Road
Camden, NJ 08101

Prepared By:

STABLEX-REUTTER, INC.
Camden, NJ 08101
March 27, 1984

ATTACHMENT V2

I. INTRODUCTION

Stablex-Reutter, Inc. (S-R) has been requested by Douglas Goepfert (Secretary) of Advanced Chemical Technologies (ACT) in Hasbrouck Heights, NJ to prepare and administer a site cleanup plan for their facility located at State and River Roads in Camden, NJ. Initial data developed from site sampling was reviewed by the Bureau of Industrial Site Evaluation and revealed two (2) principal areas of concern that will be addressed in accordance with the Environmental Cleanup Responsibility Act (ECRA) .

The results of the sampling, cleanup areas, the cleanup methods and contractors, and the subsequent sampling, timing and costs are addressed in this cleanup plan. If you have any questions concerning this plan contact Ian C. Lambert or William M. Hartman of S-R. This plan is arranged in the following fashion for your ease of review.

- Introduction
- Summary of Sampling and Analysis
- Clean Up Areas
- Clean Up Methodology
- Compliance Monitoring
- Control, Timing and Cost

ATTACHMENT V3

II. SUMMARY OF SAMPLING AND ANALYSIS

To determine compliance with the ECRA regulations, sampling was conducted at the ACT site on River Road, with a summary of results displayed below:

Sampling Date	S-R Report No.	Area Sampled	Parameters Analyzed	Summary of Result
2/17/84	SR9211	Transformer Areas	PCBs	No evidence of PCBs
2/25/84	SR9250	Rail siding and Dumpster Area	Priority Pollutants and Petroleum Hydrocarbons	Lead levels in rail siding; petroleum hydrocarbons in dumpster area.
2/25/84	SR9251	Dumpster Area	PCBs	No evidence of PCBs
3/15 and 3/16/84	SR9327	Rail siding	Lead	Lead levels

The sampling and analysis determined two areas of concern according to the Bureau of Industrial Site Evaluation: The railway siding composite sample (Figure 1) showed a significant level of lead and visible petroleum hydrocarbon contamination. The dumpsite storage area (Figure 2) had a significant level of petroleum hydrocarbons.

Parameter	Rail Siding Area (Composite No. 1, SR9250
Lead, total	1600 ug/g

Dumpster Storage Area

		Petroleum Hydrocarbon, total by IR, ug/g ppm
SR9250-4	Area No. 1	3.3; 2.6*
SR9250-5	Area No. 2	1.7
SR9250-6	Area No. 3	54
SR9250-7	Area No. 4	10
SR9250-8	Area No. 5	76
SR9250-9	Area No. 6	31
SR9250-10	Area No. 7	120
SR9250-11	Area No. 8	170

* Duplicate Analysis

ATTACHMENT V4

II. SUMMARY OF SAMPLING AND ANALYSIS (Continued)

The initial sampling in the railway siding indicated a significant lead level. As a result twenty-two additional samples were taken. Sampling concentrated in the siding area, but including other areas to further define the potential problem. The results are displayed below:

Rail Siding Area

Sample Designation	Lead, total, ug/g ppm
Area No. 1	55
Area No. 2	110
Area No. 3	160
Area No. 4	160
Area No. 5	140
Area No. 6	200
Area No. 7	170
Area No. 8	140
Area No. 9	110
Area No. 10	150
Area No. 11	120
Area No. 12	97
Area No. 13	120
Area No. 14	120
Area No. 15	93
Area No. 16	110
Area No. 17	230
Area No. 18	230
Area No. 19	200
Area No. 20	140
Area No. 21	96
Area No. 22	60
Area No. 23 (Formerly Area 7, SR9250-10)	150
Area No. 24 (Formerly Area 8, SR9250-11)	200
Area No. 25	320
Area No. 26	410
Area No. 27	160
Area No. 28	120
Area No. 29	120
Area No. 30	160
Area No. 31	110
Area No. 32	150
Area No. 33	170
Area No. 34	170

ATTACHMENT V5

II. SUMMARY OF SAMPLING AND ANALYSIS (Continued)

The results of the analysis show lesser levels of lead with an average concentration of about 160 ug/g, but with several significant concentrations again in the siding area. The background sample (Area 22) was taken on site, but from a remote location, as far from industrial activity as possible.

The analysis for the full priority pollutant list in these areas showed no other problems. The analysis around the transformers, dumpster storage area and rail siding failed to show any evidence of PCB contamination. A visual examination of both the dumpster storage area and the rail siding supports the contention that the cleanup effort be focused there.

If more extensive information is sought on the sampling techniques and analysis in the above areas, please refer to the appropriate test reports in the attached Appendix.

III. CLEAN UP AREAS

The cleanup areas will be mainly confined to the railway siding and dumpster area as discussed in the previous section and graphically displayed on Figires 1 and 2. The relationship of their areas to the site as a whole is shown by the shaded areas on Figure 3.

- Rail Siding Area

  The railway siding is located at the back of plant, running approximately east/west. The cleanup area starts at the east end of the siding at the end of the loading platform and extends 240 feet west. The track is below grade and gradually rises to grade level, with the cleanup confined to the sides and bottom of the rail bed, approximately 15 feet wide. The transition between the cleanup area and the remainder of the grounds is not apparent and will be defined by marking the exact cleanup area. Figure 3 designates the area as Areas 13, 14 and 15.

- Dumpster Storage Area

  The dumpster storage area is located at the east end of the building, adjacent to the fence bordering the property. The cleanup area extends from the railway siding entering onto ACT property north approximately 110 feet to within 20 feet of the front or north edge of the building. The width is 45 feet, from the permeter fence to the edge of the asphalt area that leads from the edge of the building to the dumpster storage area. Figure 3 designates these as Areas 23 and Area 24.

ATTACHMENT V7

IV. CLEAN UP METHODOLOGY

The cleanup of the contaminated soil will be conducted by Advanced Environmental Technologies Coporation (AETC) of Philadelphia, PA. The contaminated soil will be removed from the site by enclosed truck. The disposal will be handled by CECOS International in Niagara Falls, or Evergreen Landfill, operated by Chem Waste Management in Ohio. The estimated volume to be removed is approximately 380 cubic yards of fill. The cleanup will be conducted as follows:

- Rail Siding

  The contaminated soil on and around the railway tracks will be removed manually. The tracks, ties and railway bed will be left undisturbed. The surface soil will be removed down to about six(6) inches, or to where the apparent petroleum hydrocarbons contamination ends. The soil removal will be back filled with soil graded from the adjacent areas.

- Dumpster Storage Area

  This area consists of soil overlaying an asphalt base, which extends from the building to the parmeter fence. The removal will be conducted by scraping the soil off of the asphalt in the area of concern. The maximum depth is about six inches. Since the asphalt formed a barrier to the ground underneath, no other cleanup step is planned.

ATTACHMENT V8

V. COOMPLIANCE MONITORING

- Rail Siding

After the soil removal operation, sampling and analysis for lead and petroleum hydrocarbons content will be conducted to determine if the removal operation is complete. The samples will be taken at various points along the railbed, with compositing to minimize the analysis costs and turnaround time. The results will be examined to determine if any further soil removal is necessary.

- Dumpster Storage Area

The asphalt layer underlying this area has functioned as a barrier preventing any of the surface contamination from penetrating the soil below. The soil will be removed down to the asphalt and the asphalt left undistrurbed. No additional sampling is planned.

ATTACHMENT V9

VI. CONTROL, TIMING AND COSTS

- Control

All phases of the cleanup operation will be monitored by S-R. A project manager will be assigned to ensure that the cleanup plan is followed and that the documentation requirements of disposal are adhered to. Any deviations and/or difficulties encountered in complying with this plan will be reported to the Bureau of Industrial Site Evaluation.

- Timing

Site cleanup will commence within ten (10) calender days from the approval of this plan by the Bureau of Industrial Site Evaluation. The cleanup operation is expected to take no more than five (5) working days. Additional time will be necessary if the results of the sampling indicates the need for further cleanup.

- Costs

The exact cost cannot be determined until the volume of soil removed is measured. Estimated cost is $15,000. Exact cost will be determined by actual manhours and equipment costs.

ATTACHMENT V10

Reutter Inc.

Advanced Chemical Technology

Sampling Location

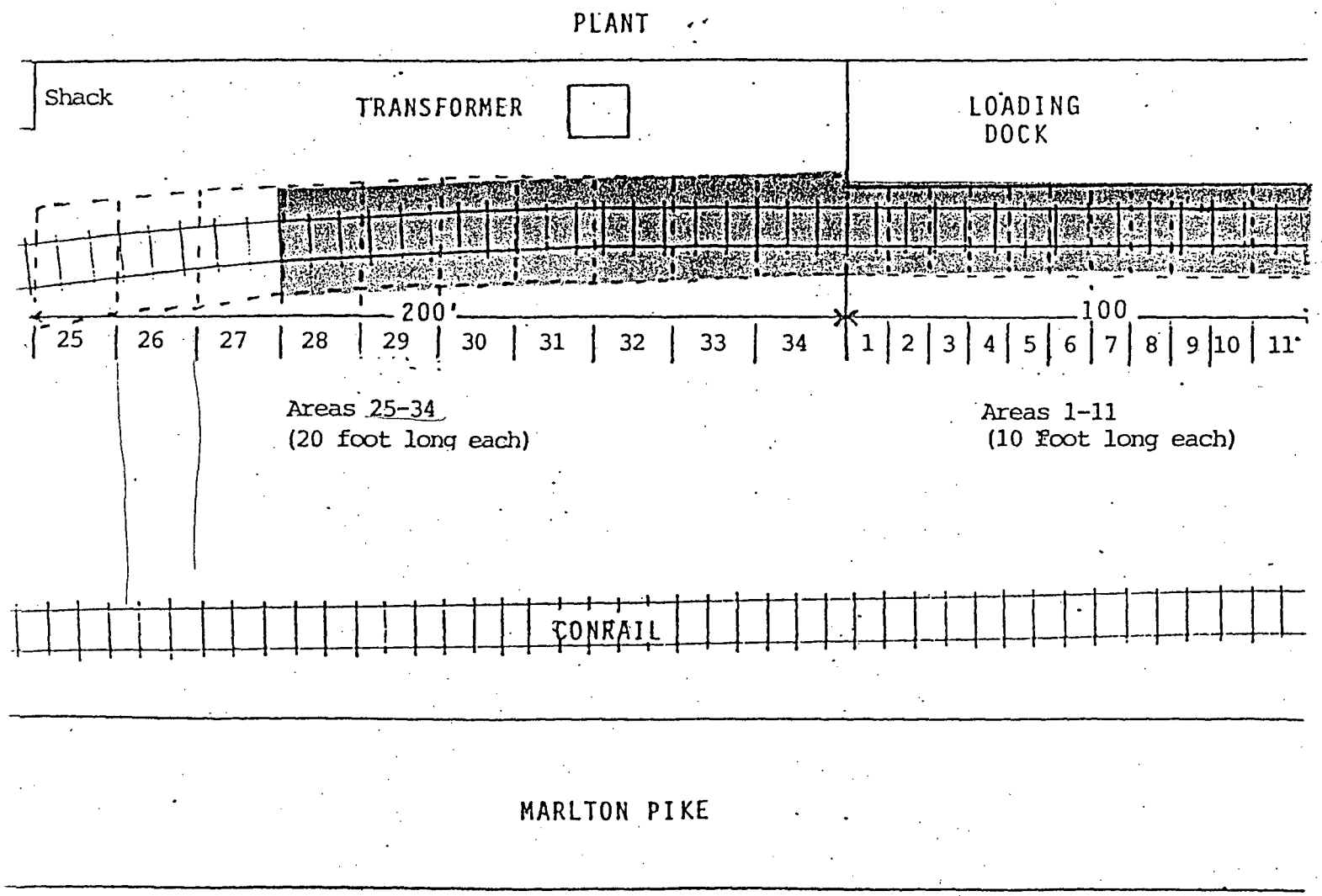

FIG. I

N

ATTACHMENT VU

NOT TO SCALE

Stablex-Reutter Inc.

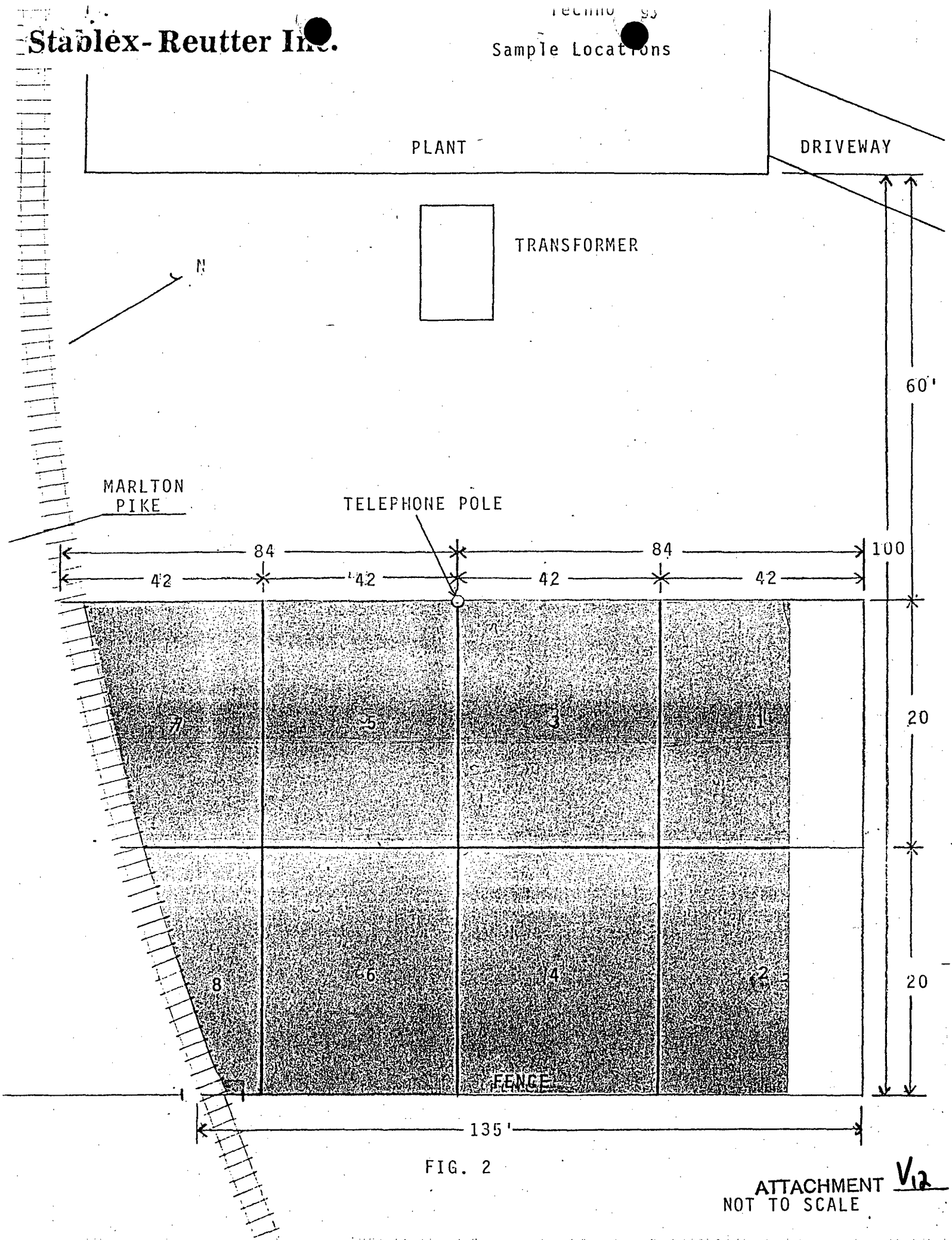

FIG. 2

ATTACHMENT V12
NOT TO SCALE

file copy

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF WASTE MANAGEMENT

HAZARDOUS SITE MITIGATION ADMINISTRATION

CN 028, Trenton, N.J. 08625

MAR[illegible] M. SAE[illegible]
DIRECTOR

JORGE H. BERKOWITZ, PH.D.
ADMINISTRATOR

August 7, 1984

Mr. Robert L. Hall, President
Advanced Chemical Technology
c/o Plant Industries Inc.
777 Terrace Avenue
Hasbrook Heights, NJ 07604

Re: Meeting Held July 20, 1984
Between the Bureau of Industrial
Site Evaluation and Advanced
Chemical Technology

Dear Mr. Hall:

This is a follow-up to the referenced meeting held to discuss the on-going FCTA case. It has been determined that the approved cleanup plan could not be fully implemented and more recent results show the contamination to be more extensive than originally believed. Based on this, you will be required to provide a new cleanup plan per N.J.A.C. 7:11-3.12. Also, the results of all sampling performed, but not yet submitted to the Department, must be included. The cleanup plan and sampling results must be submitted to the Department by September 1, 1984. Failure to meet this deadline may result in enforcement action. If there are any questions, please contact Ms. Deborah Boyed at 609/633-7141.

Very truly yours,

Anthony J. McMahon, Chief
Bureau of Industrial Site
Evaluation

[illegible]:95bmm

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ATTACHMENT W

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WASTE MANAGEMENT
HAZARDOUS SITE MITIGATION ADMINISTRATION
CN 028, Trenton, N.J. 08625

MARWAN M. SADAT, P.E.
DIRECTOR

JORGE H. BERKOWITZ, PH.D.
ADMINISTRATOR

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

21 OCT 1985

Mr. Robert Bregman, President
Plant Industries
P.O. Box 1596
Waltham, MA 02154

RE: Advanced Chemical Technology
River Road and State Street
Camden, Camden County
ECRA Case #84011

Dear Mr. Bregman:

Please be advised that the revised Cleanup Plan dated September 18, 1985 submitted for the referenced industrial establishment is hereby disapproved.

As discussed during our meeting on October 4, 1985 the cleanup plan did not address all areas of the site where soil contamination exists. In addition, it was determined during that meeting that ground water contamination may also exist therefore, capping is not appropriate. Prior to submitting a cleanup plan, the horizontal and vertical extent of all contamination on-site must be clearly identified. It is also unclear whether the railroad siding area was ever cleaned up. Until post sampling data is submitted for this area showing PHC levels acceptable by the Department, we cannot consider the railroad siding area as clean.

Advanced Chemical Technology must prepare and submit a Sampling Plan which includes but is not limited to:

1. Advanced Chemical Technology must propose to sample all areas of known or suspected petroleum hydrocarbon (PHC) contaminated soil. A full investigation must be made to delineate all contaminated areas.

2. Advanced Chemical Technology must propose a ground water investigation to determine if ground water contamination exists.

3. BISE requires that any laboratory used for ECRA related analyses must have at least one of the following qualifications:

ATTACHMENT X1

a) New Jersey certification for case-pertinent analytical parameters.

b) Member of USEPA's Contract Laboratory Program.

c) Certification for case-pertinent parameters in another state having approved reciprocity agreement with New Jersey.

4. Reporting of all analytical data from the laboratory is to include:

°cover page

°chain of custody

°sample request form

°methodology summary

°laboratory chronicle

°use of blanks and/or duplicates

5. Additionally, a map which specifies soil sampling locations as well as ground water monitoring wells must be provided along with the analytical data.

The Sampling Plan must be submitted to BISE within forty-five (45) days of receipt of this letter.

Should you have any questions concerning the above, please contact Mr. Michael Nalbone, case manager, at (609) 633-7141.

Sincerely,

Anthony J. McMahon, Chief
Bureau of Industrial Site Evaluation

HS111:dr
cc: Phil Sandine, BEERA
A. Simonoff, DAG, Division of Criminal Justice

ATTACHMENT X2

(A)

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF WASTE MANAGEMENT

HAZARDOUS SITE MITIGATION ADMINISTRATION

CN 028, Trenton, N.J. 08625

MARWAN M. SADAT, P.E.
DIRECTOR

JORGE H. BERKOWITZ, PH.D.
ADMINISTRATOR

October 2, 1984

Meeting on Oct 4 (29)
Jan 8 (12)

Mr. Robert L. Hall
Advances Chemical Technology
C/O Plant Industries
777 Terrace Heights
Hasbrouck Heights, NJ 07604

Re: Advanced Chemical Technology
River Road and State Street
Camden, Camden County
ECRA Case #84-11

Dear Mr. Hall:

The proposed field sampling plan dated September 13, 1984 from Stablex-Reutter Inc. to Plant Industries for the above referenced site is hereby approved.

At this time, the Department is requiring "background" samples to be taken away from the area of concern. This enables a cleanup plan to be more readily developed.

All sampling results must be submitted to this office within 30 days of receipt of this letter. If there are any questions concerning this matter, please contact Ms. Deborah A. Boyea at (609) 633-7141.

Sincerely,

Anthony J. McNahon, Chief
Bureau of Industrial Site
Evaluation

HS94/sje
CERTIFIED MAIL

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ATTACHMENT Y

JM Sorge, Inc.

3301 U S Highway 22, Somerville, N J 08876 • (201) 218-0066

February 1, 1988

Mr. Joseph R. Fallon, Chief
Bureau of Environmental Evaluation and Clean-up
Responsibility Assessment
Division of Hazardous Waste Management
NJ Department of Environmental Protection
401 E. State Street, 5th Floor
Trenton, NJ 08625

FEB 2 10 38 AM '88
BUREAU OF
INDUSTRIAL SITE
EVALUATION

Attn: Mr. Michael Nalbone

Re: Advanced Chemical Technology
River Road and State Street
Camden, Camden County, NJ
ECRA Case #84011

Dear Mr. Fallon:

The purpose of this letter is to notify NJDEP regarding the Sampling Program scheduled at the above referenced industrial establishment. The implementation of the soil sampling program is scheduled to begin on February 15, 1988 at 9:00 a.m. Also, the required well installation program is scheduled to begin at 8:00 a.m. on Tuesday, February 16, 1988. The field program involving the extensive soil sampling and well installation program will be carried out simultaneously and is expected to take 4 to 5 days each. The site activities will be conducted in accordance with the Sampling Plan dated November 18, 1986; the sampling program detailed in the above referenced submittal was approved as conditioned in NJDEP letter dated July 9, 1987.

ATTACHMENT 2

As discussed with Mr. Michael Nalbone, ECRA Case Manager, the initiation of the Sampling Plan was delayed since certain financial arrangements had to be worked out between parties involved. Therefore, we request a 90-day extension (until May 1, 1988) for submittal of the Sampling Plan results.

Very truly yours,

Bharat Patel

Bharat Patel
Senior Hydrogeologist

BP/kk

cc: Ms. Karen Mujica, NJGS
Mr. Robert Bregman, Plant Industries
Mr. Peter Herzberg, Esquire
Mr. Allen A. Elish, Esquire
Mr. Joseph M. Sorge, JMS

ATTACHMENT 2a

JM Sorge, Inc.

3301 US Highway 22, Somerville, NJ 08876 • (201) 218-0066
FAX (201) 218-9185

June 14, 1988

Mr. Kenneth T. Hart, Chief
Bureau of Environmental Evaluation and
Cleanup Responsibility Assessment
Div. of Hazardous Waste Management
NJ Department of Environmental Protection
401 East State Street, 5th Floor
Trenton, NJ 08625

Attn: Mr. Michael Nalbone, Case Manager

Re: Advanced Chemical Technology
River Road and State Street
Camden, NJ
ECRA Case #84011

Dear Mr. Hart:

I have attached three (3) copies of the report describing the results of the site investigation conducted by J M Sorge, Inc. (JMS) at the above referenced industrial establishment. The Sampling and Analysis Program was conducted at the site in accordance with the facility Sampling Plan (dated November 18, 1986); the Plan was conditionally approved via NJDEP letter dated July 9, 1987. The site sampling program also involved a preliminary hydrogeologic investigation to determine groundwater quality. A 45-day extension (until June 15, 1988) was requested by JMS letter dated April 27, 1988, in order to comdplete a thorough review of the voluminous data obtained during the field and laboratory program conducted at the ACT site.

As discussed in the report, the soil sampling program implemented at the site has identified the nature and approximate extent of contamination. The vertical extent of contamination has been delineated in all three (3) areas of concern; however, an additional soil sampling program will be required in certain areas in order to obtain a complete horizontal definition of the soils contamination identified. Also vertical delineation of two (2) specific metal contamination is required for one (1) area. An additional soil sampling program is proposed in the report. No significant groundwater contamination was identified during the hydrogeologic investigation conducted at the site.

ATTACHMENT AA1

It should be noted that one (1) complete copy of the analytical results (Appendix A), including QA/QC data, is provided as three (3) separate volumes.

Should you have any questions or require further information, please do not hesitate to contact Mr. Joseph Sorge or myself at (201) 218-0066.

Very truly yours,

Bharat Patel

Bharat Patel
Senior Hydrogeologist

BP/nk

Enclosure

cc: Mr. Robert Bregman, Plant Industries
Mr. Peter Herzberg, Esquire
Mr. Allen A. Etish, Esquire
Mr. Joseph Sorge, JMS

ATTACHMENT AA2

(17) Form DWM-002 A
2/84

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WASTE MANAGEMENT
R.D. 1 ROUTE 70, VINCENTOWN, N.J. 08088
PHONE : (609) 859-2958

Due Section FY 1/10/85

NOTICE OF VIOLATION

ID NO. 84-11-30-035 DATE 12-21-84

NAME OF FACILITY RUSSELL - STANLEY - A.C.T. CAMDEN

LOCATION OF FACILITY STATE ST. & RIVER RD. ; CAMDEN, N.J. 08105

NAME OF OPERATOR STANLEY BEY, THROUGH CHARLES MORRELLI

You are hereby NOTIFIED that during my inspection of your facility on the above date, the following violation(s) of the Solid Waste Management Act, (N.J.S.A. 13:1E-1 et seq.) and Regulations (N.J.A.C. 7:26-1 et seq.) promulgated thereunder and/or the Spill Compensation and Control Act, (N.J.S.A. 58:10-23.11 et seq.) and Regulations (N.J.A.C. 7:1E-1 et seq.) promulgated thereunder were observed. These violation(s) have been recorded as part of the permanent enforcement history of your facility.

DESCRIPTION OF VIOLATION 58:10-23.11c ; DISCHARGE OF A HAZARDOUS SUBSTANCE (OIL OR HYDRAULIC FLUID)
58:10-23.11e ; FAILURE TO IMMEDIATELY NOTIFY DEP. COMPANY MUST STOP SOURCE BY CONSTRUCTING CONTAINMENT DIKE. CONTAMINATED AREAS MUST BE EXCAVATED, ANALYZED, CLASSIFIED AND DISPOSED OF PROPERLY. ALSO PROVIDE AS-BUILTS OR BLUEPRINTS FOR BUILDING DRAIN SYSTEM AND FOR PROPERTY.

Remedial action to correct these violations must be initiated immediately and be completed by 1-10-85. Within fifteen (15) days of receipt of this Notice of Violation, you shall submit in writing, to the investigator issuing this notice at the above address, the corrective measures you have taken to attain compliance. The issuance of this document serves as notice to you that a violation has occurred and does not preclude the State of New Jersey, or any of its agencies from initiating further administrative or legal action, or from assessing penalties, with respect to this or other violations. Violations of these regulations are punishable by penalties of $25,000 per violation.

James D. Manuel
Investigator, Division of Waste Management
Department of Environmental Protection

ATTACHMENT BB

(33)

GREENBAUM, ROWE, SMITH, RAVIN, DAVIS & BERGSTEIN

COUNSELLORS AT LAW

WM. L. GREENBAUM (1914-1983)
ROBERT S. GREENBAUM
ARTHUR M. GREENBAUM
ALLEN RAVIN
PAUL A. ROWE
WENDELL A. SMITH
ALAN E. DAVIS
MELVYN H. BERGSTEIN
NATHANIEL H. YOHALEM
DAVID L. BRUCK
DAVID S. GORDON
ROBERT C. SCHACHTER
MARTIN L. LEPELSTAT
DENNIS A. ESTIS
WILLIAM D. GRAND
CHARLES APPLEBAUM
VICTOR A. DEUTCH
DONALD KATZ
HARRIET FARBER KLEIN
BENJAMIN D. LAMBERT, JR.
MICHAEL B. HIMMEL
DOUGLAS K. WOLFSON
ALAN S. NAAR
ROBERT E. LINKIN

ENGELHARD BUILDING
P. O. BOX 5600
WOODBRIDGE, NEW JERSEY 07095
(201) 549-5600

PARKWAY TOWERS
P. O. BOX 5600
WOODBRIDGE, NEW JERSEY 07095
(201) 750-0100

GATEWAY ONE
NEWARK, NEW JERSEY 07102
(201) 623-5600

TELECOPIER 549-1881

CHARLES R. ORENYO
MARK H. SOBEL
HAL W. MANDEL
MARIANNE McKENZIE
PETER J. HERZBERG
KENNETH T. BILLS
THOMAS C. SENTER
GLENN C. GURITZKY
MICHAEL NORD
W. RAYMOND FELTON
AMY E. STEIN
ALAIN LEIBMAN
CHRISTINE F. LI
BRUCE D. GREENBERG
JOEL M. ROSEN
MERYL A. G. GONCHAR
PAUL F. CLAUSEN
JAMES P. SHANAHAN
WILLIAM R. GICKING
JEFFREY I. BURNETT
NANCY SIVILLI
NANCY E. BRODEY
SHARON L. LEVINE
JOSEPH M. ORIOLO
JOHN G. HROMY
JOAN FERRANTE RICH
JEFFREY R. SURENIAN

HAROLD N. GAST (1933-1984)
SAMUEL J. SPAGNOLA
OF COUNSEL

REPLY TO:

Engelhard Building

January 7, 1985

Mr. Anthony McMahon, Chief
Bureau of Industrial Site Evaluation
Division of Waste Management
CN-028
Trenton, New Jersey 08625

Re: Notice of Violation dated 12-21-84
Russell-Stanley/A.C.T. Camden
I.D. #84-11-30-033

Dear Mr. McMahon:

This is to confirm our several telephone conversations of January 2, 1985.

As you know, this property is subject to an ongoing investigation by your Bureau regarding the prior operator's (A.C.T.'s/Plant's) failure to comply with ECRA upon closure of the site. The prior operator submitted to you an initial cleanup plan which, upon implementation, turned out to be inadequate to deal with all the environmental problems at the site. To date, the prior operator has not submitted to the Department a revised cleanup plan to correct all the environmental hazards at the site. In this regard, Russell-Stanley Corporation has filed a 30-day notice under the Environmental Rights Act so as to notify the Department of its concern and requirement that the prior operator clean up the site immediately.

On December 21, 1984, Russell-Stanley was hand-delivered a Notice of Violation regarding the hazardous conditions on this site. Since ECRA places the responsibility for cleanup of this hazardous condition on the prior operator, I subsequently called

received
10 JAN 1985

ATTACHMENT CC1

to inform you that this Notice of Violation conflicted with ECRA and the investigation by your Bureau. On January 2, 1985, you informed me that you had discussed this matter with Charles Krauss, Supervisor of the Sourthern Field Office of the Division of Waste Management which had issued the Notice of Violation. You informed me that it had been agreed with Mr. Krauss that the Notice of Violation was "of no force of law"; moreover, you had agreed with Mr. Krauss that this matter would be, in its entirety, referred to the Bureau of Industrial Site Evaluation for it to continue its ECRA enforcement action against A.C.T.

Based upon this agreement between Mr. Krauss and you, I informed you that my client would not respond to the Notice of Violation dated December 21, 1984. You found this acceptable. Rather, my client intends to proceed, as before, to urge the Bureau of Industrial Site Evaluation to require A.C.T. to clean up its former site in Camden pursuant to ECRA. If such action is not soon forthcoming, my client will take appropriate legal action.

Thank you very much for your cooperation.

Very truly yours,

Peter J. Herzberg

Peter J. Herzberg

PJH/lk

cc: Charles Krauss, Supervisor
Southern Field Office
Division of Waste Management

William Lima,
Russell-Stanley Corp.

ATTACHMENT CC2

EC 00005

received
08 MAY 1985

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WASTE MANAGEMENT
120 Rt. 156, Yardville, N.J. 08620

DR. MARWAN M. SADAT, P.E.
DIRECTOR

LINO F. PEREIRA
DEPUTY DIRECTOR

MAY 1 1985

Advanced Chemical Technology
c/o Plant Industries, Inc.
411 Hackensack Avenue
Hackensack, NJ 07601

Attention: Mr. Robert Bregman

Re: Notice of Violation and
Penalty Settlement Offer

Dear Mr. Bregman:

Pursuant to the Environmental Cleanup Responsibility Act, N.J.S.A. 13:1K-6, et seq. and regulations promulgated thereunder, specifically N.J.A.C. 7:1-3.13(c), 7:1-3.13(d) and 7:1-1.3(e), the following findings of fact are made:

FINDINGS

1) The State of New Jersey enacted the Environmental Cleanup Responsibility Act (hereinafter "ECRA" or "the Act"), N.J.S.A. 13:1K-6 et seq. (P.L. 1983, c. 330), which was signed into law by Governor Thomas H. Kean on September 2, 1983.

2) ECRA requires the New Jersey Department of Environmental Protection (hereinafter "the Department") to adopt rules and regulations to implement the act.

3) The Department promulgated Interim ECRA regulations, N.J.A.C. 7:1-3, on December 30, 1983 on an emergency basis pursuant to N.J.S.A. 52:14B-4(c) as implemented by N.J.A.C. 1:30-4.4. On March 6, 1984, the Department readopted the Interim ECRA Regulations, N.J.A.C. 7:1-3 (hereinafter "Regulations") in compliance with the Administrative Procedures Act, N.J.S.A. 52:14B-1 et seq., upon acceptance for filing by the Office of Administrative Law pursuant to N.J.A.C. 1:30-4.4(d).

4) ECRA and the Regulations establish certain requirements for owners or operators of industrial establishments planning to sell or transfer operations.

ATTACHMENT DD1

5) Pursuant to N.J.A.C. 7:1-3.7(c), the owner or operator of an industrial establishment planning to sell or transfer operations MUST (a) notify the Department in writing within five days of the execution of an agreement of sale pursuant to N.J.A.C. 7:1-3.10(a), (b) submit within 60 days prior to the transfer of title a negative declaration to the Department for approval, or within 60 days prior to transfer of title, attach a copy of any cleanup plan to the contract or agreement of sale which may be entered into with respect to the transfer of operations and pursuant to N.J.A.C. 7:1-3.10, (c) obtain, upon approval of the cleanup plan by the Department, a surety bond or other financial security approved by the Department guaranteeing performance of the cleanup plan in an amount equal to the cost estimate for the cleanup plan.

6) Advanced Chemical Technology (hereinafter "ACT"), a subsidiary of Plant Industries, Incorporated operated a manufacturing facility at Block 1241, Lot 2, River Road and State Street, Camden City, Camden County, New Jersey.

7) By letter dated February 8, 1984, ACT notified the Department that ACT had entered into a contract to sell all assets at the above referenced facility to Russell-Stanley Corporation.

8) By letter dated February 15, 1985, ACT submitted a GIS, SES and a negative declaration statement to the Department pursuant to N.J.A.C. 7:1-3.10.

9) By letter dated February 16, 1984, ACT submitted a copy of the Asset Purchase Agreement between ACT and Russell-Stanley Corporation regarding the sale of the above referenced facility.

10) On February 23, 1984, an inspection of the above referenced facility was conducted by a Departmental representative. During said inspection, the following was noted:

    a) Oil contaminated soil at the rear of the facility near a dumpster and along the railroad siding on the southern portion of the facility site.

    b) Absorbent material (speedy dry) contaminated with oil was discarded with the trash in a dumpster.

    c) A fill area located on the northern boundary of the facility site.

11) ACT was instructed by the Departmental inspector to conduct soil sampling and analysis in areas of oil contamination and to provide additional information concerning the fill area on the northern boundary of the facility.

12) By letter dated March 6, 1984, ACT submitted to the Department soil sampling and analysis results for eleven (11) samples collected at the ACT facility.

ATTACHMENT DD2

13) Based on Departmental review of the information described in Paragraph 12 above, the Department, by letter dated March 14, 1984, required ACT to:

   a) Conduct further sampling to determine the extent of lead contamination in the dock and dumpster areas.

   b) Conduct a cleanup of oil contaminated soil in the dumpster area and perform additional sampling to assure proper cleanup.

   c) Submit documentation to substantiate that the fill area described in Paragraphs 10c and 11 above is not part of the property leased by ACT.

14) By letter dated March 19, 1984, ACT submitted documentation to the Department indicating that the fill area described in Paragraphs 10c and 11 above was not part of the property leased by ACT.

15) By letter dated March 21, 1984, ACT responded to the Department's letter of March 14, 1984, by submitting the additional requested soil sampling and analysis results.

16) Based on Departmental review of the information described in Paragraph 15 above, the Department, by letter dated March 22, 1984, disapproved ACT's Negative Declaration.

17) By letter dated March 27, 1984, ACT submitted a site cleanup plan to the Department.

18) By letter dated April 2, 1984, the Department approved ACT's site cleanup plan as referenced in Paragraph 17 above. In said letter, the Department waived the financial assurance requirements as defined at N.J.A.C. 7:1-3.12(c) provided that the final sampling data as described on Page 8 of the plan was completed by April 23, 1984.

19) By letter dated May 1, 1984, ACT informed the Department that cleanup of the Camden facility would not begin until the first week in May, 1984.

20) ACT conducted cleanup operations at the Camden facility during the period May 5 to May 12, 1984. After the soil removal operation, sampling and analysis for lead and petroleum hydrocarbons was not performed therefore, it was never determined if the soil removal operation was complete.

21) ACT, therefore, failed to implement the approved cleanup plan according to the time schedule for implementation of said plan. This is a violation of N.J.A.C. 7:1-3.12(d).

ATTACHMENT DD3

22) As ACT failed to complete all aspects of the approved cleanup plan by April 23, 1984, ACT failed to obtain a surety bond or other financial security approved by the Department guaranteeing performance of the cleanup plan in an amount equal to the cost estimate for the cleanup plan. This is a violation of N.J.A.C. 7:1-3.12(c).

23) On July 20, 1984, a meeting was held between ACT and the Department to discuss the status of cleanup activities at the Camden facility. As a result of said meeting, it was determined by the Department that site contamination at the facility was more extensive than originally believed and that a new sampling and cleanup plan was required.

24) By letter dated August 7, 1984, the Department required ACT to submit a new sampling and cleanup plan.

25) By letter dated September 13, 1984, ACT submitted to the Department a new sampling plan for the Camden facility.

26) By letter dated October 2, 1984, the Department approved ACT's sampling plan as referenced in Paragraph 25 above.

27) By letter dated November 30, 1984, ACT submitted to the Department the analytical results of samples collected pursuant to the approved sampling plan referenced in Paragraph 25 above.

28) On January 5, 1985, a meeting was held between ACT and the Department to discuss the status of cleanup activities at the Camden facility.

29) Based on Departmental review of the analytical results as referenced in Paragraph 27 above and as a result of the January 5, 1985 meeting, the Department, by letter dated January 23, 1985, required ACT to submit an amended cleanup plan within thirty (30) days of receipt of said letter.

30) On January 28, 1985, an inspection of the Camden facility was conducted by a Departmental representative. During said inspection, deficiencies were noted by the Department concerning the implementation of the requirements of the cleanup plan.

31) As of the date of this Notice of Violation and Penalty Settlement Offer, the Department has not received an amended cleanup plan from ACT. ACT, therefore, has failed to correct deficiencies noted by the Department concerning the implementation of the requirements of the facility cleanup plan. This is a violation of N.J.A.C. 7:1-3.12(e)1.

Within fifteen (15) calendar days of receipt of this Notice of Violation, you shall submit in writing, to the Bureau of Compliance and Enforcement, Attention: Barry Frasco, at the above address, an affidavit outlining the measures you have taken to attain compliance with the above referenced regulations.

ATTACHMENT DD4

N.J.S.A. 13:1K-13c provides for maximum civil penalties of $25,000 per day for violations of this nature. The Department, however, is amenable to compromise and will settle this statutory claim for penalties for the aforementioned violations for the sum of $23,300.

Should you decide to accept this Penalty Settlement Offer, payment must be made within fifteen (15) days of your receipt of this letter. Only checks or money orders drawn to the New Jersey Department of Environmental Protection will be accepted.

Should you decide not to accept this Penalty Settlement Offer or fail to forward payment within fifteen (15) days of receipt of this letter, this offer is rescinded and this matter will be referred to the Office of the Attorney General for the initiation of litigation seeking the full penalties allowed by law.

Should you wish to discuss the specifics of this Notice and Offer, contact Barry Frasco at (609) 292-5561.

Be advised that such discussion will not automatically delay or otherwise extend the deadline for acceptance of this Penalty Settlement Offer.

Very truly yours,

Joseph A. Rogalski
Assistant Director
Field Operations, Compliance
and Enforcement

F01:F021:lmc

ATTACHMENT DD 5

(9)

1155-

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WASTE MANAGEMENT
HAZARDOUS SITE MITIGATION ADMINISTRATION
CN 028, Trenton, N.J. 08625

MARWAN M. SADAT, P.E
DIRECTOR

JORGE H. BERKOWITZ, PH.D.
ADMINISTRATOR

MEMORANDUM

MAR 7 1985

TO: GERALD BURKE, DIRECTOR
OFFICE OF REGULATORY SERVICES

THROUGH: DR. MARWAN M. SADAT, DIRECTOR
DIVISION OF WASTE MANAGEMENT

THROUGH: DR. JORGE H. BERKOWITZ, ADMINISTRATOR
HAZARDOUS SITE MITIGATION ADMINISTRATION

FROM: ANTHONY J. MCMAHON, CHIEF
BUREAU OF INDUSTRIAL SITE EVALUATION

SUBJECT: ADVANCED CHEMICAL TECHNOLOGY
ECRA CASE #84011

On or around February 6, 1984, Advanced Chemical Technology located in Camden, NJ submitted documentation that a sale of property was to occur and an ECRA approval was required.

Since that time, several inspections were conducted by this office. In addition, the Bureau of Field Operations also conducted an investigation due to an oil spill during this time. During those inspections, oil contaminated soil at the rear of the facility and along the railroad siding was observed. Also observed was speedy dry contaminated with oil discarded in the dumpster.

Advanced Chemical Technology was instructed to conduct soil sampling to determine the extent of contamination, conduct a cleanup of oil contaminated soil and perform additional sampling to assure proper cleanup.

Advanced Chemical Technology received an approved Cleanup Plan but failed to complete all aspects of the approved Cleanup Plan and, therefore, was found to be in violation of ECRA.

On June 18, 1985, Judge Skillman issued a Court Order requiring the company to submit a revised Cleanup Plan by July 17, 1985.

Advanced Chemical Technology failed to comply with Court Order.

We sent a letter dated October 21, 1985 to Mr. Robert Bregman, President, requesting Advanced Chemical Technology to submit a revised Sampling Plan. The company has not responded to this letter and it appears that the company is not going to comply.

On-site contamination exists and has been verified through past analytical data received by this office. Because it is imperative for this office to identify the horizontal and vertical extent of all contamination on site in order to properly evaluate a thorough and environmentally acceptable Cleanup Plan, this office is recommending additional legal action be taken to enforce the Court Order.

Please forward this to the Attorney General's Office for appropriate action.

If we can provide any additional information or assistance in this matter, please contact Michael Nalbone, Case Manager, at 3-7141.

HS111:dr
cc: Scott Dubin
Ann Simonoff

ATTACHMENT EE2

10002

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION
JOHN FITCH PLAZA, P.O. BOX 1390, TRENTON, N.J. 08625
Division of Environmental Quality

ORDER

o: Advanced Chemical Technology
Corporation Trust Co., Registered Agent
15 Exchange Place
Jersey City, New Jersey 07302
and
Camden Properties Inc.
N.J. Corporation Guarantee & Trust Co., Registered Agent
1 Centennial Square
Haddonfield, New Jersey

Re: Air Pollution Control Code
See attached cross reference sheet

VIOLATION OCCURRED ON PREMISES KNOWN AS:
East State Street & River Road,
Ward 11, Block 1236, Lot 2,
Camden City, Camden County,
New Jersey

Dear Sir:

FU POLLAK

WHEREAS, the State Department of Environmental Protection has determined by investigation(s) or inspection(s) made pursuant to the Provisions of the New Jersey Air Pollution Control Act, that on August 19, 1974 you did violate Chapter 27, Section(s) 7:27-8.3(a), of the New Jersey ~~Air Pollution Control~~ Administrative Code. (see paragraph(s) A below).

NOW THEREFORE, YOU ARE HEREBY ORDERED to cease violation of said Chapter on premises owned, leased, operated or maintained by you on or before September 21, 1974.

A CHAPTER 9, SECTION 3.1: The investigation(s) disclosed that a polyethylene powder storage silo with a pneumatic filling system was constructed, installed or altered on the premises identified above without first having obtained a "Permit to Construct, Install or Alter Control Apparatus or Equipment" from the Department.

B CHAPTER 9, SECTION 3.2: The investigation(s) disclosed that _____ was used or caused to be used on the premises identified above without first having obtained a "Certificate to Operate Control Apparatus or Equipment" from the Department.

C CHAPTER 10, SECTION 2.1: The investigation(s) disclosed the storing, offering for sale, delivering for use or use of Grade # _____ commercial fuel oil on the premises identified above containing sulfur in excess of _____% by weight

D CHAPTER 10-A, SECTION 2.1: The investigation(s) disclosed the storing, offering for sale, sale, or delivering for use in New Jersey of bituminous and/or anthracite coal on the premises identified above containing sulfur in excess of 0.2% by weight (dry basis).

E CHAPTER 10-A, SECTION 2.2: The investigation(s) disclosed the use of bituminous and/or anthracite coal on the premises identified above containing sulfur in excess of 0.2% by weight (dry basis)

F CHAPTER 10-A, SECTION 2.6: The investigation(s) disclosed the offering for sale, sale, delivering for use, or use in New Jersey, coke on the premises identified above containing sulfur in excess of 0.65 percent by weight

Dated ~~September 6, 1974~~

cc: Board of Health: Camden City
State Health District: Southern
Copy For:
Certified Mail

~~Grant F. Walton, Director~~
Richard D. Goodenough, Director

ATTACHMENT FF1

Air-L20
Dec. 72

(OVER)
ENFORCEMENT FILE

A-F

NEW JERSEY STATE D[illegible]MENT OF HEALTH

NEW JE[illegible] AIR POLLUTION CONTROL CODE
F[illegible]D RECORD OF VIOLATION

DATE 8/19/74 TIME AT SITE 1:30 a.m. (p.m.) from 2:00 a.m. (p.m.) to

STATE HEALTH DISTRICT Southern COUNTY Camden

Sec. A — PERSON IN VIOLATION

FULL BUSINESS NAME Advanced Chemical Technology Cal. POLY-DRUM DIV.

MAILING ADDRESS 800 So. McGarry Ave. Los Angeles 90021
No. Street Post Office Zip Code
E. STATE ST & RIVER ROAD, CAMDEN 08105

TYPE OF OWNERSHIP:

Individual
Partnership
Corporation X
Municipal (type)

NAME OF OWNER, PARTNERS, OFFICERS, OFFICIALS	TITLE
Alvin Simon	Pres.
Ted Levine	V.P.

Person(s) interviewed Mr. John Rawlins, Plant Manager

Person authorized to receive processes
Name

MAILING ADDRESS
No. Street Post Office Zip Code

REMARKS:

Sec. B — LOCATION OF VIOLATION

LOCATION ADDRESS N.E. Corner of E. State and River Rd. Camden
No. Street Municipality

(Show details on reverse side) PLAN 11 WARD Lot 2 Block 1236

Premises occupied as: Owner Lessee X Tenant

Owner Camden Projects Inc. 95 Fairmont Ave. Phila. Pa.
Name No. Street City

Sec. C — DETAILS OF VIOLATION

CODE REFERENCE Chapter(s) 7:27-8.3(a) Section(s) Paragraph(s) 8.2(a) 5 (ii) + 6

DETAILS The person did install a polyethylene powder storage silo in excess of 2000 cubic feet capacity without obtaining a Permit to Construct. SILO WAS INSTALLED IN 1974; ALSO HAS A PNEUMATIC FILING SYSTEM; BAG HOUSE WILL BE INSTALLED ON SILO

REMARKS Controls are probably required.

RECOMMENDED ACTION order

Mark Pollak / [illegible]
Signed
Sr. Envir. Spec. / Environ. Spec.
Title

(OVER)

ATTACHMENT FF

NATURE OF OPERATION (Check one that applies)

_____ a. Agriculture (Includes farming, fishing, forestry)

_____ b. Mining

_____ c. Construction

X d. Manufacturing (type) SIC # 3079

_____ e. Transportation

_____ f. Wholesale and Retail Trade (Includes restaurants)

_____ g. Utilities

_____ h. Business and Personal Services (Includes Banks, Real Estate Co., Insurance Co., Hotels, Recreational Services i.e., Movies)

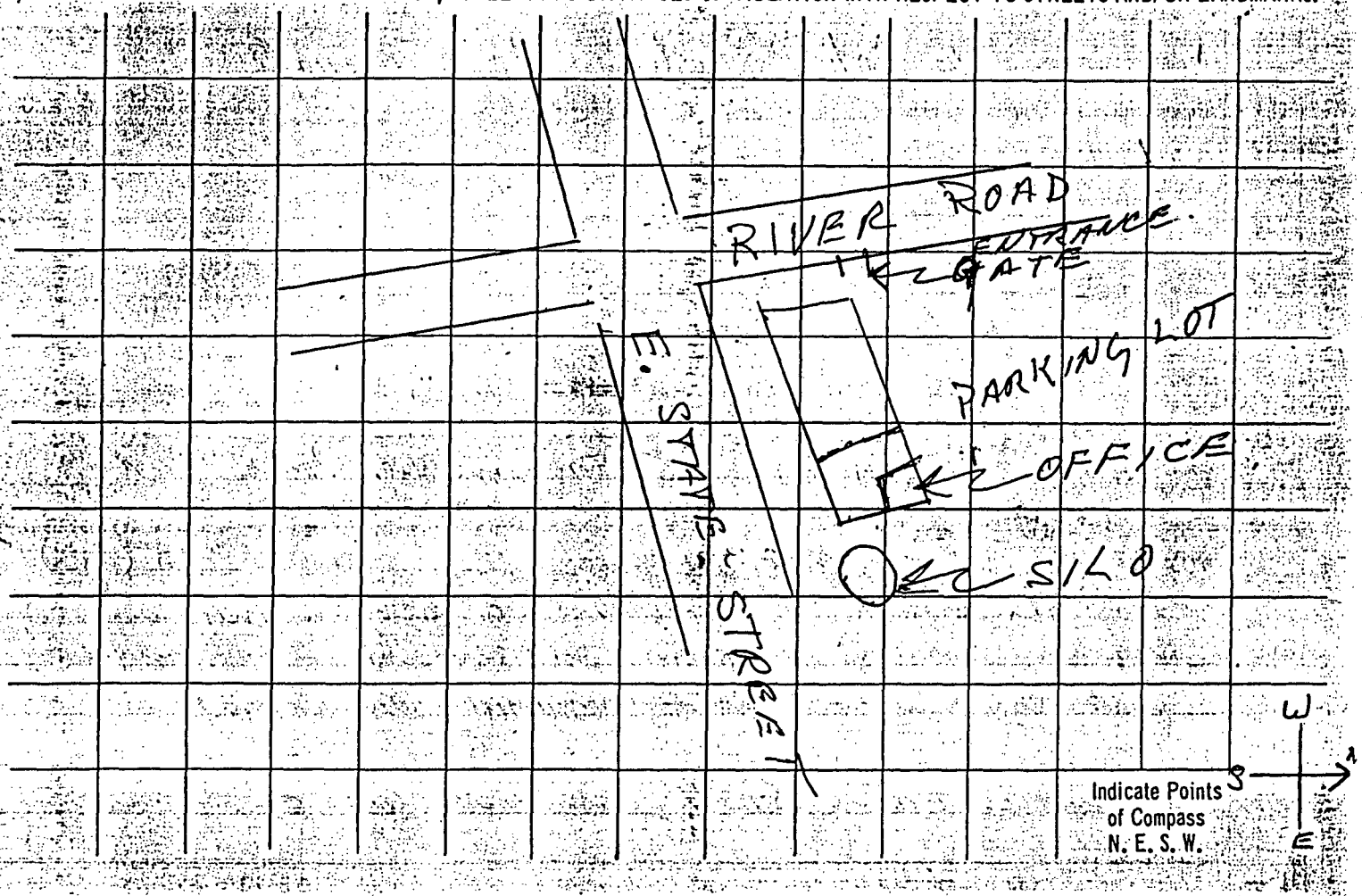
_____ i. Salvage

_____ j. Refuse and Garbage Disposal

_____ k. Government (Includes Federal, State and Local)

_____ l. Other

DRAW DIAGRAM BELOW SHOWING LOCATION, STREETS AND DISTANCES OF VIOLATION WITH RESPECT TO STREETS AND/OR LANDMARKS.



Comments on Location Plant may be reached on River road

Statements about violation made by person interviewed Not aware that permits were required, but willing to comply with our regulations

ATTACHMENT F3

Stablex-Reutter Inc.

Ninth and Cooper Streets
P.O. Box 499
Camden, New Jersey 08101

"SOLUTIONS START HERE"

Phone: 609-541-6700
Telex: 834477

MAR 1984

1st Sampling

March 6, 1984

Advanced Chemical Technologies
c/o Plant Industries, Inc.
777 Terrace Avenue
Hasbrouck Heights, NJ 07604

Attention: Douglas Goepfert, Secretary

Reference: Test Report No. SR9250, Revised

This report covers the priority sampling and analysis of eleven (11) soil samples taken by Stablex-Reutter, Inc. (S-R) personnel on February 25, 1984. This report is organized as follows:

- Sampling Data
- Analysis
- Analytical Results and Quality Assurance Data

I. Sampling Data

The sampling was conducted on February 25, 1984 at the Advanced Chemical Technologies (ACT) facility located at State Street and River Road in Camden, NJ. The samples were taken as follows:

A. Loading Dock Area (Area I and II, Figure I)

The soil samples taken in Area I were taken from a depth no deeper than 3-4 inches, between the railway ties. The area was segmented into 10 foot sections with a sample taken from each 10 foot section. A total of 20 samples were taken with subsequent compositing into one sample designated SR9250-1.

Toward the North West end of Area I, the ground was soft enough to allow sampling down to the one and one half foot level. Eight samples were taken and designated SR9250-2. No analysis was conducted on this sample, pending the results of the surface analysis.

ATTACHMENT 66.

A. Loading Dock Area (Area I and II, Figure 1) (Continued)

The Area II samples were taken from a depth no deeper than 2 inches, between the railway ties. The area was segmented into 5 foot sections, with a sample taken from each section. A total of 20 samples were taken with subsequent compositing into one sample designated SR9250-3. Note that about 50% of the area was under water. The water was allowed to drain from the ground samples before collection into the containers.

B. Dumpster Area (Figure 2)

The dumpster area was measured off into eight sections, approximately 42 feet by 20 feet each. Twenty samples were taken in each section at varying depths up to one foot. An underlying layer of asphalt prevented sampling to a greater depth. The samples within each section were composited for a total of eight samples, designated as follows:

Designation	Sample Description
SR9250-4	Area 1
SR9250-5	Area 2
SR9250-6	Area 3
SR9250-7	Area 4
SR9250-8	Area 5
SR9250-9	Area 6
SR9250-10	Area 7
SR9250-11	Area 8

II. Analysis

The samples were analyzed according to the following publications:

- EPA Test methods for Evaluating Solid Wastes - Physical/Chemical Methods - SW846, 1982.
- Method 624 Federal Register, Vol. 44, No. 233, December 3, 1979. (Columns and GC/MS conditions for purgeable organic compounds)
- Method 625 Federal Register, Vol. 44, No. 233, December 3, 1979. (Columns and GC/MS conditions for acid extractables and base/neutrals)
- EPA Method 608, Organochlorine Pesticides and PCB's Federal Register, Vol. 44, No. 233, December 3, 1979.

III. Analytical Results and Quality Assurance

A. Inorganic Analysis

Parameter	SR9250-1 Composite No. 1	SR9250-3 Composite No. 3
Antimony, total, ug/g	270	<1.0
Arsenic, total, ug/g	20	11
Beryllium, total, ug/g	<1.0	<1.0
Cadmium, total, ug/g	<1.0	<1.0
Chromium, total, ug/g	23	32
Copper, total, ug/g	58	66
Lead, total, ug/g	1,600	180
Mercury, total, ug/g	<0.2	<02
Nickel, total, ug/g	18	13
Selenium, total, ug/g	<1.0	<1.0
Silver, total, ug/g	<5.0	<5.0
Thallium, total, ug/g	<5.0	<5.0
Zinc, total, ug/g	150	300
Cyanide, total, ug/g	<1.0	3.0
Phenolics, as phenol, ug/g	<1.0	<1.0

B. Organic Analysis

Acid Extractable Organics (Method 625 by GC/MS)

Constituent	Sample Designation: SR9250-1 Composite No. 1	SR9050-3 Composite No. 3	SR9250-3 Duplicate
Phenol	<25	<25	<25
2-Nitrophenol	<25	<25	<25
4-Nitrophenol	<25	<25	<25
2,4-Dinitrophenol	<25	<25	<25
2,6-Dinitro-o-cresol	<25	<25	<25
Pentachlorophenol	<25	<25	<25
4-Chloro-3-Methyl-Phenol	<25	<25	<25
2-Chlorophenol	<25	<25	<25
2,4-Dichlorophenol	<25	<25	<25
2,4,6-Trichlorophenol	<25	<25	<25
2,4-Dimethylphenol	<25	<25	<25

Results are expressed in micrograms of constituent per gram of sample (ppm).

ATTACHMENT 6G3

Base/Neutral Extractable Organics

Constituent	Sample Designation SR9250-1 Composite No. 1	SR9250-3 Composite No. 3	SR9250-1 Duplicate
1,2-Dichlorobenzene	<10	<10	<10
1,3-Dichlorobenzene	<10	<10	<10
1,4-Dichlorobenzene	<10	<10	<10
Hexachloroethane	<10	<10	<10
Hexachlorobutadiene	<10	<10	<10
Hexachlorobenzene	<10	<10	<10
1,2,4-Trichlorobenzene	<10	<10	<10
bis (2-Chloroethoxy) methane	<10	<10	<10
Naphthalene	<10	<10	<10
2-Chloronapthalene	<10	<10	<10
Isophorone	<10	<10	<10
Nitrobenzene	<10	<10	<10
2,4-Dinitrotoluene	<10	<10	<10
2,6-Dinitrotoluene	<10	<10	<10
4-Bromophenyl phenyl ether	<10	<10	<10
bis (2-Ethylhexyl) phthalate	<10	<10	<10
Di-n-octyl phthalate	<10	<10	<10
Dimethyl phthalate	<10	<10	<10
Diethyl phthalate	<10	<10	<10
Di-n-butyl phthalate	<10	<10	<10
Acenaphthylene	<10	<10	<10
Acenaphthene	<10	<10	<10
Butyl benzyl phthalate	<10	<10	<10
Fluorene	<10	<10	<10
Fluoranthene	<10	<10	<10
Chrysene	<10	<10	<10
Pyrene	<10	<10	<10
Phenanthracene	<10	<10	<10
Anthracene	<10	<10	<10
Benzo(a)anthracene	<10	<10	<10
Benzo(b)fluoranthene	<10	<10	<10
Benzo(k)fluoranthene	<10	<10	<10
Benzo(a)pyrene	<10	<10	<10
Indeno(1,2,3-c,d)pyrene	<10	<10	<10
Dibenzo(a,h)anthracene	<10	<10	<10
Benzo(g,h,i)perylene	<10	<10	<10
4-Chlorophenyl-phenyl ether	<10	<10	<10
3,3'-Dichlorobenzidine	<10	<10	<10
Benzidine	<10	<10	<10
bis(2-Chloroethyl)ether	<10	<10	<10
1,2-Diphenylhydrazine	<10	<10	<10
Hexachlorocyclopentadiene	<10	<10	<10
N-Nitrosodiphenyl amine	<10	<10	<10
N-Nitrosodimethyl amine	<10	<10	<10
N-Nitrosodi-n-propylamine	<10	<10	<10
bis(2-Chloroisopropyl)ether	<10	<10	<10

Results are expressed in micrograms of constituent per gram sample

ATTACHMENT G64

Purgeable Organics

Sample Designation

Constituent	SR9250-1 Composite No. 1	SR9250-3 Composite No. 3
Bromomethane	<10	<10
Vinyl chloride	<10	<10
Chloroethane	<10	<10
Methylene chloride	<10	<10
1,1-Dichloroethylene	<10	<10
1,1-Dichloroethane	<10	<10
trans-1,2-Dichloroethylene	<10	<10
Chloroform	<10	<10
1,2-Dichloroethane	<10	<10
1,1,1-Trichloroethane	<10	<10
Carbon tetrachloride	<10	<10
Bromodichloromethane	<10	<10
1,2-Dichloropropane	<10	<10
trans-1,3-Dichloropropene	<10	<10
Trichloroethylene	<10	<10
Dibromochloromethane	<10	<10
Benzene	<10	<10
1,1,2-Trichloroethane	<10	<10
cis-1,3-Dichloropropene	<10	<10
2-Chloroethylvinyl ether	<10	<10
Bromoform	<10	<10
1,1,2,2-tetrachloroethane	<10	<10
Tetrachloroethylene	<10	<10
Toluene	<10	<10
Chlorobenzene	<10	<10
Ethyl Benzene	<10	<10

Results are expressed in micrograms of constituent per gram of sample (ppm).

ATTACHMENT 665

Pesticidal Compounds and Polychlorinated Biphenyls

Sample and Designation

Constituent	SR9250-3 Composite No. 1	SR9250-3 Composite No. 3
Aldrin	<1.0	<1.0
alpha BHC	<1.0	<1.0
beta BHC	<5.0	<5.0
delta BHC	<5.0	<5.0
gamma BHC	<5.0	<5.0
Chlordane	<10	<10
Dieldrin	<5.0	<5.0
p,p'-DDE	<5.0	<5.0
p,p'-DDD	<5.0	<5.0
p,p'-DDT	<5.0	<5.0
Endosulfan I	<10	<10
Endosulfan II	<10	<10
Endosulfan Sulfate	<10	<10
Endrin	<5.0	<5.0
Endrin Aldehyde	<10	<10
Heptachlor	<1.0	<1.0
Heptachlor Epoxide	<5.0	<5.0
Toxaphene	<10.0	<10.0
Polychlorinated Biphenyls, as Arochlor 1260	<5.0	<5.0

Results are expressed in micrograms of constituent per gram of sample (ppm).

Petroleum Hydrocarbons

Sample Designation		Petroleum Hydrocarbons, by IR, ug/g
SR9250-4	Surface Area No. 1	3.3; 2.6*
SR9250-5	Surface Area No. 2	1.7
SR9250-6	Surface Area No. 3	54
SR9250-7	Surface Area No. 4	10
SR9250-8	Surface Area No. 5	76
SR9250-9	Surface Area No. 6	31
SR9250-10	Surface Area No. 7	120
SR9250-11	Surface Area No. 8	170

* Duplicate Analysis

ATTACHMENT 66

Organic Analysis Quality Assurance Data

Purgeable Organics	SR9233-2* plus Spike Amount of Spike	% Recovery
Chloromethane	1.0 ug	90
Bromomethane	1.0 ppm	95
Vinyl chloride	1.0 ug	102
Chloroethane	1.0 ug	95
Methylene chloride	1.0 ug	106
1,1-Dichloroethylene	1.0 ug	97
1,1-Dichloroethane	1.0 ug	98
trans-1,2-Dichloroethylene	1.0 ug	113
Chloroform	1.0 ug	99
1,2-Dichloroethane	1.0 ug	117
1,1,1-Trichloroethane	1.0 ug	114
Carbon tetrachloride	1.0 ug	101
Bromodichloromethane	1.0 ug	115
1,2-Dichloropropane	1.0 ug	93
trans-1,3-Dichloropropene	1.0 ug	106
Trichloroethylene	1.0 ug	91
Dibromochloromethane	1.0 ug	89
Benzene	1.0 ug	110
1,1,2-Trichloroethane	1.0 ug	90
cis-1,3-Dichloropropene	1.0 ug	108
2-Chloroethylvinyl ether	1.0 ug	93
Bromoform	1.0 ug	99
1,1,2,2-tetrachloroethane	1.0 ug	110
Tetrachloroethylene	1.0 ug	92
Toluene	1.0 ug	109
Chlorobenzene	1.0 ug	93
Ethyl Benzene	1.0 ug	108

* This spiked sample was analyzed simultaneously with the samples in this Test Report.

Pesticides and Polychlorinated Biphenyls

Constituent	Amount of Spike, ppm	% Recovery
Endosulfan I	0.747	69
Endosulfan II	1.56	74
Endosulfan Sulfate	3.44	81
Endrin Aldehyde	2.28	71
Polychlorinated Biphenyls, as Arochlor 1260	5.36	73

ATTACHMENT 6b7

Inorganic Quality Assurance Data

Parameter	Sample* plus Spike Amount of Spike, ppm	% Recovery
Antimony	1.0	93
Arsenic	1.0	91
Beryllium	1.0	64
Cadmium	1.0	92
Chromium	1.0	97
Copper	1.0	92
Lead	1.0	106
Mercury	0.1	108
Nickel	1.0	82
Selenium	1.0	90
Silver	1.0	85
Thallium	1.0	96
Zinc	1.0	87
Cyanide	10	80
Phenolics	5.0	72

* The spiked samples were analyzed simultaneously with the samples in this report and may be found in Test Report Nos. SR9237, SR9217 and SR9249.

ATTACHMENT 6b

Should you have any questions concerning this report, please don't heaitate to contact me.

Respectfully submitted,

STABLEX-REUTTER, INC.

Ian Lambert

Ian C. Lambert
Laboratory Manager

ICL/dk

ATTACHMENT G69

Stablex-Reutter Inc.

Advanced Chemical Technology

Sample Locations

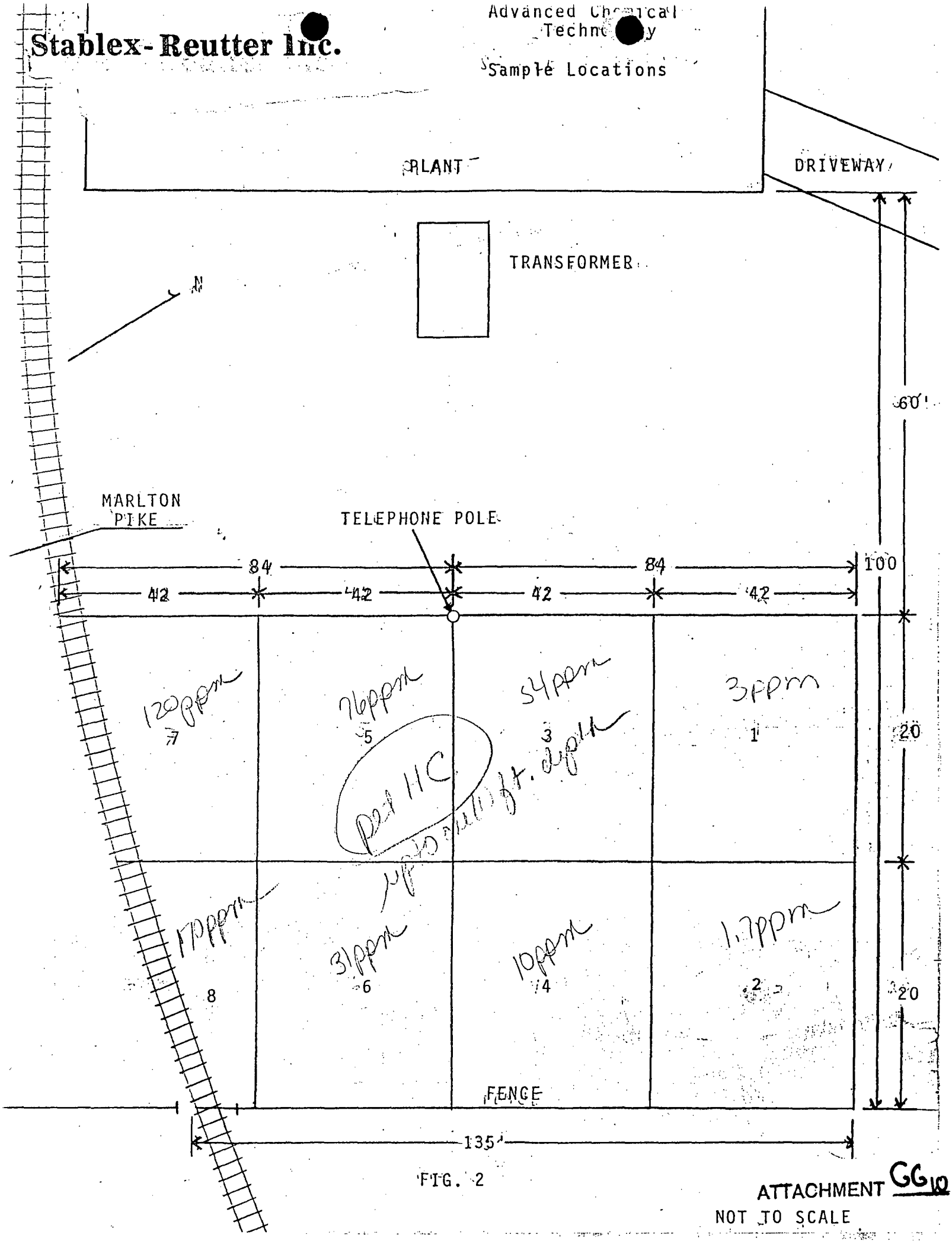


FIG. 2

ATTACHMENT GG10

NOT TO SCALE

Stablex-Reutter Inc.

Advanced Chemical Technology

Sampling Location:

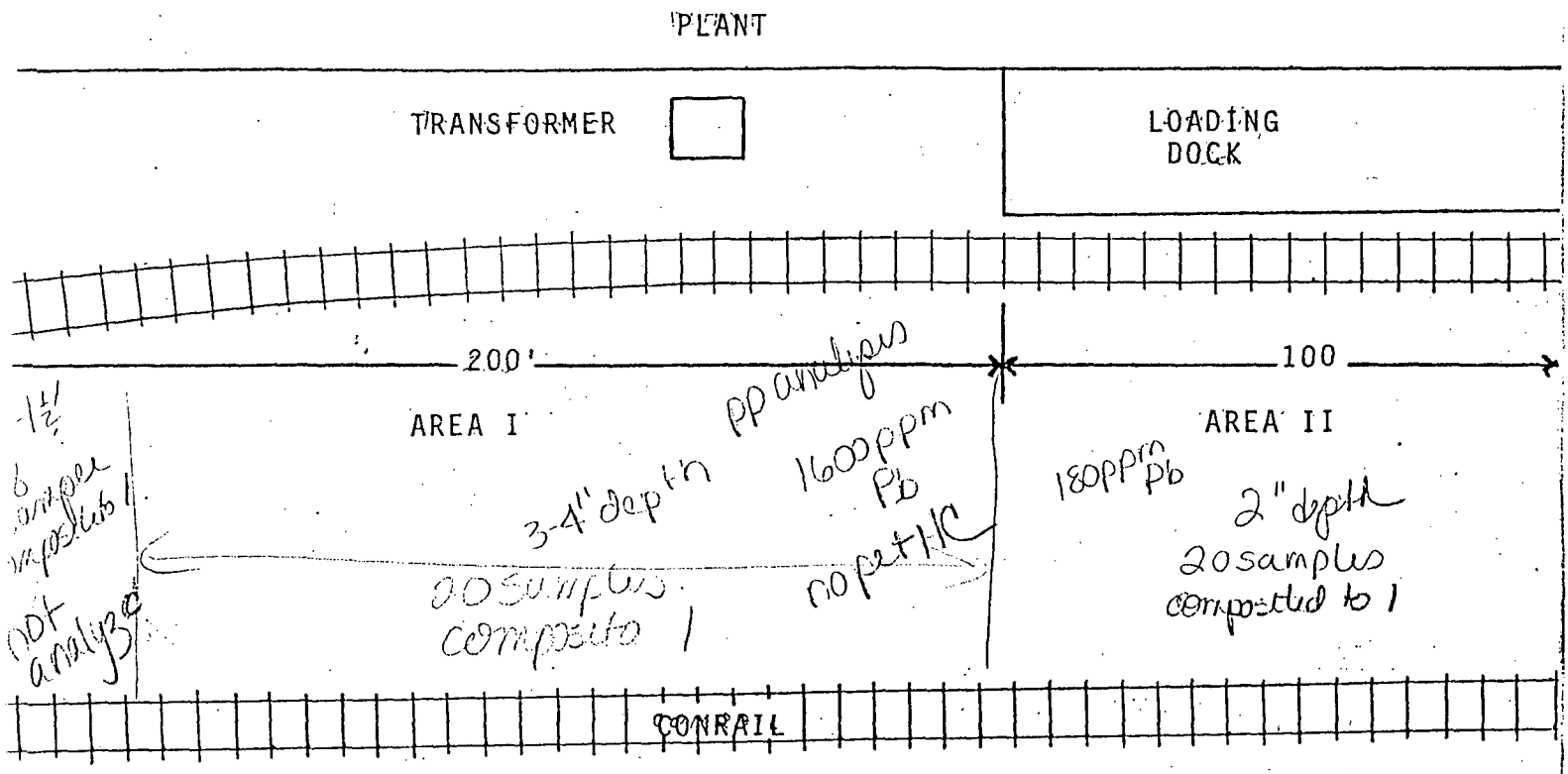


FIG. 1

NOT TO SCALE

ATTACHMENT GG11

Stablex-Re[illegible]er Inc.

Ninth and Cooper Streets
P.O. Box 499
Camden, New Jersey 08101

SOLUTIONS
START
HERE"

Client: Advanced Chemical Technologies

Date: February 29, 1984

Address: c/o Plant Industries
777 Terrace Avenue
Hasbrouck Heights, NJ 07604

Project No.: SR9251

Date Submitted: 2/25/84

Sampled By: S-R

Contact: Douglas Goepfert, Secretary

Number of Samples: 2

Sample Matrix: Soil

Analytical Results

Sample Designation

Parameter	Polychlorinated Biphenyls, ug/g as Arochlor 1260
Equal weight composite of Areas 1,2,3 & 4	<5
Equal weight composite of Areas 5,6,7 & 8	<5

The above composite samples were prepared from the soil samples taken as described in Test Report SR9250.

Ian C. Lambert
Laboratory Manager

ICL/neg

ATTACHMENT GG 12

Stablex-Reutter Inc. 04012

Ninth and Cooper Streets
P.O. Box 499
Camden, New Jersey 08101

"SOLUTIONS START HERE"

2nd Sampling

March 21, 1984

Advanced Chemical Technologies
c/o Plant Industries, Inc.
777 Terrace Avenue
Hasbrouck Heights, NJ 07604

Attention: Douglas Goepfert, Secretary

Reference: Test Report No. SR9327

This report covers the priority sampling and analysis of thirty-two (32) soil samples taken by Stablex-Reutter, Inc. (S-R) personnel on March 15 and 19, 1984. In addition, this report contains data on samples orginally taken on February 25, 1984. Information pertaining to the sampling on February 25, 1984 samples can be found in Test Report SR9250, dated March 6, 1984. This report is organized as follows:

- Sampling Data
- Analysis
- Analytical Results and Quality Assurance Data

I. Sampling Data

The sampling was conducted on March 15 and 19, 1984 at the Advanced Chemical Technologies (ACT) facility located at State Street and River Road in Camden, NJ. The samples were taken as follows:

A. Loading Dock Area

Areas 1 through 11, Figure I

This area was divided into eleven sections measuring approximately 10' x 15' each. Five samples were taken at a depth of 1" to 6" in each 10' x 15' section and these five samples were composited for a total of eleven samples. Note that 75% of the area was under water. The water was allowed to drain from the soil samples before transfer to the sample containers. 11

Areas 25 through 34, Figure I

This area was divided into ten sections measuring approximately 10' x 20' each. Ten samples were taken at a depth of 1" to 6" in each 10' x 20' section and these ten samples were composited for a total of ten samples. 10

ATTACHMENT HH1

I. Sampling Data (Continued)

B. ACT Total Plant Area

Areas 12 through 16, Figure II
17 " 21

The areas on the south and northeast side of the plant were divided into sections as designated on Figure II. The five south side sections measured approximately 90' x 50'. Ten samples were taken at a depth from 1" to 12" in each area and the samples were composited for a total of five samples. The northeast side of the plant was divided into five areas measuring approximately 55' x 90'. Ten samples were taken from a depth 1" to 12" in each area and these samples were composited for a total of five samples.

C. Background Area

Area 22, Figure II

This area is located on the northern end of the property and measures approximately 45' x 45'. Ten samples were taken from a depth of 1" to 11" and were composited into one sample.

II. Analysis

The samples were analyzed according to the following publication:

- EPA Test Methods for Evaluating Solid Wastes - Physical/Chemical Methods - SW846, 1982.

ATTACHMENT HH2

III. Analytical Results and Quality Assurance Data

A. Analytical Results

1. Lead Analysis

Sample Designation	Lead, total, ug/g
Area No. 1	55
Area No. 2	110
Area No. 3	160
Area No. 4	160
Area No. 5	140
Area No. 6	200
Area No. 7	170
Area No. 8	140
Area No. 9	110
Area No. 10	150
Area No. 11	120
Area No. 12	97
Area No. 13	120
Area No. 14	120
Area No. 15	93
Area No. 16	110
Area No. 17	230
Area No. 18	230
Area No. 19	200
Area No. 20	140
Area No. 21	96
Area No. 22	60
Area No. 23 (Formerly Area 7, SR9250-10)	150
Area No. 24 (Formerly Area 8, SR9250-11)	200
Area No. 25	320
Area No. 26	410
Area No. 27	160
Area No. 28	120
Area No. 29	120
Area No. 30	160
Area No. 31	110
Area No. 32	150
Area No. 33	170
Area No. 34	170

2. Petroleum Hydrocarbon Analysis*

	Petroleum Hydrocarbons, by IR, ug/g
Area 23 (Formerly SR9250-10 Area No. 7)	120
Area 24 (SR9250-11 Area No. 8)	170

* These results were previously reported in Test Report No. SR9250.

ATTACHMENT HH3

III. Analytical Results and Quality Assurance Data (Continued)

B. Quality Assurance Data

Parameter	Sample	QC Measure	Results
Lead	Reagent Blank	Blank Analysis	<0.05 ug/ml
	Area No. 10	Duplicate Analysis	130 ug/g
	Area No. 4	Duplicate Analysis	150 ug/g
	Area No. 4	1.0 ppm Spike	104% Recovery
	Area No. 13	1.0 ppm Spike	80% Recovery
	Area No. 24 (SR9250)	1.0 ppm Spike	123% Recovery
	Area No. 31	1.0 ppm Spike	75% Recovery

Should you have any questions concerning this analysis, please don't hesitate to contact me.

Respectfully submitted,

STABLEX-REUTTER, INC.

Ian Lambert

Ian C. Lambert
Laboratory Manager

ICL/pd

ATTACHMENT HH4

Reutter Inc.

Advanced Chemical Technology

Sampling Location

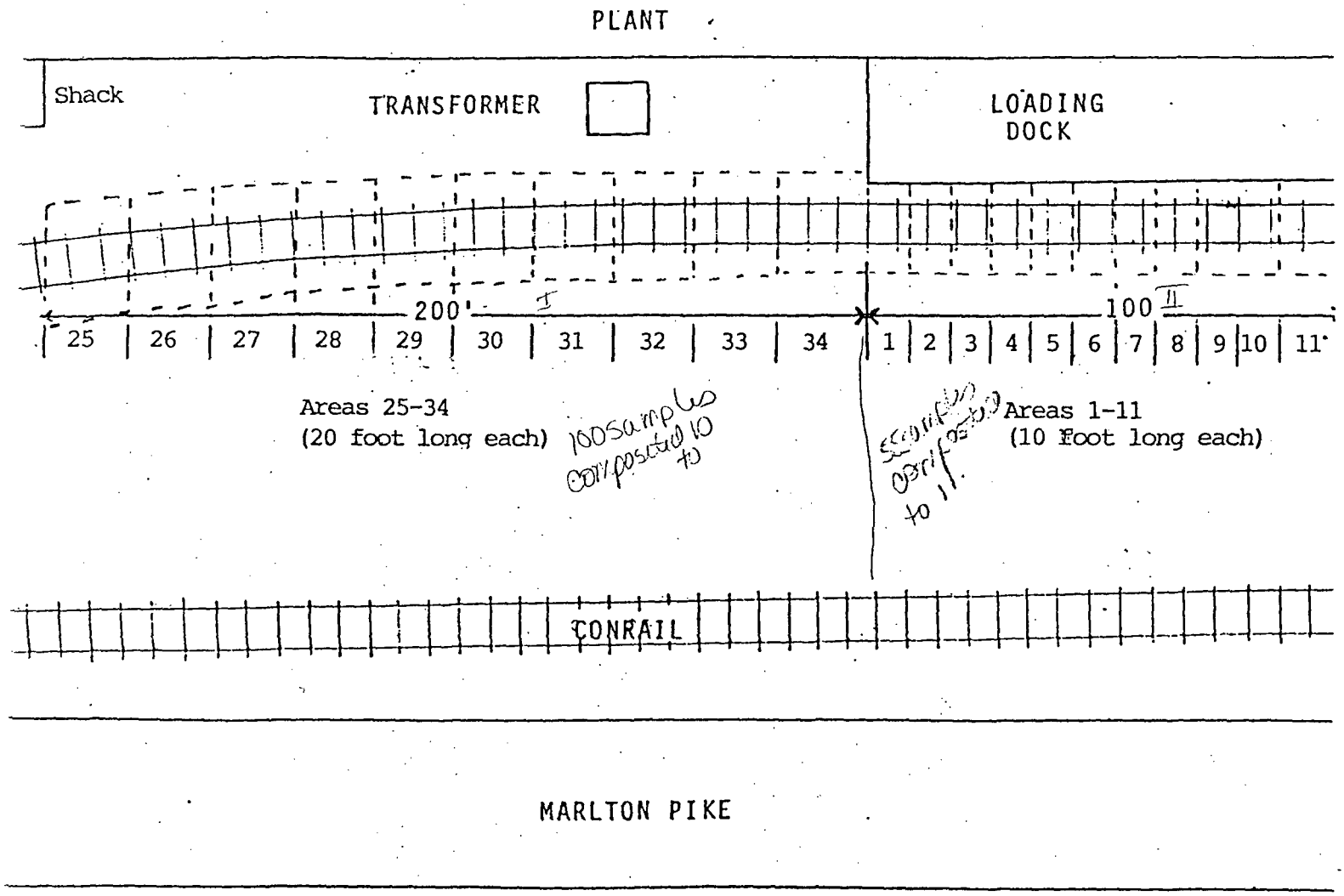


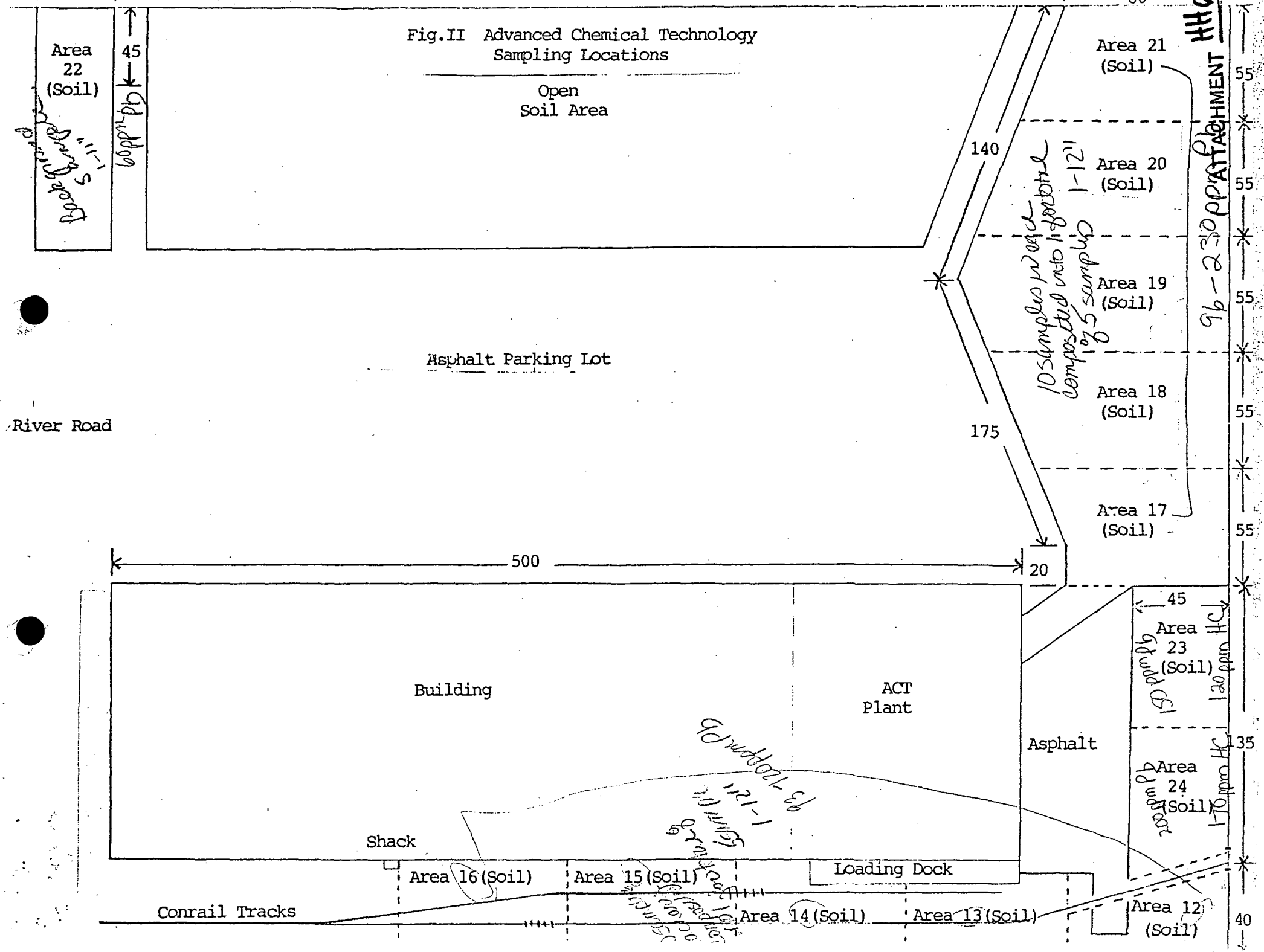
FIG. I

N

ATTACHMENT HH5

NOT TO SCALE

Fig.II Advanced Chemical Technology
Sampling Locations



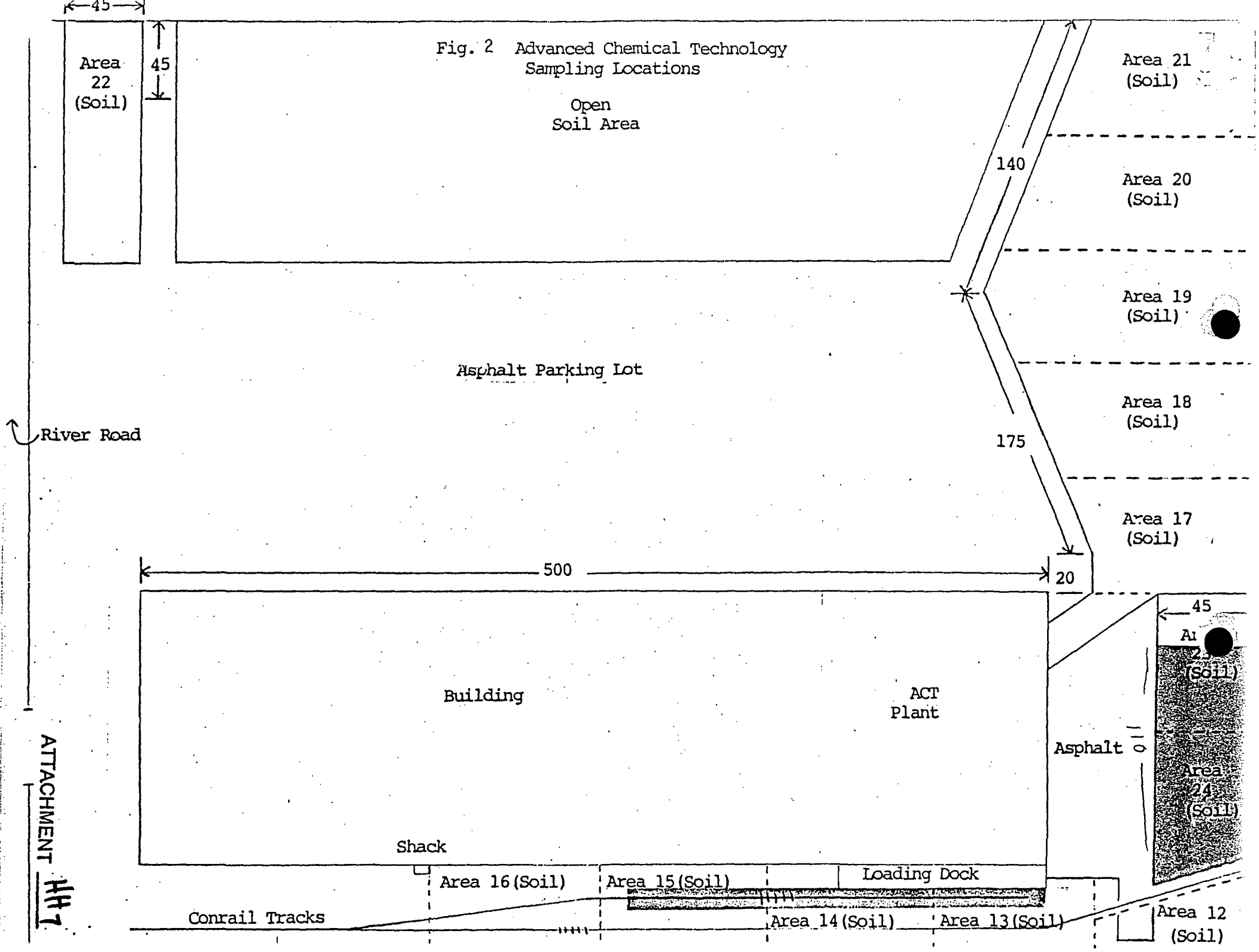


Fig. 2 Advanced Chemical Technology Sampling Locations

ATTACHMENT HH 7

32

Stablex-Reutter Inc.

"SOLUTIONS START HERE"

28 Springdale Road
P.O. Box 4201
Cherry Hill, NJ 08003

Phone: 609-541-6700
Telex: 834477

September 13, 1984

Plant Industries, Inc.
411 Hackensack Avenue
Hackensack, NJ 07601

received 9/21/84

Attention: James Kelly

Reference: Proposed Field Sampling Plan

Stablex-Reutter, Inc. (S-R) is pleased to submit this field sampling plan to Plant Industries in response to the New Jersey DEP/HSMA letter dated August 7th. By way of background, I have described below the original field sampling and analysis plan, and the subsequent additions to that plan, that were undertaken earlier this year.

In February, 1984, S-R was retained by Advanced Chemical Technology (ACT) to examine this site located at State Street and River Road to determine the extent of polychlorinated biphenyl (PCB) contamination resulting from the presence of three transformers. This assessment of possible contamination was required under the Environmental Cleanup Responsibility Act (ECRA), as per N.J.A.C. 7:11-3.12. and prior to the completion of transfer of ownership. A site survey was conducted by S-R in the presence of Doug Goepfert of ACT from which a sampling scheme was developed.

The initial sampling involved a designation of Areas I and II, which incorporated the transformer and the surrounding concrete pads, asphalt and top soil (refer to Figure 1). The PCB results of this sampling may be found in our test report No. SR9211, but did not indicate PCB contamination at detectable levels. A subsequent sampling of the top soil at depths not exceeding 4" was also performed in February as per Figures 1 and 2. The soils were combined at the laboratory and the resultant composites analyzed for priority pollutant compounds, including PCBs, and the results delineated in test report nos. SR9250 and SR9251. Based on the data, a concern was raised over lead and oil and grease presence in the soil so the site was again sampled in March, according to the more detailed scheme contained in Figures 3 and 4, at depths of 0"-6" in Area Nos. 1 through 11 and Nos. 25 through 34 and 1"-12" in Area Nos. 12 through 16 and 22. Composites were made and these analyzed for total lead content, in response to the concern raised in test report SR9250. The additional data was reported in SR9327. A fifth and sixth sampling effort in June obtained samples at depths of 0"-30" in the eight sections designated in Figure 5, and the soils were analyzed for oil and grease content (test reports SR9712 and SR9739). The presence of lead appeared to represent a "spot" problem, but it was determined that the oil and grease content of the soil is at such a level that it will impact on the clean-up effort.

100'

why?

ATTACHMENT II.

Because there has been no additional data gathered by S-R in the interim period, we can not estimate or guarantee any changes to the site that may have occured and which could affect previous results. Therefore, we would recommend a sampling schedule at this time that closely resembles that which was followed in test reports SR9712 and SR9729 (Figure 5) with preliminary analysis being performed for petroleum hydrocarbon content. Based on that scheme, eight (8) top-soil composite samples would be analyzed. If S-R should discover that the site has remained essentially unchanged, future sampling will take the following course:

Location	Depth
Sections Nos. 1 through 8	0"-12"
Sections Nos. 1 through 8	13"-24"
Sections Nos. 1 through 8	25"-36"

At this time, without knowledge of any changes that may have taken place on-site, any further description of the clean-up plan would be presumptive. As the first group of analytical results become available, we will be able to better judge the clean-up effort required.

S-R is ready to begin the sampling and analysis at the ACT Polydrum Site at Plant Industries' authorization. Should you have any questions concerning this proposed schedule, please don't hesitate to contact me.

Sincerely,

STABLEX-REUTTER, INC.

Catherine M. Ward

Catherine M. Ward
Project Manager

CMW/dk

Attachments: Figure Nos. 1 through 5

ATTACHMENT II2

Stanlex-Re[illegible] Inc.
Effective June 15, 1984
28 Springdale Rd. • P. O. Box 4201
Cherry Hill, N. J. 08034

30752
Kathy Grimes

Client: Advanced Chemical Technology
Address: ~~411 Hackensack~~ Avenue
Hackensack, NJ 07601

Contact: Douglas E. Goepfert, Secretary

Date: July 13, 1984
Project No.: SR9712, Supplementary
Date Submitted: June 13, 1984
Sampled By: Client
Number of Samples: Ten
Sample Matrix: Soil

Analytical Results

Sample Designation	Oil & Grease Wt. %	parts per hundred
Section #2 24"-30"	0.035	350 ppm
Section #2 30"-36"	0.019	190 ppm
Section #3 24"-30"	0.093	930 ppm
Section #3 30"-36"	0.22	2200
Section #4 24"-30"	0.083	830
Section #4 30"-36"	0.052	520
Section #7 24"-36"	0.052	520
Section #7 30"-36"	0.091	910
Section #8 24"-30"	0.83	8300
Section #8 30"-36"	0.76	7600

received
13 SEP 1984

Michael Shmookler
Michael Shmookler
Supervisor, Organic Section

MS/md

ATTACHMENT II3

Stablex-Reutter Inc.

SOLUTIONS START HERE

Ninth and Cooper Streets
P.O. Box 499
Camden, New Jersey 08101

Phone: 609-541-6700
Telex: 834477

file

wp attach

#5774
6/22/84

Client: Advanced Chemical Technology
Address: 411 Hakansac Avenue
Hakansac, NJ 07601

Contact: Douglas E. Goepfert, Secretary

Date: June 13, 1984

Project No.: SR9712

Date Submitted: June 15, 1984

Sampled By: S-R

Number of Samples: Twenty-four

Sample Matrix: Solid

Analytical Results

Sample Designation	Parameter: Oil & Grease Wt. %	
Section #1, 0"-6" Depth	0.33	3300
Section #1, 6"-12" Depth	0.23	2300
Section #1, 12"-18" Depth	0.046	460
Section #1, 18"-24" Depth	0.003; 0.004*	30
Section #2, 0"-6" Depth	0.71	7100
Section #2, 6"-12" Depth	0.14	1400
Section #2, 12"-18" Depth	0.14	1400
Section #2, 18"-24" Depth	0.045	450
Section #3, 0"-6" Depth	0.32	3200
Section #3, 6"-12" Depth	0.51	5100
Section #3, 12"-18" Depth	0.17	
Section #3, 18"-24" Depth	0.11	
Section #4, 0"-6" Depth	0.31	
Section #4, 6"-12" Depth	0.17	
Section #4, 12"-18" Depth	0.24	
Section #4, 18"-24" Depth	0.062	
Section #7, 0"-6" Depth	2.25	
Section #7, 6"-12" Depth	0.91; 0.92*	
Section #7, 12"-18" Depth	0.53	
Section #7, 18"-24" Depth	0.18	
Section #8, 0"-6" Depth	1.98	
Section #8, 6"-12" Depth	2.36	
Section #8, 12"-18" Depth	2.68	
Section #8, 18"-24" Depth	1.68	

* Duplicate Analysis

For sample location, refer to attached drawing. No samples were taken in sections 5 & 6 as these areas were under water

Michael Shmookler
Supervisor, Organic Section

ATTACHMENT II4

MS/md

Stablex-Reuter Inc.

Ninth and Cooper Streets
P.O. Box 499
Camden, New Jersey 08101

SOLUTIONS START HERE"

Telex: 834477

5774
6/22/84

Client: Advanced Chemical Technology
Address: 411 Hakansac Avenue
Hakansac, NJ 07601

Contact: Douglas E. Goepfert, Secretary

Date: June 14, 1984
Project No.: SR9739
Date Submitted: June 11, 1984
Sampled By: S-R
Number of Samples: Eight
Sample Matrix: Solid

Analytical Results

Sample Designation	Parameter: Oil & Grease Wt. %	
Site #5 0"-6"	8.9	89000
Site #5 6"-12"	3.5; 3.8*	35000
Site #5 12"-18"	1.3	13000
Site #5 18"-24"	0.50	5000
Site #6 0"-6"	6.0	60000
Site #6 6"-12"	0.85	8500
Site #6 12"-18"	1.4	14000
Site #6 18"-24"	0.22	2200

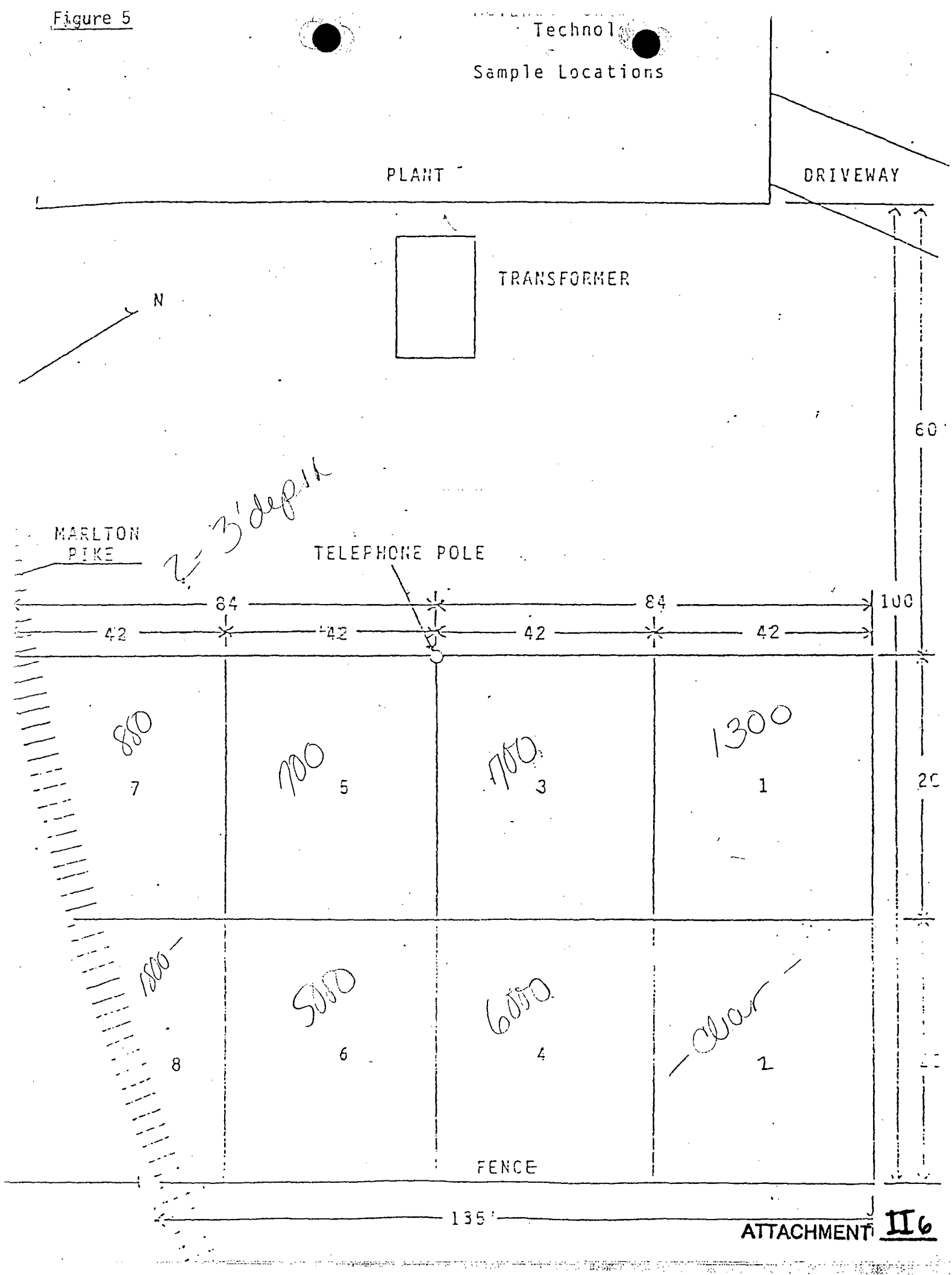
* Duplicate Analysis

Michael Shmookler
Supervisor, Organic Section

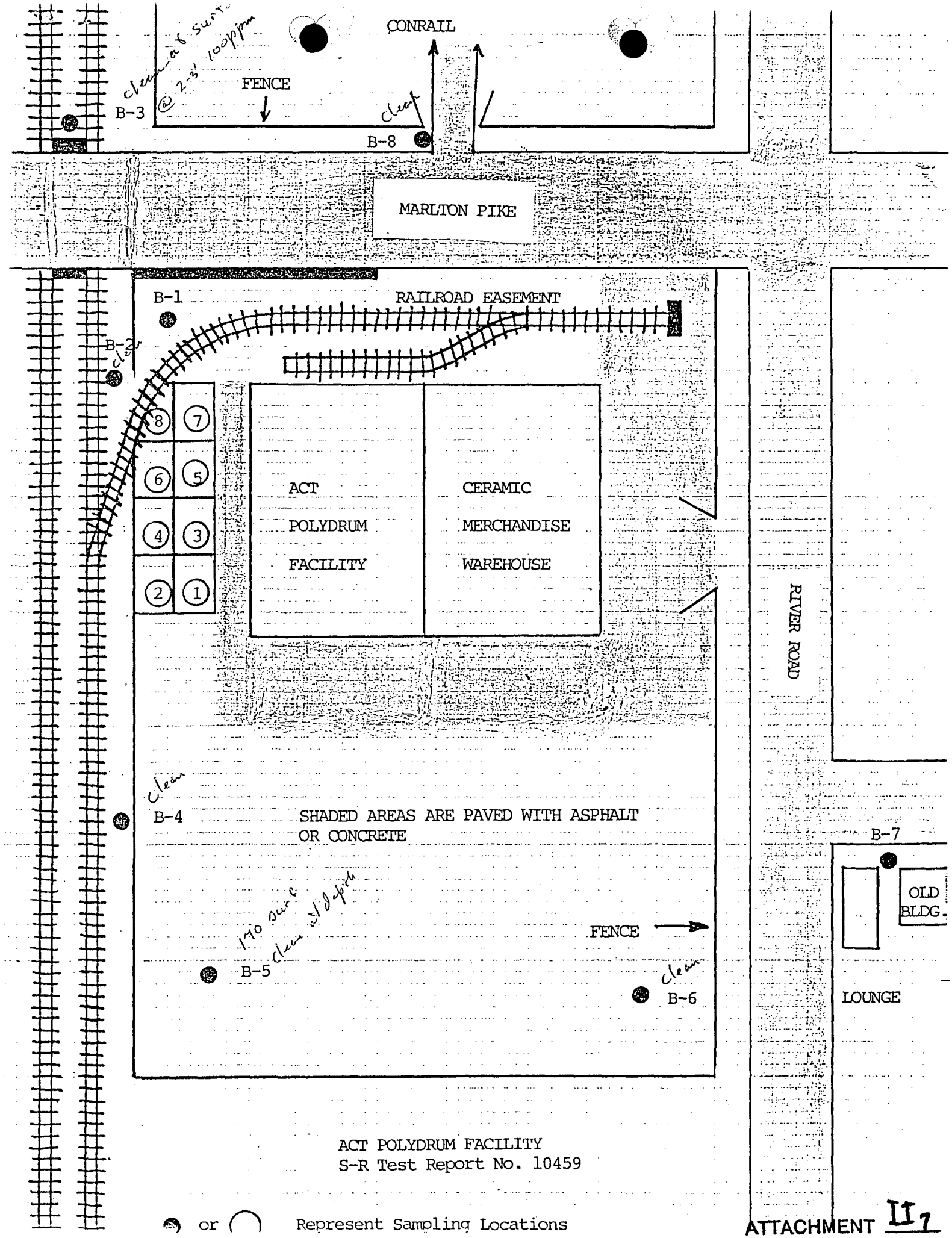
MS/md

ATTACHMENT II 5

Figure 5



ATTACHMENT II6



ACT POLYDRUM FACILITY
S-R Test Report No. 10459

● or ◯ Represent Sampling Locations

ATTACHMENT II-1

Stablex-Reutter Inc.

"SOLUTIONS START HERE"

28 Springdale Road
P.O. Box 4201
Cherry Hill, NJ 08003

Telex: 834477

Sampling 4

November 30, 1984

ACT Polydrum
c/o Plant Industries
411 Hackensack Ave.
Hackensack, NJ 07601

Attention: James Kelly

Reference: Test Report No. SR10459

Dear Mr. Kelly:

This report covers the analysis of forty-eight (48) solid samples taken by Stablex-Reutter, Inc. (S-R) on November 15, 1984. The following analysis was requested on selected samples:

- Petroleum Hydrocarbons by IR

This report is organized in the following manner:

- Sample Designation
- Analytical Results
- Quality Assurance Data

ATTACHMENT JJ1

Stablex-Reutter Inc.

"SOLUTIONS START HERE"

Ninth and Cooper Streets
P.O. Box 499
Camden, New Jersey 08101

Phone: 609-541-6700
Telex: 834477

I. Sample Designation

SR No.	Area Samples	Soil Depth	Soil Description	No. of Bore Holes Composited
SR10459-1	Grid #1	0 -12"	black & gray tan sand, slight organic odor	5
SR10459-2	Grid #1	12"-24"	gray & tan sand, slight organic odor	5
SR10459-3	Grid #1	24"-36"	tan sand, no odor	5
SR10459-4	Grid #2	0 -12"	tan, black & gray sandy soil, slight organic odor	5
SR10459-5	Grid #2	12"-24"	tan sand, slight organic odor	5
SR10459-6	Grid #2	24"-36"	tan sand, no odor	5
SR10459-7	Grid #3	0 -12"	tan, sandy soil, organic odor.	5
SR10459-8	Grid #3	12"-24"	tan sand, organic odor	5
SR10459-9	Grid #3	24"-36"	tan sand, organic odor	5
SR10459-10	Grid #4	0 -12"	brown & tan sandy soil, organic odor	5
SR10459-11	Grid #4	12"-24"	tan sand, slight organic odor	5
SR10459-12	Grid #4	24"-36"	tan sand, slight organic odor	5
SR10459-13	Grid #5	0 -12"	black, gray, brown & tan sandy soil, organic odor (tar & plastic)	5
SR10459-14	Grid #5	12"-24"	tan & brown sand, slight organic odor	5
SR10459-15	Grid #5	24"-36"	tan sand, slight organic odor	5
SR10459-16	Grid #6	0 -12"	black, gray, brown & tan sand, slight organic odor	5
SR10459-17	Grid #6	12"-24"	tan & brown sand	5
SR10459-18	Grid #6	24"-36"	tan sand, no odor	5
SR10459-19	Grid #7	0 -12"	black, brown & gray sandy soil, organic odor	3
SR10459-20	Grid #7	12"-24"	tan sand, slight organic odor	3
SR10459-21	Grid #7	24"-36"	tan sand, slight organic odor	3

ATTACHMENT JJa

Stablex-Reutter Inc.

Ninth and Cooper Streets
P.O. Box 499
Camden, New Jersey 08101

Phone: 609-541-6700
Telex: 834477

"SOLUTIONS START HERE"

SR No.	Area Samples	Soil Depth	Soil Description	No. of Bore Holes Composited
SR10459-22	Grid #8	0 -12"	black & brown sandy soil, gravel, organic odor	3
SR10459-23	Grid #8	12"-24"	black, brown & tan sandy soil with gravel, slight organic odor	3
SR10459-24	Grid #8	24"-36"	brown & tan sand, with gravel, slight organic odor	3
SR10459-25	B-1	0 -12"	tan sandy soil, no odor	3
SR10459-26	B-1	12"-24"	tan sandy soil, no odor	3
SR10459-27	B-1	24"-36"	tan sand, no odor	3
SR10459-28	B-2	0 -12"	tan sand, black soil, no odor	3
SR10459-29	B-2	12"-24"	tan sand, no odor	3
SR10459-30	B-2	24"-36"	tan sand, no odor	3
SR10459-31	B-3	0 -12"	black soil, tan sand no odor	3
SR10459-32	B-3	12"-24"	tan sand, no odor	3
SR10459-33	B-3	24"-36"	tan sand, some clay, no odor	3
SR10459-34	B-4	0 -12"	tan & black sand, no odor	2
SR10459-35	B-4	12"-24"	tan & brown sand, no odor	2
SR10459-36	B-4	24"-36"	tan & brown sand, no odor	2
SR10459-37	B-5	0 -12"	tan sand, no odor	3
SR10459-38	B-5	12"-24"	tan & brown sand, no odor	3
SR10459-39	B-5	24"-30"	brown sand, no odor	3
SR10459-40	B-6	0 -12"	tan & brown sand, no odor	2
SR10459-41	B-6	12"-24"	tan & brown sand, no odor	2

ATTACHMENT JJ3

Stablex-Reutter Inc.

"SOLUTIONS START HERE"

Ninth and Cooper Streets
P.O. Box 499
Camden, New Jersey 08101

Phone: 609-541-6700
Telex: 834477

SR No.	Area Samples	Soil Depth	Soil Description	No. of Bore Holes Composited
SR10459-42	B-6	24"-36"	tan & brown sand, no odor	2
SR10459-43	B-7	0 -12"	tan & brown sand, no odor	3
SR10459-44	B-7	12"-24"	tan & brown sand, no odor	3
SR10459-45	B-7	24"-36"	tan & brown sand, no odor	3
SR10459-46	B-8	0 -12"	tan & brown sand, no odor	3
SR10459-47	B-8	12"-24"	tan & brown sand, no odor	3
SR10459-48	B-8	24"-36"	tan & brown sand, no odor	3

ATTACHMENT JJ4

Stablex-Reutter Inc.

"SOLUTIONS START HERE"

Ninth and Cooper Streets
P.O. Box 499
Camden, New Jersey 08101

Phone: 609-541-0700
Telex: 834477

II. Analytical Results

Petroleum Hydrocarbons

Sample Designation			Parameter Petroleum Hydrocarbons, by IR
SR10459-1	Sec 1	0-12"	8,700
SR10459-2	Sec 1	12"-24"	1,500
SR10459-3	Sec 1	24"-36"	1,300
SR10459-4	Sec 2	0-12"	1,200
SR10459-5	Sec 2	12"-24"	80
SR10459-6	Sec 2	24"-36"	<10
SR10459-7	Sec 3	0-12"	8,500
SR10459-8	Sec 3	12"-24"	1,400
SR10459-9	Sec 3	24"-36"	720
SR10459-10	Sec 4	0-12"	12,000
SR10459-10	Duplicate		10,000
SR10459-11	Sec 4	12"-24"	8,400
SR10459-12	Sec 4	24"-36"	6,000
SR10459-13	Sec 5	0-12"	12,000
SR10459-14	Sec 5	12"-24"	2,600
SR10459-15	Sec 5	24"-36"	710
SR10459-16	Sec 6	0-12"	9,400
SR10459-17	Sec 6	12"-24"	13,000
SR10459-18	Sec 6	24"-36"	5,000
SR10459-19	Sec 7	0-12"	13,000
SR10459-20	Sec 7	12"-24"	6,500
SR10459-20	Duplicate		6,300
SR10459-21	Sec 7	24"-36"	880
Units			(ppm)

ATTACHMENT JJ5

Stablex-Rutter Inc.

"SOLUTIONS START HERE"

Ninth and Cooper Streets
P.O. Box 499
Camden, New Jersey 08101

Telex: 834477

Sample Designation			Parameter Petroleum Hydrocarbons, by IR
SR10459-22	Sec 8	0-12"	15,000
SR10459-23	Sec 8	12"-24"	11,000
SR10459-24	Sec 8	24"-36"	1,800
SR10459-25	B-1	0-12"	290
SR10459-26	B-1	12"-24"	120
SR10459-27	B-1	24"-36"	200
SR10459-28	B-2	0-12"	44
SR10459-29	B-2	12"-24"	<10
SR10459-30	B-2	24"-36"	14
SR10459-30	Duplicate		<10
SR10459-31	B-3	0-12"	11
SR10459-32	B-3	12"-24"	20
SR10459-33	B-3	24"-36"	100
SR10459-34	B-4	0-12"	40
SR10459-35	B-4	12"-24"	<10
SR10459-36	B-4	24"-36"	<10
SR10459-37	B-5	0-12"	170
SR10459-38	B-5	12"-24"	51
SR10459-39	B-5	24"-36"	95
SR10459-40	B-6	0-12"	36
SR10459-41	B-6	12"-24"	12
SR10459-41	Duplicate		28
SR10459-42	B-6	24"-36"	15
Units			(ppm)

ATTACHMENT JJ6

Stablex-Reutter Inc.

"SOLUTIONS START HERE"

Ninth and Cooper Streets
P.O. Box 499
Camden, New Jersey 08101

Telex: 834477

Sample Designation			Parameter Petroleum Hydrocarbons, by IR
SR10459-43	B-7	0-12"	25
SR10459-44	B-7	12"-24"	47
SR10459-45	B-7	24"-36"	48
SR10459-46	B-8	0-12"	61
SR10459-47	B-8	12-24"	66
SR10459-48	B-8	24"-36"	41
Units			(ppm)

III. Quality Assurance Data

Parameter	Spiked Sample	Amount of Spike, ug	% Recovery
Petroleum Hydrocarbons	SR10459-21	4,400	97
Petroleum Hydrocarbons	SR10459-46	4,400	73

Should you have any questions concerning this analysis, please don't hesitate to contact me.

Respectfully submitted,

STABLEX-REUTTER, INC.

Ian C. Lambert
Laboratory Manager

ICL/md

ATTACHMENT JJ1

Sampling # 5

S-R ANALYTICAL INC.

I. Methodology

Petroleum Hydrocarbons by IR

- EPA Method 418.1 Analysis of Water & Wastewater, Petroleum Hydrocarbons by IR
- SW846 Test Method for Evaluating Solid Waste, USEPA 1982, 2nd Edition, Method 3540

Miscellaneous Parameters

Aqueous, non-aqueous and solid samples are prepared and analyzed according to the following publications:

- EPA Test Methods for Evaluating Solid Wastes - Physical/Chemical Methods -SW846, 1982.
- Standard Methods for the Examination of Water and Wastewater, 15th edition.
- EPA Chemical Analysis of Water and Wastes, EPA-600, 1979.

ATTACHMENT KK1

S-R ANALYTICAL INC.

II. Analytical Results

Petroleum Hydrocarbons by IR

Sample Designation	Parameter: Petroleum Hydrocarbons, total, by IR
aqueous method blank	<1
solid method blank	<20
SR11868-1 Hole #1 4'-4'6"	<20
SR11868-2 Hole #1 6'-6'6"	<20
SR11868-3 Hole #1 8'-8'6"	74
SR11868-4 Hole #1 10'-10'6"	<20
SR11868-5 Hole #3 4'-4'6"	130
SR11868-6 Hole #3 6'-6'6"	60
SR11868-7 Hole #5 4'-4'6"	<20; <20*
SR11868-8 Hole #5 6'-6'6"	460
SR11868-11 Hole #10 4'-4'6"	230
SR11868-12 Trip Blank 8/12	<1
SR11868-13 Field Blank 8/12	9.4
SR11868-14 Hole #4 4'-4'6"	1,600
SR11868-15 Hole #4 6'-6'6"	84
SR11868-16 Hole #4 8'-8'6"	100; 120*
SR11868-17 Hole #4 10'-10'6"	80
SR11868-18 Hole #6 4'-4'6"	78
SR11868-19 Hole #6 6'-6'6"	<20
SR11868-20 Hole #6 8'-8'6"	<20
SR11868-21 Hole #6 10'-10'6"	54
SR11868-22 Hole #7 4'-4'6"	1,300
SR11868-23 Hole #7 6'-6'6"	<20
SR11868-26 Hole #8 4'-4'6"	1,200
SR11868-27 Hole #8 6'-6'6"	26
SR11868-28 Hole #8 8'-8'6"	<20; <20*
SR11868-29 Hole #8 10'-10'6"	<20
SR11868-34 Hole #11 4'-4'6"	16
SR11868-35 Field Blank 8/13	19
Units	(ppm)

* Duplicate Analysis

ATTACHMENT KK2

S-R ANALYTICAL INC.

II. Analytical Results, (CONT'D)

Metals (EP Extractable)

Sample Designation

Constituent	SR11868-2 Hole #1 6'-6'6"	SR11868-14 Hole #4 4'-4'6"	SR11868-18 Hole #6 4'-4'6"	EP Toxicity Limits
Arsenic	<0.5; <0.5*	<0.5	<0.5	5.0
Barium	0.24; 0.24*	0.53	0.22	100.0
Cadmium	<0.1; <0.1*	<0.1	<0.1	1.0
Chromium	<0.5; <0.5*	<0.5	<0.5	5.0
Lead	<0.5; <0.5*	<0.5	<0.5	5.0
Mercury	<0.02; <0.02*	<0.02	<0.02	0.2
Selenium	<0.1; <0.1*	<0.1	<0.1	1.0
Silver	<0.5; <0.5*	<0.5	<0.5	5.0
Units	(ppm)	(ppm)	(ppm)	(ppm)

ATTACHMENT KK3

S-R ANALYTICAL INC.

III. Analytical Results, (CONT'D)

Metals (EP Extractable)

Constituent	Sample Designation SR11868-23 Hole #7 6'-6'6"	SR11868-28 Hole #8 8'-8'"	EP Toxicity Limits
Arsenic	<0.5	<0.5	5.0
Barium	0.30	0.19	100.0
Cadmium	<0.1	<0.1	1.0
Chromium	<0.5	<0.5	5.0
Lead	<0.5	<0.5	5.0
Mercury	<0.02	<0.02	0.2
Selenium	<0.1	<0.1	1.0
Silver	<0.5	<0.5	5.0
Units	(ppm)	(ppm)	(ppm)

ATTACHMENT KK4

S-R ANALYTICAL INC.

III. Quality Assurance Data

Parameter	Sample No.	Amount of Spike, ug	% Recovery
Petroleum Hydrocarbons, by IR	SR11868-8	8,280	68
Petroleum Hydrocarbons, by IR	SR11868-29	8,280	68
Petroleum Hydrocarbons, by IR	DI Water	8,280	90
Arsenic	SR11868-23 EP	100	97
Barium	SR11868-23 EP	300	112
Cadmium	SR11868-23 EP	300	110
Chromium	SR11868-23 EP	300	119
Lead	SR11868-23 EP	300	115
Mercury	SR11868-14 EP	20	112
Selenium	SR11868-23 EP	100	52
Silver	SR11868-23 EP	300	84

Should you have any questions concerning this analysis, please don't hesitate to contact your account representative.

Respectfully submitted,

S-R ANALYTICAL, INC.

Ian C. Lambert
Laboratory Manager

ICL/vd

ATTACHMENT KK5

#6

TABLE 1
ADVANCED CHEMICAL TECHNOLOGY - ECRA CASE #84011
SAMPLE ANALYSIS SUMMARY BY LOCATION

LOCATION (BORING/ WELL NO.)	SAMPLE NO.	PURPOSE OF SAMPLING	SAMPLE DEPTH (ft. below ground)	MATRIX	SAMPLING DATE	ANALYTICAL PARAMETERS
RAILROAD SIDING AREA						
PI-1	PI-1A	D	0-0.5'	SOIL	2-15-88	PHC, PM13, BN+15
	PI-1A	D	1.0-1.5'	SOIL	2-15-88	PHC, PM13
	PI-1A	D	2.0-2.5'	SOIL	2-15-88	PHC, PM13, BN+15
PI-2	PI-2A	D	0-0.5'	SOIL	2-15-88	PHC, PM13
	PI-2B	D	1.0-1.5'	SOIL	2-15-88	PHC, PM13
	PI-2C	D	3.0-3.5'	SOIL	2-15-88	PHC, PM13, BN+15
PI-3	PI-3A	D	0-0.5'	SOIL	2-15-88	PHC, PM13
	PI-3B	D	1.0-1.5'	SOIL	2-15-88	PHC, PM13
	PI-3C	D	3.0-3.5'	SOIL	2-15-88	PHC, PM13
PI-4	PI-4A	D	0-0.5'	SOIL	2-15-88	PHC, PM13
	PI-4B	D	1.0-1.5'	SOIL	2-15-88	PHC, PM13
	PI-4C	D	3.0-3.5'	SOIL	2-15-88	PHC, PM13, BN+15
PI-5	PI-5A	D	0-0.5'	SOIL	2-15-88	PHC, PM13, BN+15
	PI-5B	D	1.0-1.5'	SOIL	2-15-88	PHC, PM13
	PI-5C	D	3.0-3.5'	SOIL	2-15-88	PHC, PM13
PI-6	PI-6A	D	0-0.5'	SOIL	2-15-88	PHC, PM13
	PI-6B	D	1.0-1.5'	SOIL	2-15-88	PHC, PM13
	PI-6C	D	3.5-4.0'	SOIL	2-15-88	PHC, PM13
PI-7	PI-7A	D	0-0.5'	SOIL	2-18-88	PHC, PM13
	PI-7B	D	1.0-1.5'	SOIL	2-18-88	PHC, PM13
	PI-7C	D	3.5-4.0'	SOIL	2-18-88	PHC, PM13, BN+15
PI-8	PI-8A	D	0-0.5'	SOIL	2-18-88	PHC, PM13
	PI-8B	D	1.0-1.5'	SOIL	2-18-88	PHC, PM13
	PI-8C	D	3.5-4.0'	SOIL	2-18-88	PHC, PM13
PI-9	PI-9A	D	0-0.5'	SOIL	2-15-88	PHC, PM13
	PI-9B	D	1.0-1.5'	SOIL	2-15-88	PHC, PM13
	PI-9C	D	2.0-2.5'	SOIL	2-15-88	PHC, PM13, BN+15

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ATTACHMENT LL1

TABLE 1
ADVANCED CHEMICAL TECHNOLOGY - ECRA CASE #84011
SAMPLE ANALYSIS SUMMARY BY LOCATION
(CONTINUED)

PI-10	PI-10A	D	0-0.5'	SOIL	2-15-88	PHC, PM13
	PI-10B	D	1.0-1.5'	SOIL	2-15-88	PHC, PM13
	PI-10C	D	2.0-2.5'	SOIL	2-15-88	PHC, PM13
PI-11	PI-11A	D	0-0.5'	SOIL	2-15-88	PHC, PM13, BN+15
	PI-11B	D	1.0-1.5'	SOIL	2-15-88	PHC, PM13
	PI-11C	D	2.0-2.5'	SOIL 33	2-15-88	PHC, PM13, BN+15
MW-5	MW-5	D	3.0-5.0'	SOIL	2-17-88	PHC, PM13
MW-5	PI-MW-5	I	- 2.69'	WATER	3-8-87	PHC, PM13, AE+10, BN+15, ETHYLENE GLYCOL
DUMPSTER AREA						
PI-12	PI-12A	D	0-0.5'	SOIL	2-16-88	PHC, PM13
	PI-12B	D	1.0-1.5'	SOIL	2-16-88	PHC, PM13
	PI-12C	D	3.0-3.5'	SOIL	2-16-88	PHC, PM13
PI-13	PI-13A	D	0-0.5'	SOIL	2-16-88	PHC, PM13
	PI-13B	D	1.0-1.5'	SOIL	2-16-88	PHC, PM13
	PI-13C	D	2.0-2.5'	SOIL	2-16-88	PHC, PM13, BN+15
PI-14	PI-14A	D	0-0.5'	SOIL	2-18-88	PHC, PM13, BN+15
	PI-14B	D	1.5-2.0'	SOIL	2-18-88	PHC, PM13
	PI-14C	D	3.0-3.5'	SOIL	2-18-88	PHC, PM13, BN+15
PI-15	PI-15A	D	0-0.5'	SOIL	2-18-88	PHC, PM13
	PI-15B	D	1.0-1.5'	SOIL	2-18-88	PHC, PM13, BN+15
PI-16	PI-16A	D	0-0.5'	SOIL	2-16-88	PHC, PM13
	PI-16B	D	1.0-1.5'	SOIL	2-16-88	PHC, PM13
	PI-16C	D	2.5-3.0'	SOIL	2-16-88	PHC, PM13
PI-17	PI-17A	D	0-0.5'	SOIL	2-16-88	PHC, PM13, BN+15
	PI-17B	D	1.0-1.5'	SOIL	2-16-88	PHC, PM13
PI-18	PI-18A	D	0-0.5'	SOIL	2-18-88	PHC, PM13
	PI-18B	D	1.0-1.5'	SOIL	2-18-88	PHC, PM13, BN+15
	PI-18C	D	2.0-2.5'	SOIL	2-18-88	PHC, PM13, BN+15

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ATTACHMENT LLa

TABLE 1
ADVANCED CHEMICAL TECHNOLOGY - ECRA CASE #84011
SAMPLE ANALYSIS SUMMARY BY LOCATION
(CONTINUED)

PI-19	PI-19A	D	0-0.5'	SOIL	2-18-88	PHC, PM13
	PI-19B	D	1.0-1.5'	SOIL	2-18-88	PHC, PM13
	PI-19C	D	2.0-2.5'	SOIL	2-18-88	PHC, PM13
PI-20	PI-20A	D	0-0.5'	SOIL	2-18-88	PHC, PM13
	PI-20B	D	1.0-1.5'	SOIL	2-18-88	PHC, PM13
	PI-20C	D	2.0-2.5'	SOIL	2-18-88	PHC, PM13, BN+15
PI-21	PI-21A	I	0-0.5'	SOIL	2-16-88	PHC, PM13
	PI-21B	I	1.0-1.5'	SOIL	2-16-88	PHC, PM13
	PI-21C	I	3.0-3.5'	SOIL	2-16-88	PHC, PM13, BN+15
PI-22	PI-22A	I	0-0.5'	SOIL	2-16-88	PHC, PM13, BN+15
	PI-22B	I	1.0-1.5'	SOIL	2-16-88	PHC, PM13, BN+15
PI-23	PI-23A	I	0-0.5'	SOIL	2-16-88	PHC, PM13, BN+15
	PI-23B	I	1.0-1.5'	SOIL	2-16-88	PHC, PM13
	PI-23C	I	3.0-3.5'	SOIL	2-16-88	PHC, PM13
PI-28	PI-28A	D	0-0.5'	SOIL	2-16-88	PHC, PM13, BN+15
	PI-28B	D	1.0-1.5'	SOIL	2-16-88	PHC, PM13
	PI-28C	D	2.0-2.5'	SOIL	2-16-88	PHC, PM13
PI-29	PI-29A	D	0-0.5'	SOIL	2-16-88	PHC, PM13
	PI-29B	D	1.0-1.5'	SOIL	2-16-88	PHC, PM13
	PI-29C	D	2.0-2.5'	SOIL 39	2-16-88	PHC, PM13
MW-1	MW-1	D	4.5-5.0'	SOIL	2-16-88	PHC
MW-2	MW-2	D	4.0-5.0'	SOIL	2-16-88	PHC
MW-6	MW-6	D	3.0-5.0'	SOIL	2-17-88	PHC
MW-1	PI-MW-1	I	- 3.30'	WATER	3-8-87	PHC, PM13, AE+10, BN+15, ETHYLENE GLYCOL
MW-2	PI-MW-2	I	- 3.75'	WATER	3-8-87	PHC, PM13, AE+10, BN+15, ETHYLENE GLYCOL
MW-6	PI-MW-6	I	- 3.80'	WATER	3-8-87	PHC, PM13, AE+10, BN+15, ETHYLENE GLYCOL

ATTACHMENT LL3

TABLE 1
ADVANCED CHEMICAL TECHNOLOGY - ECRA CASE #84011
SAMPLE ANALYSIS SUMMARY BY LOCATION
(CONTINUED)

OIL-STAINED AREA

PI-24	PI-24A	I	0-0.5'	SOIL	2-18-88	PHC, PM13
	PI-24B	I	1.0-1.5'	SOIL	2-18-88	PHC, PM13
	PI-24C	I	3.0-3.5'	SOIL	2-18-88	PHC, PM13, BN+15
PI-25	PI-25A	I	0-0.5'	SOIL	2-18-88	PHC, PM13, BN+15
	PI-25B	I	1.0-1.5'	SOIL	2-18-88	PHC, PM13
	PI-25C	I	2.0-2.5'	SOIL	2-18-88	PHC, PM13, BN+15
PI-26	PI-26A	I	0-0.5'	SOIL	2-18-88	PHC, PM13
	PI-26B	I	1.0-1.5'	SOIL	2-18-88	PHC, PM13
	PI-26C	I	3.0-3.5'	SOIL	2-18-88	PHC, PM13
MW-4	MW-4	I	3.0-5.0'	SOIL	2-17-88	PHC
MW-4	PI-MW-4	I	DRY	-----	3-8-87	NOT ANALYZED

BACKGROUND SAMPLING

PI-27	PI-27A	-----	0-0.5'	SOIL	2-17-88	PHC, PM13, BN+15
	PI-27B	-----	2.0-2.5'	SOIL	2-17-88	PHC, PM13, BN+15
	PI-27C	-----	6.0-6.5'	SOIL	2-17-88	PHC, PM13, BN+15
MW-3	PI-MW-3	-----	- 6.55'	WATER	3-8-87	PHC, PM13, AE+10, BN+15, ETHYLENE GLYCOL

QA/QC ANALYSIS

PI-TB-1	PI-TB-1	QA/QC	-------	WATER	2-15-88	PHC, PM13, BN+15
PI-FB-1	PI-FB-1	QA/QC	-------	WATER	2-15-88	PHC, PM13, BN+15
PI-FB-2	PI-FB-2	QA/QC	-------	WATER	2-16-88	PHC, PM13, BN+15
PI-FB-3	PI-FB-3	QA/QC	-------	WATER	2-17-88	PHC, PM13, BN+15
PI-MW-FB	PI-MW-FB	QA/QC	-------	WATER	3-8-87	PHC, PM13, AE+10, BN+15, ETHYLENE GLYCOL
PI-MW-TB	PI-MW-TB	QA/QC	-------	WATER	3-8-87	PHC, PM13, AE+10, BN+15, ETHYLENE GLYCOL

ATTACHMENT LL4

TABLE 1
ADVANCED CHEMICAL TECHNOLOGY - ECRA CASE #84011
SAMPLE ANALYSIS SUMMARY BY LOCATION
(CONTINUED)

NOTES:

PURPOSE OF SAMPLING

D - DELINEATION
I - INITIAL SCREENING
QA/QC - QUALITY ASSURANCE/QUALITY CONTROL SAMPLES

PHC - PETROLEUM HYDROCARBONS
BN+15 - BASE NEUTRAL EXTRACTABLES WITH LIBRARY SEARCH
PM13 - PRIORITY POLLUTANT METALS
AE+10 - ACID EXTRACTABLES WITH LIBRARY SEARCH

ATTACHMENT LL5

TABLE 3
ADVANCED CHEMICAL TECHNOLOGY - ECRA CASE # 84011
SOIL SAMPLING RESULTS SUMMARY - RAILROAD SIDING AREA

SAMPLE NUMBER DEPTH	PI-1A 0-0.5'	PI-1C 2.0-2.5'	PI-2C 3.0-3.5'	PI-4C 3.0-3.5'	PI-5A 0-0.5'	PI-7C 3.5-4.0'	PI-9C 2.0-2.5'	PI-11A 0-0.5'	PI-11C 2.0-2.5'
BASE NEUTRALS (ppb)									
BENZO (A) ANTHRACENE	ND	ND	ND	ND	700 J	ND	ND	ND	ND
BENZO (A) PYRENE	ND	ND	ND	ND	890 J	ND	ND	ND	ND
BENZO (B) FLUORANTHENE	ND	ND	ND	ND	990 J	ND	ND	ND	ND
BENZO (K) FLUORANTHENE	ND	ND	ND	ND	820 J	ND	ND	ND	ND
BENZO (GHI) PERYLENE	ND	ND	ND	ND	960 J	ND	ND	ND	ND
BIS(2-ETHYLHEXYL)PHTHALATE	ND	ND	ND	ND	ND	ND	ND	15000	ND
BUTYL BENZYL PHTHALATE	ND	ND	ND	ND	ND	ND	ND	1300 J	ND
CHRYSENE	ND	120 J	ND	ND	840 J	ND	ND	ND	ND
DI-N-BUTYL PHTHALATE	12000 B	220 J	ND	ND	5100 B	260 JB	ND	7000 JB	ND
FLUORANTHENE	ND	210 J	ND	ND	1500 J	ND	ND	ND	ND
PHENANTHRENE	ND	280 J	ND	ND	620 J	ND	ND	ND	ND
PYRENE	ND	360 J	ND	ND	1000 J	ND	ND	ND	ND
TOTAL BASE NEUTRALS (ppm)	ND	1.19	ND	ND	8.32	ND	ND	16.3 #	ND
TENTATIVELY IDENTIFIED COMPOUNDS (ppb) *	3470 (3)	7330 (12)	3680 (4)	3150 (4)	44400 (8)	2350 (4)	4030 (4)	5900 (3)	4390 (5)
TENTATIVELY UNIDENTIFIED COMPOUNDS (ppb) *	18300 (4)	1830 (2)	1290 (2)	2260 (2)	17390 (4)	2620 (3)	1610 (2)	14700 (2)	1300 (1)

NOTES:

B - PROBABLE/POSSIBLE LAB CONTAMINATION
J - BELOW METHOD DETECTION LIMIT
ND - NOT DETECTED
ppb - PARTS PER BILLION
ppm - PARTS PER MILLION
* - ESTIMATED CONCENTRATION (# OF COMPOUNDS IN PARENTHESIS)
# - ABOVE NJDEP CLEANUP LEVEL

ATTACHMENT LL6

ADVANCED CHEMICAL TECHNOLOGY - ECRA CASE # 84011

SOIL SAMPLING RESULTS SUMMARY - DUMPSTER AREA

SAMPLE NUMBER	PI-12A	PI-12B	PI-12C	PI-13A	PI-13B	PI-13C	PI-14A	PI-14B	PI-14C	PI-15A	PI-15B	PI-16A	PI-16B	PI-16C	PI-17A	PI-17B	PI-18A	PI-18B	PI-18C	PI-19A	PI-19B
DEPTH	0-0.5'	1.0-1.5'	3.0-3.5'	0-0.5'	1.0-1.5'	2.0-2.5'	0-0.5'	1.0-1.5'	3.0-3.5'	0-0.5'	1.0-1.5'	0-0.5'	1.0-1.5'	2.5-3.0'	0-0.5'	1.0-1.5'	0-0.5'	1.0-1.5'	2.0-2.5'	0-0.5'	1.0-1.5'
METAL ANALYSIS (ppm)																					
ANTIMONY	.56	.22	.19	.51	.13	.14	.32	.16	.27	<0.10	<0.10	.96	.68	2	.44	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
ARSENIC	4.8	8	2	11	2.4	1.6	2.7	1.6	2.4	6.2	2.7	3.6	4.5	2	3.9	1.9	5	4.6	1.6	2.8	1.5
BERYLLIUM	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
CADMIUM	3.3 *	6.4 *	<0.50	2	.63	<0.50	<0.50	<0.50	.7	3	<0.50	3.1 *	2.6	<0.50	3.5 *	<0.50	1.9	.76	<0.50	<0.50	<0.50
CHROMIUM	17	24	12	18	9.6	.9	15	12	18	23	16	17	15	10	31	12	19	13	12	11	16
COPPER	27	35	5.6	30	3	<2.0	15	7.3	3.2	61	5.9	43	46	4.7	36	<2.0	25	7.4	<2.0	4.6	<2.0
LEAD	180	1900 *	1.1	250	38	3.2	41	6.8	4.4	180	5.8	190	140	3.3	180	4.4	470 *	110	3.4	16	3.9
MERCURY	.13	1	<0.10	.21	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	.21	<0.10	.11	<0.10	.11	<0.10	<0.10	<0.10	<0.10
NICKEL	9.4	22	5.3	8.4	4.2	5.3	6.1	4.5	7	12	7.2	9.4	10	5.6	11	5.4	7.8	4.9	5.1	5.2	6.7
SELENIUM	.3	.3	.11	.45	.15	<0.10	.14	.11	.14	.43	.13	.33	.33	.15	.29	.11	.34	.35	.14	.24	<0.10
SILVER	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
THALLIUM	.21	.26	.16	.22	.18	<0.10	.22	.21	.24	.36	.25	<0.10	<0.10	<0.10	<0.10	<0.10	.41	.59	.32	.36	.35
ZINC	110	270	20	120	17	16	20	14	28	120	16	140	73	16	85	16	210	30	16	13	17
PETROLEUM HYDROCARBONS (ppm)	130 *	70	<50	120 *	<50	<50	75	150 *	62	1900 *	9500 *	310 *	<50	<50	520 *	53	350	52	<50	6500 *	<50

SAMPLE NUMBER	PI-19C	PI-20A	PI-20B	PI-20C	PI-21A	PI-21B	PI-21C	PI-22A	PI-22B	PI-23A	PI-23B	PI-23C	PI-28A	PI-28B	PI-28C	PI-29A	PI-29B	PI-29C	MW-1	MW-2	MW-6
DEPTH	2.0-2.5'	0-0.5'	1.0-1.5'	2.0-2.5'	0-0.5'	1.0-1.5'	3.0-3.5'	0-0.5'	1.0-1.5'	0-0.5'	1.0-1.5'	3.0-3.5'	0-0.5'	1.0-1.5'	2.0-2.5'	0-0.5'	1.0-1.5'	2.0-2.5'	4.5-5.0'	4.0-5.0'	3.0-5.0'
METAL ANALYSIS (ppm)																			NA	NA	NA
ANTIMONY	.14	<0.10	<0.10	<0.10	2.7 *	.13	<0.10	4.9 *	.2	1.5	.1	.14	.15	<0.10	<0.10	.39	<0.10	<0.10			
ARSENIC	1.4	1.5	1.8	2.5	6.4	1.1	1.6	7.1	1.9	6.2	1.9	2.4	5.4	1.4	1.8	5.9	1.1	1			
BERYLLIUM	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	.75	<0.50	.51	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50			
CADMIUM	<0.50	<0.50	<0.50	<0.50	1.1	.7	.55	1.8	.52	1.2	<0.50	<0.50	.62	<0.50	<0.50	1.9	<0.50	<0.50			
CHROMIUM	13	12	13	18	17	10	13	31	8.5	20	11	12	16	9	8.4	22	6	11			
COPPER	2.1	5.4	4.1	<2.0	52	3.1	<2.0	85	4	37	<2.0	<2.0	19	2.9	<2.0	36	<2.0	<2.0			
LEAD	3.7	4.4	3.2	3.9	1900 *	3	7.1	560 *	43	320 *	8	3.7	110	5.5	5.4	160	1.7	1.9			
MERCURY	<0.10	<0.10	<0.10	<0.10	.32	<0.10	<0.10	.29	<0.10	.19	<0.10	<0.10	.53	<0.10	<0.10	.1	<0.10	<0.10			
NICKEL	7.2	5.6	5.7	6.5	6.2	4.4	5.2	14	<4.0	10	4.8	5.7	6.5	<4.0	<4.0	9.2	<4.0	<4.0			
SELENIUM	<0.10	.16	.11	.12	.49	.13	.1	1	.13	.66	.1	.1	.41	.12	.13	.37	<0.10	<0.10			
SILVER	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2.2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	33 *			
THALLIUM	.32	.37	.33	.38	.13	<0.10	<0.10	.18	.11	.17	<0.10	.12	.17	.14	.14	.22	.18	.19			
ZINC	20	14	15	17	110	12	14	480 *	22	59	17	26	47	13	9.7	74	11	14			
PETROLEUM HYDROCARBONS (ppm)	<50	<50	86	86	77	<50	<50	7900 *	31000 *	<50	83	<50	<50	<50	64	100	<50	<50	50	80	<50

NOTES:

NA - NOT ANALYZED

ppm - PARTS PER MILLION

* - ABOVE NJDEP CLEANUP LEVEL

ATTACHMENT LL7

ADVANCED CHEMICAL TECHNOLOGY - ECRA CASE # 84011
SOIL SAMPLING RESULTS SUMMARY - RAILROAD SIDING AREA

SAMPLE NUMBER	PI-1A	PI-1B	PI-1C	PI-2B	PI-2B	PI-2C	PI-3A	PI-3B	PI-3C	PI-4A	PI-4B	PI-4C	PI-5A	PI-5B	PI-5C	PI-6A	PI-6B	PI-6C
DEPTH	0-0.5'	1.0-1.5'	2.0-2.5'	0-0.5'	1.0-1.5'	3.0-3.5'	0-0.5'	1.0-1.5'	3.0-3.5'	0-0.5'	1.0-1.5'	3.0-3.5'	0-0.5'	1.0-1.5'	3.0-3.5'	1.0-1.5'	3.0-3.5'	3.5-4.0'
METAL ANALYSIS (ppm)																		
ANTIMONY	1.9	3 *	2.7 *	.43	.25	.19	.63	.51	.51	.68	.51	.42	1.9	.45	.45	1.7	.16	<0.10
ARSENIC	4.2	17	4	4.2	2.9	2.5	5.7	2.3	2.8	5.5	1.6	2.4	7.5	3.4	2.3	4.7	2.3	3.5
BERYLLIUM	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
CADMIUM	5.6 *	7.3 *	2.1	5.5 *	<0.50	<0.50	<0.50	.91	.9	1.1	.66	.75	2.9	<0.50	.59	2.4	<0.50	<0.50
CHROMIUM	48	49	19	18	13	16	16	22	17	9.3	16	21	57	12	21	43	16	12
COPPER	8800 *	570 *	30	33	5.6	2.5	12	<2.0	3	17	<2.0	<2.0	200 *	6.1	9	120	<2.0	<2.0
LEAD	250	530 *	180	110	25	15	49	4	3.5	56	3.7	3.5	330 *	9.3	4.5	180	4.6	4.8
MERCURY	<0.10	.5	.42	.168	<0.10	<0.10	.11	<0.10	<0.10	.18	<0.10	<0.10	.53	<0.10	<0.10	.24	<0.10	<0.10
NICKEL	18	27	7	9	<4.0	<4.0	4.8	5.5	5	<4.0	4.8	6.4	21	<4.0	7	15	<4.0	4.4
SELENIUM	.47	1.4	.32	.27	.23	.2	.27	.24	.2	.31	.23	.27	.57	.27	.27	.41	.26	.15
SILVER	1.7	1.1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2	<1.0	<1.0	2.1	<1.0	<1.0	<1.0	<1.0	[illegible]
THALLIUM	.22	.54	.23	.17	.14	.13	[illegible]	.11	.12	.14	.16	.11	.31	.16	.14	.2	.14	[illegible]
ZINC	710 *	650 *	100	100	25	15	6[illegible]	15	15	36	15	17	270	280	210	130	13	12
PETROLEUM HYDROCARBONS (ppm)	8300 *	570 *	<50	56	<50	<50	<5[illegible]	<50	<50	<50	<50	<50	60	<50	<50	62	<50	<50

SAMPLE NUMBER	PI-7A	PI-7B	PI-7C	PI-8A	PI-8B	PI-8C	PI-[illegible]	PI-9B	PI-9C	PI-10A	PI-10B	PI-10C	PI-11A	PI-11B	PI-11C	MW-5
DEPTH	0-0.5'	1.0-1.5'	3.5-4.0'	0-0.5'	1.0-1.5'	3.5-4.0'	0-0.[illegible]	1.0-1.5'	2.0-2.5'	0-0.5'	1.0-1.5'	2.0-2.5'	0-0.5'	1.0-1.5'	2.0-2.5'	3.0-3.5'
METAL ANALYSIS (ppm)																
ANTIMONY	.86	.27	.25	.44	.2	<0.10	[illegible]	<0.10	.12	.56	.14	<0.10	3.2 *	.18	.17	.19
ARSENIC	6.4	2	1.9	6.8	4.4	3.4	3	1.6	3.1	5.6	2.5	1.7	1.6	1.1	3	2.9
BERYLLIUM	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.[illegible]	<0.50	<0.50	<0.50	<0.50	<0.50	2.3	.65	<0.50	<0.50
CADMIUM	<0.50	<0.50	<0.50	<0.50	1.3	.51	1	<0.50	.69	20 *	<0.50	<0.50	4.1 *	1.7	1.9	<0.50
CHROMIUM	15	14	19	10	16	19	[illegible]	12	23	12	12	13	49	17	14	15
COPPER	22	<2.0	<2.0	24	17	<2.0	[illegible]	4.3	<2.0	430 *	2.4	<2.0	130	19	<2.0	4.8
LEAD	140	4	4.7	68	59	4.7	[illegible]	4.8	5.5	250	6.9	2.5	190	140	10	11
MERCURY	<0.10	<0.10	<0.10	<0.10	.15	<0.10	[illegible]	<0.10	<0.10	<0.10	.12	.14	<0.10	<0.10	<0.10	<0.10
NICKEL	6.4	6.3	6.5	21	13	6.6	[illegible]	<4.0	4.6	17	4.3	<4.0	8.8	5.1	<4.0	5.3
SELENIUM	.23	<0.10	<0.10	.11	.19	.2	[illegible]	.15	.1	.31	<0.10	.11	1	.15	.12	.11
SILVER	<1.0	<1.0	<1.0	1.5	<1.0	<1.0	<1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
THALLIUM	.23	.2	.2	.24	.27	.22	[illegible]	.1	.14	.25	.22	.15	.2	.14	.14	.18
ZINC	49	12	13	54	95	16	[illegible]	14	16	290	13	11	590 *	61	33	15
PETROLEUM HYDROCARBONS (ppm)	170 *	160 *	210 *	200 *	160 *	54	[illegible]	<50	<50	<50	<50	<50	1200 *	51	52	72

NOTES:

ppm - PARTS PER MILLION
* - ABOVE NJDEP CLEANUP LEVEL

ATTACHMENT 4-9

TABLE 5
ADVANCED CHEMICAL TECHNOLOGY - ECRA CASE # 84011
SOIL SAMPLING RESULTS SUMMARY - DUMPSTER AREA

SAMPLE NUMBER DEPTH	PI-13C 2.0-2.5'	PI-14A 0-0.5'	PI-14C 3.0-3.5'	PI-15B 1.0-1.5'	PI-17A 0-0.5'	PI-18B 1.0-1.5'	PI-18C 2.0-2.5'	PI-20C 2.0-2.5'	PI-21C 3.0-3.5'	PI-22A 0-0.5'	PI-22B 1.0-1.5'	PI-23A 0-0.5'	PI-28A 0-0.5'
BASE NEUTRALS (ppb)													
ENAPHTHYLENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	170 J	ND	ND	ND
ITHRACENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	130 J	ND	ND	ND
BENZO (A) ANTHRACENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	820 J	ND
BENZO (A) PYRENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	130 J	ND	630 J	ND
BENZO (B) FLUORANTHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	670 J	ND
BENZO (K) FLUORANTHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	690 J	ND
BENZO (GHI) PERYLENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BIS(2-ETHYLHEXYL)PHTHALATE	100 J	ND	ND	ND	ND	120 JB	ND	ND	ND	1600	ND	ND	ND
BUTYL BENZYL PHTHALATE	ND	ND	ND	ND	ND	ND	ND	ND	ND	490 J	ND	1100	ND
CHRYSENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	170 J	ND	1100	ND
DI-N-BUTYL PHTHALATE	ND	250 JB	200 JB	360 JB	4900 JB	ND	180 JB	720 JB	ND	460 J	350 J	190 JB	120 JB
FLUORANTHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	180 J	ND	ND	130 J
PHENANTHRENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	200 J	ND	1200	ND
PYRENE	ND	ND	ND	ND	ND	100 J	ND	ND	ND	600 J	ND	2800	430 J
TOTAL BASE NEUTRALS (ppm)	0.1	ND	ND	ND	ND	0.1	ND	ND	ND	4.13	.35	9.1	.56
TENTATIVELY IDENTIFIED COMPOUNDS (ppb) *	4280 (4)	5200 (7)	2590 (6)	3384 (10)	ND	3055 (7)	1770 (4)	5960 (5)	3990 (4)	48300 (17)	37860 (20)	14430 (14)	2319 (5)
TENTATIVELY UNIDENTIFIED COMPOUNDS (ppb) *	1790 (2)	3750 (5)	2570 (3)	1700 (8)	23000 (1)	1694 (6)	2380 (2)	3700 (2)	1760 (2)	17940 (3)	ND	2450 (6)	9005 (12)

NOTES:
- B - PROBABLE/POSSIBLE LAB CONTAMINATION
- J - BELOW METHOD DETECTION LIMIT
- ND - NOT DETECTED
- ppb - PARTS PER BILLION
- ppm - PARTS PER MILLION
- * - ESTIMATED CONCENTRATION (# OF COMPOUNDS IN PARENTHESIS)
- # - ABOVE NJDEP CLEANUP LEVEL

ATTACHMENT LL9

TABLE 7
ADVANCED CHEMICAL TECHNOLOGY - ECRA CASE # 84011
SOIL SAMPLING RESULTS SUMMARY - OIL STAINED AREA

SAMPLE NUMBER	PI-24C	PI-25A	PI-25C
DEPTH	3.0-3.5'	0-0.5'	2.0-2.5'
BASE NEUTRALS (ppb)			
ACENAPHTHYLENE	ND	120 J	ND
ANTHRACENE	440 J	130 J	ND
BENZO (A) ANTHRACENE	1900 J	330 J	870 J
BENZO (A) PYRENE	1400 J	370 J	700 J
BENZO (B) FLUORANTHENE	2500 J	420 J	780 J
BENZO (K) FLUORANTHENE	1700 J	380 J	380 J
BENZO (GHI) PERYLENE	1400 J	210 J	ND
BIS(2-ETHYLHEXYL)PHTHALATE	1100 JB	ND	ND
BUTYL BENZYL PHTHALATE	ND	ND	2600 J
CHRYSENE	2300 J	360 J	930 J
DI-N-BUTYL PHTHALATE	2200 JB	750 JB	17000 B
DI-N-OCTYL PHTHALATE	ND	ND	410 J
FLUORANTHENE	5200	1000	900 J
INDENO (1,2,3-CD) PYRENE	1300 J	210 J	ND
PHENANTHRENE	2200 J	350 J	1600 J
PYRENE	2300 J	420 J	2000 J
TOTAL BASE NEUTRALS (ppm)	22.64 #	4.3	11.17 #
TENTATIVELY IDENTIFIED COMPOUNDS (ppb) *	119200 (16)	13000 (18)	33940 (10)
TENTATIVELY UNIDENTIFIED COMPOUNDS (ppb) *	37800 (4)	3800 (2)	47410 (9)

NOTES:

B - PROBABLE/POSSIBLE LAB CONTAMINATION
J - BELOW METHOD DETECTION LIMIT
ND - NOT DETECTED
ppb - PARTS PER BILLION
ppm - PARTS PER MILLION
* - ESTIMATED CONCENTRATION (# OF COMPOUNDS IN PARENTHESIS)
\# - ABOVE NJDEP CLEANUP LEVEL

ATTACHMENT LL10

TABLE 6
ADVANCED CHEMICAL TECHNOLOGY - ECRA CASE # 84011
SOIL SAMPLING RESULTS SUMMARY - OIL STAINED AREA

SAMPLE NUMBER DEPTH	PI-24A 0-0.5'	PI-24B 1.0-1.5'	PI-24C 3.0-3.5'	PI-25A 0-0.5'	PI-25B 1.0-1.5'	PI-25C 2.0-2.5'	PI-26A 0-0.5'	PI-26B 1.0-1.5'	PI-26C 3.0-3.5'	MW-4 3.0-5.0'
METAL ANALYSIS (ppm)										NA
ANTIMONY	.4	1.6	.37	.49	.3	<0.10	.29	.31	.42	
ARSENIC	2.4	10	3.3	2.3	5.2	2.9	8.5	3	4.9	
BERYLLIUM	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
CADMIUM	3.8 #	4500 #	55 #	3.9 #	9.3 #	2.9	3.3 #	3.1 #	4.7 #	
CHROMIUM	17	140 #	20	15	20	17	18	18	24	
COPPER	22	400 #	90	35	73	8.9	12	17	32	
LEAD	47	240	71	55	260 #	39	150	68	100	
MERCURY	<0.10	.54	.19	<0.10	<0.10	.12	<0.10	<0.10	<0.10	
NICKEL	8.5	150 #	37	7.1	8.1	7.1	6.4	7	10	
SELENIUM	.25	.59	.24	.16	.26	.22	.3	.1	.3	
SILVER	<1.0	73 #	41 #	<1.0	<1.0	<1.0	12 #	<1.0	5.6 #	
THALLIUM	.35	.62	.36	.35	.42	.45	.52	.33	.38	
ZINC	50	600 #	120	64	150	36	36	55	74	
PETROLEUM HYDROCARBONS (ppm)	64	370 #	190 #	730 #	160 #	310 #	<50	110 #	1400 #	97

NOTES:
NA - NOT ANALYZED
ppm - PARTS PER MILLION
- ABOVE NJDEP CLEANUP LEVEL

ATTACHMENT LL11

TABLE 8
ADVANCED CHEMICAL TECHNOLOGY - ECRA CASE # 84011
SOIL SAMPLING RESULTS SUMMARY - BACKGROUND SAMPLING

SAMPLE NUMBER	PI-27A	PI-27B	PI-27C
DEPTH	0-0.5'	2.0-2.5'	6.0-6.5'
BASE NEUTRALS (ppb)			
BIS(2-ETHYLHEXYL)PHTHALATE	32000	ND	440 J
BUTYL BENZYL PHTHALATE	1300	ND	900 J
CHRYSENE	360 J	ND	ND
DI-N-BUTYL PHTHALATE	480 J	280 J	700 JB
DI-N-OCTYL PHTHALATE	460 J	130 J	ND
TOTAL BASE NEUTRALS (ppm)	34.6 #	.41	1.34
TENTATIVELY IDENTIFIED COMPOUNDS (ppb) *	4790 (12)	420 (7)	3615 (6)
TENTATIVELY UNIDENTIFIED COMPOUNDS (ppb) *	6960 (8)	2732 (13)	8792 (8)
METAL ANALYSIS (ppm)			
ANTIMONY	.12	.47	.22
ARSENIC	2.1	1.5	1.2
BERYLLIUM	<0.50	.54	<0.50
CADMIUM	<0.50	.54	<0.50
CHROMIUM	11	13	13
COPPER	5.4	3.5	3.4
LEAD	14	2.4	2.7
MERCURY	<0.10	<0.10	<0.10
NICKEL	<4.0	5	6.6
SELENIUM	.11	<0.10	<0.10
SILVER	<1.0	<1.0	<1.0
THALLIUM	.17	.15	.16
ZINC	24	24	15
PETROLEUM HYDROCARBONS (ppm)	56	<50	76

NOTES:
B - PROBABLE/POSSIBLE LAB CONTAMINATION
J - BELOW METHOD DETECTION LIMIT
ND - NOT DETECTED
ppb - PARTS PER BILLION
ppm - PARTS PER MILLION
* - ESTIMATED CONCENTRATION (# OF COMPOUNDS IN PARENTHESIS)
# - ABOVE NJDEP CLEANUP LEVEL

ATTACHMENT LL12

1st Round GW Sampling

TABLE 10
ADVANCED CHEMICAL TECHNOLOGY - ERCA CASE #84011
GROUNDWATER SAMPLING RESULTS SUMMARY

SAMPLE NUMBER	PI-MW-1	PI-MW-2	PI-MW-3	PI-MW-5	PI-MW-6	PI-MW-TP	PI-MW-FB
BASE NEUTRALS (ppb)							
BIS(2-ETHYLHEXYL)PHTHALATE	ND	ND	ND	ND	ND	ND	620 B
BUTYL BENZL PHTHALATE	ND	ND	ND	ND	ND	ND	18
DI-N-OCTYL PHTHALATE	ND	ND	ND	ND	ND	ND	27
TENTATIVELY IDENTIFIED COMPOUNDS (ppb) *	5 (1)	10 (6) 14 (2)B	5 (1)	40 (2) 6 (1)B	40 (5) 13 (1)B	5 (1)	159 (10) 10 (1)B
TENTATIVELY UNIDENTIFIED COMPOUNDS (ppb) *	82 (2) 19 (2)B	4 (3) 7 (1)B	6 (1) 18 (2)B	47 (1)B	14 (6) 7 (1)B	4 (1) 11 (2)B	86 (4) 8 (1)B
ACID EXTRACTABLE ANALYSIS (ppb)	ND	ND	ND	ND	ND	ND	ND
ETHYLENE GLYCOL	ND	ND	ND	ND	ND	ND	ND
METAL ANALYSIS (ppm)							
ANTIMONY	<.001	<.001	.001	.001	<.001	<.001	<.001
ARSENIC	<.001	<.001	<.001	<.001	.002	.001	.001
BERYLLIUM	<.005	<.005	<.005	<.005	<.005	<.005	<.005
CADMIUM	.007	.008	<.005	<.005	<.005	<.005	<.005
CHROMIUM	<.025	<.025	<.025	<.025	.005	<.025	<.025
COPPER	<.020	<.020	<.020	<.020	<.020	<.020	<.020
LEAD	.001	<.001	.003	.003	.003	.001	<.001
MERCURY	<.001	<.001	<.001	<.001	<.001	<.001	<.001
NICKEL	<.040	<.040	<.040	<.040	<.040	<.040	<.040
SELENIUM	<.001	<.001	<.001	<.001	<.001	<.001	<.001
SILVER	<.010	<.010	<.010	<.010	<.010	<.010	<.010
THALLIUM	<.001	<.001	<.001	<.001	<.001	<.001	<.001
ZINC	<.050	<.050	<.050	<.050	.06	<.050	<.050
PETROLEUM HYDROCARBONS (ppm)	<1.0	<1.0	<1.0	2 #	<1.0	<1.0	<1.0

NOTES:
- B - PROBABLE/POSSIBLE LAB CONTAMINATION
- NA - NOT ANALYZED
- ND - NOT DETECTED
- ppb - PARTS PER BILLION
- ppm - PARTS PER MILLION
- * - ESTIMATED CONCENTRATION (# OF COMPOUNDS IN PARENTHESIS)
- # - ABOVE NJDEP CLEANUP LEVEL

ATTACHMENT MM

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Advanced Chemical Technoly
ECRA Case # 84011

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5. CHAIN OF CUSTODY(S) & LABORATORY CHRONICLE(S)

ATTACHMENT MM2

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J. M. SORGE, INC.
3301 U. S. HIGHWAY 22
SOMERVILLE, NJ 08876

ATTN:

DATE: 04/06/88

JOB No: 880957

PROJECT No: 86013

SAMPLE RECEIVED: 03/09/88

SAMPLE SUMMARY

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E802611	03/08/88	13:35	DH	GROUND WATER - PI MW-1 PLANT INDUSTRIES
E802612	03/08/88	13:00	DH	GROUND WATER - PI-MW-2 PLANT INDUSTRIES
E802613	03/08/88	14:00	DH	GROUND WATER - PI-MW-3 PLANT INDUSTRIES
E802614	03/08/88	16:20	DH	GROUND WATER - PI-MW-5 PLANT INDUSTRIES
E802615	03/08/88	14:15	DH	GROUND WATER - PI-MW-6 PLANT INDUSTRIES
E802616	03/08/88	14:40	DH	WATER - PI-MW-FB PLANT INDUSTRIES
E802617	03/08/88		DH	WATER - PI-MW-TP, TRIP BLANK PLANT INDUSTRIES

? CERTIFICATION 12129

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT MM3

ACCUTEST
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ANALYSIS REPORT FOR BASE NEUTRAL EXTRACTABLES BY GC/MS

CLIENT : J.M. SORGE
SAMPLE ID.: WATER/#E802611
DATA FILE : >D2215

METHOD : EPA 625
ANALYSIS DATE: 03/22/88
ANALYST : WU

	COMPOUND	RESULT(UG/L)	MDL(UG/L)
1)	ACENAPHTHENE	ND	10
2)	ACENAPHTHYLENE	ND	10
3)	ANTHRACENE	ND	10
4)	BENZIDENE	ND	10
5)	BENZO (A) ANTHRACENE	ND	10
6)	BENZO (A) PYRENE	ND	10
7)	BENZO (B) FLUORANTHENE	ND	10
8)	BENZO (K) FLUORANTHENE	ND	10
9)	BENZO (GHI) PERYLENE	ND	10
10)	BIS (2-CHLOROETHOXY) METHANE	ND	10
11)	BIS (2-CHLOROETHYL) ETHER	ND	10
12)	BIS (2-CHLOROISOPROPYL) ETHER	ND	10
13)	BIS (2-ETHYLHEXYL) PHTHALATE	ND	10
14)	4-BROMOPHENYL PHENYL ETHER	ND	10
15)	BUTYL BENZYL PHTHALATE	ND	10
16)	2-CHLORONAPHTHALENE	ND	10
17)	4-CHLOROPHENYL PHENYL ETHER	ND	10
18)	CHRYSENE	ND	10
19)	DIBENZO (A,H) ANTHRACENE	ND	10
20)	1,2-DICHLOROBENZENE	ND	10
21)	1,3-DICHLOROBENZENE	ND	10
22)	1,4-DICHLOROBENZENE	ND	10
23)	3,3-DICHLOROBENZIDENE	ND	10
24)	DIETHYL PHTHALATE	ND	10
25)	DIMETHYL PHTHALATE	ND	10
26)	DI-N-BUTYL PHTHALATE	ND	10
27)	2,4-DINITROTOLUENE	ND	10
28)	2,6-DINITROTOLUENE	ND	10
29)	DI-N-OCTYL PHTHALATE	ND	10
30)	1,2-DIPHENYLHYDRAZINE	ND	10
31)	FLUORANTHENE	ND	10
32)	FLUORENE	ND	10
33)	HEXACHLOROBENZENE	ND	10
34)	HEXACHLOROBUTADIENE	ND	10
35)	HEXACHLOROCYCLOPENTADIENE	ND	10
36)	HEXCHLOROETHANE	ND	10
37)	INDENO (1,2,3-CD) PYRENE	ND	10
38)	ISOPHORONE	ND	10
39)	NAPHTHALENE	ND	10
40)	NITROBENZENE	ND	10
41)	N-NITROSODIMETHYLAMINE	ND	10
42)	N-NITROSODI-N-PROPYLAMINE	ND	10
43)	N-NITROSODIPHENYLAMINE	ND	10
44)	PHENANTHRENE	ND	10
45)	PYRENE	ND	10
46)	1,2,4-TRICHLOROBENZENE	ND	10

J = BELOW METHOD DETECTION LIMIT
MDL= METHOD DETCTION LIMIT
ND = NON DETECTABLE

B=ANALYTE WAS ALSO FOUND IN METHOD BLANK INDICATING POSSIBLE/PROBABLE LAB BLANK CONTAMINATION.

2

ATTACHMENT MM4

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ACID EXTRACTABLE ANALYSIS REPORT

CLIENT : J.M. SORGE
SAMPLE ID : WATER #E802611
DATA FILE : >D2215

METHOD : EPA/625
ANALYSIS DATE : 03/22/88
ANALYST : WU

	COMPOUND	RESULT(UG/L)	MDL(UG/L)
1)	4-CHLORO-3-METHYL PHENOL	ND	10
2)	2-CHLOROPHENOL	ND	10
3)	2,4-DICHLOROPHENOL	ND	10
4)	2,4-DIMETHYLPHENOL	ND	10
5)	2,4-DINITROPHENOL	ND	50
6)	2-METHYL-4,6-DINITROPHENOL	ND	50
7)	2-NITROPHENOL	ND	10
8)	4-NITROPHENOL	ND	10
9)	PENTACHLOROPHENOL	ND	10
10)	PHENOL	ND	10
11)	2,4,6-TRICHLOROPHENOL	ND	10

J =BELOW METHOD DETECTION LIMIT
MDL=METHOD DETECTION LIMIT
ND =NON DETECTABLE

B=ANALYTE WAS ALSO FOUND IN METHOD BLANK INDICATING POSSIBLE/PROBABLE LAB BLANK CONTAMINATION.

ATTACHMENT MM5

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1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: SORGE

Lab Sample ID: E802611

Date Analyzed: 3/22/88 15:52

Lab File ID: >D2215

Matrix: WATER

Number TICs found: 5 CONCENTRATION UNITS: ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	3.74	9.	
2.	25	Benzene	3.85	5.	
3.		Unknown	8.08	4.	1
4.		Unknown	35.13	80.	
5.		Unknown	43.85	15.	2
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					

QUALIFIERS(Q);
(1)-THIS COMPOUND (OR SIMILAR SPECTRA) FOUND IN LAB BLANK. 4
(2)-INTERNAL OR SURROGATE STANDARD ADDED BY LABORATORY.
(3)-THIS COMPOUND ALREADY IDENTIFIED AND REPORTED AS TARGET COMPOUND.
(4)-PROBABLE BACKGROUND DUE TO SOLVENT OR CO2.

ATTACHMENT MM6

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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E802611	03/08/88	13:35	DH	GROUND WATER - PI MW-1 PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<1.0	1.0	MG/L	03/25/88	GRM
ANTIMONY	<0.001	0.001	MG/L	03/16/88	JK
ARSENIC	<0.001	0.001	MG/L	03/17/88	JK
BERYLLIUM	<0.005	0.005	MG/L	03/16/88	FM
CADMIUM	0.007	0.005	MG/L	03/16/88	FM
CHROMIUM	<0.025	0.025	MG/L	03/16/88	FM
COPPER	<0.020	0.020	MG/L	03/16/88	FM
LEAD	0.001	0.001	MG/L	03/15/88	JK
MERCURY	<0.001	0.001	MG/L	03/10/88	SH
NICKEL	<0.040	0.040	MG/L	03/16/88	FM
SELENIUM	<0.001	0.001	MG/L	03/16/88	JK
SILVER	<0.010	0.010	MG/L	03/15/88	MS
THALLIUM	<0.001	0.001	MG/L	03/22/88	FM
ZINC	<0.050	0.050	MG/L	03/16/88	FM

UG/L = PPB MG/L= PPM
MDL = METHOD DETECTION LIMIT

NJDEP CERTIFICATION 12129

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT MM7

ACCUTEST
LABORATORIES
2235 ROUTE 130, BLDG B • DAYTON, N.J. 08810 • (201) 329-0200

ANALYSIS REPORT FOR BASE NEUTRAL EXTRACTABLES BY GC/MS

CLIENT : J.M. SORGE
SAMPLE ID.: WATER /#E802612
DATA FILE : >D2225

METHOD : EPA 625
ANALYSIS DATE: 03/23/88
ANALYST : PB

	COMPOUND	RESULT(UG/L)	MDL(UG/L)
1)	ACENAPHTHENE	ND	11
2)	ACENAPHTHYLENE	ND	11
3)	ANTHRACENE	ND	11
4)	BENZIDENE	ND	11
5)	BENZO (A) ANTHRACENE	ND	11
6)	BENZO (A) PYRENE	ND	11
7)	BENZO (B) FLUORANTHENE	ND	11
8)	BENZO (K) FLUORANTHENE	ND	11
9)	BENZO (GHI) PERYLENE	ND	11
10)	BIS (2-CHLOROETHOXY) METHANE	ND	11
11)	BIS (2-CHLOROETHYL) ETHER	ND	11
12)	BIS (2-CHLOROISOPROPYL) ETHER	ND	11
13)	BIS (2-ETHYLHEXYL) PHTHALATE	ND	11
14)	4-BROMOPHENYL PHENYL ETHER	ND	11
15)	BUTYL BENZYL PHTHALATE	ND	11
16)	2-CHLORONAPHTHALENE	ND	11
17)	4-CHLOROPHENYL PHENYL ETHER	ND	11
18)	CHRYSENE	ND	11
19)	DIBENZO (A,H) ANTHRACENE	ND	11
20)	1,2-DICHLOROBENZENE	ND	11
21)	1,3-DICHLOROBENZENE	ND	11
22)	1,4-DICHLOROBENZENE	ND	11
23)	3,3-DICHLOROBENZIDENE	ND	11
24)	DIETHYL PHTHALATE	ND	11
25)	DIMETHYL PHTHALATE	ND	11
26)	DI-N-BUTYL PHTHALATE	ND	11
27)	2,4-DINITROTOLUENE	ND	11
28)	2,6-DINITROTOLUENE	ND	11
29)	DI-N-OCTYL PHTHALATE	ND	11
30)	1,2-DIPHENYLHYDRAZINE	ND	11
31)	FLUORANTHENE	ND	11
32)	FLUORENE	ND	11
33)	HEXACHLOROBENZENE	ND	11
34)	HEXACHLOROBUTADIENE	ND	11
35)	HEXACHLOROCYCLOPENTADIENE	ND	11
36)	HEXCHLOROETHANE	ND	11
37)	INDENO (1,2,3-CD) PYRENE	ND	11
38)	ISOPHORONE	ND	11
39)	NAPHTHALENE	ND	11
40)	NITROBENZENE	ND	11
41)	N-NITROSODIMETHYLAMINE	ND	11
42)	N-NITROSODI-N-PROPYLAMINE	ND	11
43)	N-NITROSODIPHENYLAMINE	ND	11
44)	PHENANTHRENE	ND	11
45)	PYRENE	ND	11
46)	1,2,4-TRICHLOROBENZENE	ND	11

J = BELOW METHOD DETECTION LIMIT
MDL= METHOD DETCTION LIMIT
ND = NON DETECTABLE

B=ANALYTE WAS ALSO FOUND IN METHOD BLANK INDICATING POSSIBLE/PROBABLE LAB BLANK CONTAMINATION.

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ACID EXTRACTABLE ANALYSIS REPORT

CLIENT : J.M. SORGE
SAMPLE ID : WATER/#E802612
DATA FILE : >D2225

METHOD : EPA/625
ANALYSIS DATE : 03/23/88
ANALYST : WU

	COMPOUND	RESULT(UG/L)	MDL(UG/L)
1)	4-CHLORO-3-METHYL PHENOL	ND	11
2)	2-CHLOROPHENOL	ND	11
3)	2,4-DICHLOROPHENOL	ND	11
4)	2,4-DIMETHYLPHENOL	ND	11
5)	2,4-DINITROPHENOL	ND	55
6)	2-METHYL-4,6-DINITROPHENOL	ND	55
7)	2-NITROPHENOL	ND	11
8)	4-NITROPHENOL	ND	11
9)	PENTACHLOROPHENOL	ND	11
10)	PHENOL	ND	11
11)	2,4,6-TRICHLOROPHENOL	ND	11

J =BELOW METHOD DETECTION LIMIT
MDL=METHOD DETECTION LIMIT
ND =NON DETECTABLE

B=ANALYTE WAS ALSO FOUND IN METHOD BLANK INDICATING POSSIBLE/PROBABLE LAB BLANK CONTAMINATION.

ATTACHMENT MMq

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1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: SORGE

Lab Sample ID: E802612

Date Analyzed: 3/23/88 12:42

Lab File ID: >D2225

Matrix: WATER

Number TICs found: 12 CONCENTRATION UNITS: ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	563804	2-Butanone, 3-methyl- (8CI9C	3.75	7.	1
2.	25	Benzene	3.86	5.	
3.		Unknown	7.73	1.	
4.		Unknown	8.12	7.	1
5.	17059482	1H-Indene, 2,3-dihydro-1,6-d	16.81	1.	
6.	54340873	1H-Indene, 2,3-dihydro-1,4,7	18.71	1.	
7.	2471832	1H-Indene, 1-ethylidene- (9C	19.21	1.	
8.	475387	1,4-Naphthalenedione, 5,8-di	19.96	1.	
9.	575417	Naphthalene, 1,3-dimethyl- (	21.18	1.	
10.		Unknown	25.02	1.	
11.		Unknown	26.10	2.	
12.	438	Perylene d-12	43.87	7.	2
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					

QUALIFIERS(Q);
(1)-THIS COMPOUND (OR SIMILAR SPECTRA) FOUND IN LAB BLANK.
(2)-INTERNAL OR SURROGATE STANDARD ADDED BY LABORATORY.
(3)-THIS COMPOUND ALREADY IDENTIFIED AND REPORTED AS TARGET COMPOUND.
(4)-PROBABLE BACKGROUND DUE TO SOLVENT OR CO2.

8

ATTACHMENT MM10

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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E802612	03/08/88	13:00	DH	GROUND WATER - PI-MW-2 PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<1.0	1.0	MG/L	03/29/88	G/D
ANTIMONY	0.001	0.001	MG/L	03/16/88	JK
ARSENIC	<0.001	0.001	MG/L	03/17/88	JK
BERYLLIUM	<0.005	0.005	MG/L	03/16/88	FM
CADMIUM	0.008	0.005	MG/L	03/16/88	FM
CHROMIUM	<0.025	0.025	MG/L	03/16/88	FM
COPPER	<0.020	0.020	MG/L	03/16/88	FM
LEAD	<0.001	0.001	MG/L	03/15/88	JK
MERCURY	<0.001	0.001	MG/L	03/10/88	SH
NICKEL	<0.040	0.040	MG/L	03/16/88	FM
SELENIUM	<0.001	0.001	MG/L	03/16/88	JK
SILVER	<0.010	0.010	MG/L	03/15/88	MS
THALLIUM	<0.001	0.001	MG/L	03/22/88	FM
ZINC	<0.050	0.050	MG/L	03/16/88	FM

UG/L = PPB MG/L= PPM
MDL = METHOD DETECTION LIMIT

NJDEP CERTIFICATION 12129

VINCENT J. PUGLIESE
VICE-PRESIDENT

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ANALYSIS REPORT FOR BASE NEUTRAL EXTRACTABLES BY GC/MS

CLIENT : J.M. SORGE
SAMPLE ID.: WATER/#E802613
DATA FILE : >D2226

METHOD : EPA 625
ANALYSIS DATE: 03/23/88
ANALYST : WU

	COMPOUND	RESULT(UG/L)	MDL(UG/L)
1)	ACENAPHTHENE	ND	10
2)	ACENAPHTHYLENE	ND	10
3)	ANTHRACENE	ND	10
4)	BENZIDENE	ND	10
5)	BENZO (A) ANTHRACENE	ND	10
6)	BENZO (A) PYRENE	ND	10
7)	BENZO (B) FLUORANTHENE	ND	10
8)	BENZO (K) FLUORANTHENE	ND	10
9)	BENZO (GHI) PERYLENE	ND	10
10)	BIS (2-CHLOROETHOXY) METHANE	ND	10
11)	BIS (2-CHLOROETHYL) ETHER	ND	10
12)	BIS (2-CHLOROISOPROPYL) ETHER	ND	10
13)	BIS (2-ETHYLHEXYL) PHTHALATE	ND	10
14)	4-BROMOPHENYL PHENYL ETHER	ND	10
15)	BUTYL BENZYL PHTHALATE	ND	10
16)	2-CHLORONAPHTHALENE	ND	10
17)	4-CHLOROPHENYL PHENYL ETHER	ND	10
18)	CHRYSENE	ND	10
19)	DIBENZO (A,H) ANTHRACENE	ND	10
20)	1,2-DICHLOROBENZENE	ND	10
21)	1,3-DICHLOROBENZENE	ND	10
22)	1,4-DICHLOROBENZENE	ND	10
23)	3,3-DICHLOROBENZIDENE	ND	10
24)	DIETHYL PHTHALATE	ND	10
25)	DIMETHYL PHTHALATE	ND	10
26)	DI-N-BUTYL PHTHALATE	ND	10
27)	2,4-DINITROTOLUENE	ND	10
28)	2,6-DINITROTOLUENE	ND	10
29)	DI-N-OCTYL PHTHALATE	ND	10
30)	1,2-DIPHENYLHYDRAZINE	ND	10
31)	FLUORANTHENE	ND	10
32)	FLUORENE	ND	10
33)	HEXACHLOROBENZENE	ND	10
34)	HEXACHLOROBUTADIENE	ND	10
35)	HEXACHLOROCYCLOPENTADIENE	ND	10
36)	HEXCHLOROETHANE	ND	10
37)	INDENO (1,2,3-CD) PYRENE	ND	10
38)	ISOPHORONE	ND	10
39)	NAPHTHALENE	ND	10
40)	NITROBENZENE	ND	10
41)	N-NITROSODIMETHYLAMINE	ND	10
42)	N-NITROSODI-N-PROPYLAMINE	ND	10
43)	N-NITROSODIPHENYLAMINE	ND	10
44)	PHENANTHRENE	ND	10
45)	PYRENE	ND	10
46)	1,2,4-TRICHLOROBENZENE	ND	10

J = BELOW METHOD DETECTION LIMIT
MDL= METHOD DETCTION LIMIT
ND = NON DETECTABLE

B=ANALYTE WAS ALSO FOUND IN METHOD BLANK INDICATING POSSIBLE/PROBABLE LAB BLANK CONTAMINATION.

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LABORATORIES
2235 ROUTE 130, BLDG B • DAYTON, N.J. 08810 • (201) 329-0200

ACID EXTRACTABLE ANALYSIS REPORT

CLIENT : J.M. SORGE
SAMPLE ID : WATER #E802613
DATA FILE : >D2226

METHOD : EPA/625
ANALYSIS DATE : 03/23/88
ANALYST : WU

	COMPOUND	RESULT(UG/L)	MDL(UG/L)
1)	4-CHLORO-3-METHYL PHENOL	ND	10
2)	2-CHLOROPHENOL	ND	10
3)	2,4-DICHLOROPHENOL	ND	10
4)	2,4-DIMETHYLPHENOL	ND	10
5)	2,4-DINITROPHENOL	ND	50
6)	2-METHYL-4,6-DINITROPHENOL	ND	50
7)	2-NITROPHENOL	ND	10
8)	4-NITROPHENOL	ND	10
9)	PENTACHLOROPHENOL	ND	10
10)	PHENOL	ND	10
11)	2,4,6-TRICHLOROPHENOL	ND	10

J =BELOW METHOD DETECTION LIMIT
MDL=METHOD DETECTION LIMIT
ND =NON DETECTABLE

B=ANALYTE WAS ALSO FOUND IN METHOD BLANK INDICATING POSSIBLE/PROBABLE LAB BLANK CONTAMINATION.

ATTACHMENT MM13

ACCUTEST LABORATORIES

SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: SORGE

Lab Sample ID: E802613

Date Analyzed: 3/23/88 13:58

Lab File ID: >D2226

Matrix: WATER

Number TICs found: 4 CONCENTRATION UNITS: ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	3.77	6.	
2.	71432	Benzene (ACN)(DOT)(8CI9CI)	3.88	5.	
3.		Unknown	8.11	7.	1
4.		Unknown	43.85	11.	2
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					

QUALIFIERS(Q);
(1)-THIS COMPOUND (OR SIMILAR SPECTRA) FOUND IN LAB BLANK.
(2)-INTERNAL OR SURROGATE STANDARD ADDED BY LABORATORY.
(3)-THIS COMPOUND ALREADY IDENTIFIED AND REPORTED AS TARGET COMPOUND.
(4)-PROBABLE BACKGROUND DUE TO SOLVENT OR CO2.

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ATTACHMENT MM14

ACCUTEST
LABORATORIES
2235 ROUTE 130 BLDG B • DAYTON N J 08810 • (201) 329-0200

ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E802613	03/08/88	14:00	DH	GROUND WATER - PI-MW-3 PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<1.0	1.0	MG/L	03/29/88	G/D
ANTIMONY	<0.001	0.001	MG/L	03/16/88	JK
ARSENIC	<0.001	0.001	MG/L	03/17/88	JK
BERYLLIUM	<0.005	0.005	MG/L	03/16/88	FM
CADMIUM	<0.005	0.005	MG/L	03/16/88	FM
CHROMIUM	<0.025	0.025	MG/L	03/16/88	FM
COPPER	<0.020	0.020	MG/L	03/16/88	FM
LEAD	0.003	0.001	MG/L	03/15/88	JK
MERCURY	<0.001	0.001	MG/L	03/10/88	SH
NICKEL	<0.040	0.040	MG/L	03/16/88	FM
SELENIUM	<0.001	0.001	MG/L	03/16/88	JK
SILVER	<0.010	0.010	MG/L	03/15/88	MS
THALLIUM	<0.001	0.001	MG/L	03/22/88	FM
ZINC	<0.050	0.050	MG/L	03/16/88	FM

UG/L = PPB MG/L= PPM
MDL = METHOD DETECTION LIMIT

NJDEP CERTIFICATION 12129

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT MM15

ACCUTEST
LABORATORIES
2235 ROUTE 130, BLDG B • DAYTON, N.J. 08810 • (201) 329-0200

ANALYSIS REPORT FOR BASE NEUTRAL EXTRACTABLES BY GC/MS

CLIENT : J.M. SORGE
SAMPLE ID.: WATER /#E802614
DATA FILE : >D2227

METHOD : EPA 625
ANALYSIS DATE: 03/23/88
ANALYST : PB

	COMPOUND	RESULT(UG/L)	MDL(UG/L)
1)	ACENAPHTHENE	ND	11
2)	ACENAPHTHYLENE	ND	11
3)	ANTHRACENE	ND	11
4)	BENZIDENE	ND	11
5)	BENZO (A) ANTHRACENE	ND	11
6)	BENZO (A) PYRENE	ND	11
7)	BENZO (B) FLUORANTHENE	ND	11
8)	BENZO (K) FLUORANTHENE	ND	11
9)	BENZO (GHI) PERYLENE	ND	11
10)	BIS (2-CHLOROETHOXY) METHANE	ND	11
11)	BIS (2-CHLOROETHYL) ETHER	ND	11
12)	BIS (2-CHLOROISOPROPYL) ETHER	ND	11
13)	BIS (2-ETHYLHEXYL) PHTHALATE	ND	11
14)	4-BROMOPHENYL PHENYL ETHER	ND	11
15)	BUTYL BENZYL PHTHALATE	ND	11
16)	2-CHLORONAPHTHALENE	ND	11
17)	4-CHLOROPHENYL PHENYL ETHER	ND	11
18)	CHRYSENE	ND	11
19)	DIBENZO (A,H) ANTHRACENE	ND	11
20)	1,2-DICHLOROBENZENE	ND	11
21)	1,3-DICHLOROBENZENE	ND	11
22)	1,4-DICHLOROBENZENE	ND	11
23)	3,3-DICHLOROBENZIDENE	ND	11
24)	DIETHYL PHTHALATE	ND	11
25)	DIMETHYL PHTHALATE	ND	11
26)	DI-N-BUTYL PHTHALATE	ND	11
27)	2,4-DINITROTOLUENE	ND	11
28)	2,6-DINITROTOLUENE	ND	11
29)	DI-N-OCTYL PHTHALATE	ND	11
30)	1,2-DIPHENYLHYDRAZINE	ND	11
31)	FLUORANTHENE	ND	11
32)	FLUORENE	ND	11
33)	HEXACHLOROBENZENE	ND	11
34)	HEXACHLOROBUTADIENE	ND	11
35)	HEXACHLOROCYCLOPENTADIENE	ND	11
36)	HEXCHLOROETHANE	ND	11
37)	INDENO (1,2,3-CD) PYRENE	ND	11
38)	ISOPHORONE	ND	11
39)	NAPHTHALENE	ND	11
40)	NITROBENZENE	ND	11
41)	N-NITROSODIMETHYLAMINE	ND	11
42)	N-NITROSODI-N-PROPYLAMINE	ND	11
43)	N-NITROSODIPHENYLAMINE	ND	11
44)	PHENANTHRENE	ND	11
45)	PYRENE	ND	11
46)	1,2,4-TRICHLOROBENZENE	ND	11

J = BELOW METHOD DETECTION LIMIT
MDL= METHOD DETCTION LIMIT
ND = NON DETECTABLE

B=ANALYTE WAS ALSO FOUND IN METHOD BLANK INDICATING POSSIBLE/PROBABLE LAB BLANK CONTAMINATION.

ATTACHMENT MM16

ACCUTEST
LABORATORIES
2235 ROUTE 130, BLDG B • DAYTON, N.J. 08810 • (201) 329-0200

ACID EXTRACTABLE ANALYSIS REPORT

CLIENT : J.M. SORGE
SAMPLE ID : WATER/#E802614
DATA FILE : >D2227

METHOD : EPA/625
ANALYSIS DATE : 03/23/88
ANALYST : WU

	COMPOUND	RESULT(UG/L)	MDL(UG/L)
1)	4-CHLORO-3-METHYL PHENOL	ND	11
2)	2-CHLOROPHENOL	ND	11
3)	2,4-DICHLOROPHENOL	ND	11
4)	2,4-DIMETHYLPHENOL	ND	11
5)	2,4-DINITROPHENOL	ND	55
6)	2-METHYL-4,6-DINITROPHENOL	ND	55
7)	2-NITROPHENOL	ND	11
8)	4-NITROPHENOL	ND	11
9)	PENTACHLOROPHENOL	ND	11
10)	PHENOL	ND	11
11)	2,4,6-TRICHLOROPHENOL	ND	11

J =BELOW METHOD DETECTION LIMIT
MDL=METHOD DETECTION LIMIT
ND =NON DETECTABLE

B=ANALYTE WAS ALSO FOUND IN METHOD BLANK INDICATING POSSIBLE/PROBABLE LAB BLANK CONTAMINATION.

ATTACHMENT MM4

ACCUTEST LABORATORIES

SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: SORGE

Lab Sample ID: E802614

Date Analyzed: 3/23/88 15:13

Lab File ID: >D2227

Matrix: WATER

Number TICs found: 4 CONCENTRATION UNITS: ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	563804	2-Butanone, 3-methyl- (8CI9C	3.80	6.	1
2.	542858	Ethane, isothiocyanato- (9CI	11.80	37.	
3.	1801725	Urea, N,N'-di-2-propenyl- (9	25.36	3.	
4.		Unknown	43.93	47.	2
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					

QUALIFIERS(Q);
(1)-THIS COMPOUND (OR SIMILAR SPECTRA) FOUND IN LAB BLANK.
(2)-INTERNAL OR SURROGATE STANDARD ADDED BY LABORATORY.
(3)-THIS COMPOUND ALREADY IDENTIFIED AND REPORTED AS TARGET COMPOUND.
(4)-PROBABLE BACKGROUND DUE TO SOLVENT OR CO2.

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ATTACHMENT MM16

ACCUTEST
LABORATORIES
2235 ROUTE 130, BLDG B • DAYTON, N.J. 08810 • (201) 329-0200

ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E802614	03/08/88	16:20	DH	GROUND WATER - PI-MW-5 PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	2.0	1.0	MG/L	03/29/88	G/D
ANTIMONY	0.001	0.001	MG/L	03/16/88	JK
ARSENIC	<0.001	0.001	MG/L	03/17/88	JK
BERYLLIUM	<0.005	0.005	MG/L	03/16/88	FM
CADMIUM	<0.005	0.005	MG/L	03/16/88	FM
CHROMIUM	<0.025	0.025	MG/L	03/16/88	FM
COPPER	<0.020	0.020	MG/L	03/16/88	FM
LEAD	0.003	0.001	MG/L	03/15/88	JK
MERCURY	<0.001	0.001	MG/L	03/10/88	SH
NICKEL	<0.040	0.040	MG/L	03/16/88	FM
SELENIUM	<0.001	0.001	MG/L	03/16/88	JK
SILVER	<0.010	0.010	MG/L	03/15/88	MS
THALLIUM	<0.001	0.001	MG/L	03/22/88	FM
ZINC	<0.050	0.050	MG/L	03/16/88	FM

UG/L = PPB MG/L= PPM
MDL = METHOD DETECTION LIMIT

NJDEP CERTIFICATION 12129

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT MM19

ACCUTEST
LABORATORIES
2225 ROUTE 130 BLDG B • DAYTON N J 08810 • (201) 329-0200

ANALYSIS REPORT FOR BASE NEUTRAL EXTRACTABLES BY GC/MS

CLIENT : J.M. SORGE
SAMPLE ID.: WATER/#E802615
DATA FILE : >D2228

METHOD : EPA 625
ANALYSIS DATE: 03/23/88
ANALYST : WU

	COMPOUND	RESULT(UG/L)	MDL(UG/L)
1)	ACENAPHTHENE	ND	10
2)	ACENAPHTHYLENE	ND	10
3)	ANTHRACENE	ND	10
4)	BENZIDENE	ND	10
5)	BENZO (A) ANTHRACENE	ND	10
6)	BENZO (A) PYRENE	ND	10
7)	BENZO (B) FLUORANTHENE	ND	10
8)	BENZO (K) FLUORANTHENE	ND	10
9)	BENZO (GHI) PERYLENE	ND	10
10)	BIS (2-CHLOROETHOXY) METHANE	ND	10
11)	BIS (2-CHLOROETHYL) ETHER	ND	10
12)	BIS (2-CHLOROISOPROPYL) ETHER	ND	10
13)	BIS (2-ETHYLHEXYL) PHTHALATE	ND	10
14)	4-BROMOPHENYL PHENYL ETHER	ND	10
15)	BUTYL BENZYL PHTHALATE	ND	10
16)	2-CHLORONAPHTHALENE	ND	10
17)	4-CHLOROPHENYL PHENYL ETHER	ND	10
18)	CHRYSENE	ND	10
19)	DIBENZO (A,H) ANTHRACENE	ND	10
20)	1,2-DICHLOROBENZENE	ND	10
21)	1,3-DICHLOROBENZENE	ND	10
22)	1,4-DICHLOROBENZENE	ND	10
23)	3,3-DICHLOROBENZIDENE	ND	10
24)	DIETHYL PHTHALATE	ND	10
25)	DIMETHYL PHTHALATE	ND	10
26)	DI-N-BUTYL PHTHALATE	ND	10
27)	2,4-DINITROTOLUENE	ND	10
28)	2,6-DINITROTOLUENE	ND	10
29)	DI-N-OCTYL PHTHALATE	ND	10
30)	1,2-DIPHENYLHYDRAZINE	ND	10
31)	FLUORANTHENE	ND	10
32)	FLUORENE	ND	10
33)	HEXACHLOROBENZENE	ND	10
34)	HEXACHLOROBUTADIENE	ND	10
35)	HEXACHLOROCYCLOPENTADIENE	ND	10
36)	HEXCHLOROETHANE	ND	10
37)	INDENO (1,2,3-CD) PYRENE	ND	10
38)	ISOPHORONE	ND	10
39)	NAPHTHALENE	ND	10
40)	NITROBENZENE	ND	10
41)	N-NITROSODIMETHYLAMINE	ND	10
42)	N-NITROSODI-N-PROPYLAMINE	ND	10
43)	N-NITROSODIPHENYLAMINE	ND	10
44)	PHENANTHRENE	ND	10
45)	PYRENE	ND	10
46)	1,2,4-TRICHLOROBENZENE	ND	10

J = BELOW METHOD DETECTION LIMIT
MDL= METHOD DETCTION LIMIT
ND = NON DETECTABLE

B=ANALYTE WAS ALSO FOUND IN METHOD BLANK INDICATING POSSIBLE/PROBABLE LAB BLANK CONTAMINATION.

ATTACHMENT MM10

ACCUTEST
LABORATORIES
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

ACID EXTRACTABLE ANALYSIS REPORT

CLIENT : J.M. SORGE
SAMPLE ID : WATER #E802615
DATA FILE : >D2228

METHOD : EPA/625
ANALYSIS DATE : 03/23/88
ANALYST : WU

	COMPOUND	RESULT(UG/L)	MDL(UG/L)
1)	4-CHLORO-3-METHYL PHENOL	ND	10
2)	2-CHLOROPHENOL	ND	10
3)	2,4-DICHLOROPHENOL	ND	10
4)	2,4-DIMETHYLPHENOL	ND	10
5)	2,4-DINITROPHENOL	ND	50
6)	2-METHYL-4,6-DINITROPHENOL	ND	50
7)	2-NITROPHENOL	ND	10
8)	4-NITROPHENOL	ND	10
9)	PENTACHLOROPHENOL	ND	10
10)	PHENOL	ND	10
11)	2,4,6-TRICHLOROPHENOL	ND	10

J =BELOW METHOD DETECTION LIMIT
MDL=METHOD DETECTION LIMIT
ND =NON DETECTABLE

B=ANALYTE WAS ALSO FOUND IN METHOD BLANK INDICATING POSSIBLE/PROBABLE LAB BLANK CONTAMINATION.

ATTACHMENT MM-1

ACCUTEST LABORATORIES
2235 ROUTE 130, BLDG B • DAYTON, N.J. 08810 • 201 329-0200

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: SORGE

Lab Sample ID: E802615

Date Analyzed: 3/23/88 16:29

Lab File ID: >D2228

Matrix: WATER

Number TICs found: 13 CONCENTRATION UNITS: ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	563804	2-Butanone, 3-methyl- (8CI9C	3.74	9.	1
2.	25	Benzene	3.84	4.	
3.		Unknown	6.89	3.	
4.		Unknown	7.72	3.	
5.		Unknown	8.11	5.	1
6.	4076362	1H-Tetrazole, 5-methyl- (8CI	10.05	4.	
7.	18060770	2-Butenoic acid, 1-methyleth	11.77	34.	
8.		Unknown	14.57	1.	
9.		Unknown	23.15	1.	
10.	23043881	1H-Purine-2,6-dione, 7-ethyl	23.43	1.	
11.		Unknown	25.01	1.	
12.	122349	1,3,5-Triazine-2,4-diamine,	26.09	1.	
13.		Unknown	43.86	7.	2
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					

QUALIFIERS(Q);
(1)-THIS COMPOUND (OR SIMILAR SPECTRA) FOUND IN LAB BLANK.
(2)-INTERNAL OR SURROGATE STANDARD ADDED BY LABORATORY.
(3)-THIS COMPOUND ALREADY IDENTIFIED AND REPORTED AS TARGET COMPOUND.
(4)-PROBABLE BACKGROUND DUE TO SOLVENT OR CO2.

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ATTACHMENT MM22

ACCUTEST LABORATORIES
2235 ROUTE 130 BLDG B • DAYTON, N.J. 08810 • (201) 329-0200

ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E802615	03/08/88	14:15	DH	GROUND WATER - PI-MW-6 PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<1.0	1.0	MG/L	03/29/88	G/D
ANTIMONY	<0.001	0.001	MG/L	03/16/88	JK
ARSENIC	0.002	0.001	MG/L	03/17/88	JK
BERYLLIUM	<0.005	0.005	MG/L	03/16/88	FM
CADMIUM	<0.005	0.005	MG/L	03/16/88	FM
CHROMIUM	0.050	0.025	MG/L	03/16/88	FM
COPPER	<0.020	0.020	MG/L	03/16/88	FM
LEAD	0.003	0.001	MG/L	03/15/88	JK
MERCURY	<0.001	0.001	MG/L	03/10/88	SH
NICKEL	<0.040	0.040	MG/L	03/16/88	FM
SELENIUM	<0.001	0.001	MG/L	03/16/88	JK
SILVER	<0.010	0.010	MG/L	03/15/88	MS
THALLIUM	<0.001	0.001	MG/L	03/22/88	FM
ZINC	0.060	0.050	MG/L	03/16/88	FM

UG/L = PPB MG/L= PPM
MDL = METHOD DETECTION LIMIT

NJDEP CERTIFICATION 12129

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT MM23

ACCUTEST
LABORATORIES
2235 ROUTE 130, BLDG B • DAYTON, N.J. 08810 • (201) 329-0200

ANALYSIS REPORT FOR BASE NEUTRAL EXTRACTABLES BY GC/MS

CLIENT : J.M. SORGE
SAMPLE ID.: WATER /#E802616
DATA FILE : >D2229

METHOD : EPA 625
ANALYSIS DATE: 03/23/88
ANALYST : PB

	COMPOUND	RESULT(UG/L)	MDL(UG/L)
1)	ACENAPHTHENE	ND	11
2)	ACENAPHTHYLENE	ND	11
3)	ANTHRACENE	ND	11
4)	BENZIDENE	ND	11
5)	BENZO (A) ANTHRACENE	ND	11
6)	BENZO (A) PYRENE	ND	11
7)	BENZO (B) FLUORANTHENE	ND	11
8)	BENZO (K) FLUORANTHENE	ND	11
9)	BENZO (GHI) PERYLENE	ND	11
10)	BIS (2-CHLOROETHOXY) METHANE	ND	11
11)	BIS (2-CHLOROETHYL) ETHER	ND	11
12)	BIS (2-CHLOROISOPROPYL) ETHER	ND	11
13)	BIS (2-ETHYLHEXYL) PHTHALATE	620 B	11
14)	4-BROMOPHENYL PHENYL ETHER	ND	11
15)	BUTYL BENZYL PHTHALATE	18	11
16)	2-CHLORONAPHTHALENE	ND	11
17)	4-CHLOROPHENYL PHENYL ETHER	ND	11
18)	CHRYSENE	ND	11
19)	DIBENZO (A,H) ANTHRACENE	ND	11
20)	1,2-DICHLOROBENZENE	ND	11
21)	1,3-DICHLOROBENZENE	ND	11
22)	1,4-DICHLOROBENZENE	ND	11
23)	3,3-DICHLOROBENZIDENE	ND	11
24)	DIETHYL PHTHALATE	ND	11
25)	DIMETHYL PHTHALATE	ND	11
26)	DI-N-BUTYL PHTHALATE	ND	11
27)	2,4-DINITROTOLUENE	ND	11
28)	2,6-DINITROTOLUENE	ND	11
29)	DI-N-OCTYL PHTHALATE	27	11
30)	1,2-DIPHENYLHYDRAZINE	ND	11
31)	FLUORANTHENE	ND	11
32)	FLUORENE	ND	11
33)	HEXACHLOROBENZENE	ND	11
34)	HEXACHLOROBUTADIENE	ND	11
35)	HEXACHLOROCYCLOPENTADIENE	ND	11
36)	HEXCHLOROETHANE	ND	11
37)	INDENO (1,2,3-CD) PYRENE	ND	11
38)	ISOPHORONE	ND	11
39)	NAPHTHALENE	ND	11
40)	NITROBENZENE	ND	11
41)	N-NITROSODIMETHYLAMINE	ND	11
42)	N-NITROSODI-N-PROPYLAMINE	ND	11
43)	N-NITROSODIPHENYLAMINE	ND	11
44)	PHENANTHRENE	ND	11
45)	PYRENE	ND	11
46)	1,2,4-TRICHLOROBENZENE	ND	11

J = BELOW METHOD DETECTION LIMIT
MDL= METHOD DETCTION LIMIT
ND = NON DETECTABLE

B=ANALYTE WAS ALSO FOUND IN METHOD BLANK INDICATING POSSIBLE/PROBABLE LAB BLANK CONTAMINATION.

ATTACHMENT MM24

ACCUTEST
LABORATORIES
2235 ROUTE 130 BLDG B • DAYTON N J 08810 • (201) 329-0200

ACID EXTRACTABLE ANALYSIS REPORT

CLIENT : J.M. SORGE
SAMPLE ID : WATER/#E802616
DATA FILE : >D2229

METHOD : EPA/625
ANALYSIS DATE : 03/23/88
ANALYST : WU

	COMPOUND	RESULT(UG/L)	MDL(UG/L)
1)	4-CHLORO-3-METHYL PHENOL	ND	11
2)	2-CHLOROPHENOL	ND	11
3)	2,4-DICHLOROPHENOL	ND	11
4)	2,4-DIMETHYLPHENOL	ND	11
5)	2,4-DINITROPHENOL	ND	55
6)	2-METHYL-4,6-DINITROPHENOL	ND	55
7)	2-NITROPHENOL	ND	11
8)	4-NITROPHENOL	ND	11
9)	PENTACHLOROPHENOL	ND	11
10)	PHENOL	ND	11
11)	2,4,6-TRICHLOROPHENOL	ND	11

J =BELOW METHOD DETECTION LIMIT
MDL=METHOD DETECTION LIMIT
ND =NON DETECTABLE

B=ANALYTE WAS ALSO FOUND IN METHOD BLANK INDICATING POSSIBLE/PROBABLE LAB BLANK CONTAMINATION.

ATTACHMENT MM25

ACCUTEST LABORATORIES

2235 ROUTE 130, BLDG B • DAYTON, N.J. 08810 • (201) 329-0200

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: SORGE

Lab Sample ID: E802616

Date Analyzed: 3/23/88 17:44

Lab File ID: >D2229

Matrix: WATER

Number TICs found: 16 CONCENTRATION UNITS: ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	563804	2-Butanone, 3-methyl- (8CI9C	3.74	8.	1
2.	56728100	1-Hexene, 3,4,5-trimethyl- (	23.87	28.	
3.	6624799	1-Dotriacontanol (8CI9CI)	28.10	5.	
4.	117828	1,2-Benzenedicarboxylic acid	32.51	3.	
5.	146509	1,2-Benzenedicarboxylic acid	32.69	19.	
6.	146509	1,2-Benzenedicarboxylic acid	32.76	27.	
7.	146509	1,2-Benzenedicarboxylic acid	32.91	13.	
8.	146509	1,2-Benzenedicarboxylic acid	33.01	27.	
9.		Unknown	33.12	49.	
10.	146509	1,2-Benzenedicarboxylic acid	33.34	34.	
11.	146509	1,2-Benzenedicarboxylic acid	33.44	42.	
12.		Unknown	33.77	27.	
13.	146509	1,2-Benzenedicarboxylic acid	34.38	3.	
14.		Unknown	34.81	4.	
15.		Unknown	42.96	4.	
16.		Unknown	43.89	10.	2
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					

QUALIFIERS(Q);

(1)-THIS COMPOUND (OR SIMILAR SPECTRA) FOUND IN LAB BLANK.

(2)-INTERNAL OR SURROGATE STANDARD ADDED BY LABORATORY.

(3)-THIS COMPOUND ALREADY IDENTIFIED AND REPORTED AS TARGET COMPOUND.

(4)-PROBABLE BACKGROUND DUE TO SOLVENT OR CO2.

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ATTACHMENT MMx

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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E802616	03/08/88	14:40	DH	WATER - PI-MW-FB PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<1.0	1.0	MG/L	03/29/88	G/D
ANTIMONY	<0.001	0.001	MG/L	03/16/88	JK
ARSENIC	<0.001	0.001	MG/L	03/17/88	JK
BERYLLIUM	<0.005	0.005	MG/L	03/16/88	FM
CADMIUM	<0.005	0.005	MG/L	03/16/88	FM
CHROMIUM	<0.025	0.025	MG/L	03/16/88	FM
COPPER	<0.020	0.020	MG/L	03/16/88	FM
LEAD	0.001	0.001	MG/L	03/15/88	JK
MERCURY	<0.001	0.001	MG/L	03/10/88	SH
NICKEL	<0.040	0.040	MG/L	03/16/88	FM
SELENIUM	<0.001	0.001	MG/L	03/16/88	JK
SILVER	<0.010	0.010	MG/L	03/15/88	MS
THALLIUM	<0.001	0.001	MG/L	03/22/88	FM
ZINC	<0.050	0.050	MG/L	03/16/88	FM

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
(DRY WEIGHT BASIS)

NJDEP CERTIFICATION 12129

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT MM27

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ANALYSIS REPORT FOR BASE NEUTRAL EXTRACTABLES BY GC/MS

CLIENT : J.M. SORGE
SAMPLE ID.: WATER/#E802617
DATA FILE : >D2230

METHOD : EPA 625
ANALYSIS DATE: 03/23/88
ANALYST : WU

	COMPOUND	RESULT(UG/L)	MDL(UG/L)
1)	ACENAPHTHENE	ND	10
2)	ACENAPHTHYLENE	ND	10
3)	ANTHRACENE	ND	10
4)	BENZIDENE	ND	10
3)	BENZO (A) ANTHRACENE	ND	10
6)	BENZO (A) PYRENE	ND	10
7)	BENZO (B) FLUORANTHENE	ND	10
8)	BENZO (K) FLUORANTHENE	ND	10
9)	BENZO (GHI) PERYLENE	ND	10
10)	BIS (2-CHLOROETHOXY) METHANE	ND	10
11)	BIS (2-CHLOROETHYL) ETHER	ND	10
12)	BIS (2-CHLOROISOPROPYL) ETHER	ND	10
13)	BIS (2-ETHYLHEXYL) PHTHALATE	ND	10
14)	4-BROMOPHENYL PHENYL ETHER	ND	10
15)	BUTYL BENZYL PHTHALATE	ND	10
16)	2-CHLORONAPHTHALENE	ND	10
17)	4-CHLOROPHENYL PHENYL ETHER	ND	10
18)	CHRYSENE	ND	10
19)	DIBENZO (A,H) ANTHRACENE	ND	10
20)	1,2-DICHLOROBENZENE	ND	10
21)	1,3-DICHLOROBENZENE	ND	10
22)	1,4-DICHLOROBENZENE	ND	10
23)	3,3-DICHLOROBENZIDENE	ND	10
24)	DIETHYL PHTHALATE	ND	10
25)	DIMETHYL PHTHALATE	ND	10
26)	DI-N-BUTYL PHTHALATE	ND	10
27)	2,4-DINITROTOLUENE	ND	10
28)	2,6-DINITROTOLUENE	ND	10
29)	DI-N-OCTYL PHTHALATE	ND	10
30)	1,2-DIPHENYLHYDRAZINE	ND	10
31)	FLUORANTHENE	ND	10
32)	FLUORENE	ND	10
33)	HEXACHLOROBENZENE	ND	10
34)	HEXACHLOROBUTADIENE	ND	10
35)	HEXACHLOROCYCLOPENTADIENE	ND	10
36)	HEXCHLOROETHANE	ND	10
37)	INDENO (1,2,3-CD) PYRENE	ND	10
38)	ISOPHORONE	ND	10
39)	NAPHTHALENE	ND	10
40)	NITROBENZENE	ND	10
41)	N-NITROSODIMETHYLAMINE	ND	10
42)	N-NITROSODI-N-PROPYLAMINE	ND	10
43)	N-NITROSODIPHENYLAMINE	ND	10
44)	PHENANTHRENE	ND	10
45)	PYRENE	ND	10
46)	1,2,4-TRICHLOROBENZENE	ND	10

J = BELOW METHOD DETECTION LIMIT
MDL= METHOD DETCTION LIMIT
ND = NON DETECTABLE

B=ANALYTE WAS ALSO FOUND IN METHOD BLANK INDICATING POSSIBLE/PROBABLE LAB BLANK CONTAMINATION.

ATTACHMENT MM28

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ACID EXTRACTABLE ANALYSIS REPORT

CLIENT : J.M. SORGE
SAMPLE ID : WATER #E802617
DATA FILE : >D2230

METHOD : EPA/625
ANALYSIS DATE : 03/23/88
ANALYST : WU

	COMPOUND	RESULT(UG/L)	MDL(UG/L)
1)	4-CHLORO-3-METHYL PHENOL	ND	10
2)	2-CHLOROPHENOL	ND	10
3)	2,4-DICHLOROPHENOL	ND	10
4)	2,4-DIMETHYLPHENOL	ND	10
5)	2,4-DINITROPHENOL	ND	50
6)	2-METHYL-4,6-DINITROPHENOL	ND	50
7)	2-NITROPHENOL	ND	10
8)	4-NITROPHENOL	ND	10
9)	PENTACHLOROPHENOL	ND	10
10)	PHENOL	ND	10
11)	2,4,6-TRICHLOROPHENOL	ND	10

J =BELOW METHOD DETECTION LIMIT
MDL=METHOD DETECTION LIMIT
ND =NON DETECTABLE

B=ANALYTE WAS ALSO FOUND IN METHOD BLANK INDICATING POSSIBLE/PROBABLE LAB BLANK CONTAMINATION.

ATTACHMENT MM29

ACCUTEST LABORATORIES
2235 ROUTE 130, BLDG B • DAYTON, N.J. 08810 • (201) 329-0200

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: SORGE

Lab Sample ID: E802617

Date Analyzed: 3/23/88 18:59

Lab File ID: >D2230

Matrix: WATER

Number TICs found: 4 CONCENTRATION UNITS: ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	3.76	4.	
2.	71432	Benzene (ACN)(DOT)(8CI9CI)	3.86	5.	
3.		Unknown	8.13	4.	1
4.		Unknown	43.86	7.	2
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25.					

QUALIFIERS(Q);
(1)-THIS COMPOUND (OR SIMILAR SPECTRA) FOUND IN LAB BLANK.
(2)-INTERNAL OR SURROGATE STANDARD ADDED BY LABORATORY.
(3)-THIS COMPOUND ALREADY IDENTIFIED AND REPORTED AS TARGET COMPOUND.
(4)-PROBABLE BACKGROUND DUE TO SOLVENT OR CO2.

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ATTACHMENT MM30

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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E802617	03/08/88		DH	WATER - PI-MW-TP, TRIP BLANK PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<1.0	1.0	MG/L	03/29/88	G/D
ANTIMONY	<0.001	0.001	MG/L	03/16/88	JK
ARSENIC	0.001	0.001	MG/L	03/17/88	JK
BERYLLIUM	<0.005	0.005	MG/L	03/16/88	FM
CADMIUM	<0.005	0.005	MG/L	03/16/88	FM
CHROMIUM	<0.025	0.025	MG/L	03/16/88	FM
COPPER	<0.020	0.020	MG/L	03/16/88	FM
LEAD	<0.001	0.001	MG/L	03/15/88	JK
MERCURY	<0.001	0.001	MG/L	03/10/88	SH
NICKEL	<0.040	0.040	MG/L	03/16/88	FM
SELENIUM	<0.001	0.001	MG/L	03/16/88	JK
SILVER	<0.010	0.010	MG/L	03/15/88	MS
THALLIUM	<0.001	0.001	MG/L	03/22/88	FM
ZINC	<0.050	0.050	MG/L	03/16/88	FM

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
(DRY WEIGHT BASIS)

NJDEP CERTIFICATION 12129

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT MM31

SAMPLING PLAN ADDENDUM RESULTS

Prepared for

ADVANCED CHEMICAL TECHNOLOGY
(PLANT INDUSTRIES)

Camden, New Jersey

ECRA Case #84011

Prepared by

J M Sorge, Inc.
3301 US Highway 22
Somerville, NJ 08876

February 1989

ATTACHMENT NN

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ATTACHMENT NN2

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2	Soil Boring Location and Above ECRA Level Map (Railroad Siding and Dumpster Area)
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ATTACHMENT NN3

LIST OF APPENDICES

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A	Laboratory Analytical Results (Sample QA/QC data included with original only)
B	Chain-of-Custody Control Forms
C	Soil Boring Logs
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E	Accutest laboratory Correspondence Regarding Contamination of Samples

ATTACHMENT NNY

1.0 INTRODUCTION

The following report describes the results of the additional site investigation conducted in accordance with requirements of the Environmental Cleanup Responsibility Act (ECRA), at the former Advanced Chemical Technology (ACT) site. The ACT site is located at River Road and State Street in Camden, New Jersey. Results of the previously completed soil and groundwater investigation were provided in the J M Sorge, Inc. (JMS) submittal dated June 14, 1988; the report also included a proposal for the additional site investigation. Additional support data, specifically the analytical results of the groundwater sampling and laboratory Quality Assurance/Quality Control (QA/QC) data for certain soil sampling analyses, were provided on July 21, 1988. The Sampling and Analysis Plan Results (JMS submittal dated June 14, 1988), and the additional support data (JMS submittal dated July 21, 1988), are collectively referred to as the Sampling Plan Addendum, unless a specific reference is required for either submittal.

The Sampling Plan Addendum was conditionally approved by the Bureau of Environmental Evaluation and Cleanup Responsibility Assessment (BEECRA) via letter dated September 26, 1988.

The additional soil investigation, as specified in the Sampling Plan Addendum with modifications required by the BEECRA, was conducted in the following areas:

Dumpster Area - Area 2;

Oil Stained Area - Area 3; and,

Background Area - Area 4.

No additional soil investigation was required in the Railroad Siding Area - Area 1. These areas are shown on Figure 1.

Groundwater sampling of all existing wells was conducted during the additional site program. The BEECRA, via correspondence dated January 11, 1989, has requested an additional groundwater investigation at the facility, specifically installation of up to two (2) additional wells. However, the required well location(s) are within the limits of proposed soil excavation. The need for an additional groundwater investigation will be evaluated following completion of the required soil remediation program since any wells installed prior to that may be damaged during the soil program. See Section 4.3 for a detailed response to the BEECRA letter of January 11, 1989. A Soil Cleanup Plan for the facility will be prepared following the BEECRA review of this report.

ATTACHMENT NN5

1.1 COMPLETED INVESTIGATION SUMMARY

Prior to JMS involvement, site investigations were completed by Stablex-Reutter, Inc., of Camden, New Jersey. The previous site investigations included an extensive soil sampling and cleanup program involving soil removal and disposal from two (2) areas (Areas 1 and 2), at the site. Details on the completed cleanup program were provided in a series of submittals prepared earlier in the ECRA Compliance Program (1984 and 1985), and very briefly summarized in the Facility Sampling Plan (JMS submittal dated November 1986).

The initial investigation conducted by JMS involved characterization of residual soils quality in the two (2) remaining areas of concern. The analytical parameters (PHC, BN+15 and metals) utilized during the JMS program were based on the PP+40 analyses previously conducted by others. Also, an investigation was conducted in a stained soil area (Area 3), identified during the JMS reconnaissance. In addition, a hydrogeologic investigation involving installation of six (6) wells was completed during the site program. The results of the initial JMS investigation were provided in June , 1988 submittal.

The initial phase of the investigation determined the nature of contamination present at the site. However, an additional phase of investigation was required to obtain complete horizontal and vertical extent of contamination in certain areas. Results of the second phase of the site investigation are detailed in this report.

The contamination identified in the railroad siding and dumpster areas was primarily surficial in extent and appeared to have been derived from oil staining associated with railroad operations and storage of industrial wastes in the dumpster. The petroleum and metals contaminants present in the stained area indicated more extensive contamination than previously assumed.

The railroad siding area (Area 1) contamination, specifically petroleum hydrocarbons, metals and base neutral compounds, was restricted to the upper 1.0 to 2.0 feet of soils. Only one soil boring exhibited slight PHC contamination at depth (to 4.0 feet). Therefore, since the horizontal and vertical extent of contamination in this area had been delineated, no further sampling was required during the Second Phase.

The contaminants identified in the dumpster storage area, (Area 2) primarily petroleum hydrocarbons and specific metals, required further investigation for complete delineation. The metals contamination was restricted primarily to the upper 6 inches of soil in the area. Moderate to high levels of PHC were exhibited in two (2) borings at depth, one of these boring was located off the ACT site. Therefore, additional sampling was required east of the fence line to determine the horizontal extent of contaminants that have migrated off the ACT property.

ATTACHMENT NN6

The contamination identified during the initial phase in the oil-stained area (Area 3) was not adequately delineated. Moderate levels of PHC, metals and base neutral compounds were indicated in all samples at depth. The metal contamination identified in this area is somewhat different than that identified in the other two (2) areas of the site, and appeared to be attributed to filling of the area rather than ACT operations. Additional sampling was conducted in the second phase to delineate the contaminated area, both horizontally and vertically.

Slightly elevated base neutral levels were detected at the background location during the initial phase of soil sampling program. The contamination identified is believed to be unrelated to the operations conducted by ACT. However, BEECRA has required additional soil sampling in the area (Background Area - Area 4, Figure 1) to delineate a phthalate level detected at the previous background sample location. The metals and base neutral contamination identified in the area is unrelated to the ACT operations.

The groundwater samples obtained from the wells during the initial phase indicated only a slightly elevated level of PHC in one (1) monitoring well. The additional round of sampling was conducted during the second phase of the site investigation. Only minor metal contamination was identified during the second phase.

GW

1.2 REPORT ORGANIZATION

An extensive soil boring and sampling analysis program was conducted in two areas of concern on the site; the stained soil area and the background area. A two-stage laboratory analyses was conducted for the samples collected from the two areas. Based on the analytical results obtained for the stage one samples, a limited number of samples were analyzed during the Stage 2 program in order to complete horizontal and vertical delineation of the above ECRA levels detected. Also, a limited soil boring program was implemented in the dumpster area. No soil sampling was conducted in the railroad siding area during this phase. The description and findings of the soil sampling program conducted at the site are detailed in Section 3.0.

An item-by-item response to the BEECRA comments noted on the Sampling Plan Addendum approval letter (September 26, 1988), is included as Section 2.0. The results of the second round of groundwater sampling conducted for the existing wells are provided as Section 4.0. Also, a response to the BEECRA requested additional groundwater program (BEECRA letter dated January 11, 1989) is provided as Section 4.3.

Sample locations and analytical parameters for Stage 1 and 2 sample analyses are summarized on Tables 1 and 2, respectively by area of concern. The laboratory results obtained for the samples analyzed are included on Tables 3 through 10.

ATTACHMENT NN1

The various areas of concern present at the ACT site, as well as monitoring well locations, are shown on Figure 1. Soil borings and sampling points are indicated on Figures 2 and 3. Areas which exhibited contamination in excess of the ECRA action level are depicted on Figures 2 and 3. Also, the above-ECRA levels of soil contamination detected during the initial phase of the investigation are shown on these maps.

The QA/QC procedures outlined in Section 4.0 of the previously approved Sampling Plan (JMS submittal dated November 1986), were followed during this phase of the site investigation. Therefore, the QA/QC procedures, including the detailed sampling procedures are not included again with this report. Appendices A and B provide copies of the laboratory analytical results and chain-of-custody control documentation respectively. Soil boring logs are included as Appendix C.

ATTACHMENT NN8

2.0 RESPONSE TO SAMPLING PLAN ADDENDUM APPROVAL LETTER

The Sampling Plan Addendum was conditionally approved by NJDEP letter dated September 26, 1988. The following provides a brief point-by-point response, as required by Comment 13A of the BEECRA letter, to each of the conditions noted.

Response to the BEECRA letter dated January 11, 1989, addressing the groundwater investigation, is provided in Section 4.3.

Comment 1: Advanced Chemical Technology shall accomplish this investigation and any further analytical investigations by the methods outlined in this Sampling Plan. If any change in methods outlined in this sampling plan is necessary or if any delays are encountered, Advanced Chemical Technology shall inform BEECRA in writing prior to implementation.

Response: No action required.

Comment 2: Advanced Chemical Technology shall submit summarized analytical results in tabular form. Advanced Chemical Technology shall also submit with the analytical data all documents associated with the sampling and testing, including but not limited to lab sheets, chain-of-custody, results of blank analyses, lab chronicles, summary of analytical instrument tuning, and analytical methods used.

Response: One (1) complete copy of the requested QA/QC data for the laboratory analyses is included. As required, all Tier II deliverables are separated from the submittal. Only laboratory summary pages are included with the remaining two (2) copies of the report. All parameters detected during the laboratory analysis are summarized in tabular form in the submittal.

ATTACHMENT NN9

Comment 5: If contamination is determined to exist above a level found acceptable by NJDEP, Advanced Chemical Technology shall prepare and submit a Cleanup Plan developed pursuant to N.J.A.C. 7:26B-5.3 to address said contamination. If the data from implementation of the approved Sampling Plan indicates the presence of contamination, but is not sufficient to define the full horizontal and vertical extent, then such areal definition shall be proposed as a Sampling Plan Addendum in a form which meets the criteria of N.J.A.C. 7:26B-3.2(c)11. The horizontal and vertical extent of contamination shall be determined before an approvable Cleanup Plan can be developed.

Response: As discussed in the approved Sampling Plan Addendum (specifically Section 5.3), the soil samples collected during this phase of investigation in the Oil-Stained Area (Area 3), were analyzed in two (2) phases. Two (2) sets of borings were installed in a circular pattern surrounding the area of concern to completely delineate the horizontal and vertical extent of contamination. First, the shallow depth samples collected from the first set of borings were analyzed for the parameters proposed in the approved plan. Based on the analytical results obtained, specifically the above-ECRA acceptable parameters detected in the samples, the deeper samples were selected from the borings to delineate the vertical extent. Also, the soil samples collected at comparable depth interval (and in some cases deeper), were selected from the counterpart borings for the target parameters analyses to determine the lateral extent.

The Stage 2 sample analyses results has approximated areal definition of the soil contamination present at the ACT site. It should be noted that the sample holding times, as required by ECRA Sampling Plan Guide, were not exceeded for the second stage sample analyses.

A similar two-stage sampling was also conducted for the background area (Area 4). The details of the sampling program are provided in Section 3.0.

A Cleanup Plan addressing the soil contamination present at the site will be developed following the BEECRA review of this report. The proposed Cleanup Plan will be developed in accordance with the elements specified in Comment 14 of the BEECRA letter.

ATTACHMENT NN10

Comment 6: The additional delineation of the dumpster area and oil stained area is acceptable as proposed.

Response: No action required.

Comment 7: Advanced Chemical Technology shall continue to investigate the 0 - 6" background sample since phthalates (bis 2-ethylhexyl phthalate) was identified at 32 ppm in soil. It is not likely to be attributable to background conditions since the industrial establishment used plasticizers. Its recommended that Advanced Chemical Technology shall sample for phthalates at three (3) locations approximately fifty (50) feet from the background sample. The sampling depths shall remain consistent as proposed for other samples.

Response: Although the industrial establishment used plasticizers, the area of background location has not been utilized by ACT. The plasticizers are received at the site via railroad cars and stored in the silos located adjacent to the siding. The background area is located away from the area of this operation (Figure 1). Therefore, the elevated level (32 ppm) of bis-2-ethylhexyl phthalate, detected during the initial sampling program, could not have resulted from site operations.

As discussed in the Notice of Violations and Penalty Settlement Offer, Specifically Findings 13(c) and 14 (NJDEP Correspondence dated May 1, 1985), the area (referred to as "fill area"), is not part of the property leased by ACT. NJDEP Finding 13(a) and (b) also noted the nature of contamination (lead and oil), present at the two (2) areas of the site: loading dock/railroad siding, and dumpster areas. A copy of the correspondence is included as Appendix D.

In addition to the three (3) BEECRA recommended locations (i.e. 50 feet from the previous background sample location), three (3) additional borings were located at a distance of 5.0 feet from the previous background sample location. In addition to the six (6) surface samples, three (3) deeper samples were also selected for base neutral analyses. The data obtained indicates a background or an offsite source of the phthalate contamination identified at Background Area (Area 4) rather than ACT operation. Details on our findings are provided in Section 3.3 of this report.

ATTACHMENT NN

Comment 8: The lab, QA/QC is acceptable as proposed.

Response: No action required.

Comment 9: The Health and Safety Plan is acceptable as proposed.

Response: No action required.

Comment 10: The second round of sampling for the groundwater monitoring wells is acceptable as proposed.

Response: No action required. Results of the additional groundwater sampling, including discussions on the additional groundwater investigation required by BEECRA letter dated January 11, 1989, are provided as Section 4.0.

Comment 11: Upon completion of sampling the following information must be included with the sampling results.

a. Provide in a tabular format the results of sampling. Include the sample number, location, interval and depth of sample, sample matrix, and the analytical methods used.

b. A site map which lists the concentrations of all significant contamination found (above ECRA action levels) at all sampling locations. The labeling of data should be keyed to facilitate interpretation, especially at locations where more than one type of contaminant is found.

Response: Table 1 summarizes the sample number, sample location, sample matrix and sampling depth interval, as well as the analytical parameters and methods utilized during the laboratory analyses of Stage 1 sample analyses. Table 2 provides identical data for the Stage 2 sample analyses program. The purpose of the sampling is also included on the tables. The sample location maps (Figures 2 and 3) list above-ECRA action levels detected (if any), during the sampling programs.

Comment 12: Please note that all sampling documentation and reporting must meet NJDEP Tier II standards.

Response: NJDEP Tier II Standards were followed during the sampling documentation and data reporting by JMS contract laboratory.

ATTACHMENT NN12

Comment 13: Data/Results Presentation

A. The consultant must respond to this letter point-by-point in the order of conditions outlined above.

Response: This section (Section 2.0) provides a point-by-point response in the order of the conditions outlined in the Sampling Plan Addendum approval letter dated September 26, 1988.

B. Because of case management workloads and volumes of data to be reviewed and processed, the above noted formatting requirements are essential to insure complete and timely review of the submittal.

Response: The report is prepared following the NJDEP specified format.

C. Tier II deliverables must be identified and separated from the submittals, discussion, conclusions and data summary sheets.

Response: As required, Tier II deliverables are provided as separate volume(s) from the sampling results report.

D. Failure to organize submittal information as outlined above can constitute reason to return the submittal to the consultant for correction and resubmission, thus causing further delay in case processing.

Response: The submittal is prepared in accordance with the NJDEP outline specified. See Section 1.2 for Report Organization.

ATTACHMENT NN13

Comment 14: The Cleanup Plan Proposal

During the course of the implementation of the sampling and the generation and evaluation of data, the consultant will be considering the development of a Cleanup Plan. As a guide to this process, the following elements shall be included in the formation of the plan:

a. Introduction.

b. Summary of Environmental Concerns. Include the results of previous sampling.

c. The proposed remedial actions. Include the evaluation of any alternative remedial action if appropriate.

d. Cleanup levels to be achieved. Be specific with regard to media and parameters.

e. A Work Plan must detail the specific activities that will be used to complete the proposed cleanup objectives.

f. A post remediation sampling and monitoring plan.

g. A specific time table for implementation of the Cleanup Plan which includes milestones in the project.

h. Progress reports, depending on the duration of the cleanup, must be on a monthly basis.

i. Estimate costs for cleanup, including additional soil and groundwater monitoring activities.

Response: The proposed Soil Cleanup Plan for the facility will be prepared following BEECRA review of this report. Also, certain groundwater investigation issues, discussed in Section 4.0, must be addressed prior to preparation of the Site Cleanup Plan. The proposed Cleanup Plan will be prepared in the format specified by BEECRA.

ATTACHMENT NN4

3.0 SOIL SAMPLING RESULTS - PHASE 2 INVESTIGATION

As discussed in the JMS submittal dated June 14, 1988 (specifically Section 3.0), an extensive investigation was conducted during the initial phase to characterize the soil contamination existing at the ACT site. The nature of contamination present in each area of concern was determined during the completed Phase 1 investigation. Also, the extent of contamination in the railroad siding (Area 1) and, to some extent, the dumpster storage area (Area 2), was determined during the initial phase investigation. PHC and metals contamination detected in these two (2) areas was primarily restricted to shallow surficial soils. No significant BN contamination was detected in these areas. Since the railroad siding area contamination had been adequately delineated, no additional investigation was required.

The second phase investigation was conducted to delineate PHC and metal contaminantion to the east of the dumpster storage area, and further define the horizontal and vertical extent of the oil stained area (Area 3) contaminants, specifically PHC, metals and BN. The additional proposed sampling program for Areas 2 and 3 was provided in Section 5.1 and 5.2, respectively, of the June 14th report. A two-stage sample analysis program was provided for Area 3.

The BEECRA, via their letter of September 26, 1988, approved the proposed program for the site areas (Areas 1 through 3 as well as groundwater portion) without any modifications. However, BEECRA requested further investigation of the phthalates detected at the background sample location. The "background" area is designated as Area 4 (Figure 1). A two-stage sample analysis program, similar to that of Area 3, was also conducted for this area.

The additional sampling and analysis program was implemented following the techniques and QA/QC procedures approved for the initial investigation. The samples were analyzed for the target parameters based on the initial phase sampling results. The second phase soil sampling results obtained for Areas 2 through 4 are discussed in the following subsections.

3.1 DUMPSTER AREA - AREA 2

3.1.1 Phase 1 Sampling Results Summary

The Phase 1 sampling results identified the presence of PHC and PM13 contamination in the dumpster area. PHC contamination identified in this area was restricted to the surface (0 - 0.5 feet), except in Borings PI-15 and PI-22 where it extended to a depth of 0.5 feet. The PHC concentrations detected in Samples PI-15B and PI-22B was 9500 and 31000 ppm, respectively. PM13 analyses identified the presence of one (1) to three (3) metals concentrations above NJDEP cleanup levels in several borings. The metal contamination included antimony (Sb), cadmium (Cd) and lead (Pb);

ATTACHMENT NN15

also, zinc (Zn) and silver (Ag) contamination was detected at one (1) sample location each. The metal contamination identified was restricted to shallow depths (<1.5 feet); except 33 ppm of Ag was detected in Sample PI-29C (2.0 - 2.5 feet). No base neutral concentrations above NJDEP cleanup level was detected in any dumpster area samples.

3.1.2 Phase 2 Sampling Results

Three (3) soil borings (PI-30 through PI-32) were installed during the Phase II program in the Conrail Railroad Area; located east of the dumpster area fencing (Figure 2). A total of three (3) samples were collected from each boring at depths of 0-0.5 feet, 1.0 - 1.5 feet and 6-inch interval directly above the water table. During the Phase I investigation, groundwater was encountered at shallow depths (1.5 - 3.5 feet) in the borings located on this portion of the site; however, groundwater was encountered at significantly deeper levels (6.5 feet in Boring PI 32 and 7.5 feet in Borings PI-30 and 31) during the second phase. All nine (9) samples were analyzed for PHC and PM13.

Only minor PHC contamination was detected at three (3) shallow samples collected from these borings (Table 3). Surface Samples PI-30A and PI-32A, taken 0 - 0.5 feet depth interval, exhibited slightly elevated PHC levels (180 ppm and 130 ppm). Shallow Sample PI-31B (1.0 - 1.5 feet depth) contained 200 ppm of PHC. Sample PI-31B also exhibited Cd level at 6.7 ppm. In addition, surface Sample PI-31A contained slightly elevated Sb concentration level (5.6 ppm). No other priority pollutant metals were found during the laboratory analyses.

The PHC, Cd and Sb contamination identified is only slightly above respective NJDEP guidelines (100 ppm, 3 ppm and 2 ppm, respectively). Also, the contamination identified is restricted in shallow depths; the concentration levels detected in the next depth interval samples are well within NJDEP guidelines. Therefore, no further vertical delineation is required. Horizontal delineation of the metal contamination has been completed except for the area of Boring PI-31. Petroleum hydrocarbon levels identified in the three (3) shallow samples slightly exceeded the ECRA level. The post-excavation sampling will confirm the complete removal of contamination in this case.

Areas which exhibited contamination above the ECRA action level during the two-phase program are depicted on Figure 2. The Cleanup Plan will address the soil contamination identified in the dumpster staging area.

ATTACHMENT NN16

3.2 OIL STAINED AREA

3.2.1 Phase 1 Sampling Results Summary

The initial soil sampling results identified moderate PHC, PM13 and BN contamination in the area referred to as Oil Stained Area. The PHC concentrations ranged between 110 and 1400 ppm, and extended to a depth of about 3.5 feet. The soil sample collected at a depth of 5.0 feet during the monitoring well (MW-4) installation contained a PHC concentration level (97 ppm) slightly below NJDEP guideline. Minor BN contamination was also identified in two (2) of the three (3) samples analyzed during the initial phase.

Contamination level above the ECRA action level for one (1) or more priority pollutant metals was detected in all samples (except Sample PI-25C). These metals included cadmium, chromium, copper, lead, nickel, silver and zinc at varying concentrations above the appropriate NJDEP cleanup level. The vertical delineation of metal contamination, except for Cd and Ag, was completed during the initial phase investigation. Cd and Ag concentration found in the deepest samples (3.0 - 3.5 feet depth interval) collected from the Borings PI-24 and PI-26 were above ECRA acceptable level.

3.2.2 Phase 2 Sampling Results

A total of eleven (11) soil borings (PI-33 to PI-43) were installed during the second phase in order to further define the horizontal and vertical extent of contaminants identified in the initial sampling program. As shown on Figure 3, the borings are situated in two ring patterns surrounding the Phase I borings. A total of four (4) samples were collected from each boring at depths of 0 - 0.5, 3.0 - 3.5, 5.0 - 5.5 and 7.0 - 7.5 feet. It should be noted that no groundwater was encountered to a depth of 7.5 feet during the soil boring program. A two-stage sample analyses program was conducted, as discussed in the approved Sampling Plan Addendum, to delineate horizontal and vertical extent of contamination. All shallow samples collected from the inner ring of Phase II borings (PI-33 to PI-38) were analyzed during the Stage 1 sample analyses program. The deeper samples from these inner borings as well as all the samples collected from the outer ring borings were retained for later analyses (Stage 2), if required. The sampling depth, as well as analytical parameters, were selected based on the soil sample locations which indicated elevated levels during the Stage 1 analyses. The samples collected for the area were analyzed for PHC, PM13 (or specific metals) with 25% of the samples analyzed for BN+15. The Stage 1 sample analyses summary is provided on Table 1.

ATTACHMENT NN17

Based on the results obtained, selected Stage 2 samples (Table 2) were submitted for laboratory analyses. It should be noted that the sample holding times, as required by ECRA Draft Sampling Plan Guide, were not exceeded during the Stage 2 sample analyses. Stage 1 sample analyses for PHC and mercury were expedited in order to meet the required holding time (28 days) during the later sample analyses for these parameters. The holding time for priority pollutant metals (except mercury) is 6 months. Also, the selected samples for base neutral analyses (Table 2A) were extracted within 14 days of sampling; later, certain samples (Table 2) were selected for BN analyses based on Stage 1 results. The BN analysis was completed within 40 days of sample extraction.

3.2.2.1 Stage 1 Sample Analyses Results

Three (3) shallow soil samples collected from the six (6) soil borings (PI-33 through PI-38) were initially submitted for laboratory analyses. The analytical parameters were based on the results of the Phase I investigation. Samples collected at depth intervals of 0 - 0.5 and 3.0 - 3.5 feet were analyzed for PHC and PM13. In addition to PHC analyses, the 5.0 - 5.5 feet depth samples were analyzed for two (2) specific metals (Ag and Cd). Deeper samples (7.0 - 7.5 feet depth) were retained for later analysis, if required. A summary of the petroleum hydrocarbon (PHC) and metals analysis results are provided as Table 4.

Surface samples (0 - 0.5 feet) collected from the four (4) borings (PI-33, 35, 37 and 38) located on each side of the area, were analyzed for BN+15 to determine horizontal extent of contamination. Also, the 5.0 - 5.5 depth samples collected from Borings PI-33 and PI-38 were included for BN+15 analyses to obtain vertical delineation. Base neutral+15 analytical results are summarized on Table 5.

The initial stage sample analyses identified above-ECRA levels of PHC at two (2) sample locations out of the eighteen (18) samples analyzed (Table 4). Samples PI-33B (3.0 - 3.5 feet) and PI-35C (5.0 - 5.5 feet) contained 620 ppm and 180 ppm, respectively. The remaining soil samples except PI-35B, PI-36A and PI-38A, did not contain any detectable level of PHC (<50 ppm); the other three (3) samples exhibited detectable concentration levels well below the ECRA action level.

Priority pollutant metals (PM13) analysis was conducted for twelve (12) shallow samples (0 - 0.5 and 3.0 - 3.5 feet). The six (6) intermediate level samples (5.0 - 5.5 feet depth) were analyzed for Ag and Cd. Five (5) of the twelve (12) shallow samples contained low levels of one (1) or two (2) metals above NJDEP guidelines. However, only one (1) of the six (6) intermediate samples exhibited elevated levels of cadmium and silver.

ATTACHMENT NN18

As expected, cadmium and silver were the two (2) most common metal contaminants identified in the shallow samples (Table 4). The highest levels of the two metals detected during the Stage 1 analyses were 46 ppm (Sample PI-33B) and 45 ppm (PI-35C). Cadmium concentrations detected in the other four (4) samples were between 3.2 ppm (Sample PI-34A) and 22 ppm (Sample PI-35B). Two (2) other samples contained silver levels at 8.4 ppm (PI-35B and 19 ppm (PI-37A). In addition, antimony and beryllium contamination was detected in certain samples. Sample PI-38A contained 3.0 ppm of antimony (Sb). Two (2) samples (PI-34B at 1.9 ppm and PI-37A at 1.1 ppm) contained slightly elevated levels of Beryllium (Be).

During the BN+15 analyses, three (3) of the six (6) samples exceeded NJDEP guideline of 10 ppm. All three samples were collected at 0 - 0.5 feet interval; the samples were PI-35A, PI-37A and PI-38A. PI-35A and PI-38A contained only low levels of contamination; 10.64 and 15.01 ppm of priority pollutant base neutrals were detected in the samples. However, PI-37A exhibited a significantly elevated level of 80.82 ppm. The presence of certain compounds (e.g. 0.8 ppm of acenapthene) identified in Sample PI-37A, indicate that the sample may have been contaminated with macadam, rather than oil. This was confirmed by microscopic analysis of a Stage 2 sample exhibiting similar concentration levels (see Section 3.2.2 for details). The concentration level significantly decreased to 4 ppm at 5.0 to 5.5 depth (Sample PI-37C). The BN concentration detected in the two (2) samples collected from Boring PI-33 were also below NJDEP guidelines (Table 5).

Moderately high concentrations of several non-priority pollutants were detected in all six (6) samples during the forward library search. However, most of these compounds were also found in method blank indicating possible laboratory contamination (Table 5). As expected, the three (3) samples containing elevated levels of priority pollutant base neutrals also contained elevated levels of additional compounds. The remaining three (3) samples contained only one or two additional compounds.

3.2.2.2 Stage 2 Sample Analyses Results

In order to further define horizontal extent of contamination identified during the Stage 1 sample analyses, certain soil samples from the outer ring borings (PI-39 to PI-43) were selected for Stage 2 sample analyses. A total of seven (7) samples were selected for target parameter analyses (Table 2). In addition, a deeper level sample (7.0 - 7.5 depth) obtained from an inner boring (PI-35) was analyzed to complete vertical delineation. A summary of the Stage 2 sampling results is provided as Table 8.

ATTACHMENT NN19

A total of three (3) soil samples were analyzed to delineate PHC contamination identified in samples PI-33B and PI-35C. The two (2) outer boring samples PI-40B and PI-42C, collected at the comparable depth interval, contained below ECRA levels of PHC. Sample PI-40B contained 60 ppm of PHC; no detectable level (<50 ppm) was found in the second sample. Also, the base sample (Sample PI-35D, 7.0 - 7.5 feet depth) did not contain any detectable level (<50 ppm) of PHC. Therefore, horizontal and vertical delineation of PHC contamination has been completed.

Stage 1 sample analyses identified above-ECRA levels of four (4) specific metals in certain samples; these metals include: Ag, Be, Cd and Sb. Seven (7) soil samples were selected for target metal analyses during the Stage 2 sample analyses program. All (except Sample PI-35D) were analyzed to complete horizontal delineation (Table 2). Sample PI-35D was analyzed to obtain vertical extent of certain metal contamination identified in Sample PI-35C.

Samples PI-35D (7.0 - 7.5 feet), PI-42B (3.0 - 3.5 feet), PI-42C (5.0 - 5.5 feet) and PI-43A (0 - 0.5 feet) were analyzed for Cd and Ag. In addition, Samples PI-40B and PI-41B (both taken at 3.0 - 3.5 foot interval) were analyzed for Cd. Sample PI-39A (0-0.5 feet) was analyzed for Sb. No additional sample analysis was conducted for Be, since only one Stage 1 sample (PI-37A, 1.1 ppm) slightly exceeded the NJDEP guideline of 1 ppm. Also, the concentration level detected is comparable to the level identified in the background area sampling (Section 3.3).

No concentration level of Ag was detected in the four (4) samples analyzed. However, Cd concentration exceeded NJDEP guidelines for two (2) samples analyzed for the metal. Sample PI-43A (0-0.5 feet) and PI-40B (3.0 - 3.5 feet) contained 3.1 and 17.0 ppm, respectively. These levels are comparable to the concentrations detected in the background area (Section 3.3). Only a trace level (0.6 to 1.6 ppm) of cadmium was detected in the remaining four samples (Table 8). Antimony concentration (2.8 ppm) detected in Sample PI-39A (0 - 0.5 feet) also exceeded NJDEP guideline.

Three (3) surface (0 - 0.5 feet) samples, (PI-39A, PI-42A and PI-43A) were analyzed for BN+15 during the Stage 2 sample analyses program, specifically to determine the horizontal extent of high BN levels detected at sample location PI-37A. Only moderate levels of base neutral compounds were detected in Samples PI-42A (7.45 ppm) and PI-43A (10.26 ppm), however a very high level (89.28 ppm) was detected in Sample PI-39A. The boring location is east of the fenceline outside the property limits. The type, and concentration level of base neutral compounds, identified at location PI-39, are similar to the Stage 1 Sample PI-37A. As discussed previously, the contamination appears to be related to the presence of macadam rather than oil in the sample.

ATTACHMENT NN20

The contract laboratory was requested to verify the reported base neutral concentration and also to evaluate the possiblity of sample contamination by coal residues. In response to JMS inquiry, additional sample analyses was conducted by Accutest Laboratories. The PHC analyses of the sample indicated no detectable concentration (<50 ppm). Also, the review of the total ion chromatogram of the base neutral analyses did not indicate the characteristics of petroleum hydrocarbons. The subsequent microsopic analyses of the sample indicated the presence of macadam particles. The base neutral contamination identified in the sample can be attributed to the macadam particles mixed in with the soils. Accutest correspondence detailing this additional analysis is provided as Appendix E. Since the material identified is stable in the environment, it does not represent a migratory problem.

In brief, the two (2) stage sample analyses program implemented during the Second Phase investigation has delineated the extent of contamination; the nature of the contamination had been previously identified by the Phase I program. Certain base neutral contamination identified in the area appears to be related to coal contamination. In addition, BN and the metal concentration levels are comparable to the Background Area. Cd and Be metal contamination has been delineated to the background area levels. Although the extent of the Ag contamination has been delineated to the NJDEP acceptable levels, the concentration levels reported are well below background area.

The Cleanup Plan will address the PHC and associated BN contamination. However, no remedial activities will be required to remove the BN and metal contamination attributable to the coal residues or the historic filling operations.

3.3 BACKGROUND AREA - AREA 4

3.3.1 Phase 1 Sampling Results Summary

The surface sample (PI-27A) obtained from the background boring indicated significantly elevated levels of base neutral compounds (total of 34.6 ppm), including 32.0 ppm of bis-2-ethylhexyl phthalate. The two (2) deeper samples obtained from the boring contained only trace levels. Sample PI-27B (2.0 - 2.5 feet) and PI-27C (6.0 - 6.5 feet) contained 0.41 ppm and 1.34 ppm of base neutral compounds. Bis-2-ethylhexyl phthalate was not found in the intermediate sample (2.0 - 2.5 feet depth), however 0.44 ppm was detected in the base sample PI-27C (6.0 - 6.5 feet). No significant concentration levels of metals and petroleum hydrocarbons were detected in the three (3) samples.

ATTACHMENT NN01

3.3.2 Phase 2 Sampling Results

In order to further define the phthalate contamination discussed above, additional investigation was required by the BEECRA. The BEECRA recommended sampling for phthalates at three (3) locations, approximately 50 feet from the previous background sample (Boring PI-27). The following additional soil sampling and analysis program was implemented at the site area to further define the background soils quality.

In addition to the BEECRA recommended locations, three (3) borings were installed at a distance of 5.0 feet from the previous sample location. Also, in addition to BN+15 analyses, the samples were analyzed for metals and petroleum hydrocarbons. Thus, a total of six (6) soil borings (PI-44 to PI-48, Figure 3) were installed in the Background Area (Area 4) during the Phase 2 investigation. A two-stage sample analysis program, similar to that of the stained area discussed above (Section 3.2), was employed during the investigation of this area. Two (2) samples were collected from each boring at 0 - 0.5 feet and 1.0-1.5 feet interval.

3.3.2.1 Stage 1 Sample Analyses Results

All six (6) surface samples (PI-44A to PI-49A) and three (3) shallow samples (PI-44B to PI-46B) obtained from the 5.0 foot distance borings (optional borings) were analyzed for BN+15 (Table 1) during the Stage 1 sample analysis program. Also, the surface samples obtained from the three (3) BEECRA required locations were analyzed for PM13 and PHC.

No significant BN contamination was identified during the sample analyses. Only one (1) sample (PI-44A) exceeded NJDEP guideline of 10 ppm. The sample contained approximately 16.7 ppm of priority pollutant base neutral compounds. The remaining eight (8) samples contained total base neutral concentrations between 0.3 ppm and 6.73 ppm. The specific compounds detected in Sample PI-44A are identical to the two (2) stained area samples (PI-37A and PI-39A) believed to have been contaminated with macadam. Also, the sample location is within 5.0 feet of the previous background boring location. However, only 0.06 ppm of bis-2-ethylhexyl phthalate was found in Sample PI-44A (Table 6), compared with 32 ppm detected in the previous sample. Only two other samples contained trace levels (<0.15 ppm) of bis-2-ethylhexyl phthalate.

Several non-priority pollutant base-neutral compounds were detected in all samples at low to moderate levels; however the compounds were also found in the method blank indicating lab contamination (Table 6).

ATTACHMENT NN22

No PHC levels were detected in the three (3) samples analyzed for the background area. However, two of these samples contained elevated levels of one or two metals. Sample PI-47A contained above-ECRA level (23 ppm) of arsenic. Sample PI-48A contained elevated levels of beryllium (1.2 ppm) and cadmium (13 ppm). The sample also contained significant level (160 ppm) of lead metal (Table 7).

3.3.2.2 Stage 2 Sample Analyses Results

In order to further define the extent of metal contamination identified in the area during the Stage 1 sample analyses, certain additional samples were selected for specific metal analyses. A total of five (5) samples were selected for target metal analyses during the Stage 2 sample analyses program (Table 2).

The surface samples obtained from the three (3) optional borings (5.0 foot distance) were analyzed for all three (3) metals which were found at elevated levels in the BEECRA required borings (50 feet). The purpose of these samples was to define horizontal extent of metal contamination. The samples were analyzed for As, Be and Cd. However, only Cd level exceeded NJDEP guideline at one sample location. Sample PI-44A contained 3.6 ppm of cadmium.

In order to define the vertical extent of contamination identified in the two surface samples analyzed during the initial stage sample analyses program, Sample PI-47B was analyzed for As, and Sample PI-48B was analyzed for Be and Cd. These were the only metals above NJDEP guidelines. The Stage 2 sample analysis results of these two shallow samples (1.0 - 1.5 feet) were within ECRA acceptable levels.

In brief, the two (2) stage sample analyses program implemented in the Background Area during the second phase investigation confirm that the contamination identified in the area is unrelated to ACT operations. The results obtained are similar to our findings for the stained area investigation. The metal contamination appears to be associated with the previous filling of the area. The BN contamination appears to be related to macadam contamination of the soil samples rather than plasticizers utilized in the site operation. The neighboring facility is involved in the manufacture of roofing tar. The contamination identified can be attributed to this neighboring operation. The results of the microscopic analyses of the sample, specifically the nature of macadam particles identified, indicate that the airborne residues or fly-ash particles originated during the roof-tar manufacturing operation and later deposited on the site property, have contaminated the certain areas of the site.

Since the soil contamination identified in this area of concern is unrelated to the ACT operation, no further action is required.

ATTACHMENT NN23

3.4 SOILS INVESTIGATION SUMMARY

The two-phased soil boring and sample analyses program conducted by JMS at the ACT facility has adequately delineated the nature and extent of contamination present at the site. The petroleum and metals contamination present at the railroad siding and dumpster staging area is primarily surficial in extent, and is derived from oil staining associated with the railroad operations and storage of industrial wastes in the dumpster. No significant base neutral (BN) contamination has been identified in these two (2) areas; only one (1) sample contained elevated levels of BN. Similarly, certain soil contamination, specifically the petroleum hydrocarbons (PHC), identified in the oil stained area appears to have resulted from the site operations. The BN contamination noted appears to be related to macadam particles in the sample. The source of the macadam present is probably associated with an adjacent roofing material production facility and is not associated with ACT operations.

The site Cleanup Plan will address the remediation of the contaminated soils found in the site areas. A soil cleanup plan will be prepared following the BEECRA review of this report.

The BN and metal contamination identified in the oil stained area and the background area is unrelated to the ACT operations. The contamination identified in these two (2) areas appears to have resulted from an off-site source (BN contamination) or the previous filling of the area by construction debris (metals contamination). Since the contamination is unrelated to ACT operation, no further action is required.

ATTACHMENT NN24

4.0 GROUNDWATER SAMPLING RESULTS

4.1 PHASE 1 INVESTIGATION SUMMARY

Six (6) groundwater monitoring wells (MW-1 to MW-6, Figure 1) were installed at the site during the initial phase of the JMS investigation. The wells were installed at the BEECRA approved location in accordance with the NJDEP specification for wells in unconsolidated formations. Due to site constraints, two (2) wells (MW-5 and MW-6) were installed with 2-inch diameter PVC screen and casing material. The presence of a lower confining strata of dense clay encountered at varying depths of 8.0 to 12.0 feet across the site required certain modifications during the well construction. The screened interval was decreased in certain wells so that the wells are completed within the first groundwater zone and the confining substratum is not penetrated. These modifications were approved by the NJDEP geologist present on the site during well installation.

Also, a thin saturated zone was encountered above the lower confining strata in Well MW-4; however, no stabilized water has been measured in the well during several monitoring visits. The base of the 10-foot screen is located at 12 feet depth. It should be noted that the well is located in an area which has been filled with concrete and wood construction debris. An extensive soil borings program has been completed in the area during the two (2) phases, however, no groundwater has been encountered in any of these fifteen (15) borings installed to a depth of up to 7.5 feet. The water level measured in remaining on-site wells is generally between 2.5 to 4.0 feet depth range, except for Well MW-3. Groundwater occurs at about 7.5 to 8.0 feet in MW-3. Therefore, we believe that Well MW-4 is dry due to the nature of fill material, rather than improper construction.

The first round of groundwater sample obtained from the five (5) wells were analyzed for base neutrals +15 (BN+15), acid extractables +10, priority pollutant metals (PM13), petroleum hydrocarbons (PHC) and ethylene glycol. The sample analyses identified only a slightly elevated level of PHC in Well MW-5 at 2 ppm.

4.2 PHASE 2 SAMPLING RESULTS

A second round of groundwater samples were collected from all five (5) wells during this phase. The samples were analyzed for BN+15, PM13 and PHC, in accordance with the approved Sampling Plan Addendum. Please note that due to low yield of 2-inch diameter Well MW-5, the required sampling was conducted over two (2) day period. The metal and PHC fractions were sampled with the remaining four (4) wells. Five days later, the BN fraction of the sample for Well MW-5 was obtained. A separate field blank was collected for each day of sampling. The well purging and groundwater sampling procedures approved in the initial Sampling Plan were utilized during the additional program; the detailed sampling procedures were submitted in our June

ATTACHMENT NN25

14, 1988 report. The groundwater sampling results are summarized on Table 9. The field blank sampling results for the Phase 2 investigation are provided as Table 10. The groundwater elevation measured prior to the sampling is indicated for each well on the potentiometric map (Figure 4).

During the second round of groundwater sample analyses program, no detectable levels of BN and PHC concentrations were found in the samples (Table 9). Trace level (6 and 9 ppb, respectively) of only one (1) non-priority pollutant base neutral compound was found in Samples MW-5 and MW-6.

Trace concentration levels of several metals were found in all samples. However, only two (2) samples (Wells MW-2 and MW-6) contained levels of one (1) or two (2) metals in concentrations above the ECRA action level. Slightly elevated level of chromium was found in both samples. Samples MW-2 and MW-6 contained 0.062 ppm and 0.086 ppm, respectively; NJDEP guideline for chromium contamination is 0.05 ppm. Sample MW-6 also contained a slightly elevated level (0.013 ppm) of cadmium; the NJDEP guideline for cadmium contamination in the groundwater is 0.01 ppm.

4.3 PROPOSED GROUNDWATER INVESTIGATION

The completed groundwater investigation has adequately established groundwater flow at the site. The two (2) rounds of sampling data confirm that only minor contamination is present at one (1) or two (2) wells. The extensive soil boring and sample analysis program has determined that the soil contamination present on the site is primarily surficial and in most cases does not extend to the water table. Therefore, no additional hydrogeologic investigation is required at the site.

4.3.1 Response to BEECRA Letter Dated January 11, 1989

BEECRA correspondence dated January 11, 1989, has requested an additional groundwater investigation at the site. The following provides a brief discussion of BEECRA concerns.

Item 1 requires installation of a well (MW-7) in the dumpster area. As discussed in Section 3.2 above, a soil remediation program will be required for this area of concern. The BEECRA requested location is within the known area of contamination. Therefore, any wells installed may be damaged during the soil remedial program.

As discussed above in Section 4.1, Well MW-4, located in the oil stained area (Area 3) is dry. The well is located in a filled portion of the property. No groundwater has been encountered to a depth of 7.5 feet in the soil borings installed in the area. The soil contamination is restricted to a depth of less than 3.5 feet, except for location PI-35 (Figure 3). Only minor contamination extends to a depth of 5.0 - 5.5 feet at location

ATTACHMENT NN26

PI-35; however, no contamination was found in the deeper sample. Therefore, there is no potential for any groundwater contamination. Thus, the investigation required in Item 2 of the letter, specifically the flushing of the well in an effort to yield groundwater or a replacement well, is not warranted. Also, a replacement well (if installed) may be damaged during the soil remediation program.

Item 5 of the BEECRA letter requires an additional round of groundwater sampling for MW-3, MW-5 and MW-6 for VO+15 and ethylene glycol analyses. However, the previous PP+40 analyses conducted by others during the early phases of ECRA compliance program has established that VO is not a concern at the ACT site. The materials utilized during the operations conducted at the site do not include VO compounds. Also, the two (2) rounds of completed groundwater sampling was conducted in accordance with the analytical parameters specified by the previously assigned geologist and approved by BEECRA. Therefore, the additional sampling for VO+15 analysis is not warranted based on available site data. The initial round of groundwater sampling included analyses for ethylene glycol. No concentration levels of the analyte above method detection limit have been identified. Thus, additional sampling for ethylene glycol is not warranted.

A Hydrogeological Assessment Request was included as Appendix A of the facility Sampling Plan (dated November 1986). The request included an inventory of wells located within a 1-mile radius of the site. No domestic water wells are located in the 1-mile area. Also, no public water supply wells are located downgradient to the site. The records available at the NJDEP Trenton offices indicate that the five (5) wells, owned by Conrail (numbered 7 to 11 on the request) are monitoring wells, and not used for human consumption. No further action is necessary to satisfy Item 7 of the BEECRA letter.

ATTACHMENT NN27

TABLE 1
ADVANC[illegible] HEMICAL TECHNOLOGY - ECRA CASE #84011
STAGE- [illegible] MPLE ANALYSIS SUMMARY BY LOCATION

ATION	SAMPLE NO.	PURPOSE OF SAMPLING	SAMPLE DEPTH * (ft. below ground)	MATRIX	SAMPLING DATE	ANALYTICAL PARAMETERS
- DUMPSTER AREA						
30	PI-30A	D	0-0.5'	SOIL	10-20-88	PHC, PM13
	PI-30B	D	1.0-1.5'	SOIL	10-20-88	PHC, PM13
	PI-30C	D	7.0-7.5'	SOIL	10-20-88	PHC, PM13
31	PI-31A	D	0-0.5'	SOIL	10-20-88	PHC, PM13
	PI-31B	D	1.0-1.5'	SOIL	10-20-88	PHC, PM13
	PI-31C	D	7.0-7.5'	SOIL	10-20-88	PHC, PM13
32	PI-32A	D	0-0.5'	SOIL	10-20-88	PHC, PM13
	PI-32B	D	1.0-1.5'	SOIL	10-20-88	PHC, PM13
	PI-32C	D	6.0-6.5'	SOIL	10-20-88	PHC, PM13
- OIL STAINED AREA						
3	PI-33A	D	0-0.5'	SOIL	10-19-88	PHC, PM13, BN+15
	PI-33B	D	3.0-3.5'	SOIL	10-20-88	PHC, PM13
	PI-33C	D	5.0-5.5'	SOIL	10-20-88	PHC, BN+15, Cd, Ag
[illegible]	PI-34A	D	0-0.5'	SOIL	10-19-88	PHC, PM13
	PI-34B	D	3.0-3.5'	SOIL	10-19-88	PHC, PM13
	PI-34C	D	5.0-5.5'	SOIL	10-20-88	PHC, Cd, Ag
[illegible]	PI-35A	D	0-0.5'	SOIL	10-19-88	PHC, PM13, BN+15
	PI-35B	D	3.0-3.5'	SOIL	10-20-88	PHC, PM13
	PI-35C	D	5.0-5.5'	SOIL	10-20-88	PHC, Cd, Ag
	PI-36A	D	0-0.5'	SOIL	10-19-88	PHC, PM13
	PI-36B	D	3.0-3.5'	SOIL	10-19-88	PHC, PM13
	PI-36C	D	5.0-5.5'	SOIL	10-19-88	PHC, Cd, Ag
7	PI-37A	D	0-0.5'	SOIL	10-19-88	PHC, PM13, BN+15
	PI-37B	D	3.0-3.5'	SOIL	10-19-88	PHC, PM13
	PI-37C	D	5.0-5.5'	SOIL	10-19-88	PHC, BN+15, Cd, Ag
	PI-38A	D	0-0.5'	SOIL	10-19-88	PHC, PM13, BN+15
	PI-38B	D	3.0-3.5'	SOIL	10-19-88	PHC, PM13
	PI-38C	D	5.0-5.5'	SOIL	10-19-88	PHC, Cd, Ag

ATTACHMENT NN28

TABLE 1
ADVANCED CHEMICAL TECHNOLOGY - ECRA CASE #840
STAGE 1 SAMPLE ANALYSIS SUMMARY BY LOCATION
(continued)

LOCATION	SAMPLE NO.	PURPOSE OF SAMPLING	SAMPLE DEPTH * (ft. below ground)	MATRIX	SAMPLING DATE	ANALYTICAL PARAMETERS
AREA 4 - BACKGROUND AREA						
PI-44	PI-44A	I/D	0-0.5'	SOIL	10-20-88	PHC, BN+15
	PI-44B	I/D	1.0-1.5'	SOIL	10-20-88	PHC, BN+15
	PI-44C	I/D	8.0-8.5'	SOIL	10-20-88	PHC
PI-45	PI-45A	I/D	0-0.5'	SOIL	10-20-88	PHC, BN+15
	PI-45B	I/D	1.0-1.5'	SOIL	10-20-88	PHC, BN+15
	PI-45C	I/D	8.0-8.5'	SOIL	10-20-88	PHC
PI-46	PI-46A	I/D	0-0.5'	SOIL	10-20-88	PHC, BN+15
	PI-46B	I/D	1.0-1.5'	SOIL	10-20-88	PHC, BN+15
	PI-46C	I/D	7.75-8.25'	SOIL	10-20-88	PHC
PI-47	PI-47A	I/D	0-0.5'	SOIL	10-20-88	PHC, BN+15, PM13
	PI-47B	I/D	1.0-1.5'	SOIL	10-20-88	PHC
	PI-47C	I/D	7.75-8.25'	SOIL	10-20-88	PHC
PI-48	PI-48A	I/D	0-0.5'	SOIL	10-20-88	PHC, BN+15, PM13
	PI-48B	I/D	1.0-1.5'	SOIL	10-20-88	PHC
	PI-48C	I/D	7.75-8.25'	SOIL	10-20-88	PHC, BN+15
PI-49	PI-49A	I/D	0-0.5'	SOIL	10-20-88	PHC, BN+15, PM13
	PI-49B	I/D	1.0-1.5'	SOIL	10-20-88	PHC
	PI-49C	I/D	7.5-8.0'	SOIL	10-20-88	PHC
MONITORING WELLS						
	MW-1	M	- 5.43	WATER	10-21-88	PHC, BN+15, PM13
	MW-2	M	- 5.92	WATER	10-21-88	PHC, BN+15, PM13
	MW-3	M	- 8.11	WATER	10-21-88	PHC, BN+15, PM13
	MW-4	M	DRY	-------	--------	----------
	MW-5	M	- 4.61	WATER	10-21-88	PHC, PM13
	MW-5	M	- 4.60	WATER	10-26-88	BN+15
	MW-6	M	- 5.58	WATER	10-21-88	PHC, BN+15, PM13

ATTACHMENT NN29

TABLE 1
ADVANCED CHEMICAL TECHNOLOGY - ECRA CASE #8401
STAGE 1 SAMPLE ANALYSIS SUMMARY BY LOCATION
(continued)

LOCATION	SAMPLE NO.	PURPOSE OF SAMPLING	SAMPLE DEPTH * (ft. below ground)	MATRIX	SAMPLING DATE	ANALYTICAL PARAMETERS
QUALITY ASSURANCE/QUALITY CONTROL						
FIELD BLANK	PI-FB(4)	---	--------	WATER	10-19-88	PHC, PM13, BN+15
	PI-FB(5)	---	--------	WATER	10-20-88	PHC, PM13, BN+15
	FB-6	---	--------	WATER	10-21-88	PHC, PM13, BN+15
	FB-7	---	--------	WATER	10-26-88	BN+15

NOTES:

PURPOSE OF SAMPLING
- I - INITIAL SCREENING
- D - DELINEATION
- M - MONITORING

- Ag - SILVER
- Cd - CADMIUM
- PHC - PETROLEUM HYDROCARBONS (EPA METHOD 418.1)
- BN+15 - BASE NEUTRAL EXTRACTABLES WITH LIBRARY SEARCH (EPA METHOD 625)
- PM13 - PRIORITY POLLUTANTS (SW - 846 METHODS)

ATTACHMENT NN30

TABLE 2A
ADVANCED CHEMICAL TECHNOLOGY - ECRA CASE #84011
STAGE 2 SAMPLE ANALYSIS SUMMARY - BASE NEUTRAL EXTRACTABLES

LOCATION	SAMPLE NO.	PURPOSE OF SAMPLING	SAMPLE DEPTH * (ft. below ground)	MATRIX	SAMPLING DATE	ANALYTICAL PARAMETERS
AREA 3 - OIL STAINED AREA						
PI-33	PI-33D	D	7.0-7.5'	SOIL	10-19-88	B625XH
PI-35	PI-35D	D	7.0-7.5'	SOIL	10-20-88	B625XH
PI-37	PI-37D	D	7.0-7.5'	SOIL	10-19-88	B625XH
PI-38	PI-38D	D	7.0-7.5'	SOIL	10-19-88	B625XH
PI-39	PI-39A	D	0-0.5'	SOIL	10-19-88	B625XH
PI-40	PI-40A	D	0-0.5'	SOIL	10-19-88	B625XH
PI-42	PI-42A	D	0-0.5'	SOIL	10-19-88	B625XH
PI-43	PI-43A	D	0-0.5'	SOIL	10-19-88	B625XH

NOTES:

PURPOSE OF SAMPLING
D - DELINEATION

BN625XH - EXTRACT AND HOLD SAMPLES FOR BASE NEUTRAL EXTRACTABLES WITH LIBRARY SEARCH (EPA METHOD 625) ANALYSES (IF REQUIRED)

ATTACHMENT NN31

TABLE 2
ADVANCED CHEMICAL TECHNOLOGY - ECRA CASE # 84011
STAGE 2 SAMPLE ANALYSIS SUMMARY - AREAS 3 AND 4

LOCATION	SAMPLE NO.	SAMPLE DEPTH	ANALYTICAL PARAMETERS
AREA 3 - OIL STAINED AREA			
PI-35	PI-35D	7.0-7.5'	Cd, Ag, PHC
PI-39	PI-39A	0-0.5'	Sb, BN+15
PI-40	PI-40B	3.0-3.5'	Cd, PHC
PI-41	PI-41B	3.0-3.5'	Cd
PI-42	PI-42A	0-0.5'	BN+15
	PI-42B	3.0-3.5'	Cd, Ag
	PI-42C	5.0-5.5'	Cd, Ag, PHC
PI-43	PI-43A	0-0.5'	Cd, Ag, BN+15
AREA 4 - BACKGROUND AREA			
PI-44	PI-44A	0-0.5'	As, Be, Cd
PI-45	PI-45A	0-0.5'	As, Be, Cd
PI-46	PI-46A	0-0.5'	As, Be, Cd
PI-47	PI-47B	1.0-1.5'	As
PI-48	PI-48B	1.0-1.5'	Be, Cd

NOTES:

Ag - SILVER (EPA METHODS SW-846)
As - ARSENIC (EPA METHODS SW-846)
Be - BERYLIUM (EPA METHODS SW-846)
Cd - CADMIUM (EPA METHODS SW-846)
Sb - ANTIMONY (EPA METHODS SW-846)
PHC - PETROLEUM HYDROCARBONS (EPA METHOD 418.1)
BN+15 - BASE NEUTRAL EXTRACTABLES WITH LIBRARY SEARCH (EPA METHOD 625)

ATTACHMENT NN32

TABLE 4
ADVANCED CHEMICAL TECHNOLOGY - ECRA CASE # 84011
SOIL SAMPLING RESULTS SUMMARY - OIL STAINED AREA (AREA 3)
(METALS AND PHC)

SAMPLE NUMBER	PI-33A	PI-33B	PI-33C	PI-34A	PI-34B	PI-34C	PI-35A	PI-35B	PI-35C	PI-36A	PI-36B	PI-36C
DEPTH	0-0.5'	3.0-3.5'	5.0-5.5'	0-0.5'	3.0-3.5'	5.0-5.5'	0-0.5'	3.0-3.5'	5.0-5.5'	0-0.5'	3.0-3.5'	5.0-5.5'
METAL ANALYSIS (ppm)												
ANTIMONY	.46	<0.10	NA	<0.10	.25	NA	.6	.42	NA	.32	.24	NA
ARSENIC	2.8	8.7	NA	5.0	20	NA	4.4	6.7	NA	6.8	20	NA
BERYLLIUM	<0.50	<0.50	NA	.84	1.9 #	NA	<0.50	<0.50	NA	<0.50	.75	NA
CADMIUM	1.5	46 #	1.5	3.2 #	3.6 #	1.6	1.6	22 #	8.0 #	1.2	1.2	1.2
CHROMIUM	20	51	NA	24	44	NA	22	24	NA	21	29	NA
COPPER	14	40	NA	29	15	NA	94	49	NA	150	18	NA
LEAD	22	80	NA	28	19	NA	49	43	NA	63	14	NA
MERCURY	<0.10	<0.10	NA	<0.10	.34	NA	<0.10	<0.10	NA	.14	.1	NA
NICKEL	7.3	39	NA	8.0	18	NA	8.2	49	NA	13	13	NA
SELENIUM	.14	.20	NA	.13	.22	NA	.12	<0.10	NA	.21	.20	NA
SILVER	<1.0	7.8	<1.0	<1.0	1.6	<1.0	<1.0	8.4 #	45 #	1.1	<1.0	<1.0
THALLIUM	.11	.17	NA	<0.10	.28	NA	.12	.31	NA	<0.10	.28	NA
ZINC	37	160	NA	49	59	NA	54	85	NA	90	17	NA
TOTAL PERCENT SOLIDS	84	83	97	94	64	96	94	90	91	94	74	95
PETROLEUM HYDROCARBONS (ppm)	<50	620 #	<50	<50	<50	<50	<50	63	180 #	82	<50	<50

SAMPLE NUMBER	PI-37A	PI-37B	PI-37C	PI-38A	PI-38B	PI-38C
DEPTH	0-0.5'	3.0-3.5'	5.0-5.5'	0-0.5'	3.0-3.5'	5.0-5.5'
METAL ANALYSIS (ppm)						
ANTIMONY	.84	<0.10	NA	3.0 #	<0.10	NA
ARSENIC	17	3.5	NA	8.5	1.7	NA
BERYLLIUM	1.1 #	.93	NA	<0.50	<0.50	NA
CADMIUM	66	3.3	4.2	4.1	.89	1.9
CHROMIUM	33	33	NA	30	17	NA
COPPER	130	2.5	NA	39	<2.0	NA
LEAD	180	<10	NA	18	<10	NA
MERCURY	<0.10	<0.10	NA	.13	<0.10	NA
NICKEL	34	10	NA	11	5.2	NA
SELENIUM	.46	<0.10	NA	.57	.1	NA
SILVER	19 #	<1.0	2.6	1.8	<1.0	<1.0
THALLIUM	.17	.23	NA	<0.10	<0.10	NA
ZINC	98	32	NA	160	23	NA
TOTAL PERCENT SOLIDS	83	91	90	93	95	90
PETROLEUM HYDROCARBONS (ppm)	<50	<50	<50	84	<50	<50

NOTES:
ND - NOT DETECTED
ppm - PARTS PER MILLION
- ABOVE NJDEP CLEANUP LEVEL

ATTACHMENT NN33

TABLE 5
ADVANCED CHEMICAL TECHNOLOGY - ECRA CASE # 84011
SOIL SAMPLING RESULTS SUMMARY - OIL STAINED AREA (AREA 3)
(BASE NEUTRAL ORGANICS)

SAMPLE NUMBER	PI-33A	PI-33C	PI-35A	PI-37A	PI-37C	PI-38A
DEPTH	0-0.5'	5.0-5.5'	0-0.5'	0-0.5'	5.0-5.5'	0-0.5'
BASE NEUTRALS (ppb)						
ACENAPHTHENE	ND	ND	ND	780	ND	ND
ANTHRACENE	ND	ND	ND	2300	ND	100 J
BENZO (A) ANTHRACENE	69 J	ND	320 J	6400	ND	760
BENZO (A) PYRENE	70 J	ND	380 J	5000	ND	750
BENZO (B) FLUORANTHENE	71 J	ND	410 J	5600	ND	870
BENZO (K) FLUORANTHENE	64 J	ND	360 J	4100	ND	690
BENZO (GHI) PERYLENE	61 J	ND	290 J	3500	ND	600
BIS(2-ETHYLHEXYL)PHTHALATE	590	1900	2200	1300	ND	170 J
BUTYL BENZYL PHTHALATE	970	2000	2300	1700	510 J	490 J
CHRYSENE	83 J	ND	430 J	6900	ND	1200
DIBENZO (A,H) ANTHRACENE	ND	ND	ND	1400	ND	200 J
DI-N-BUTYL PHTHALATE	4800	1500	2300	4000	3500	4100
FLUORANTHENE	140 J	ND	500 J	14000	ND	1900
FLUORENE	ND	ND	ND	790	ND	ND
INDENO (1,2,3-CD) PYRENE	ND	ND	240 J	3000	ND	480 J
NAPHTHALENE	ND	ND	ND	150 J	ND	ND
PHENANTHRENE	90 J	ND	320 J	11000	ND	1200
PYRENE	110 J	ND	590	8900	ND	1500
TOTAL BASE NEUTALS (ppm)	7.118	5.4	10.64 #	80.82 #	4.01	15.01 #
LIBRARY SEARCH IDENITIFIED COMPOUNDS (ppb) *	2200 (2) 2570 (5)B	760 (1) 1920 (5)B	3050 (3) 1600 (4)B	11310 (12) 1020 (2)B	3140 (6)B	3960 (6) 1260 (4)B
LIBRARY SEARCH UNIDENITIFIED COMPOUNDS (ppb) *	2500 (1)	7600 (1)	10350 (2) 490 (1)B	6800 (1)	2200 (1)	2200 (1) 560 (1)B

NOTES:

J - BELOW METHOD DETECTION LIMIT
ND - NOT DETECTED
ppb - PARTS PER BILLION
ppm - PARTS PER MILLION
* - ESTIMATED CONCENTRATION (NUMBER OF COMPOUNDS IN PARENTHESIS)
\# - ABOVE NJDEP CLEANUP LEVEL

ATTACHMENT NN34

TABLE 10
ADVANCED CHEMICAL TECHNOLOGY - ECRA CASE # 84011
SAMPLING RESULTS SUMMARY - FIELD BLANKS

SAMPLE NUMBER	PI-FB(4)	PI-FB(5)	FB-6	FB-7
SAMPLE DATE	10-19-88	10-20-88	10-21-88	10-26-88
BASE NEUTRALS (ppb)				
BIS(2-ETHYLHEXYL)PHTHALATE	3.5 J	ND	24 B	ND
DI-N-BUTYL PHTHALATE	ND	ND	1.6 J	ND
TOTAL BASE NEUTRALS (ppm)	.0035	ND	.0016	ND
LIBRARY SEARCH IDENTIFIED COMPOUNDS (ppb) *	17 (1) 12 (1)B	17 (1)B	6 (1)B	10 (2) 8 (1)B
LIBRARY SEARCH UNIDENTIFIED COMPOUNDS (ppb) *	ND	ND	ND	ND
METAL ANALYSIS (ppm)				NA
ANTIMONY	<.001	<.001	<.001	
ARSENIC	<.001	.001	.002	
BERYLLIUM	<.005	<.005	<.005	
CADMIUM	<.005	<.005	<.005	
CHROMIUM	<.025	<.025	<.025	
COPPER	<.020	<.020	<.020	
LEAD	<.001	<.001	<.001	
MERCURY	<.001	<.001	<.001	
NICKEL	<.040	<.040	<.040	
SELENIUM	<.001	<.001	<.001	
SILVER	<.010	<.010	<.010	
THALLIUM	<.001	<.001	<.001	
ZINC	<.050	<.050	<.050	
PETROLEUM HYDROCARBONS (ppm)	<1.0	<1.0	<1.0	NA

NOTES:

B - PROBABLE/POSSIBLE LAB CONTAMINATION
J - BELOW METHOD DETECTION LIMIT
NA - NOT ANALYZED
ND - NOT DETECTED
ppb - PARTS PER BILLION
ppm - PARTS PER MILLION
* - ESTIMATED CONCENTRATION (NUMBER OF COMPOUNDS IN PARENTHESIS)

ATTACHMENT NN35

APPENDIX A

LABORATORY ANALYTICAL RESULTS
(Sample QA/QC data included with original only)

ATTACHMENT NN36

ACCUTEST®
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): J. M. SORGE, INC.
3301 U. S. HIGHWAY 22
SOMERVILLE, NJ 08876

ATTN: MIKE McGOWAN

DATE: 11/21/88

JOB No: 884963

PROJECT No: 86013

SAMPLE RECEIVED: 10/21/88

SAMPLE SUMMARY

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815397	10/19/88	13:05	AC	SOIL - PI-33A, AREA 3, 0-.5' PLANT INDUSTRIES
E815398	10/20/88	08:50	AC	SOIL - PI-33B, AREA 3, 3.0-3.5' PLANT INDUSTRIES
E815399	10/20/88	09:05	AC	SOIL - PI-33C, AREA 3, 5-5.5' PLANT INDUSTRIES
E815400	10/19/88	14:40	AC	SOIL - PI-36A, AREA 3, 0-5' PLANT INDUSTRIES
E815401	10/19/88	14:45	AC	SOIL - PI-36B, AREA 3, 3.0-3.5' PLANT INDUSTRIES
E815402	10/19/88	14:50	AC	SOIL - PI-36C, AREA 3, 5-5.5' PLANT INDUSTRIES

NJDEP CERTIFICATION 12129
EP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT 1 NN37

ACCUTEST®
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

TO: J. M. SORGE, INC.
3301 U. S. HIGHWAY 22
SOMERVILLE, NJ 08876

ATTN: MIKE McGOWAN

DATE: 11/21/88

JOB No: 884963

PROJECT No: 86013

SAMPLE RECEIVED: 10/21/88

SAMPLE SUMMARY

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815403	10/19/88	15:05	AC	SOIL - PI-35A, AREA 3, 0-5' PLANT INDUSTRIES
E815404	10/20/88	10:35	AC	SOIL - PI-35B, AREA 3, 3-3.5' PLANT INDUSTRIES
E815405	10/20/88	10:50	AC	SOIL - PI-35C, AREA 3, 5-5.5' PLANT INDUSTRIES
E815406	10/19/88	16:00	AC	SOIL - PI-34A, AREA 3, 0-5' PLANT INDUSTRIES
E815407	10/19/88	16:10	AC	SOIL - PI-34B, AREA 3, 3-3.5' PLANT INDUSTRIES
E815408	10/20/88	08:20	AC	SOIL - PI-24C, AREA 3, 5-5.5' PLANT INDUSTRIES 34C

NJDEP CERTIFICATION 12129
C EP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT 2 NN38

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J. M. SORGE, INC.
3301 U. S. HIGHWAY 22
SOMERVILLE, NJ 08876

ATTN: MIKE McGOWAN

DATE: 11/21/88

JOB No: 884963

PROJECT No: 86013

SAMPLE RECEIVED: 10/21/88

SAMPLE SUMMARY

AMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
315409	10/19/88	11:15	AC	SOIL - PI-37A, AREA 3, 0-6" PLANT INDUSTRIES
815410	10/19/88	11:25	AC	SOIL - PI-37B, AREA 3, 3-3.5' PLANT INDUSTRIES
315411	10/19/88	11:35	AC	SOIL - PI-37C, AREA 3, 5-5.5 PLANT INDUSTRIES
815412	10/19/88	12:45	AC	SOIL - PI-38A, AREA 3, 0-6" PLANT INDUSTRIES
315413	10/19/88	12:55	AC	SOIL - PI-38B, AREA 3, 3.0-3.5' PLANT INDUSTRIES
E815414	10/19/88	13:00	AC	SOIL - PI-38C, AREA 3, 5-5.5' PLANT INDUSTRIES

EP CERTIFICATION 12129
EP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT NN39

ACCUTEST®
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

TO: J. M. SORGE, INC.
3301 U. S. HIGHWAY 22
SOMERVILLE, NJ 08876

ATTN: MIKE McGOWAN

DATE: 11/21/88

JOB No: 884963

PROJECT No: 86013

SAMPLE RECEIVED: 10/21/88

SAMPLE SUMMARY

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815415	10/20/88	15:10	AC	SOIL - PI-30A, AREA 2, 0-5' PLANT INDUSTRIES
E815416	10/20/88	15:15	AC	SOIL - PI-30B, AREA 2, 1-1.5' PLANT INDUSTRIES
E815417	10/20/88	16:15	AC	SOIL - PI-30C, AREA 2, 7-7.5' PLANT INDUSTRIES
E815418	10/20/88	15:15	AC	SOIL - PI-31A, AREA 2, 0-.5' PLANT INDUSTRIES
E815419	10/20/88	15:25	AC	SOIL - PI-31B, AREA 2, 1.0-1.5' PLANT INDUSTRIES
E815420	10/20/88	16:25	AC	SOIL - PI-31C, AREA 2, 7.7.5' PLANT INDUSTRIES

NJDEP CERTIFICATION 12129
C' 3P CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT NN40

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'O: J. M. SORGE, INC.
3301 U. S. HIGHWAY 22
SOMERVILLE, NJ 08876

ATTN: MIKE McGOWAN

DATE: 11/21/88

JOB No: 884963

PROJECT No: 86013

SAMPLE RECEIVED: 10/21/88

SAMPLE SUMMARY

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815421	10/20/88	15:35	AC	SOIL - PI-32A, 0-.5', AREA 2 PLANT INDUSTRIES
E815422	10/20/88	15:40	AC	SOIL - PI-32B, AREA 2, 1-1.5' PLANT INDUSTRIES
E815423	10/20/88	15:55	AC	SOIL - PI-32C, AREA 2, 6-6.5' PLANT INDUSTRIES
E815424	10/20/88	11:40	AC	SOIL - PI-44A, AREA 4, 0-.5' PLANT INDUSTRIES
E815425	10/20/88	11:45	AC	SOIL - PI-44B, AREA 4, 1.0-1.5' PLANT INDUSTRIES
E815426	10/20/88	12:05	AC	SOIL - PI-44C, AREA 4, 8-8.5' PLANT INDUSTRIES

NJDEP CERTIFICATION 12129
C EP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT NN41

ACCUTEST®
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

TO: J. M. SORGE, INC.
3301 U. S. HIGHWAY 22
SOMERVILLE, NJ 08876

ATTN: MIKE McGOWAN

DATE: 11/21/88

JOB No: 884963

PROJECT No: 86013

SAMPLE RECEIVED: 10/21/88

SAMPLE SUMMARY

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815427	10/20/88	12:10	AC	SOIL - PI-45A, AREA 4, 0-.5' PLANT INDUSTRIES
E815428	10/20/88	12:15	AC	SOIL - PI-45B, AREA 4, 1-1.5' PLANT INDUSTRIES
E815429	10/20/88	12:30	AC	SOIL - PI-45C, AREA 4, 8-8.5' PLANT INDUSTRIES
E815430	10/20/88	12:40	AC	SOIL - PI-46A, AREA 4, 0-.5' PLANT INDUSTRIES
E815431	10/20/88	12:45	AC	SOIL - PI-46B, AREA 4, 1-1.5' PLANT INDUSTRIES
E815432	10/20/88	12:55	AC	SOIL - PI-46C, AREA 4, 7.75-8.25' PLANT INDUSTRIES

N: CERTIFICATION 12129

VINCENT J. PUGLIESE
VICE-PRESIDENT

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ATTACHMENT NN42

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2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

J. M. SORGE, INC.
3301 U. S. HIGHWAY 22
SOMERVILLE, NJ 08876

ATTN: MIKE McGOWAN

DATE: 11/21/88

JOB No: 884963

PROJECT No: 86013

SAMPLE RECEIVED: 10/21/88

SAMPLE SUMMARY

MPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
815433	10/20/88	13:05	AC	SOIL - PI-47A, AREA 4, 0-.5' PLANT INDUSTRIES
815434	10/20/88	13:15	AC	SOIL - PI-47B, AREA 4, 1-1.5' PLANT INDUSTRIES
815435	10/20/88	13:30	AC	SOIL - PI-47C, AREA 4, 7.75-8.25' PLANT INDUSTRIES
815436	10/20/88	13:40	AC	SOIL - PI-48A, AREA 4, 0-.5' PLANT INDUSTRIES
815437	10/20/88	13:45	AC	SOIL - PI-48B, AREA 4, 1.0-1.5' PLANT INDUSTRIES
E815438	10/20/88	13:55	AC	SOIL - PI-48C, AREA 4, 7.75-8.25' PLANT INDUSTRIES

DEP CERTIFICATION 12129
EP CERTIFICATION PH-0585

VINCENT A. PUGLIESE
VICE-PRESIDENT

ATTACHMENT NN43

ACCUTEST®
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

O: J. M. SORGE, INC.
3301 U. S. HIGHWAY 22
SOMERVILLE, NJ 08876

ATTN: MIKE McGOWAN

DATE: 11/21/88

JOB No: 884963

PROJECT No: 86013

SAMPLE RECEIVED: 10/21/88

SAMPLE SUMMARY

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815439	10/20/88	14:05	AC	SOIL - PI-49A, AREA 4, 0-.5' PLANT INDUSTRIES
E815440	10/20/88	14:10	AC	SOIL - PI-49B, AREA 4, 1-1.5' PLANT INDUSTRIES
E815441	10/20/88	14:15	AC	SOIL - PI-49C, AREA 4, 7.5-8.0' PLANT INDUSTRIES
E815442	10/20/88	17:00	AC	WATER - PI-FB(4), FIELD BLANK PLANT INDUSTRIES
E815443	10/20/88	17:00	AC	WATER - PI-FB(5), FIELD BLANK PLANT INDUSTRIES

NJDEP CERTIFICATION 12129
C EP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

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ATTACHMENT NN44

ACCUTEST®
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

ANALYSIS REPORT FOR BASE NEUTRAL EXTRACTABLES BY GC/MS

CLIENT : SORGE
LAB SAMPLE #: E815397
MATRIX : SOIL

METHOD : SW846 8270
ANALYSIS DATE: 11/07/88
DATA FILE : >D4103

	COMPOUND	RESULT (ug/kg)	MDL (ug/kg)	Q
1)	ACENAPHTHENE	ND	590	
2)	ACENAPHTHYLENE	ND	590	
3)	ANTHRACENE	ND	590	
4)	BENZIDENE	ND	2900	
5)	BENZO(A)ANTHRACENE	69	590	J
6)	BENZO(A)PYRENE	70	590	J
7)	BENZO(B)FLUORANTHENE	71	590	J
8)	BENZO(K)FLUORANTHENE	64	590	J
9)	BENZO(G,H,I)PERYLENE	61	590	J
10)	BIS(2-CHLOROETHOXY)METHANE	ND	590	
11)	BIS(2-CHLOROETHYL)ETHER	ND	590	
12)	BIS(2-CHLOROISOPROPYL)ETHER	ND	590	
13)	BIS(2-ETHYLHEXYL)PHTHALATE	590	590	
14)	4-BROMOPHENYL PHENYL ETHER	ND	590	
15)	BUTYL BENZYL PHTHALATE	970	590	
16)	2-CHLORONAPHTHALENE	ND	590	
17)	4-CHLOROPHENYL PHENYL ETHER	ND	590	
18)	CHRYSENE	83	590	J
19)	DIBENZO(A,H)ANTHRACENE	ND	590	
20)	1,2-DICHLOROBENZENE	ND	590	
21)	1,3-DICHLOROBENZENE	ND	590	
22)	1,4-DICHLOROBENZENE	ND	590	
23)	3,3'-DICHLOROBENZIDENE	ND	1200	
24)	DIETHYL PHTHALATE	ND	590	
25)	DIMETHYL PHTHALATE	ND	590	
26)	DI-N-BUTYL PHTHALATE	4800	590	
27)	2,4-DINITROTOLUENE	ND	590	
28)	2,6-DINITROTOLUENE	ND	590	
29)	DI-N-OCTYL PHTHALATE	ND	590	
30)	1,2-DIPHENYLHYDRAZINE	ND	590	
31)	FLUORANTHENE	140	590	J
32)	FLUORENE	ND	590	
33)	HEXACHLOROBENZENE	ND	590	
34)	HEXACHLOROBUTADIENE	ND	590	
35)	HEXACHLOROCYCLOPENTADIENE	ND	590	
36)	HEXACHLOROETHANE	ND	590	
37)	INDENO(1,2,3-CD)PYRENE	ND	590	
38)	ISOPHORONE	ND	590	
39)	NAPHTHALENE	ND	590	
40)	NITROBENZENE	ND	590	
41)	N-NITROSODIMETHYLAMINE	ND	590	
42)	N-NITROSODI-N-PROPYLAMINE	ND	590	
43)	N-NITROSODIPHENYLAMINE	ND	590	
44)	PHENANTHRENE	90	590	J
45)	PYRENE	110	590	J
46)	1,2,4-TRICHLOROBENZENE	ND	590	

ND = NOT DETECTED
MDL= METHOD DETECTION LIMIT

QUALIFIERS (Q)

J =INDICATES AN ESTIMATED VALUE BELOW MDL
B =INDICATES COMPOUND FOUND IN THE ASSOCIATED BLANK AS WELL AS IN SAMPLE

ATTACHMENT NN-45

ACCUTEST®
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: SORGE

Batch Number: MS-S-270

Lab Sample ID: E815397

Extraction Date: 11/2/88

Lab File ID: D4103

Date Analyzed: 11/07/88 10:33

Matrix: SOIL FOR BN

Number TICs Found: 8

CONCENTRATION UNITS: ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123	Ethane, 1,1,2-trichloro-	7.90	500.	1
2.	80706	Guanidine, N,N,N',N'-tetrame	8.04	330.	1
3.	62238373	3-Penten-1-ol, 2-methyl- (9CI	8.44	1100.	
4.	930223	Oxirane, ethenyl- (9CI)	9.30	1100.	
5.	67641	2-Propanone (9CI)	9.73	420.	1
6.	79345	Ethane, 1,1,2,2-tetrachloro-	11.73	930.	1
7.	14979396	3-Heptanol, 4-methyl- (VANBC	12.31	390.	1
8.		Unknown	12.88	2500.	
9.					
10.					
11.					
12.					
13.					
14.					
15.					

QUALIFIERS(Q):
(1)-THIS COMPOUND (OR SIMILAR SPECTRA) FOUND IN LAB BLANK.
(2)-INTERNAL OR SURROGATE STANDARD ADDED BY LABORATORY.
(3)-THIS COMPOUND ALREADY IDENTIFIED AND REPORTED AS TARGET COMPOUND.
(4)-PROBABLE BACKGROUND DUE TO SOLVENT OR CO2.

FORM I SV-TIC

ATTACHMENT NN46

ACCUTEST®
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815397	10/19/88	13:05	AC	SOIL - PI-33A, AREA 3, 0-.5' PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<50	50	MG/KG	11/01/88	JK
SOLIDS, TOTAL PERCENT	84	2.0	%	10/25/88	GRM
ANTIMONY	0.46	0.10	MG/KG	11/09/88	MS
ARSENIC	2.8	0.10	MG/KG	11/08/88	MS
BERYLLIUM	<0.50	0.50	MG/KG	10/31/88	GG
CADMIUM	1.5	0.50	MG/KG	10/31/88	GG
CHROMIUM	20	2.5	MG/KG	10/31/88	GG
COPPER	14	2.0	MG/KG	10/31/88	GG
LEAD	22	10	MG/KG	11/03/88	NH
MERCURY	<0.10	0.10	MG/KG	11/04/88	SH
NICKEL	7.3	4.0	MG/KG	10/31/88	GG
SELENIUM	0.14	0.10	MG/KG	11/10/88	MS
SILVER	<1.0	1.0	MG/KG	10/31/88	NH
THALLIUM	0.11	0.10	MG/KG	11/08/88	MS
ZINC	37	5.0	MG/KG	10/31/88	GG

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT NN47

ACCUTEST®
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815398	10/20/88	08:50	AC	SOIL - PI-33B, AREA 3, 3.0-3.5' PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	620	50	MG/KG	11/03/88	TM
SOLIDS, TOTAL PERCENT	83	2.0	%	10/25/88	GRM
ANTIMONY	<0.10	0.10	MG/KG	11/15/88	MS
ARSENIC	8.7	0.10	MG/KG	11/15/88	MS
BERYLLIUM	<0.50	0.50	MG/KG	10/31/88	GG
CADMIUM	46	0.50	MG/KG	10/31/88	GG
CHROMIUM	51	2.5	MG/KG	10/31/88	GG
COPPER	40	2.0	MG/KG	10/31/88	GG
LEAD	80	10	MG/KG	11/03/88	NH
MERCURY	<0.10	0.10	MG/KG	11/08/88	SH
NICKEL	39	4.0	MG/KG	10/31/88	GG
SELENIUM	0.20	0.10	MG/KG	11/10/88	MS
SILVER	7.8	1.0	MG/KG	10/31/88	NH
THALLIUM	0.17	0.10	MG/KG	11/08/88	MS
ZINC	160	5.0	MG/KG	10/31/88	GG

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT NN-4B

ACCUTEST®
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

ANALYSIS REPORT FOR BASE NEUTRAL EXTRACTABLES BY GC/MS

CLIENT : SORGE
LAB SAMPLE #: E815399
MATRIX : SOIL

METHOD : SW846 8270
ANALYSIS DATE: 11/07/88
DATA FILE : >D4106

	COMPOUND	RESULT (ug/kg)	MDL (ug/kg)	Q
1)	ACENAPHTHENE	ND	520	
2)	ACENAPHTHYLENE	ND	520	
3)	ANTHRACENE	ND	520	
4)	BENZIDENE	ND	2600	
5)	BENZO(A)ANTHRACENE	ND	520	
6)	BENZO(A)PYRENE	ND	520	
7)	BENZO(B)FLUORANTHENE	ND	520	
8)	BENZO(K)FLUORANTHENE	ND	520	
9)	BENZO(G,H,I)PERYLENE	ND	520	
10)	BIS(2-CHLOROETHOXY)METHANE	ND	520	
11)	BIS(2-CHLOROETHYL)ETHER	ND	520	
12)	BIS(2-CHLOROISOPROPYL)ETHER	ND	520	
13)	BIS(2-ETHYLHEXYL)PHTHALATE	1900	520	
14)	4-BROMOPHENYL PHENYL ETHER	ND	520	
15)	BUTYL BENZYL PHTHALATE	2000	520	
16)	2-CHLORONAPHTHALENE	ND	520	
17)	4-CHLOROPHENYL PHENYL ETHER	ND	520	
18)	CHRYSENE	ND	520	
19)	DIBENZO(A,H)ANTHRACENE	ND	520	
20)	1,2-DICHLOROBENZENE	ND	520	
21)	1,3-DICHLOROBENZENE	ND	520	
22)	1,4-DICHLOROBENZENE	ND	520	
23)	3,3'-DICHLOROBENZIDENE	ND	1000	
24)	DIETHYL PHTHALATE	ND	520	
25)	DIMETHYL PHTHALATE	ND	520	
26)	DI-N-BUTYL PHTHALATE	1500	520	
27)	2,4-DINITROTOLUENE	ND	520	
28)	2,6-DINITROTOLUENE	ND	520	
29)	DI-N-OCTYL PHTHALATE	ND	520	
30)	1,2-DIPHENYLHYDRAZINE	ND	520	
31)	FLUORANTHENE	ND	520	
32)	FLUORENE	ND	520	
33)	HEXACHLOROBENZENE	ND	520	
34)	HEXACHLOROBUTADIENE	ND	520	
35)	HEXACHLOROCYCLOPENTADIENE	ND	520	
36)	HEXACHLOROETHANE	ND	520	
37)	INDENO(1,2,3-CD)PYRENE	ND	520	
38)	ISOPHORONE	ND	520	
39)	NAPHTHALENE	ND	520	
40)	NITROBENZENE	ND	520	
41)	N-NITROSODIMETHYLAMINE	ND	520	
42)	N-NITROSODI-N-PROPYLAMINE	ND	520	
43)	N-NITROSODIPHENYLAMINE	ND	520	
44)	PHENANTHRENE	ND	520	
45)	PYRENE	ND	520	
46)	1,2,4-TRICHLOROBENZENE	ND	520	

ND = NOT DETECTED
MDL= METHOD DETECTION LIMIT

QUALIFIERS (Q)

J =INDICATES AN ESTIMATED VALUE BELOW MDL
B =INDICATES COMPOUND FOUND IN THE ASSOCIATED BLANK AS WELL AS IN SAMPLE

ATTACHMENT NN49

ACCUTEST®
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: SORGE

Batch Number: MS-S-270

Lab Sample ID: E815399

Extraction Date: 11/2/88

Lab File ID: D4106

Date Analyzed: 11/07/88 14:35

Matrix: SOIL FOR BN

Number TICs found: 7

CONCENTRATION UNITS: ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123	Ethane, 1,1,2-trichloro-	7.88	310.	/
2.	13091162	Butanamide, N-ethyl- (9CI)	8.03	300.	/
3.	115220	2-Butanone, 3-hydroxy-3-meth	9.71	400.	/
4.	199	Ethane, 1,1,2,2-tetrachloro-	11.72	560.	/
5.	113008	Guanidine (8CI9CI)	12.29	350.	/
6.		Unknown	12.97	7600.	
7.	1241947	Phosphoric acid, 2-ethylhexy	37.60	760.	
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					

QUALIFIERS(Q);
(1)-THIS COMPOUND (OR SIMILAR SPECTRA) FOUND IN LAB BLANK.
(2)-INTERNAL OR SURROGATE STANDARD ADDED BY LABORATORY.
(3)-THIS COMPOUND ALREADY IDENTIFIED AND REPORTED AS TARGET COMPOUND.
(4)-PROBABLE BACKGROUND DUE TO SOLVENT OR CO2.

FORM 1 SV-TIC

ATTACHMENT NN 50

ACCUTEST®
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815399	10/20/88	09:05	AC	SOIL - PI-33C, AREA 3, 5-5.5' PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<50	50	MG/KG	11/03/88	TM
SOLIDS, TOTAL PERCENT	97	2.0	%	10/25/88	GRM
CADMIUM	1.5	0.50	MG/KG	10/31/88	GG
SILVER	<1.0	1.0	MG/KG	10/31/88	RH

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT NN51
15

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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815400	10/19/88	14:40	AC	SOIL - PI-36A, AREA 3, 0-5' PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	82	50	MG/KG	11/01/88	JK
SOLIDS, TOTAL PERCENT	94	2.0	%	10/26/88	GRM
ANTIMONY	0.32	0.10	MG/KG	11/09/88	MS
ARSENIC	6.8	0.10	MG/KG	11/08/88	MS
BERYLLIUM	<0.50	0.50	MG/KG	10/31/88	GG
CADMIUM	1.2	0.50	MG/KG	10/31/88	GG
CHROMIUM	21	2.5	MG/KG	10/31/88	GG
COPPER	150	2.0	MG/KG	10/31/88	GG
LEAD	63	10	MG/KG	11/03/88	NH
MERCURY	0.14	0.10	MG/KG	11/04/88	SH
NICKEL	13	4.0	MG/KG	10/31/88	GG
SELENIUM	0.21	0.10	MG/KG	11/10/88	MS
SILVER	1.1	1.0	MG/KG	10/31/88	NH
THALLIUM	<0.10	0.10	MG/KG	11/08/88	MS
ZINC	90	5.0	MG/KG	10/31/88	GG

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT NN52

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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815401	10/19/88	14:45	AC	SOIL - PI-36B, AREA 3, 3.0-3.5' PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<50	50	MG/KG	11/01/88	JK
SOLIDS, TOTAL PERCENT	74	2.0	%	10/26/88	GRM
ANTIMONY	0.24	0.10	MG/KG	11/09/88	MS
ARSENIC	20	0.10	MG/KG	11/08/88	AS
BERYLLIUM	0.75	0.50	MG/KG	10/31/88	GG
CADMIUM	1.2	0.50	MG/KG	10/31/88	GG
CHROMIUM	29	2.5	MG/KG	10/31/88	GG
COPPER	18	2.0	MG/KG	10/31/88	GG
LEAD	14	10	MG/KG	11/03/88	NH
MERCURY	0.10	0.10	MG/KG	11/04/88	SH
NICKEL	13	4.0	MG/KG	10/31/88	GG
SELENIUM	0.20	0.10	MG/KG	11/10/88	MS
SILVER	<1.0	1.0	MG/KG	10/31/88	NH
THALLIUM	0.28	0.10	MG/KG	11/08/88	MS
ZINC	17	5.0	MG/KG	10/31/88	GG

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT NN53

ACCUTEST®
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815402	10/19/88	14:50	AC	SOIL - PI-36C, AREA 3, 5-5.5' PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<50	50	MG/KG	11/01/88	JK
SOLIDS, TOTAL PERCENT	95	2.0	%	10/26/88	GRM
CADMIUM	1.2	0.50	MG/KG	10/31/88	GG
SILVER	<1.0	1.0	MG/KG	10/31/88	MH

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT NN54

ACCUTEST®
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

ANALYSIS REPORT FOR BASE NEUTRAL EXTRACTABLES BY GC/MS

CLIENT : SORGE
LAB SAMPLE #: E815403
MATRIX : SOIL

METHOD : SW846 8270
ANALYSIS DATE: 11/07/88
DATA FILE : >D4107

	COMPOUND	RESULT (ug/kg)	MDL (ug/kg)	Q
1)	ACENAPHTHENE	ND	520	
2)	ACENAPHTHYLENE	ND	520	
3)	ANTHRACENE	ND	520	
4)	BENZIDENE	ND	2600	
5)	BENZO(A)ANTHRACENE	320	520	J
6)	BENZO(A)PYRENE	380	520	J
7)	BENZO(B)FLUORANTHENE	410	520	J
8)	BENZO(K)FLUORANTHENE	360	520	J
9)	BENZO(G,H,I)PERYLENE	290	520	J
10)	BIS(2-CHLOROETHOXY)METHANE	ND	520	
11)	BIS(2-CHLOROETHYL)ETHER	ND	520	
12)	BIS(2-CHLOROISOPROPYL)ETHER	ND	520	
13)	BIS(2-ETHYLHEXYL)PHTHALATE	2200	520	
14)	4-BROMOPHENYL PHENYL ETHER	ND	520	
15)	BUTYL BENZYL PHTHALATE	2300	520	
16)	2-CHLORONAPHTHALENE	ND	520	
17)	4-CHLOROPHENYL PHENYL ETHER	ND	520	
18)	CHRYSENE	430	520	J
19)	DIBENZO(A,H)ANTHRACENE	ND	520	
20)	1,2-DICHLOROBENZENE	ND	520	
21)	1,3-DICHLOROBENZENE	ND	520	
22)	1,4-DICHLOROBENZENE	ND	520	
23)	3,3'-DICHLOROBENZIDENE	ND	1000	
24)	DIETHYL PHTHALATE	ND	520	
25)	DIMETHYL PHTHALATE	ND	520	
26)	DI-N-BUTYL PHTHALATE	2300	520	
27)	2,4-DINITROTOLUENE	ND	520	
28)	2,6-DINITROTOLUENE	ND	520	
29)	DI-N-OCTYL PHTHALATE	ND	520	
30)	1,2-DIPHENYLHYDRAZINE	ND	520	
31)	FLUORANTHENE	500	520	J
32)	FLUORENE	ND	520	
33)	HEXACHLOROBENZENE	ND	520	
34)	HEXACHLOROBUTADIENE	ND	520	
35)	HEXACHLOROCYCLOPENTADIENE	ND	520	
36)	HEXACHLOROETHANE	ND	520	
37)	INDENO(1,2,3-CD)PYRENE	240	520	J
38)	ISOPHORONE	ND	520	
39)	NAPHTHALENE	ND	520	
40)	NITROBENZENE	ND	520	
41)	N-NITROSODIMETHYLAMINE	ND	520	
42)	N-NITROSODI-N-PROPYLAMINE	ND	520	
43)	N-NITROSODIPHENYLAMINE	ND	520	
44)	PHENANTHRENE	320	520	J
45)	PYRENE	590	520	
46)	1,2,4-TRICHLOROBENZENE	ND	520	

ND = NOT DETECTED
MDL= METHOD DETECTION LIMIT

QUALIFIERS (Q)

J =INDICATES AN ESTIMATED VALUE BELOW MDL
B =INDICATES COMPOUND FOUND IN THE ASSOCIATED BLANK AS WELL AS IN SAMPLE

ATTACHMENT NN55

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: SORGE

Batch Number: MS-S-270

Lab Sample ID: ES15403

Extraction Date: 11/2/88

Lab File ID: D4102

Date Analyzed: 11/07/88 15:55

Matrix: SOIL FOR BN

Number TICs found: 10

CONCENTRATION UNITS: ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123	Ethane, 1,1,2-trichloro-	7.88	340.	/
2.	80706	Guanidine, N,N,N',N'-tetrame	8.03	270.	/
3.	18641822	Pentane, 1-propoxy- (9CI)	8.42	1400.	
4.	930223	Oxirane, ethenyl- (9CI)	9.28	1400.	
5.		Unknown	9.71	490.	/
6.	198	Ethane, 1,1,2,2-tetrachloro-	11.72	660.	/
7.	5076200	Oxirane, tetramethyl- (9CI)	12.29	330.	/
8.		Unknown	13.01	10000.	
9.	18794848	1,6,10-Dodecatriene, 7,11-di	23.29	250.	
10.		Unknown	37.57	350.	
11.					
12.					
13.					
14.					
15.					

QUALIFIERS(Q);
(1)-THIS COMPOUND (OR SIMILAR SPECTRA) FOUND IN LAB BLANK.
(2)-INTERNAL OR SURROGATE STANDARD ADDED BY LABORATORY.
(3)-THIS COMPOUND ALREADY IDENTIFIED AND REPORTED AS TARGET COMPOUND.
(4)-PROBABLE BACKGROUND DUE TO SOLVENT OR CO2.

FORM I SV-TIC

ATTACHMENT NN56

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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815403	10/19/88	15:05	AC	SOIL - PI-35A, AREA 3, 0-5' PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<50	50	MG/KG	11/01/88	JK
SOLIDS, TOTAL PERCENT	94	2.0	%	10/26/88	GRM
ANTIMONY	0.60	0.10	MG/KG	11/09/88	MS
ARSENIC	4.4	0.10	MG/KG	11/08/88	MS
BERYLLIUM	<0.50	0.50	MG/KG	10/31/88	GG
CADMIUM	1.6	0.50	MG/KG	10/31/88	GG
CHROMIUM	22	2.5	MG/KG	10/31/88	GG
COPPER	94	2.0	MG/KG	10/31/88	GG
LEAD	49	10	MG/KG	11/03/88	NH
MERCURY	<0.10	0.10	MG/KG	11/04/88	SH
NICKEL	8.2	4.0	MG/KG	10/31/88	GG
SELENIUM	0.12	0.10	MG/KG	11/10/88	MS
SILVER	<1.0	1.0	MG/KG	10/31/88	NH
THALLIUM	0.12	0.10	MG/KG	11/08/88	MS
ZINC	54	5.0	MG/KG	10/31/88	GG

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

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ATTACHMENT NN57

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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815404	10/20/88	10:35	AC	SOIL - PI-35B, AREA 3, 3-3.5' PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	63	50	MG/KG	11/01/88	JK
SOLIDS, TOTAL PERCENT	90	2.0	%	10/26/88	GRM
ANTIMONY	0.42	0.10	MG/KG	11/15/88	MS
ARSENIC	6.7	0.10	MG/KG	11/15/88	MS
BERYLLIUM	<0.50	0.50	MG/KG	10/31/88	GG
CADMIUM	22	0.50	MG/KG	10/31/88	GG
CHROMIUM	24	2.5	MG/KG	10/31/88	GG
COPPER	49	2.0	MG/KG	10/31/88	GG
LEAD	43	10	MG/KG	11/03/88	NH
MERCURY	<0.10	0.10	MG/KG	11/08/88	SH
NICKEL	49	4.0	MG/KG	10/31/88	GG
SELENIUM	<0.10	0.10	MG/KG	11/15/88	MS
SILVER	8.4	1.0	MG/KG	10/31/88	NH
THALLIUM	0.31	0.10	MG/KG	11/16/88	MS
ZINC	85	5.0	MG/KG	10/31/88	GG

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815405	10/20/88	10:50	AC	SOIL - PI-35C, AREA 3, 5-5.5' PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	180	50	MG/KG	11/01/88	JK
SOLIDS, TOTAL PERCENT	91	2.0	%	10/26/88	GRM
CADMIUM	8.0	0.50	MG/KG	10/31/88	GG
SILVER	45	1.0	MG/KG	10/31/88	NH

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815406	10/19/88	16:00	AC	SOIL - PI-34A, AREA 3, 0-5' PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<50	50	MG/KG	11/01/88	JK
SOLIDS, TOTAL PERCENT	94	2.0	%	10/26/88	GRM
ANTIMONY	<0.10	0.10	MG/KG	11/09/88	MS
ARSENIC	5.0	0.10	MG/KG	11/15/88	MS
BERYLLIUM	0.84	0.50	MG/KG	11/03/88	GAG
CADMIUM	3.2	0.50	MG/KG	11/03/88	GG
CHROMIUM	24	2.5	MG/KG	11/03/88	GG
COPPER	29	2.0	MG/KG	11/03/88	GG
LEAD	28	10	MG/KG	11/03/88	NH
MERCURY	<0.10	0.10	MG/KG	11/04/88	SH
NICKEL	8.0	4.0	MG/KG	11/03/88	GG
SELENIUM	0.13	0.10	MG/KG	11/10/88	MS
SILVER	<1.0	1.0	MG/KG	10/31/88	NH
THALLIUM	<0.10	0.10	MG/KG	11/08/88	MS
ZINC	49	5.0	MG/KG	11/03/88	GG

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815407	10/19/88	16:10	AC	SOIL - PI-34B, AREA 3, 3-3.5' PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<50	50	MG/KG	11/01/88	JK
SOLIDS, TOTAL PERCENT	64	2.0	%	10/26/88	GRM
ANTIMONY	0.25	0.10	MG/KG	11/09/88	MS
ARSENIC	20	0.10	MG/KG	11/15/88	MS
BERYLLIUM	1.9	0.50	MG/KG	10/31/88	GG
CADMIUM	3.6	0.50	MG/KG	10/31/88	GG
CHROMIUM	44	2.5	MG/KG	10/31/88	GG
COPPER	15	2.0	MG/KG	10/31/88	GG
LEAD	19	10	MG/KG	11/03/88	NH
MERCURY	0.34	0.10	MG/KG	11/04/88	SH
NICKEL	18	4.0	MG/KG	10/31/88	GG
SELENIUM	0.22	0.10	MG/KG	11/10/88	MS
SILVER	1.6	1.0	MG/KG	10/31/88	NH
THALLIUM	0.28	0.10	MG/KG	11/08/88	MS
ZINC	59	5.0	MG/KG	10/31/88	GG

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815408	10/20/88	08:20	AC	SOIL - PI-24C, AREA 3, 5-5.5' PLANT INDUSTRIES

34C

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<50	50	MG/KG	11/01/88	JK
SOLIDS, TOTAL PERCENT	96	2.0	%	10/26/88	GRM
CADMIUM	1.6	0.50	MG/KG	10/31/88	GG
SILVER	<1.0	1.0	MG/KG	10/31/88	NH

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

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ATTACHMENT NN62

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ANALYSIS REPORT FOR BASE NEUTRAL EXTRACTABLES BY GC/MS

CLIENT : SORGE
LAB SAMPLE #: E815409
MATRIX : SOIL

METHOD : SW846 8270
ANALYSIS DATE: 11/07/88
DATA FILE : >D4108

	COMPOUND	RESULT (ug/kg)	MDL (ug/kg)	Q
1)	ACENAPHTHENE	780	600	
2)	ACENAPHTHYLENE	ND	600	
3)	ANTHRACENE	2300	600	
4)	BENZIDENE	ND	3000	
5)	BENZO(A)ANTHRACENE	6400	600	
6)	BENZO(A)PYRENE	5000	600	
7)	BENZO(B)FLUORANTHENE	5600	600	
8)	BENZO(K)FLUORANTHENE	4100	600	
9)	BENZO(G,H,I)PERYLENE	3500	600	
10)	BIS(2-CHLOROETHOXY)METHANE	ND	600	
11)	BIS(2-CHLOROETHYL)ETHER	ND	600	
12)	BIS(2-CHLOROISOPROPYL)ETHER	ND	600	
13)	BIS(2-ETHYLHEXYL)PHTHALATE	1300	600	
14)	4-BROMOPHENYL PHENYL ETHER	ND	600	
15)	BUTYL BENZYL PHTHALATE	1700	600	
16)	2-CHLORONAPHTHALENE	ND	600	
17)	4-CHLOROPHENYL PHENYL ETHER	ND	600	
18)	CHRYSENE	6900	600	
19)	DIBENZO(A,H)ANTHRACENE	1400	600	
20)	1,2-DICHLOROBENZENE	ND	600	
21)	1,3-DICHLOROBENZENE	ND	600	
22)	1,4-DICHLOROBENZENE	ND	600	
23)	3,3'-DICHLOROBENZIDENE	ND	1200	
24)	DIETHYL PHTHALATE	ND	600	
25)	DIMETHYL PHTHALATE	ND	600	
26)	DI-N-BUTYL PHTHALATE	4000	600	
27)	2,4-DINITROTOLUENE	ND	600	
28)	2,6-DINITROTOLUENE	ND	600	
29)	DI-N-OCTYL PHTHALATE	ND	600	
30)	1,2-DIPHENYLHYDRAZINE	ND	600	
31)	FLUORANTHENE	14000	600	
32)	FLUORENE	790	600	
33)	HEXACHLOROBENZENE	ND	600	
34)	HEXACHLOROBUTADIENE	ND	600	
35)	HEXACHLOROCYCLOPENTADIENE	ND	600	
36)	HEXACHLOROETHANE	ND	600	
37)	INDENO(1,2,3-CD)PYRENE	3000	600	
38)	ISOPHORONE	ND	600	
39)	NAPHTHALENE	150	600	J
40)	NITROBENZENE	ND	600	
41)	N-NITROSODIMETHYLAMINE	ND	600	
42)	N-NITROSODI-N-PROPYLAMINE	ND	600	
43)	N-NITROSODIPHENYLAMINE	ND	600	
44)	PHENANTHRENE	11000	600	
45)	PYRENE	8900	600	
46)	1,2,4-TRICHLOROBENZENE	ND	600	

ND = NOT DETECTED
MDL= METHOD DETECTION LIMIT

QUALIFIERS (Q)

J =INDICATES AN ESTIMATED VALUE BELOW MDL
B =INDICATES COMPOUND FOUND IN THE ASSOCIATED BLANK AS WELL AS IN SAMPLE

ATTACHMENT NN63

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: SORGE

Batch Number: MS-S-270

Lab Sample ID: E815409

Extraction Date: 11/2/88

Lab File ID: >D4108

Date Analyzed: 11/07/88 17:16

Matrix: SOIL FOR BN

Number TICs found: 15

CONCENTRATION UNITS: ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	62238373	3-Penten-1-ol, 2-methyl- (9CI	8.42	1700.	
2.	930223	Oxirane, ethenyl- (9CI)	9.25	1400.	
3.	115220	2-Butanone, 3-hydroxy-3-meth	9.71	520.	/
4.	196	Ethane, 1,1,2,2-tetrachloro-	11.72	500.	/
5.		Unknown	12.90	6800.	
6.	569415	Naphthalene, 1,8-dimethyl- (	23.22	450.	
7.	132649	Dibenzofuran (8CI9CI)	25.05	530.	
8.	610480	Anthracene, 1-methyl- (8CI9C	31.58	470.	
9.	243174	11H-Benzo[b]fluorene (8CI9CI	35.11	310.	
10.	243174	11H-Benzo[b]fluorene (8CI9CI	35.50	410.	
11.	238846	11H-Benzo[a]fluorene (8CI9CI	35.94	290.	
12.	82053	7H-Benz[de]anthracen-7-one (	37.70	350.	
13.	239350	Benzo[b]naphtho[2,1-d]thioph	38.24	340.	
14.	82053	7H-Benz[de]anthracen-7-one (	38.67	360.	
15.	192972	Benzo[e]pyrene (8CI9CI)	49.89	4700.	

QUALIFIERS(Q);
(1)-THIS COMPOUND (OR SIMILAR SPECTRA) FOUND IN LAB BLANK.
(2)-INTERNAL OR SURROGATE STANDARD ADDED BY LABORATORY.
(3)-THIS COMPOUND ALREADY IDENTIFIED AND REPORTED AS TARGET COMPOUND.
(4)-PROBABLE BACKGROUND DUE TO SOLVENT OR CO2.

FORM I SV-TIC

ATTACHMENT NN64

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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815409	10/19/88	11:15	AC	SOIL - PI-37A, AREA 3, 0-6" PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<50	50	MG/KG	11/01/88	JK
SOLIDS, TOTAL PERCENT	83	2.0	%	10/26/88	GRM
ANTIMONY	0.84	0.10	MG/KG	11/15/88	MS
ARSENIC	17	0.10	MG/KG	11/15/88	MS
BERYLLIUM	1.1	0.50	MG/KG	10/31/88	GG
CADMIUM	66	0.50	MG/KG	10/31/88	GG
CHROMIUM	33	2.5	MG/KG	10/31/88	GG
COPPER	130	2.0	MG/KG	10/31/88	GG
LEAD	180	10	MG/KG	11/03/88	NH
MERCURY	<0.10	0.10	MG/KG	11/04/88	SH
NICKEL	34	4.0	MG/KG	10/31/88	GG
SELENIUM	0.46	0.10	MG/KG	11/10/88	MS
SILVER	19	1.0	MG/KG	10/31/88	NH
THALLIUM	0.17	0.10	MG/KG	11/08/88	MS
ZINC	98	5.0	MG/KG	10/31/88	GG

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

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ATTACHMENT NN65

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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815410	10/19/88	11:25	AC	SOIL - PI-37B, AREA 3, 3-3.5' PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<50	50	MG/KG	11/01/88	JK
SOLIDS, TOTAL PERCENT	91	2.0	%	10/26/88	GRM
ANTIMONY	<0.10	0.10	MG/KG	11/15/88	MS
ARSENIC	3.5	0.10	MG/KG	11/15/88	MS
BERYLLIUM	0.93	0.50	MG/KG	10/31/88	GG
CADMIUM	3.3	0.50	MG/KG	10/31/88	GG
CHROMIUM	33	2.5	MG/KG	10/31/88	GG
COPPER	2.5	2.0	MG/KG	10/31/88	GG
LEAD	<10	10	MG/KG	11/03/88	NH
MERCURY	<0.10	0.10	MG/KG	11/08/88	SH
NICKEL	10	4.0	MG/KG	10/31/88	GG
SELENIUM	<0.10	0.10	MG/KG	11/10/88	MS
SILVER	<1.0	1.0	MG/KG	10/31/88	NH
THALLIUM	0.23	0.10	MG/KG	11/16/88	MS
ZINC	32	5.0	MG/KG	10/31/88	GG

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

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ATTACHMENT NN66
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ANALYSIS REPORT FOR BASE NEUTRAL EXTRACTABLES BY GC/MS

CLIENT : SORGE
LAB SAMPLE #: E815411
MATRIX : SOIL

METHOD : SW846 8270
ANALYSIS DATE: 11/07/88
DATA FILE : >D4109

	COMPOUND	RESULT (ug/kg)	MDL (ug/kg)	Q
1)	ACENAPHTHENE	ND	550	
2)	ACENAPHTHYLENE	ND	550	
3)	ANTHRACENE	ND	550	
4)	BENZIDENE	ND	2700	
5)	BENZO(A)ANTHRACENE	ND	550	
6)	BENZO(A)PYRENE	ND	550	
7)	BENZO(B)FLUORANTHENE	ND	550	
8)	BENZO(K)FLUORANTHENE	ND	550	
9)	BENZO(G,H,I)PERYLENE	ND	550	
10)	BIS(2-CHLOROETHOXY)METHANE	ND	550	
11)	BIS(2-CHLOROETHYL)ETHER	ND	550	
12)	BIS(2-CHLOROISOPROPYL)ETHER	ND	550	
13)	BIS(2-ETHYLHEXYL)PHTHALATE	ND	550	
14)	4-BROMOPHENYL PHENYL ETHER	ND	550	
15)	BUTYL BENZYL PHTHALATE	510	550	J
16)	2-CHLORONAPHTHALENE	ND	550	
17)	4-CHLOROPHENYL PHENYL ETHER	ND	550	
18)	CHRYSENE	ND	550	
19)	DIBENZO(A,H)ANTHRACENE	ND	550	
20)	1,2-DICHLOROBENZENE	ND	550	
21)	1,3-DICHLOROBENZENE	ND	550	
22)	1,4-DICHLOROBENZENE	ND	550	
23)	3,3'-DICHLOROBENZIDENE	ND	1100	
24)	DIETHYL PHTHALATE	ND	550	
25)	DIMETHYL PHTHALATE	ND	550	
26)	DI-N-BUTYL PHTHALATE	3500	550	
27)	2,4-DINITROTOLUENE	ND	550	
28)	2,6-DINITROTOLUENE	ND	550	
29)	DI-N-OCTYL PHTHALATE	ND	550	
30)	1,2-DIPHENYLHYDRAZINE	ND	550	
31)	FLUORANTHENE	ND	550	
32)	FLUORENE	ND	550	
33)	HEXACHLOROBENZENE	ND	550	
34)	HEXACHLOROBUTADIENE	ND	550	
35)	HEXACHLOROCYCLOPENTADIENE	ND	550	
36)	HEXACHLOROETHANE	ND	550	
37)	INDENO(1,2,3-CD)PYRENE	ND	550	
38)	ISOPHORONE	ND	550	
39)	NAPHTHALENE	ND	550	
40)	NITROBENZENE	ND	550	
41)	N-NITROSODIMETHYLAMINE	ND	550	
42)	N-NITROSODI-N-PROPYLAMINE	ND	550	
43)	N-NITROSODIPHENYLAMINE	ND	550	
44)	PHENANTHRENE	ND	550	
45)	PYRENE	ND	550	
46)	1,2,4-TRICHLOROBENZENE	ND	550	

ND = NOT DETECTED
MDL= METHOD DETECTION LIMIT

QUALIFIERS (Q)

J =INDICATES AN ESTIMATED VALUE BELOW MDL
B =INDICATES COMPOUND FOUND IN THE ASSOCIATED BLANK AS WELL AS IN SAMPLE

ATTACHMENT NN 67

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: SORGE

Batch Number: MS-S-270

Lab Sample ID: E815411

Extraction Date: 11/2/88

Lab File ID: D04109

Date Analyzed: 11/07/88 18:36

Matrix: SOIL FOR BN

Number TICs Found: 7

CONCENTRATION UNITS: ug/kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	124	Ethane, 1,1,2-trichloro-	7.88	530.	/
2.	13091162	Butanamide, N-ethyl- (9CI)	8.02	340.	/
3.	1528309	Cyclopentane, methylene- (8C	8.60	220.	/
4.	115220	2-Butanone, 3-hydroxy-3-meth	9.71	750.	/
5.	196	Ethane, 1,1,2,2-tetrachloro-	11.71	920.	/
6.	14979396	3-Heptanol, 4-methyl- (VAN8C	12.25	380.	/
7.		Unknown	12.82	2200.	
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					

QUALIFIERS(Q):
(1)-THIS COMPOUND (OR SIMILAR SPECTRA) FOUND IN LAB BLANK.
(2)-INTERNAL OR SURROGATE STANDARD ADDED BY LABORATORY.
(3)-THIS COMPOUND ALREADY IDENTIFIED AND REPORTED AS TARGET COMPOUND.
(4)-PROBABLE BACKGROUND DUE TO SOLVENT OR CO2.

FORM I SV-TIC

ATTACHMENT NN68

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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815411	10/19/88	11:35	AC	SOIL - PI-37C, AREA 3, 5-5.5 PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<50	50	MG/KG	11/01/88	JK
SOLIDS, TOTAL PERCENT	90	2.0	%	10/26/88	GRM
CADMIUM	4.2	0.50	MG/KG	10/31/88	GG
SILVER	2.6	1.0	MG/KG	10/31/88	RH

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

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ACCUTEST®
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

ANALYSIS REPORT FOR BASE NEUTRAL EXTRACTABLES BY GC/MS

CLIENT : SORGE
LAB SAMPLE #: E815412
MATRIX : SOIL

METHOD : SW846 8270
ANALYSIS DATE: 11/07/88
DATA FILE : >D4110

	COMPOUND	RESULT (ug/kg)	MDL (ug/kg)	Q
1)	ACENAPHTHENE	ND	540	
2)	ACENAPHTHYLENE	ND	540	
3)	ANTHRACENE	100	540	J
4)	BENZIDENE	ND	2700	
5)	BENZO(A)ANTHRACENE	760	540	
6)	BENZO(A)PYRENE	750	540	
7)	BENZO(B)FLUORANTHENE	870	540	
8)	BENZO(K)FLUORANTHENE	690	540	
9)	BENZO(G,H,I)PERYLENE	600	540	
10)	BIS(2-CHLOROETHOXY)METHANE	ND	540	
11)	BIS(2-CHLOROETHYL)ETHER	ND	540	
12)	BIS(2-CHLOROISOPROPYL)ETHER	ND	540	
13)	BIS(2-ETHYLHEXYL)PHTHALATE	170	540	J
14)	4-BROMOPHENYL PHENYL ETHER	ND	540	
15)	BUTYL BENZYL PHTHALATE	490	540	J
16)	2-CHLORONAPHTHALENE	ND	540	
17)	4-CHLOROPHENYL PHENYL ETHER	ND	540	
18)	CHRYSENE	1200	540	
19)	DIBENZO(A,H)ANTHRACENE	200	540	J
20)	1,2-DICHLOROBENZENE	ND	540	
21)	1,3-DICHLOROBENZENE	ND	540	
22)	1,4-DICHLOROBENZENE	ND	540	
23)	3,3'-DICHLOROBENZIDENE	ND	1100	
24)	DIETHYL PHTHALATE	ND	540	
25)	DIMETHYL PHTHALATE	ND	540	
26)	DI-N-BUTYL PHTHALATE	4100	540	
27)	2,4-DINITROTOLUENE	ND	540	
28)	2,6-DINITROTOLUENE	ND	540	
29)	DI-N-OCTYL PHTHALATE	ND	540	
30)	1,2-DIPHENYLHYDRAZINE	ND	540	
31)	FLUORANTHENE	1900	540	
32)	FLUORENE	ND	540	
33)	HEXACHLOROBENZENE	ND	540	
34)	HEXACHLOROBUTADIENE	ND	540	
35)	HEXACHLOROCYCLOPENTADIENE	ND	540	
36)	HEXACHLOROETHANE	ND	540	
37)	INDENO(1,2,3-CD)PYRENE	480	540	J
38)	ISOPHORONE	ND	540	
39)	NAPHTHALENE	ND	540	
40)	NITROBENZENE	ND	540	
41)	N-NITROSODIMETHYLAMINE	ND	540	
42)	N-NITROSODI-N-PROPYLAMINE	ND	540	
43)	N-NITROSODIPHENYLAMINE	ND	540	
44)	PHENANTHRENE	1200	540	
45)	PYRENE	1500	540	
46)	1,2,4-TRICHLOROBENZENE	ND	540	

ND = NOT DETECTED
MDL= METHOD DETECTION LIMIT

QUALIFIERS (Q)

J =INDICATES AN ESTIMATED VALUE BELOW MDL
B =INDICATES COMPOUND FOUND IN THE ASSOCIATED BLANK AS WELL AS IN SAMPLE

ATTACHMENT NN10

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: SORGE

Batch Number: MS-S-270

Lab Sample ID: E815412

Extraction Date: 11/2/88

Lab File ID: >D4110

Date Analyzed: 11/07/88 19:57

Matrix: SOIL FOR BN

Number TICs found: 12

CONCENTRATION UNITS: ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	124	Ethane, 1,1,2-trichloro-	7.88	220.	/
2.	13091162	Butanamide, N-ethyl- (9CI)	8.02	260.	/
3.	115195	3-Butyn-2-ol, 2-methyl- (8CI	8.38	1100.	
4.	930223	Oxirane, ethenyl- (9CI)	9.24	1000.	
5.		Unknown	9.71	560.	/
6.	199	Ethane, 1,1,2,2-tetrachloro-	11.71	440.	/
7.	5076200	Oxirane, tetramethyl- (9CI)	12.25	340.	/
8.		Unknown	12.82	2200.	
9.	610480	Anthracene, 1-methyl- (8CI9C	31.57	290.	
10.	238846	11H-Benzo[a]fluorene (8CI9CI	35.13	320.	
11.	238846	11H-Benzo[a]fluorene (8CI9CI	35.49	250.	
12.	192972	Benzo[e]pyrene (8CI9CI)	49.83	1000.	
13.					
14.					
15.					

QUALIFIERS(Q);
(1)-THIS COMPOUND (OR SIMILAR SPECTRA) FOUND IN LAB BLANK.
(2)-INTERNAL OR SURROGATE STANDARD ADDED BY LABORATORY.
(3)-THIS COMPOUND ALREADY IDENTIFIED AND REPORTED AS TARGET COMPOUND.
(4)-PROBABLE BACKGROUND DUE TO SOLVENT OR CO2.

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ATTACHMENT NN 11
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ANALYSIS REPORT

MPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
15412	10/19/88	12:45	AC	SOIL - PI-38A, AREA 3, 0-6" PLANT INDUSTRIES

IST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	84	50	MG/KG	11/01/88	JK
LIDS, TOTAL PERCENT	93	2.0	%	10/26/88	GRM
ANTIMONY	3.0	0.10	MG/KG	11/15/88	MS
ISENIC	8.5	0.10	MG/KG	11/15/88	MS
BERYLLIUM	<0.50	0.50	MG/KG	10/31/88	GG
ADMIUM	4.1	0.50	MG/KG	10/31/88	GG
IROMIUM	30	2.5	MG/KG	10/31/88	GG
COPPER	39	2.0	MG/KG	10/31/88	GG
EAD	18	10	MG/KG	11/03/88	NH
MERCURY	0.13	0.10	MG/KG	11/08/88	SH
ICKEL	11	4.0	MG/KG	10/31/88	GG
SELENIUM	0.57	0.10	MG/KG	11/10/88	MS
ILVER	1.8	1.0	MG/KG	10/31/88	NH
THALLIUM	<0.10	0.10	MG/KG	11/08/88	MS
INC	160	5.0	MG/KG	10/31/88	GG

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815413	10/19/88	12:55	AC	SOIL - PI-38B, AREA 3, 3.0-3.5' PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<50	50	MG/KG	11/01/88	JK
SOLIDS, TOTAL PERCENT	95	2.0	%	10/26/88	GRM
ANTIMONY	<0.10	0.10	MG/KG	11/15/88	MS
ARSENIC	1.7	0.10	MG/KG	11/15/88	MS
BERYLLIUM	<0.50	0.50	MG/KG	10/31/88	GG
CADMIUM	0.89	0.50	MG/KG	10/31/88	GG
CHROMIUM	17	2.5	MG/KG	10/31/88	GG
COPPER	<2.0	2.0	MG/KG	10/31/88	GG
LEAD	<10	10	MG/KG	11/03/88	NH
MERCURY	<0.10	0.10	MG/KG	11/08/88	SH
NICKEL	5.2	4.0	MG/KG	10/31/88	GG
SELENIUM	0.10	0.10	MG/KG	11/10/88	MS
SILVER	<1.0	1.0	MG/KG	10/31/88	NH
THALLIUM	<0.10	0.10	MG/KG	11/08/88	MS
ZINC	23	5.0	MG/KG	10/31/88	GG

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
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CTDEP CERTIFICATION PH-0585

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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815414	10/19/88	13:00	AC	SOIL - PI-38C, AREA 3, 5-5.5' PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<50	50	MG/KG	11/01/88	JK
SOLIDS, TOTAL PERCENT	90	2.0	%	10/26/88	GRM
CADMIUM	1.9	0.50	MG/KG	10/31/88	GG
SILVER	<1.0	1.0	MG/KG	10/31/88	NH

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815415	10/20/88	15:10	AC	SOIL - PI-30A, AREA 2, 0-5' PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	180	50	MG/KG	11/01/88	JK
SOLIDS, TOTAL PERCENT	95	2.0	%	10/26/88	GRM
ANTIMONY	0.58	0.10	MG/KG	11/15/88	MS
ARSENIC	4.2	0.10	MG/KG	11/15/88	MS
BERYLLIUM	<0.50	0.50	MG/KG	10/31/88	GG
CADMIUM	1.6	0.50	MG/KG	10/31/88	GG
CHROMIUM	23	2.5	MG/KG	10/31/88	GG
COPPER	14	2.0	MG/KG	10/31/88	GG
LEAD	70	10	MG/KG	11/03/88	NH
MERCURY	<0.10	0.10	MG/KG	11/08/88	SH
NICKEL	6.9	4.0	MG/KG	10/31/88	GG
SELENIUM	0.29	0.10	MG/KG	11/15/88	MS
SILVER	1.1	1.0	MG/KG	10/31/88	NH
THALLIUM	<0.10	0.10	MG/KG	11/08/88	MS
ZINC	51	5.0	MG/KG	10/31/88	GG

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815416	10/20/88	15:15	AC	SOIL - PI-30B, AREA 2, 1-1.5' PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<50	50	MG/KG	11/01/88	JK
SOLIDS, TOTAL PERCENT	96	2.0	%	10/26/88	GRM
ANTIMONY	0.13	0.10	MG/KG	11/15/88	MS
ARSENIC	2.7	0.10	MG/KG	11/15/88	MS
BERYLLIUM	<0.50	0.50	MG/KG	10/31/88	GG
CADMIUM	0.68	0.50	MG/KG	10/31/88	GG
CHROMIUM	13	2.5	MG/KG	10/31/88	GG
COPPER	10	2.0	MG/KG	10/31/88	GG
LEAD	130	10	MG/KG	11/03/88	NH
MERCURY	0.14	0.10	MG/KG	11/08/88	SH
NICKEL	4.2	4.0	MG/KG	10/31/88	GG
SELENIUM	0.14	0.10	MG/KG	11/15/88	MS
SILVER	<1.0	1.0	MG/KG	10/31/88	NH
THALLIUM	0.21	0.10	MG/KG	11/16/88	MS
ZINC	20	5.0	MG/KG	10/31/88	GG

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815417	10/20/88	16:15	AC	SOIL - PI-30C, AREA 2, 7-7.5' PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<50	50	MG/KG	11/01/88	JK
SOLIDS, TOTAL PERCENT	85	2.0	%	10/26/88	GRM
ANTIMONY	<0.10	0.10	MG/KG	11/15/88	MS
ARSENIC	1.3	0.10	MG/KG	11/15/88	MS
BERYLLIUM	<0.50	0.50	MG/KG	10/31/88	GG
CADMIUM	0.57	0.50	MG/KG	10/31/88	GG
CHROMIUM	12	2.5	MG/KG	10/31/88	GG
COPPER	3.4	2.0	MG/KG	10/31/88	GG
LEAD	120	10	MG/KG	11/03/88	NH
MERCURY	<0.10	0.10	MG/KG	11/08/88	SH
NICKEL	5.8	4.0	MG/KG	10/31/88	GG
SELENIUM	<0.10	0.10	MG/KG	11/15/88	MS
SILVER	<1.0	1.0	MG/KG	10/31/88	NH
THALLIUM	<0.10	0.10	MG/KG	11/16/88	MS
ZINC	24	5.0	MG/KG	10/31/88	GG

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815426	10/20/88	12:05	AC	SOIL - PI-44C, AREA 4, 8-8.5' PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<50	50	MG/KG	11/03/88	TK
SOLIDS, TOTAL PERCENT	79	2.0	%	10/26/88	GRM

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

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ANALYSIS REPORT FOR BASE NEUTRAL EXTRACTABLES BY GC/MS

CLIENT : J.M. SORGE
LAB SAMPLE #: E815427
MATRIX : SOIL

METHOD : SW846 8270
ANALYSIS DATE: 11/10/88
DATA FILE : >C6783

	COMPOUND	RESULT (ug/kg)	MDL (ug/kg)	Q
1)	ACENAPHTHENE	ND	520	
2)	ACENAPHTHYLENE	ND	520	
3)	ANTHRACENE	ND	520	
4)	BENZIDENE	ND	2600	
5)	BENZO(A)ANTHRACENE	390	520	J
6)	BENZO(A)PYRENE	ND	520	
7)	BENZO(B)FLUORANTHENE	780	520	
8)	BENZO(K)FLUORANTHENE	ND	520	
9)	BENZO(G,H,I)PERYLENE	320	520	J
10)	BIS(2-CHLOROETHOXY)METHANE	ND	520	
11)	BIS(2-CHLOROETHYL)ETHER	ND	520	
12)	BIS(2-CHLOROISOPROPYL)ETHER	ND	520	
13)	BIS(2-ETHYLHEXYL)PHTHALATE	ND	520	
14)	4-BROMOPHENYL PHENYL ETHER	ND	520	
15)	BUTYL BENZYL PHTHALATE	ND	520	
16)	2-CHLORONAPHTHALENE	ND	520	
17)	4-CHLOROPHENYL PHENYL ETHER	ND	520	
18)	CHRYSENE	440	520	J
19)	DIBENZO(A,H)ANTHRACENE	ND	520	
20)	1,2-DICHLOROBENZENE	ND	520	
21)	1,3-DICHLOROBENZENE	ND	520	
22)	1,4-DICHLOROBENZENE	ND	520	
23)	3,3'-DICHLOROBENZIDENE	ND	1000	
24)	DIETHYL PHTHALATE	ND	520	
25)	DIMETHYL PHTHALATE	ND	520	
26)	DI-N-BUTYL PHTHALATE	1200	520	
27)	2,4-DINITROTOLUENE	ND	520	
28)	2,6-DINITROTOLUENE	ND	520	
29)	DI-N-OCTYL PHTHALATE	ND	520	
30)	1,2-DIPHENYLHYDRAZINE	ND	520	
31)	FLUORANTHENE	570	520	
32)	FLUORENE	ND	520	
33)	HEXACHLOROBENZENE	ND	520	
34)	HEXACHLOROBUTADIENE	ND	520	
35)	HEXACHLOROCYCLOPENTADIENE	ND	520	
36)	HEXACHLOROETHANE	ND	520	
37)	INDENO(1,2,3-CD)PYRENE	330	520	J
38)	ISOPHORONE	ND	520	
39)	NAPHTHALENE	ND	520	
40)	NITROBENZENE	ND	520	
41)	N-NITROSODIMETHYLAMINE	ND	520	
42)	N-NITROSODI-N-PROPYLAMINE	ND	520	
43)	N-NITROSODIPHENYLAMINE	ND	520	
44)	PHENANTHRENE	290	520	J
45)	PYRENE	590	520	
46)	1,2,4-TRICHLOROBENZENE	ND	520	

ND = NOT DETECTED
MDL= METHOD DETECTION LIMIT

QUALIFIERS (Q)

J =INDICATES AN ESTIMATED VALUE BELOW MDL
B =INDICATES COMPOUND FOUND IN THE ASSOCIATED BLANK AS WELL AS IN SAMPLE

ATTACHMENT NN9L

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: J.M. SORGE

Batch Number: MS-S-2~~7~~0

Lab Sample ID: E815427

Extraction Date: 11/~~10~~ 3/88

Lab File ID: >C6783

Date Analyzed: 11/10/88 18:10

Matrix: SOIL FOR BN

Number TICs found: 9

CONCENTRATION UNITS: ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	2.32	620.	
2.		Unknown	2.43	5900.	
3.	79016	Ethene, trichloro- (9CI)	2.61	710.	
4.	122	Ethane, 1,1,2-trichloro-	3.51	250.	
5.	115195	3-Butyn-2-ol, 2-methyl- (8CI	3.97	1300.	
6.	115195	3-Butyn-2-ol, 2-methyl- (8CI	4.62	1200.	
7.		Unknown	4.80	430.	
8.	199	Ethane, 1,1,2,2-tetrachloro-	6.41	590.	
9.	123751	Pyrrolidine (DOT)(8CI9CI)	6.88	280.	
10.					
11.					
12.					
13.					
14.					
15.					

QUALIFIERS(Q);
(1)-THIS COMPOUND (OR SIMILAR SPECTRA) FOUND IN LAB BLANK.
(2)-INTERNAL OR SURROGATE STANDARD ADDED BY LABORATORY.
(3)-THIS COMPOUND ALREADY IDENTIFIED AND REPORTED AS TARGET COMPOUND.
(4)-PROBABLE BACKGROUND DUE TO SOLVENT OR CO2.

FORM I SV-TIC

ATTACHMENT NN92

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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815427	10/20/88	12:10	AC	SOIL - PI-45A, AREA 4, 0-.5' PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<50	50	MG/KG	11/03/88	TM
SOLIDS, TOTAL PERCENT	96	2.0	%	10/26/88	GRM

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT NN93

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ANALYSIS REPORT FOR BASE NEUTRAL EXTRACTABLES BY GC/MS

CLIENT : J.M. SORGE
LAB SAMPLE #: E815428
MATRIX : SOIL

METHOD : SW846 8270
ANALYSIS DATE: 11/08/88
DATA FILE : >C6731

	COMPOUND	RESULT (ug/kg)	MDL (ug/kg)	Q
1)	ACENAPHTHENE	ND	500	
2)	ACENAPHTHYLENE	ND	500	
3)	ANTHRACENE	ND	500	
4)	BENZIDENE	ND	2500	
5)	BENZO(A)ANTHRACENE	ND	500	
6)	BENZO(A)PYRENE	ND	500	
7)	BENZO(B)FLUORANTHENE	ND	500	
8)	BENZO(K)FLUORANTHENE	ND	500	
9)	BENZO(G,H,I)PERYLENE	ND	500	
10)	BIS(2-CHLOROETHOXY)METHANE	ND	500	
11)	BIS(2-CHLOROETHYL)ETHER	ND	500	
12)	BIS(2-CHLOROISOPROPYL)ETHER	ND	500	
13)	BIS(2-ETHYLHEXYL)PHTHALATE	ND	500	
14)	4-BROMOPHENYL PHENYL ETHER	ND	500	
15)	BUTYL BENZYL PHTHALATE	ND	500	
16)	2-CHLORONAPHTHALENE	ND	500	
17)	4-CHLOROPHENYL PHENYL ETHER	ND	500	
18)	CHRYSENE	ND	500	
19)	DIBENZO(A,H)ANTHRACENE	ND	500	
20)	1,2-DICHLOROBENZENE	ND	500	
21)	1,3-DICHLOROBENZENE	ND	500	
22)	1,4-DICHLOROBENZENE	ND	500	
23)	3,3'-DICHLOROBENZIDENE	ND	1000	
24)	DIETHYL PHTHALATE	ND	500	
25)	DIMETHYL PHTHALATE	ND	500	
26)	DI-N-BUTYL PHTHALATE	340	500	J
27)	2,4-DINITROTOLUENE	ND	500	
28)	2,6-DINITROTOLUENE	ND	500	
29)	DI-N-OCTYL PHTHALATE	ND	500	
30)	1,2-DIPHENYLHYDRAZINE	ND	500	
31)	FLUORANTHENE	ND	500	
32)	FLUORENE	ND	500	
33)	HEXACHLOROBENZENE	ND	500	
34)	HEXACHLOROBUTADIENE	ND	500	
35)	HEXACHLOROCYCLOPENTADIENE	ND	500	
36)	HEXACHLOROETHANE	ND	500	
37)	INDENO(1,2,3-CD)PYRENE	ND	500	
38)	ISOPHORONE	ND	500	
39)	NAPHTHALENE	ND	500	
40)	NITROBENZENE	ND	500	
41)	N-NITROSODIMETHYLAMINE	ND	500	
42)	N-NITROSODI-N-PROPYLAMINE	ND	500	
43)	N-NITROSODIPHENYLAMINE	ND	500	
44)	PHENANTHRENE	ND	500	
45)	PYRENE	ND	500	
46)	1,2,4-TRICHLOROBENZENE	ND	500	

ND = NOT DETECTED
MDL= METHOD DETECTION LIMIT

QUALIFIERS (Q)

J =INDICATES AN ESTIMATED VALUE BELOW MDL
B =INDICATES COMPOUND FOUND IN THE ASSOCIATED BLANK AS WELL AS IN SAMPLE

ATTACHMENT NN94

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: J.M. SORGE

Batch Number: MS-S-272

Lab Sample ID: E815428

Extraction Date: 11/03/88

Lab File ID: >C6731

Date Analyzed: 11/08/88 3:43

Matrix: SOIL FOR BN

Number TICs found: 9

CONCENTRATION UNITS: ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	624782	Ethanamine, N-methyl- (9CI)	2.26	3100.	
2.		Unknown	2.40	1100.	
3.	646060	1,3-Dioxolane (8CI9CI)	2.55	11000.	
4.	107	Ethene, trichloro-	2.73	680.	
5.	60355	Acetamide (8CI9CI)	4.95	950.	
6.	196	Ethane, 1,1,2,2-tetrachloro-	6.49	500.	
7.	16106595	1-Hexene, 4,5-dimethyl- (8CI	6.96	300.	
8.		Unknown	33.39	250.	
9.		Unknown	34.68	250.	
10.					
11.					
12.					
13.					

QUALIFIERS(Q):
(1)-THIS COMPOUND (OR SIMILAR SPECTRA) FOUND IN LAB BLANK.
(2)-INTERNAL OR SURROGATE STANDARD ADDED BY LABORATOPY.
(3)-THIS COMPOUND ALREADY IDENTIFIED AND REPORTED AS TARGET COMPOUND.
(4)-PROBABLE BACKGROUND DUE TO SOLVENT OR CO2.

FORM I SV-TIC

ATTACHMENT NN95

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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815428	10/20/88	12:15	AC	SOIL - PI-45B, AREA 4, 1-1.5' PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<50	50	MG/KG	11/03/88	TM
SOLIDS, TOTAL PERCENT	97	2.0	%	10/26/88	GRM

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT NN96
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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815429	10/20/88	12:30	AC	SOIL - PI-45C, AREA 4, 8-8.5' PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<50	50	MG/KG	11/03/88	JK
SOLIDS, TOTAL PERCENT	90	2.0	%	10/26/88	GRM

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

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ANALYSIS REPORT FOR BASE NEUTRAL EXTRACTABLES BY GC/MS

CLIENT : J.M. SORGE
LAB SAMPLE #: E815430
MATRIX : SOIL

METHOD : SW846 8270
ANALYSIS DATE: 11/08/88
DATA FILE : >C6734

	COMPOUND	RESULT (ug/kg)	MDL (ug/kg)	Q
1)	ACENAPHTHENE	ND	520	
2)	ACENAPHTHYLENE	ND	520	
3)	ANTHRACENE	ND	520	
4)	BENZIDENE	ND	2600	
5)	BENZO(A)ANTHRACENE	ND	520	
6)	BENZO(A)PYRENE	190	520	J
7)	BENZO(B)FLUORANTHENE	160	520	J
8)	BENZO(K)FLUORANTHENE	150	520	J
9)	BENZO(G,H,I)PERYLENE	100	520	J
10)	BIS(2-CHLOROETHOXY)METHANE	ND	520	
11)	BIS(2-CHLOROETHYL)ETHER	ND	520	
12)	BIS(2-CHLOROISOPROPYL)ETHER	ND	520	
13)	BIS(2-ETHYLHEXYL)PHTHALATE	ND	520	
14)	4-BROMOPHENYL PHENYL ETHER	ND	520	
15)	BUTYL BENZYL PHTHALATE	ND	520	
16)	2-CHLORONAPHTHALENE	ND	520	
17)	4-CHLOROPHENYL PHENYL ETHER	ND	520	
18)	CHRYSENE	180	520	J
19)	DIBENZO(A,H)ANTHRACENE	ND	520	
20)	1,2-DICHLOROBENZENE	ND	520	
21)	1,3-DICHLOROBENZENE	ND	520	
22)	1,4-DICHLOROBENZENE	ND	520	
23)	3,3'-DICHLOROBENZIDENE	ND	1000	
24)	DIETHYL PHTHALATE	ND	520	
25)	DIMETHYL PHTHALATE	ND	520	
26)	DI-N-BUTYL PHTHALATE	540	520	
27)	2,4-DINITROTOLUENE	ND	520	
28)	2,6-DINITROTOLUENE	ND	520	
29)	DI-N-OCTYL PHTHALATE	ND	520	
30)	1,2-DIPHENYLHYDRAZINE	ND	520	
31)	FLUORANTHENE	210	520	J
32)	FLUORENE	ND	520	
33)	HEXACHLOROBENZENE	ND	520	
34)	HEXACHLOROBUTADIENE	ND	520	
35)	HEXACHLOROCYCLOPENTADIENE	ND	520	
36)	HEXACHLOROETHANE	ND	520	
37)	INDENO(1,2,3-CD)PYRENE	ND	520	
38)	ISOPHORONE	ND	520	
39)	NAPHTHALENE	ND	520	
40)	NITROBENZENE	ND	520	
41)	N-NITROSODIMETHYLAMINE	ND	520	
42)	N-NITROSODI-N-PROPYLAMINE	ND	520	
43)	N-NITROSODIPHENYLAMINE	ND	520	
44)	PHENANTHRENE	120	520	J
45)	PYRENE	230	520	J
46)	1,2,4-TRICHLOROBENZENE	ND	520	

ND = NOT DETECTED
MDL= METHOD DETECTION LIMIT

QUALIFIERS (Q)

J =INDICATES AN ESTIMATED VALUE BELOW MDL
B =INDICATES COMPOUND FOUND IN THE ASSOCIATED BLANK AS WELL AS IN SAMPLE

ATTACHMENT NN98

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: J.M. SORGE

Batch Number: MS-S-272

Lab Sample ID: E815430

Extraction Date: 11/03/88

Lab File ID: C6734

Date Analyzed: 11/08/88 6:44

Matrix: SOIL FOR BN

Number TICs found: 12

CONCENTRATION UNITS: ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	2.26	7900.	
2.	994058	Butane, 2-methoxy-2-methyl-	2.51	5700.	
3.	1759531	Cyclopropanecarboxylic acid	2.58	480.	
4.	107211	1,2-Ethanediol (9CI)	2.69	380.	
5.	123	Ethane, 1,1,2-trichloro-	3.62	510.	
6.	115195	3-Butyn-2-ol, 2-methyl- (8CI	4.09	1100.	
7.	115195	3-Butyn-2-ol, 2-methyl- (8CI	4.70	340.	
8.	75912	Hydroperoxide, 1,1-dimethyle	4.95	870.	
9.	196	Ethane, 1,1,2,2-tetrachloro-	6.49	600.	
10.	2051787	Butanoic acid, 2-propenyl es	6.96	340.	
11.		Unknown	33.37	740.	
12.	56771483	Cyclopropanamine, N-methyl-1	34.67	3100.	

QUALIFIERS(Q):
(1)-THIS COMPOUND (OR SIMILAR SPECTRA) FOUND IN LAB BLANK.
(2)-INTERNAL OR SURROGATE STANDARD ADDED BY LABORATORY.
(3)-THIS COMPOUND ALREADY IDENTIFIED AND REPORTED AS TARGET COMPOUND.
(4)-PROBABLE BACKGROUND DUE TO SOLVENT OR CO2.

FORM I SV-TIC

ATTACHMENT NN99

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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815430	10/20/88	12:40	AC	SOIL - PI-46A, AREA 4, 0-.5' PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<50	50	MG/KG	11/03/88	JK
SOLIDS, TOTAL PERCENT	94	2.0	%	10/26/88	GRM

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

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ATTACHMENT NN100

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ANALYSIS REPORT FOR BASE NEUTRAL EXTRACTABLES BY GC/MS

CLIENT : J.M. SORGE
LAB SAMPLE #: E815431
MATRIX : SOIL

METHOD : SW846 8270
ANALYSIS DATE: 11/08/88
DATA FILE : >C6732

	COMPOUND	RESULT (ug/kg)	MDL (ug/kg)	Q
1)	ACENAPHTHENE	ND	510	
2)	ACENAPHTHYLENE	ND	510	
3)	ANTHRACENE	ND	510	
4)	BENZIDENE	ND	2600	
5)	BENZO(A)ANTHRACENE	ND	510	
6)	BENZO(A)PYRENE	ND	510	
7)	BENZO(B)FLUORANTHENE	ND	510	
8)	BENZO(K)FLUORANTHENE	ND	510	
9)	BENZO(G,H,I)PERYLENE	ND	510	
10)	BIS(2-CHLOROETHOXY)METHANE	ND	510	
11)	BIS(2-CHLOROETHYL)ETHER	ND	510	
12)	BIS(2-CHLOROISOPROPYL)ETHER	ND	510	
13)	BIS(2-ETHYLHEXYL)PHTHALATE	ND	510	
14)	4-BROMOPHENYL PHENYL ETHER	ND	510	
15)	BUTYL BENZYL PHTHALATE	ND	510	
16)	2-CHLORONAPHTHALENE	ND	510	
17)	4-CHLOROPHENYL PHENYL ETHER	ND	510	
18)	CHRYSENE	ND	510	
19)	DIBENZO(A,H)ANTHRACENE	ND	510	
20)	1,2-DICHLOROBENZENE	ND	510	
21)	1,3-DICHLOROBENZENE	ND	510	
22)	1,4-DICHLOROBENZENE	ND	510	
23)	3,3'-DICHLOROBENZIDENE	ND	1000	
24)	DIETHYL PHTHALATE	ND	510	
25)	DIMETHYL PHTHALATE	ND	510	
26)	DI-N-BUTYL PHTHALATE	360	510	J
27)	2,4-DINITROTOLUENE	ND	510	
28)	2,6-DINITROTOLUENE	ND	510	
29)	DI-N-OCTYL PHTHALATE	ND	510	
30)	1,2-DIPHENYLHYDRAZINE	ND	510	
31)	FLUORANTHENE	ND	510	
32)	FLUORENE	ND	510	
33)	HEXACHLOROBENZENE	ND	510	
34)	HEXACHLOROBUTADIENE	ND	510	
35)	HEXACHLOROCYCLOPENTADIENE	ND	510	
36)	HEXACHLOROETHANE	ND	510	
37)	INDENO(1,2,3-CD)PYRENE	ND	510	
38)	ISOPHORONE	ND	510	
39)	NAPHTHALENE	ND	510	
40)	NITROBENZENE	ND	510	
41)	N-NITROSODIMETHYLAMINE	ND	510	
42)	N-NITROSODI-N-PROPYLAMINE	ND	510	
43)	N-NITROSODIPHENYLAMINE	ND	510	
44)	PHENANTHRENE	ND	510	
45)	PYRENE	ND	510	
46)	1,2,4-TRICHLOROBENZENE	ND	510	

ND = NOT DETECTED
MDL= METHOD DETECTION LIMIT

QUALIFIERS (Q)

J =INDICATES AN ESTIMATED VALUE BELOW MDL
B =INDICATES COMPOUND FOUND IN THE ASSOCIATED BLANK AS WELL AS IN SAMPLE

ATTACHMENT NN 101

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2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: J.M. SORGE

Batch Number: MS-S-272

Lab Sample ID: E815431

Extraction Date: 11/03/88

Lab File ID: C6732

Date Analyzed: 11/08/88 4:43

Matrix: SOIL FOR BN

Number TICs found: 12

CONCENTRATION UNITS: ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	81	Chloroform	2.15	4200.	4
2.	113008	Guanidine (8CI9CI)	2.30	5600.	1
3.	563804	2-Butanone, 3-methyl- (8CI9C	2.40	1600.	1
4.	646060	1,3-Dioxolane (8CI9CI)	2.55	11000.	1
5.	107211	1,2-Ethanediol (9CI)	2.69	730.	
6.	123	Ethane, 1,1,2-trichloro-	3.66	370.	
7.	2402064	Cyclopropane, 1,2-dimethyl-,	4.16	810.	1
8.	930223	Oxirane, ethenyl- (9CI)	4.73	870.	
9.	67641	2-Propanone (9CI)	4.95	960.	1
10.	196	Ethane, 1,1,2,2-tetrachloro-	6.49	510.	
11.	16106595	1-Hexene, 4,5-dimethyl- (8CI	6.96	340.	1
12.		Unknown	33.39	430.	1
13.					

QUALIFIERS(Q):
(1)-THIS COMPOUND (OR SIMILAR SPECTRA) FOUND IN LAB BLANK.
(2)-INTERNAL OR SURROGATE STANDARD ADDED BY LABORATORY.
(3)-THIS COMPOUND ALREADY IDENTIFIED AND REPORTED AS TARGET COMPOUND.
(4)-PROBABLE BACKGROUND DUE TO SOLVENT OR CO2.

FORM I SV-TIC

ATTACHMENT NN102
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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815431	10/20/88	12:45	AC	SOIL - PI-46B, AREA 4, 1-1.5' PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<50	50	MG/KG	11/03/88	JK
SOLIDS, TOTAL PERCENT	97	2.0	%	10/26/88	GRM

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT NN003

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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815432	10/20/88	12:55	AC	SOIL - PI-46C, AREA 4, 7.75-8.25' PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<50	50	MG/KG	11/03/88	JK
SOLIDS, TOTAL PERCENT	80	2.0	%	10/26/88	GRM

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
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ATTACHMENT NN104

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ANALYSIS REPORT FOR BASE NEUTRAL EXTRACTABLES BY GC/MS

CLIENT : J.M. SORGE
LAB SAMPLE #: E815433
MATRIX : SOIL

METHOD : SW846 8270
ANALYSIS DATE: 11/08/88
DATA FILE : >C6735

	COMPOUND	RESULT (ug/kg)	MDL (ug/kg)	Q
1)	ACENAPHTHENE	ND	540	
2)	ACENAPHTHYLENE	ND	540	
3)	ANTHRACENE	ND	540	
4)	BENZIDENE	ND	2700	
5)	BENZO(A)ANTHRACENE	180	540	J
6)	BENZO(A)PYRENE	210	540	J
7)	BENZO(B)FLUORANTHENE	240	540	J
8)	BENZO(K)FLUORANTHENE	170	540	J
9)	BENZO(G,H,I)PERYLENE	ND	540	
10)	BIS(2-CHLOROETHOXY)METHANE	ND	540	
11)	BIS(2-CHLOROETHYL)ETHER	ND	540	
12)	BIS(2-CHLOROISOPROPYL)ETHER	ND	540	
13)	BIS(2-ETHYLHEXYL)PHTHALATE	95	540	J
14)	4-BROMOPHENYL PHENYL ETHER	ND	540	
15)	BUTYL BENZYL PHTHALATE	ND	540	
16)	2-CHLORONAPHTHALENE	ND	540	
17)	4-CHLOROPHENYL PHENYL ETHER	ND	540	
18)	CHRYSENE	310	540	J
19)	DIBENZO(A,H)ANTHRACENE	ND	540	
20)	1,2-DICHLOROBENZENE	ND	540	
21)	1,3-DICHLOROBENZENE	ND	540	
22)	1,4-DICHLOROBENZENE	ND	540	
23)	3,3'-DICHLOROBENZIDENE	ND	1100	
24)	DIETHYL PHTHALATE	ND	540	
25)	DIMETHYL PHTHALATE	ND	540	
26)	DI-N-BUTYL PHTHALATE	680	540	
27)	2,4-DINITROTOLUENE	ND	540	
28)	2,6-DINITROTOLUENE	ND	540	
29)	DI-N-OCTYL PHTHALATE	76	540	J
30)	1,2-DIPHENYLHYDRAZINE	ND	540	
31)	FLUORANTHENE	280	540	J
32)	FLUORENE	ND	540	
33)	HEXACHLOROBENZENE	ND	540	
34)	HEXACHLOROBUTADIENE	ND	540	
35)	HEXACHLOROCYCLOPENTADIENE	ND	540	
36)	HEXACHLOROETHANE	ND	540	
37)	INDENO(1,2,3-CD)PYRENE	140	540	J
38)	ISOPHORONE	ND	540	
39)	NAPHTHALENE	ND	540	
40)	NITROBENZENE	ND	540	
41)	N-NITROSODIMETHYLAMINE	ND	540	
42)	N-NITROSODI-N-PROPYLAMINE	ND	540	
43)	N-NITROSODIPHENYLAMINE	ND	540	
44)	PHENANTHRENE	170	540	J
45)	PYRENE	320	540	J
46)	1,2,4-TRICHLOROBENZENE	ND	540	

ND = NOT DETECTED
MDL= METHOD DETECTION LIMIT

QUALIFIERS (Q)

J =INDICATES AN ESTIMATED VALUE BELOW MDL
B =INDICATES COMPOUND FOUND IN THE ASSOCIATED BLANK AS WELL AS IN SAMPLE

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: J.M. SORGE

Batch Number: MS-S-272

Lab Sample ID: E815433

Extraction Date: 11/03/88

Lab File ID: >C6735

Date Analyzed: 11/08/88 7:44

Matrix: SOIL FOR BN

Number TICs found: 14

CONCENTRATION UNITS: ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	2.26	4700.	
2. 75092	Methane, dichloro- (8CI9CI)	2.33	230.	
3. 594365	Butane, 2-chloro-2-methyl- (I	2.44	350.	
4.	Unknown	2.55	6800.	
5. 79016	Ethene, trichloro- (9CI)	2.73	430.	
6. 79005	Ethane, 1,1,2-trichloro- (8CI	3.63	330.	
7. 115195	3-Butyn-2-ol, 2-methyl- (8CI	4.09	1300.	
8. 930223	Oxirane, ethenyl- (9CI)	4.74	1500.	
9. 67641	2-Propanone (9CI)	4.95	1100.	
10. 79345	Ethane, 1,1,2,2-tetrachloro-	6.50	710.	
11. 4316658	1-Hexene, 3,5,5-trimethyl- (I	6.96	290.	
12.	Unknown	32.01	280.	
13.	Unknown	34.60	900.	
14. 27551117	4-Thiazoleethanol, 2-(p-chlo	34.67	1100.	

QUALIFIERS(Q);
(1)-THIS COMPOUND (OR SIMILAR SPECTRA) FOUND IN LAB BLANK.
(2)-INTERNAL OR SURROGATE STANDARD ADDED BY LABORATORY.
(3)-THIS COMPOUND ALREADY IDENTIFIED AND REPORTED AS TARGET COMPOUND.
(4)-PROBABLE BACKGROUND DUE TO SOLVENT OR CO2.

FORM I SV-TIC

ATTACHMENT NN 106

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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815433	10/20/88	13:05	AC	SOIL - PI-47A, AREA 4, 0-.5' PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<50	50	MG/KG	11/04/88	TM
SOLIDS, TOTAL PERCENT	92	2.0	%	10/26/88	GRM
ANTIMONY	0.96	0.10	MG/KG	11/15/88	MS
ARSENIC	23	0.10	MG/KG	11/15/88	MS
BERYLLIUM	<0.50	0.50	MG/KG	10/31/88	GG
CADMIUM	2.0	0.50	MG/KG	10/31/88	GG
CHROMIUM	20	2.5	MG/KG	10/31/88	GG
COPPER	44	2.0	MG/KG	10/31/88	GG
LEAD	85	10	MG/KG	11/03/88	NH
MERCURY	0.11	0.10	MG/KG	11/08/88	SH
NICKEL	12	4.0	MG/KG	10/31/88	GG
SELENIUM	0.65	0.10	MG/KG	11/15/88	MS
SILVER	1.1	1.0	MG/KG	10/31/88	NH
THALLIUM	0.52	0.10	MG/KG	11/16/88	MS
ZINC	170	5.0	MG/KG	10/31/88	GG

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

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ATTACHMENT N.N.6

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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815434	10/20/88	13:15	AC	SOIL - PI-47B, AREA 4, 1-1.5' PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<50	50	MG/KG	11/03/88	TM
SOLIDS, TOTAL PERCENT	95	2.0	%	10/26/88	GRM

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815435	10/20/88	13:30	AC	SOIL - PI-47C, AREA 4, 7.75-8.25' PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<50	50	MG/KG	11/03/88	JK
SOLIDS, TOTAL PERCENT	79	2.0	%	10/26/88	GRM

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

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ANALYSIS REPORT FOR BASE NEUTRAL EXTRACTABLES BY GC/MS

CLIENT : J.M. SORGE
LAB SAMPLE #: E815436
MATRIX : SOIL

METHOD : SW846 8270
ANALYSIS DATE: 11/09/88
DATA FILE : >C6769

	COMPOUND	RESULT (ug/kg)	MDL (ug/kg)	Q
1)	ACENAPHTHENE	ND	520	
2)	ACENAPHTHYLENE	ND	520	
3)	ANTHRACENE	ND	520	
4)	BENZIDENE	ND	2600	
5)	BENZO(A)ANTHRACENE	400	520	J
6)	BENZO(A)PYRENE	460	520	J
7)	BENZO(B)FLUORANTHENE	830	520	
8)	BENZO(K)FLUORANTHENE	ND	520	
9)	BENZO(G,H,I)PERYLENE	360	520	J
10)	BIS(2-CHLOROETHOXY)METHANE	ND	520	
11)	BIS(2-CHLOROETHYL)ETHER	ND	520	
12)	BIS(2-CHLOROISOPROPYL)ETHER	ND	520	
13)	BIS(2-ETHYLHEXYL)PHTHALATE	150	520	J
14)	4-BROMOPHENYL PHENYL ETHER	ND	520	
15)	BUTYL BENZYL PHTHALATE	ND	520	
16)	2-CHLORONAPHTHALENE	ND	520	
17)	4-CHLOROPHENYL PHENYL ETHER	ND	520	
18)	CHRYSENE	520	520	
19)	DIBENZO(A,H)ANTHRACENE	74	520	J
20)	1,2-DICHLOROBENZENE	ND	520	
21)	1,3-DICHLOROBENZENE	ND	520	
22)	1,4-DICHLOROBENZENE	ND	520	
23)	3,3'-DICHLOROBENZIDENE	ND	1000	
24)	DIETHYL PHTHALATE	ND	520	
25)	DIMETHYL PHTHALATE	ND	520	
26)	DI-N-BUTYL PHTHALATE	1900	520	
27)	2,4-DINITROTOLUENE	ND	520	
28)	2,6-DINITROTOLUENE	ND	520	
29)	DI-N-OCTYL PHTHALATE	110	520	J
30)	1,2-DIPHENYLHYDRAZINE	ND	520	
31)	FLUORANTHENE	720	520	
32)	FLUORENE	ND	520	
33)	HEXACHLOROBENZENE	ND	520	
34)	HEXACHLOROBUTADIENE	ND	520	
35)	HEXACHLOROCYCLOPENTADIENE	ND	520	
36)	HEXACHLOROETHANE	ND	520	
37)	INDENO(1,2,3-CD)PYRENE	370	520	J
38)	ISOPHORONE	ND	520	
39)	NAPHTHALENE	ND	520	
40)	NITROBENZENE	ND	520	
41)	N-NITROSODIMETHYLAMINE	ND	520	
42)	N-NITROSODI-N-PROPYLAMINE	ND	520	
43)	N-NITROSODIPHENYLAMINE	ND	520	
44)	PHENANTHRENE	310	520	J
45)	PYRENE	530	520	
46)	1,2,4-TRICHLOROBENZENE	ND	520	

ND = NOT DETECTED
MDL= METHOD DETECTION LIMIT

QUALIFIERS (Q)

J =INDICATES AN ESTIMATED VALUE BELOW MDL
B =INDICATES COMPOUND FOUND IN THE ASSOCIATED BLANK AS WELL AS IN SAMPLE

ATTACHMENT NN110

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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815418	10/20/88	15:15	AC	SOIL - PI-31A, AREA 2, 0-.5' PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<50	50	MG/KG	11/03/88	JK
SOLIDS, TOTAL PERCENT	94	2.0	%	10/26/88	GRM
ANTIMONY	5.6	0.10	MG/KG	11/15/88	MS
ARSENIC	5.0	0.10	MG/KG	11/15/88	MS
BERYLLIUM	<0.50	0.50	MG/KG	10/31/88	GG
CADMIUM	1.7	0.50	MG/KG	10/31/88	GG
CHROMIUM	24	2.5	MG/KG	10/31/88	GG
COPPER	45	2.0	MG/KG	10/31/88	GG
LEAD	160	10	MG/KG	11/03/88	NH
MERCURY	0.25	0.10	MG/KG	11/08/88	SH
NICKEL	13	4.0	MG/KG	10/31/88	GG
SELENIUM	0.19	0.10	MG/KG	11/15/88	MS
SILVER	1.3	1.0	MG/KG	10/31/88	NH
THALLIUM	0.30	0.10	MG/KG	11/16/88	MS
ZINC	93	5.0	MG/KG	10/31/88	GG

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815419	10/20/88	15:25	AC	SOIL - PI-31B, AREA 2, 1.0-1.5' PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	200	50	MG/KG	11/03/88	TM
SOLIDS, TOTAL PERCENT	94	2.0	%	10/26/88	GRM
ANTIMONY	0.78	0.10	MG/KG	11/15/88	MS
ARSENIC	3.5	0.10	MG/KG	11/15/88	MS
BERYLLIUM	<0.50	0.50	MG/KG	10/31/88	GG
CADMIUM	0.67	0.50	MG/KG	10/31/88	GG
CHROMIUM	18	2.5	MG/KG	10/31/88	GG
COPPER	14	2.0	MG/KG	10/31/88	GG
LEAD	67	10	MG/KG	11/03/88	NH
MERCURY	0.25	0.10	MG/KG	11/08/88	SH
NICKEL	7.5	4.0	MG/KG	10/31/88	GG
SELENIUM	0.17	0.10	MG/KG	11/15/88	MS
SILVER	<1.0	1.0	MG/KG	10/31/88	NH
THALLIUM	0.20	0.10	MG/KG	11/16/88	MS
ZINC	50	5.0	MG/KG	10/31/88	GG

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815420	10/20/88	16:25	AC	SOIL - PI-31C, AREA 2, 7.7.5' PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<50	50	MG/KG	11/03/88	TM
SOLIDS, TOTAL PERCENT	81	2.0	%	10/26/88	GRM
ANTIMONY	<0.10	0.10	MG/KG	11/15/88	MS
ARSENIC	2.6	0.10	MG/KG	11/15/88	MS
BERYLLIUM	<0.50	0.50	MG/KG	10/31/88	GG
CADMIUM	1.2	0.50	MG/KG	10/31/88	GG
CHROMIUM	47	2.5	MG/KG	10/31/88	GG
COPPER	<2.0	2.0	MG/KG	10/31/88	GG
LEAD	22	10	MG/KG	11/03/88	NH
MERCURY	<0.10	0.10	MG/KG	11/08/88	SH
NICKEL	8.7	4.0	MG/KG	10/31/88	GG
SELENIUM	0.20	0.10	MG/KG	11/15/88	MS
SILVER	<1.0	1.0	MG/KG	10/31/88	NH
THALLIUM	0.22	0.10	MG/KG	11/16/88	MS
ZINC	33	5.0	MG/KG	10/31/88	GG

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815421	10/20/88	15:35	AC	SOIL - PI-32A, 0-.5', AREA 2 PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	130	50	MG/KG	11/03/88	TM
SOLIDS, TOTAL PERCENT	93	2.0	%	10/26/88	GRM
ANTIMONY	1.2	0.10	MG/KG	11/15/88	MS
ARSENIC	5.4	0.10	MG/KG	11/15/88	MS
BERYLLIUM	<0.50	0.50	MG/KG	10/31/88	GG
CADMIUM	0.99	0.50	MG/KG	10/31/88	GG
CHROMIUM	27	2.5	MG/KG	10/31/88	GG
COPPER	50	2.0	MG/KG	10/31/88	GG
LEAD	210	10	MG/KG	11/03/88	NH
MERCURY	0.66	0.10	MG/KG	11/08/88	SR
NICKEL	8.5	4.0	MG/KG	10/31/88	GG
SELENIUM	0.38	0.10	MG/KG	11/15/88	MS
SILVER	1.2	1.0	MG/KG	10/31/88	NH
THALLIUM	0.23	0.10	MG/KG	11/16/88	MS
ZINC	45	5.0	MG/KG	10/31/88	GG

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815422	10/20/88	15:40	AC	SOIL - PI-32B, AREA 2, 1-1.5' PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<50	50	MG/KG	11/03/88	TM
SOLIDS, TOTAL PERCENT	97	2.0	%	10/26/88	GRM
ANTIMONY	0.47	0.10	MG/KG	11/15/88	MS
ARSENIC	4.3	0.10	MG/KG	11/15/88	MS
BERYLLIUM	<0.50	0.50	MG/KG	10/31/88	GG
CADMIUM	<0.50	0.50	MG/KG	10/31/88	GG
CHROMIUM	12	2.5	MG/KG	10/31/88	GG
COPPER	7.7	2.0	MG/KG	10/31/88	GG
LEAD	29	10	MG/KG	11/03/88	NH
MERCURY	<0.10	0.10	MG/KG	11/08/88	SH
NICKEL	<4.0	4.0	MG/KG	10/31/88	GG
SELENIUM	0.22	0.10	MG/KG	11/15/88	MS
SILVER	<1.0	1.0	MG/KG	10/31/88	NH
THALLIUM	0.23	0.10	MG/KG	11/16/88	MS
ZINC	26	5.0	MG/KG	10/31/88	GG

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

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ATTACHMENT NN82

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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815423	10/20/88	15:55	AC	SOIL - PI-32C, AREA 2, 6-6.5' PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<50	50	MG/KG	11/03/88	TM
SOLIDS, TOTAL PERCENT	82	2.0	%	10/26/88	GRM
ANTIMONY[1]	0.34	0.10	MG/KG	11/09/88	MS
ARSENIC	3.9	0.10	MG/KG	11/08/88	MS
BERYLLIUM	<0.50	0.50	MG/KG	10/31/88	GG
CADMIUM	0.61	0.50	MG/KG	10/31/88	GG
CHROMIUM	30	2.5	MG/KG	10/31/88	GG
COPPER	<2.0	2.0	MG/KG	10/31/88	GG
LEAD	18	10	MG/KG	11/03/88	MH
MERCURY	<0.10	0.10	MG/KG	11/08/88	SH
NICKEL	7.8	4.0	MG/KG	10/31/88	GG
SELENIUM	<0.10	0.10	MG/KG	11/15/88	MS
SILVER	<1.0	1.0	MG/KG	10/31/88	MH
THALLIUM	0.23	0.10	MG/KG	11/16/88	MS
ZINC	36	5.0	MG/KG	10/31/88	GG

[1] RESULTS DETERMINED BY METHOD OF STANDARD ADDITION (MSA).

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

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ATTACHMENT NN83

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ANALYSIS REPORT FOR BASE NEUTRAL EXTRACTABLES BY GC/MS

CLIENT : J.M. SORGE
LAB SAMPLE #: E815424
MATRIX : SOIL

METHOD : SW846 8270
ANALYSIS DATE: 11/09/88
DATA FILE : >C6768

	COMPOUND	RESULT (ug/kg)	MDL (ug/kg)	Q
1)	ACENAPHTHENE	110	520	J
2)	ACENAPHTHYLENE	ND	520	
3)	ANTHRACENE	160	520	J
4)	BENZIDENE	ND	2600	
5)	BENZO(A)ANTHRACENE	1500	520	
6)	BENZO(A)PYRENE	1400	520	
7)	BENZO(B)FLUORANTHENE	2200	520	
8)	BENZO(K)FLUORANTHENE	680	520	
9)	BENZO(G,H,I)PERYLENE	1200	520	
10)	BIS(2-CHLOROETHOXY)METHANE	ND	520	
11)	BIS(2-CHLOROETHYL)ETHER	ND	520	
12)	BIS(2-CHLOROISOPROPYL)ETHER	ND	520	
13)	BIS(2-ETHYLHEXYL)PHTHALATE	59	520	J
14)	4-BROMOPHENYL PHENYL ETHER	ND	520	
15)	BUTYL BENZYL PHTHALATE	ND	520	
16)	2-CHLORONAPHTHALENE	ND	520	
17)	4-CHLOROPHENYL PHENYL ETHER	ND	520	
18)	CHRYSENE	1900	520	
19)	DIBENZO(A,H)ANTHRACENE	74	520	J
20)	1,2-DICHLOROBENZENE	ND	520	
21)	1,3-DICHLOROBENZENE	ND	520	
22)	1,4-DICHLOROBENZENE	ND	520	
23)	3,3'-DICHLOROBENZIDENE	ND	1000	
24)	DIETHYL PHTHALATE	ND	520	
25)	DIMETHYL PHTHALATE	ND	520	
26)	DI-N-BUTYL PHTHALATE	730	520	
27)	2,4-DINITROTOLUENE	ND	520	
28)	2,6-DINITROTOLUENE	ND	520	
29)	DI-N-OCTYL PHTHALATE	ND	520	
30)	1,2-DIPHENYLHYDRAZINE	ND	520	
31)	FLUORANTHENE	2800	520	
32)	FLUORENE	56	520	J
33)	HEXACHLOROBENZENE	ND	520	
34)	HEXACHLOROBUTADIENE	ND	520	
35)	HEXACHLOROCYCLOPENTADIENE	ND	520	
36)	HEXACHLOROETHANE	ND	520	
37)	INDENO(1,2,3-CD)PYRENE	1300	520	
38)	ISOPHORONE	ND	520	
39)	NAPHTHALENE	ND	520	
40)	NITROBENZENE	ND	520	
41)	N-NITROSODIMETHYLAMINE	ND	520	
42)	N-NITROSODI-N-PROPYLAMINE	ND	520	
43)	N-NITROSODIPHENYLAMINE	ND	520	
44)	PHENANTHRENE	1000	520	
45)	PYRENE	1700	520	
46)	1,2,4-TRICHLOROBENZENE	ND	520	

ND = NOT DETECTED
MDL= METHOD DETECTION LIMIT

QUALIFIERS (Q)

J =INDICATES AN ESTIMATED VALUE BELOW MDL
B =INDICATES COMPOUND FOUND IN THE ASSOCIATED BLANK AS WELL AS IN SAMPLE

ATTACHMENT NN84

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2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: J.M. SORGE

Batch Number: MS-S-~~250~~ 212

Lab Sample ID: E815424

Extraction Date: 11/~~10~~/88

Lab File ID: >C6768

Date Analyzed: 11/09/88 17:56

Matrix: SOIL FOR BN

Number TICs found: 15

CONCENTRATION UNITS: ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	2.17	7500.	4
2.	594365	Butane, 2-chloro-2-methyl- (	2.35	630.	
3.	994058	Butane, 2-methoxy-2-methyl-	2.42	6200.	1
4.		Unknown	2.63	560.	
5.	115195	3-Butyn-2-ol, 2-methyl- (8CI	4.00	4200.	
6.	930223	Oxirane, ethenyl- (9CI)	4.64	3200.	
7.	75912	Hydroperoxide, 1,1-dimethyle	4.82	970.	1
8.	197	Ethane, 1,1,2,2-tetrachloro-	6.40	480.	1
9.	16106595	1-Hexene, 4,5-dimethyl- (8CI	6.83	330.	1
10.	4291796	Cyclohexane, 1-methyl-2-prop	7.30	240.	1
11.	290	Benzo[a]pyrene	34.42	490.	
12.	192972	Benzo[e]pyrene (8CI9CI)	34.89	1500.	
13.	302	Benzo[ghi]perylene	38.37	540.	
14.	215587	Benzo[b]triphenylene (8CI9CI	39.20	370.	
15.	4090624	9H-Xanthen-9-one, 1-hydroxy-	45.27	520.	

QUALIFIERS(Q);
(1)-THIS COMPOUND (OR SIMILAR SPECTRA) FOUND IN LAB BLANK.
(2)-INTERNAL OR SURROGATE STANDARD ADDED BY LABORATORY.
(3)-THIS COMPOUND ALREADY IDENTIFIED AND REPORTED AS TARGET COMPOUND.
(4)-PROBABLE BACKGROUND DUE TO SOLVENT OR CO2.

FORM I SV-TIC

ATTACHMENT NN85

ACCUTEST®
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815424	10/20/88	11:40	AC	SOIL - PI-44A, AREA 4, 0-.5' PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<50	50	MG/KG	11/03/88	TM
SOLIDS, TOTAL PERCENT	96	2.0	%	10/26/88	GRM

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT NN86

ACCUTEST®
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

ANALYSIS REPORT FOR BASE NEUTRAL EXTRACTABLES BY GC/MS

CLIENT : J.M. SORGE
LAB SAMPLE #: E815425
MATRIX : SOIL

METHOD : SW846 8270
ANALYSIS DATE: 11/07/88
DATA FILE : >C6727

	COMPOUND	RESULT (ug/kg)	MDL (ug/kg)	Q
1)	ACENAPHTHENE	ND	520	
2)	ACENAPHTHYLENE	ND	520	
3)	ANTHRACENE	ND	520	
4)	BENZIDENE	ND	2600	
5)	BENZO(A)ANTHRACENE	ND	520	
6)	BENZO(A)PYRENE	ND	520	
7)	BENZO(B)FLUORANTHENE	ND	520	
8)	BENZO(K)FLUORANTHENE	ND	520	
9)	BENZO(G,H,I)PERYLENE	ND	520	
10)	BIS(2-CHLOROETHOXY)METHANE	ND	520	
11)	BIS(2-CHLOROETHYL)ETHER	ND	520	
12)	BIS(2-CHLOROISOPROPYL)ETHER	ND	520	
13)	BIS(2-ETHYLHEXYL)PHTHALATE	ND	520	
14)	4-BROMOPHENYL PHENYL ETHER	ND	520	
15)	BUTYL BENZYL PHTHALATE	ND	520	
16)	2-CHLORONAPHTHALENE	ND	520	
17)	4-CHLOROPHENYL PHENYL ETHER	ND	520	
18)	CHRYSENE	ND	520	
19)	DIBENZO(A,H)ANTHRACENE	ND	520	
20)	1,2-DICHLOROBENZENE	ND	520	
21)	1,3-DICHLOROBENZENE	ND	520	
22)	1,4-DICHLOROBENZENE	ND	520	
23)	3,3'-DICHLOROBENZIDENE	ND	1000	
24)	DIETHYL PHTHALATE	ND	520	
25)	DIMETHYL PHTHALATE	ND	520	
26)	DI-N-BUTYL PHTHALATE	310	520	J
27)	2,4-DINITROTOLUENE	ND	520	
28)	2,6-DINITROTOLUENE	ND	520	
29)	DI-N-OCTYL PHTHALATE	ND	520	
30)	1,2-DIPHENYLHYDRAZINE	ND	520	
31)	FLUORANTHENE	ND	520	
32)	FLUORENE	ND	520	
33)	HEXACHLOROBENZENE	ND	520	
34)	HEXACHLOROBUTADIENE	ND	520	
35)	HEXACHLOROCYCLOPENTADIENE	ND	520	
36)	HEXACHLOROETHANE	ND	520	
37)	INDENO(1,2,3-CD)PYRENE	ND	520	
38)	ISOPHORONE	ND	520	
39)	NAPHTHALENE	ND	520	
40)	NITROBENZENE	ND	520	
41)	N-NITROSODIMETHYLAMINE	ND	520	
42)	N-NITROSODI-N-PROPYLAMINE	ND	520	
43)	N-NITROSODIPHENYLAMINE	ND	520	
44)	PHENANTHRENE	ND	520	
45)	PYRENE	ND	520	
46)	1,2,4-TRICHLOROBENZENE	ND	520	

ND = NOT DETECTED
MDL= METHOD DETECTION LIMIT

QUALIFIERS (Q)

J =INDICATES AN ESTIMATED VALUE BELOW MDL
B =INDICATES COMPOUND FOUND IN THE ASSOCIATED BLANK AS WELL AS IN SAMPLE

ATTACHMENT NN87

ACCUTEST®
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: J.M. SORGE

Batch Number: MS-S-272

Lab Sample ID: E815425

Extraction Date: 11/03/88

Lab File ID: 06727

Date Analyzed: 11/07/88 23:41

Matrix: SOIL FOR BN

Number TICs found: 11

CONCENTRATION UNITS: ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	67663	Methane, trichloro- (9CI)	2.17	8900.	4
2.		Unknown	2.27	5900.	1
3.	594365	Butane, 2-chloro-2-methyl- (	2.45	460.	
4.		Unknown	2.52	4600.	1
5.	108	Ethene, trichloro-	2.74	520.	
6.	122	Ethane, 1,1,2-trichloro-	3.64	340.	
7.	764012	2-Butyn-1-ol (8CI9CI)	4.10	360.	
8.	115220	2-Butanone, 3-hydroxy-3-meth	4.96	380.	1
9.	197	Ethane, 1,1,2,2-tetrachloro-	6.51	630.	1
10.	123751	Pyrrolidine (DOT)(8CI9CI)	6.97	230.	1
11.		Unknown	33.40	300.	
12.					
13.					

QUALIFIERS(Q);
(1)-THIS COMPOUND (OR SIMILAR SPECTRA) FOUND IN LAB BLANK.
(2)-INTERNAL OR SURROGATE STANDARD ADDED BY LABORATORY.
(3)-THIS COMPOUND ALREADY IDENTIFIED AND REPORTED AS TARGET COMPOUND.
(4)-PROBABLE BACKGROUND DUE TO SOLVENT OR CO2.

FORM I SV-TIC

ATTACHMENT NN88

ACCUTEST®
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815425	10/20/88	11:45	AC	SOIL - PI-44B, AREA 4, 1.0-1.5' PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<50	50	MG/KG	11/03/88	TM
SOLIDS, TOTAL PERCENT	97	2.0	%	10/26/88	GRM

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT NN89

ACCUTEST®
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: J.M. SORGE

Batch Number: MS-S-280

Lab Sample ID: E815436

Extraction Date: 11/10/88

Lab File ID: >C6769

Date Analyzed: 11/09/88 13:57

Matrix: SOIL FOR BN

Number TICs Found: 11

CONCENTRATION UNITS: ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	113008	Guanidine (8CI9CI)	2.17	6900.	1
2.	107879	2-Pentanone (8CI9CI)	2.28	2000.	1
3.	646060	1,3-Dioxolane (8CI9CI)	2.42	11000.	1
4.	109	Ethene, trichloro-	2.60	520.	
5.	122	Ethane, 1,1,2-trichloro-	3.50	250.	
6.	115195	3-Butyn-2-ol, 2-methyl- (8CI	4.00	4900.	
7.	115195	3-Butyn-2-ol, 2-methyl- (8CI	4.61	2200.	
8.	113008	Guanidine (8CI9CI)	4.83	1200.	1
9.	107255	Ethene, methoxy- (9CI)	6.12	24.	
10.	196	Ethane, 1,1,2,2-tetrachloro-	6.37	420.	1
11.	2051787	Butanoic acid, 2-propenyl es	6.84	260.	
12.					
13.					
14.					
15.					

QUALIFIERS(Q);
(1)-THIS COMPOUND (OR SIMILAR SPECTRA) FOUND IN LAB BLANK.
(2)-INTERNAL OR SURROGATE STANDARD ADDED BY LABORATORY.
(3)-THIS COMPOUND ALREADY IDENTIFIED AND REPORTED AS TARGET COMPOUND
(4)-PROBABLE BACKGROUND DUE TO SOLVENT OR CO2.

FORM I SV-TIC

ATTACHMENT NN III

ACCUTEST®
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815436	10/20/88	13:40	AC	SOIL - PI-48A, AREA 4, 0-.5' PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<50	50	MG/KG	11/03/88	JK
SOLIDS, TOTAL PERCENT	95	2.0	%	10/26/88	GRM
ANTIMONY	0.47	0.10	MG/KG	11/15/88	MS
ARSENIC	3.6	0.10	MG/KG	11/15/88	MS
BERYLLIUM	1.2	0.50	MG/KG	11/10/88	GG
CADMIUM	13	0.50	MG/KG	11/10/88	GG
CHROMIUM	26	2.5	MG/KG	11/10/88	GG
COPPER	32	2.0	MG/KG	11/10/88	GG
LEAD	160	10	MG/KG	11/07/88	NH
MERCURY	<0.10	0.10	MG/KG	11/08/88	SH
NICKEL	7.0	4.0	MG/KG	11/10/88	GG
SELENIUM	0.18	0.10	MG/KG	11/15/88	MS
SILVER	1.2	1.0	MG/KG	11/08/88	NH
THALLIUM	0.20	0.10	MG/KG	11/16/88	MS
ZINC	74	5.0	MG/KG	11/10/88	GG

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT NW112

ACCUTEST®
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815437	10/20/88	13:45	AC	SOIL - PI-48B, AREA 4, 1.0-1.5' PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<50	50	MG/KG	11/03/88	JK
SOLIDS, TOTAL PERCENT	94	2.0	%	10/26/88	GRM

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT NN 113

ACCUTEST®
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

ANALYSIS REPORT FOR BASE NEUTRAL EXTRACTABLES BY GC/MS

CLIENT : J.M. SORGE
LAB SAMPLE #: E815438
MATRIX : SOIL

METHOD : SW846 8270
ANALYSIS DATE: 11/08/88
DATA FILE : >C6730

	COMPOUND	RESULT (ug/kg)	MDL (ug/kg)	Q
1)	ACENAPHTHENE	ND	550	
2)	ACENAPHTHYLENE	ND	550	
3)	ANTHRACENE	ND	550	
4)	BENZIDENE	ND	2700	
5)	BENZO(A)ANTHRACENE	ND	550	
6)	BENZO(A)PYRENE	ND	550	
7)	BENZO(B)FLUORANTHENE	ND	550	
8)	BENZO(K)FLUORANTHENE	ND	550	
9)	BENZO(G,H,I)PERYLENE	ND	550	
10)	BIS(2-CHLOROETHOXY)METHANE	ND	550	
11)	BIS(2-CHLOROETHYL)ETHER	ND	550	
12)	BIS(2-CHLOROISOPROPYL)ETHER	ND	550	
13)	BIS(2-ETHYLHEXYL)PHTHALATE	ND	550	
14)	4-BROMOPHENYL PHENYL ETHER	ND	550	
15)	BUTYL BENZYL PHTHALATE	ND	550	
16)	2-CHLORONAPHTHALENE	ND	550	
17)	4-CHLOROPHENYL PHENYL ETHER	ND	550	
18)	CHRYSENE	ND	550	
19)	DIBENZO(A,H)ANTHRACENE	ND	550	
20)	1,2-DICHLOROBENZENE	ND	550	
21)	1,3-DICHLOROBENZENE	ND	550	
22)	1,4-DICHLOROBENZENE	ND	550	
23)	3,3'-DICHLOROBENZIDENE	ND	1100	
24)	DIETHYL PHTHALATE	ND	550	
25)	DIMETHYL PHTHALATE	ND	550	
26)	DI-N-BUTYL PHTHALATE	730	550	
27)	2,4-DINITROTOLUENE	ND	550	
28)	2,6-DINITROTOLUENE	ND	550	
29)	DI-N-OCTYL PHTHALATE	ND	550	
30)	1,2-DIPHENYLHYDRAZINE	ND	550	
31)	FLUORANTHENE	ND	550	
32)	FLUORENE	ND	550	
33)	HEXACHLOROBENZENE	ND	550	
34)	HEXACHLOROBUTADIENE	ND	550	
35)	HEXACHLOROCYCLOPENTADIENE	ND	550	
36)	HEXACHLOROETHANE	ND	550	
37)	INDENO(1,2,3-CD)PYRENE	ND	550	
38)	ISOPHORONE	ND	550	
39)	NAPHTHALENE	ND	550	
40)	NITROBENZENE	ND	550	
41)	N-NITROSODIMETHYLAMINE	ND	550	
42)	N-NITROSODI-N-PROPYLAMINE	ND	550	
43)	N-NITROSODIPHENYLAMINE	ND	550	
44)	PHENANTHRENE	ND	550	
45)	PYRENE	ND	550	
46)	1,2,4-TRICHLOROBENZENE	ND	550	

ND = NOT DETECTED
MDL= METHOD DETECTION LIMIT

QUALIFIERS (Q)

J =INDICATES AN ESTIMATED VALUE BELOW MDL
B =INDICATES COMPOUND FOUND IN THE ASSOCIATED BLANK AS WELL AS IN SAMPLE

ATTACHMENT NN114
78

ACCUTEST®
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: J.M. SORGE

Batch Number: MS-S-272

Lab Sample ID: E815438

Extraction Date: 11/03/88

Lab File ID: >C6730

Date Analyzed: 11/08/88 2:42

Matrix: SOIL FOR BN

Number TICs found: 10

CONCENTRATION UNITS: ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	67663	Methane, trichloro- (9CI)	2.19	13000.	4
2.		Unknown	2.30	9000.	1
3.	29	Methane, dichloro-	2.37	300.	
4.	109900	Ethane, isocyanato- (9CI)	2.48	240.	
5.	994058	Butane, 2-methoxy-2-methyl-	2.55	6100.	1
6.	75183	Methane, thiobis- (9CI)	2.76	900.	
7.	124	Ethane, 1,1,2-trichloro-	3.66	930.	
8.	2402064	Cyclopropane, 1,2-dimethyl-,	4.16	440.	1
9.	113008	Guanidine (8CI9CI)	4.99	1100.	1
10.	197	Ethane, 1,1,2,2-tetrachloro-	6.53	760.	1
11.					
12.					
13.					
14.					
15.					

QUALIFIERS(Q);
(1)-THIS COMPOUND (OR SIMILAR SPECTRA) FOUND IN LAB BLANK.
(2)-INTERNAL OR SURROGATE STANDARD ADDED BY LABORATORY.
(3)-THIS COMPOUND ALREADY IDENTIFIED AND REPORTED AS TARGET COMPOUND.
(4)-PROBABLE BACKGROUND DUE TO SOLVENT OR CO2.

FORM I SV-TIC

ATTACHMENT NN115

ACCUTEST®
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815438	10/20/88	13:55	AC	SOIL - PI-48C, AREA 4, 7.75-8.25' PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<50	50	MG/KG	11/03/88	JK
SOLIDS, TOTAL PERCENT	90	2.0	%	10/26/88	GRM

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT NN116

ACCUTEST®
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

ANALYSIS REPORT FOR BASE NEUTRAL EXTRACTABLES BY GC/MS

CLIENT : J.M. SORGE
LAB SAMPLE #: E815439
MATRIX : SOIL

METHOD : SW846 8270
ANALYSIS DATE: 11/09/88
DATA FILE : >C6767

	COMPOUND	RESULT (ug/kg)	MDL (ug/kg)	Q
1)	ACENAPHTHENE	ND	510	
2)	ACENAPHTHYLENE	ND	510	
3)	ANTHRACENE	ND	510	
4)	BENZIDENE	ND	2600	
5)	BENZO(A)ANTHRACENE	ND	510	
6)	BENZO(A)PYRENE	ND	510	
7)	BENZO(B)FLUORANTHENE	ND	510	
8)	BENZO(K)FLUORANTHENE	ND	510	
9)	BENZO(G,H,I)PERYLENE	ND	510	
10)	BIS(2-CHLOROETHOXY)METHANE	ND	510	
11)	BIS(2-CHLOROETHYL)ETHER	ND	510	
12)	BIS(2-CHLOROISOPROPYL)ETHER	ND	510	
13)	BIS(2-ETHYLHEXYL)PHTHALATE	ND	510	
14)	4-BROMOPHENYL PHENYL ETHER	ND	510	
15)	BUTYL BENZYL PHTHALATE	ND	510	
16)	2-CHLORONAPHTHALENE	ND	510	
17)	4-CHLOROPHENYL PHENYL ETHER	ND	510	
18)	CHRYSENE	ND	510	
19)	DIBENZO(A,H)ANTHRACENE	ND	510	
20)	1,2-DICHLOROBENZENE	ND	510	
21)	1,3-DICHLOROBENZENE	ND	510	
22)	1,4-DICHLOROBENZENE	ND	510	
23)	3,3'-DICHLOROBENZIDENE	ND	1000	
24)	DIETHYL PHTHALATE	ND	510	
25)	DIMETHYL PHTHALATE	ND	510	
26)	DI-N-BUTYL PHTHALATE	220	510	J
27)	2,4-DINITROTOLUENE	ND	510	
28)	2,6-DINITROTOLUENE	ND	510	
29)	DI-N-OCTYL PHTHALATE	ND	510	
30)	1,2-DIPHENYLHYDRAZINE	ND	510	
31)	FLUORANTHENE	ND	510	
32)	FLUORENE	ND	510	
33)	HEXACHLOROBENZENE	ND	510	
34)	HEXACHLOROBUTADIENE	ND	510	
35)	HEXACHLOROCYCLOPENTADIENE	ND	510	
36)	HEXACHLOROETHANE	ND	510	
37)	INDENO(1,2,3-CD)PYRENE	ND	510	
38)	ISOPHORONE	ND	510	
39)	NAPHTHALENE	ND	510	
40)	NITROBENZENE	ND	510	
41)	N-NITROSODIMETHYLAMINE	ND	510	
42)	N-NITROSODI-N-PROPYLAMINE	ND	510	
43)	N-NITROSODIPHENYLAMINE	ND	510	
44)	PHENANTHRENE	ND	510	
45)	PYRENE	ND	510	
46)	1,2,4-TRICHLOROBENZENE	ND	510	

ND = NOT DETECTED
MDL= METHOD DETECTION LIMIT

QUALIFIERS (Q)

J =INDICATES AN ESTIMATED VALUE BELOW MDL
B =INDICATES COMPOUND FOUND IN THE ASSOCIATED BLANK AS WELL AS IN SAMPLE

ATTACHMENT NN117

Lab Sample ID: E8[illegible]39 E[illegible]action Date: 11/10/88

Lab File ID: >C6767 Date Analyzed: 11/09/88 16:55

Matrix: SOIL FOR BN

Number TICs found: 7 CONCENTRATION UNITS: ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	2.30	470.	
2.	Unknown	2.41	1700.	
3.	Unknown	2.59	450.	
4. 124	Ethane, 1,1,2-trichloro-	3.52	320.	
5. 592461	2,4-Hexadiene (8CI9CI)	4.02	480.	
6. 115220	2-Butanone, 3-hydroxy-3-meth	4.85	690.	
7. 198	Ethane, 1,1,2,2-tetrachloro-	6.43	470.	
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				

QUALIFIERS(Q):

(1)-THIS COMPOUND (OR SIMILAR SPECTRA) FOUND IN LAB BLANK.

(2)-INTERNAL OR SURROGATE STANDARD ADDED BY LABORATORY.

(3)-THIS COMPOUND ALREADY IDENTIFIED AND REPORTED AS TARGET COMPOUND.

(4)-PROBABLE BACKGROUND DUE TO SOLVENT OR CO2.

FORM I SV-TIC

ATTACHMENT NN118

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815439	10/20/88	14:05	AC	SOIL - PI-49A, AREA 4, 0-.5' PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<50	50	MG/KG	11/03/88	JK
SOLIDS, TOTAL PERCENT	97	2.0	%	10/26/88	GRM
ANTIMONY	0.53	0.10	MG/KG	11/15/88	MS
ARSENIC	2.3	0.10	MG/KG	11/15/88	MS
BERYLLIUM	<0.50	0.50	MG/KG	10/31/88	GG
CADMIUM	0.59	0.50	MG/KG	10/31/88	GG
CHROMIUM	28	2.5	MG/KG	10/31/88	GG
COPPER	17	2.0	MG/KG	10/31/88	GG
LEAD	29	10	MG/KG	11/03/88	NH
MERCURY	<0.10	0.10	MG/KG	11/08/88	SH
NICKEL	5.1	4.0	MG/KG	10/31/88	GG
SELENIUM	<0.10	0.10	MG/KG	11/15/88	MS
SILVER	<1.0	1.0	MG/KG	10/31/88	NH
THALLIUM	0.21	0.10	MG/KG	11/16/88	MS
ZINC	46	5.0	MG/KG	10/31/88	GG

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
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ATTACHMENT NN49

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815440	10/20/88	14:10	AC	SOIL - PI-49B, AREA 4, 1-1.5' PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<50	50	MG/KG	11/03/88	JK
SOLIDS, TOTAL PERCENT	96	2.0	%	10/26/88	GRM

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
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ATTACHMENT NN120

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2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815441	10/20/88	14:15	AC	SOIL - PI-49C, AREA 4, 7.5-8.0' PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<50	50	MG/KG	11/03/88	JK
SOLIDS, TOTAL PERCENT	87	2.0	%	10/26/88	GRM

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT NNtal

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ANALYSIS REPORT FOR BASE NEUTRAL EXTRACTABLES BY GC/MS

CLIENT : SORGE
LAB SAMPLE #: E815442
MATRIX : WATER

METHOD : EPA 625
ANALYSIS DATE: 10/27/88
DATA FILE : >E2046

	COMPOUND	RESULT (ug/L)	MDL (ug/L)	Q
1)	ACENAPHTHENE	ND	10	
2)	ACENAPHTHYLENE	ND	10	
3)	ANTHRACENE	ND	10	
4)	BENZIDENE	ND	52	
5)	BENZO(A)ANTHRACENE	ND	10	
6)	BENZO(A)PYRENE	ND	10	
7)	BENZO(B)FLUORANTHENE	ND	10	
8)	BENZO(K)FLUORANTHENE	ND	10	
9)	BENZO(G,H,I)PERYLENE	ND	10	
10)	BIS(2-CHLOROETHOXY)METHANE	ND	10	
11)	BIS(2-CHLOROETHYL)ETHER	ND	10	
12)	BIS(2-CHLOROISOPROPYL)ETHER	ND	10	
13)	BIS(2-ETHYLHEXYL)PHTHALATE	3.5	10	J
14)	4-BROMOPHENYL PHENYL ETHER	ND	10	
15)	BUTYL BENZYL PHTHALATE	ND	10	
16)	2-CHLORONAPHTHALENE	ND	10	
17)	4-CHLOROPHENYL PHENYL ETHER	ND	10	
18)	CHRYSENE	ND	10	
19)	DIBENZO(A,H)ANTHRACENE	ND	10	
20)	1,2-DICHLOROBENZENE	ND	10	
21)	1,3-DICHLOROBENZENE	ND	10	
22)	1,4-DICHLOROBENZENE	ND	10	
23)	3,3'-DICHLOROBENZIDENE	ND	21	
24)	DIETHYL PHTHALATE	ND	10	
25)	DIMETHYL PHTHALATE	ND	10	
26)	DI-N-BUTYL PHTHALATE	ND	10	
27)	2,4-DINITROTOLUENE	ND	10	
28)	2,6-DINITROTOLUENE	ND	10	
29)	DI-N-OCTYL PHTHALATE	ND	10	
30)	1,2-DIPHENYLHYDRAZINE	ND	10	
31)	FLUORANTHENE	ND	10	
32)	FLUORENE	ND	10	
33)	HEXACHLOROBENZENE	ND	10	
34)	HEXACHLOROBUTADIENE	ND	10	
35)	HEXACHLOROCYCLOPENTADIENE	ND	10	
36)	HEXACHLOROETHANE	ND	10	
37)	INDENO(1,2,3-CD)PYRENE	ND	10	
38)	ISOPHORONE	ND	10	
39)	NAPHTHALENE	ND	10	
40)	NITROBENZENE	ND	10	
41)	N-NITROSODIMETHYLAMINE	ND	10	
42)	N-NITROSODI-N-PROPYLAMINE	ND	10	
43)	N-NITROSODIPHENYLAMINE	ND	10	
44)	PHENANTHRENE	ND	10	
45)	PYRENE	ND	10	
46)	1,2,4-TRICHLOROBENZENE	ND	10	

ND = NOT DETECTED
MDL= METHOD DETECTION LIMIT

QUALIFIERS (Q)

J =INDICATES AN ESTIMATED VALUE BELOW MDL
B =INDICATES COMPOUND FOUND IN THE ASSOCIATED BLANK AS WELL AS IN SAMPL

ATTACHMENT NN-22

atrix: (soil/water) BN[illegible]TER BATCH NO: [illegible]-260

ab File ID: >E2046

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 108883	Benzene, methyl- (9CI)	6.30	17.	
2. 54063148	1,3-Dioxan-5ol, 4,4,5-trim	8.09	12.	
3.				
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12.				
13.				
14.				
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16.				
17.				
18.				
20.				
21.				
22.				

QUALIFIERS

(1)-THIS COMPOUND (OR SIMILAR SPECTRA) FOUND IN LAB BLANK.
(2)-INTERNAL OR SURROGATE STANDARD ADDED BY LABORATORY.
(3)-THIS COMPOUND ALREADY IDENTIFIED AND REPORTED AS TARGET.
(4)-PROBABLE BACKGROUND DUE TO SOLVENT OR CO2.

1/87 Rev.

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ATTACHMENT NN123

SAMPLE No	C[illegible]CTED DATE	TIME	BY	[illegible]INT OF COLLECTION
E815442	10/20/88	17:00	AC	WATER - PI-FB(4), FIELD BLANK PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<1.0	1.0	MG/L	10/26/88	KY
ANTIMONY	<0.001	0.001	MG/L	11/02/88	MS
ARSENIC	<0.001	0.001	MG/L	11/01/88	MS
BERYLLIUM	<0.005	0.005	MG/L	10/27/88	GG
CADMIUM	<0.005	0.005	MG/L	10/27/88	GAG
CHROMIUM	<0.025	0.025	MG/L	10/27/88	GG
COPPER	<0.020	0.020	MG/L	10/27/88	GG
LEAD	<0.001	0.001	MG/L	10/28/88	MS
MERCURY	<0.001	0.001	MG/L	11/01/88	SH
NICKEL	<0.040	0.040	MG/L	10/27/88	GG
SELENIUM	<0.001	0.001	MG/L	10/28/88	MS
SILVER	<0.010	0.010	MG/L	10/26/88	NH
THALLIUM	<0.001	0.001	MG/L	11/01/88	MS
ZINC	<0.050	0.050	MG/L	10/27/88	GG

UG/L = PPB MG/L= PPM
MDL = METHOD DETECTION LIMIT
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

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ATTACHMENT NN

	COMPOUND	RESULT (ug/L)	MDL (ug/L)	Q
1)	ACENAPHTHENE	ND	14	
2)	ACENAPHTHYLENE	ND	14	
3)	ANTHRACENE	ND	14	
4)	BENZIDENE	ND	70	
5)	BENZO(A)ANTHRACENE	ND	14	
6)	BENZO(A)PYRENE	ND	14	
7)	BENZO(B)FLUORANTHENE	ND	14	
8)	BENZO(K)FLUORANTHENE	ND	14	
9)	BENZO(G,H,I)PERYLENE	ND	14	
10)	BIS(2-CHLOROETHOXY)METHANE	ND	14	
11)	BIS(2-CHLOROETHYL)ETHER	ND	14	
12)	BIS(2-CHLOROISOPROPYL)ETHER	ND	14	
13)	BIS(2-ETHYLHEXYL)PHTHALATE	ND	14	
14)	4-BROMOPHENYL PHENYL ETHER	ND	14	
15)	BUTYL BENZYL PHTHALATE	ND	14	
16)	2-CHLORONAPHTHALENE	ND	14	
17)	4-CHLOROPHENYL PHENYL ETHER	ND	14	
18)	CHRYSENE	ND	14	
19)	DIBENZO(A,H)ANTHRACENE	ND	14	
20)	1,2-DICHLOROBENZENE	ND	14	
21)	1,3-DICHLOROBENZENE	ND	14	
22)	1,4-DICHLOROBENZENE	ND	14	
23)	3,3'-DICHLOROBENZIDENE	ND	28	
24)	DIETHYL PHTHALATE	ND	14	
25)	DIMETHYL PHTHALATE	ND	14	
26)	DI-N-BUTYL PHTHALATE	ND	14	
27)	2,4-DINITROTOLUENE	ND	14	
28)	2,6-DINITROTOLUENE	ND	14	
29)	DI-N-OCTYL PHTHALATE	ND	14	
30)	1,2-DIPHENYLHYDRAZINE	ND	14	
31)	FLUORANTHENE	ND	14	
32)	FLUORENE	ND	14	
33)	HEXACHLOROBENZENE	ND	14	
34)	HEXACHLOROBUTADIENE	ND	14	
35)	HEXACHLOROCYCLOPENTADIENE	ND	14	
36)	HEXACHLOROETHANE	ND	14	
37)	INDENO(1,2,3-CD)PYRENE	ND	14	
38)	ISOPHORONE	ND	14	
39)	NAPHTHALENE	ND	14	
40)	NITROBENZENE	ND	14	
41)	N-NITROSODIMETHYLAMINE	ND	14	
42)	N-NITROSODI-N-PROPYLAMINE	ND	14	
43)	N-NITROSODIPHENYLAMINE	ND	14	
44)	PHENANTHRENE	ND	14	
45)	PYRENE	ND	14	
46)	1,2,4-TRICHLOROBENZENE	ND	14	

ND = NOT DETECTED
MDL= METHOD DETECTION LIMIT

QUALIFIERS (Q)

J =INDICATES AN ESTIMATED VALUE BELOW MDL
B =INDICATES COMPOUND FOUND IN THE ASSOCIATED BLANK AS WELL AS IN SAMPLE

ATTACHMENT NN

Matrix: (soil/water) [illegible] ATER BATCH NO[illegible]-260

Lab File ID: >E2047

Number TICs found: 1

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 13757910	2-Heptanone, 3-hydroxy-3-me	8.10	17.	1
2.				
3.				
4.				
5.				
6.				
7.				
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9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
20.				
21.				
22.				

QUALIFIERS

(1)-THIS COMPOUND (OR SIMILAR SPECTRA) FOUND IN LAB BLANK.
(2)-INTERNAL OR SURROGATE STANDARD ADDED BY LABORATORY.
(3)-THIS COMPOUND ALREADY IDENTIFIED AND REPORTED AS TARGET.
(4)-PROBABLE BACKGROUND DUE TO SOLVENT OR CO2.

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ATTACHMENT NN126

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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815443	10/20/88	17:00	AC	WATER - PI-FB(5), FIELD BLANK PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<1.0	1.0	MG/L	10/26/88	KY
ANTIMONY	<0.001	0.001	MG/L	11/02/88	MS
ARSENIC	0.001	0.001	MG/L	11/01/88	MS
BERYLLIUM	<0.005	0.005	MG/L	10/27/88	GG
CADMIUM	<0.005	0.005	MG/L	10/27/88	GAG
CHROMIUM	<0.025	0.025	MG/L	10/27/88	GG
COPPER	<0.020	0.020	MG/L	10/27/88	GG
LEAD	<0.001	0.001	MG/L	10/28/88	MS
MERCURY	<0.001	0.001	MG/L	11/01/88	SH
NICKEL	<0.040	0.040	MG/L	10/27/88	GG
SELENIUM	<0.001	0.001	MG/L	10/28/88	MS
SILVER	<0.010	0.010	MG/L	10/26/88	NH
THALLIUM	<0.001	0.001	MG/L	11/01/88	MS
ZINC	<0.050	0.050	MG/L	10/27/88	GG

UG/L = PPB MG/L= PPM
MDL = METHOD DETECTION LIMIT
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT NN127

ATTACHMENT NN128

ACCUTEST
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

TO: J. M. SORGE, INC.
3301 U. S. HIGHWAY 22
SOMERVILLE, NJ 08876

ATTN: MIKE McGOWAN

DATE: 12/20/88

JOB No: 885177S

PROJECT No: 86013

SAMPLE RECEIVED: 12/01/88

SAMPLE SUMMARY

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E816086S	10/20/88	11:00	AC	SOIL - PI-350, 7-7.5'/PLANT INDUSTRIES
E816090R	10/19/88	14:15	AC	SOIL - PI-39A, 0-6", S/S HAND AUGER PLANT INDUSTRIES
E816099R	10/19/88	15:25	AC	SOIL - PI-42A, 0-6"/PLANT INDUSTRIES
E816103R	10/19/88	12:05	AC	SOIL - PI-43A, 0-6"/PLANT INDUSTRIES

NJDEP CERTIFICATION 12129
CDEP CERTIFICATION PH-0585

VINCENT J. FUGLIESE
VICE-PRESIDENT

ATTACHMENT NN129

ACCUTEST
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
516086S	10/20/88	11:00	AC	SOIL - PI-35D, 7-7.5'/PLANT INDUSTRIES 35-D

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
SOLIDS, TOTAL PERCENT	95	2.0	%	12/06/88	[illegible]
CADMIUM	0.60	0.50	MG/KG	12/15/88	[illegible]
SILVER	<1.0	1.0	MG/KG	12/13/88	[illegible]

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
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ATTACHMENT NN 130

ACCUTEST
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

ANALYSIS REPORT FOR BASE NEUTRAL EXTRACTABLES BY GC/MS

CLIENT : J.M. SORGE
LAB SAMPLE #: E816090R
MATRIX : SOIL

METHOD : SW846 8270
ANALYSIS DATE: 12/01/88
DATA FILE : >C6998

	COMPOUND	RESULT (ug/kg)	MDL (ug/kg)	Q
1)	ACENAPHTHENE	220	540	J
2)	ACENAPHTHYLENE	220	540	J
3)	ANTHRACENE	6100	540	
4)	BENZIDENE	ND	2700	
5)	BENZO(A)ANTHRACENE	7300	540	
6)	BENZO(A)PYRENE	5500	540	
7)	BENZO(B)FLUORANTHENE	4800	540	
8)	BENZO(K)FLUORANTHENE	5500	540	
9)	BENZO(G,H,I)PERYLENE	3000	540	
10)	BIS(2-CHLOROETHOXY)METHANE	ND	540	
11)	BIS(2-CHLOROETHYL)ETHER	ND	540	
12)	BIS(2-CHLOROISOPROPYL)ETHER	ND	540	
13)	BIS(2-ETHYLHEXYL)PHTHALATE	ND	540	
14)	4-BROMOPHENYL PHENYL ETHER	ND	540	
15)	BUTYL BENZYL PHTHALATE	1000	540	
16)	2-CHLORONAPHTHALENE	ND	540	
17)	4-CHLOROPHENYL PHENYL ETHER	ND	540	
18)	CHRYSENE	7400	540	
19)	DIBENZO(A,H)ANTHRACENE	1100	540	
20)	1,2-DICHLOROBENZENE	ND	540	
21)	1,3-DICHLOROBENZENE	ND	540	
22)	1,4-DICHLOROBENZENE	ND	540	
23)	3,3'-DICHLOROBENZIDENE	ND	1100	
24)	DIETHYL PHTHALATE	ND	540	
25)	DIMETHYL PHTHALATE	ND	540	
26)	DI-N-BUTYL PHTHALATE	4700	540	
27)	2,4-DINITROTOLUENE	ND	540	
28)	2,6-DINITROTOLUENE	ND	540	
29)	DI-N-OCTYL PHTHALATE	ND	540	
30)	1,2-DIPHENYLHYDRAZINE	ND	540	
31)	FLUORANTHENE	18000	540	
32)	FLUORENE	760	540	
33)	HEXACHLOROBENZENE	ND	540	
34)	HEXACHLOROBUTADIENE	ND	540	
35)	HEXACHLOROCYCLOPENTADIENE	ND	540	
36)	HEXACHLOROETHANE	ND	540	
37)	INDENO(1,2,3-CD)PYRENE	2900	540	
38)	ISOPHORONE	ND	540	
39)	NAPHTHALENE	480	540	J
40)	NITROBENZENE	ND	540	
41)	N-NITROSODIMETHYLAMINE	ND	540	
42)	N-NITROSODI-N-PROPYLAMINE	ND	540	
43)	N-NITROSODIPHENYLAMINE	ND	540	
44)	PHENANTHRENE	11000	540	
45)	PYRENE	9300	540	
46)	1,2,4-TRICHLOROBENZENE	ND	540	

89290

ND = NOT DETECTED
MDL= METHOD DETECTION LIMIT

QUALIFIERS (Q)

J =INDICATES AN ESTIMATED VALUE BELOW MDL
B =INDICATES COMPOUND FOUND IN THE ASSOCIATED BLANK AS WELL AS IN SAMPLE

ATTACHMENT NN(3)

ACCUTEST
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: J.M. SORGE

Batch Number: MS-S-270

Lab Sample ID: E816090R 12/13/88

Extraction Date: 11/02/88

Lab File ID: >C6998

Date Analyzed: 12/01/88 5:

Matrix: SOIL FOR BN

Number TICs found: 15

CONCENTRATION UNITS: ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	107879	2-Pentanone (8CI9CI)	4.26	1700.	1
2.	6868979	2-Butanone, 4-hydroxy-3-(hyd	4.55	780.	
3.		Unknown	4.69	570.	1
4.	60766009	Butenol, methyl- (9CI)	4.80	1100.	1
5.	124	Ethane, 1,1,2-trichloro-	6.99	470.	
6.	13091162	Butanamide, N-ethyl- (9CI)	7.17	350.	1
7.	62238373	3-Penten-1-ol, 2-methyl- (9C	7.60	6500.	
8.	115195	3-Butyn-2-ol, 2-methyl- (8CI	8.43	5700.	
9.	67641	2-Propanone (9CI)	8.79	520.	1
10.	195	Ethane, 1,1,2,2-tetrachloro-	10.73	900.	1
11.	14979396	3-Heptanol, 4-methyl- (VANRC	11.30	470.	1
12.	625558	Formic acid, 1-methylethyl e	11.80	470.	
13.	90608	Benzaldehyde, 3,5-dichloro-2	30.30	450.	
14.	243174	11H-Benzo[b]fluorene (8CI9CI	34.19	690.	
15.	205823	Benzo[j]fluoranthene (8CI9CI	45.96	4000.	

QUALIFIERS(Q):
(1)-THIS COMPOUND (OR SIMILAR SPECTRA) FOUND IN LAB BLANK.
(2)-INTERNAL OR SURROGATE STANDARD ADDED BY LABORATORY.
(3)-THIS COMPOUND ALREADY IDENTIFIED AND REPORTED AS TARGET COMPOUND.
(4)-PROBABLE BACKGROUND DUE TO SOLVENT OR CO2.

FORM I SV-TIC

ATTACHMENT NN 132

ACCUTEST
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E816090R	10/19/88	14:15	AC	SOIL - PI-39A, 0-6", S/S HAND AUGER PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
SOLIDS, TOTAL PERCENT	93	2.0	%	12/05/88	[illegible]
ANTIMONY	2.8	0.10	MG/KG	12/15/88	[illegible]

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

VINCENT J. FUGLIESE
VICE-PRESIDENT

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ATTACHMENT NN133

ACCUTEST
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

ANALYSIS REPORT FOR BASE NEUTRAL EXTRACTABLES BY GC/MS

CLIENT : J.M. SORGE
LAB SAMPLE #: E816099R
MATRIX : SOIL

METHOD : SW846 8270
ANALYSIS DATE: 12/01/88
DATA FILE : >C6997

	COMPOUND	RESULT (ug/kg)	MDL (ug/kg)	Q
1)	ACENAPHTHENE	ND	540	
2)	ACENAPHTHYLENE	ND	540	
3)	ANTHRACENE	ND	540	
4)	BENZIDENE	ND	2700	
5)	BENZO(A)ANTHRACENE	ND	540	
6)	BENZO(A)PYRENE	66	540	J
7)	BENZO(B)FLUORANTHENE	91	540	J
8)	BENZO(K)FLUORANTHENE	ND	540	
9)	BENZO(G,H,I)PERYLENE	ND	540	
10)	BIS(2-CHLOROETHOXY)METHANE	ND	540	
11)	BIS(2-CHLOROETHYL)ETHER	ND	540	
12)	BIS(2-CHLOROISOPROPYL)ETHER	ND	540	
13)	BIS(2-ETHYLHEXYL)PHTHALATE	1100	540	
14)	4-BROMOPHENYL PHENYL ETHER	ND	540	
15)	BUTYL BENZYL PHTHALATE	1200	540	
16)	2-CHLORONAPHTHALENE	ND	540	
17)	4-CHLOROPHENYL PHENYL ETHER	ND	540	
18)	CHRYSENE	ND	540	
19)	DIBENZO(A,H)ANTHRACENE	ND	540	
20)	1,2-DICHLOROBENZENE	ND	540	
21)	1,3-DICHLOROBENZENE	ND	540	
22)	1,4-DICHLOROBENZENE	ND	540	
23)	3,3'-DICHLOROBENZIDENE	ND	1100	
24)	DIETHYL PHTHALATE	ND	540	
25)	DIMETHYL PHTHALATE	ND	540	
26)	DI-N-BUTYL PHTHALATE	4700	540	
27)	2,4-DINITROTOLUENE	ND	540	
28)	2,6-DINITROTOLUENE	ND	540	
29)	DI-N-OCTYL PHTHALATE	ND	540	
30)	1,2-DIPHENYLHYDRAZINE	ND	540	
31)	FLUORANTHENE	120	540	J
32)	FLUORENE	ND	540	
33)	HEXACHLOROBENZENE	ND	540	
34)	HEXACHLOROBUTADIENE	ND	540	
35)	HEXACHLOROCYCLOPENTADIENE	ND	540	
36)	HEXACHLOROETHANE	ND	540	
37)	INDENO(1,2,3-CD)PYRENE	ND	540	
38)	ISOPHORONE	ND	540	
39)	NAPHTHALENE	ND	540	
40)	NITROBENZENE	ND	540	
41)	N-NITROSODIMETHYLAMINE	ND	540	
42)	N-NITROSODI-N-PROPYLAMINE	ND	540	
43)	N-NITROSODIPHENYLAMINE	ND	540	
44)	PHENANTHRENE	61	540	J
45)	PYRENE	120	540	J
46)	1,2,4-TRICHLOROBENZENE	ND	540	

ND = NOT DETECTED
MDL= METHOD DETECTION LIMIT

QUALIFIERS (Q)

J =INDICATES AN ESTIMATED VALUE BELOW MDL
B =INDICATES COMPOUND FOUND IN THE ASSOCIATED BLANK AS WELL AS IN SAMPLE

ATTACHMENT 6 NN134

ACCUTEST
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: J.M. SOPSE

Batch Number: MS-S-270

Lab Sample ID: E816099R 12/13/88

Extraction Date: 11/02/88

Lab File ID: >C6997

Date Analyzed: 12/01/88 4:1[illegible]

Matrix: SOIL FOR BN

Number TICs found: 14

CONCENTRATION UNITS: ug/kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	563804	2-Butanone, 3-methyl- (8CI,9CI	4.31	1800.	
2.	594365	Butane, 2-chloro-2-methyl- (	4.49	280.	
3.	814788	3-Buten-2-one, 3-methyl- (8C	4.60	320.	
4.	994058	Butane, 2-methoxy-2-methyl-	4.74	640.	
5.	115184	3-Buten-2-ol, 2-methyl- (8CI	4.81	470.	
6.	2916316	1,3-Dioxolane, 2,2-dimethyl-	5.03	670.	
7.	124	Ethane, 1,1,2-trichloro-	7.00	390.	
8.	13091162	Butanamide, N-ethyl- (9CI)	7.18	370.	
9.	18641822	Pentane, 1-propoxy- (9CI)	7.58	1600.	
10.	930223	Oxirane, ethenyl- (9CI)	8.40	1700.	
11.	67641	2-Propanone (9CI)	8.76	640.	
12.	79345	Ethane, 1,1,2,2-tetrachloro-	10.70	610.	
13.	14979396	3-Heptanol, 4-methyl- (VANBC	11.31	470.	
14.		Unknown	11.92	2700.	

QUALIFIERS(Q):
(1)-THIS COMPOUND (OR SIMILAR SPECTRA) FOUND IN LAB BLANK.
(2)-INTERNAL OR SURROGATE STANDARD ADDED BY LABORATORY.
(3)-THIS COMPOUND ALREADY IDENTIFIED AND REPORTED AS TARGET COMPOUND.
(4)-PROBABLE BACKGROUND DUE TO SOLVENT OR CO2.

FORM I SV-TIC

ATTACHMENT NN135

ACCUTEST
2235 ROUTE 130, BLDG B • DAYTON, N.J. 08810 • (201) 329 0200

ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E816099R	10/19/88	15:25	AC	SOIL - FI-42A, 0-6"/PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
SOLIDS, TOTAL PERCENT	94	2.0	%	12/05/88	[illegible]

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT 83 NN136

ACCUTEST
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

ANALYSIS REPORT FOR BASE NEUTRAL EXTRACTABLES BY GC/MS

CLIENT : J.M. SORGE
LAB SAMPLE #: E816103R
MATRIX : SOIL

METHOD : SW846 8270
ANALYSIS DATE: 12/01/88
DATA FILE : >C6999

	COMPOUND	RESULT (ug/kg)	MDL (ug/kg)	Q
1)	ACENAPHTHENE	ND	540	
2)	ACENAPHTHYLENE	ND	540	
3)	ANTHRACENE	63	540	J
4)	BENZIDENE	ND	2700	
5)	BENZO(A)ANTHRACENE	460	540	J
6)	BENZO(A)PYRENE	510	540	J
7)	BENZO(B)FLUORANTHENE	520	540	J
8)	BENZO(K)FLUORANTHENE	460	540	J
9)	BENZO(G,H,I)PERYLENE	310	540	J
10)	BIS(2-CHLOROETHOXY)METHANE	ND	540	
11)	BIS(2-CHLOROETHYL)ETHER	ND	540	
12)	BIS(2-CHLOROISOPROPYL)ETHER	ND	540	
13)	BIS(2-ETHYLHEXYL)PHTHALATE	ND	540	
14)	4-BROMOPHENYL PHENYL ETHER	ND	540	
15)	BUTYL BENZYL PHTHALATE	280	540	J
16)	2-CHLORONAPHTHALENE	ND	540	
17)	4-CHLOROPHENYL PHENYL ETHER	ND	540	
18)	CHRYSENE	550	540	
19)	DIBENZO(A,H)ANTHRACENE	ND	540	
20)	1,2-DICHLOROBENZENE	ND	540	
21)	1,3-DICHLOROBENZENE	ND	540	
22)	1,4-DICHLOROBENZENE	ND	540	
23)	3,3'-DICHLOROBENZIDENE	ND	1100	
24)	DIETHYL PHTHALATE	ND	540	
25)	DIMETHYL PHTHALATE	ND	540	
26)	DI-N-BUTYL PHTHALATE	4900	540	
27)	2,4-DINITROTOLUENE	ND	540	
28)	2,6-DINITROTOLUENE	ND	540	
29)	DI-N-OCTYL PHTHALATE	ND	540	
30)	1,2-DIPHENYLHYDRAZINE	ND	540	
31)	FLUORANTHENE	660	540	
32)	FLUORENE	ND	540	
33)	HEXACHLOROBENZENE	ND	540	
34)	HEXACHLOROBUTADIENE	ND	540	
35)	HEXACHLOROCYCLOPENTADIENE	ND	540	
36)	HEXACHLOROETHANE	ND	540	
37)	INDENO(1,2,3-CD)PYRENE	280	540	J
38)	ISOPHORONE	ND	540	
39)	NAPHTHALENE	ND	540	
40)	NITROBENZENE	ND	540	
41)	N-NITROSODIMETHYLAMINE	ND	540	
42)	N-NITROSODI-N-PROPYLAMINE	ND	540	
43)	N-NITROSODIPHENYLAMINE	ND	540	
44)	PHENANTHRENE	400	540	J
45)	PYRENE	870	540	
46)	1,2,4-TRICHLOROBENZENE	ND	540	

ND = NOT DETECTED
MDL= METHOD DETECTION LIMIT

QUALIFIERS (Q)

J =INDICATES AN ESTIMATED VALUE BELOW MDL
B =INDICATES COMPOUND FOUND IN THE ASSOCIATED BLANK AS WELL AS IN SAMPLE

ACCUTEST®
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: J.M. SORGE

Batch Number: MS-S-270

Lab Sample ID: E816103R 12/13/88

Extraction Date: 11/02/88

Lab File ID: >C6999

Date Analyzed: 12/01/88 6:56

Matrix: SOIL FOR BN

Number TICs found: 15

CONCENTRATION UNITS: ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	431038	2,3-Butanedione (8CI,9CI)	4.29	1400.	
2.	814788	3-Buten-2-one, 3-methyl- (8CI	4.58	850.	
3.		Unknown	4.72	530.	
4.	60766009	Butenol, methyl- (9CI)	4.83	850.	
5.	107211	1,2-Ethanediol (9CI)	5.08	580.	
6.		Unknown	6.51	580.	
7.	123	Ethane, 1,1,2-trichloro-	6.98	340.	
8.	13091162	Butanamide, N-ethyl- (9CI)	7.16	270.	
9.	115195	3-Butyn-2-ol, 2-methyl- (8CI)	7.56	2500.	
10.	1589475	1-Propanol, 2-methoxy- (8CI,9	8.09	240.	
11.	930223	Oxirane, ethenyl- (9CI)	8.42	2900.	
12.	67641	2-Propanone (9CI)	8.78	670.	
13.	79345	Ethane, 1,1,2,2-tetrachloro-	10.72	580.	
14.	5076200	Oxirane, tetramethyl- (9CI)	11.33	390.	
15.	109864	Ethanol, 2-methoxy- (8CI,9CI)	11.87	790.	

QUALIFIERS(Q):
(1)-THIS COMPOUND (OR SIMILAR SPECTRA) FOUND IN LAB BLANK.
(2)-INTERNAL OR SURROGATE STANDARD ADDED BY LABORATORY.
(3)-THIS COMPOUND ALREADY IDENTIFIED AND REPORTED AS TARGET COMPOUND.
(4)-PROBABLE BACKGROUND DUE TO SOLVENT OR CO2.

FORM I SV-TIC

ATTACHMENT NN 138

ACCUTEST
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E816103R	10/19/88	12:05	AC	SOIL - PI-43A, 0-6"/PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
SOLIDS, TOTAL PERCENT	86	2.0	%	12/06/88	GPM
CADMIUM	3.1	0.50	MG/KG	12/15/88	[illegible]
SILVER	<1.0	1.0	MG/KG	12/13/88	[illegible]

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT NN13

ACCUTEST®
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

TO: J. M. SORGE, INC.
3301 U. S. HIGHWAY 22
SOMERVILLE, NJ 08876

ATTN: MIKE McGOWAN

DATE: 11/21/88

JOB No: 885177R

PROJECT No: 86013

SAMPLE RECEIVED: 11/07/88

SAMPLE SUMMARY

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E816086R	10/20/88	11:00	JK	SOIL - PI-35D, 7'-7.5' PLANT INDUSTRIES

NJDEP CERTIFICATION 12129
C EP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT 1 NN140

ACCUTEST®
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E816086R	10/20/88	11:00	JK	SOIL - PI-35D, 7'-7.5' PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<50	50	MG/KG	11/16/88	TM

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT 2 NN141

ACCUTEST®
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

TO: J. M. SORGE, INC.
3301 U. S. HIGHWAY 22
SOMERVILLE, NJ 08876

ATTN: MIKE McGOWAN

DATE: 11/21/88

JOB No: 885178R

PROJECT No: 86013

SAMPLE RECEIVED: 11/07/88

SAMPLE SUMMARY

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E816092R	10/20/88	09:25	JK	SOIL - PI-40B, 3-3.5'/PLANT INDUSTRIES
E816101R	10/19/88	15:45	JK	SOIL - PI-42C, 5'-5.5' PLANT INDUSTRIES

NJDEP CERTIFICATION 12129
C EP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT NN-17

ACCUTEST®
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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E816092R	10/20/88	09:25	JK	SOIL - PI-40B, 3-3.5'/PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	60	50	MG/KG	11/16/88	TM

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT NN43

ACCUTEST®
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E816101R	10/19/88	15:45	JK	SOIL - PI-42C, 5'-5.5' PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<50	50	MG/KG	11/15/88	KY

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT 3 NN144

ACCUTEST
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

: J. M. SORGE, INC.
3301 U. S. HIGHWAY 22
SOMERVILLE, NJ 08876

ATTN: MIKE McGOWAN

DATE: 12/23/88

JOB No: 884963R

PROJECT No: 86013

SAMPLE RECEIVED: 12/01/88

SAMPLE SUMMARY

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
815424R	10/20/88	11:40	AC	SOIL - PI-44A, 0-.5', AREA 4 PLANT INDUSTRIES
E815427R	10/20/88	12:10	AC	SOIL - PI=45A, 0-.5', AREA 4 PLANT INDUSTRIES
815430R	10/20/88	12:40	AC	SOIL - PI-46A, 0-.5', AREA 4 PLANT INDUSTRIES
E815434R	10/20/88	13:15	AC	SOIL - PI-47B, 1.0-1.5', AREA 4 PLANT INDUSTRIES
815437R	10/20/88	13:45	AC	SOIL - PI-48B, 1.0-1.5', AREA 4 PLANT INDUSTRIES

JOEP CERTIFICATION 12129
EP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT NN145
1

ACCUTEST
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815424R	10/20/88	11:40	AC	SOIL - PI-44A, 0-.5', AREA 4 PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
SOLIDS, TOTAL PERCENT	95	2.0	%	12/06/88	GPM
ARSENIC	4.3	0.10	MG/KG	12/21/88	MS
BERYLLIUM	0.84	0.50	MG/KG	12/15/88	GG
CADMIUM	1.8	0.50	MG/KG	12/15/88	GG

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT NN146
2

ACCUTEST
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815427R	10/20/88	12:10	AC	SOIL - PI=45A, 0-.5', AREA 4 PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
SOLIDS, TOTAL PERCENT	96	2.0	%	12/06/88	GPM
ARSENIC	2.9	0.10	MG/KG	12/21/88	MS
BERYLLIUM	0.94	0.50	MG/KG	12/15/88	GG
CADMIUM	3.6	0.50	MG/KG	12/15/88	GG

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT NN147
3

ACCUTEST
2235 ROUTE 130, BLDG B • DAYTON, N.J. 08810 • (201) 329-0200

ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815430R	10/20/88	12:40	AC	SOIL - PI-46A, 0-.5', AREA 4 PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
SOLIDS, TOTAL PERCENT	95	2.0	%	12/06/88	GRM
ARSENIC	2.9	0.10	MG/KG	12/21/88	MS
BERYLLIUM	0.93	0.50	MG/KG	12/15/88	GG
CADMIUM	1.6	0.50	MG/KG	12/15/88	GG

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT NN14e

ACCUTEST
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815434R	10/20/88	13:15	AC	SOIL - PI-47B, 1.0-1.5', AREA 4 PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
SOLIDS, TOTAL PERCENT	96	2.0	%	12/06/88	GPM
ARSENIC	16	0.10	MG/KG	12/21/88	MS

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT NN149

ACCUTEST
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815437R	10/20/88	13:45	AC	SOIL - PI-48B, 1.0-1.5', AREA 4 PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
SOLIDS, TOTAL PERCENT	95	2.0	%	12/06/88	GPM
BERYLLIUM	0.67	0.50	MG/KG	12/15/88	GG
CADMIUM	0.94	0.50	MG/KG	12/15/88	GG

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT NN150

ACCUTEST
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

M. SORGE, INC.
01 U. S. HIGHWAY 22
MERVILLE, NJ 08876

TN: MIKE McGOWAN

DATE: 12/20/88

JOB No: 885178S

PROJECT No: 86013

SAMPLE RECEIVED: 12/01/88

SAMPLE SUMMARY

PLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
6092S	10/20/88	09:25	AC	SOIL - PI-40B, 3-3.5'/PLANT INDUSTRIES
6096R	10/19/88	16:25	AC	SOIL - PI-41B, 3-3.5'/PLANT INDUSTRIES
16100R	10/19/88	15:35	AC	SOIL - PI-42B, 3-3.5'/PLANT INDUSTRIES
16101S	10/19/88	15:45	AC	SOIL - PI-42C, 5-5.5'/PLANT INDUSTRIES

EP CERTIFICATION 12129
EP CERTIFICATION PH-0585

VINCENT J. FUGLIESE
VICE-PRESIDENT

ATTACHMENT NN 151

ACCUTEST
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E816092S	10/20/88	09:25	AC	SOIL - PI-40B, 3-3.5'/PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
SOLIDS, TOTAL PERCENT	91	2.0	%	12/06/88	GPM
CADMIUM	17	0.50	MG/KG	12/15/88	GG

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT NN152 2

ACCUTEST
2235 ROUTE 130, BLDG. B • DAYTON, N.J 08810 • (201) 329-0200

ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E816096R	10/19/88	16:25	AC	SOIL - PI-41B, 3-3.5'/PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
SOLIDS, TOTAL PERCENT	96	2.0	%	12/06/88	SEM
CADMIUM	1.6	0.50	MG/KG	12/15/88	SS

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT NN 163
3

ACCUTEST
2235 ROUTE 130, BLDG B • DAYTON, N.J. 08810 • (201) 329-0200

ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E816100R	10/19/88	15:35	AC	SOIL - PI-42B, 3-3.5'/PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
SOLIDS, TOTAL PERCENT	95	2.0	%	12/06/88	GPM
CADMIUM	1.5	0.50	MG/KG	12/15/88	GG
SILVER	<1.0	1.0	MG/KG	12/13/88	NH

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT NN154

ACCUTEST
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E816101S	10/19/88	15:45	AC	SOIL - PI-42C, 5-5.5'/PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
SOLIDS, TOTAL PERCENT	92	2.0	%	12/06/88	GEM
CADMIUM	1.6	0.50	MG/KG	12/15/88	GG
SILVER	<1.0	1.0	MG/KG	12/13/88	KH

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT NN 155

ACCUTEST®
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

D: J. M. SORGE, INC.
3301 U. S. HIGHWAY 22
SOMERVILLE, NJ 08876

ATTN: MIKE McGOWAN

DATE: 11/10/88

JOB No: 885037

PROJECT No: 86013

SAMPLE RECEIVED: 10/25/88

SAMPLE SUMMARY

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815661	10/21/88	15:00	JK	GROUND WATER - MW-1/PLANT INDUSTRIES
.815662	10/21/88	14:30	JK	GROUND WATER - MW-2/PLANT INDUSTRIES
E815663	10/21/88	14:45	JK	GROUND WATER - MW-3/PLANT INDUSTRIES
E815664	10/21/88	15:30	JK	GROUND WATER - MW-5/PLANT INDUSTRIES
E815665	10/21/88	14:15	JK	GROUND WATER - MW-6/PLANT INDUSTRIES
E815666	10/21/88	16:30	JK	WATER - FB-6/PLANT INDUSTRIES

,EP CERTIFICATION 12129
)EP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT NN156

ACCUTEST®
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

ANALYSIS REPORT FOR BASE NEUTRAL EXTRACTABLES BY GC/MS

CLIENT : SORGE
LAB SAMPLE #: E815661
MATRIX : WATER

METHOD : EPA 625
ANALYSIS DATE: 10/31/88
DATA FILE : >E2080

	COMPOUND	RESULT (ug/L)	MDL (ug/L)	Q
1)	ACENAPHTHENE	ND	11	
2)	ACENAPHTHYLENE	ND	11	
3)	ANTHRACENE	ND	11	
4)	BENZIDENE	ND	53	
5)	BENZO(A)ANTHRACENE	ND	11	
6)	BENZO(A)PYRENE	ND	11	
7)	BENZO(B)FLUORANTHENE	ND	11	
8)	BENZO(K)FLUORANTHENE	ND	11	
9)	BENZO(G,H,I)PERYLENE	ND	11	
10)	BIS(2-CHLOROETHOXY)METHANE	ND	11	
11)	BIS(2-CHLOROETHYL)ETHER	ND	11	
12)	BIS(2-CHLOROISOPROPYL)ETHER	ND	11	
13)	BIS(2-ETHYLHEXYL)PHTHALATE	ND	11	
14)	4-BROMOPHENYL PHENYL ETHER	ND	11	
15)	BUTYL BENZYL PHTHALATE	ND	11	
16)	2-CHLORONAPHTHALENE	ND	11	
17)	4-CHLOROPHENYL PHENYL ETHER	ND	11	
18)	CHRYSENE	ND	11	
19)	DIBENZO(A,H)ANTHRACENE	ND	11	
20)	1,2-DICHLOROBENZENE	ND	11	
21)	1,3-DICHLOROBENZENE	ND	11	
22)	1,4-DICHLOROBENZENE	ND	11	
23)	3,3'-DICHLOROBENZIDENE	ND	21	
24)	DIETHYL PHTHALATE	ND	11	
25)	DIMETHYL PHTHALATE	ND	11	
26)	DI-N-BUTYL PHTHALATE	ND	11	
27)	2,4-DINITROTOLUENE	ND	11	
28)	2,6-DINITROTOLUENE	ND	11	
29)	DI-N-OCTYL PHTHALATE	ND	11	
30)	1,2-DIPHENYLHYDRAZINE	ND	11	
31)	FLUORANTHENE	ND	11	
32)	FLUORENE	ND	11	
33)	HEXACHLOROBENZENE	ND	11	
34)	HEXACHLOROBUTADIENE	ND	11	
35)	HEXACHLOROCYCLOPENTADIENE	ND	11	
36)	HEXACHLOROETHANE	ND	11	
37)	INDENO(1,2,3-CD)PYRENE	ND	11	
38)	ISOPHORONE	ND	11	
39)	NAPHTHALENE	ND	11	
40)	NITROBENZENE	ND	11	
41)	N-NITROSODIMETHYLAMINE	ND	11	
42)	N-NITROSODI-N-PROPYLAMINE	ND	11	
43)	N-NITROSODIPHENYLAMINE	ND	11	
44)	PHENANTHRENE	ND	11	
45)	PYRENE	ND	11	
46)	1,2,4-TRICHLOROBENZENE	ND	11	

ND = NOT DETECTED
MDL= METHOD DETECTION LIMIT

QUALIFIERS (Q)

J =INDICATES AN ESTIMATED VALUE BELOW MDL
B =INDICATES COMPOUND FOUND IN THE ASSOCIATED BLANK AS WELL AS IN SAMPLE

ATTACHMENT NW157
2

ACCUTEST®
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: SORGE

Batch Number: MS-S-263

Lab Sample ID: E815661

Extraction Date: 10/28/88

Lab File ID: >E2080

Date Analyzed: 10/31/88 15:41

Matrix: WATER FOR BN

Number TICs found: 1

CONCENTRATION UNITS: ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	53778737	2-Butanol, 1-methoxy- (9CI)	8.02	8.	1
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					

QUALIFIERS(Q);
(1)-THIS COMPOUND (OR SIMILAR SPECTRA) FOUND IN LAB BLANK.
(2)-INTERNAL OR SURROGATE STANDARD ADDED BY LABORATORY.
(3)-THIS COMPOUND ALREADY IDENTIFIED AND REPORTED AS TARGET COMPOUND.
(4)-PROBABLE BACKGROUND DUE TO SOLVENT OR CO2.

FORM I SV-TIC

ATTACHMENT NN158

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ANALYSIS REPORT

AMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
815661	10/21/88	15:00	JK	GROUND WATER - MW-1/PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<1.0	1.0	MG/L	10/25/88	KY
ANTIMONY	<0.001	0.001	MG/L	11/02/88	MS
ARSENIC	0.002	0.001	MG/L	11/01/88	MS
BERYLLIUM	<0.005	0.005	MG/L	11/01/88	GG
CADMIUM	<0.005	0.005	MG/L	11/01/88	GG
CHROMIUM	<0.025	0.025	MG/L	11/01/88	GG
COPPER	<0.020	0.020	MG/L	11/01/88	GG
LEAD	0.003	0.001	MG/L	11/01/88	MS
MERCURY	<0.001	0.001	MG/L	11/01/88	SH
NICKEL	<0.040	0.040	MG/L	11/01/88	GG
SELENIUM	<0.001	0.001	MG/L	11/02/88	MS
SILVER	<0.010	0.010	MG/L	10/31/88	MH
THALLIUM	<0.001	0.001	MG/L	11/01/88	MS
ZINC	0.062	0.050	MG/L	11/01/88	GG

UG/L = PPB MG/L= PPM
MDL = METHOD DETECTION LIMIT
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT: NN 159

ACCUTEST®
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

ANALYSIS REPORT FOR BASE NEUTRAL EXTRACTABLES BY GC/MS

CLIENT : SORGE
LAB SAMPLE #: E815662
MATRIX : WATER

METHOD : EPA 625
ANALYSIS DATE: 10/31/88
DATA FILE : >E2081

	COMPOUND	RESULT (ug/L)	MDL (ug/L)	Q
1)	ACENAPHTHENE	ND	11	
2)	ACENAPHTHYLENE	ND	11	
3)	ANTHRACENE	ND	11	
4)	BENZIDENE	ND	53	
5)	BENZO(A)ANTHRACENE	ND	11	
6)	BENZO(A)PYRENE	ND	11	
7)	BENZO(B)FLUORANTHENE	ND	11	
8)	BENZO(K)FLUORANTHENE	ND	11	
9)	BENZO(G,H,I)PERYLENE	ND	11	
10)	BIS(2-CHLOROETHOXY)METHANE	ND	11	
11)	BIS(2-CHLOROETHYL)ETHER	ND	11	
12)	BIS(2-CHLOROISOPROPYL)ETHER	ND	11	
13)	BIS(2-ETHYLHEXYL)PHTHALATE	ND	11	
14)	4-BROMOPHENYL PHENYL ETHER	ND	11	
15)	BUTYL BENZYL PHTHALATE	ND	11	
16)	2-CHLORONAPHTHALENE	ND	11	
17)	4-CHLOROPHENYL PHENYL ETHER	ND	11	
18)	CHRYSENE	ND	11	
19)	DIBENZO(A,H)ANTHRACENE	ND	11	
20)	1,2-DICHLOROBENZENE	ND	11	
21)	1,3-DICHLOROBENZENE	ND	11	
22)	1,4-DICHLOROBENZENE	ND	11	
23)	3,3'-DICHLOROBENZIDENE	ND	21	
24)	DIETHYL PHTHALATE	ND	11	
25)	DIMETHYL PHTHALATE	ND	11	
26)	DI-N-BUTYL PHTHALATE	1.1	11	J
27)	2,4-DINITROTOLUENE	ND	11	
28)	2,6-DINITROTOLUENE	ND	11	
29)	DI-N-OCTYL PHTHALATE	ND	11	
30)	1,2-DIPHENYLHYDRAZINE	ND	11	
31)	FLUORANTHENE	ND	11	
32)	FLUORENE	ND	11	
33)	HEXACHLOROBENZENE	ND	11	
34)	HEXACHLOROBUTADIENE	ND	11	
35)	HEXACHLOROCYCLOPENTADIENE	ND	11	
36)	HEXACHLOROETHANE	ND	11	
37)	INDENO(1,2,3-CD)PYRENE	ND	11	
38)	ISOPHORONE	ND	11	
39)	NAPHTHALENE	ND	11	
40)	NITROBENZENE	ND	11	
41)	N-NITROSODIMETHYLAMINE	ND	11	
42)	N-NITROSODI-N-PROPYLAMINE	ND	11	
43)	N-NITROSODIPHENYLAMINE	ND	11	
44)	PHENANTHRENE	ND	11	
45)	PYRENE	ND	11	
46)	1,2,4-TRICHLOROBENZENE	ND	11	

ND = NOT DETECTED
MDL= METHOD DETECTION LIMIT

QUALIFIERS (Q)

J =INDICATES AN ESTIMATED VALUE BELOW MDL
B =INDICATES COMPOUND FOUND IN THE ASSOCIATED BLANK AS WELL AS IN SAMPLE

ATTACHMENT 5 NN 160

ACCUTEST®
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1E

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: SORGE

EXTRACTION DATE: 102888

Lab Sample ID: E815662

ANALYSIS DATE: 103188 16:48

Matrix: (soil/water) BN WATER

BATCH NO: MS-263

Lab File ID: >E2081

Number TICs found: 1

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	1191873	2,5,8,11,14,17-Hexaoxaoctad	7.92	12.	1
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
20.					
21.					
22.					

QUALIFIERS

(1)-THIS COMPOUND (OR SIMILAR SPECTRA) FOUND IN LAB BLANK.
(2)-INTERNAL OR SURROGATE STANDARD ADDED BY LABORATORY.
(3)-THIS COMPOUND ALREADY IDENTIFIED AND REPORTED AS TARGET.
(4)-PROBABLE BACKGROUND DUE TO SOLVENT OR CO2.

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ATTACHMENT NN 161

ACCUTEST®
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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815662	10/21/88	14:30	JK	GROUND WATER - MW-2/PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<1.0	1.0	MG/L	10/26/88	KY
ANTIMONY	<0.001	0.001	MG/L	11/02/88	MS
ARSENIC	0.009	0.001	MG/L	11/01/88	MS
BERYLLIUM	<0.005	0.005	MG/L	11/01/88	GG
CADMIUM	0.006	0.005	MG/L	11/01/88	GG
CHROMIUM	0.062	0.025	MG/L	11/01/88	GG
COPPER	0.039	0.020	MG/L	11/01/88	GG
LEAD	0.006	0.001	MG/L	11/01/88	MS
MERCURY	<0.001	0.001	MG/L	11/01/88	SH
NICKEL	<0.040	0.040	MG/L	11/01/88	GG
SELENIUM	<0.001	0.001	MG/L	11/02/88	MS
SILVER	<0.010	0.010	MG/L	10/31/88	NH
THALLIUM	<0.001	0.001	MG/L	11/01/88	MS
ZINC	0.24	0.050	MG/L	11/01/88	GG

UG/L = PPB MG/L= PPM
MDL = METHOD DETECTION LIMIT
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT NN162

ACCUTEST®
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

ANALYSIS REPORT FOR BASE NEUTRAL EXTRACTABLES BY GC/MS

CLIENT : SORGE
LAB SAMPLE #: E815663
MATRIX : WATER

METHOD : EPA 625
ANALYSIS DATE: 10/31/88
DATA FILE : >E2082

	COMPOUND	RESULT (ug/L)	MDL (ug/L)	Q
1)	ACENAPHTHENE	ND	12	
2)	ACENAPHTHYLENE	ND	12	
3)	ANTHRACENE	ND	12	
4)	BENZIDENE	ND	60	
5)	BENZO(A)ANTHRACENE	ND	12	
6)	BENZO(A)PYRENE	ND	12	
7)	BENZO(B)FLUORANTHENE	ND	12	
8)	BENZO(K)FLUORANTHENE	ND	12	
9)	BENZO(G,H,I)PERYLENE	ND	12	
10)	BIS(2-CHLOROETHOXY)METHANE	ND	12	
11)	BIS(2-CHLOROETHYL)ETHER	ND	12	
12)	BIS(2-CHLOROISOPROPYL)ETHER	ND	12	
13)	BIS(2-ETHYLHEXYL)PHTHALATE	ND	12	
14)	4-BROMOPHENYL PHENYL ETHER	ND	12	
15)	BUTYL BENZYL PHTHALATE	ND	12	
16)	2-CHLORONAPHTHALENE	ND	12	
17)	4-CHLOROPHENYL PHENYL ETHER	ND	12	
18)	CHRYSENE	ND	12	
19)	DIBENZO(A,H)ANTHRACENE	ND	12	
20)	1,2-DICHLOROBENZENE	ND	12	
21)	1,3-DICHLOROBENZENE	ND	12	
22)	1,4-DICHLOROBENZENE	ND	12	
23)	3,3'-DICHLOROBENZIDENE	ND	24	
24)	DIETHYL PHTHALATE	ND	12	
25)	DIMETHYL PHTHALATE	ND	12	
26)	DI-N-BUTYL PHTHALATE	ND	12	
27)	2,4-DINITROTOLUENE	ND	12	
28)	2,6-DINITROTOLUENE	ND	12	
29)	DI-N-OCTYL PHTHALATE	ND	12	
30)	1,2-DIPHENYLHYDRAZINE	ND	12	
31)	FLUORANTHENE	ND	12	
32)	FLUORENE	ND	12	
33)	HEXACHLOROBENZENE	ND	12	
34)	HEXACHLOROBUTADIENE	ND	12	
35)	HEXACHLOROCYCLOPENTADIENE	ND	12	
36)	HEXACHLOROETHANE	ND	12	
37)	INDENO(1,2,3-CD)PYRENE	ND	12	
38)	ISOPHORONE	ND	12	
39)	NAPHTHALENE	ND	12	
40)	NITROBENZENE	ND	12	
41)	N-NITROSODIMETHYLAMINE	ND	12	
42)	N-NITROSODI-N-PROPYLAMINE	ND	12	
43)	N-NITROSODIPHENYLAMINE	ND	12	
44)	PHENANTHRENE	ND	12	
45)	PYRENE	ND	12	
46)	1,2,4-TRICHLOROBENZENE	ND	12	

ND = NOT DETECTED
MDL= METHOD DETECTION LIMIT

QUALIFIERS (Q)

J =INDICATES AN ESTIMATED VALUE BELOW MDL
B =INDICATES COMPOUND FOUND IN THE ASSOCIATED BLANK AS WELL AS IN SAMPLE

ATTACHMENT 8 NN163

ACCUTEST®
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1E

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: SORGE

EXTRACTION DATE: 102888

Lab Sample ID: E815663

ANALYSIS DATE: 103188 17:55

Matrix: (soil/water) BN WATER

BATCH NO: MS-263

Lab File ID: >E2082

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	No non-target compounds			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
20.				
21.				
22.				

QUALIFIERS

(1)-THIS COMPOUND (OR SIMILAR SPECTRA) FOUND IN LAB BLANK.
(2)-INTERNAL OR SURROGATE STANDARD ADDED BY LABORATORY.
(3)-THIS COMPOUND ALREADY IDENTIFIED AND REPORTED AS TARGET.
(4)-PROBABLE BACKGROUND DUE TO SOLVENT OR CO2.

1/87 Rev.

ATTACHMENT NN 164

ACCUTEST®
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815663	10/21/88	14:45	JK	GROUND WATER - MW-3/PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<1.0	1.0	MG/L	10/26/88	KY
ANTIMONY	<0.001	0.001	MG/L	11/02/88	MS
ARSENIC	0.001	0.001	MG/L	11/01/88	MS
BERYLLIUM	<0.005	0.005	MG/L	11/01/88	GG
CADMIUM	<0.005	0.005	MG/L	11/01/88	GG
CHROMIUM	<0.025	0.025	MG/L	11/01/88	GG
COPPER	0.020	0.020	MG/L	11/01/88	GG
LEAD	<0.001	0.001	MG/L	11/08/88	MS
MERCURY	<0.001	0.001	MG/L	11/01/88	SH
NICKEL	<0.040	0.040	MG/L	11/01/88	GG
SELENIUM	0.005	0.001	MG/L	11/02/88	MS
SILVER	<0.010	0.010	MG/L	10/31/88	NH
THALLIUM	<0.001	0.001	MG/L	11/01/88	MS
ZINC	0.054	0.050	MG/L	11/01/88	GG

UG/L = PPB MG/L= PPM
MDL = METHOD DETECTION LIMIT
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815664	10/21/88	15:30	JK	GROUND WATER - MW-5/PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<1.0	1.0	MG/L	10/26/88	KY
ANTIMONY	<0.001	0.001	MG/L	11/02/88	MS
ARSENIC	0.002	0.001	MG/L	11/01/88	MS
BERYLLIUM	<0.005	0.005	MG/L	11/01/88	GG
CADMIUM	<0.005	0.005	MG/L	11/01/88	GG
CHROMIUM	<0.025	0.025	MG/L	11/01/88	GG
COPPER	<0.020	0.020	MG/L	11/01/88	GG
LEAD	0.001	0.001	MG/L	11/08/88	MS
MERCURY	<0.001	0.001	MG/L	11/01/88	SH
NICKEL	<0.040	0.040	MG/L	11/01/88	GG
SELENIUM	<0.001	0.001	MG/L	11/02/88	MS
SILVER	<0.010	0.010	MG/L	10/31/88	NH
THALLIUM	<0.001	0.001	MG/L	11/01/88	MS
ZINC	0.064	0.050	MG/L	11/01/88	GG

UG/L = PPB MG/L= PPM
MDL = METHOD DETECTION LIMIT
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT 11 NN166

ACCUTEST®
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

ANALYSIS REPORT FOR BASE NEUTRAL EXTRACTABLES BY GC/MS

CLIENT : SORGE
LAB SAMPLE #: E815665
MATRIX : WATER

METHOD : EPA 625
ANALYSIS DATE: 10/31/88
DATA FILE : >E2083

	COMPOUND	RESULT (ug/L)	MDL (ug/L)	Q
1)	ACENAPHTHENE	ND	12	
2)	ACENAPHTHYLENE	ND	12	
3)	ANTHRACENE	ND	12	
4)	BENZIDENE	ND	62	
5)	BENZO(A)ANTHRACENE	ND	12	
6)	BENZO(A)PYRENE	ND	12	
7)	BENZO(B)FLUORANTHENE	ND	12	
8)	BENZO(K)FLUORANTHENE	ND	12	
9)	BENZO(G,H,I)PERYLENE	ND	12	
10)	BIS(2-CHLOROETHOXY)METHANE	ND	12	
11)	BIS(2-CHLOROETHYL)ETHER	ND	12	
12)	BIS(2-CHLOROISOPROPYL)ETHER	ND	12	
13)	BIS(2-ETHYLHEXYL)PHTHALATE	ND	12	
14)	4-BROMOPHENYL PHENYL ETHER	ND	12	
15)	BUTYL BENZYL PHTHALATE	ND	12	
16)	2-CHLORONAPHTHALENE	ND	12	
17)	4-CHLOROPHENYL PHENYL ETHER	ND	12	
18)	CHRYSENE	ND	12	
19)	DIBENZO(A,H)ANTHRACENE	ND	12	
20)	1,2-DICHLOROBENZENE	ND	12	
21)	1,3-DICHLOROBENZENE	ND	12	
22)	1,4-DICHLOROBENZENE	ND	12	
23)	3,3'-DICHLOROBENZIDENE	ND	25	
24)	DIETHYL PHTHALATE	ND	12	
25)	DIMETHYL PHTHALATE	ND	12	
26)	DI-N-BUTYL PHTHALATE	ND	12	
27)	2,4-DINITROTOLUENE	ND	12	
28)	2,6-DINITROTOLUENE	ND	12	
29)	DI-N-OCTYL PHTHALATE	ND	12	
30)	1,2-DIPHENYLHYDRAZINE	ND	12	
31)	FLUORANTHENE	ND	12	
32)	FLUORENE	ND	12	
33)	HEXACHLOROBENZENE	ND	12	
34)	HEXACHLOROBUTADIENE	ND	12	
35)	HEXACHLOROCYCLOPENTADIENE	ND	12	
36)	HEXACHLOROETHANE	ND	12	
37)	INDENO(1,2,3-CD)PYRENE	ND	12	
38)	ISOPHORONE	ND	12	
39)	NAPHTHALENE	ND	12	
40)	NITROBENZENE	ND	12	
41)	N-NITROSODIMETHYLAMINE	ND	12	
42)	N-NITROSODI-N-PROPYLAMINE	ND	12	
43)	N-NITROSODIPHENYLAMINE	ND	12	
44)	PHENANTHRENE	ND	12	
45)	PYRENE	ND	12	
46)	1,2,4-TRICHLOROBENZENE	ND	12	

ND = NOT DETECTED
MDL= METHOD DETECTION LIMIT

QUALIFIERS (Q)

J =INDICATES AN ESTIMATED VALUE BELOW MDL
B =INDICATES COMPOUND FOUND IN THE ASSOCIATED BLANK AS WELL AS IN SAMPLE

ATTACHMENT 12 NN 67

ACCUTEST®

2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

1E

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: SORGE

EXTRACTION DATE: 102888

Lab Sample ID: E815665

ANALYSIS DATE: 103188 19:02

Matrix: (soil/water) BN WATER

BATCH NO: MS-263

Lab File ID: >E2083

Number TICs found: 1

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	13757910	2-Heptanone, 3-hydroxy-3-me	7.89	9.	1
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
20.					
21.					
22.					

QUALIFIERS

(1)-THIS COMPOUND (OR SIMILAR SPECTRA) FOUND IN LAB BLANK.
(2)-INTERNAL OR SURROGATE STANDARD ADDED BY LABORATORY.
(3)-THIS COMPOUND ALREADY IDENTIFIED AND REPORTED AS TARGET.
(4)-PROBABLE BACKGROUND DUE TO SOLVENT OR CO2.

1/87 Rev.

ATTACHMENT 1 NN169

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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815665	10/21/88	14:15	JK	GROUND WATER - MW-6/PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<1.0	1.0	MG/L	10/26/88	KY
ANTIMONY	<0.001	0.001	MG/L	11/02/88	MS
ARSENIC	0.049	0.001	MG/L	11/01/88	MS
BERYLLIUM	<0.005	0.005	MG/L	11/01/88	GG
CADMIUM	0.013	0.005	MG/L	11/01/88	GG
CHROMIUM	0.086	0.025	MG/L	11/01/88	GG
COPPER	<0.020	0.020	MG/L	11/01/88	GG
LEAD	0.001	0.001	MG/L	11/08/88	MS
MERCURY	<0.001	0.001	MG/L	11/01/88	SH
NICKEL	0.058	0.040	MG/L	11/01/88	GG
SELENIUM	<0.001	0.001	MG/L	11/02/88	MS
SILVER	<0.010	0.010	MG/L	10/31/88	NH
THALLIUM	<0.001	0.001	MG/L	11/01/88	MS
ZINC	0.12	0.050	MG/L	11/01/88	GG

UG/L = PPB MG/L= PPM
MDL = METHOD DETECTION LIMIT
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT WN169
14

ACCUTEST®
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

ANALYSIS REPORT FOR BASE NEUTRAL EXTRACTABLES BY GC/MS

CLIENT : SORGE
LAB SAMPLE #: E815666
MATRIX : WATER

METHOD : EPA 625
ANALYSIS DATE: 10/31/88
DATA FILE : >E2084

	COMPOUND	RESULT (ug/L)	MDL (ug/L)	Q
1)	ACENAPHTHENE	ND	11	
2)	ACENAPHTHYLENE	ND	11	
3)	ANTHRACENE	ND	11	
4)	BENZIDENE	ND	54	
5)	BENZO(A)ANTHRACENE	ND	11	
6)	BENZO(A)PYRENE	ND	11	
7)	BENZO(B)FLUORANTHENE	ND	11	
8)	BENZO(K)FLUORANTHENE	ND	11	
9)	BENZO(G,H,I)PERYLENE	ND	11	
10)	BIS(2-CHLOROETHOXY)METHANE	ND	11	
11)	BIS(2-CHLOROETHYL)ETHER	ND	11	
12)	BIS(2-CHLOROISOPROPYL)ETHER	ND	11	
13)	BIS(2-ETHYLHEXYL)PHTHALATE	24	11	B
14)	4-BROMOPHENYL PHENYL ETHER	ND	11	
15)	BUTYL BENZYL PHTHALATE	ND	11	
16)	2-CHLORONAPHTHALENE	ND	11	
17)	4-CHLOROPHENYL PHENYL ETHER	ND	11	
18)	CHRYSENE	ND	11	
19)	DIBENZO(A,H)ANTHRACENE	ND	11	
20)	1,2-DICHLOROBENZENE	ND	11	
21)	1,3-DICHLOROBENZENE	ND	11	
22)	1,4-DICHLOROBENZENE	ND	11	
23)	3,3'-DICHLOROBENZIDENE	ND	22	
24)	DIETHYL PHTHALATE	ND	11	
25)	DIMETHYL PHTHALATE	ND	11	
26)	DI-N-BUTYL PHTHALATE	1.6	11	J
27)	2,4-DINITROTOLUENE	ND	11	
28)	2,6-DINITROTOLUENE	ND	11	
29)	DI-N-OCTYL PHTHALATE	ND	11	
30)	1,2-DIPHENYLHYDRAZINE	ND	11	
31)	FLUORANTHENE	ND	11	
32)	FLUORENE	ND	11	
33)	HEXACHLOROBENZENE	ND	11	
34)	HEXACHLOROBUTADIENE	ND	11	
35)	HEXACHLOROCYCLOPENTADIENE	ND	11	
36)	HEXACHLOROETHANE	ND	11	
37)	INDENO(1,2,3-CD)PYRENE	ND	11	
38)	ISOPHORONE	ND	11	
39)	NAPHTHALENE	ND	11	
40)	NITROBENZENE	ND	11	
41)	N-NITROSODIMETHYLAMINE	ND	11	
42)	N-NITROSODI-N-PROPYLAMINE	ND	11	
43)	N-NITROSODIPHENYLAMINE	ND	11	
44)	PHENANTHRENE	ND	11	
45)	PYRENE	ND	11	
46)	1,2,4-TRICHLOROBENZENE	ND	11	

ND = NOT DETECTED
MDL= METHOD DETECTION LIMIT

QUALIFIERS (Q)

J =INDICATES AN ESTIMATED VALUE BELOW MDL
B =INDICATES COMPOUND FOUND IN THE ASSOCIATED BLANK AS WELL AS IN SAMPLE

ATTACHMENT N170

ACCUTEST®
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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815666	10/21/88	16:30	JK	WATER - FB-6/PLANT INDUSTRIES

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
PETROLEUM HYDROCARBONS	<1.0	1.0	MG/L	10/26/88	KY
ANTIMONY	<0.001	0.001	MG/L	11/02/88	MS
ARSENIC	0.002	0.001	MG/L	11/01/88	MS
BERYLLIUM	<0.005	0.005	MG/L	11/01/88	GG
CADMIUM	<0.005	0.005	MG/L	11/01/88	GG
CHROMIUM	<0.025	0.025	MG/L	11/01/88	GG
COPPER	<0.020	0.020	MG/L	11/01/88	GG
LEAD	<0.001	0.001	MG/L	11/08/88	MS
MERCURY	<0.001	0.001	MG/L	11/01/88	SH
NICKEL	<0.040	0.040	MG/L	11/01/88	GG
SELENIUM	<0.001	0.001	MG/L	11/02/88	MS
SILVER	<0.010	0.010	MG/L	11/01/88	NH
THALLIUM	<0.001	0.001	MG/L	11/01/88	MS
ZINC	<0.050	0.050	MG/L	11/01/88	GG

UG/L = PPB MG/L= PPM
MDL = METHOD DETECTION LIMIT
NJDEP CERTIFICATION 12129
CTDEP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT NN171
17

ACCUTEST®
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

TO: J. M. SORGE, INC.
3301 U. S. HIGHWAY 22
SOMERVILLE, NJ 08876

ATTN: MIKE McGOWAN

DATE: 11/16/88

JOB No: 885055

PROJECT No: 86013

SAMPLE RECEIVED: 10/26/88

SAMPLE SUMMARY

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E815792	10/26/88	11:50	JK	GROUND WATER - MW-5/PLANT INDUSTRIES
E815793	10/26/88	11:55	JK	WATER - FB-7, FIELD BLANK PLANT INDUSTRIES

NJDEP CERTIFICATION 12129
CT DEP CERTIFICATION PH-0585

VINCENT J. PUGLIESE
VICE-PRESIDENT

ATTACHMENT NN 172

ACCUTEST®
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: SORGE

Batch Number: MS-S-264

Lab Sample ID: E815792

Extraction Date: 10/28/88

Lab File ID: >E2155

Date Analyzed: 11/04/88 21:33

Matrix: WATER FOR BN

Number TICs found: 2

CONCENTRATION UNITS: ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	53778737	2-Butanol, 1-methoxy- (9CI)	7.59	12.	1
2.	556672	Cyclotetrasiloxane, octameth	11.35	6.	
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					

QUALIFIERS(Q);
(1)-THIS COMPOUND (OR SIMILAR SPECTRA) FOUND IN LAB BLANK.
(2)-INTERNAL OR SURROGATE STANDARD ADDED BY LABORATORY.
(3)-THIS COMPOUND ALREADY IDENTIFIED AND REPORTED AS TARGET COMPOUND.
(4)-PROBABLE BACKGROUND DUE TO SOLVENT OR CO2.

FORM I SV-TIC

ATTACHMENT NN113
3

ACCUTEST®
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

ANALYSIS REPORT FOR BASE NEUTRAL EXTRACTABLES BY GC/MS

CLIENT : SORGE
LAB SAMPLE #: E815793
MATRIX : WATER

METHOD : EPA 625
ANALYSIS DATE: 11/04/88
DATA FILE : >E2154

	COMPOUND	RESULT (ug/L)	MDL (ug/L)	Q
1)	ACENAPHTHENE	ND	11	
2)	ACENAPHTHYLENE	ND	11	
3)	ANTHRACENE	ND	11	
4)	BENZIDENE	ND	55	
5)	BENZO(A)ANTHRACENE	ND	11	
6)	BENZO(A)PYRENE	ND	11	
7)	BENZO(B)FLUORANTHENE	ND	11	
8)	BENZO(K)FLUORANTHENE	ND	11	
9)	BENZO(G,H,I)PERYLENE	ND	11	
10)	BIS(2-CHLOROETHOXY)METHANE	ND	11	
11)	BIS(2-CHLOROETHYL)ETHER	ND	11	
12)	BIS(2-CHLOROISOPROPYL)ETHER	ND	11	
13)	BIS(2-ETHYLHEXYL)PHTHALATE	ND	11	
14)	4-BROMOPHENYL PHENYL ETHER	ND	11	
15)	BUTYL BENZYL PHTHALATE	ND	11	
16)	2-CHLORONAPHTHALENE	ND	11	
17)	4-CHLOROPHENYL PHENYL ETHER	ND	11	
18)	CHRYSENE	ND	11	
19)	DIBENZO(A,H)ANTHRACENE	ND	11	
20)	1,2-DICHLOROBENZENE	ND	11	
21)	1,3-DICHLOROBENZENE	ND	11	
22)	1,4-DICHLOROBENZENE	ND	11	
23)	3,3'-DICHLOROBENZIDENE	ND	22	
24)	DIETHYL PHTHALATE	ND	11	
25)	DIMETHYL PHTHALATE	ND	11	
26)	DI-N-BUTYL PHTHALATE	ND	11	
27)	2,4-DINITROTOLUENE	ND	11	
28)	2,6-DINITROTOLUENE	ND	11	
29)	DI-N-OCTYL PHTHALATE	ND	11	
30)	1,2-DIPHENYLHYDRAZINE	ND	11	
31)	FLUORANTHENE	ND	11	
32)	FLUORENE	ND	11	
33)	HEXACHLOROBENZENE	ND	11	
34)	HEXACHLOROBUTADIENE	ND	11	
35)	HEXACHLOROCYCLOPENTADIENE	ND	11	
36)	HEXACHLOROETHANE	ND	11	
37)	INDENO(1,2,3-CD)PYRENE	ND	11	
38)	ISOPHORONE	ND	11	
39)	NAPHTHALENE	ND	11	
40)	NITROBENZENE	ND	11	
41)	N-NITROSODIMETHYLAMINE	ND	11	
42)	N-NITROSODI-N-PROPYLAMINE	ND	11	
43)	N-NITROSODIPHENYLAMINE	ND	11	
44)	PHENANTHRENE	ND	11	
45)	PYRENE	ND	11	
46)	1,2,4-TRICHLOROBENZENE	ND	11	

ND = NOT DETECTED
MDL= METHOD DETECTION LIMIT

QUALIFIERS (Q)

J =INDICATES AN ESTIMATED VALUE BELOW MDL
B =INDICATES COMPOUND FOUND IN THE ASSOCIATED BLANK AS WELL AS IN SAMPLE

ATTACHMENT NN 174

ACCUTEST®
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: SORGE

Batch Number: MS-S-264

Lab Sample ID: E815793

Extraction Date: 10/28/88

Lab File ID: >E2154

Date Analyzed: 11/04/88 20:28

Matrix: WATER FOR BN

Number TICs found: 3

CONCENTRATION UNITS: ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	52097855	Cyclobutene, 2-propenylidene	5.78	5.	
2.	1072146	Silane, hexyl- (8CI9CI)	7.61	8.	
3.	556672	Cyclotetrasiloxane, octameth	11.35	5.	
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					

QUALIFIERS(Q);
(1)-THIS COMPOUND (OR SIMILAR SPECTRA) FOUND IN LAB BLANK.
(2)-INTERNAL OR SURROGATE STANDARD ADDED BY LABORATORY.
(3)-THIS COMPOUND ALREADY IDENTIFIED AND REPORTED AS TARGET COMPOUND.
(4)-PROBABLE BACKGROUND DUE TO SOLVENT OR CO2.

FORM I SV-TIC

ATTACHMENT NN175
5

ACCUTEST®
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

ANALYSIS REPORT FOR BASE NEUTRAL EXTRACTABLES BY GC/MS

CLIENT : SORGE
LAB SAMPLE #: E815792
MATRIX : WATER

METHOD : EPA 625
ANALYSIS DATE: 11/04/88
DATA FILE : >E2155

	COMPOUND	RESULT (ug/L)	MDL (ug/L)	Q
1)	ACENAPHTHENE	ND	11	
2)	ACENAPHTHYLENE	ND	11	
3)	ANTHRACENE	ND	11	
4)	BENZIDENE	ND	55	
5)	BENZO(A)ANTHRACENE	ND	11	
6)	BENZO(A)PYRENE	ND	11	
7)	BENZO(B)FLUORANTHENE	ND	11	
8)	BENZO(K)FLUORANTHENE	ND	11	
9)	BENZO(G,H,I)PERYLENE	ND	11	
10)	BIS(2-CHLOROETHOXY)METHANE	ND	11	
11)	BIS(2-CHLOROETHYL)ETHER	ND	11	
12)	BIS(2-CHLOROISOPROPYL)ETHER	ND	11	
13)	BIS(2-ETHYLHEXYL)PHTHALATE	ND	11	
14)	4-BROMOPHENYL PHENYL ETHER	ND	11	
15)	BUTYL BENZYL PHTHALATE	ND	11	
16)	2-CHLORONAPHTHALENE	ND	11	
17)	4-CHLOROPHENYL PHENYL ETHER	ND	11	
18)	CHRYSENE	ND	11	
19)	DIBENZO(A,H)ANTHRACENE	ND	11	
20)	1,2-DICHLOROBENZENE	ND	11	
21)	1,3-DICHLOROBENZENE	ND	11	
22)	1,4-DICHLOROBENZENE	ND	11	
23)	3,3'-DICHLOROBENZIDENE	ND	22	
24)	DIETHYL PHTHALATE	ND	11	
25)	DIMETHYL PHTHALATE	ND	11	
26)	DI-N-BUTYL PHTHALATE	ND	11	
27)	2,4-DINITROTOLUENE	ND	11	
28)	2,6-DINITROTOLUENE	ND	11	
29)	DI-N-OCTYL PHTHALATE	ND	11	
30)	1,2-DIPHENYLHYDRAZINE	ND	11	
31)	FLUORANTHENE	ND	11	
32)	FLUORENE	ND	11	
33)	HEXACHLOROBENZENE	ND	11	
34)	HEXACHLOROBUTADIENE	ND	11	
35)	HEXACHLOROCYCLOPENTADIENE	ND	11	
36)	HEXACHLOROETHANE	ND	11	
37)	INDENO(1,2,3-CD)PYRENE	ND	11	
38)	ISOPHORONE	ND	11	
39)	NAPHTHALENE	ND	11	
40)	NITROBENZENE	ND	11	
41)	N-NITROSODIMETHYLAMINE	ND	11	
42)	N-NITROSODI-N-PROPYLAMINE	ND	11	
43)	N-NITROSODIPHENYLAMINE	ND	11	
44)	PHENANTHRENE	ND	11	
45)	PYRENE	ND	11	
46)	1,2,4-TRICHLOROBENZENE	ND	11	

ND = NOT DETECTED
MDL= METHOD DETECTION LIMIT

QUALIFIERS (Q)

J =INDICATES AN ESTIMATED VALUE BELOW MDL
B =INDICATES COMPOUND FOUND IN THE ASSOCIATED BLANK AS WELL AS IN SAMPLE

ATTACHMENT NN176

ACCUTEST
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

QUALITY CONTROL REPORT FOR JOB : 884963R

SAMPLE(S) : E815424R ,E815427R ,E815430R ,E815434R

TEST : ARSENIC

DUPLICATE				MATRIX SPIKE					METHOD BLANK		
ORIGINAL	DUPLICATE	UNITS	RPD	ORIGINAL	AMT.SPK	SPK.RES	UNITS	%REC	DET.LIM	UNITS	METH.BLANK
13.200	13.200	MG/KG	0	3.000	10.500	13.200	MG/KG	97	1.0	MG/KG	<0.10

COMMENTS :

SAMPLE(S) : E815424R ,E815427R ,E815430R ,E815437R

TEST : BERYLLIUM

DUPLICATE				MATRIX SPIKE					METHOD BLANK		
ORIGINAL	DUPLICATE	UNITS	RPD	ORIGINAL	AMT.SPK	SPK.RES	UNITS	%REC	DET.LIM	UNITS	METH.BLANK
5.330	5.340	MG/KG	0	0.540	5.210	5.330	MG/KG	92	0.50	MG/KG	<0.50

COMMENTS :

SAMPLE(S) : E815424R ,E815427R ,E815430R ,E815437R

TEST : CADMIUM

DUPLICATE				MATRIX SPIKE					METHOD BLANK		
ORIGINAL	DUPLICATE	UNITS	RPD	ORIGINAL	AMT.SPK	SPK.RES	UNITS	%REC	DET.LIM	UNITS	METH.BLANK
7.130	6.060	MG/KG	16	2.400	5.210	7.130	MG/KG	91	0.50	MG/KG	<0.50

COMMENTS :

ATTACHMENT NN 177
9

ACCUTEST
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INORGANIC CONFORMANCE SUMMARY

1) BLANK CONTAMINATION BELOW MDLS [IF NOT LIST INDIVIDUAL METALS AND PREPARTION DATA.] [✓]

COMMENTS: _____

2) MATRIX SPIKE DATA WITHIN ACCEPTABLE LIMITS [IF NOT, LIST METAL(S) THAT DO NOT MEET CRITERIA.] [✓]

COMMENTS: _____

3) MATRIX DUPLICATE DATA WITHIN ACCEPTABLE LIMITS [IF NOT, LIST METAL(S) THAT DID NOT MEET CRITERIA.] [✓]

COMMENTS: _____

4) SAMPLES HOLDING TIMES MET FOR PREPARATION AND ANALYSIS [IF NOT, LIST SAMPLE # AND ANALYSIS TYPE THAT DID NOT MEET CRIERIA.] [✓]

COMMENTS _____

MANAGER R. F. Smith 12/23/88

ATTACHMENT NN178

SU

PROJECT NAME PLANTS INDUSTRIES PROJECT NO. 86013

5

COLLECTED BY A.C., J.K., EJ SIGNATURE Andrew Conforf

JM Sorge, Inc.

SITE TYPE | SITE ID

CHAIN OF CUSTODY RECORD

884963R

SPL NO.	DATE SPLD	TIME SPLD	SAMPLING POINT & SAMPLING METHOD DESCRIPTION	SAMPLE MATERIAL	ANALYSIS	REMARKS
E815421 PI-32A	10.20.88	1535 HRS	0-.5' AREA 2	SOIL	PHC, PM13 2m	ECRA DELIVERABLES
E815422 PI-32B	10.20.88	1540 HRS	1.0-1.5' AREA 2		PHC, PM13	
E815423 PI-32C	10.20.88	1558 HRS	6.0-6.5' AREA 2		PHC, PM13	
± E815424R PI-44A	10.20.88	1140 HRS	0-.5' AREA 4		*E815424R relinquished for AS, Be, Cd BN+, PHC 12-1-88 RUB	
E815425 PI-44B	10.20.88	1145 HRS	1.0-1.5' AREA 4		BN+, PHC	
E815426 PI-44C	10.20.88	1205 HRS	8.0-8.5' AREA 4		PHC GF	

RELINQUISHED BY	ORGANIZATION	DATE/TIME	RECEIVED BY (signature)	ORGANIZATION	DATE/TIME	REMARKS
Andrew Conforf	J.M. SORGE, INC	10/21/88 12:00	[signature]	JMS	10/21/88 12:00	
[signature]	JMS	10/21/88 3:15	[signature]	ACCUTEST	10/21/88 3:15	

ATTACHMENT NN179 11

PROJECT NAME PLANT INDUSTRIES PROJECT NO. 86013

COLLECTED BY A. C., J. K., EJ SIGNATURE Andrew Conforf

SITE TYPE , SITE ID

JM Sorge, Inc.

6

CHAIN OF CUSTODY RECORD

SPL NO.	DATE SPLD	TIME SPLD	SAMPLING POINT & SAMPLING METHOD DESCRIPTION	SAMPLE MATERIAL	ANALYSIS	REMARKS
E815427 PI-45A	10.20.88	1210 HRS	0-.5' AREA 4	SOIL	*E815427R relinquished for AS, Be, Cd 12-1-88 RUB BN+, PHC 2M	ECRA DELIVERABLES
E815428 PI-45B	10.20.88	1215 HRS	1.0-1.5' AREA 4	↓	BN+, PHC ↓	
E815429 PI-45C	10.20.88	1230 HRS	8.0-8.5' AREA 4	↓	PHC 6F	
E815430R PI-46A	10.20.88	1240 HRS	0-.5' AREA 4	↓	*E815430R relinquished for AS, Be, Cd 12-1-88 RUB BN+, PHC 2M	
E815431 PI-46B	10.20.88	1245 HRS	1.0-1.5' AREA 4	↓	BN+, PHC ↓	
E815432 PI-46C	10.20.88	1255 HRS	7.75-8.25' AREA 4	↓	PHC 6F	

RELINQUISHED BY	ORGANIZATION	DATE/TIME	RECEIVED BY (signature)	ORGANIZATION	DATE/TIME	REMARKS
Andrew Conforf	J. M. SORGE INC	10/21/88 12:00	[illegible]	JMS	10/21/88 12:00	
[illegible]	JMS	10/21/88 3:15	[illegible]	ACCUTEST	10/21/88 3:15	

ATTACHMENT NW180-12

PROJECT NAME PLANT INDUSTRIES PROJECT NO. 86013

COLLECTED BY A.C., J.K., ET SIGNATURE Andrew Conforf

7

JM Sorge. Inc.

SITE TYPE | SITE ID

CHAIN OF CUSTODY RECORD

SPL NO.	DATE SPLD	TIME SPLD	SAMPLING POINT & SAMPLING METHOD DESCRIPTION	SAMPLE MATERIAL	ANALYSIS	REMARKS
E815433 PI-47A	10.20.88	1305 HRS	0-.5' AREA 4	SOIL	PHC, PM13 2m	ECRA DELIVERABLES
E815434 PI-47B	10.20.88	1315 HRS	1.0-1.5' AREA 4		*relogged for AS. PHC 12-1-88 RUB 6F	
E815435 PI-47C	10.20.88	1330 HRS	7.75-8.25' AREA 4		PHC 6F	
E815436 PI-48A	10.20.88	1340 HRS	0-.5' AREA 4		PHC, BN+, PM13 2m	
E815437 PI-48B	10.20.88	1345 HRS	1.0-1.5' AREA 4		*relogged for Be, Cd PHC, 12-1-88 RUB 6F	
E815438 PI-48C	10.20.88	1355 HRS	7.75-8.25' AREA 4		PHC, BN+ 2m	

RELINQUISHED BY	ORGANIZATION	DATE/TIME	RECEIVED BY (signature)	ORGANIZATION	DATE/TIME	REMARKS
Andrew Conforf	J.M. SORGE INC	10/21/88 12:10	[signature]	JMS	10/21/88 12:10	
[signature]	JMS	10/21/88 3:15	Marty Guarza	ACCUTEST	10/21/88 15:15	

ATTACHMENT NN

ACCUTEST
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

LABORATORY CHRONICLE

ACCUTEST JOB #.....884963R

DATE SAMPLES RECEIVED.....12/01/88

ACCUTEST SAMPLE #	SAMPLE DATE	PARAMETER	PREP. DATE	ANALYSIS DATE
E815424R	10/20/88	SOLIDS, TOTAL PERCENT		12/06/88
E815424R	10/20/88	ARSENIC	12/12/88	12/21/88
E815424R	10/20/88	BERYLLIUM	12/12/88	12/15/88
E815424R	10/20/88	CADMIUM	12/12/88	12/15/88
E815427R	10/20/88	SOLIDS, TOTAL PERCENT		12/06/88
E815427R	10/20/88	ARSENIC	12/12/88	12/21/88
E815427R	10/20/88	BERYLLIUM	12/12/88	12/15/88
E815427R	10/20/88	CADMIUM	12/12/88	12/15/88
E815430R	10/20/88	SOLIDS, TOTAL PERCENT		12/06/88
E815430R	10/20/88	ARSENIC	12/12/88	12/21/88
E815430R	10/20/88	BERYLLIUM	12/12/88	12/15/88
E815430R	10/20/88	CADMIUM	12/12/88	12/15/88
E815434R	10/20/88	SOLIDS, TOTAL PERCENT		12/06/88
E815434R	10/20/88	ARSENIC	12/13/88	12/21/88
E815437R	10/20/88	SOLIDS, TOTAL PERCENT		12/06/88

MANAGER R. F. Smith DATE 12/23/88

ATTACHMENT NN1821-1

ACCUTEST
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

LABORATORY CHRONICLE

ACCUTEST JOB #.....884963R

DATE SAMPLES RECEIVED.....12/01/88

ACCUTEST SAMPLE #	SAMPLE DATE	PARAMETER	PREP. DATE	ANALYSIS DATE
E815437R	10/20/88	BERYLLIUM	12/13/88	12/15/88
E815437R	10/20/88	CADMIUM	12/13/88	12/15/88

MANAGER R. F. Smith DATE 12, 23, 88

ATTACHMENT NN143-5

ACCUTEST
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

QUALITY CONTROL REPORT FOR JOB : 885178S

SAMPLE(S) : E816092S ,E816096R ,E816100R ,E816101S

TEST : CADMIUM

DUPLICATE				MATRIX SPIKE					METHOD BLANK		
ORIGINAL	DUPLICATE	UNITS	RPD	ORIGINAL	AMT.SPK	SPK.RES	UNITS	%REC	DET.LIM	UNITS	METH.BLANK
7.130	6.060	MG/KG	16	2.400	5.210	7.130	MG/KG	91	0.50	MG/KG	<0.50

COMMENTS :

SAMPLE(S) : E816100R ,E816101S

TEST : SILVER

DUPLICATE				MATRIX SPIKE					METHOD BLANK		
ORIGINAL	DUPLICATE	UNITS	RPD	ORIGINAL	AMT.SPK	SPK.RES	UNITS	%REC	DET.LIM	UNITS	METH.BLANK
10.000	10.200	MG/KG	2	<1.000	11.200	10.000	MG/KG	89	1.0	MG/KG	<1.0

COMMENTS :

ATTACHMENT NN184

ACCUTEST®
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INORGANIC CONFORMANCE SUMMARY

1) BLANK CONTAMINATION BELOW MDLS [IF NOT LIST INDIVIDUAL METALS AND PREPARTION DATA.] [✓]

COMMENTS: _____

2) MATRIX SPIKE DATA WITHIN ACCEPTABLE LIMITS [IF NOT, LIST METAL(S) THAT DO NOT MEET CRITERIA.] [✓]

COMMENTS: _____

3) MATRIX DUPLICATE DATA WITHIN ACCEPTABLE LIMITS [IF NOT, LIST METAL(S) THAT DID NOT MEET CRITERIA.] [✓]

COMMENTS: _____

4) SAMPLES HOLDING TIMES MET FOR PREPARATION AND ANALYSIS [IF NOT, LIST SAMPLE # AND ANALYSIS TYPE THAT DID NOT MEET CRIERIA.] [✓]

COMMENTS _____

MANAGER R.F. Smith 12/20/88

ATTACHMENT NN185

50

PROJECT NAME PLANT INDUSTRIES PROJECT NO. 86013

COLLECTED BY AC, JK SIGNATURE Joe Kane

SITE TYPE | SITE ID

JM Sorge, Inc.

CHAIN OF CUSTODY RECORD

885178 S

SPL NO.	DATE SPLD	TIME SPLD	SAMPLING POINT & SAMPLING METHOD DESCRIPTION	SAMPLE MATERIAL	ANALYSIS	REMARKS
E816090 PI-39A	10/19/88	2:15	0-6" S/S HAND AUGER	Soil	B625XH	ECRA DELIVERABLES 2B
E816091 PI-40A	10/19/88	1:30	0-6" " " "	"	B625XH	↓
X E816092 S PI-40B	10/20/88	9:25	3'-3.5' " " "	"	*E816092 relogged hold for cd RVB 12-1-88	2W
E816093 PI-40C	10/20/88	9:35	5'-5.5' " " "	"	↓	↓
E816094 PI-40D	10/20/88	10:05	7'-7.5' " " "	"	↓	↓
E816095 PI-41A	10/19/88	4:15	0-6" " " "	"	↓	↓

RELINQUISHED BY	ORGANIZATION	DATE/TIME	RECEIVED BY (signature)	ORGANIZATION	DATE/TIME	REMARKS
Joe Kane	J.M. Sorge	11/1/88 9:15	William Call	JMS	11/1/88 9:15 AM	
William Call	JMS	11/1/88 10:00 AM	[signature]	Accutest	11/1/88 10:00	
[signature]	Accutest	11-1-88 11:00	R. Van Slaven	ACCUTEST	11-1-88 11:00	

ATTACHMENT NW86 10

SO

PROJECT NAME PLANT INDUSTRIES PROJECT NO. 86019

COLLECTED BY AC, JK SIGNATURE Joe Kane

JM Sorge, Inc.

SITE TYPE | SITE ID

CHAIN OF CUSTODY RECORD

885178 S

SPL NO.	DATE SPLD	TIME SPLD	SAMPLING POINT & SAMPLING METHOD DESCRIPTION	SAMPLE MATERIAL	ANALYSIS	REMARKS
* E816096R PI-41B	10/19/88	4:25	3'-3.5' S/S HAND AUGER	SOIL	* relogged for Cd. hold 12-1-88 RUB 2N	ECRA DELIVERABLES
E816097 PI-41C	10/19/88	4:30	5'-5.5' " " "	"	↓	
E816098 PI-41D	10/19/88	4:35	7'-7.5' " " "	"	↓	
E816099 PI-42A	10/19/88	3:25	0 - 6" " " "	"	B625XH 2B	
* E816100R PI-42B	10/19/88	3:35	3'-3.5' " " "	"	* relogged for Cd, AG. hold 12-1-88 RUB 2N	
X * E816101 S PI-42C	10/19/88	3:45	5'-5.5' " " "	"	↓ * relogged for Cd, AG, RUB 12-1-88 ↓	

RELINQUISHED BY	ORGANIZATION	DATE/TIME	RECEIVED BY (signature)	ORGANIZATION	DATE/TIME	REMARKS
Joe Kane	J.M. Sorge	11/1/88 9:15	William Coll	JMS	11/1/88 9:15 AM	
William Coll	JMS	11/1/88 10:00 AM	[signature]	Accutest	11-1-88 10:00	
[signature]	Accutest	11-1-88 11:00	R. Van Blaum	ACCUTEST	11-1-88 11:00	

ATTACHMENT NN 19 II

ACCUTEST
2235 ROUTE 130, BLDG. B • DAYTON, N.J. 08810 • (201) 329-0200

LABORATORY CHRONICLE

ACCUTEST JOB #.....885178S

DATE SAMPLES RECEIVED.....12/01/88

ACCUTEST SAMPLE #	SAMPLE DATE	PARAMETER	PREP. DATE	ANALYSIS DATE
E816092S	10/20/88	SOLIDS, TOTAL PERCENT		12/06/88
E816092S	10/20/88	CADMIUM	12/12/88	12/15/88
E816096R	10/19/88	SOLIDS, TOTAL PERCENT		12/06/88
E816096R	10/19/88	CADMIUM	12/12/88	12/15/88
E816100R	10/19/88	SOLIDS, TOTAL PERCENT		12/06/88
E816100R	10/19/88	SILVER	12/12/88	12/13/88
E816100R	10/19/88	CADMIUM	12/12/88	12/15/88
E816101S	10/19/88	SOLIDS, TOTAL PERCENT		12/06/88
E816101S	10/19/88	SILVER	12/12/88	12/13/88
E816101S	10/19/88	CADMIUM	12/12/88	12/15/88

MANAGER R. F. Smith DATE 12, 20, 88

ATTACHMENT NN188

Let's protect our earth

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT
Lance R. Miller, Acting Director
CN 028
Trenton, N.J. 08625-0028
(609) 633-1408

MEMORANDUM

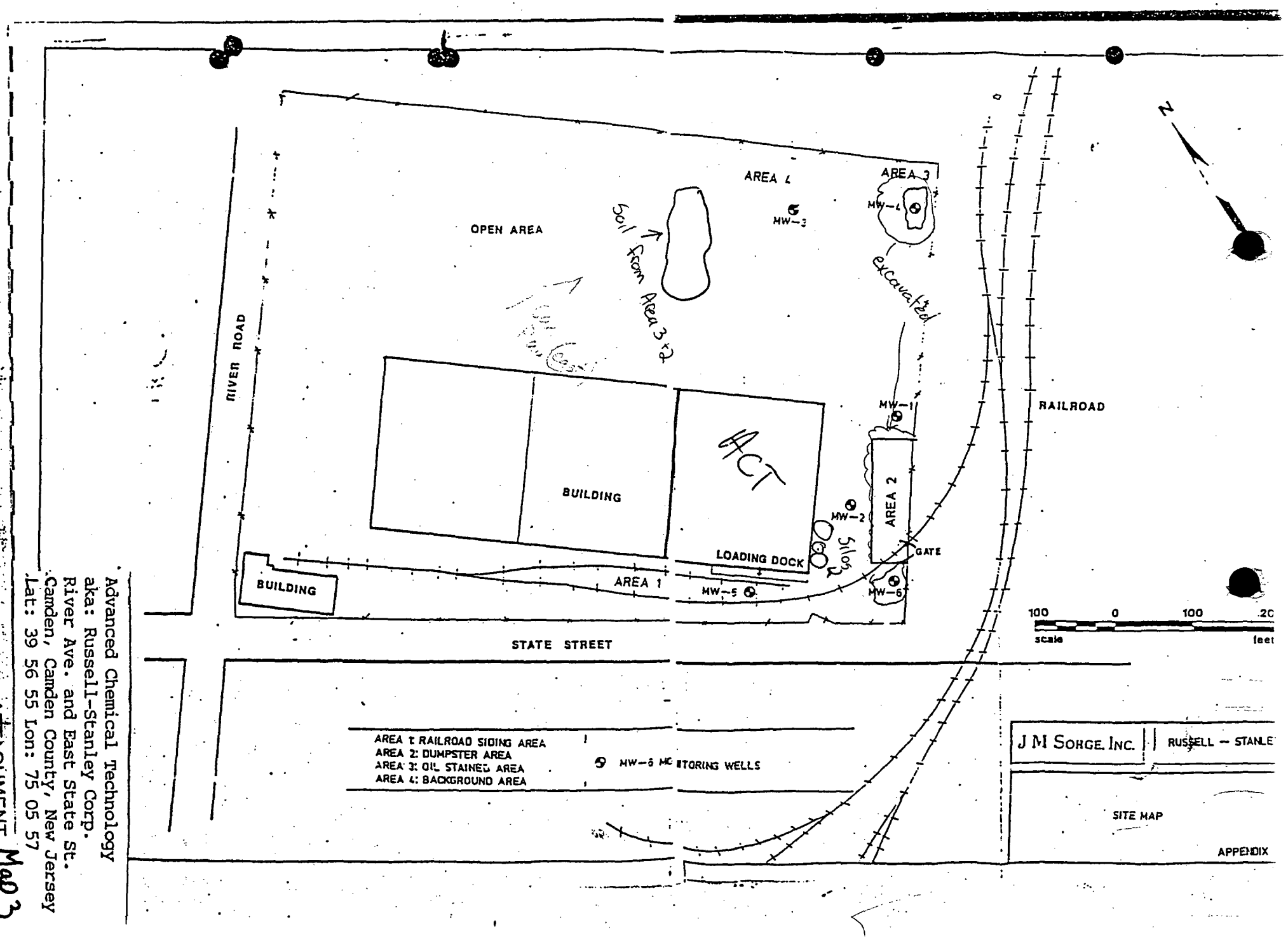
TO: Files - Bureau of Planning and Assessment

FROM: Dan Maltese, HSMS IV, Bureau of Planning and Assessment

DATE: March 28,1990

SUBJECT: Visual Site Inspection of Advanced Chemical Technology located at River Ave. and East State St., Camden, New Jersey

On March 28, 1990, Dan Maltese and Donna Restivo, NJDEP/DHWM/BPA, conducted a visual site inspection of Advanced Chemical Technology (ACT). We were met at the facility by Bharat Patel, senior hydrogeologist for J.M. Sorge, Inc. ACT manufactures plastic containers and plastic 55-gallon drums. The building that ACT occupies is divided in half with the eastern half being leased to Ceramic Tile Warehouse. The entire facility is owned by Camden Properties, Inc. The northeast corner of the site had been excavated to a depth of approximately 4 feet and the soil from the pit was staged about 100 yards west of the excavation. The former "dry" monitoring well (MW-4), which had been located within the excavation, had been sealed and a new monitoring well is proposed after the area is backfilled with clean soil. Area 2, located at the east side of the building where the dumpster had once been located, had also been excavated and that soil was stored with the soil from the other excavation. Both areas had been recently sampled and ACT was awaiting the post-excavation results. The excavated soil was partially covered with plastic. No solvents or oils were observed outside the facility and no soil gas readings were detected with an HNu or OVA. ACT is currently regulated under the ECRA program.



Advanced Chemical Technology
aka: Russell-Stanley Corp.
River Ave. and East State St.
Camden, Camden County, New Jersey
Lat: 39 56 55 Lon: 75 05 57

ATTACHMENT Map 3
002