

137784

R-585-7-5-44
SITE INSPECTION OF
RENTOKIL, INCORPORATED
PREPARED UNDER

TDD NO. F3-8402-20
EPA NO. VA-210
CONTRACT NO. 68-01-6699

FOR THE
HAZARDOUS SITE CONTROL DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY

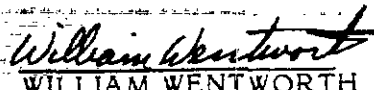
MARCH 24, 1986

NUS CORPORATION
SUPERFUND DIVISION

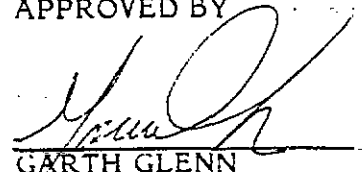
SUBMITTED BY


MARTIN HOWE
HYDROGEOLOGIST

REVIEWED BY


WILLIAM WENTWORTH
ASSISTANT MANAGER

APPROVED BY


GARTH GLENN
MANAGER, FIT III

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SECTION 1

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1.0 INTRODUCTION

1.1 Authorization

NUS Corporation performed this work under Environmental Protection Agency Contract No. 68-01-6699. This specific report was prepared in accordance with Technical Directive Document No. F3-8402-20 for the site entitled Rentokil, Incorporated, Virginia Wood Preserving Division, located in Richmond, Virginia.

1.2 Scope of Work

NUS FIT III was tasked to conduct a site inspection to include sampling of the facility and pertinent off-site locations.

1.3 Summary

The subject site is a wood preserving facility which has been in operation since April 1957. Waste chemicals from the treatment process were held in an unlined lagoon on site until approximately 1983. Since 1983, no materials have been added to the lagoon. FIT III conducted a site inspection of this lagoon and the surrounding area. It was determined that wastes from the site are leaving the facility via surface drainage. The swamp, located east of the site, is owned by Richmond Frederick and Potomac Railroad (R. F. and P. Railroad) and evidence shows it to be contaminated. There is no conclusive evidence to show migration off site of contaminated groundwater. Pentachlorophenol (PCP) was detected by EPA at low levels in an off-site residential well.

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SECTION 2

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2.0 THE SITE

2.1 Location

The Rentokil, Incorporated site is located in Henrico County, Virginia about 2 miles north-northwest of Richmond, Virginia. The site is at the corner of Purcell and Peyton Streets (see appendix B).

2.2 Site Layout

The main facility covers a rectangular area of 4.96 acres. The site is bound by streets to the west and south, by a spur of the R. F. and P. Railroad to the north, and by a swampy wooded area (owned by R. F. and P. Railroad) to the east. An additional 5 acres of land lie on the north side of the railroad spur. These 5 acres are currently leased by TACO Corporation with an option to buy (see appendix C). There are approximately 10 buildings on site and 6 other structures which enclose or support various parts of the facility. These include the bulk chemical storage tanks, wood autoclaves, chemical pump sheds, and collection and recirculation systems. The portion of the site germane to this investigation is the area in and around the lagoon. The lagoon has been inactive since approximately 1983. (The area is shown on the plant map as "fiberglass roof above holding pond," see appendix B.)

2.3 Ownership History

Virginia Wood Preserving Company was incorporated on May 9, 1956 in the state of Virginia. The company was equally owned by TACO Corporation and Taylor-Colquitt. Taylor-Colquitt was at some point bought by Southern Wood Preserving (Georgia). TACO Corporation bought all shares and became the sole owner of Virginia Wood Preserving. On August 21, 1974, TACO Corporation was bought by Rentokil, Incorporated, who automatically became the owner of Virginia Wood Preserving.

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Site Name: Rentokil, Incorporated
TDD No.: F3-8402-20

The land on which the plant is located was originally owned by a man named Colonel Farley. Farley leased 4.96 acres of land to TACO Corporation for 5 years with an option to buy. Colonel Farley later sold the land to R. F. and P. Railroad Company. Apparently, the lease agreement with TACO Corporation remained intact because, in 1965, TACO exercised the option to buy the 4.96-acre plot. The 4.96-acre plot is currently owned by Rentokil as a result of buying TACO Corporation. An additional 5 acres of land, on the north side of the railroad spur, are leased from R. F. and P. Railroad with an option to buy (see appendix C).

2.4 Site Use History

According to Mr. Farmer, plant manager, the facility was built in about 1957 as a wood treating operation. Actual wood treating began in April 1957. The company employs an average of 32 people and is currently active.

From its inception until approximately 1981, PCP and creosote were used as the primary chemicals in the wood preserving process. In 1982, Rentokil discontinued use of PCP in place of the more widely used chromated-copper-arsenate. The use of creosote also continued. As part of the pressure treating process, steam and gasses from these chemicals are vented from the autoclave to condensing vessels. Most of the chemicals are reused but some waste does accumulate. According to Mr. Farmer, no waste is being added to the lagoon nor has any waste been added for the past 2 or 3 years. Mr. Farmer indicated that the plant recycles process materials (see appendix G).

2.5 Permit and Regulatory Action History

There is no known permit allowing Rentokil to dispose of wastes in a lagoon on site. The origination of the lagoon predates RCRA. On October 30, 1984, the Bureau of Hazardous Waste Management conducted an unannounced inspection of the site in response to allegations, by a recently terminated employee, that drums had been buried on site. The facts related to that inspection have not been released since the case is still under investigation. Currently, Rentokil has a no-discharge certificate; however, discussions with the Virginia State Department of Health by the FIT III office did not determine the RCRA status of the site (see appendix G, telecon with Raymond Jenkins).

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Site Name: Rentokil, Incorporated
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2.6 Remedial Action To Date

There has been no known remedial action to date at this site.

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SECTION 3

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3.0 ENVIRONMENTAL SETTING

3.1 Water Supply

The James River and the Chickahominy River supply drinking water for most of Henrico County. Municipal water is available throughout most of the site area or is readily becoming available, according to the Henrico Public Utility Office. According to Michael Campbell, of the Henrico County Health Department, within 1 kilometer of the subject site there are 53 structures. Campbell estimates that 40 to 50 of these obtain water from private wells. The actual number of wells has not yet been confirmed. The source of water from the Chickahominy is greater than 3 miles from the site. The major intake for Henrico County is located on the James River where Route 295 crosses the river, approximately 6.25 miles from the site. FIT III sampled 3 home wells near the site during the site visit (see appendix B, sample location maps). *North or South*

3.2 Surface Waters

The site slopes from an elevation of just over 213 feet mean sea level (MSL) near the main office to roughly 206 feet MSL along a swamp located immediately east of the facility. The site is approximately 900 feet long from its high end to its low end. This yields an average slope of 0.78 percent. The site slope probably ranges between 0 and 5 percent. On-site runoff is directed to a culvert along Peyton Street and to a channel along the side of the lagoon. The latter drains directly into the swamp, which in turn overflows to the former culvert. Water from the swamp was not observed flowing directly into the unnamed tributary north of the site. Water from the culvert is channeled under Peyton Street and, from there, flows through the woods, under Parnham Road and eventually to a perennial stream which forms part of the drainage to the Chickahominy River. The Chickahominy flows southeast to the James River and the Chesapeake Bay.

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3.3 Geology and Soils

In June 1985, Environmental Laboratories, Incorporated and Dvorak Geotechnical Services, Incorporated submitted to the Virginia State Water Control Board (VA SWCB), an assessment of groundwater and soil contamination at the Virginia Wood Preserving facility. A detailed description of on-site geologic and hydrogeologic conditions was prepared during the investigation. The following is a summary of the report's findings and conclusions.

The site lies just west of the Fall Line, within the Piedmont Physiographic Province of Virginia. A residual layer of clay, overlying a silty, clayey, micaceous sand is typical of this region, in varying thicknesses. This is a saprolite, which is the result of the deep weathering of the Upper Paleozoic Petersburg Granite, the bedrock of the site. A general subsurface description of the site prepared by Environmental Laboratories is as follows (from surface to bedrock): "clay, silty sandy clay, silty clayey sand, and clayey silty sand."¹ Depth to the weathered granite surface varies from 6' to 13 feet below the surface. The surface of the unweathered granite occurs at roughly 25 feet below the surface.¹

Besides the granite and overlying residuum, 2 other lithologies were found to exist on site. One such unit is described as fill material. Sporadic in its occurrence, the fill consists of variable amounts of silt, sand, clay, and crushed stone. A second unit, described as alluvium, is present in thicknesses between 6 to 13 feet, and consists of "combinations of clay, silt, and sand."¹

Soils of the Caroline, Pouncy, and Kempsville Series are depicted by the United States Department of Agriculture (U.S.D.A.) as natural soil cover for the site. These granitic soils are described by Environmental Laboratories as clay overlying a "soil transition zone that is made up of sandy clay that grades to a clayey sand."¹

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3.4 Groundwaters

The Environmental Laboratories, Incorporated report identifies 3 water tables which exist below the site, including a perched, seasonal table above the relatively impermeable layers of clay, fragipan, and "fill-natural ground" contacts. Shallow auger borings were made in an attempt to characterize this shallow water table. Water levels in the borings varied from between 1.2 and 3 feet below the surface.¹

A second, deeper water table is present between 14 and 19 feet below the surface and occurs as a confined aquifer within the weathered granite bedrock. Deep within the bedrock, a third, fracture-controlled water table was found to exist.¹

Based on the conclusions of Environmental Laboratories, Incorporated, it is evident that there is a hydraulic interconnection between units beneath the site, at least to the "shallow, permanent water table which is confined by bedrock."¹ This condition is apparent by the detection of contaminants within this and subsequent shallower units.

Included in appendix H is a groundwater survey for a 1-kilometer radius around the Rentokil site. This survey summarizes well usage, construction, and depth within the survey area.

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3.5 Climate and Meteorology

The site is located in an area of relatively mild winters and warm, humid summers. The average annual total precipitation is 44.2 inches, according to the Soil Survey of Henrico County, Virginia. The Climatic Atlas of United States indicates a normal annual total precipitation of 32 to 48 inches per year, an average of 40 inches. The mean annual lake evaporation, as given by the Climatic Atlas of the United States, is 38 to 40 inches per year, an average of 39 inches. The average net annual precipitation is 5.2 inches with respect to the soil survey and 1 inch with respect to the Climatic Atlas of the United States. The mean annual temperature ranges from 55°F to 60°F. The average high is 90°F and the average low is 32°F. The average humidity is 71 percent. The overall prevailing wind direction is southerly; however, winds from all directions may occur. Mostly southerly to westerly winds prevail, except in October and February when the prevailing winds are north-northeasterly. The average wind speed is 7.7 miles per hour (mph).^{2, 4}

3.6 Land Use

The 3-mile radius around the site is developing rapidly in terms of industry and residential complexes. Numerous highway systems and secondary roads exist. Industry includes tobacco products, sawmill products, building supplies, paper products, machinery, pharmaceutical supplies, stationery, and office equipment, as well as sand and gravel quarries and concrete products manufacturing facilities. Agriculture is decreasing as industry increases. The site is on the outskirts of metropolitan Richmond. Numerous new home developments have been built in the area of the site.

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3.7 Population Distribution

The population within a 3-mile radius of the site is growing. A routine house count was made for the 1-, 2-, and 3-mile radius around the site. The United States Geological Survey (U.S.G.S.) 7.5 minute series topographic maps were used to calculate the population.

The calculated population (3.8 persons per house) was as follows:

1 mile	1,354 times 3.8 = 5,145.2
2 miles	2,399 plus 1,354 times 3.8 = 14,261.4
3 miles	2,862 plus 2,399 plus 1,354 times 3.8 = 25,099.0

The number of non-residential buildings within a 2-mile radius of the site was estimated by the same method at 42 for 1 mile and 55 plus 42 equals 97 for 2 miles. The total number of buildings within 2 miles of the site is roughly 3,850.

3.8 Critical Environments

There are no known indigenous federal or state endangered species living within 1 mile of the site.

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Site Name: Rentokil, Incorporated
TDD No.: F3-8402-20

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3.9 References

1. Environmental Laboratories, Incorporated. Assessment of Groundwater and Soil Contamination, Virginia Wood Preserving, Richmond, Virginia. May 31, 1985.

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SECTION 4

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4.0 WASTE TYPES AND QUANTITIES

The waste types include PCP, creosote, and chromated-copper-arsenate. Other wastes may include various solvents and sap from the wood. The quantity of the chemicals presently in the lagoon are unknown. According to the preliminary assessment conducted by the Virginia Health Department (see appendix D), company records indicate that 150,000 gallons per year of creosote, 4,535.9 to 45,359 pounds per year of various solvents, and 13,607.7 to 136,077 pounds per year of undetermined chemical compounds were used at the plant. A small fraction of these would constitute the waste in the lagoon.

The dimensions of the lagoon are 40 by 80 by 6 feet deep. This yields a volume of 711.1 cubic yards. This lagoon was once uncovered. It is not known how much of the volume calculated is water. Since the lagoon is unlined, the total volume disposed of is probably greater than what remains in the impoundment.

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SECTION 5

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5.0 FIELD TRIP REPORT

5.1 Summary

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FIT III conducted a site investigation and sampling of the Rentokil, Incorporated, Virginia Wood Preserving facility on March 14, 1984. The investigating team consisted of Martin Howe, Eugene Dennis, James Strickland, and Edmund Reardon. The FIT was accompanied on site by Robert Wichser and Kevin Greene of the Virginia Health Department. Lindwood Farmer of Virginia Wood Preserving, Incorporated gave permission to conduct the investigation during a telephone conversation with Martin Howe on March 5, 1984. At this time, permission was given for photographs to be taken on site and an offer of split samples was accepted.

The weather during the inspection was clear and warm with a slight breeze and temperatures in the upper 50s by noon.

The total number of samples collected was 10 aqueous and 7 solids. This included a blank and a duplicate aqueous and solid sample. The sample locations included the waste lagoon, the swamp, upgradient and downgradient on the unnamed tributary north of the site, and 3 home wells, 1 upgradient and 2 downgradient. A duplicate sample was taken from the lagoon. Split samples of all on-site samples were given to Virginia Wood Preserving.

5.2 Persons Contacted

5.2.1 Prior to Field Trip

Darius Ostrauskas
SIQ-EPA
841 Chestnut Building
Ninth and Chestnut Streets
Philadelphia, Pennsylvania 19107
(215) 597-6488

Robert Wichser
Kevin Greene
Div. of Solid & Hazardous Waste Mgmt.
Virginia State Health Department
Monroe Building - 11th Floor
101 North 14th Street
Richmond, Virginia 23219
(804) 225-2835
(Both persons have left the agency.)

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5.2.1 Prior to Field Trip (Con't)

H. Lindwood Farmer, Jr.
Virginia Wood Preserving
3000 Peyton Street
Richmond, Virginia 23228
(804) 266-0262

Alan Stringer, Inspector
Henrico County Health Department
P.O. Box 27032
Richmond, Virginia 23278
(804) 747-4530

William Bolinski
Henrico County Laboratory
Dabbs House
Richmond, Virginia 22223
(804) 226-2165

Peter Deshan
Technical Department
4067 Industrial Park Drive
Norcross, Georgia 30071
(404) 476-4871

5.2.2 At The Site

H. Lindwood Farmer, Jr.
Virginia Wood Preserving
3000 Peyton Street
Richmond, Virginia 23228
(804) 266-0262

Robert Wichser
Kevin Greene
Div. of Solid & Hazardous Waste Mgmt.
Monroe Building - 11th Floor
101 North 14th Street
Richmond, Virginia 23219
(804) 225-2835
(Both persons have left the agency.)

5.2.3 Post Site Visit

Timothy Perry
Piedmont Regional Office
Virginia State Water Control Board
2201 Westboad Street
Richmond, Virginia 23210

Amy Wajciechowski
Fred Overman - (No longer employed)
Engineering Technician
Department of Public Utilities
Henrico County
Richmond, Virginia 23273
(804) 747-4503

Terri Cross
Department of Health
Div. of Solid & Hazardous Waste
Monroe Building - 11th Floor
101 North 14th Street
Richmond, Virginia 23219
(804) 257-6607

Raymond Jenkins
Department of Health
Div. of Solid & Hazardous Waste
Monroe Building - 11th Floor
101 North 14th Street
Richmond, Virginia 23219
(804) 257-6777

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EPA Number VA-210

5.3 SAMPLE LOG

Site Name Rentokil, Inc.

TRAFFIC REPORTS		SAMPLING LOCATION	PHASE	SAMPLE DESCRIPTION	DATE	TIME	pH	COMMENTS/OBSERVATIONS	LABORATORY
Organic	Inorganic								
8248	3271	Leona #1	AQ	clear - no odor	3-14-84		5.53		ORGANIC AQ & Sol
8249	3272	HOME WELL #2	AQ	clear - no odor			6.50		MEAD CONCENTRATION
8250	3273	HOME WELL #3	AQ	clear - no odor			5.78		
8251	3274	H.O. Robertson	AQ	turbid			6.16	Higher than normal flow due to recent period of heavy rain fall.	INORGANIC AQ & Sol
8252	3275	Upstream	Sol	fine silt & sand & humus			N/A		CAL. ANAL.
8253	3276	Upstream	AQ	turbid			6.10		
8254	3277	Downstream	Sol	fine silt & sand & humus			N/A		
8255	3278	Impoundment 1	AQ	Black oil, fat glob			*	Smelled of tar and crossed	
8256	3279	Impoundment 1	Sol	sandy oil & black			N/A	"	
8257	3280	Impoundment 2 (Duplicate of 8255)	AQ	Black, oily, tar glob			*	"	
8258	3281	Impoundment 2 (Duplicate of 8256)	Sol	sandy oil & black			N/A	"	
8259	3282	Swamp 1	AQ	Color w/ some turbidity			6.65	Taken where runoff from log area enters the swamp.	
8260	3283	Swamp 1	Sol	sand w/ fine silt & humus			N/A		
8261	3284	Swamp 2	AQ	Color w/ some turbidity			6.32	Taken where swamp discharges to culvert along street. Sole discharge point except for ground water flow.	
8262	3285	Swamp 2	Sol	sand w/ fine silt & humus			N/A		
8263	3286	Blank	AQ	NAS purified water			7.81		
8264	3287	Blank	Sol	NAS purified water			N/A		
				* Did not take pH of					
				This sample because it did not want to run					
				The probe on the unit.					

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5.4 Site Observations

- o No HNU readings were obtainable.
- o The site is comprised of about 16 buildings or structures.
- o There is a cyclone fence that runs along Peyton Street only. Access to the site is not restricted by a fence.
- o There is a culvert along Peyton Street that discharges to a drain pipe. This drain pipe channels water beneath Peyton Street to a drainage path south of the plant. Runoff from the site enters the culvert either directly or via the swamp east of the plant.
- o Soils on the site are mostly sand and a caramel-tan silt clay.
- o Most of the ground around the site is heavily blackened with chemicals and possibly oil from the plant vehicles.
- o The site appears to be nearly level.
- o Recent rains left numerous puddles around the plant. Some of these were draining to a ditch along the side of the waste lagoon. The ditch drains to a swamp east of the plant.
- o The lagoon is bermed.
- o The level of the liquid in the lagoon appeared to be at about the same height as the base of the runoff ditch along its south side.
- o The lagoon is covered by a sound structure supporting a fiberglass roof.
- o Drainage off the roof is directed away from the lagoon.
- o There were no objectionable odors coming off the lagoons that could be discerned above those from the overall operations.

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East of the plant is a swampy area which, according to employees of the site, can be completely dry at times.

- o During this inspection, the swamp was overflowing to a culvert along Peyton Street. No other outfalls from the swamp were seen.
- o Water in the swamp looked clear. No oil sheen was noticed and no odors could be detected.
- o Upon disturbing the sediments in the drainage path at its confluence with the swamp, a small amount of a light amber, oily liquid was liberated.
- o The swamp was littered with trash, bags, bottles, cans, and other types of municipal wastes.
- o There is a drop in elevation from the site to the swamp of about 4 feet. It appears that the site has been built up.
- o No leachate seeps were found along the east edge of the site.
- o Some oily materials were noticed in the water draining off site.

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5.5 PHOTOGRAPH LOG

Photo 1, 2, & 3 -
Structure covering lagoon.

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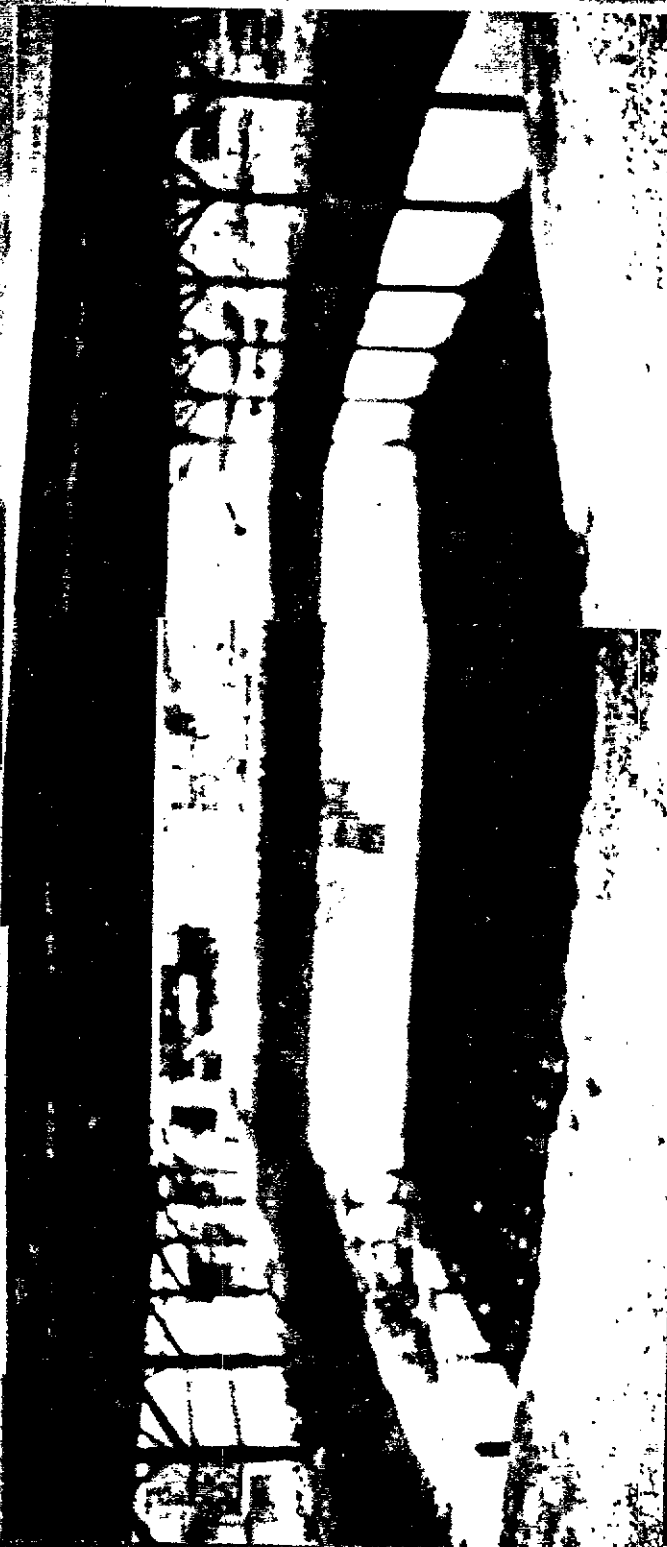


Photo 4 & 5 -
Chemical waste lagoon.

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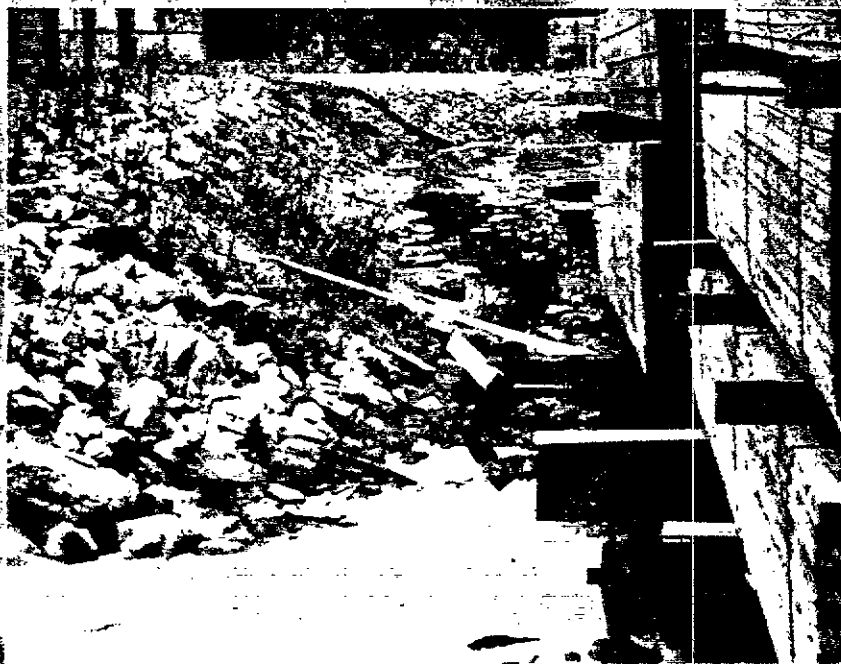


Photo 6 -
Runoff ditch next to lagoon.



Photo 7 -
Runoff ditch from lagoon area.

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Photo 8 & 9 -
Swamp

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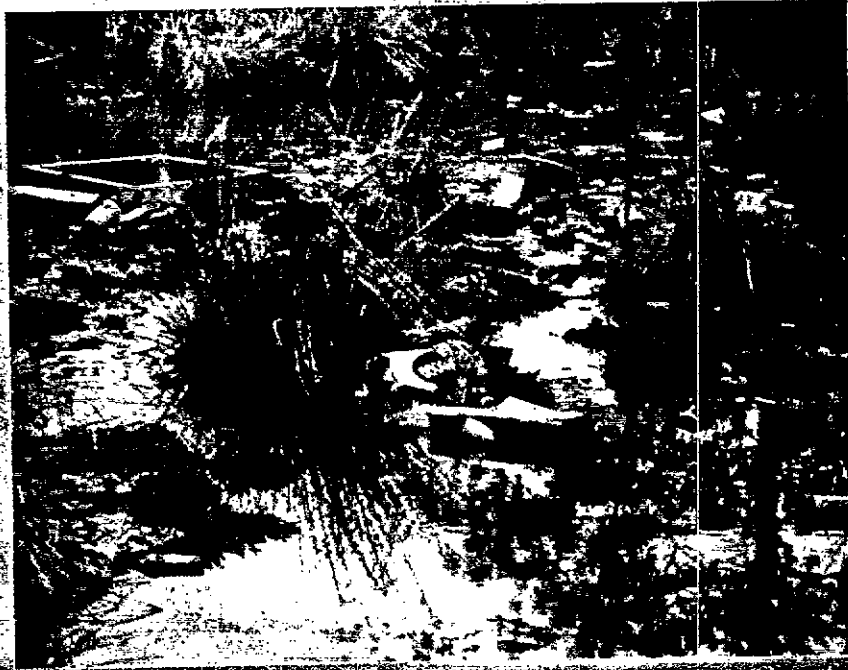


Photo 10 -
Swamp above out fall to culvert.



Photo 11 -
Swamp draining to culvert.

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- Photo 12 -
- Drainage into woods.



- Photo 13 -
- Downstream aqueous and sediment sample.

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

1. IDENTIFICATION	
01 STATE VA	02 SITE NUMBER 210

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site) Rentokil, Inc. - VA Wood Preserving Division		02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER 3000 Peyton Street			
03 CITY Boulder		04 STATE VA	05 ZIP CODE 23228	06 COUNTY Henrico	
08 COORDINATES LATITUDE 37° 38' 18" N LONGITUDE 77° 30' 36" W		10 TYPE OF OWNERSHIP (Check one) ☒ A. PRIVATE ☐ B. FEDERAL ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL ☐ F. OTHER ☐ G. UNKNOWN			

III. INSPECTION INFORMATION

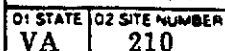
01 DATE OF INSPECTION 03 14 84 MONTH DAY YEAR	02 SITE STATUS ☒ ACTIVE ☐ INACTIVE	03 YEARS OF OPERATION April 1957 Present BEGINNING YEAR ENDING YEAR	
04 AGENCY PERFORMING INSPECTION (Check all that apply) ☐ A. EPA ☒ B. EPA CONTRACTOR NUS Corporation ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR ☐ E. STATE ☐ F. STATE CONTRACTOR ☐ G. OTHER			

05 CHIEF INSPECTOR Martin Howe	06 TITLE Geologist/Hydrogeologist	07 ORGANIZATION NUS Corp.	08 TELEPHONE NO. (215) 687-95
09 OTHER INSPECTORS Eugene Dennis	10 TITLE Geologist	11 ORGANIZATION NUS Corp.	12 TELEPHONE NO. (215) 687-95
James Strickland	Environmental Technician	NUS Corp.	(215) 687-95
Edmund Reardon	Environmental Engineer	NUS Corp.	(215) 687-95
Robert Wichser	Inspector	VA -BSHW	(804) 225-28
Kevin Greene	Inspector	VA-BSHW	(804) 225-28
13 SITE REPRESENTATIVES INTERVIEWED H. Lindwood Farmer, Jr.	14 TITLE Manager	15 ADDRESS 3000 Peyton Street	16 TELEPHONE NO. (804) 266-02
Mr. Semple	Foreman	Richmond, VA 23228	(804) 266-02
			()
			()
			()
			()
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17 ACCESS GAINED BY (Check one) ☒ PERMISSION ☐ WARRANT	18 TIME OF INSPECTION 1045	19 WEATHER CONDITIONS Slightly cloudy and breezy. Temperatures in low 50s
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IV. INFORMATION AVAILABLE FROM

01 CONTACT Darius Ostrauskas	02 OF (Agency/Organization) EPA Site Inspection Office		03 TELEPHONE NO. (215) 597-64
04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM Martin Howe	05 AGENCY NUS Corp.	06 ORGANIZATION FIT III	07 TELEPHONE NO. 215-687-9510
			08 DATE 07 / 26 85 MONTH DAY YEAR



☐ HIGHLY VOLATILE
☒ EXPLOSIVE
☒ REACTIVE
☐ INCOMPATIBLE
☐ NOT APPLICABLE

EPA FORM 2070-13 (7-83)

ORIGINAL
(Red)



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

I. IDENTIFICATION	
01 STATE VA	02 SITE NUMBER 210

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ A. GROUNDWATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 346
02 ☒ OBSERVED (DATE 3-14-84) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Pentachlorophenol was detected in a monitoring well downgradient of the site. This chemical was used extensively on site and is found in the unlined lagoon on site.

01 ☒ B. SURFACE WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: Unknown
02 ☒ OBSERVED (DATE 3-14-84) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

FIT III sampling shows a release of arsenic, copper, chromium, pentachlorophenol, and numerous other organics to the swamp east of the site. No release could be found to a stream north of the site.

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

Odors were detectable. Virginia Wood Preserving was cautioned about this during an inspection on August 11, 1982 by the local Henrico County Health Department.

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

The state fire marshal's office (804-786-4751) does not consider this site a fire threat, as of April 11, 1985.

01 ☒ E. DIRECT CONTACT
03 POPULATION POTENTIALLY AFFECTED: 198
02 ☐ OBSERVED (DATE _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

The facility is not surrounded by a fence.

01 ☒ F. CONTAMINATION OF SOIL
03 AREA POTENTIALLY AFFECTED: 5 to 10
02 ☒ OBSERVED (DATE 3-14-84) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Sediment taken from the swamps shows almost the same assemblage of chemicals found in the lagoon. Sediments taken from the stream north of the site do not.

01 ☒ G. DRINKING WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 346
02 ☒ OBSERVED (DATE 3-14-84) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

PCP (12 ug/l) was identified in 1 of the 3 home wells sampled. Increased levels of copper were reported in all home well samples, including the Robertson well. At the reported concentrations the contaminants reported in domestic wells pose no apparent health concerns.

01 ☒ H. WORKER EXPOSURE/INJURY
03 WORKERS POTENTIALLY AFFECTED: 32
02 ☐ OBSERVED (DATE _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None were reported, but the possibility exists for injury.
The lagoon is not fenced in.

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

None reported or expected.

ORIGINAL
(Red)



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

I. IDENTIFICATION
01 STATE 02 SITE NUMBER
VA 210

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

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

None known

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

None known

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

None known

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES 02 ☐ OBSERVED (DATE 3-14-84) ☐ POTENTIAL ☒ ALLEGED
(Spill, Runoff, Standing liquids, Leaking drums)

03 POPULATION POTENTIALLY AFFECTED Unknown 04 NARRATIVE DESCRIPTION

Chemicals that drip off the drying wood are washed by rainwater runoff to the swamp or directly to the culvert along Peyton Street.

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

None reported.

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

Unknown

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☒ ALLEGED
04 NARRATIVE DESCRIPTION

None reported. FIT III noticed trash in the swamp. The Virginia Department of Health is currently investigating allegations.

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

FIT III found contamination in an adjacent swamp which is owned by R. F. and P. Railroad.

III. TOTAL POPULATION POTENTIALLY AFFECTED: 198 est. through groundwater.

IV. COMMENTS

The swamp supposedly never drains except to overflow to the culvert along Peyton Street during rainy periods. Hence, runoff is going directly to the water table and potentially into the groundwater. The swamp allegedly dries up periodically.

V. SOURCES OF INFORMATION (Can include references to EPA forms used during site visit)

Virginia Wood Preserving.
FIT III sample data and site inspection observations
BSHW site inspection report by Robert Wichser and Kevin Greene

100068

100068

ORIGINAL
(Red)

EPA		POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION PART 4 - PERMIT AND DESCRIPTIVE INFORMATION				I. IDENTIFICATION	
		01 STATE		02 SITE NUMBER			
		VA		210			
II. PERMIT INFORMATION							
01 TYPE OF PERMIT ISSUED (Check all that apply)		02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS		
☐ A. NPDES							
☐ B. UIC							
☐ C. AIR							
☐ D. RCRA							
☐ E. RCRA INTERIM STATUS							
☐ F. SPCC PLAN							
☐ G. STATE (Specify)							
☐ H. LOCAL (Specify)							
☐ I. OTHER (Specify)							
☒ J. NONE							
III. SITE DESCRIPTION							
01 STORAGE/DISPOSAL (Check all that apply)		02 AMOUNT	03 UNIT OF MEASURE	04 TREATMENT (Check all that apply)		05 OTHER	
☒ A. SURFACE IMPOUNDMENT		711.1 est	cubic yds	☐ A. INCINERATION		☒ A. BUILDINGS ON SITE	
☐ B. PILES				☐ B. UNDERGROUND INJECTION			
☐ C. DRUMS, ABOVE GROUND				☐ C. CHEMICAL/PHYSICAL			
☐ D. TANK, ABOVE GROUND				☐ D. BIOLOGICAL			
☐ E. TANK, BELOW GROUND				☐ E. WASTE OIL PROCESSING		06 AREA OF SITE	
☐ F. LANDFILL				☐ F. SOLVENT RECOVERY		4.96	
☐ G. LANDFARM				☒ G. OTHER RECYCLING/RECOVERY			
☐ H. OPEN DUMP				☐ H. OTHER (Specify)			
☐ I. OTHER (Specify)							
07 COMMENTS							
The lagoon is used to dispose of the non-recoverable chemicals from the autoclave. There are probably also wood saps present in the lagoon.							
IV. CONTAINMENT							
01 CONTAINMENT OF WASTES (Check one)							
☐ A. ADEQUATE, SECURE ☐ B. MODERATE ☐ C. INADEQUATE, POOR ☒ D. INSECURE, UNSOUND, DANGEROUS							
02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.							
The lagoon is in a sandy, silty soil and is unlined.							
V. ACCESSIBILITY							
01 WASTE EASILY ACCESSIBLE ☒ YES ☐ NO							
02 COMMENTS							
There is no continuous fence around the site on the lagoon.							
VI. SOURCES OF INFORMATION (Can include references, e.g. owner files, sample analyses, reports)							
NUS FIT III site inspection of March 14, 1984							



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

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
VA 210

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)	02 STATUS	03 DISTANCE TO SITE															
<table><tr><td>SURFACE</td><td>WELL</td></tr><tr><td>COMMUNITY A. ☒</td><td>B. ☐</td></tr><tr><td>NON-COMMUNITY C. ☐</td><td>D. ☒</td></tr></table>	SURFACE	WELL	COMMUNITY A. ☒	B. ☐	NON-COMMUNITY C. ☐	D. ☒	<table><tr><td>ENDANGERED</td><td>AFFECTED</td><td>MONITORED</td></tr><tr><td>A. ☐</td><td>B. ☐</td><td>C. ☐</td></tr><tr><td>D. ☐</td><td>E. ☒</td><td>F. ☐</td></tr></table>	ENDANGERED	AFFECTED	MONITORED	A. ☐	B. ☐	C. ☐	D. ☐	E. ☒	F. ☐	A. 6.25 (mi) B. 0.3 (mi)
SURFACE	WELL																
COMMUNITY A. ☒	B. ☐																
NON-COMMUNITY C. ☐	D. ☒																
ENDANGERED	AFFECTED	MONITORED															
A. ☐	B. ☐	C. ☐															
D. ☐	E. ☒	F. ☐															

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

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

02 POPULATION SERVED BY GROUND WATER est. 346 within 1 km

03 DISTANCE TO NEAREST DRINKING WATER WELL 0.3 (mi)

04 DEPTH TO GROUNDWATER
12.5 (ft)

05 DIRECTION OF GROUNDWATER FLOW
Unknown

06 DEPTH TO AQUIFER
OF CONCERN
12.5 (ft)

07 POTENTIAL YIELD
OF AQUIFER
Unknown (gpd)

08 SOLE SOURCE AQUIFER
☐ YES ☒ NO

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

Most of the old homes in the area have shallow dug wells which draw from the unconsolidated sands and gravels, and saprolite.

10 RECHARGE AREA

☒ YES ☐ NO
COMMENTS Recharge to water table
through swamp.

11 DISCHARGE AREA

☐ YES ☒ NO
COMMENTS Swamp overflows when
runoff exceeds the infiltration capacity.

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

☒ A. RESERVOIR, RECREATION
DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY
IMPORTANT RESOURCES ☐ C. COMMERCIAL INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
<u>Unknown</u>	☐	<u> </u> (mi)
<u> </u>	☐	<u> </u> (mi)
<u> </u>	☐	<u> </u> (mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE A. <u>5,145</u> NO. OF PERSONS	TWO (2) MILES OF SITE B. <u>14,261</u> NO. OF PERSONS	THREE (3) MILES OF SITE C. <u>25,099</u> NO. OF PERSONS
---	---	---

02 DISTANCE TO NEAREST POPULATION

0.3 (mi)

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

3,850 est.

04 DISTANCE TO NEAREST OFF-SITE BUILDING

0.3 (mi)

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

Population figures were estimated by the topographic coverage for the area. A multiplier of 3.8 persons per home was used in the calculation. The area is growing in population. The site is in the suburbs of Richmond. Developments are increasing in number.

ORIGINAL
(Red)



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

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
VA '210

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

Unknown ☐ A. $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ☐ C. $10^{-2} - 10^{-3}$ cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☒ A. IMPERMEABLE (Less than 10^{-8} cm/sec) ☐ B. RELATIVELY IMPERMEABLE ($10^{-6} - 10^{-8}$ cm/sec) ☐ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

Unknown

03 DEPTH TO BEDROCK

20 (ft)

04 DEPTH OF CONTAMINATED SOIL ZONE

Unknown (ft)

05 SOIL pH

Unknown

06 NET PRECIPITATION

1 (in)

07 ONE YEAR 24 HOUR RAINFALL

approx. 2.75 (in)

08 SLOPE

SITE SLOPE

0 to 5 %

DIRECTION OF SITE SLOPE

east

TERRAIN AVERAGE SLO

0 to 5

09 FLOOD POTENTIAL

SITE IS IN N/A YEAR FLOODPLAIN

N/A

☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE

OTHER

A. >3 (mi)

B. (mi)

12 DISTANCE TO CRITICAL HABITAT (if endangered species)

N/A (mi)

ENDANGERED SPECIES:

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL

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

AGRICULTURAL LANDS
PRIME AGRICULTURAL LAND AGRICULTURAL LAND

A. 0 (mi)

B. 0.2 (mi)

C. Unknown (mi) D. 1 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The area is relatively flat. Parts are swampy. The site has been built up about 4 feet at its east end to raise it above a swamp. The west, north, and south ends appear to grade naturally into the surroundings.

VII. SOURCES OF INFORMATION (List specific references, e.g., 1980 EPA, 1980 analysis, reports)

NUS FIT III site inspection of March 14, 1984
HRS User's Manual



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

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
VA 210

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER	3	Organic samples - Mead Compuchem	currently
SURFACE WATER	3		
WASTE	2	Inorganic samples - California Analytical	currently
AIR			
RUNOFF	1		
SPILL			
SOIL	6		
VEGETATION			
OTHER blank	1		

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
pH	Ranged between 5.53 and 6.65 except blank, which was 7.81

IV. PHOTOGRAPHS AND MAPS

01 TYPE ☒ GROUND ☐ AERIAL	02 IN CUSTODY OF NUS Corporation (Name of organization or individual)
03 MAPS ☒ YES ☐ NO	04 LOCATION OF MAPS NUS Corporation

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

None

VI. SOURCES OF INFORMATION (See specific references, e.g., data files, various analyses, reports)

NUS FIT III site inspection of March 14, 1984



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

ORIGINAL
I. IDENTIFICATION
01 STATE 02 SITE NUMBER
VA 210

II. CURRENT OWNER(S)				PARENT COMPANY (if applicable)			
01 NAME	02 D+B NUMBER	03 NAME	04 D+B NUMBER	05 NAME	06 D+B NUMBER	07 NAME	08 D+B NUMBER
Virginia Wood Preserving		Rentokil, Inc.					
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		10 STREET ADDRESS (P.O. Box, RFD #, etc.)		11 SIC CODE	
3000 Peyton Street				4007 Industrial Park Drive			
06 CITY	08 STATE	07 ZIP CODE		12 CITY	13 STATE	14 ZIP CODE	
Richmond	VA	23228		Norcross	GA	30071	
01 NAME	02 D+B NUMBER	03 NAME	04 D+B NUMBER	05 NAME	06 D+B NUMBER	07 NAME	08 D+B NUMBER
N/A		N/A		N/A		N/A	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		10 STREET ADDRESS (P.O. Box, RFD #, etc.)		11 SIC CODE	
06 CITY	08 STATE	07 ZIP CODE		12 CITY	13 STATE	14 ZIP CODE	
01 NAME	02 D+B NUMBER	03 NAME	04 D+B NUMBER	05 NAME	06 D+B NUMBER	07 NAME	08 D+B NUMBER
N/A		N/A		N/A		N/A	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		10 STREET ADDRESS (P.O. Box, RFD #, etc.)		11 SIC CODE	
06 CITY	08 STATE	07 ZIP CODE		12 CITY	13 STATE	14 ZIP CODE	
01 NAME	02 D+B NUMBER	03 NAME	04 D+B NUMBER	05 NAME	06 D+B NUMBER	07 NAME	08 D+B NUMBER
N/A		N/A		N/A		N/A	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		10 STREET ADDRESS (P.O. Box, RFD #, etc.)		11 SIC CODE	
06 CITY	08 STATE	07 ZIP CODE		12 CITY	13 STATE	14 ZIP CODE	

III. PREVIOUS OWNER(S) (List from recent first)				IV. REALTY OWNER(S) (if applicable, list from recent first)			
01 NAME	02 D+B NUMBER	03 NAME	04 D+B NUMBER	01 NAME	02 D+B NUMBER	03 NAME	04 D+B NUMBER
N/A		N/A		N/A		N/A	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	
06 CITY	08 STATE	07 ZIP CODE		06 CITY	08 STATE	07 ZIP CODE	
01 NAME	02 D+B NUMBER	03 NAME	04 D+B NUMBER	01 NAME	02 D+B NUMBER	03 NAME	04 D+B NUMBER
N/A		N/A		N/A		N/A	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	
06 CITY	08 STATE	07 ZIP CODE		06 CITY	08 STATE	07 ZIP CODE	
01 NAME	02 D+B NUMBER	03 NAME	04 D+B NUMBER	01 NAME	02 D+B NUMBER	03 NAME	04 D+B NUMBER
N/A		N/A		N/A		N/A	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	
06 CITY	08 STATE	07 ZIP CODE		06 CITY	08 STATE	07 ZIP CODE	

V. SOURCES OF INFORMATION (Cite specific references, e.g., 2000 EPA, 2000 EPA, 2000 EPA, 2000 EPA)

Rentokil, Incorporated

100073



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

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
VA 210

II. CURRENT OPERATOR (Provide if different from owner)

OPERATOR'S PARENT COMPANY (if applicable)

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

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

PREVIOUS OPERATORS' PARENT COMPANIES (if applicable)

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

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

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

IV. SOURCES OF INFORMATION (Cite specific references, e.g., MSDS files, company analyses, reports)

N/A

100074

ORIGINAL
(Red)

 POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT PART 8 - GENERATOR/TRANSPORTER INFORMATION				I. IDENTIFICATION	
				01 STATE	02 SITE NUMBER
II. ON-SITE GENERATOR					
01 NAME Virginia Wood Preserving		02 D+B NUMBER			
03 STREET ADDRESS (P.O. Box, RFD #, etc.) 3000 Peyton Street		04 SIC CODE			
05 CITY Richmond	06 STATE VA	07 ZIP CODE 23228			
III. OFF-SITE GENERATOR(S)					
01 NAME N/A		02 D+B NUMBER		01 NAME N/A	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		03 STREET ADDRESS (P.O. Box, RFD #, etc.)	
05 CITY	06 STATE	07 ZIP CODE		05 CITY	06 STATE
01 NAME N/A		02 D+B NUMBER		01 NAME N/A	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		03 STREET ADDRESS (P.O. Box, RFD #, etc.)	
05 CITY	06 STATE	07 ZIP CODE		05 CITY	06 STATE
IV. TRANSPORTER(S)					
01 NAME N/A		02 D+B NUMBER		01 NAME N/A	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		03 STREET ADDRESS (P.O. Box, RFD #, etc.)	
05 CITY	06 STATE	07 ZIP CODE		05 CITY	06 STATE
01 NAME N/A		02 D+B NUMBER		01 NAME N/A	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		03 STREET ADDRESS (P.O. Box, RFD #, etc.)	
05 CITY	06 STATE	07 ZIP CODE		05 CITY	06 STATE
V. SOURCES OF INFORMATION (City specific references, e.g., State Rep. Sample Analysis Reports)					
Virginia Wood Preserving					

100075



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

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
VA 210

II. PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 ☐ C. PERMANENT WATER SUPPLY PROVIDED 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 ☐ D. SPILLED MATERIAL REMOVED 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 ☐ E. CONTAMINATED SOIL REMOVED 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 ☐ F. WASTE REPACKAGED 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 ☐ G. WASTE DISPOSED ELSEWHERE 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 ☐ H. ON SITE BURIAL 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 ☐ I. IN SITU CHEMICAL TREATMENT 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 ☐ J. IN SITU BIOLOGICAL TREATMENT 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 ☐ K. IN SITU PHYSICAL TREATMENT 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 ☐ L. ENCAPSULATION 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 ☐ M. EMERGENCY WASTE TREATMENT 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 ☐ N. CUTOFF WALLS 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 ☐ O. EMERGENCY DIKING/SURFACE WATER DIVERSION 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 ☐ P. CUTOFF TRENCHES/BUMP 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 ☐ Q. SUBSURFACE CUTOFF WALL 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____



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

L IDENTIFICATION
01 STATE 02 SITE NUMBER
VA 210

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 ☐ S. CAPPING/COVERING 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 ☐ T. BULK TANKAGE REPAIRED 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 ☐ U. GROUT CURTAIN CONSTRUCTED 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 ☐ V. BOTTOM SEALED 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 ☐ W. GAS CONTROL 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 ☐ X. FIRE CONTROL 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 ☐ Y. LEACHATE TREATMENT 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 ☐ Z. AREA EVACUATED 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 ☐ 1. ACCESS TO SITE RESTRICTED 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 ☐ 2. POPULATION RELOCATED 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 ☐ 3. OTHER REMEDIAL ACTIVITIES 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____

III SOURCES OF INFORMATION (Cite specific references. e.g., State Reg. Agency Spill Report)

NUS FIT III site inspection of March 14, 1984



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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
VA	210

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☒ YES ☐ NO

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

VA BSHW conducted a surprise inspection of the facility on October 30, 1984. No remedial measures were taken at that time or to date.

III. SOURCES OF INFORMATION (Cite specific references e.g. state file, agency survey reports)

VA BSHW
100078

ORIGINAL
(Red)

SECTION 6

100079

6.0 LABORATORY DATA

6.1 Sample Data Summary

ORIGINAL
Doc

100080

TDD Number F3-8402-20

EPA Number VA-210

SAMPLE DATA SUMMARY
TARGET COMPOUNDS

☒ Organic ☐ Inorganic

Site Name Rentakill, Tex.

Date of Sample March 14, 1991

Solid sample results reported as
dry weight.

Sample Number	Sample Description and Location	Phase	Units	Compounds Detected										Remarks
				2,4-dinitrophenol	phenol	2-methylphenol	4-methylphenol	acetophenone	chlorobenzene	naphthalene	anthracene	fluorene	benzo(a)pyrene	benzo(a)anthracene
8248	Home well #1 Leonard C. market	AQ	mg/L	12										
8249	Home well #2 Alfred Apple	AQ	mg/L											
8250	Home well #3 W.O. Robertson	AQ	mg/L											
8251	Upstream AQ	AQ	mg/L											
8252	Upstream Sol	Sol	mg/kg											
8253	Downstream AQ	AQ	mg/L											
8254	Downstream Sol	Sol	mg/kg											
8255	Impoundment 1	AQ	mg/L	1800			2300	3700	7200		520			
8256	Impoundment 1	Sol	mg/kg	42,000 280			10,000 800	13,000 800	25,000 800		4,000 800			
8257	Impoundment 2 (Dike at 8258)	AQ	mg/L	5000			5,400	9,000	19,000	760				
8258	Impoundment 2 (Dike at 8258)	Sol	mg/kg	7,900 100	240,000 160,000	240,000 160,000	10,000 800	15,000 800	19,000 800		2,100 800	6,700 800	1900 800	II - Indistinguishable Isomers
8259	Swamp 1 AQ	AQ	mg/L	380			46	230						
8260	Swamp 1 Sol	Sol	mg/kg	13,000			2,400	17,000						
8261	Swamp 2 AQ	AQ	mg/L					49						

NOTE: For a review of this data and non-target, tentatively identified compounds, please see the Analytical Quality Assurance section of this report.

◊ Denotes results of questionable qualitative significance based upon quality assurance review of data.

Quality Assurance performed by
Rock J. Vitale (215) 687-9510.

SAMPLE DATA SUMMARY TARGET COMPOUNDS

TDO Number F3-8402-20

EPA Number YA-210

Site Name Rental, Inc.

Date of Sample March 14, 1964

☒ Organic ☐ Inorganic

inorganic

Compounds Detected

Solid sample results reported as dry weight.

[illegible]

NOTE: For a review of this data and non-target, tentatively identified compounds, please see the Analytical Quality Assurance section of this report.

○ Denotes results of questionable qualitative significance based upon quality assurance review of data.

Quality Assurance performed by
Rock J. Vitale (215) 687-9510.

1-11-72

100082

SAMPLE DATA SUMMARY
TARGET COMPOUNDSTDD Number F3-8402-20EPA Number VA-210☒ Organic ☐ InorganicDate of Sample March 14, 1979Solid sample results reported as
dry weight.

Compounds Detected

Sample Number	Sample Description and Location	Phase	Units	benzo (b) fluoranthene	chrysene	benzophenanthrene	anthracene	benzo (a,b) pyrene	fluorene	phenanthrene	dibenz (a,h) anthracene	pyrene (1,2,3,4-b)	pyrene	dibenzofuran	2-methyl-naphthalene	benzene
8248	Home well #1, Leonard C. Michel	AQ	mg/l													
8249	Home well #2, Alfred Boyle	AQ	mg/l													
8250	Home well #3, W.O. Robertson	AQ	mg/l													
8251	Upstream AQ	AQ	mg/l													
8252	Upstream Sol	Sol	mg/l _s													
8253	Downstream AQ	AQ	mg/l													
8254	Downstream Sol	Sol	mg/l _s													
8255	Impoundment 1	AQ	mg/l	560	<400	880		2,900	8000			2,600	2,400	2,900	53	
8256	Impoundment 2	Sol	mg/l _s	3,200, 000	<1,300, 000	3,100, 000		19,000, 000	29,000, 000			8,800, 000	8,500, 000	9,800, 000	<23,000, 000	
8257	Impoundment 2 (Duplicate of 8256)	AQ	mg/l	1,200	480	2,000		5,600	13,000			5,200	5,200	7,200	<5	
8258	Impoundment 2 (Duplicate of 8256)	Sol	mg/l _s	1,800, 000	448,000	7,700, 000		9,300, 000	37,800, 000			7,000, 000	6,700, 000	8,000, 000	20,000, 000	II - Radioactively unstable
8259	Swamp 1 AQ	AQ	mg/l	44	<20			44	72			130	24			
8260	Swamp 1 Sol	Sol	mg/l _s	6,200	560	3,300	1500	1,800	7,800	<1120	1800	12,000	1500			
8261	Swamp 2 AQ	AQ	mg/l									<35				

NOTE: For a review of this data and non-targets, tentatively identified compounds, please see the Analytical Quality Assurance section of this report.

○ Denotes results of questionable qualitative significance based upon quality assurance review of data.

Quality Assurance performed by
Rock J. Vitale (215) 687-9510.

SAMPLE DATA SUMMARY TARGET COMPOUNDS

TDD Number F3-8402-20

EPA Number: VA-210

Organic

☐ Organic ☐ Inorganic

Date of Sample March 14 1954

Solid sample results reported as dry weight.

Compounds Detected

[illegible]

NOTE: For a review of this data and non-target, tentatively identified compounds, please see the Analytical Quality Assurance section of this report.

◆ Denotes results of questionable qualitative significance based upon quality assurance review of data.

Quality Assurance performed by
Rock J. Vitale (215) 687-9510.

100684

SAMPLE DATA SUMMARY TARGET COMPOUNDS

TDD Number F9-8402-20

EPA Number VA-210

Site Name Reatakil, Inc.

Date of Sample March 14, 1974

☒ Organic ☐ Inorganic

Lowrance

Compounds Detected

Solid sample results reported as dry weight.

[illegible]

NOTE: For a review of this data and non-target, tentatively identified compounds, please see the Analytical Quality Assurance section of this report.

◊ Denotes results of questionable qualitative significance based upon quality assurance review of data.

**Quality Assurance performed by
Rock J. Vitale (215) 687-9510.**

II- Indistinguishable Isomers

TDO Number F3-2402-20
EPA Number VA-210

SAMPLE DATA SUMMARY TARGET COMPOUNDS

☒ Organic ☐ Inorganic

Site Name Reston, Va.
Date of Sample March 14, 1984

Solid sample results reported as
dry weight.

Compounds Detected

Sample Number	Sample Description and Location	Phase	Units	ethylbenzene	chlorobenzene	chlorobenzene	toluene	benzene	styrene	o-xylene	p, m-xylene	Remarks
8248	Home water 1. Unadulterated	AQ	ug/l									
8249	Home water 2. Adulterated	AQ	ug/l									
8250	Home water 3. H.O. Extraction	AQ	ug/l									
8251	Upstream AQ	AQ	ug/l									
8252	Upstream Sol	Sol	ug/kg	43	4							
8253	Downstream AQ	AQ	ug/l									
8254	Downstream Sol	Sol	ug/kg	31	3							
8255	Impoundment 1	AQ	ug/l	< 5	5.8	< 100	< 5	6.5				
8256	Impoundment 1	Sol	ug/kg	410,000	36,000	130,000	210,000	330,000				
8257	Impoundment 2 (Duplicate of 8255)	AQ	ug/l	6	5		< 5	8				
8258	Impoundment 2 (Duplicate of 8256)	Sol	ug/kg	79,000	< 20,000	69,000	75,000	110,000				
8259	Swamp 1 AQ	AQ	ug/l									
8260	Swamp 1 Sol	Sol	ug/kg	10								
8261	Swamp 2 AQ	AQ	ug/l									

NOTE: For a review of this data and non-target, tentatively identified compounds, please see the Analytical Quality Assurance section of this report.

◇ Denotes results of questionable qualitative significance based upon quality assurance review of data.

Quality Assurance performed by
Rock J. Vitale (215) 687-9510.

ORIGINAL
(Red)

100086

JD N 2-3406-60
EPA Number: VA-211

TAI
COMPOUNDS

☐ Organic ☒ Inorganic

Site Name Rentokil, Inc.
Date of Sample March 14 1984

Quality Assurance performed by
Rock J. Vitale (215) 687-9510.

Compounds Detected

Sample Number	Sample Description and Location	Phase	Units	Aluminum	Chromium	Barium	Beryllium	Cobalt	Copper	Iron	Nickel	Manganese	Zinc	Boron	Vanadium	Remarks
MC 3271	Home Well #1	AQ	ug/l	600		220			730	270		28	94			
MC 3272	Home Well #2	AQ	ug/l	460					750	320			160			
MC 3273	Home Well #3	AQ	ug/l	650				1100	280		15	99				
MC 3274	Upstream AQ	AQ	ug/l	750					400		29	71				
MC 3275	Upstream sed	sed	mg/kg	1100	1.6	9			1400		14	12				
MC 3276	Downstream AQ	AQ	ug/l	684					440		22	80				
MC 3277	Downstream sed	sed	mg/kg	1000	9	9		3.5	750		16	13				
MC 3278	Impoundment 1 AQ	AQ	ug/l	10000	46000	140		31000	16000	60	1200	1200				
MC 3279	Impoundment 1 sed	sed	mg/kg	750	4000	14		1900	1600		27	90				
MC 3280	Impoundment 2 AQ	AQ	ug/l	15000	69000	230	67	44000	23000	64	1700	2000				Duplicate of MC 3278
MC 3281	Impoundment 2 sed	sed	mg/kg	3900	3400	13		1900	3900	2.2	43	70				Duplicate of MC 3279
MC 3282	Swamp 1 AQ	AQ	ug/l	6900	2100			670	4600		220	200				
MC 3283	Swamp 1 sed	sed	mg/kg	3700	240	10		120	4600		23	25				
MC 3284	Swamp 2 AQ	AQ	ug/l	4600	730			430	3900		150	200				

NOTE: For a review of this data and non-target, tentatively identified compounds, please see the Analytical Quality Assurance section of this report.
☒ Denotes results of questionable qualitative significance based upon quality assurance review of data.

ARI00087

TDD Number E3-8402-20
EPA Number VA-210

SAMPLE DATA SUMMARY
TARGET COMPOUNDS

Site Name Reynolds, I NC
Date of Sample March 14 1984
☐ Organic ☒ Inorganic

Quality Assurance performed by
Rock J. Vitale (215) 687-9510.

Compounds Detected

Sample Number	Sample Description and Location	Phase	Units	Arsenic	Antimony	Selenium	Thallium	Mercury	Tin	Cadmium	Lead	Ammonia	Cyanide	Sulfide	Remarks
MC 3271	Home well #1	AQ	ug/l								6.7				
MC 3272	Home well #2	AQ	ug/l								7.1				
MC 3273	Home well #3	AQ	ug/l	23						2.2	12				
MC 3274	Upstream AQ	AQ	ug/l	24							12				
MC 3275	Upstream Sed	Sed	mg/kg	1.4							7				
MC 3276	Downstream AQ	AQ	ug/l	12	23						5.6				
MC 3277	Downstream Sed	Sed	mg/kg	20	1						5.5				
MC 3278	Impoundment 1	AQ	ug/l	32000	200						16				
MC 3279	Impoundment 1	Sed	mg/kg	5500	22			1.4	0.1	7.5	2.1				
MC 3280	Impoundment 2	AQ	ug/l	50000	510	10	0.6								Duplicate of MC 3278
MC 3281	Impoundment 2	Sed	mg/kg	5500	3.2										Duplicate of MC 3279
MC 3282	Swamp 1	AQ	ug/l	2800	33						15				
MC 3283	Swamp 1	Sed	mg/kg	340	1						7.2				
MC 3284	Swamp 2	AQ	ug/l	2400	31						14				

NOTE: For a review of this data and non-target, tentatively identified compounds, please see the Analytical Quality Assurance section of this report.
Denotes results of questionable qualitative significance based upon quality assurance review of data.

ARI00088

EPA Number VA-210

☐ Organic

Date of Sample March 14 1984

Compounds Detected

[illegible]

NOTE: For a review of this data and non-target, tentatively identified compounds, please see the Analytical Quality Assurance section of this report.

◇ Denotes results of questionnaire qualitative significance based upon quality assurance review of data.

AR100090

6.2 Quality Assurance Review

6.2.1 Organic Data: Lab Case 2350

6.2.1.1 Introduction

The findings offered in this report are based upon a general review of sample data, blank analysis results, surrogate and matrix spike results, evaluation of GC confirmations, field and laboratory duplicate analysis, quantitation of results, and target compound matching quality.

6.2.1.2 Qualifiers

It is recommended that this data package be utilized only with the following qualifier statements:

- o All positive results for methylene chloride, acetone, fluorotrichloromethane, and di-n-octyl phthalate are questionable.
- o The positive results for toluene in samples C8255, C8257 (field duplicates), and C8262 are questionable.

The aforementioned results were designated questionable because there is evidence to doubt the presence of these compounds at concentrations less than or similar to the levels reported. However, it can be assumed that concentrations substantially greater than the levels reported cannot be present.

- o Due to a laboratory quantitation error, all the reported BN results for sample C8256 were reported incorrectly. The corrected concentrations have been incorporated into the sample data summary.

100091

- o Due to a transcription error, the laboratory failed to report a confident identification of acenaphthene in sample C8259 at a concentration of 46 ug/l. This result has been incorporated into the sample data summary.
- o Due to evidence which suggested the presence of pentachlorophenol in sample C8248, the laboratory was requested to provide additional documentation that further supported the presence of this compound. The documentation has been received and has proved the presence of pentachlorophenol at a concentration of 12 ug/l. This information has been incorporated into the sample data summary.
- o The reported result for N-nitrosodiphenylamine in sample C8257 may actually represent the presence of either diphenylamine or N-nitrosodiphenylamine.
- o The reported results for benzo(b)fluoranthene and benzo(k)fluoranthene in samples C8257, C8258, C8259, and C8260 may actually represent the presence of either 1 or both of these compounds.
- o The actual detection limits for some acid compounds in sample C8252 may be slightly higher than reported.
- o The actual detection limit for 2,3,7,8-TCDD in samples C8255, C8256, C8257, and C8258 may be substantially higher than reported.
- o The actual detection limits for 2,4-dinitrotoluene, 4-nitrophenol, and lindane in sample C8262 may be substantially higher than reported. In addition, the reported concentration of pentachlorophenol in sample C8262 may not reflect the average concentration present.
- o The actual detection limit for 4-nitrophenol may be substantially higher than reported for sample C8250.

100092

- o The positive results for pentachlorophenol, acenaphthene, fluoranthene, naphthalene, N-nitrosodiphenylamine, benzo(a)anthracene, chrysene, anthracene, fluorene, phenanthrene, pyrene, dibenzofuran, and 2-methylnaphthalene in the field duplicates C8255 and C8257 may not reflect the average concentration present. An average of these field duplicates would provide a better indication of the concentrations present at this sample location.
- o The positive results for 2,4-dimethylphenol, pentachlorophenol, phenol, 2-methylphenol, 4-methylphenol, benzo(a)pyrene, benzo(b) and/or (k) fluoranthene, anthracene, ethylbenzene, styrene, and o-xylene in the field duplicates C8256 and C8258 may not reflect the average concentration present at that sampling point. An average of these field duplicates would provide a better indication of the concentration present, since these results differed substantially. However, results for toluene may include an additional source of bias so that an average may not represent a more accurate result.
- o Per EPA request, tentatively identified compounds which were reported by the laboratory are not included in this report.

6.2.1.3 Findings

- o Field and/or laboratory blank analyses revealed the presence of fluorotrichloromethane, toluene, methylene chloride, acetone, and di-n-octyl phthalate at sufficient levels to question the aforementioned sample results for these compounds.
- o The laboratory used an incorrect calculation in quantitating the BN compound results for sample C8256.

100093

- o Examination of the BNA quantitation list for sample C8248 revealed the possible presence of pentachlorophenol in this sample at a concentration of 12 ug/l. Although this quantitation is below the criteria that the laboratory uses for reporting compounds, the laboratory was requested to provide the spectrum. This spectrum has been received and confirms the presence of pentachlorophenol at this sample location.
- o N-nitrosodiphenylamine decomposes in the GC inlet to diphenylamine, so that these compounds are indistinguishable in this analysis.
- o Benzo(b)fluoranthene and benzo(k)fluoranthene have identical mass spectra and nearly identical retention times, in samples C8257, C8258, C8259, and C8260. Consequently, they cannot be differentiated by this analysis in these samples.
- o Low recovery was reported for 1 acid surrogate compound in sample C8252.
- o Indeterminant recoveries were reported for the 2,3,7,8-TCDD surrogate compound in samples C8255, C8256, C8257, and C8258.
- o Very low or zero recoveries were reported for the matrix spike compounds 2,4-dinitrotoluene, 4-nitrophenol, and lindane in sample C8262. In addition, duplicate matrix spike of pentachlorophenol revealed recoveries with a high degree of variability.
- o Zero recovery was reported for the matrix compound 4-nitrophenol in sample C8250.
- o Analyses of field duplicates C8255 and C8257 revealed a high degree of variability for the compounds pentachlorophenol, acenaphthene, fluoranthene, naphthalene, N-nitrosodiphenylamine, benzo(a)anthracene, chrysene, anthracene, fluorene, phenanthrene, pyrene, dibenzofuran, and 2-methylnaphthalene.

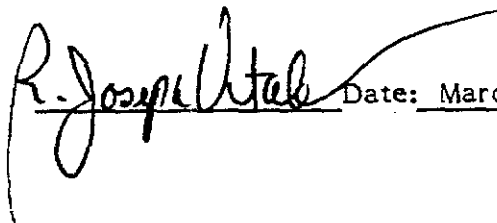
100094

- o Analyses of field duplicates C8256 and C8258 revealed a high degree of variability for the compounds 2,4-dimethylphenol, pentachlorophenol, phenol, 2-methylphenol, 4-methylphenol, benzo(a)pyrene, benzo(b) and/or (k)fluoranthene, anthracene, toluene, ethylbenzene, styrene, and o-xylene. In addition, low recovery was reported for the matrix spike compound toluene in sample C8256.
- o Total percent BNA compounds (target compounds) for field duplicates C8256 and C8258 are 16.5 percent and 13.3 percent, respectively.
- o Tentatively identified compounds were examined only for possible target compound identifications.

6.2.1.4 Summary

The attached Quality Assurance Review has identified blank contamination, poor surrogate and matrix spike recoveries, transcription, and quantitation errors as the primary areas of concern. Please see the accompanying Support Documentation appendix for specifics on this Quality Assurance Review.

Report prepared by R. Joseph Vitale
(215) 687-9510

 Date: March 24, 1986

100695

6.2.2 Inorganic Data: Lab Case 2521

ORIGINAL
(Mod)

6.2.2.1 Introduction

The findings offered in this report are based upon a general review of all inorganic sample data, blank analysis results, matrix spike results, duplicate analysis results, ICP interference check results, calibration data, and detection limits.

6.2.2.2 Qualifiers

It is recommended that this data package be utilized only with the following qualifier statements:

- o The positive reported results for aluminum and iron in samples MC3271, MC3272, MC3274, MC3274, and MC3276 are questionable.
- o The positive reported results for zinc in samples MC3271, MC3272, MC3273, MC3274, MC3276, MC3282, and MC3284 are questionable.
- o The positive reported results for arsenic in samples MC3275 and MC3276 are questionable.
- o The positive reported results for antimony in samples MC3273, MC3274, MC3276, MC3277, MC3281, MC3282, MC3283, and MC3284 are questionable.
- o The positive reported results for tin in samples MC3279 and MC3285 are questionable.
- o The positive reported results for lead in samples MC3271, MC3272, MC3273, MC3274, MC3276, MC3278, MC3282, and MC3284 are questionable.

100096

The aforementioned results were designated questionable because there is evidence to doubt the presence of these constituents at concentrations less than or similar to the levels reported. However, it can be assumed that concentrations substantially greater than the levels reported cannot be present.

- o Due to a transcription error, aluminum, barium, chromium, and manganese were reported in sample MC3276 incorrectly. The corrected values have been incorporated into the sample data summary. (Chromium and barium concentrations are below detection limits for this sample.)
- o The actual concentration of lead in sample MC3283 may be slightly lower than reported.
- o The positive results for cobalt, zinc, arsenic, antimony, thallium, and mercury in the field duplicates MC3278 and MC3280, and aluminum, copper, iron, nickel, manganese, antimony, lead, and cyanide in the field duplicates MC3279 and MC3281 may not reflect the average concentration present. An average of the aforementioned duplicates would provide a better indication of the concentrations present at these sample locations.

6.2.2.3 Findings

- o Analysis of field blanks and laboratory preparation blanks revealed the presence of aluminum, iron, zinc, arsenic, antimony, tin, and lead in sufficient quantity to question the results of the aforementioned samples.
- o High recovery was reported for the matrix spike constituent lead in sample MC3283.

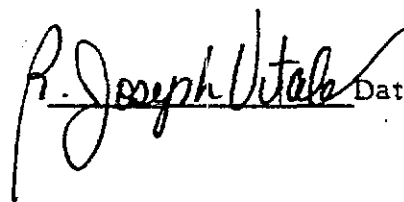
100097

Analysis of field duplicates MC3278 and MC3280 revealed poor precision for cobalt, zinc, arsenic, antimony, thallium, and mercury. Similarly, analysis of field duplicates MC3279 and MC3281 revealed poor precision for aluminum, copper, iron, nickel, manganese, antimony, lead, and cyanide.

6.2.2.4 Summary

The attached Quality Assurance Review has identified blank contamination, transcription error, matrix spike recoveries, and duplicate analysis as the primary areas of concern. Please see the accompanying Support Documentation appendix for specifics on this Quality Assurance Review.

Report prepared by R. Joseph Vitale
(215) 687-9510



Date: March 24, 1986

ORIGINAL
(Red)

SECTION 7

100699

7.0 TOXICOLOGICAL EVALUATION

7.1 Summary

High concentrations of both organic and inorganic priority pollutants were reported in samples from the on-site impoundment and from the swampy area adjacent to the site. The most apparent potential hazards are posed by worker exposure and the contamination of the groundwater. The facility currently has 32 workers. Approximately 91 home wells have been reported to be located within 1 kilometer of the site.

Polycyclic aromatic hydrocarbons (PAHs), some of which have evidence of animal carcinogenicity, comprised 13.3 to 16.5 percent by weight of sediment samples from the impoundment. Concentrations of individual PAHs were as high as 29,000 mg/kg. Arsenic, chromium, and copper were reported at levels of up to 500,000, 69,000, and 44,000 ug/l, respectively, in aqueous impoundment samples. Arsenic and chromium are recognized human carcinogens. Individual volatile organics including benzene, a human carcinogen, were measured in impoundment sediment samples in concentrations of up to 3,300 mg/kg; a maximum level of 42,000 mg/kg was measured for pentachlorophenol (PCP). Worker exposure could potentially occur through dermal and inhalation routes. Levels of many on-site contaminants were also elevated in the swamp, which can potentially receive runoff from the site.

PCP (12 ug/l) was identified in 1 of the 3 home wells sampled. The contamination may be site-related. Elevated levels of copper (up to 1,100 ug/l) were reported in all home well samples. At the reported concentrations, the contaminants reported in domestic wells pose no apparent health concerns. The future contamination of these and other area home wells with on-site contaminants, including known and suspect human carcinogens, cannot be ruled out.

HNU readings were not taken because of a malfunctioning of the meter. It is possible that organic vapors at levels of concern may be present in the ambient air on site and in the surrounding neighborhood.

100100

There were no organic pollutants reported in samples from the nearby stream. The arsenic concentration in the downstream sediment sample (20 mg/kg) was slightly elevated.

7.2 Distribution of Contaminants

ORIGINAL

7.2.1 Organics

High concentrations of base neutral compounds (PAHs and related compounds), phenols, and volatile organics were measured in samples from the on-site impoundment, and the swamp adjacent to the site. The reported base neutrals comprise 13.3 percent and 16.5 percent, on a dry weight basis, respectively, of the 2 sediment samples from the impoundment. Numerous other related compounds were also tentatively identified in the impoundment sediment. The concentrations of confidently identified contaminants are summarized in the table below. Except where otherwise indicated, if only 1 value is given, it indicates that the substance was reported within quantifiable limits in only 1 sample. The impoundment values are the results of the analysis of duplicate samples taken at the same sampling location. The swamp values are from samples taken at 2 different sampling stations. Sampling station 1 was in the area of the swamp which may have previously received overflow from the impoundment. Since a roof was constructed over the impoundment, there has been no overflow reported. The swamp can still potentially receive runoff from the area surrounding the impoundment. Sampling station 2 was in the region of the swamp which, following heavy precipitation, overflows into a ditch on Peyton Street. Concentrations of all organic contaminants identified in the swamp were higher in samples from station 1 than from station 2.

100101

PAHs and Related Compounds	Impoundment (aqueous) ug/l	Impoundment (sediment) ug/kg	Swamp (aqueous) ug/l	Swamp (sediment) ug/kg
acenaphthene	2,900 - 5,600	10 ⁷ (both samples)	46	2,400
acenaphthylene	*(400) - 480	4.8 x 10 ⁵ - 13.0 x 10 ⁵	--	560
anthracene ✓	880 - 2,000	3.1 x 10 ⁶ - 7.7 x 10 ⁶	*(20)	*(700) - 3,300
benzo(a)anthracene	520 - 1,200	2.0 x 10 ⁶ - 2.1 x 10 ⁶	30	6,700
dibenzo(a,h)anthracene	--	--	--	*(1,120)
chrysene	560 - 1,200	2.2 x 10 ⁶ - 2.3 x 10 ⁶	44	910 - 6,200
fluorene	2,800 - 5,600	9.3 x 10 ⁶ - 1.0 x 10 ⁷	44	1,800
fluoranthene	3,700 - 8,000	1.3 x 10 ⁷ - 1.5 x 10 ⁷	49 - 230	*(700) - 17,000
** benzo(b)fluoranthene and/or				
benzo(k)fluoranthene	*(800) - 1,100	1.8 x 10 ⁶	54	1,600 - 12,000
benzo (g,h,i)perylene	--	--	--	1,500
phenanthrene	8,000 - 13,000	2.7 x 10 ⁷ - 2.9 x 10 ⁷	72	7,800
pyrene	2,600 - 5,200	7.0 x 10 ⁶ - 8.8 x 10 ⁶	*(35) - 130	*(700) - 12,000
benzo(a)pyrene	--	--	--	2.3 x 10 ³ x 6.7 x 10 ⁶
indeno (1,2,3-cd) pyrene	--	--	--	1,800
naphthalene ✓	7,200 - 15,000	1.8 x 10 ⁷ - 2.5 x 10 ⁷	--	--
2-methylnaphthalene	2,900 - 7,200	8.0 x 10 ⁶ - 9.8 x 10 ⁶	--	--
dibenzofuran	2,400 - 5,200	6.7 x 10 ⁶ - 8.5 x 10 ⁶	24	1,500

*detected below the minimum quantifiable limit which is indicated in parenthesis
**isomers not distinguishable by analytical method used

ORIGINAL
(20)

	Phenols		Inpoundment		Swamp	
	Inpoundment (aqueous) ug/l	Inpoundment (sediment) ug/kg	Swamp (aqueous) ug/l	Swamp (sediment) ug/kg		
phenol	--	2.4×10^5	--	--		
2-methylphenol	--	$*(1.6) \times 10^5$	--	--		
4-methylphenol	--	2.6×10^5	--	--		
2,4-dimethylphenol	--	$*(1.6) \times 10^5$	--	--		
pentachlorophenol	1,800 - 6,000	$7.8 \times 10^6 - 42.0 \times 10^6$	380	$*(1,400) - 13,000$		
Volatile Organics						
benzene	$*(5) - 5.3$	$20.0 \times 10^3 - 27.6 \times 10^3$	--	--		
ethylbenzene	$*(5) - 5$	$7.9 \times 10^4 - 41.0 \times 10^4$	--	--		
toluene	--	$5.9 \times 10^4 - 13.0 \times 10^4$	--	--		
o-xylene	6.5 - 8	$1.1 \times 10^5 - 3.3 \times 10^5$	--	--		
styrene	$*(5)$	$7.5 \times 10^4 - 21.0 \times 10^4$	--	--		

*detected below the minimum quantifiable limit which is indicated in parenthesis

In addition to the above, PCB-1260 (92 ug/kg) was identified in a swamp sediment sample, and N-nitrosodiphenylamine (760 ug/l) was reported in an aqueous sample from the impoundment. According to the quality assurance chemist, the latter value may indicate the total concentration of either N-nitrosodiphenylamine and/or diphenylamine as routine laboratory analysis cannot distinguish between these 2 compounds (see section 6.2.1).

The sampling results are consistent with known chemical usage on site, and with FIT III site observations. PCP was used on site as a wood preserver until 1982. Creosote has been in use since 1957. Creosote is a mixture of organic compounds produced by the distillation of coal tar. Although the mixture is highly variable, it is composed mainly of cyclic hydrocarbons, including PAHs and phenols. Volatile organics are also used in the wood treatment process. All of these compounds were reported in samples taken on site. Many of the organics identified in the impoundment were also reported in the swamp; most were measured in lower concentrations in the swamp.

According to FIT III, overflow from the swamp would not be expected to affect the stream located to the north of the site in the area where stream samples were taken, although overflow could potentially reach the stream further downstream via the aforementioned drainage ditch. There were no organic contaminants confidently identified in samples from the stream.

Due to a malfunction of the HNU meter, the ambient air was not monitored for the presence of organic vapors. A "slight odor of creosote" was noted on site by FIT III.

PCP (12 ug/l) was identified in the Merkel home well sample. It was the only organic priority pollutant identified in the 3 home wells sampled.

100104

7.2.2 Inorganics

Sampling results for inorganics also correlate with chemical usage on site. The highest concentrations of identified inorganic priority pollutants were reported for arsenic, chromium, and copper. CCA has been used on site since 1982. Unusual levels of inorganics measured in the impoundment and swamp samples are summarized in the table below:

	Impoundment (aqueous) ug/l	Impoundment (sediment) mg/kg	Swamp (aqueous) ug/l	Swamp (sediment) mg/kg
arsenic	$3.2 \times 10^5 - 5.0 \times 10^5$	5,500 (both samples)	2,400 - 2,800	340 (both samples)
chromium	$4.6 \times 10^4 - 6.9 \times 10^4$	3,400 - 4,000	730 - 2,100	180 - 24
copper	$3.1 \times 10^4 - 4.4 \times 10^4$	1,900 (both samples)	430 - 670	120 - 16
antimony	200 - 510	22	--	--
barium	140 - 230	--	--	--
cobalt	6.7	--	--	--
mercury	0.6	--	--	--
thallium	10	--	--	--

Slightly elevated levels of zinc (1,200 to 2,000 ug/l), manganese (1,200 to 1,700 ug/l), aluminum (10,000 to 15,000 ug/l), and iron (16,000 to 23,000) were present in aqueous samples from the impoundment. These levels do not necessarily suggest a man-made source of pollution; increased levels of these metals may be natural to the area. The levels of these metals in the swamp samples were substantially lower.

100105

Copper concentrations were elevated in all 3 home well samples (730 to 1,100 ug/l). The highest level was measured in the Robertson well. Barium (220 ug/l) was measured in the Merkel home well sample.

Arsenic (20 mg/kg) was slightly increased in the downstream sediment sample of the stream. Typical sediments contain about 6.6 mg/kg of arsenic.¹

7.3 Toxicological Considerations

7.3.1 Worker Exposure

A number of hazardous substances including PAHs, chromium, arsenic, and PCP were identified in on-site samples. Worker exposure could potentially occur through dermal contact and the inhalation of vapors and/or dust. The site is reported to have 32 workers.

Of the PAHs identified on site, the following have evidence of carcinogenicity in animals: benzo(a)pyrene, benzo(a)anthracene, dibenzo(a,h)anthracene, benzo(b)fluoranthene (analytically indistinguishable from the k isomer), indeno(1, 2, 3,-cd)pyrene, and fluoranthene.^{2 to 4} Pyrene and benzo(g,h,i)perylene have evidence of cocarcinogenicity.² Skin and other epithelial cancers have been produced in rodents by acute exposure to as little as microgram quantities of some PAHs. There is currently limited evidence linking PAH exposure to cancer in primates, however. In addition to the carcinogenic potential of some PAHs, other systemic toxicities have been associated with PAH exposure in animals, normally proliferating tissues (e.g., hematopoietic, gastrointestinal epithelium) appearing to be the most susceptible.

100106

The PAHs reported in on- and off-site samples are probably derived largely from the creosote used on site. Creosote is considered carcinogenic by EPA's Carcinogen Assessment Group.⁵ Dermal application in mice has been shown to produce skin and lung tumors, and there is epidemiological evidence from workplace exposure linking it mainly with skin and, to a lesser extent, with visceral tumors in humans. There is insufficient evidence correlating the carcinogenicity of creosote with its PAH content, however. Contact of creosote liquid or vapors with skin, eyes, or mucous membranes in humans can also cause irritation, lesions, gangrene, and changes in (skin) pigmentation. Skin photosensitization can also occur.⁵ Creosote is easily absorbed through the skin and mucous membranes. Constant worker exposure to creosote, either by dermal contact or inhalation, poses a potential risk of cancer and, possibly, the other toxicities noted.

Other potentially hazardous organic contaminants were also identified in impoundment samples. Benzene is a recognized human carcinogen associated with leukemia. N-nitrosodiphenylamine (analytically indistinguishable from diphenylamine) has evidence of carcinogenicity in animals.⁶ Brief, periodic dermal contact with volatiles and phenolic compounds at levels similar to those measured in impoundment aqueous samples would be expected to result in the absorption of only small amounts of contaminants, and any health risks would be expected to be small. It should be kept in mind, however, that some of these contaminants may be used in concentrated solutions on site, in which case more substantial amounts may be absorbed if dermal exposure occurs.

The maximum concentration of any individual contaminant in the aqueous sample was 0.0006 percent, reported for PCP. Considerably higher levels (up to 42,000 mg/kg or 4.2 percent by weight) of PCP were found in sediment samples, however, and dermal contact might potentially be an exposure route of concern. Prolonged or repeated skin contact with PCP solutions or dust have been known to cause dermatitis and systemic effects.⁷

The absorption of small amounts of naphthalene might be potentially hazardous to special groups at risk. Individuals deficient in the enzyme, glucose-6-phosphate dehydrogenase, may be more susceptible to its hemolytic effects, and there is evidence that some individuals may have an allergic sensitivity.⁸

100107

Due to mechanical problems with the HNU, ambient air levels of organic vapors could not be determined. It is possible that organic vapors are present at levels of toxicological concern in the on-site ambient air. A creosote-like odor was noted on site by FIT III.

Hazards to workers may also be posed by inorganic contaminants. Although routine laboratory analysis does not determine the form(s) in which chromium is present, it is likely that a major portion measured on site is hexavalent, since chromium trioxide comprises approximately 47.5 percent of CCA. Hexavalent chromium as chromium trioxide can easily penetrate the skin, and can lead to skin ulceration and allergic sensitization. Inhalation of hexavalent chromium can lead to perforations of the nasal septum, and there is epidemiological evidence that inhalation can increase the risk of cancer of the respiratory tract.³ A 20-fold increased incidence of respiratory cancer has been reported in those occupationally exposed to chromium.

Similarly, although the form(s) of arsenic were not determined by laboratory analysis, most of the arsenic measured was probably pentavalent, since arsenic pentoxide composes approximately 35 percent of CCA. Natural oxidation also favors the conversion of the trivalent to the pentavalent form. Trivalent is considered the more toxic form and most toxicological data are based on exposure to trivalent arsenic. Arsenic can be absorbed by inhalation. Effects of chronic arsenic exposure include skin ulceration, acrocyanosis (blackfoot disease), loss of hair and nails, nasal septum perforation, gastrointestinal disturbances, peripheral neuropathy, and skin cancer.³

There is insufficient evidence to associate industrial copper exposure with chronic or acute poisoning. It would also not be expected that the levels of the other metals measured on site would pose health threats to workers through probable exposure routes.

100108

7.3.2 Surface Waters

Numerous contaminants, mainly PAHs and a few metals which were identified in the impoundment, were also found in the swampy area adjacent to the site. There is a scarcity of data regarding the influence of PAHs on aquatic life. PAHs do not tend to persist in surface waters. In the aqueous phase, PAHs are degraded by photolysis, and to a lesser extent by oxidation. Those in the sediment undergo biodegradation and biotransformation by benthic organisms.⁹ PAHs can enter food chains via absorption by plants from sediments. Although bioconcentration factors (BCFs) of up to 134,000 have been reported for freshwater invertebrates, BCFs for vertebrates are much lower, a value of 30 being considered typical for fish. PAHs tend to be rapidly metabolized and excreted, and bioaccumulation, especially in vertebrates, is considered to be short-term.²

A TLM₉₆* of 100 ug/l has been reported for creosote.⁵ The concentration of creosote in the swamp cannot be determined from the available data. It may be noted, however, that the level of PAHs, a major component of creosote, exceeded this value.

The concentration of PCP in the aqueous swamp sample (380 ug/l) could be acutely toxic to aquatic life, acute toxicity having been reported at concentrations as low as 55 ug/l.¹⁰ It is conjectured that its high toxicity may result, in part, from contamination of technical grade PCP with substances such as dibenzofurans, which may be more toxic than pure PCP. PCP is readily metabolized and excreted by some species of fish, while BCFs of up to 1,000 have been reported in others.^{9,10}

*Median Tolerance Limit (96 hour) - average concentration at which 50 percent of aquatic organisms survive a 96-hour exposure.

100109

ORIGINAL
(100)

Increased levels of arsenic, chromium, and copper were also measured in the swamp. As previously mentioned, although the forms of arsenic and chromium were not distinguished by laboratory analysis, a high percentage was probably pentavalent and hexavalent, respectively. Due to insufficient data, there are no criteria for the protection of freshwater aquatic life from pentavalent arsenic. Pentavalent arsenic has been shown to be acutely toxic to sensitive freshwater animals at concentrations as low as 850 ug/l, and toxic to sensitive plants at 48 ug/l.¹¹ The aqueous levels in the swamp (maximum of 2,800 ug/l) substantially exceed these values, as well as the criterion for trivalent arsenic (72 ug/l) recommended for the protection of freshwater aquatic life.¹¹

The chromium concentration in the aqueous swamp samples (maximum of 2,100 ug/l) exceed recommended criteria for both the hexavalent (72 ug/l) and trivalent (42, 74, and 130 ug/l at water hardnesses of 50, 100, and 200 mg/l as CaCO_3) forms of chromium.¹² Similarly, the measured copper concentrations (maximum of 670 ug/l) exceed recommended criteria of 5.8, 11, and 20 ug/l at water hardnesses of 50, 100, and 200 mg/l as CaCO_3 .¹³

PCB-1260 (92 ug/kg) was identified in 1 swamp sediment sample. PCBs are highly immobile in sediments, although they can enter foods chains via ingestion by bottom-feeding organisms, or absorption by plants.⁹ The reported concentration is low, and it would be expected that any environmental effects would be localized and minimal. The extent of PCB contamination is not known, however.

100110

Resident aquatic life in the swamp is likely to be limited. The swamp is reported to be greatly reduced in size during the summer months due to evaporation. There was no obvious aquatic life noted in the swamp by FIT III.

There is little evidence to suggest that contaminants are affecting the local stream. Of the contaminants identified on site, there were no organic contaminants identified in either up- or downstream samples. Arsenic (20 mg/kg) was slightly increased in the downstream sediment sample.¹ According to the FIT III site leader, the swamp did not appear to drain into the stream in the areas where samples were taken. The source of this slightly elevated level of arsenic is uncertain. Overflow from the swamp was reported to drain into a ditch and eventually empty into the stream farther downstream. The stream contents ultimately flowed into the Chickahominy River, approximately 6-1/2 miles from the site. The Chickahominy is a source of drinking water for Henrico County.

7.3.3 Groundwater

PCP was the only organic contaminant identified on site that was also identified in a home well sample. The PCP concentration (12 ug/l), measured in the Merkel home well, poses no apparent health threats. It is below the No-Adverse-Effect level of 21 ug/l suggested by the National Research Council for pure PCP in drinking water.¹⁰ It is also below the level of 30 ug/l recommended for controlling unpleasant odor and taste.¹⁰ Evidence suggests that the presence of PCP may be site related.

100111

Samples from all 3 home wells contained elevated (730 to 1,100 ug/l) levels of copper. Although copper was found in high concentrations in on-site samples, the well contamination may not be site related. The elevated copper concentrations might be due in part to the acidity of the groundwater. Acidic water can potentially leach copper from plumbing. pH readings of home well samples ranged from approximately 5.5 to 6.5. The levels of copper in the home wells are of no apparent health concern, but the concentration in the Robertson well might impart an unpleasant taste to the water. The slightly elevated level of barium (220 ug/l) in the Merkel well poses no apparent health threats.

In view of the contamination of the Merkel well with PCP, the further contamination of area home wells with on-site pollutants, including known human and animal carcinogens, should be considered as a potential threat. Approximately 91 home wells are situated within 1 kilometer of the site. There is 1 aquifer underlying the site which supplies water to local wells.

The total extent of contamination on site is not known, but is likely to be substantial. Extensive staining of soil was noted by both state and FIT III site investigators. As previously noted, base neutral compounds (including PAHs) comprised approximately 13.3 to 16.5 percent of the impoundment sediment. High concentrations of phenols and volatile organics (up to 4.2×10^7 mg/kg) were also reported. The impoundment is unlined, providing no mechanical barrier to the leaching of contaminants into underlying soil and groundwater. Contaminants could also potentially penetrate the groundwater from the adjacent swamp, and, possibly, from on-site soil.

Of the organic contaminants identified on site, it can be predicted on the basis of the logs of their octanol/water partition coefficients ($\log K_{ow}$ s), which are less than 3.7, that benzene, ethylbenzene, naphthalene, toluene, xylene, styrene, N-nitrosodiphenylamine, and 2,4-dimethylphenol could potentially infiltrate the groundwater relatively easily.¹⁴ It should be noted that PCP, whose $\log K_{ow}$ is 5.0, would not be expected to readily penetrate the groundwater. However, it was the only on-site organic contaminant identified in a home well sample. PCP was used on site from the early years of the facility's operation (late 1950s) until 1982, and on-site contamination may have been extensive. High levels were still present in the impoundment at the time of the investigation. The likelihood of a pollutant reaching the groundwater in measurable quantities may be influenced by many factors, including the extent of contamination. PCP does not tend to persist in the aqueous portion of surface waters due to photolysis and biodegradation but tends to bind to organic matter in soils and sediments, serving as a source of pollution for prolonged periods of time.⁹ At the time of the survey, there was no information available regarding the quality of the groundwater underlying the site due to the absence of monitoring wells. Monitoring wells were installed in March 1985. According to a report by Environmental Laboratories, Incorporated, a private consultant, groundwater samples were found to contain PCP, creosote, and arsenic. Arsenic is a recognized human carcinogen by the oral route.

100113

ORIGINAL
(106)

7.3.4 Ambient Air

There was no information available regarding the ambient air levels of organic vapors or dusts of corrosive inorganics utilized in CCA wood preserving processes in the neighborhood surrounding the site. It is possible that levels of toxicological concern are present. Several odor complaints are on file at the Virginia Air Board.

Prepared by:

Isabel Mandelbaum

Isabel Mandelbaum, Ph.D.
Toxicologist

Date: March 24, 1986

Reviewed by:

Kenneth D. Symms
Kenneth Symms, Ph. D., Toxicologist

Date: March 24, 1986

106114

LIST OF SOURCES

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ORIGINAL
(Red)

APPENDIX A

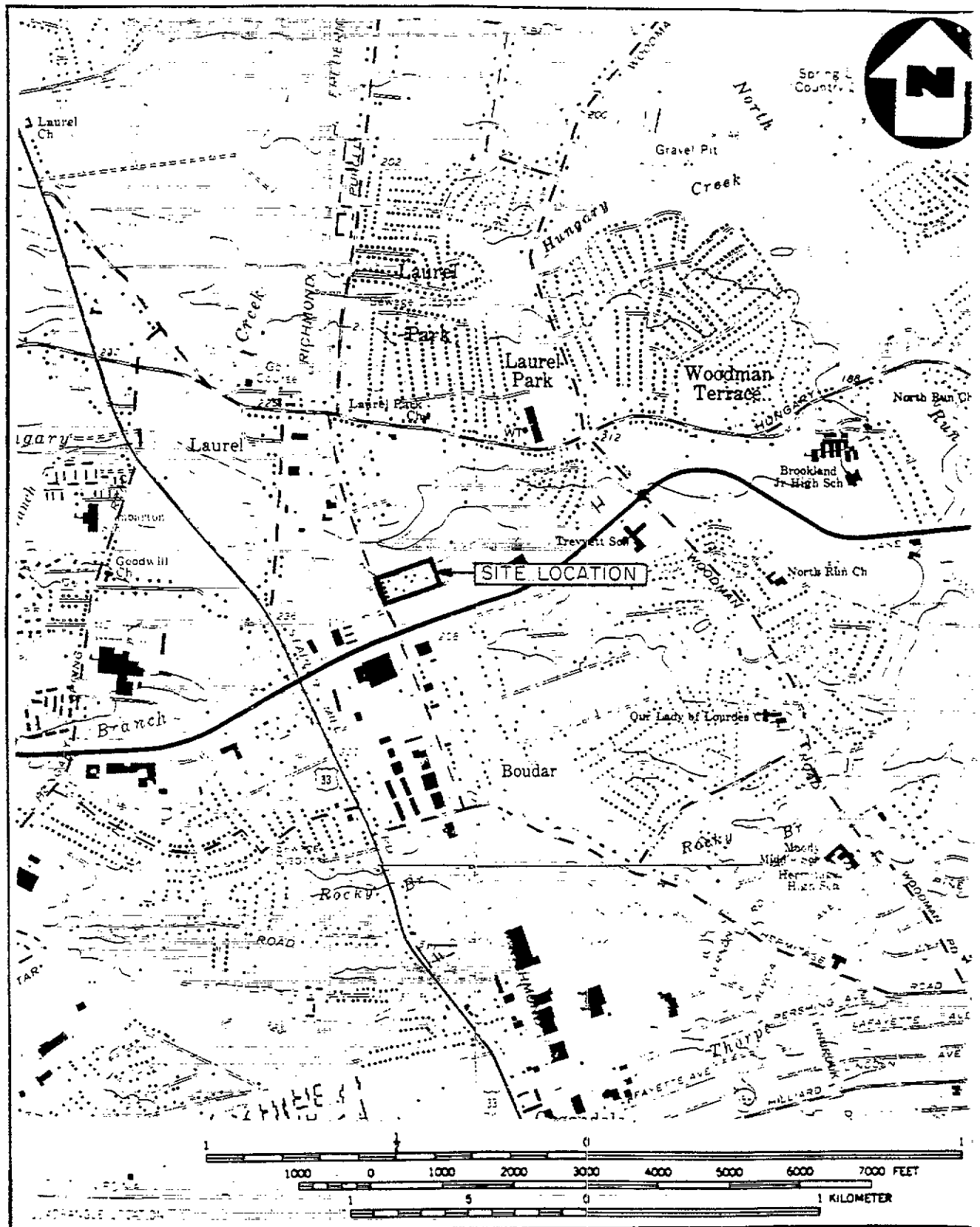
100117

COST CENTER:		REM/FIT ZONE CONTRACT TECHNICAL DIRECTIVE DOCUMENT (TDD)			2. NO.: F3-8402-20		
ACCOUNT NO.:							
3. PRIORITY: ☒ HIGH ☐ MEDIUM ☐ LOW	4. ESTIMATE OF TECHNICAL HOURS: 150	5. EPA SITE ID: VA-210	6. COMPLETION DATE: 3 weeks after QA	7. REFERENCE INFO.: ☒ YES ☐ NO ☐ ATTACHED ☐ PICK UP			
	4A. ESTIMATE OF SUBCONTRACT COST:	5A. EPA SITE NAME: <u>Rentokil, Inc. - VA</u> <u>Wood Preserving</u> <u>Div.</u>					
8. GENERAL TASK DESCRIPTION: <u>Perform SI of subject site.</u>							
9. SPECIFIC ELEMENTS: <u>1.) Review background information.</u> <u>2.) Submit sampling plan to EPA for approval.</u> <u>3.) Coordinate Lab analysis.</u> <u>4.) Conduct on and off site inspection and sampling.</u> <u>5.) Take and ship samples according to standard protocol.</u> <u>6.) Quality Assurance of Lab data according to standard protocol.</u> <u>7.) Submission of report.</u>					10. INTERIM DEADLINES:		
11. DESIRED REPORT FORM: FORMAL REPORT ☐ LETTER REPORT ☐ FORMAL BRIEFING ☐							
OTHER (SPECIFY): _____							
12. COMMENTS: <u>Contact Bob Wichser and Kevin Greene of VA DOH.</u>							
13. AUTHORIZING RPO: <u>Harold G. Bign...</u> (SIGNATURE)				14. DATE: <u>3/15/84</u>			
15. RECEIVED BY: <u>[Signature]</u> (CONTRACTOR RPM SIGNATURE)				16. DATE: <u>3/16/84</u> 100118			

ORIGINAL
(Red)

APPENDIX B

100119



SOURCE: (7.5 MINUTE SERIES) USGS GLEN ALLEN, YELLOW TAVERN, BON AIR, & RICHMOND, VA. QUADS.

SITE LOCATION MAP
RENTOKIL INC., RICHMOND, VA.
 SCALE 1:24000

100120

FIGURE 1
NUE
 CORPORATE
 A Halliburton Comp

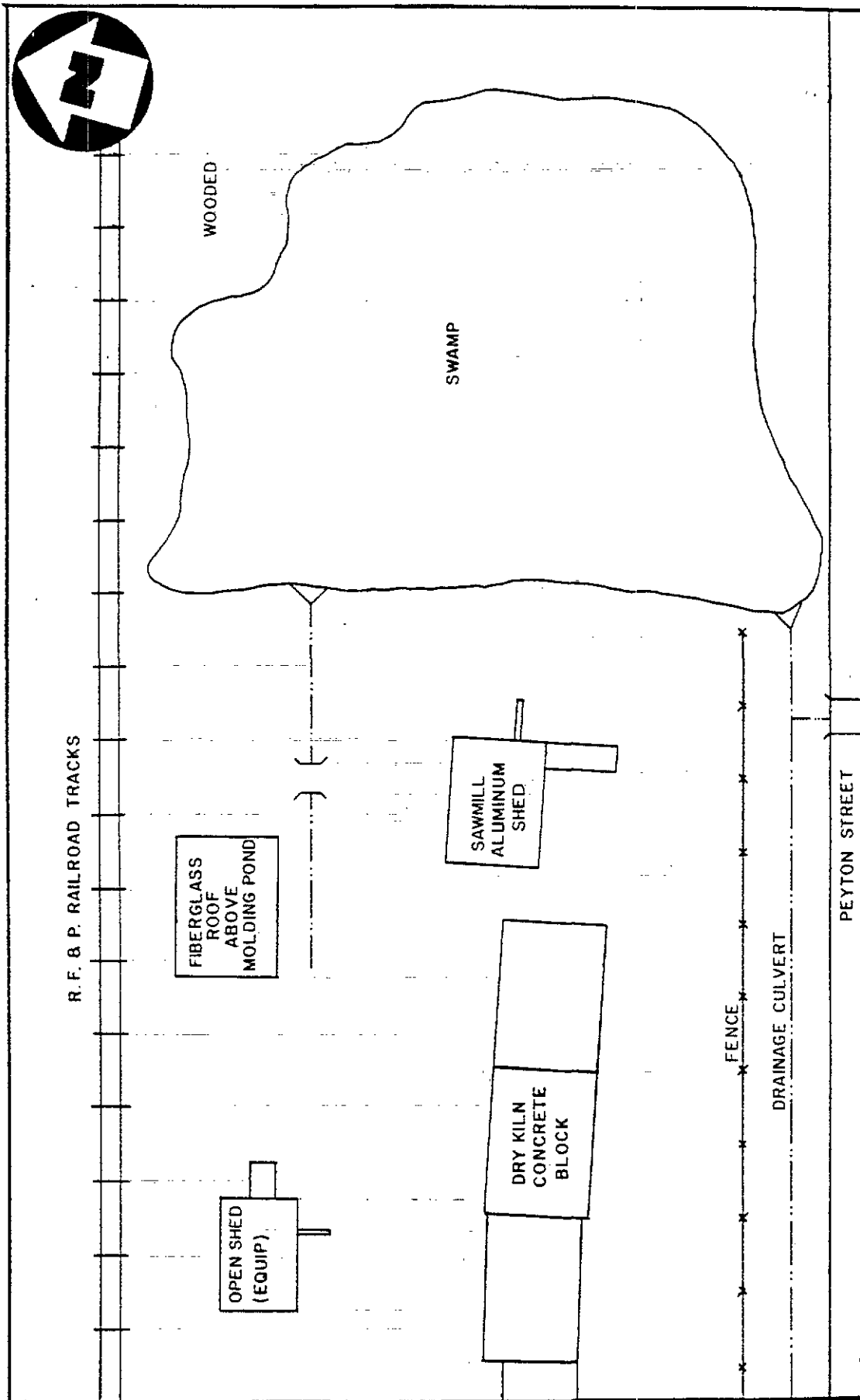


FIGURE 2

SITE SKETCH

RENTOKIL INC., RICHMOND, VA.

(NO SCALE)

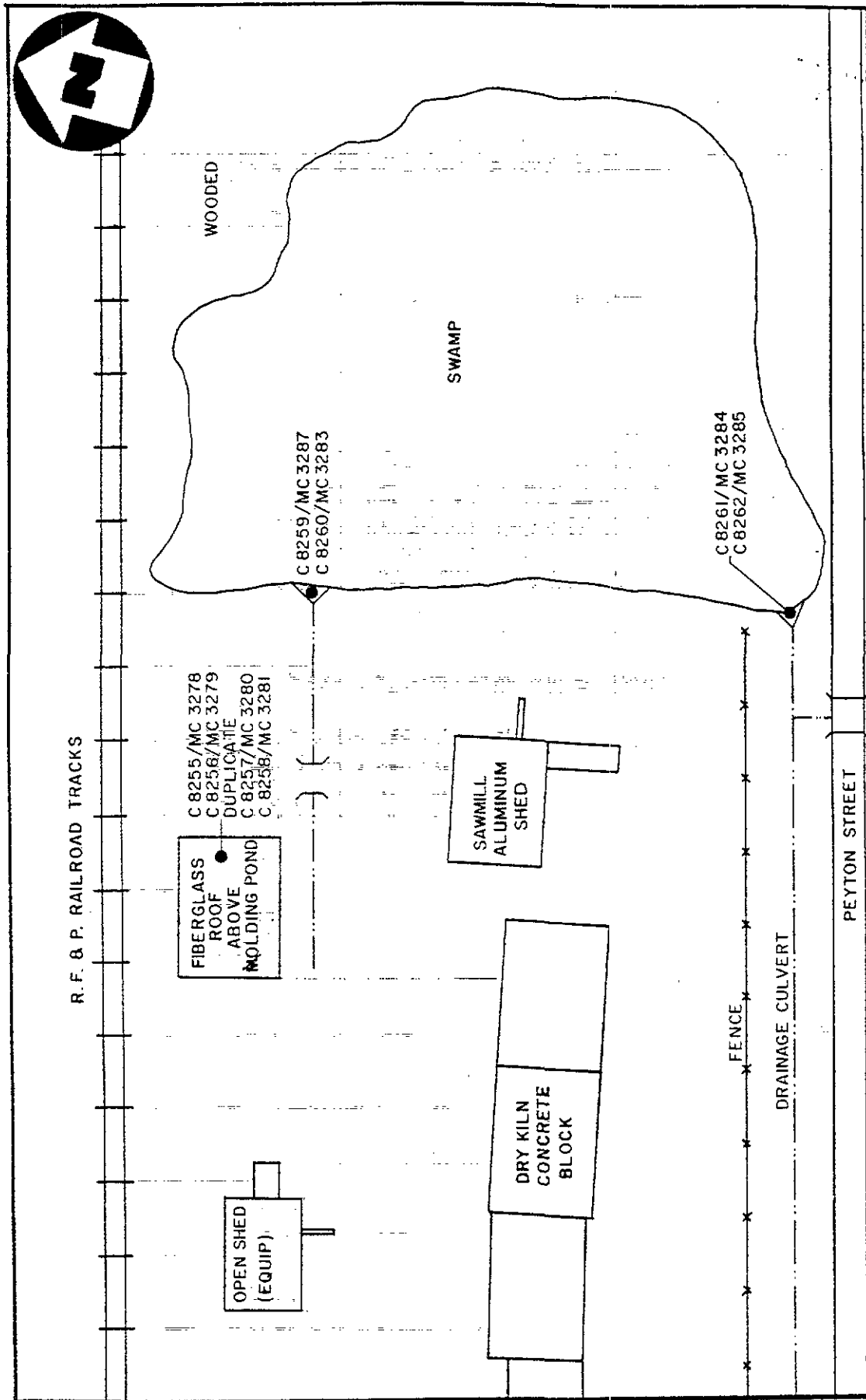


FIGURE 3



SAMPLE LOCATION MAP
 RENTOKIL INC., RICHMOND, VA.
 (NO SCALE)

100122

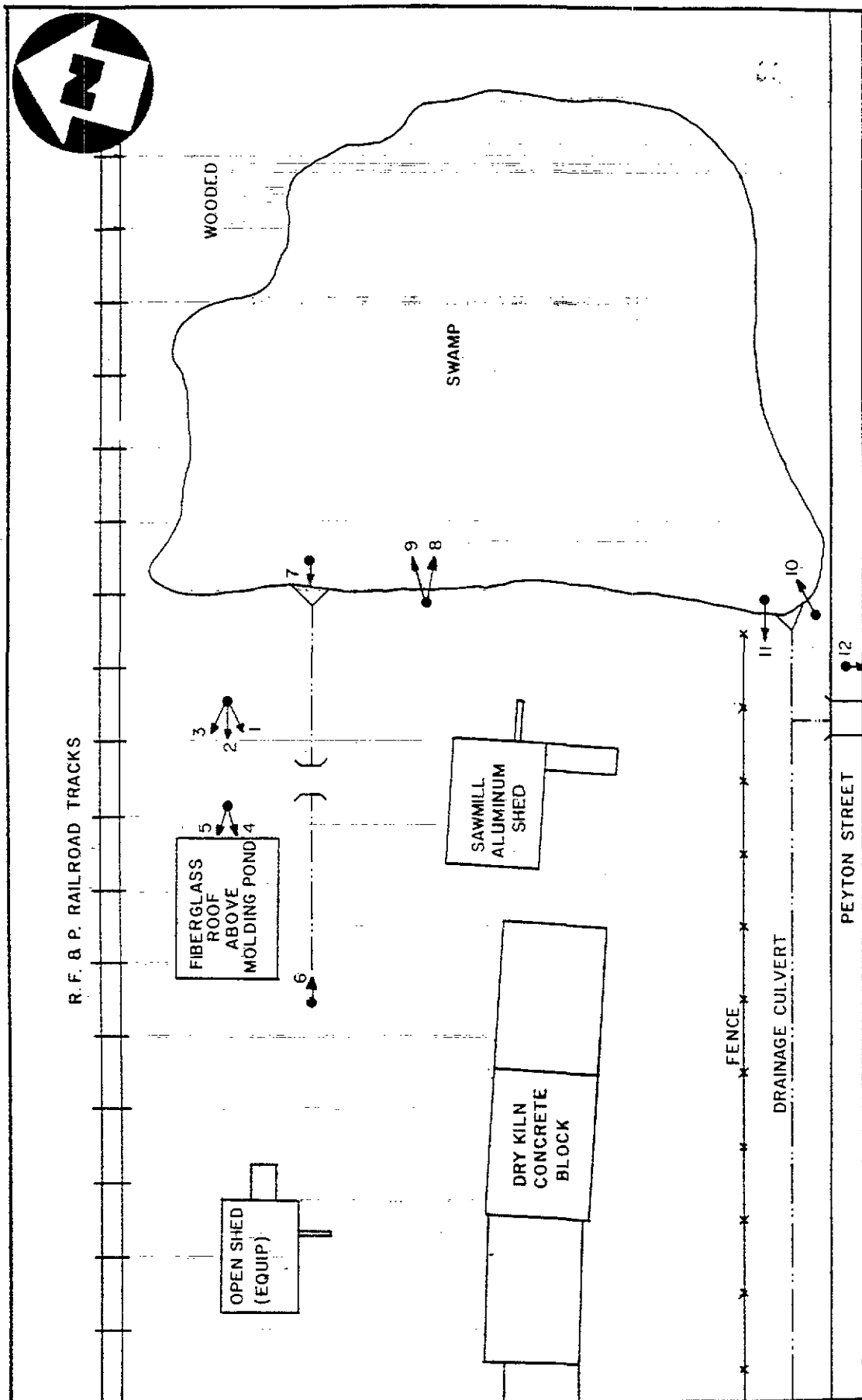


FIGURE 4

PHOTO LOCATION MAP
 RENTOKIL INC., RICHMOND, VA.

(NO SCALE)



SOURCE: SOILS SURVEY OF HENRICO COUNTY, VA.

SOILS MAP
RENTOKIL INC., RICHMOND, VA.

SCALE 4" = 1 MILE

FIGURE 6



100125

ORIGINAL
(Red)

APPENDIX C

100126

Virginia Wood Preserving

A Division of Rentokil, Inc.

3000 Peyton Street
Richmond, Va. 23228
Telephone: (804) 266-0262

Virginia Wood Preserving Co. was incorporated in Virginia on May 9, 1956. Shares were equally owned by TACO Corporation, Spartanburg, South Carolina, and Taylor-Colquitt.

Taylor-Colquitt was bought by Southern Wood Preserving (Georgia) and TACO bought all shares, thus becoming the sole owner of Virginia Wood Preserving.

Actual treating was commenced in April, 1957.

Land where plant stands was originally owned by Col. Farley who leased 4.96 acres for 5 years with option to buy. Col. Farley sold the land to R. F. & P. Railroad Co. The option to buy was exercised in 1965. At present time the original acreage is owned and 5.0 acres (other side of railroad spur) is leased from R. F. & P. with the option to buy, but this option has not been exercised.

On August 21, 1974, when TACO was bought by Rentokil Inc., Virginia Wood Preserving was automatically included in the sale.

100127

ORIGINAL
(Red)

APPENDIX D

100128

RECEIVED

3 27 1984

NYS CORPORATION
REGION III
SENT TO

Preliminary Assessment of
Virginia Wood Preserving
A Division of Rentokil, Inc.
Virginia Site 210

for

U. S. Environmental Protection Agency, Region III
Sixth and Walnut Streets
Philadelphia, Pennsylvania 19106

prepared by

K. Greene, R. Wichser
Virginia State Health Department
Richmond, Virginia
February, 1984

AR100128A



COMMONWEALTH of VIRGINIA

Department of Health
Richmond, Va. 23219

JAMES B. KENLEY M.D.
COMMISSIONER

February 27, 1984

Mr. Darius C. Ostrauskas
Environmental Scientist
USEPA - Region III
Curtis Building
Sixth and Walnut Streets
Philadelphia, PA 19106

Dear Darius:

Attached is a draft copy of our report, "Preliminary Assessment of Virginia Wood Preserving, a Division of Rentokil, Inc., Virginia Site 210."

If you have any questions or comments regarding the contents of this report, please call me.

Sincerely,

Robert C. Wichser
Division of Solid Waste Management

RCW/mcw

100129

Original
(102)

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100130

ORIGINAL
(B-6)

Summary and Conclusions

A preliminary assessment was made on the Virginia Wood Preserving Facility located in Henrico County, Virginia. This work was completed under Section 3012(a) of the Resource Conservation and Recovery Act. As stated in Section 3012(a) - State Inventory Programs, we are reporting such information relating to: 1) waste generation process, 2) amount, nature and toxicity of the hazardous waste, and 3) types of disposal found at this facility.

Information sources used were qualitative giving only a general indication of the contamination potential which this site represents and whether contamination is leaving the site. This site does represent a potential source of hazardous waste contamination. A Site Inspection is recommended at this site.

Introduction

Virginia Wood Preserving (VA-210), a Division of Rentokil, Inc., based in Norcross, Georgia, operates a wood preserving facility in Henrico County, Virginia. The facility was built about 1957 and employs about 32 employees. During the early years of its operation up until approximately 1981, both pentachlorophenol and creosote were utilized as the bulk chemicals used in the treatment process. In 1982, pentachlorophenol use was discontinued and chromated-copper-arsenate and creosote were the chemicals used in the process.

Pollutants generated on site include pentachlorophenol, creosote and chromated-copper-arsenate (CCA) contaminated soil, and volatiles emitted to the atmosphere during the last stage of the wood treatment process.

Areas around the bulk chemicals storage tanks, wood autoclaves, chemical pump sheds and collection and recirculation area appeared to be heavily contaminated with preserving chemicals. Soil appeared stained black throughout the treatment area. These areas are all non-RCRA related (Refer to page #11, photo #3; page #13, photo #7).

In addition, a 40' x 80' x 6' deep unlined surface impoundment is located on site (Refer to page #14, photos #9, #10). Liquid waste had been placed in this subsurface impoundment from 1957 until approximately 1965. The impoundment is contaminated with all forms of untreated bulk waste chemicals that had entered the facility. Until approximately 1965, this impoundment was uncovered and runoff uncontrolled. Runoff flow from the impoundment was to a swampy area (approximately 5 acres) located to the east of the plant facility (Refer to page #15, photo #11).

100132

ORIGINAL
(105)

Problem Definition

Section 3012(a) of the Resource Conservation and Recovery Act required the State to inventory the location of any potential hazardous waste sites at which any storage or disposal of hazardous waste had taken place before November 19, 1980. As a continuation of this process, the State is now collecting specific information on each site relating to the amount, nature, and toxicity of any potential existing waste at the site, and include information on site ownership. Further information, such as current status of the site (active vs. inactive) and any other activity currently carried out at the site, is required.

The information of potential hazardous waste site existence was derived as a result of Section 3010(a) of RCRA requiring notification to USEPA by industry of any knowledge of generation, transportation or treatment of any hazardous waste by facilities owned by them. Information was also derived as a result of the State's regulatory reporting requirements, local, State and federal file information, or via the public submittal of information.

The Preliminary Assessment is used to document the information initially available concerning a given site and to determine the necessity for and priority of a more in-depth Site Inspection.

Virginia Wood Preserving had filed an EPA yearly hazardous waste report in 1982. Due to this reporting, the facility has been listed on the USEPA potential site inventory (See Appendix A).

100133

Geology and Soils

Virginia Wood Preserving, a Division of Rentokil, Inc., is underlain by unconsolidated sands and gravels of the Piedmont Plateau Geographic Province. These sands and gravels range in size from clay to large cobbles. Pebbles compose up to twenty-five percent of the soil profile. Elevation of the facility ranges from 213 feet to the southwest to around 206 feet to the southeast above mean sea level (MSL).

The native soils of the area are the Kempsville Series. The Kempsville consist of deep, well drained soils that have a clay subsoil below a depth of 50 inches. Run-off is medium to rapid and permeability is moderate to slow. These soils were formed in loamy coastal plain sediments. Petersburg granite is the underlying bedrock and is located greater than 30 feet below the surface.

100134

Hydrology

The surface water receptor for the runoff originating from the Virginia Wood Preserving Facility is a swampy area located along the eastern border of the property. The swamp appears not to drain into any nearby streams. The nearest stream is an unnamed stream located a few hundred meters north of the facility. This stream eventually flows into the James River, 7 to 10 kilometers downgradient.

Groundwater data shows at least two water producing aquifers below the surface of the facility. These aquifers are at depths of 20 feet and at 35 feet. Some of the older homes in the area utilize the shallower 20-foot aquifer whereas the newer homes (< 20 years old) use the 35-foot aquifer or the aquifer at greater depths. The groundwater is expected to flow in a northeastern direction. The water table levels vary seasonally, running higher during the winter months.

The James River and the Chickahominy River supply potable water for much of the population in Henrico County. Most of the homes in the vicinity of the Virginia Wood Preserving Facility do utilize the municipal water supply available. Information collected on the number of domestic wells in the immediate area suggests that as many as thirty to forty domestic wells are within a kilometer of the facility.

Climatological Data

The climate in the vicinity of the facility consists of generally mild winters and warm humid summers. Average annual precipitation of Henrico County is 44 inches with July and August being the months of the greatest precipitation. The mean value for evapotranspiration is 39 inches per year. Therefore, the net water budget is about 5 inches per year.

Land Use

Rentokil, Inc. plans to continue using the site as a wood preserving operation (See Appendix E for comments).

Demographic Distribution

The approximate population levels for the area surrounding the Facility are:

Henrico County	180,735
City of Richmond	219,214
Within two mile radius	1,500

(Data taken from Virginia 1980 Census.)

Critical Environments

Critical Habitats can be considered to contain a community or species of flora and/or fauna impacted due to: 1) the community or species is endemic to this specific habitat, 2) the community or species population numbers are such that further pollution stress could directly effect long-term survival rates, 3) the social-economic value of the community or species is such that preservation measures must be taken.

Due to winter weather conditions, an accurate biological assessment could not be made. Swamp vegetation lacked growth, and the swamp was covered with ice. Environmental impacts on a critical ecosystem as defined above were not observed at the Virginia Wood Preserving facility discussed in this report.



POTENTIAL HAZARDOUS WASTE SITE
IDENTIFICATION AND PRELIMINARY ASSESSMENT

REGION III SITE NUMBER (to be assigned by HQ) VA-210

NOTE: This form is completed for each potential hazardous waste site to help set priorities for site inspection. The information submitted on this form is based on available records and may be updated on subsequent forms as a result of additional inquiries and on-site inspections.

GENERAL INSTRUCTIONS: Complete Sections I and III through X as completely as possible before Section II (Preliminary Assessment). File this form in the Regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force (EN-335); 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME Virginia Wood Preserving		B. STREET (or other identifier) 3000 Peyton Street	
C. CITY Richmond	D. STATE VA	E. ZIP CODE 23228	F. COUNTY NAME Henrico
G. OWNER/OPERATOR (if known) 1. NAME Rentokil, Inc., Norcross, Georgia		2. TELEPHONE NUMBER (804) 266-0262	
H. TYPE OF OWNERSHIP ☐ 1. FEDERAL ☐ 2. STATE ☐ 3. COUNTY ☐ 4. MUNICIPAL ☒ 5. PRIVATE ☐ 6. UNKNOWN			

I. SITE DESCRIPTION

An active wood preserving facility.

J. HOW IDENTIFIED (i.e., citizen's complaints, OSHA citations, etc.) Yearly EPA Hazardous Waste Report	K. DATE IDENTIFIED (mo., day, & yr.) August 1980
L. PRINCIPAL STATE CONTACT 1. NAME R. C. Wichser, Va. State Health Dept., Solid Waste Management	2. TELEPHONE NUMBER (804) 225-2835

II. PRELIMINARY ASSESSMENT (complete this section last)

A. APPARENT SERIOUSNESS OF PROBLEM ☐ 1. HIGH ☐ 2. MEDIUM ☐ 3. LOW ☐ 4. NONE ☒ 5. UNKNOWN	
B. RECOMMENDATION ☐ 1. NO ACTION NEEDED (no hazard) ☐ 2. IMMEDIATE SITE INSPECTION NEEDED ☒ 3. SITE INSPECTION NEEDED a. TENTATIVELY SCHEDULED FOR _____ b. WILL BE PERFORMED BY: _____ c. WILL BE PERFORMED BY _____ ☐ 4. SITE INSPECTION NEEDED (low priority)	

C. PREPARER INFORMATION 1. NAME R. C. Wichser, K. Greene	2. TELEPHONE NUMBER (804) 225-2835	3. DATE (mo., day, & yr.) February 1984
--	---------------------------------------	--

III. SITE INFORMATION

A. SITE STATUS ☒ 1. ACTIVE (Those industrial or municipal sites which are being used for waste treatment, storage, or disposal on a continuing basis, even if infrequently.) ☐ 2. INACTIVE (Those sites which no longer receive wastes.) ☐ 3. OTHER (specify): _____ (Those sites that include such incidents like "midnight dumping" where no regular or continuing use of the site for waste disposal has occurred.)	
B. IS GENERATOR ON SITE? ☐ 1. NO ☒ 2. YES (specify generator's four-digit SIC Code): 2491	
C. AREA OF SITE (in acres) 4.9 acres	D. IF APPARENT SERIOUSNESS OF SITE IS HIGH, SPECIFY COORDINATES 1. LATITUDE (deg.-min.-sec.) N 37°38'18" 2. LONGITUDE (deg.-min.-sec.) E 77°30'36"
E. ARE THERE BUILDINGS ON THE SITE? ☐ 1. NO ☒ 2. YES (specify): Refer to photographs.	

IV. CHARACTERIZATION OF SITE ACTIVITY

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

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

N/A

E. SPECIFY DETAILS OF SITE ACTIVITIES AS NEEDED

Facility is an active wood preserving facility.

V. WASTE RELATED INFORMATION

A. WASTE TYPE

☐ 1. UNKNOWN ☒ 2. LIQUID ☒ 3. SOLID ☐ 4. SLUDGE ☐ 5. GAS

B. WASTE CHARACTERISTICS

☐ 1. UNKNOWN ☐ 2. CORROSIVE ☐ 3. IGNITABLE ☐ 4. RADIOACTIVE ☒ 5. HIGHLY VOLATILE
☒ 6. TOXIC ☐ 7. REACTIVE ☐ 8. INERT ☐ 9. FLAMMABLE
☒ 10. OTHER (specify): Carcinogenic

C. WASTE CATEGORIES

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

Yes, Inventories

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

a. SLUDGE	b. OIL	c. SOLVENTS	d. CHEMICALS	e. SOLIDS	f. OTHER
AMOUNT unknown	AMOUNT unknown	AMOUNT unknown	AMOUNT unknown	AMOUNT unknown	AMOUNT
UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE
☒ (1) PAINT PIGMENTS	☒ (1) OILY WASTES	☒ (1) HALOGENATED SOLVENTS	☒ (1) ACIDS	☒ (1) FLYASH	☒ (1) LABORATORY PHARMACEUT.
(2) METALS SLUDGES	X (2) OTHER (specify): Creosote -	(2) NON-HALOGENATED SOLVENTS	(2) PICKLING LIQUORS	(2) ASBESTOS	(2) HOSPITAL
(3) POTW	150,000 gal/yr used.	(3) OTHER (specify): 10,000-100,000 kg/yr used.	(3) CAUSTICS	(3) MILLING/ MINE TAILINGS	(3) RADIOACTIVE
(4) ALUMINUM SLUDGE			(4) PESTICIDES	(4) FERROUS SMELTG. WASTES	(4) MUNICIPAL
X (5) OTHER (specify): Creosote Pentachloro- phenol			(5) DYES/INKS	(5) NON-FERROUS SMELTG. WASTES	(5) OTHER (specify):
			(6) CYANIDE	X (6) OTHER (specify): Contaminated Soils.	
			(7) PHENOLS		
			(8) HALOGENS		
			(9) PCB		
			X (10) METALS		
			(11) OTHER (specify): 30,000-300,000 kg/yr used.		

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V. WASTE RELATED INFORMATION (continued)

3. LIST SUBSTANCES OF GREATEST CONCERN WHICH MAY BE ON THE SITE (place in descending order of hazard).

1. Phenol - Pentachloro
2. Creosote - Refer to Appendix D.
3. Arsenic as As_2O_5 (35%); Chromium Oxide as CrO_3 (47.5%); Copper (18.5%)

4. ADDITIONAL COMMENTS OR NARRATIVE DESCRIPTION OF SITUATION KNOWN OR REPORTED TO EXIST AT THE SITE.

N/A

VI. HAZARD DESCRIPTION

A. TYPE OF HAZARD	B. POTENTIAL HAZARD (mark 'X')	C. ALLEGED INCIDENT (mark 'X')	D. DATE OF INCIDENT (mo., day, yr.)	E. REMARKS
1. NO HAZARD				
2. HUMAN HEALTH	X			Volatile air emissions
3. NON-WORKER INJURY/EXPOSURE				
4. WORKER INJURY	X			Exposure to toxic, carcinogenic chemicals.
5. CONTAMINATION OF WATER SUPPLY	X			Potential exists. Seepage into groundwater offsite migration.
6. CONTAMINATION OF FOOD CHAIN	X			Runoff flows into swamp directly east of the site.
7. CONTAMINATION OF GROUND WATER				
8. CONTAMINATION OF SURFACE WATER				
9. DAMAGE TO FLORA/FAUNA				
10. FISH KILL				
11. CONTAMINATION OF AIR	X			
12. NOTICEABLE ODORS		X		Several odor complaints on file at Regional Air Board Office.
13. CONTAMINATION OF SOIL	X			Soil contaminated throughout plant.
14. PROPERTY DAMAGE				
15. FIRE OR EXPLOSION				
16. SPILLS/LEAKING CONTAINERS/ RUNOFF/STANDING LIQUIDS				
17. SEWER, STORM DRAIN PROBLEMS				
18. EROSION PROBLEMS				
19. INADEQUATE SECURITY				
20. INCOMPATIBLE WASTES				
21. MIDNIGHT DUMPING				
22. OTHER (specify)				

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VII. PERMIT INFORMATION

A. INDICATE ALL APPLICABLE PERMITS HELD BY THE SITE.

- ☐ 1. NPDES PERMIT ☐ 2. SPCC PLAN ☐ 3. STATE PERMIT (specify):
☒ 4. AIR PERMITS ☐ 5. LOCAL PERMIT ☐ 6. RCRA TRANSPORTER
☐ 7. RCRA STORER ☐ 8. RCRA TREATER ☐ 9. RCRA DISPOSER
☐ 10. OTHER (specify):

B. IN COMPLIANCE?

- ☒ 1. YES ☐ 2. NO ☐ 3. UNKNOWN

4. WITH RESPECT TO (list regulation name & number):

VIII. PAST REGULATORY ACTIONS

- ☐ A. NONE ☒ B. YES (summarize below)

Air Emission Problems.

State Water Control Board - Surface impoundment covered.

IX. INSPECTION ACTIVITY (past or on-going)

- ☐ A. NONE ☒ B. YES (complete items 1, 2, 3, & 4 below)

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION (mo., day, & yr.)	3. PERFORMED BY: (EPA/State)	4. DESCRIPTION
RCRA 3012 Program		State - VA	Assess potential hazardous waste site.

X. REMEDIAL ACTIVITY (past or on-going)

- ☒ A. NONE ☐ B. YES (complete items 1, 2, 3, & 4 below)

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION (mo., day, & yr.)	3. PERFORMED BY: (EPA/State)	4. DESCRIPTION

NOTE: Based on the information in Sections III through X, fill out the Preliminary Assessment (Section II) information on the first page of this form.

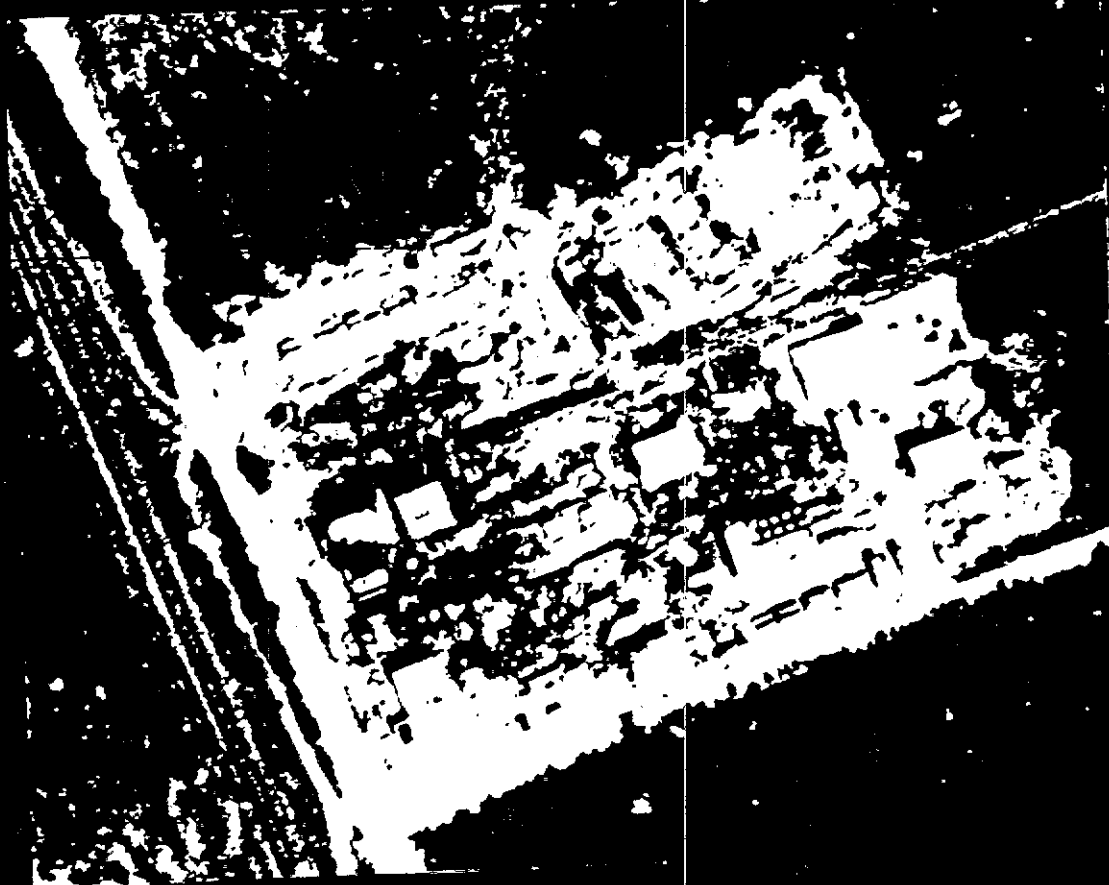
100140

Photograph Listing

<u>Photo No.</u>	<u>Name</u>
3	Chemical Storage Area (Unlined)
4	Chemical Storage Area and Wood Treatment Area
5	Spill Collection Area
6	Wood Treatment Area
7	Wood Storage Area
8	Rain and Chemical Spill Storage and Recycle Area
9	Surface Impoundment
10	Surface Impoundment
11	Swamp Area
12	Surface Impoundment Edges

The photographs presented in this report represent the actual conditions at Virginia Wood Preservers on January 10, 1984, using a 55 mm. lens on the camera.

Kevin L. Greene
Hazardous Waste Site Evaluator



RENTOKIL, INC.
VA. SITE #210
AERIAL VIEW

(photo #1)

100142

RENTOKIL, INC.
PLANT LAYOUT

(photo #2)



CHEMICAL STORAGE AREA
(UNLINED)

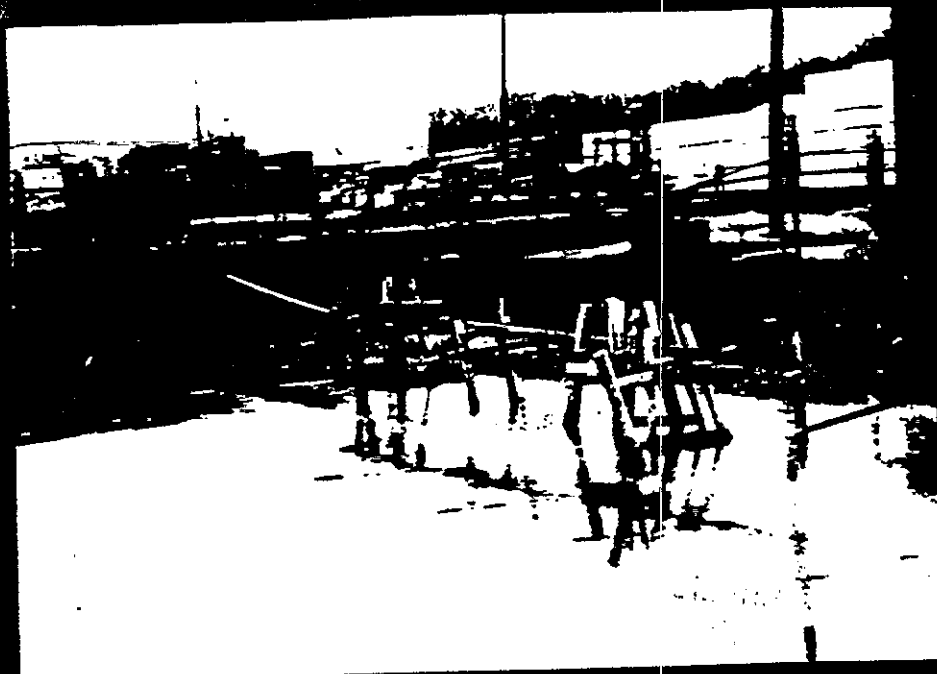
(photo #3)



CHEMICAL STORAGE AREA
AND
WOOD TREATMENT AREA

(photo #4)

100144



SPILL COLLECTION AREA

(photo #5)



WOOD TREATMENT AREA

(photo #6)

100145



WOOD STORAGE AREAS

(photo #7)



100146

RAIN AND CHEMICAL SPILL
STORAGE AND RECYCLE
AREA

(photo #8)



SURFACE IMPOUNDMENT

(photo #9)



SURFACE IMPOUNDMENT

(photo #10)

Persons Contacted

H. Linwood Farmer, Jr., Manager
Virginia Wood Preserving
3000 Peyton Street
Richmond, VA 23228
(804) 266-0262

R. C. Wichser
K. Greene
Virginia State Health Department
Monroe Building, Floor 11
101 North 14th Street
Richmond, VA 23219
(804) 225-2835
-2802

Alan Stringer, Health Inspector
Henrico County Health Department
P. O. Box 27032
Richmond, VA 23273
(804) 747-5422
45

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References

Goodwin, B. K. 1981. Geology of the Glen Allen Quadrangle, 1981.
Virginia Division of Mineral Resources, Publication 31.

National Climatic Center, Climates of Virginia, June 1982.
NOAA, Asheville, NC.

U. S. Department of Agriculture, Soil Survey of Henrico County, Virginia,
Oct. 1975, Richmond, VA.

U. S. Department of Commerce, 1980 Census of Population: Virginia,
Bureau of the Census, Washington, D.C.

100150

APPENDICES

100151

gc
sc

CSA No. 12245 XX
Form Approved OMB No. 158-0001

EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY
HAZARDOUS WASTE REPORT

TYPE OF HAZARDOUS WASTE REPORT

PART A: GENERATOR ANNUAL REPORT

THIS REPORT IS FOR THE YEAR ENDING DEC. 31, 1982

PART B: FACILITY ANNUAL REPORT

THIS REPORT FOR YEAR ENDING DEC. 31, 1982

PART C: UNMANIFESTED WASTE REPORT

THIS REPORT IS FOR A WASTE RECEIVED (ANY, MA, & YR.) 1982

LINDENZWEIG JR CR V
RENTOKIL INC VIRGINIA WOOD PRES DIV
VAD071040752

Onk...
Richmond, Va. 23228

correct. Leave Sections II, III, and IV blank. If you did not receive a designated label, complete all sections. "Installation" means a land site where hazardous waste is generated, treated, stored, or disposed of. Please refer to the specific instructions for generators or facilities before completing this form. The information requested herein is required by law (Section 1002, 1004 of the Resource Conservation and Recovery Act).

II. INSTALLATION'S EPA I.D. NUMBER

EVAD071040752

III. NAME OF INSTALLATION

Rentokil Inc Virginia Wood Preserving Div

IV. INSTALLATION MAILING ADDRESS

STREET OR P.O. BOX

3300 Pleyton Street

CITY OR TOWN

ST

ZIP CODE

Richmond Va

Va 23228

V. LOCATION OF INSTALLATION

STREET OR ROUTE NUMBER

3300 Pleyton Street

CITY OR TOWN

ST

ZIP CODE

Richmond Va

Va 23228

VI. INSTALLATION CONTACT

NAME (Last and First)

PHONE NO. (Area Code & No.)

Kenneth L. Sample Pres

804-266-1026

VII. TRANSPORTATION SERVICES USED (For Part A reports only)

List the EPA Identification Numbers for those transportation services used during the reporting year (continued on this report)

VIII. COST ESTIMATES FOR FACILITIES (For Part B reports only)

A. COST ESTIMATE FOR FACILITY CLOSURE

B. COST ESTIMATE FOR POST CLOSURE MONITORING AND MAINTENANCE (Additional facilities only)

\$

\$

IX. CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on the 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 penalties for submitting false information, including the possibility of fine and imprisonment.

Kenneth L. Sample

A. PRINT OR TYPE NAME

B. SIGNATURE

Jan. 28, 1983

C. DATE SIGNED

Print or type with E-TE (100) 112 characters (max)



U.S. ENVIRONMENTAL PROTECTION AGENCY
GENERATOR ANNUAL REPORT - PART A
(Collecting information according to Section 1002 of RCRA)

FOR OFFICIAL USE ONLY (Section 1 and 2)	I. DATE RECEIVED	11/9	X. GENERATOR'S EPA ID NO.
	II. TYPE OF REPORT	G	
XI. FACILITY'S EPA ID NO.		XIII. FACILITY ADDRESS (Street or P.O. Box, city, state, & zip code)	
XII. FACILITY NAME (optional)			

XIV. WASTE IDENTIFICATION				
LINE NUMBER	A. DESCRIPTION OF WASTE	B. DOT HAZARD CLASS	C. EPA HAZARDOUS WASTE NUMBER (see instructions)	D. AMOUNT OF WASTE (in thousands of pounds)
1	NO HAZARDOUS WASTE			
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

XV. COMMENTS (optional information to be furnished by the generator to the receiving party)

I. FEEDSTOCKS

CAS Number	Chemical Name
1. 7664-41-7	Ammonia
2. 7440-36-0	Antimony
3. 1309-64-4	Antimony Trioxide
4. 7440-38-2	Arsenic
5. 1327-53-3	Arsenic Trichloride
6. 21109-95-5	Barium Sulfide
7. 7726-95-6	Bromine
8. 106-99-0	Butadiene
9. 7440-43-9	Cadmium
10. 7782-50-5	Chlorine
11. 12737-27-8	Chromite
12. 7440-47-3	Chromium
13. 7440-48-4	Cobalt

CAS Number	Chemical Name
14. 1317-38-0	Cupric Oxide
15. 7758-98-7	Cupric Sulfate
16. 1317-39-1	Cuprous Oxide
17. 74-85-1	Ethylene
18. 7647-01-0	Hydrochloric Acid
19. 7664-39-3	Hydrogen Fluoride
20. 1335-25-7	Lead Oxide
21. 7439-97-6	Mercury
22. 74-82-8	Methane
23. 91-20-3	Napthalene
24. 7440-02-0	Nickel
25. 7697-37-2	Nitric Acid
26. 7723-14-0	Phosphorus

CAS Number	Chemical Name
27. 7778-50-9	Potassium Dichromate
28. 1310-58-3	Potassium Hydroxide
29. 115-07-1	Propylene
30. 10588-01-9	Sodium Dichromate
31. 1310-73-2	Sodium Hydroxide
32. 7646-78-8	Stannic Chloride
33. 7772-99-8	Stannous Chloride
34. 7664-93-9	Sulfuric Acid
35. 108-88-3	Toluene
36. 1330-20-7	Xylene
37. 7646-85-7	Zinc Chloride
38. 7733-02-0	Zinc Sulfate

II. HAZARDOUS SUBSTANCES

CAS Number	Chemical Name
1. 75-12-0	Acetaldehyde
2. 64-19-7	Acetic Acid
3. 105-24-7	Acetic Anhydride
4. 75-26-5	Acetone Cyanohydrin
5. 506-96-7	Acetyl Bromide
6. 75-36-5	Acetyl Chloride
7. 107-02-8	Acrolein
8. 107-13-1	Acrylonitrile
9. 124-04-9	Adipic Acid
10. 309-00-2	Aldrin
11. 10043-01-3	Aluminum Sulfate
2. 107-18-6	Allyl Alcohol
13. 107-05-1	Allyl Chloride
14. 7664-41-7	Ammonia
15. 631-61-8	Ammonium Acetate
16. 1863-63-4	Ammonium Benzoate
17. 1066-33-7	Ammonium Bicarbonate
18. 7789-09-5	Ammonium Bichromate
19. 1341-49-7	Ammonium Bisulfide
20. 10192-30-0	Ammonium Bisulfite
21. 1111-78-0	Ammonium Carbamate
22. 12125-02-9	Ammonium Chloride
23. 7788-98-9	Ammonium Chromate
24. 3012-65-5	Ammonium Citrate, Dibasic
25. 13826-83-0	Ammonium Fluoborate
26. 12125-01-8	Ammonium Fluoride
27. 1336-21-6	Ammonium Hydroxide
28. 6009-70-7	Ammonium Oxalate
29. 16919-19-0	Ammonium Silicofluoride
30. 7773-06-0	Ammonium Sulfamate
31. 12135-76-1	Ammonium Sulfide
32. 10196-04-0	Ammonium Sulfite
33. 14307-43-8	Ammonium Tartrate
34. 1762-95-4	Ammonium Thiocyanate
35. 7783-18-8	Ammonium Thiosulfate
36. 628-63-7	Amyl Acetate
37. 62-53-3	Aniline
38. 7647-18-9	Antimony Pentachloride
39. 7789-61-9	Antimony Tribromide
40. 10025-91-9	Antimony Trichloride
41. 7783-56-4	Antimony Trifluoride
12. 1309-64-4	Antimony Trioxide
3. 1303-32-8	Arsenic Disulfide
44. 1303-28-2	Arsenic Pentoxide
45. 7784-34-1	Arsenic Trichloride
46. 1327-53-3	Arsenic Trioxide

CAS Number	Chemical Name
47. 1303-33-9	Arsenic Trisulfide
48. 542-62-1	Barium Cyanide
49. 71-43-2	Benzene
50. 65-85-0	Benzoic Acid
51. 100-47-0	Benzonitrile
52. 98-88-4	Benzoyl Chloride
53. 100-44-7	Benzyl Chloride
54. 7440-41-7	Beryllium
55. 7787-47-5	Beryllium Chloride
56. 7787-49-7	Beryllium Fluoride
57. 13597-99-4	Beryllium Nitrate
58. 123-86-4	Butyl Acetate
59. 84-74-2	n-Butyl Phthalate
60. 109-73-9	Butylamine
61. 107-92-6	Butyric Acid
62. 543-90-8	Cadmium Acetate
63. 7789-42-6	Cadmium Bromide
64. 10108-64-2	Cadmium Chloride
65. 7778-44-1	Calcium Arsenate
66. 52740-16-6	Calcium Arsenite
67. 75-20-7	Calcium Carbide
68. 13765-19-0	Calcium Chromate
69. 592-01-8	Calcium Cyanide
70. 26264-06-2	Calcium Dodecylbenzene Sulfonate
71. 7778-54-3	Calcium Hypochlorite
72. 133-06-2	Captan
73. 63-25-2	Carbaryl
74. 1563-66-2	Carbofuran
75. 75-15-0	Carbon Disulfide
76. 56-23-5	Carbon Tetrachloride
77. 57-74-9	Chlordane
78. 7782-50-5	Chlorine
79. 108-90-7	Chlorobenzene
80. 67-66-3	Chloroform
81. 7790-94-5	Chlorosulfonic Acid
82. 2921-88-2	Chlorpyrifos
83. 1066-30-4	Chromic Acetate
84. 7738-94-5	Chromic Acid
85. 10101-53-8	Chromic Sulfate
86. 10049-05-5	Chromous Chloride
87. 544-18-3	Cobaltous Formate
88. 14017-41-5	Cobaltous Sulfamate
89. 56-72-4	Coumaphos
90. 1319-73-3	Crotonaldehyde
91. 4170-30-3	Crotonaldehyde

CAS Number	Chemical Name
92. 142-71-2	Cupric Acetate
93. 12002-03-8	Cupric Acetoarsenite
94. 7447-39-4	Cupric Chloride
95. 3251-23-8	Cupric Nitrate
96. 5893-66-3	Cupric Oxalate
97. 7758-98-7	Cupric Sulfate
98. 10380-29-7	Cupric Sulfate Ammoniated
99. 815-82-7	Cupric Tartrate
100. 506-77-4	Cyanogen Chloride
101. 110-82-7	Cyclohexane
102. 94-75-7	2,4-D Acid
103. 94-11-1	2,4-D Esters
104. 50-29-3	DDT
105. 333-41-5	Diazinon
106. 1918-00-9	Dicamba
107. 1194-65-6	Dichlobenil
108. 117-80-6	Dichloro
109. 25321-22-6	Dichlorobenzene (all isomer)
110. 266-38-19-7	Dichloropropane (all isomer)
111. 26952-23-8	Dichloropropene (all isomer)
112. 8003-19-8	Dichloropropene
	Dichloropropene Mixture
113. 75-99-0	2,2-Dichloropropionic Acid
114. 62-73-7	Dichlorvos
115. 60-57-1	Dieldrin
116. 109-89-7	Diethylamine
117. 124-40-3	Dimethylamine
118. 25154-54-5	Dinitrobenzene (all isomers)
119. 51-28-5	Dinitrophenol
120. 25321-14-6	Dinitrotoluene (all isomers)
121. 85-00-7	Diquat
122. 298-04-4	Disulfoton
123. 330-54-1	Diuron
124. 27176-87-0	Dodecylbenzenesulfonic Acid
125. 115-29-7	Endosulfan (all isomers)
126. 72-20-8	Endrin and Metabolites
127. 106-89-8	Epichlorohydrin
128. 563-12-7	Ethion
129. 100-41-4	Ethyl Benzene
130. 107-15-3	Ethionamine
131. 106-93-4	Ethylene Dibromide
132. 107-06-2	Ethylene Dichloride
133. 60-00-4	EDFA
134. 1185-57-5	Ferric Ammonium Citrate
135. 2944-67-4	Ferric Ammonium Oxalate
136. 7705-08-1	Ferri-chloride

137 7783-50-2 Ferric Chloride
 138 10421-48-4 Ferric Nitrate
 139 10029-32-5 Ferric Sulfate
 140 10045-89-3 Ferrous Ammonium Sulfate
 141 7758-94-3 Ferrous Chloride
 142 7720-78-7 Ferrous Sulfate
 143 206-44-0 Fluoranthene
 144 50-00-0 Formaldehyde
 145 64-18-6 Formic Acid
 146 110-17-8 Fumaric Acid
 147 98-01-1 Furfural
 148 86-50-0 Gethion
 149 75-44-8 Guthachlor
 150 118-74-1 Hexachlorobenzene
 151 87-68-3 Hexachlorobutadiene
 152 67-72-1 Hexachloroethane
 153 70-30-4 Hexachlorophene
 154 77-47-4 Hexachlorocyclopentadiene
 155 7647-01-0 Hydrochloric Acid
 (Hydrogen Chloride)
 156 7664-39-3 Hydrofluoric Acid
 (Hydrogen Fluoride)
 157 74-90-8 Hydrogen Cyanide
 158 7783-06-4 Hydrogen Sulfide
 159 78-79-5 Isoprene
 160 42504-46-1 Isopropanolamine
 Dodecylbenzenesulfonate
 161 115-32-2 Keithane
 162 143-50-0 Kepone
 163 301-04-2 Lead Acetate
 164 3687-31-8 Lead Arsenate
 165 7758-95-4 Lead Chloride
 166 13813-96-5 Lead Fluoborate
 167 7783-46-2 Lead Fluoride
 168 10101-63-0 Lead Iodide
 169 18256-98-9 Lead Nitrate
 170 7428-48-0 Lead Stearate
 171 15739-80-7 Lead Sulfate
 172 1314-87-0 Lead Sulfide
 173 592-87-0 Lead Thiocyanate
 174 58-89-9 Lindane
 175 14307-35-8 Lithium Chromate
 176 121-75-5 Malthion
 177 110-16-7 Maleic Acid
 178 108-31-6 Maleic Anhydride
 179 2032-65-7 Mercaptodimethylur
 180 592-04-1 Mercuric Cyanide
 181 10045-94-0 Mercuric Nitrate
 182 7783-35-9 Mercuric Sulfate
 183 592-85-8 Mercuric Thiocyanate
 184 10415-75-5 Mercurous Nitrate
 185 72-43-5 Methoxychlor
 186 74-93-1 Methyl Mercaptan
 187 80-62-6 Methyl Methacrylate
 188 298-00-0 Methyl Parathion
 189 7786-34-7 Mevinphos
 190 315-18-4 Mexacarbate
 191 75-04-7 Monoethylamine

192 74-69-5 Monomethylamine
 193 300-76-5 Naled
 194 31-20-3 Neophthalene
 195 1338-24-5 Naphthenic Acid
 196 7440-02-0 Nickel
 197 15699-18-0 Nickel Ammonium Sulfate
 198 37211-05-5 Nickel Chloride
 199 12054-48-7 Nickel Hydroxide
 200 14216-75-2 Nickel Nitrate
 201 7786-81-4 Nickel Sulfate
 202 7697-37-2 Nitric Acid
 203 98-95-3 Nitrobenzene
 204 10102-44-0 Nitrogen Dioxide
 205 25154-55-6 Nitrophenol (all isomers)
 206 1321-12-6 Nitrotoluene
 207 30525-89-4 Paraformaldehyde
 208 56-38-2 Parathion
 209 608-93-5 Pentachlorobenzene
 210 87-86-5 ~~Pentachlorophenol~~
 211 85-01-8 Phenanthrene
 212 108-95-2 Phenol
 213 75-44-5 Phosgene
 214 7664-38-2 Phosphoric Acid
 215 7723-14-0 Phosphorus
 216 10025-87-3 Phosphorus Oxichloride
 217 1314-80-3 Phosphorus Pentasulfide
 218 7719-12-2 Phosphorus Trichloride
 219 7784-41-0 Potassium Arsenate
 220 10124-50-2 Potassium Arsenite
 221 7778-50-9 Potassium Bichromate
 222 7789-00-6 Potassium Chromate
 223 7722-64-7 Potassium Permanganate
 224 2312-35-8 Propargite
 225 79-09-4 Propionic Acid
 226 123-62-6 Propionic Anhydride
 227 1336-36-3 Polychlorinated Biphenyls
 228 151-50-8 Potassium Cyanide
 229 1310-58-3 Potassium Hydroxide
 230 75-56-9 Propylene Oxide
 231 121-29-9 Pyrethrins
 232 91-22-5 Quinoline
 233 108-46-3 Resorcinol
 234 7446-08-4 Selenium Oxide
 235 7761-88-8 Silver Nitrate
 236 7631-89-2 Sodium Arsenate
 237 7784-46-5 Sodium Arsenite
 238 10588-01-9 Sodium Bichromate
 239 1333-83-1 Sodium Bifluoride
 240 7631-90-5 Sodium Bisulfite
 241 7775-11-3 Sodium Chromate
 242 143-33-9 Sodium Cyanide
 243 25155-30-0 Sodium Dodecylbenzene
 Sulfonate
 244 7681-49-4 Sodium Fluoride
 245 16721-80-5 Sodium Hydrosulfide
 246 1310-73-2 Sodium Hydroxide
 247 7681-52-9 Sodium Hypochlorite
 248 124-41-4 Sodium Methylate

249 7632-00-0 Sodium Nitrate
 250 7558-79-4 Sodium Phosphate, Dibasic
 251 7601-54-9 Sodium Phosphate, Tribasic
 252 10102-18-8 Sodium Selenite
 253 7789-06-2 Strontium Chromate
 254 57-24-9 Strychnine and Salts
 255 100-420-5 Styrene
 256 12771-08-3 Sulfur Monochloride
 257 7664-93-9 Sulfuric Acid
 258 93-76-5 2,4,5-T Acid
 259 2008-46-0 2,4,5-T Amines
 260 93-79-8 2,4,5-T Esters
 261 13560-99-1 2,4,5-T Salts
 262 93-72-1 2,4,5-TP Acid
 263 32534-95-5 2,4,5-TP Acid Esters
 264 72-54-8 TDE
 265 95-94-3 Tetrachlorobenzene
 266 127-18-4 Tetrachloroethane
 267 78-00-2 Tetraethyl Lead
 268 107-49-3 Tetramethyl Pyrophosphate
 269 7446-18-6 Thallium (I) Sulfate
 270 108-88-3 Toluene
 271 8001-35-2 Toxaphene
 272 12002-48-1 Trichlorobenzene (all isomers)
 273 52-68-6 Trichlorfon
 274 25323-89-1 Trichloroethane (all isomers)
 275 79-01-6 Trichloroethylene
 276 25167-82-2 Trichlorophenol (all isomers)
 277 27323-41-7 Triethanolamine
 Dodecylbenzenesulfonate
 278 121-44-8 Triethylamine
 279 75-50-3 Trimethylamine
 280 541-09-3 Uranyl Acetate
 281 10102-06-4 Uranyl Nitrate
 282 1314-62-1 Vanadium Pentoxide
 283 27774-13-6 Vanadyl Sulfate
 284 108-05-4 Vinyl Acetate
 285 75-35-4 Vinylidene Chloride
 286 1300-71-6 Xylenol
 287 557-34-6 Zinc Acetate
 288 52628-25-8 Zinc Ammonium Chloride
 289 1332-07-6 Zinc Borate
 290 7699-45-8 Zinc Bromide
 291 3486-35-9 Zinc Carbonate
 292 7646-85-7 Zinc Chloride
 293 557-21-1 Zinc Cyanide
 294 7783-49-3 Zinc Fluoride
 295 557-41-5 Zinc Formate
 296 7779-86-4 Zinc Hydrosulfite
 297 7779-88-6 Zinc Nitrate
 298 127-82-2 Zinc Phenolsulfonate
 299 1314-84-7 Zinc Phosphide
 300 16871-71-9 Zinc Silicofluoride
 301 7733-02-0 Zinc Sulfate
 302 13746-89-9 Zirconium Nitrate
 303 16923-95-8 Zirconium Potassium Fluoride
 304 14644-61-2 Zirconium Sulfate
 305 10026-11-6 Zirconium Tetrachloride

Company Address		P. O. Box 9610, Richmond, Va. 23228	
Operating Schedule		Date	
Days/Week	5.5	Weeks/Year	52
Date Received		September 26, 1975	

STORAGE TANKS

Reference	Type of Storage Tank (Use Codes 1-5)	Name of Material Stored in Tank	Tank Capacity Gallons	Annual Throughput Gallons/Year	Method of Vapor Recovery (Use Codes 2-4)	Year Tank was Built	Year Tank was Last Repaired or (Resealed)	Estimated Control Efficiency Percent	Estimated Emissions tons/Year
1	1	refrigerant	20,000	100,000	4 condensation	1956	1965		
2	1	refrigerant	20,000	100,000	4 condensation	1975	1975		
3	1	no. 2 oil	20,000	50,000	4 closed	1956	1965		
4	1	no. 4 oil	8,000	50,000	4 closed	1956	1975		
5	5	diesel	1,000	50,000	4 closed	1965			
6	5	gasoline	1,000	60,000	4 closed	1957			
7	4	LP gas	1,000	12,000	4 closed	1970	1970		
8	4	LP gas	1,000	12,000	4 closed	1970	1970		
9	4	LP gas	1,000	12,000	4 closed	1970	1970		
10	4	LP gas	1,000	12,000	4 closed	1970	1970		

Storage Tank Type Codes

1. Fixed roof
2. Floating Roof (or Internal Cover)
3. Variable Vapor Space
4. Pressure Tank
5. Underground

Vapor Recovery System Codes

1. Charcoal Adsorption
2. Refrigeration-Condensation
3. Incineration
4. Other (Describe)
5. None

100156

ORIGINAL (Red)

Chemical Constituents of Creosote

Chemical
1001

Phenols	$C_6 H_6 O$
Aniline	$C_6 H_7 N$
Benzonitrile	$C_7 H_5 N$
Ortho-cresol	$C_7 H_8 O_3$
Meta-cresol	$C_7 H_8 O_3$
Para-cresol	$C_7 H_8 O_3$
Quinoline	$C_9 H_7 N$
Isoquinoline	$C_9 H_7 N$
Acetophenone	$C_8 H_8 O$
Napthalene	$C_{10} H_8$
Thionphtalene	$C_8 H_6 S$
Quinoid	$C_{10} H_9 N$
Methylnapthalene (beta)	$C_{11} H_{10}$
Methylnapthalene (alpha)	$C_{11} H_{10}$
Diphenyl	$C_{12} H_{10}$
2, 6 - dimethylnapthalene	$C_{12} H_{10}$
Acenapthalene	$C_{12} H_{10}$
Alpha - naphthol	$C_{10} H_8 O$
Beta - naphthol	$C_{10} H_8 O$
Phenanthrene	$C_{14} H_{10}$
Anthracin	$C_{14} H_{10}$
Acradine	$C_{13} H_9 N$
Carbazol	$C_{12} H_9 N$
Fluoranthlene	$C_{15} H_{10}$
Tyrene	$C_{16} H_{10}$

100157

SIN STACK MONITORING EQUIPMENT OPERATING

IF YES WHAT WERE THE FINDINGS

IF NO EXPLAIN

VISIBLE EMISSIONS OBSERVED ☒ Y ☐ N

DESCRIBE ANY VISIBLE EMISSIONS OBSERVED EMISSIONS FROM HOT WOOD REMOVED FROM #2 CYLINDER BARREL, VIS. BLE (<5% OPACITY)

COMPLIANCE STATUS

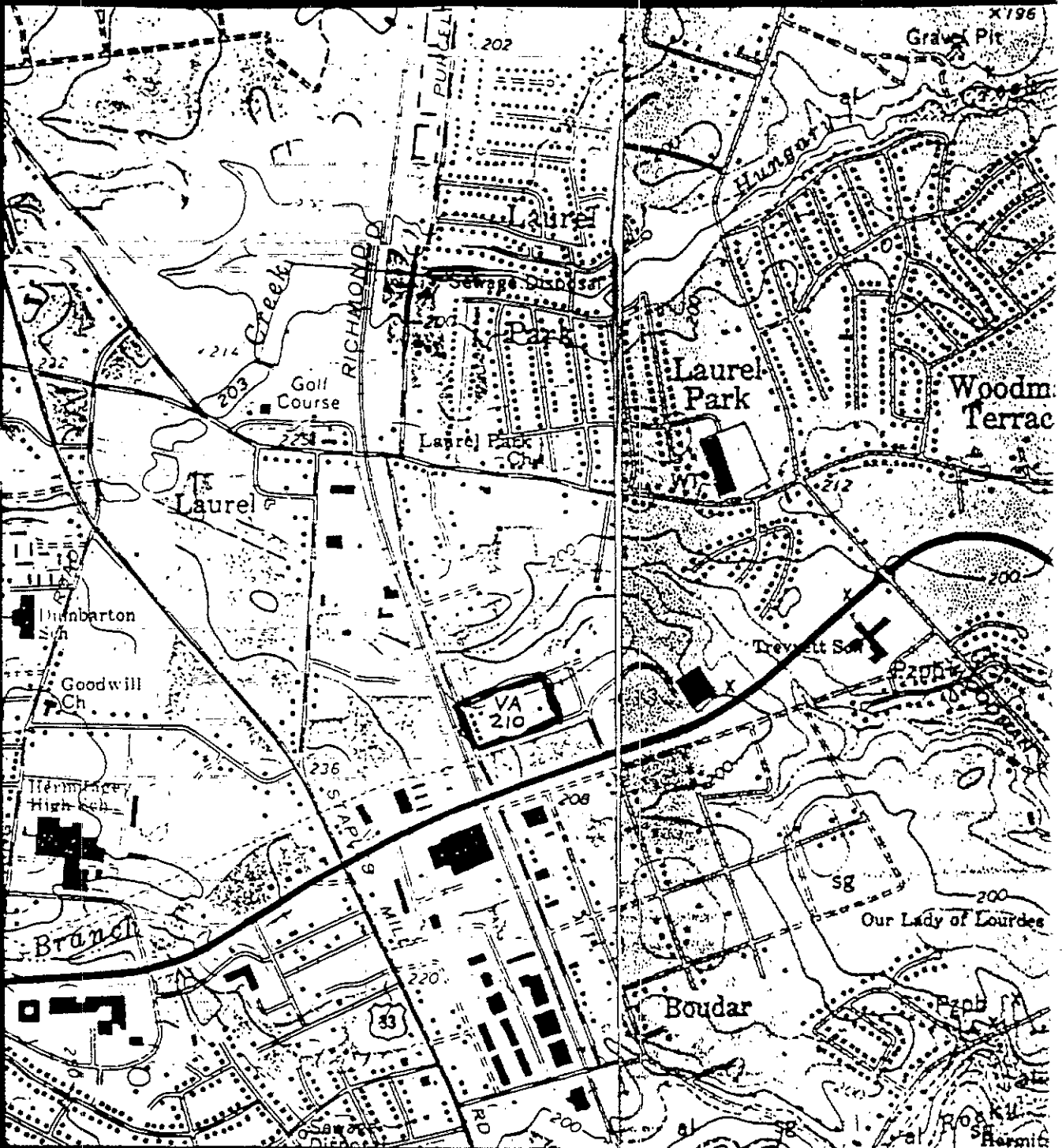
IN COMPLIANCE ☒ NOT IN COMPLIANCE ☐ UNKNOWN ☐

COMMENTS

USE OF PENTACHLOROPHENOL WAS DISCONTINUED 7 OR 8 MONTHS AGO. CYLINDER IS NOW USED ONLY FOR CCA (CHROMATED COPPER ARSENATE), WHICH IS WATER-SOLUBLE. THE SPRAY SYSTEM WAS NOT FUNCTIONING ON 8/10/82 DUE TO A JAMMED VALVE, BUT THIS FIXED, AND WORKED ADEQUATELY WHEN A LOAD OF CREOSOTE-TREATED WOOD WAS WITHDRAWN ON CYLINDER #2. THAT LOAD, HOWEVER, HAD BEEN ALLOWED TO COOL SEVERAL HOURS, AND IT WAS SUGGESTED THAT THE WOOD BE REMOVED MORE SLOWLY WHEN IT IS TO BE TAKEN OUT WHILE HOT TO ALLOW MORE EXPOSURE TO THE COOLING SPRAY. THE SPRAY BAR ON CYLINDER #3 WAS ALSO DEMONSTRATED, AND ONE OF 7 HOLES WAS PLUGGED. THIS WAS CORRECTED BEFORE IT WAS TURNED OFF. I SUGGEST THAT THE LOADING SCHEDULE BE ADJUSTED TO MINIMIZE OPENING THE CYLINDERS DURING THE EVENING HOURS WHEN COMPLAINTS ARE MOST LIKELY TO RESULT. MR. SEARLE AGREED TO TRY THIS, AND BELIEVED NIGHT-TIME OPENINGS COULD BE REDUCED BY 6. HE ALSO AGREED TO EXPLORE THE FEASIBILITY OF ART ESCOBAR'S (WHO ALSO TOOK PART IN THE INSPECTIONS) SUGGESTION OF LEAVING THE VACUUM SYSTEM ON AFTER THE DOORS ARE OPENED. WITH A VACUUM OF 22 INCHES HG, ~~IMPROVING OFFICER SIGNATURE DATE~~ THE VACUUM WOULD OBVIOUSLY HAVE TO BE BROKEN TO ALLOW DOOR OPENING AND THEN RESTARTING OF THE PUMPS TO UTILIZE THE CONDENSER TO CONTROL FUMES. THE PLANT WAS BUILT ABOUT 1957. ~~IT IS ANTICIPATED THAT DEVELOPMENTS IN PRESSURE IN THE AREA WILL EVENTUALLY FORCE THE RELOCATION OF THE PLANT, IN PERHAPS 5 OR 10 YEARS.~~ THE IMPORTANCE OF GOOD MAINTENANCE WAS STRESSED. ONE OTHER SUGGESTION WAS TO REALIGN SPRAY HOLES TO PROVIDE MORE UNIFORM COVERAGE. PL B... 8/11/82

REGIONAL DIRECTOR SIGNATURE DATE

100158



USGS MAP OF VA-210

100159

ORIGINAL
(Red)

APPENDIX E

100160

PROJECT NAME: Kentokil, Inc
TDD NO: F3-8402-20

EPA SITE NO.: VA210
REGION: Fit III

QUALITY ASSURANCE REVIEW OF
ORGANIC ANALYSIS LAB DATA PACKAGE

Case No.: 2521 Applicable Sample No's.: C8248, C8249,
C8250, C8251, C8252, C8253,
Contract No.: 68-01-6866 C8254, C8255, C8256, C8257,
Contract Laboratory: Mead C8258, C8259, C8260, C8261,
Applicable IFB No.: WA83-A198 C8262, C8263, C8264.
Reviewer: Rock J. Vitale
Review Date: 12/11/84

The organic analytical data for this case has been reviewed. The quality assurance evaluation is summarized in the following table:

Reviewer's Evaluation*	Fraction				
	VOLATILES	ACIDS	BASE/ NEUTRALS	PCB/ PEST.	TCDD
Acceptable					
Acceptable with exception(s)	✓#1, #2	✓#2, #3, #5, #7	✓#1, #2, #4, #5, #6, #8	✓#2	✓#3
Questionable					
Unacceptable					

* Definitions of the evaluation score categories are listed on next page.

This evaluation was based upon an analysis of the review items indicated below:

- DATA COMPLETENESS
- BLANK ANALYSIS RESULTS
- SURROGATE SPIKE RESULTS
- MATRIX SPIKE RESULTS
- DUPLICATE ANALYSIS RESULTS
- EVALUATION OF CONFIRMATIONS
- QUANTITATIVE CALCULATIONS
- ‡ ● TARGET COMPOUND MATCHING QUALITY
- TENTATIVELY IDENTIFIED COMPOUNDS
- CHROMATOGRAPHIC SENSITIVITY CHECKS
- DFTPP AND BFB SPECTRUM TUNE RESULTS
- ‡ ● STANDARDS
- ‡ ● CALIBRATION CHECK STANDARDS
- INTERNAL STANDARDS PERFORMANCE

Data review forms are attached for each of the review items indicated above.

‡ No errors noted, no form attached.

● Spot Check performed.

Comments: #1 Please see blank analysis documentation
#2 Please see matrix spike results
#3 Please see surrogate spike results
#4 The reported BNA results for C8256 is incorrectly reported 10x too high.
#5 The laboratory neglected to report a confident identification (transcript error)
#6 Please see RPDs for field duplicates 100161
#7 Please see laboratory duplicate analysis
#8 Please see total % BNA for samples C8255, C8256, C8257, & C8258
#9 There is the possibility of the presence of pentachlorophenol
in sample C8248 @ 12 ug/L. The requested info has been received & has proved the presence of PCB

DATA EVALUATION SCORE CATEGORIES

ACCEPTABLE: Data is within established control limits, or the data which is outside established control limits does not affect the validity of the analytical results.

ACCEPTABLE WITH EXCEPTION(S): Data is not completely within established control limits. The deficiencies are identified and specific data is still valid, given certain qualifications which are listed below.

QUESTIONABLE: Data is not within established control limits. The deficiencies bring the validity of the entire data set into question. However, the data validity is neither proved nor disproved by the available information.

UNACCEPTABLE: Data is not within established control limits. The deficiencies imply the results are not meaningful.

DATA COMPLETENESS		CONC./MATRIX	w/AQ	w/AD	w/AB	w/AD	w/AC	w/AG	w/AD	w/AD	w/AD	w/AD	w/AD	w/AD	w/AD	w/AD	w/AD	w/AD
FRACTION	TRAFFIC REPORT #	C82	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
	LAB I.D. #	225	67	74	75	76	83	77	90	78	91	79	92	8				
VOA :	RUN DATE/TIME		✓															
	TARGET COMPOUND TAB.		✓															
	TARGET COMPOUND D.L.		✓															
	TENT. I.D. COMPOUND TAB.		✓															
	SURROGATE RECOVERY		✓															
	GC SCREEN TABULATION		✓															
	GC/MS CHROMATOGRAMS		✓															
	TARGET CMPD. QUAN. LIST		✓															
	TARGET CMPD. SPECTRA		✓															
	TENT. I.D. CMPD. Q.L.		✓															
	TENT. CMPD. LIB. SRCH.		✓															
	CHRO./SENS. CHECKS		✓															
	BFB/BPTT TUNE DATA		✓															
	I.S. AREAS CHARTS		✓															
	I.S. REL. RESP. FORM		✓															
	RF & AMTS.: CALIB. CHK.		✓															
	RF & AMTS.: 3-PT CALIB.		✓															
	Chromatograms: Calib. Chk.		✓															
	Chromatograms: 3-Pt. Calib.		MS															
	LINEARITY: 3-PT. CALIB		✓															
	RF COMPARISON		✓															
	SAMPLE/FIELD BLANK																	
	METHOD/INSTR. BLANK																	
	LAB DUPLICATE					✓					✓							
	FIELD DUP/REP									✓	✓		✓	✓				
	MAT. SPK./M. STD.					✓					✓							

COMMENTS:

100163

DATA COMPLETENESS		CONC./MATRIX	48	49	50	51	52	53	54	55	56	57	58	59
FRACTION	TRAFFIC REPORT #	LAB I.D. #	48	49	50	51	52	53	54	55	56	57	58	59
BNA :	RUN DATE/TIME	225	✓											
	TARGET COMPOUND TAB.		✓											
	TARGET COMPOUND D.L.		✓											
	TENT. I.D. COMPOUND TAB.		✓											
	SURROGATE RECOVERY		✓											
	GC SCREEN TABULATION		✓											
	GC/MS CHROMATOGRAMS		✓											
	TARGET CMPD. QUAN. LIST		✓											
	TARGET CMPD. SPECTRA		✓											
	TENT. I.D. CMPD. Q.L.		✓											
	TENT. CMPD. LIB. SRCH.		✓											
	CHRO./SENS. CHECKS		✓											
	DEFB/DFTPP TUNE DATA		✓											
	I.S. AREAS CHARTS		✓											
	I.S. REL. RESP. FORM		✓											
	RF & AMTS.: CALIB. CHK.		✓											
	RF & AMTS.: 3-PT CALIB.		✓											
	Chromatograms: Calib. Chk.		✓											
	Chromatograms: 3-Pt. Calib.		MS											
	LINEARITY: 3-PT. CALIB		✓											
	RF COMPARISON		✓											
	SAMPLE/FIELD BLANK													
	METHOD/INSTR. BLANK													
	LAB DUPLICATE				✓									
	FIELD DUP/REP								✓	✓	✓	✓		
	MAT. SPK./M. STD.				✓									
PEST. :	PESTICIDE TABULATION		✓											
	PEST. D.L. TABULATION		✓											
	PESTICIDE CHRO.		✓											
	PESTICIDE STD. CHRO.		✓											
	PESTICIDE STD. I.D.		✓											
	2nd COLUMN CONF.		✓											
	GC/MS CONFIRMATION		n/a											
	PESTICIDE DUPLICATE		✓						✓	✓	✓	✓		
	PESTICIDE SPIKE		✓											
	PESTICIDE BLANK													
TCDD	TCDD TABULATION		✓											
	TCDD DETECTION LIMIT		✓											
	TCDD CHRO./E.I.C.P.		✓											
	TCDD BLANK													

ART00165

DATA COMPLETENESS		CONC./MATRIX	W/SOL	W/AG	W/SOL	W/AG	W/SOL	MAN
FRACTION	TRAFFIC REPORT #	60	61	62	63	64	Lab	
	LAB I.D. #	93	81	94	92	95	blks	
BNA :	RUN DATE/TIME	✓						
	TARGET COMPOUND TAB.	✓						
	TARGET COMPOUND D.L.	✓						
	TENT. I.D. COMPOUND TAB.	✓						
	SURROGATE RECOVERY	✓						
	GC SCREEN TABULATION	✓						
	GC/MS CHROMATOGRAMS	✓						
	TARGET CMPD. QUAN. LIST	✓						
	TARGET CMPD. SPECTRA	✓						
	TENT. I.D. CMPD. Q.L.	✓						
	TENT. CMPD. LIB. SRCH.	✓						
	CHRO./SENS. CHECKS	✓						
	BFB/DFTPP TUNE DATA	✓						
	I.S. AREAS CHARTS	✓						
	I.S. REL. RESP. FORM	✓						
	RF & AMTS. : CALIB. CHK.	✓						
	RF & AMTS. : 3-PT CALIB.	✓						
	Chromatograms: Calib. Chk.	✓						
	Chromatograms: 3-Pt. Calib.	MS						
	LINEARITY: 3-PT. CALIB	✓						
	RF COMPARISON	✓						
SAMPLE/FIELD BLANK				✓	✓			
METHOD/INSTR. BLANK						✓		
LAB DUPLICATE			✓					
FIELD DUP/REP								
MAT. SPK./M. STD.			✓					
PEST. :	PESTICIDE TABULATION	✓						
	PEST. D.L. TABULATION	✓						
	PESTICIDE CHRO.	✓						
	PESTICIDE STD. CHRO.	✓						
	PESTICIDE STD. I.D.	✓						
	2nd COLUMN CONF.	✓						
	GC/MS CONFIRMATION	N/A						
	PESTICIDE DUPLICATE			✓				
	PESTICIDE SPIKE			✓				
PESTICIDE BLANK				✓	✓	✓		
TCDD	TCDD TABULATION	✓						
	TCDD DETECTION LIMIT	✓						
	TCDD CHRO./E.I.C.P.	✓						
	TCDD BLANK			✓	✓	✓		

KEY TO DATA COMPLETENESS FORM

<u>Abbreviation Used on Form</u>	<u>Description of Checklist Item</u>
Conc./Matrix	Concentration category submitted in analysis request (low, med, hi); and matrix (sol., aq.)
Fraction	FBI in acid, base/neutral, acid/base/neutral, or volatiles analysis
Run Date/Time	Instrument run date (to be used for correlating calibration)
Target Cmpd. Tab.	Tabulated results for target compounds
Target Cmpd. D.L.	Detection limits for target compounds (actual/level indicated by screen)
Tent. LD. Cmpd. Tab.	Tabulated results for tentatively identified compounds
Surr. Rec.	Surrogate recoveries results
GC Screen Tab.	Tabulated GC screen results indicating required level of followup
GC/MS Chromatograms	Chromatograms of GC/MS analysis runs
Target Cmpd. Quan. List	Target compounds quantitation list, showing areas, ret. times
Target Cmpd. Spectra	Enhanced and unenhanced spectra of target compound hits
Tent. LD. Cmpd. Q.L.	Quantitation list for tentatively identified compounds
Tent. Cmpd. Lib. Srch.	Spectra and library match spectra of tentatively identified compounds
Chro./Sens. Checks	EICP's and R.R.F.'s for chromatographic sensitivity checks
BFB/DFTPP Tune Data	Spectra intensity lists, and criteria comparison forms for BFB, DFTPP
I.S. Areas Charts	Internal standards area control charts and description of remedial action
I.S. Rel. Resp. Form	Internal standards relative response listings for each sample run
RF and amts.: Calib. Chk.	Tabulated response factors and amount injected for all cmpds. in calibration check
RF and amts.: 3-Pt. Calib.	Tabulated response factors and amount injected for all cmpds. in 3-point calibration
Chromatograms: Calib. Chk.	Chromatograms for calibration check standard
Chromatograms: 3-Pt. Calib.	Chromatograms for 3-point multilevel calibration standards.
Linearity: 3-Pt. Calib.	Tabulated correlation coefficient or relative standard deviation for calibration
RF Comparison	Tabulated comparison of calibration Response Factor with check standard
Sample/Field Blank	Equipment rinse or reagent water blank shipped with samples from field
Method/Instr. Blank	Method or instrument blank which is prepared at lab
Lab Duplicate	Sample which was split by lab for duplicate analysis
Field Dup/Rep	Sample which was split or collected twice in the field
Mat. Spk./M. Std.	Matrix spike or method standard (blind, or done by lab)
Pest. Tab.	Tabulated results for pesticides
Pest. D.L. Tab.	Tabulated detection limits for pesticides
Pest. Chro.	Chromatograms for pesticide screening
2 nd Col. Conf.	Confirmation of pesticide results by using a second GC column and temperature
GC/MS Conf.	Confirmation of pesticide results by GC/MS analysis
Pest. Dup., Spk. Blk.	Pesticide duplicate, spike, and blank
Pest. Std. Chro.	Chromatogram of pesticide standard
Pest. Std. LD.	Pesticide standard identification form
TCDD	2,3,7,8-tetrachlorodibenzodioxin
TCDD Tab., D.L., EICP, Blk.	TCDD tabulated results, detection limits, extracted ion current profile, blank

ORIGINAL
(758)

KEY TO SYMBOLS USED IN DATA COMPLETENESS TABLE

<u>Symbol</u>	<u>Meaning</u>	<u>Symbol</u>	<u>Meaning</u>
✓	Data item present	I	Incomplete data item
NA	Data item not applicable or not required	NC	Data item not clearly explained (units of conc., etc)
P	Data item within established control limits	* or [number]	See footnote
F	Data item outside established control limits	XX/XX/XX XX:XX	Date/Time of run (calibration, etc.)
MS	Missing item		

100167

BLANK ANALYSIS RESULTS FOR TARGET COMPOUNDS

FRACTION	TYPE	CONC	MATRIX	SAMPLE #	SOURCE OF H ₂ O	CONTAMINANTS (CONCENTRATION / DETECTION LIMIT)
VOA	field/lw/AQ			C8263 22582	NUS	MeCl ₂ (10ug/L/5) #1 Acetone (7.1ug/L/100) #2 Toluene (0.26ug/L/5) #2 Xylene (0.051ug/L/5) #2 Pyrene (0.92ug/L/20) #2 Benzo(a)anthracene (1.4ug/L/20) #2 Chrysene (1.6ug/L/20) #2 Di-n-octylphthalate (8.6ug/L/20) #2 Benzo(b)fluoranthene (1.8ug/L/40) #2 Benzo(k)fluoranthene (2.1ug/L/40) #2 Indeno(1,2,3-cd)pyrene (2.1ug/L/40) #2 Dibenzo(a,h)anthracene (1.4ug/L/20) #2
BNA	field/lw/AQ			C8263 22582	NUS	
VOA	field/lw/sol			C8264 22595	NUS	MeCl ₂ (32ug/Kg/2.5) #1 FTCM - (9.8ug/Kg/2.5) #1 Acetone (14ug/Kg/100) #2 benzene (0.052ug/Kg/2.5) #2 Toluene (0.84ug/Kg/2.5) #2 styrene (0.08ug/Kg/2.5) #2 N.D.
BNA	field/lw/sol			C8264 22595	NUS	
VOA	lab/lw/sol			GB8403 21 C19	Mead	MeCl ₂ (0.99ug/Kg/2.5) #2 Acetone (7.4ug/Kg/50) #2 Benzene (0.02ug/Kg/2.5) #2 styrene (0.014ug/Kg/2.5) #2
VOA	lab/lw/AQ			GB840322 A19	Mead	MeCl ₂ (0.23ug/L/5) #2
VOA	lab/lw/sol			GB840319 A19	Mead	MeCl ₂ (2ug/Kg/2.5) #2 Acetone (2.4ug/Kg/50) #2
VOA	lab/Med/AQ			CN022803 B12	Mead	MeCl ₂ (1.8ug/L/5) #2 Acetone (1.6ug/L/100) #2 Benzene (0.9ug/L/5) #2 Toluene (0.10ug/L/5) #2
VOA	lab/lw/sol			GH022655 C19	Mead	MeCl ₂ (2.1ug/Kg/2.5) #1 Acetone (2.2ug/Kg/50) #2 Toluene (0.12ug/Kg/2.5) #2

LABORATORY REPORTED FIELD BLANK DATA IS COMPARED WITH THE SAMPLE DATA IN A TABULATION FORM WITHIN THE SAMPLE ANALYTICAL DATA SUMMARY. TENTATIVELY IDENTIFIED COMPOUNDS IN BLANKS ARE LISTED ON A SEPARATE PAGE.

COMMENTS:

(1) RESULT REPORTED BY LABORATORY AND CONFIRMED BY REVIEWER.

(2) RESULT INFERRED FROM QUANTITATION LIST, DIAGNOSTICS, CHROMATOGRAM AND/OR SPECTRA.

BLANK ANALYSIS RESULTS FOR TARGET COMPOUNDS

FRACTION	TYPE	CONC	MATRIX	SAMPLE #	SOURCE OF H ₂ O	CONTAMINANTS (CONCENTRATION / DETECTION LIMIT)
CONT. (VDA)	lab/low/sof			G4022655 C19	Mead	Ethylbenzene (0.13 ug/kg / 2.5) #2 O-xylene (0.30 ug/kg / 2.5) #2 Styrene (0.15 ug/kg / 2.5) #2 Phenanthrene (21.1 ug/kg / 400) #2 Fluoranthene (26.6 ug/kg / 400) #2 Pyrene (29.6 ug/kg / 400) #2 Benzo(c)anthracene (43.4 ug/kg / 400) #2 Chrysene (45.7 ug/kg / 400) #2 Di-n-octylphthalate (12.6 ug/kg / 400) #2 Benzo(b)fluoranthene (116 ug/kg / 800) #2 Benzo(k)fluoranthene (116 ug/kg / 800) #2 Benzo(a)pyrene (160 ug/kg / 400) #2 Indeno(1,2,3-cd)pyrene (169 ug/kg / 400) #2 Dibenzo(a,h)anthracene (127 ug/kg / 400) #2 Di-n-octylphthalate (11.3 ug/kg / 400) #2
BNA	lab/low/sof			GJ 022644 B15	Mead	
BNA	lab/Med/sof			G4022665 A14	Mead	
VOA	lab/low/AQ			CB840320 C18	Mead	MeCl ₂ (0.27 ug/kg / 5) #2 TCFM (0.14 ug/kg / 5) #2 Benzene (0.08 ug/kg / 5) #2 Toluene (0.12 ug/kg / 5) #2 Styrene (0.21 ug/kg / 5) #2 MeCl ₂ (0.86 ug/kg / 5) #2 Acetone (6.6 ug/kg / 100) #2 Benzene (0.26 ug/kg / 5) #2 Xylene (0.12 ug/kg / 5) #2 MeCl ₂ (0.74 ug/kg / 5) #2 Acetone (2.7 ug/kg / 100) #2 Benzene (0.27 ug/kg / 5) #2 Toluene (0.05 ug/kg / 5) #2
VOA	lab/low/AQ			CB840319 B12	Mead	
VOA	lab/low/AQ			CB840320 A12	Mead	
VOA	lab/low/AQ			CB840321 A12	Mead	
BNA	lab/Med/AQ			G4022663 A14	Mead	N.D.
BNA	lab/low/AQ			G4022651 B15	Mead	N.D.
BNA	lab/low/AQ			G4022649 A14	Mead	Di-n-octylphthalate (9.9 ug/kg / 20) #1

LABORATORY REPORTED FIELD BLANK DATA IS COMPARED WITH THE SAMPLE DATA IN A TABULATION FORM WITHIN THE SAMPLE ANALYTICAL DATA SUMMARY. TENTATIVELY IDENTIFIED COMPOUNDS IN BLANKS ARE LISTED ON A SEPARATE PAGE.

COMMENTS:

(1) RESULT REPORTED BY LABORATORY AND CONFIRMED BY REVIEWER.

(2) RESULT INFERRED FROM QUANTITATION LIST, DIAGNOSTICS, CHROMATOGRAM AND/OR SPECTRA.

WATER SUBSTRATE PERCENT BL. BY SUMMARY

CASE NO. 2521
 CONTRACT NO. 68-01-6762
 HIGH LEVEL
 OTHER (SpecType) 68-01-6866
 QC REPORT NO. _____
 CONTRACTOR CompuChem
 MED. LEVEL
 SOIL/SED. _____
 DATE 3/15

SUM. I.D.	EXT. DATE	ENT. I.D.	DATE	ANAL. I.D.	OC	SND Traffic No.	Volatile					Semi-Volatile					Pesticide			
							Bz Toluene 84-114	MFA 63-1274	Bq-1,2 Dichloro Ethane 90-1304	Bz Nitro Benzene 42-131	2-Fluore Biphenyl 50-154	Pyrene (ME) 54-1184	Bz p-ter Phenyl 54-1184	Bz Phenol 15-98	2-Fluore Phenol 25-1154	2,4,6-Tribrom Phenol 47-1234	1,2,3,4 Chlor-ocate 67-1144	1,2,3,4 TCDD		DILUTION
383	3/13		3/21	758	22578	68255	101	101	83											
382	3/15		3/21	755																
368	3/15		3/24	597																
364	3/15		3/20	619																
383	3/13		3/20	633	22579	68257	113	112	76											
382	3/15		3/21	659																
368	3/15		3/27	597																
364	3/15		3/20	619																
383	3/13		3/20	633	22580	68259	114	114	78											
382	3/15		3/21	659																
368	3/15		3/19	597																
364	3/15		3/20	619																
383	3/13		3/20	633	22581	68261	112	114	80											
382	3/15		3/30	754																
368	3/15		3/23	597																
364	3/15		3/20	619																
383	3/13		3/20	758	22582	68263	99	93	79											
382	3/15		3/20	755																
368	3/15		3/20	597																
364	3/15		3/20	619																

The actual D.I. for 2,3,7,8-TCDD may be substantially higher than reported.

AR100170

CASE NO. 8521
 LOW LEVEL XXXX
 WATER XXXX
 QC REPORT NO. XXXX
 SOIL SURrogate PERCENT R XXXX SUMMARY 68-01-6866
 CONTRACTOR Compuchem
 MED. LEVEL XXXX
 (SOIL/SED.) XX
 CONTRACT NO. 68-01-6762
 HIGH LEVEL XXXX
 OTHER (SpecTg) XXXX

SURR. EXT. I.D.	EXT. I.D.	DATE	ANAL. I.D.	ANAL. I.D.	QC #	SWD Traffic No.	[-----Volatile-----]				[-----Semi-Volatile-----]				[-----Pesticide-----]			
							Dg Toluene 81-120	Dg BFB 57-137	Dg-1,2 Dichloro Ethane 50-150*	Dg Nitro Benzene 19-115	2-Fluoro Biphenyl 17-125	Dg Pyrene (ME) 34-126*	Dg p-ter Phenyl 34-126*	Dg Phenol 10-104	2-Fluoro Phenol 26-116	2,4,6-Tribromophenol 32-124*	Dibutyl Chloride 41-121*	(Dioxin)
303	3/13		3/19	577	22583	08252	92	92	75	100	79	73	73	46	64	110	110	37
302	3/15		3/19	584														
308	3/15		3/23	597														
304	3/15		3/23	643														
303	3/13		3/19	577	22594	08254	83	92	75	58	73	64	44	42	58	37	86	75
302	3/15		3/20	753														
308	3/15		3/23	597														
304	3/15		3/20	619														
303	3/13		3/19	577	22591	08251	Screened Medium	Screened Medium	35 L	Dilution 10								75
302	3/15		3/20	753														
308	3/15		3/23	597														
304	3/15		3/20	619														
303	3/13		3/19	577	22592	08252	Screened Medium	Screened Medium	30 L	20% DILUTION								75
302	3/15		3/21	754														
308	3/15		3/23	597														
304	3/15		3/20	619														
303	3/13		3/19	577	22593	08260	97	96	75	62	67	80	94	43	24	14	38	50
302	3/15		3/21	754														
308	3/15		3/23	597														
304	3/15		3/20	619														

Volatiles: 0 out of 3; outside of QC limits
 Semivolatiles: 0 out of 12; outside of QC limits
 Pesticides: 0 out of 3; outside of QC limits
 Asterisked values are outside of QC limits.
 ME - Not established.
 Comments: 1 O A Notice 1 The actual detection limit for some acids may be slightly higher than reported.
2 The actual detection limit for 2,3,7,8-TCDF may be slightly higher than reported.

CASE NO. 4581
 LOW LEVEL
 WATER
 QC REPORT NO. _____
 CONTRACTOR Compuchem
 ED. LEVEL XX
 SOIL/SID _____
 CONTRACT NO. 68-01-6866
 HIGH LEVEL
 OTHER (Specify) _____
 Y SU. 68-01-6762

SURR. I.D.	EXT. DATE	EXT. I.D.	DATE ANAL. I.D.	ANAL. I.D.	CC	SWD Traffic No.	Volatile				Semi-Volatile				Pesticide			
							(7233)	(7247)	(7258)	(7447)	(7448)	(7471)	(7496)	(7512)	(7519)	(7528)	(7538)	(7466)
							Dg Toluene 81-120	BFB 57-137	Dg-1,2 Dichloro Ethane 50-150	Dg Nitro Benzene 19-115	2-Fluoro Biphenyl 17-125	D10 Pyrene (ME)	p-ter Phenyl 34-126	Dg Phenol 10-104	2-Fluoro Phenol 26-116	2,4,6-Trifluoro Phenol 32-124	Dibutyl Chloride 41-121	1,2,3,4 TCDD 11-128
383	3/13		3/21	677	22591	28256	99	110	80									
382																		
368																		
364																		
383	3/10		3/22	633	22582	28258	97	100	84									
382																		
368																		
364																		
383																		
382																		
368																		
364																		
383																		
382																		
368																		
364																		
383																		
382																		
368																		
364																		

Volatiles: 0 out of 2; outside of QC limits
 Semi-volatiles: 0 out of 3; outside of QC limits
 Bifluoride: 0 out of 3; outside of QC limits
 Comments: OK
 *Asterisked values are outside of QC limits.
 ME - Not established.

CASE NO. 2521
 TOP LEVEL 2A
 WATER
 QC REPORT NO. _____
 SOIL SURROGATE PERCENT RATIO SUMMARY
 CONTRACTOR Compuchem
 MED. LEVEL
 (SOIL/SED) XX
 CONTRACT NO. 68-01-6866
 HIGH LEVEL
 OTHER (Specify) _____

SURR. I.D.	EXT. DATE	EXT. I.D.	DATE ANAL.	ANAL. I.D.	QC #	SWD Traffic No.	Volatile				Semi-Volatile				Pesticide			
							Dg Toluene 81-120	Dg BFB 57-137	Dg-1,2 Ethane 50-150	Dg Nitro Benzene 19-115	2-Fluoro Biphenyl 17-125	D10 Pyrene (ME) 34-126	D14 p-ter Phenyl 34-126	D5 Phenol 10-104	2-Fluoro Phenol 26-116	2,4,6-Tribromophenol 32-124	Dibutyl Chloride 41-121	1,2,3,4 TCDD 11-128
383	3/13		3/19	577	22574	08262	98	95	75	49	61	64	69	34	45	30	45	118
382	3/16		3/24	755														
368	3/20		3/24	597														
364	4/1		4/13	643														
383	3/13		3/19	623	22575	08264	99	106	84	59	65	88	73	61	100	80	104	90
382	3/16		3/24	754														
368	3/20		3/22	597														
364	3/16		3/20	615														
383																		
382																		
368																		
364																		
383																		
382																		
368																		
364																		
383																		
382																		
368																		
364																		

Volatiles: 0 out of 2; outside of QC limits
 Semivolatiles: 0 out of 8; outside of QC limits
 Pesticides: 0 out of 1; outside of QC limits
 Comments:

*Asterisked values are outside of QC limits.
ME - Not established.

CASE NO. 2521

152

CONTRACTORS

CompuChem

CONTRACT NO. 63-1

-6216-

QC REPORT NO.

THE

1. The following are the names of the people who were involved in the project:

55/7105
9011/559.

OTHER (SpecTty)

[illegible]

Comments:

all OK.

Variables:	0	out of 5;	outside of 9C limits
Semi-variables:	0	out of 20;	outside of 9C limits
Statistics:	0	out of 2;	outside of 9C limits

*Asterisked values are outside of QC limits
NE - Not established

Date Limit Sat 12/12

100174

CONTRACT NO. 68-01-

CONTRACT NO. MEAD COMPUCHEM

CASE NO. 2521

HIGH LEVEL

MED. LEVEL

LOW LEVEL

OTHER (Specify)

SOIL/SED.

WATER

UNITS (Circle)

mg/kg

QC REPORT NO.

FRACTION	COMPOUND	SMO #	CONC.	CONC. ADDED	CONC. MS	% REC.	% CONC. MSD	% REC.	APD	APD RECOVERY	COMMENTS
VOA	1,1-Dichloroethylene			25						<15%	51-150
SHO #	Trichloroethylene			25						<15%	74-130
MS #	Chlorobenzene			25						<15%	67-130
MSD #	Toluene			25						<15%	50-130
	Benzene			25						<15%	56-130
B/N	1,2,4-Trichlorobenzene			200						<50%	30-110
SHO #	Acenaphthene			200						<50%	57-120
	2,4-Dinitrotoluene			200						<50%	43-110
MS #	Di-N-Butylphthalate			200						<50%	13-110
MSD #	Pyrene			200						<50%	25-140
	N-Nitrosodimethylamine			800						<50%	34-110
ACID	1,4-Dichlorobenzene			200						<50%	33-110
SHO #	Pentachlorophenol			200						<40%	19-120
	Phenol			200						<40%	23-80
MS #	2-Chlorophenol			200						<40%	33-110
MSD #	P-Chloro-N-Cresol			200						<40%	32-110
	4-Nitrophenol			1200						<40%	15-90
PEST	Lindane	ND		8-0	8.2	163	8.4	105	2	<40%	87-110
22567	Heptachlor	ND		8-0	8.7	109	8.8	110	1	<40%	43-120
22567	Aldrin	ND		8-0	7.7	96	7.9	99	3	<40%	45-110
MS AC22567	Dieldrin	ND		8-0	7.7	96	7.8	98	2	<40%	56-120
MSD AC22567	Endrin	ND		8-0	9.6	113	9.1	114*	1	<40%	89-110
	P,p'-DDE	ND		8-0	9.4	118	9.4	118*	0	<40%	82-100

22567
22574-82

all ok

*Asterisked values are outside QC limits.

APD: VOA: out of ; outside QC limits
 B/N: out of ; outside QC limits
 ACID: out of ; outside QC limits
 PEST: out of ; outside QC limits

RECOVERY: VOA: out of ; outside QC limits
 B/N: out of ; outside QC limits
 ACID: out of ; outside QC limits
 PEST: out of ; outside QC limits

DATE: 12/82
 100175

CAS # 2521
LOW LEVEL XX
WATER
QC REPORT NO.

CONTRACTOR MEAD COMPUCHER
MED. LEVEL
SOIL/SED. XX

UNIT # 68-01-107
HIGH LEVEL
OTHER (Specify)
UNITS (Circle) ug/kg ug/l

FRACTION	COMPOUND	SWO #	CONC. SPIKE ADDED	CONC. MS	% REC.	CONC. MSD	% REC.	RPD	QC LIMITS* RPD RECOVERY	COMMENTS
VOC 22593 SWO # 22260	1,1-Dichloroethylene	ND	12.5	10	80	11	88	10	<15% 51-150	22583
	Trichloroethylene	ND	12.5	10	80	11	88	10	<15% 74-130	22590-95
	Chlorobenzene	ND	12.5	10	80	11	88	10	<15% 67-130	
MS 22260 MSD #22260	Toluene	ND	12.5	11	88	12	96	9	<15% 58-130	
	Benzene	ND	12.5	10	80	11	88	10	<15% 56-130	o.k.
	1,2,4-Trichlorobenzene		2000						<50% 38-110	
B/N SWO #	Acenaphthene		2000						<50% 57-120	
	2,4-Dinitrotoluene		2000						<50% 43-110	
	Di-N-Butylphthalate		2000						<50% 13-110	
MS # MSD #	Pyrene		2000						<50% 25-140	
	N-Nitrosodi-N-Propylamine		8000						<50% 34-110	
	1,4-Dichlorobenzene		2000						<50% 33-110	
ACID SWO #	Pentachlorophenol		2000						<40% 19-120	
	Phenol		2000						<40% 23-80	
	2-Chlorophenol		2000						<40% 33-110	
MS # MSD #	P-Chloro-M-Cresol		2000						<40% 32-110	
	4-Nitrophenol		12000						<40% 15-90	
PEST SWO #	Lindane		80						<40% 87-110	
	Heptachlor		80						<40% 43-120	
	Aldrin		80						<40% 45-110	
MS # MSD #	Dieldrin		80						<40% 56-120	
	Endrin		80						<40% 89-110	
	p,p-DDT		80						<40% 82-100	

*Asterisked values are outside QC limits.

RPD: VOCs 0 out of 5; outside QC limits
B/N 0 out of 5; outside QC limits
ACID 0 out of 5; outside QC limits
PEST 0 out of 5; outside QC limits

RECOVERY: VOCs 0 out of 10; outside QC limits
B/N 0 out of 10; outside QC limits
ACID 0 out of 10; outside QC limits
PEST 0 out of 10; outside QC limits

*Date Limits Set 12/82
Revision Due 6/83

CASE NO. 2521
 LUM LEVEL XX
 WATER XX
 QC REPORT NO. _____

CONTRACTOR MEAD COMPUCHEM
 MED. LEVEL _____
 SOIL/SED. _____

CONTRACT NO. 68-01-6762
 HIGH LEVEL _____
 OTHER (Specify) _____
 UNITS (Circle) _____
 ug/kg (ug/l) _____

FRACTION	COMPOUND	SWD #	CONC. ADDED	CONC. MS	REC.	CONC. MSD	REC.	RPD	QC LIMITS*		COMMENTS
									RPD	RECOVERY	
VMA 22576 SWD #	1,1-Dichloroethylene	ND	25	27	108	27	108	0	<15%	51-150	22567
	Trichloroethylene	ND	25	25	100	25	100	0	<15%	74-130	
	Chlorobenzene	ND	25	25	100	26	104	4	<15%	67-130	22574-82
	Toluene	ND	25	26	104	26	104	0	<15%	58-130	
MS # C825 MSD # C825	Benzene	ND	25	26	104	26	104	0	<15%	56-130	all OK
B/M SWD #	1,2,4-Trichlorobenzene		100						<50%	38-110	
	Acenaphthene		100						<50%	57-120	
	2,4-Dinitrotoluene		100						<50%	43-110	
	Di-N-Butylphthalate		100						<50%	13-110	
MS # — MSD # —	Pyrene		100						<50%	25-140	
ACID SWD #	N-Nitrosodi-N-Propylamine		400						<50%	34-110	
	1,4-Dichlorobenzene		100						<50%	33-110	
	Pentachlorophenol		100						<40%	19-120	
MS # — MSD # —	Phenol		100						<40%	23-80	
	2-Chlorophenol		100						<40%	33-110	
	P-Chloro-N-Cresol		100						<40%	32-110	
	4-Nitrophenol		600						<40%	15-90	
PEST SWD #	Lindane		4						<40%	87-110	
	Heptachlor		4						<40%	43-120	
	Aldrin		4						<40%	45-110	
	Dieldrin		4						<40%	56-120	
MS # — MSD # —	Endrin		4						<40%	89-110	
PAP-DDT			4						<40%	82-100	

*Asterisked values are outside QC limits.

RPD: VMA: 0 out of 5; outside QC limits
 B/M: 0 out of 5; outside QC limits
 ACID: 0 out of 5; outside QC limits
 PEST: 0 out of 5; outside QC limits

RECOVERY: VMA: 0 out of 10; outside QC limits
 B/M: 0 out of 10; outside QC limits
 ACID: 0 out of 10; outside QC limits
 PEST: 0 out of 10; outside QC limits

*Date Limits Set 12/82

100177

CASE
LOW LEVEL
WATER
QC REPORT NO.

CONTRACTOR HEAD COMPUCHEM
MED. LEVEL
SOIL/SED. XX

CONTRACT
HIGH LI
OTHER (Specify)
UNITS (Circle) ug/kg ug/l

68-01-6762

FRACTION	COMPOUND	SWO #	CONC.	SPRKE	CONC.	%	REC.	CONC.	%	REC.	RPD	QC LIMITS*	COMMENTS
VOA	1,1-Dichloroethylene			12.5								<15%	51-150
SWO #	Trichloroethylene			12.5								<15%	74-130
	Chlorobenzene			12.5								<15%	67-130
MS #	Toluene			12.5								<15%	58-130
MSD #	Benzene			12.5								<15%	56-130
B/N	1,2,4-Trichlorobenzene			2000								<50%	38-110
SWO #	Acenaphthene			2000								<50%	57-120
	2,4-Dinitrotoluene			2000								<50%	43-110
	Di-N-Butylphthalate			2000								<50%	13-110
MS #	Pyrene			2000								<50%	25-140
MSD #	M-Nitrosodi-N-Propylamine			8000								<50%	34-110
	1,4-Dichlorobenzene			2000								<50%	33-110
ACID	Pentachlorophenol			2000								<40%	19-120
SWO #	Phenol			2000								<40%	23-80
	2-Chlorophenol			2000								<40%	33-110
	P-Chloro-M-Cresol			2000								<40%	32-110
MS #	4-Nitrophenol			12000								<40%	15-90
MSD #	Lindane	ND		80	2	3	2-2	3	2-2	3	0	<40%	87-110
	Heptachlor			80	94	118	91	114	114	3	3	<40%	43-120
	Aldrin			80	88	110	91	114	114	4	4	<40%	45-110
	Dieldrin			80	98	113	120	150	150	20	20	<40%	56-120
	Endrin			80	76	95	84	105	105	10	10	<40%	89-110
	P,P-DDT	ND		80	64	80	90	113	113	34	34	<40%	82-100

22583,
22590-95

*Asterisked values are outside QC limits. [] The actual D.L. for Lindane may be substantially higher than reported.

RPD: VOA: out of ; outside QC limits
B/N: out of ; outside QC limits
ACID: out of ; outside QC limits
PEST: out of ; outside QC limits

*Date Limits Set 12/82
Revision Due 6/83

100178

CASE NO. 2521
 LOW LEVEL XX
 WATER XX
 QC REPORT NO.

CONTRACTOR MEAD COMPUTHER
 M.D. LEVEL
 SOIL/SED. XX

CONTRACT NO. 68-01-6762
 HIGH LEVEL
 OTHER (Spec/ty)
 UNITS (Circle) ug/kg ug/l

MAINER SPIKE DUPL /HLCUVELHY

FRACTION	COMP/NO	SWD # CONC	CONC. SPIRE ADDED	CONC. MS	% REC.	CONC. MSD	% REC.	RPD	QC LIMITS* RPD RECOVERY	COMMENTS
VOM	1,1-Dichloroethylene								<15%	51-150
SWD #	Trichloroethylene								<15%	74-130
	Chlorobenzene								<15%	67-130
MS #	Toluene								<15%	58-130
MSD #	Benzene								<15%	56-130
B/N <u>22594</u> SWD # <u>28262</u>	1,2,4-Trichlorobenzene	ND	1986	3500	176*	3400	171*	3	<50%	38-110
	Acenaphthene	ND	1986	2700	135*	3200	161*	18	<50%	57-120
	2,4-Dinitrotoluene [1]	ND	1986	300	—	300	—	—	<50%	43-110
	Di-M-Butylphthalate	ND	1986	2300	116	2800	141*	19	<50%	13-110
MS <u>28262</u> MSD <u>28262</u>	Pyrene	520	1986	2400	95	1700	59	47	<50%	25-140
	N-Nitrosod-M-Propylamine	ND	7942	7700	97	7800	123*	24	<50%	34-110
	1,4-Dichlorobenzene	ND	1986	2700	136*	3400	161*	17	<50%	33-110
ACID <u>22594</u> SWD # <u>28262</u>	Pentachlorophenol [2]	1200	1986	—	—	3800	131*	—	<40%	19-120
	Phenol	ND	1986	1800	91	1300	65	33	<40%	23-80
	2-Chlorophenol	ND	1986	1800	91	1100	53*	49*	<40%	33-110
MS <u>28262</u> MSD <u>28262</u>	P-Chloro-N-Cresol	ND	1986	1300	71	1500	76	18	<40%	32-110
	4-Nitrophenol [1]	ND	11940	300	—	300	—	—	<40%	15-90
PEST	Lindane								<40%	87-110
SWD #	Heptachlor								<40%	43-120
	Aldrin								<40%	45-110
MS #	Dieldrin								<40%	56-120
MSD #	Endrin								<40%	89-110
	P,P-DDT								<40%	82-100

Computer missed, but peak looks to be present.

*Actual D.L. may be substantially higher than reported.
 [2] Actual level of pentachlorophenol may not be reflected average.

Asterisked values are outside QC limits.
 RPD: VOMs out of 7; outside QC limits
 B/N 0 out of 7; outside QC limits
 ACID 1 out of 6; outside QC limits
 PEST 1 out of 1; outside QC limits

RECOVERY: VOMs out of 14; outside QC limits
 B/N 10 out of 14; outside QC limits
 ACID 4 out of 10; outside QC limits
 PEST 1 out of 1; outside QC limits

CASE NO. 2521

CONTRACTOR MEAD COMPUCHEM

CONTRACT 68-01-6762

LOW LEVEL XX

MED. LEVEL

WATER XX

SOIL/SED.

QC REPORT NO.

HIGH LEVEL

OTHER (Specify)

UNITS (Circle)

ug/kg (ug/l)

FRACTION	COMPOUND	SWD #	CONC. ADDED	CONC. MS	% REC.	CONC. MSD	% REC.	RPD	QC LIMITS* RPD RECOVERY	COMMENTS
VOA	1,1-Dichloroethylene		25						<15% 51-150	
SWD #	Trichloroethylene		25						<15% 74-130	
	Chlorobenzene		25						<15% 67-130	
MS #	Toluene		25						<15% 58-130	
MSD #	Benzene		25						<15% 56-130	
B/N 22567 SWD #	1,2,4-Trichlorobenzene	ND	100	84	84	74	74	13	<50% 38-110	22567
C8250	Acenaphthene	ND	100	100	100	84	84	17	<50% 57-120	22574-82
	2,4-Dinitrotoluene	ND	100	82	82	62	62	28	<50% 43-110	
MS A8283	Di-N-Butylphthalate	ND	100	66	66	46	46	36	<50% 13-110	
MSD A8283	Pyrene	ND	100	120	120	110	110	9	<50% 25-140	
	M-Nitrosodi-N-Propylamine	ND	400	400	100	340	85	16	<50% 34-110	
	1,4-Dichlorobenzene	ND	100	82	82	74	74	10	<50% 33-110	
ACID 22575 SWD #	Pentachlorophenol	ND	100	72	72	62	62	15	<40% 19-120	22567
C8250	Phenol	ND	100	50	50	44	44	13	<40% 23-80	22574-82
	2-Chlorophenol	ND	100	92	92	84	84	9	<40% 33-110	
MS A8283 MSD A8283	P-Chloro-M-Cresol	ND	100	80	80	66	66	11	<40% 32-110	Actual D.L. for 4-nitrophenol may be substantially higher
	4-Nitrophenol	ND	600	57 ¹⁰²	20	—	—	—	<50% 15-20	
PEST	Lindane		4						<40% 87-110	
SWD #	Heptachlor		4						<40% 43-120	
	Aldrin		4						<40% 45-110	
MS #	Dieldrin		4						<40% 56-120	
MSD #	Endrin		4						<40% 89-110	
	P,P-DDT		4						<40% 82-100	

*Asterisked values are outside QC limits.

RPD: VOA: out of ; outside QC limits
 B/N: out of ; outside QC limits
 ACID: out of ; outside QC limits
 PEST: out of ; outside QC limits

RECOVERY: VOA: out of ; outside QC limits
 B/N: out of ; outside QC limits
 ACID: out of ; outside QC limits
 PEST: out of ; outside QC limits

*Date Limits Set 12/82
 Revision Due 6/83

100180

CASE NO. 2521
 LOW LEVEL
 WATER
 QC REPORT NO. _____

CONTRACTOR HEAD COMPUCHEM
 MED. LEVEL XX
 SOIL/SED. XX

CONTRACT NO. 68-01-6762
 HIGH LEVEL
 OTHER (Specify)
 UNITS (Circle) _____ ug/g _____ ug/l

FRACTION	COMPOUND	STD #	CONC. SPIKE	CONC. MS	% REC.	% CONC. MSD	% REC.	RPD	QC LIMITS* RECOVERY	COMMENTS
VDA 22591 SWD #	1,1-Dichloroethylene	ND	25	32	128	32	128	0	<15% 51-150	22591
	Trichloroethylene	ND	25	28	112	29	116	4	<15% 74-130	22592
28256	Chlorobenzene	ND	25	29	116	30	120	3	<15% 67-130	
MS # MSD #	Toluene	23	25	31	(8)	33	(40)	133	<15% 58-130	Actual level of toluene may be higher than reported.
	Benzene	4.5	25	24	78	25	82	5	<15% 56-130	
B/N SWD #	1,2,4-Trichlorobenzene								<50% 38-110	
	Acenaphthene								<50% 57-120	
	2,4-Dinitrotoluene								<50% 43-110	
	Di-N-Butylphthalate								<50% 13-110	
MS # MSD #	Pyrene								<50% 25-140	
	N-Nitrosodi-N-Propylamine								<50% 34-110	
	1,4-Dichlorobenzene								<50% 33-110	
ACID SWD #	Pentachlorophenol								<40% 19-120	
	Phenol								<40% 23-80	
	2-Chlorophenol								<40% 33-110	
MS # MSD #	P-Chloro-N-Cresol								<40% 32-110	
	4-Nitrophenol								<40% 15-90	
PEST SWD #	Lindane								<40% 87-110	
	Heptachlor								<40% 43-120	
	Aldrin								<40% 45-110	
MS # MSD #	Dieldrin								<40% 56-120	
	Endrin								<40% 69-110	
	P,P-DDT								<40% 82-100	

*Asterisked values are outside QC limits.

RPD: VDA 1 out of 3; outside QC limits
 B/N out of 3; outside QC limits
 ACID out of 3; outside QC limits
 PEST out of 3; outside QC limits

RECOVERY: VDA 2 out of 10; outside QC limits
 B/N out of 3; outside QC limits
 ACID out of 3; outside QC limits
 PEST out of 3; outside QC limits

Duplicate/Triplicate Analysis of Non-Matrix Spiked (Indigenous) Compounds

Outliers are tabulated below for three types of multiple analyses:

(1) Field duplicates

(2) Un-spiked laboratory duplicates

(3) Matrix spike duplicate plus corresponding unspiked sample evaluated for non-matrix spiked (indigenous) compounds. (Spike recoveries are evaluated on a separate form.)

Analytical Fraction		Outlier Criteria (for tabulation purposes only)			
Field dups C8255 & C8257		Relative standard deviation		Equivalent Relative Percent Difference	
		solid	aqueous	solid	aqueous
VOA		35.4%	23.3%	50%	33%
BNA		42.4%	28.3%	60%	40%
PEST		42.4%	28.3%	60%	40%

COMPOUND	CONCENTRATIONS						relative standard deviation or relative percent difference	concentration units	footnotes
	Analysis No.1		Analysis No.2		Analysis No.3				
	SAMPLE I.D.	CONC.	SAMPLE I.D.	CONC.	SAMPLE I.D.	CONC.			
Pentachlorophenol	C8255	1,800	C8257	6,000			107%	ug/L	#2
Acenaphthene		2,900		5,600			63%		#2
Fluoranthene		3,700		8,000			74%		#2
Naphthalene		7,200		15,000			70%		#2
N-nitrosodiphenylamine		304		760			86%		#2
Benzo(a)anthracene		520		1,200			79%		#2
Benzo(b)Fluoranthene		800		1,100			31%		#1
Chrysene		560		1,200			73%		#2
Acenaphthylene		392		400			2%		#1
Anthracene		880		2,000			78%		#2
Fluorene		2,800		5,600			67%		#2
Phenanthrene		8,000		13,000			47%		#2
Pyrene		2,600		5,200			67%		#2
Dibenzofuran		2,400		5,200			74%		#2
2-Methylnaphthalene		2,900		7,200			85%		#2
Benzene		5.3		4			28%		#1
Ethylbenzene		4.4		5			29%		#1
Toluene		5.8		5			15%		#1
Acetone		54		39			32%		#1
Styrene		2.8		4			3%		#3
Xylene	✓	6.5	✓	8			21%	✓	#1

#1 Within acceptable criteria

#2 The actual concentration may not be reflected as reported.

A better quantitation would be the average between the 2 field duplicates.

#3 Not significantly outside acceptable criteria.

100182

Duplicate/Triplicate Analysis of Non-Matrix Spiked (Indigenous) Compounds

Outliers are tabulated below for three types of multiple analyses:

(1) Field duplicates

(2) Un-spiked laboratory duplicates

(3) Matrix spike duplicate plus corresponding unspiked sample evaluated for non-matrix spiked (indigenous) compounds. (Spike recoveries are evaluated on a separate form.)

Analytical Fraction	Outlier Criteria (for tabulation purposes only)			
Field Dups C8256 + C8258	Relative standard deviation		Equivalent Relative Percent Difference	
	solid	aqueous	solid	aqueous
VOA	35.4%	23.3%	50%	33%
BNA	42.4%	28.3%	60%	40%
PEST	42.4%	28.3%	60%	40%

COMPOUND	CONCENTRATIONS						Relative standard deviation - or - relative percent difference	concentration units	footnotes
	Analysis No. 1		Analysis No. 2		Analysis No. 3				
	SAMPLE I.D.	CONC.	SAMPLE I.D.	CONC.	SAMPLE I.D.	CONC.			
2,4-dimethylphenol	C8256	0.67	C8258	6.3ns			161%	NG	#2
Pentachlorophenol		42,000,000		7,800,000			137%	ug/kg	#2
Phenol		N.D		240,000			200%	ug/kg	#2
2-Methylphenol		N.D		6.3ns			200%	NG	#2
4-Methylphenol		N.D		16.1ns			200%	NG	#2
Acenaphthene		10,000,000		10,000,000			0%	ug/kg	#1
Fluoranthene		13,000,000		16,000,000			21%		#1
Naphthalene		25,000,000		18,000,000			32%		#1
Benzo(a)anthracene		2,000,000		2,100,000			0%		#1
Benzo(a)Pyrene		—		6,700,000			200%		#2
Benzo(b)fluoranthene		—		1,800,000			200%		#2
Chrysene		2,200,000		2,300,000			0%	✓	#1
Acenaphthylene		7.7		14.6			62%	NG	#3
Anthracene		3,100,000		7,700,000			85%	ug/kg	#2
Fluorene		10,000,000		9,300,000			7.2%		#1
Phenanthrene		24,000,000		27,000,000			7.1%		#1
Pyrene		8,800,000		7,000,000			23%		#1
Di-benzofuran		8,500,000		6,700,000			24%		#1
2-Methylnaphthalene		9,800,000		8,000,000			21%		#1
Benzene		27,600		20,000			32%		#1
Ethylbenzene		410,000		79,000			135%		#2
Methylene Chloride		37,200		37,450			0%		#1
Toluene		130,000		59,000			75%		#2
Styrene		210,000		75,000			95%		#2
O-xylene	Y	330,000	Y	110,000			100%	Y	#2

EVALUATION OF CONFIRMATIONS OF GC ANALYSES

SAMPLE NO	COMPOUND	GC COLUMN #1				GC COLUMN #2				Comments	TYPE OF CONFIRMATION (2 COL / GC/MS)	REVIEWER CONFIDENT
		COLUMN: CONDITIONS: DETECTOR: OTHER:		DATA FROM COLUMN #1: RET. OR REL. RET. TIMES IN: RELATIVE PEAK AREA RATIOS		COLUMN: CONDITIONS: DETECTOR: OTHER:		DATA FROM COLUMN #2: RET. OR REL. RET. TIMES IN: RELATIVE PEAK AREA RATIOS				
		Sample	Standard	Sample	Standard	Sample	Standard	Sample	Standard			
C8262	PCB 1260	19:10	19:09	19	59	*	7:09	10	Quantitation is OK. (w/ these areas calculated 105, they reported 92 calculated from Cap column)	2C	Y	
		19:78	19:76	51	123	*	8:91	29				
		21:13	21:11	62	144	10:10	10:11	6				
		22:72	22:70	84	148	11:40	11:46	9				
		23:63	23:60	41	129	12:35	12:35	10				
		24:85	24:83	44	96	15:47	15:15	13				
		26:19	26:17	97	221	*	18:12	45				
		27:11	27:08	75	154	23:76	23:59	21				
		27:61	27:59	58	97							
		28:20	28:20	95	75							

100184

COMMENTS: * Large peak interfering w/ peak of interest.

QUANTITATIVE CALCULATIONS

CALCULATION ERRORS AND CORRECTED RESULTS ARE LISTED BELOW:

Sample C8256

BN compounds reported 10x too high!

CORRECTION FACTOR CALCULATION:

C8256

Final extraction volume(ml) $\frac{50 \text{ g}}{\text{Wet Weight Extracted (g)}} \times \text{Dilution Factor} \times \text{Dry Weight Factor} \times 40 =$

$\frac{5 \text{ ml}}{1.0 \text{ and } 0.5 \text{ ml}} \times \frac{50 \text{ g}}{50.6 \text{ (g)}} \times 1 \times 5.52 \times 40 =$

A = 220,000

B = 130,000

QUANT. REPORT AMOUNT SPIKED CONVERSION FACTOR:

$\frac{250 \text{ ul}}{\text{Amount Surrogate Added (ul)}} \times \frac{\text{Final Extract Vol. (ml)}}{\text{ml for Acid, 0.5ml for BN}} \times \text{Dilution Factor} =$

$\frac{250 \text{ ul}}{25 \text{ (ul)}} \times \frac{5 \text{ ml}}{1.0 \text{ and } 0.5 \text{ ml}} \times 1 =$

*For Advisory Purposes Only

Only BN's are affected.

Quantitation error

$654 \times 200 = 130,800$

They reported 1,300,000

BN's off by a factor of 10 - R

JRT 11/83

100185

QUANTITATIVE CALCULATIONS

CALCULATION ERRORS AND CORRECTED RESULTS ARE LISTED BELOW:

% BNAs In Duplicates C8256 & C8258

* -Dry weight.

Compound	C8256 Results(ppm)*	C8258 Results(ppm)
2,4-dimethylphenol	—	819 mg/kg
pentachlorophenol	42,000 mg/kg	7,800 mg/kg
phenol	—	240 mg/kg
2-methylphenol	—	819 mg/kg
4-methylphenol	—	260 mg/kg
Acenaphthene	10,000 mg/kg	10,000 mg/kg
fluoranthene	13,000 mg/kg	16,000 mg/kg
naphthalene	25,000 mg/kg	18,000 mg/kg
benzo(a)anthracene	2,000 mg/kg	2,100 mg/kg
benzo(a)pyrene	—	6,700 mg/kg
benzo(b+k)fluoranthene	—	1,800 mg/kg
chrysene	2,200 mg/kg	2,300 mg/kg
acenaphthylene	1,100 mg/kg	480 mg/kg
anthracene	3,100 mg/kg	7,700 mg/kg
fluorene	10,000 mg/kg	9,300 mg/kg
phenanthrene	29,000 mg/kg	27,000 mg/kg
pyrene	8,800 mg/kg	7,000 mg/kg
dibenzofuran	8,500 mg/kg	6,700 mg/kg
2-methylnaphthalene	9,800 mg/kg	8,000 mg/kg
* Total %	~ 16.5%	~ 13.3%

* This total percentage is for target compound BNA's only, this does not include VOA's or tentatively identified compounds

100186

QUANTITATIVE CALCULATIONS

CALCULATION ERRORS AND CORRECTED RESULTS ARE LISTED BELOW:

% BNA Results in Duplicates C 8255 & C 8257

C8255			C8257		
Compound	Results (ppm)	%	Compound	Result (ppm)	%
Pentachlorophenol	1.8 mg/L	0.00180	Pentachlorophenol	6.0 mg/L	0.000
Acenaphthene	2.9 mg/L	0.00029	Acenaphthene	5.6 mg/L	0.000
Fluoranthene	3.7 mg/L	0.00037	Fluoranthene	8.0 mg/L	0.000
Naphthalene	7.2 mg/L	0.00072	Naphthalene	15.0 mg/L	0.0015
N-nitrosodiphenylamine	—	—	N-nitrosodiphenylamine	0.76 mg/L	0.0000
Benzo(a)anthracene	0.52 mg/L	0.00052	Benzo(a)anthracene	1.2 mg/L	0.0001
Benzo(b)fluoranthene	0.80 mg/L	0.00080	Benzo(b)fluoranthene	1.1 mg/L	0.0001
Chrysene	0.56 mg/L	0.00056	Chrysene	1.2 mg/L	0.000
Acenaphthylene	0.39 mg/L	0.00039	Acenaphthylene	0.48 mg/L	0.000
Anthracene	0.88 mg/L	0.00088	Anthracene	2.0 mg/L	0.000
Fluorene	2.8 mg/L	0.0028	Fluorene	5.6 mg/L	0.0005
Phenanthrene	8.0 mg/L	0.0080	Phenanthrene	13.0 mg/L	0.001
Pyrene	2.6 mg/L	0.0026	Pyrene	5.2 mg/L	0.000
Dibenzofuran	2.4 mg/L	0.0024	Dibenzofuran	5.2 mg/L	0.005
2-Methyl-naphthalene	2.9 mg/L	0.0029	2-methyl-naphthalene	7.2 mg/L	0.000

* Total % 0.0038%

* Total 0.0071

* This total % is only Priority Pollutants not including VOA's or tentatively identified compounds

Average 0.0056%

100187

PROJECT NAME: Rentokil Inc.
TDD NO: F3-8402-20

EPA SITE NO.:
REGION: FT III

QUALITY ASSURANCE REVIEW OF
INORGANIC ANALYTICAL DATA PACKAGE

Case No.: 2521
Contract No.: 68-01-6617
Contract Laboratory: Cal Analytical
Applicable IFB No.: WA82-A072
Reviewer: Rock J. Vitale
Review Date: 12/7/84

Applicable Sample No's.:
MC3271 up to and including
MC3287

The inorganic analytical data for this case has been reviewed. The quality assurance evaluation is summarized in the following table:

Reviewer's Evaluation*	Fraction			
	TASK I ICP or AA METALS	TASK II FURNACE AA METALS	TASK II COLD VAPOR AA MERCURY	TASK III CYANIDE
Acceptable				
Acceptable with exception(s)	✓ #1, #3	✓ #1, #2, #3, #4	✓ #3	✓ #3
Questionable				
Unacceptable				

* Definitions of the evaluation score categories are listed on next page.

This evaluation was based upon an analysis of the review items indicated below:

- DATA COMPLETENESS
- BLANK ANALYSIS RESULTS
- MATRIX SPIKE RESULTS
- DUPLICATE ANALYSIS RESULTS
- STANDARD ADDITIONS RESULTS
- QUANTITATIVE CALCULATIONS
- INITIAL CALIBRATION VERIFICATION
- CONTINUING CALIBRATION VERIFICATION
- INTERFERENCE QC RESULTS
- DETECTION LIMITS RESULTS
- INSTRUMENT SENSITIVITY REPORTS

Data review forms are attached for each of the review items indicated above.

≠ No errors noted, no form attached.

● Spot Check performed.

Comments: #1 Please see blank analysis documentation
#2 Please see matrix spike recoveries
#3 Please see field duplicate analysis documentation
#4 Please see lab duplicate analysis documentation

100188

DATA EVALUATION SCORE CATEGORIES

ACCEPTABLE: Data is within established control limits, or the data which is outside established control limits does not affect the validity of the analytical results.

ACCEPTABLE WITH EXCEPTION(S): Data is not completely within established control limits. The deficiencies are identified and specific data is still valid, given certain qualifications which are listed below.

QUESTIONABLE: Data is not within established control limits. The deficiencies bring the validity of the entire data set into question. However, the data validity is neither proved nor disproved by the available information.

UNACCEPTABLE: Data is not within established control limits. The deficiencies imply the results are not meaningful.

DATA COMPLETENESS		CONC./ MATRIX	LO/AG	LO/AG	LO/AG	LO/AG	LO/AG	LO/AG	LO/AG	LO/AG	LO/AG	LO/AG	LO/AG	LO/AG	LO/AG	LO/AG	LO/AG
TRAFFIC REPORT # MC32			71	72	73	74	75	76	77	78	79	80	81	82	83	84	85
LAB I.D. # P6			72	73	74	75	76	77	78	79	80	81	82	83	84	85	86
FIELD QC	BLANK																
	DUPLICATE		✓											✓			
	SPIKE		✓											✓			
TASK I: ICAP OR AA: METALS	RAW DATA		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TAB. RESULTS		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TAB. D.L.'s		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	QA FORM		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	ICAP INTER. QC		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	INSTR. SENS.		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
TASK II: FURNACE AA: METALS	RAW DATA		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TAB. RESULTS		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TAB. D.L.'s		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	QA FORM		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	INSTR. SENS.		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
TASK II: COLD VAPOR AA: MERCURY	RAW DATA		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TAB. RESULTS		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TAB. D.L.'s		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	QA FORM		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	INSTR. SENS.		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
TASK III: CYANIDE	RAW DATA		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TAB. RESULTS		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TAB. D.L.'s		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	QA FORM		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	INSTR. SENS.		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
OTHER (SPECIFY):	RAW DATA																
	TAB. RESULTS																
	TAB. D.L.'s																
	QA FORM																
	INSTR. SENS.																
OTHER (SPECIFY):	RAW DATA																
	TAB. RESULTS																
	TAB. D.L.'s																
	QA FORM																
	INSTR. SENS.																

COMMENTS:

100190

DATA COMPLETENESS		CONC./ MATRIX	% AQ	% DOC	Prep 1	Prep 2														
		TRAFFIC REPORT #	MC	86	87															
		LAB I.D. #	86	87	88															
FIELD QC	BLANK		✓	✓	✓	✓														
	DUPLICATE																			
	SPIKE																			
TASK I: ICAP OR AA: METALS	RAW DATA		✓	✓	✓	✓														
	TAB. RESULTS		✓	✓	✓	✓														
	TAB. D.L.'s		✓	✓	✓	✓														
	QA FORM		✓	✓	✓	✓														
	ICAP INTER. QC		✓	✓	✓	✓														
	INSTR. SENS.		✓	✓	✓	✓														
TASK II: FURNACE AA: METALS	RAW DATA		✓	✓	✓	✓														
	TAB. RESULTS		✓	✓	✓	✓														
	TAB. D.L.'s		✓	✓	✓	✓														
	QA FORM		✓	✓	✓	✓														
	INSTR. SENS.		✓	✓	✓	✓														
TASK II: COLD VAPOR AA: MERCURY	RAW DATA		✓	✓	✓	✓														
	TAB. RESULTS		✓	✓	✓	✓														
	TAB. D.L.'s		✓	✓	✓	✓														
	QA FORM		✓	✓	✓	✓														
	INSTR. SENS.		✓	✓	✓	✓														
TASK III: CYANIDE	RAW DATA		✓	✓	✓	✓														
	TAB. RESULTS		✓	✓	✓	✓														
	TAB. D.L.'s		✓	✓	✓	✓														
	QA FORM.		✓	✓	✓	✓														
	INSTR. SENS.		✓	✓	✓	✓														
OTHER (SPECIFY):	RAW DATA																			
	TAB. RESULTS																			
	TAB. D.L.'s																			
	QA FORM																			
	INSTR. SENS.																			
OTHER (SPECIFY):	RAW DATA																			
	TAB. RESULTS																			
	TAB. D.L.'s																			
	QA FORM																			
	INSTR. SENS.																			

COMMENTS:

100191

BLANK ANALYSIS RESULTS

TASK	TYPE	CONC	MATRIX	SAMPLE #	SOURCE OF H ₂ O	CONTAMINANTS (CONCENTRATION / DETECTION LI)
TASK I	lab/lw/AQ		P BLK ₁	Cal		Zn (10 ug/L / 10) #1
TASK I	lab/lw/AQ		P. BLK ₂	Cal		Aluminum (44 ug/L / 200) #1 Chromium (6 ug/L / 10) #1 30 / 1.5
TASK I	Field/lw/AQ		P687 MC3286	NUS		Al (644 ug/L / 200) #1 3220 / 161 Ba (18 ug/L / 100) #1 90 / 4.5 Cu (7 ug/L / 50) #1 35 / 1.75 Mn (2 ug/L / 15) #1 Zn (41 ug/L / 10) #1 205 / 10.5 Fe (346 ug/L / 50) #1 1830 / 915
TASK I	Field/lw/sol		P688 MC3287	NUS		Zn (19 ug/L / 10) #1 Fe (38 ug/L / 50) #1 Al (178 ug/L / 200) #1 Ba (12 ug/L / 100) #1 Cr (3 ug/L / 10) #1 Pb (3.2 ug/L / 5) #1 As (3 ug/L / 10) #1
TASK II + III	lab/lw/AQ		P BLK ₁	Cal		
TASK II + III	lab/lw/AQ		P BLK ₂	Cal		Sn (3.2 ug/L / 20) #1 Sb (22 ug/L / 20) #1
TASK II + III	Field/lw/AQ		687 MC3286	NUS		Pb (6 ug/L / 5) #1 Sn (123 ug/L / 20) #1 As (28 ug/L / 10) #1 140 / 2.0 Sb (23 ug/L / 20) #1
TASK II + III	Field/lw/sol		688 MC3287	NUS		Pb (10.4 ug/L / 5) #1 52 / 2.6 Sn (153 ug/L / 20) #1 765 / 38 As (16 ug/L / 10) #1 Sb (24 ug/L / 20) #1 120 / 6.0

LABORATORY REPORTED FIELD BLANK DATA IS COMPARED WITH THE SAMPLE DATA IN A TABULATION FORM WITH SAMPLE ANALYTICAL DATA SUMMARY.

COMMENTS:

(1) RESULT REPORTED BY LABORATORY AND CONFIRMED BY REVIEWER.

(2) RESULT INFERRED FROM RAW DATA

MATRIX SPIKE RECOVERIES

Sample No.	MC 3272	MC 3283				
Field Spike						
Lab Spike	✓	✓				
Matrix	AQ	Solid				
Conc. Level	Low	Low				
Method Std.	✓	✓				
Fraction	All	All				

All matrix spike recoveries were within the established control ranges specified in; IFB WA82-A072, Exhibit E, Table 2. ✓ Yes

✓ Yes

No

Exception(s):

[illegible]

Comments: [1] Actual level of Pb may be slightly lower than reported
[2] Since none found in sample, no effect on data.

100193

Duplicate Analysis Results

The applicable duplicate pairs are:

sample no.	MC3272	MC3283				
Field duplicate						
Lab duplicate	✓	✓				
sample level	Low	Low				
sample matrix	AQ	AQ				
Fraction	All	All				

The relative percent difference (RPD) for each parameter group was evaluated. The duplicate analysis RPD acceptance criteria should be:

	<u>maximum acceptable</u>	AQUEOUS	20%
Fraction	Percent Difference	SOLID	40%

The RPD's exceeding the maximum acceptable percent difference were:

[illegible]

Comments: LI Not significantly out of acceptable criteria.

100194

Duplicate/Triplicate Analysis of Non-Matrix Spiked (Indigenous) Constituents

- (1) Field duplicates
- (2) Un-spiked laboratory duplicates
- (3) Matrix spike duplicate plus corresponding unspiked sample evaluated for non-matrix spiked (indigenous) constituents (Spike recoveries are evaluated on a separate form)

	Outlier Criteria (for tabulation purposes only)			
	Relative standard deviation		Equivalent Relative Percent Difference	
	solid	aqueous	solid	aqueous
MC-3279 - MC3281	40%	20%	50%	33%

Constituents	CONCENTRATIONS						relative standard deviation or relative percent difference	Concentration units	footnotes
	Analysis No. 1		Analysis No. 2		Analysis No. 3				
	SAMPLE I.D.	CONC.	SAMPLE I.D.	CONC.	SAMPLE I.D.	CONC.			
Aluminum	MC3274	750	MC3281	3900			135%	mg/kg	#3
Chromium		14		13			7.4%		#2
barium		1900		1900			—		#2
Copper		0		2.2			200%		#3
Iron		1600		3900			84%		#3
Nickel		0		2.2			200%		#3
Manganese		27		43			46%		#3
Zinc		90		70			25%		#2
Arsenic		5500		5500			—		#2
Antimony		22		3.2			149%		#3
Tin		1.4		0			200%		#4
Cadmium		0.10		0.08			22%		#2
Lead		7.5		0			200%		#3
Cyanide	✓	2.1	✓	0			200%	✓	#3

COMMENTS:

- #2 Within acceptable criteria
- #3 The reported concentrations may not reflect the average.
- #4 Questioned due to blank contamination.

106195

Duplicate/Triplicate Analysis of Non-Matrix Spiked (Indigenous) Constituents

- ✓ (1) Field duplicates
- (2) Un-spiked laboratory duplicates
- (3) Matrix spike duplicate plus corresponding unspiked sample evaluated for non-matrix spiked (indigenous) constituents (Spike recoveries are evaluated on a separate form)

		Outlier Criteria (for tabulation purposes only)			
		Relative standard deviation		Equivalent Relative Percent Difference	
		solid	aqueous	solid	aqueous
1 st	MC-3278 + MC3280				
2 nd	MC-3279 & MC3281	40%	20%	50%	33%

Constituents	CONCENTRATIONS						relative standard deviation - or - relative percent difference	concentration units	footnote
	Analysis No. 1		Analysis No. 2		Analysis No. 3				
	SAMPLE I.D.	CONC.	SAMPLE I.D.	CONC.	SAMPLE I.D.	CONC.			
Aluminum	MC3278	10,580	MC3280	15,580			41%	mg/L	#1
Chromium		46,580		69,580			40%		#1
Barium		140		230			32%		#2
Cobalt		0		67			200%		#3
Copper		31,000		44,000			17%		#2
Iron		16,000		23,000			36%		#1
Nickel		60		64			6.4%		#2
Manganese		1200		1700			34%		#1
Zinc		1200		2000			50%		#3
Arsenic		320,000		500,000			44%		#3
Antimony		250		510			87%		#1
Thallium		0		10			200%		#3
Mercury		0		0.6			200%		#3
Lead	Y	16	Y	0			200%	Y	#3

COMMENTS:

- #1 Not significantly out of acceptable Criteria
- #2 Within acceptable Criteria
- #3 The reported concentration may not reflect the average.
- #4 Questioned due to blank contamination.

100196

Dr. J. H. H. H. H.

2016/04

Abstract

#229A W4649/48-171

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— 100% — 100% — 100%

1992-1993

— 382 —

5

PROCEEDINGS OF THE

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100197

INTERFERENCE STANDARDS (ICP)

CASE NUMBER 2521

METALS	I.D. Before 12:50			ID AFTER 1:22			ID		
	FOUND	TRUE	% Rec	FOUND	TRUE	% Rec	FOUND	TRUE	% Rec
Aluminum	106,280	100,000	106%	107,280	100,000	107%			
Boron	1160	1000	116%	1120	1000	112%			
Barium	1029	1000	103%	997	1000	99.7%			
Beryllium	957	1000	95.7%	929	1000	92.9%			
Calcium	104,000	100,000	104%	105,000	100,000	105%			
Chromium	982	1000	98.2%	959	1000	95.9%			
Cobalt	993	1000	99.3%	969	1000	96.9%			
Copper	1125	1000	112.5%	1054	1000	105%			
Iron	521,900	500,000	104%	523,800	500,000	105%			
Magnesium	100,000	100,000	100%	99,600	100,000	99.6%			
Manganese	985	1000	98.5%	973	1000	97.3%			
Nickel	980	1000	98%	942	1000	94.2%			
Silver	—	—	—	—	—	—			
Sodium	104,630	100,000	104%	106,000	100,000	106%			
Vanadium	1035	1000	103%	984	1000	98.4%			
Zinc	1100	1000	110%	979	1000	97.9%			

Comments: All acceptable

100198

Detection Limits Results

Detection limits were reported for all samples analyzed: Yes ☒ No ☐

Exceptions: All detection limits reported.

Detection limits were less than or equal to the required detection limits specified in WA82-17072. Yes ☒ No ☐

Exceptions: All reported detection limits met by available instrumentation

Instrument Sensitivity Reports

Instrument sensitivity reports were documented for all parameters:

Yes ☒ No ☐

Comments: All absorbances/Intensities were reported by the Laboratory

Other Remarks Concerning this Case:

Transcription error for ICP metals in sample MC 3276.

100199

QUANTITATIVE CALCULATIONS

CALCULATION ERRORS AND CORRECTED RESULTS ARE LISTED BELOW:

mc 3276
R677

P 100 120598-04 Rev 1 29 MAR 84

SAMPLE	OPERATOR	PWR	TIME	NAME
14	0002	4	18:50:29	INORGANICS 11/83

EL	NH	CH	CONC	UNIT	SD	RSD	SEC
AL	308.22	A	384	PPB	29.8	4.35	2.0
AL	226.34	A	0.1d	PPM	0.00	0.000	1.0
CR	267.71	A	4d	PPB	4.7	78.33	2.0
BA	425.40	A	50%	PPB	1.2	4.00	2.0
FE	234.35	A	245	PPB	8.7	2.51	2.0
FE	273.48	A	-0.2d	PPM	0.23	115.00	1.0
BE	313.11	A	-7	PPB	1.2	120.00	2.0
CD	228.50	A	-2d	PPB	3.8	120.00	2.0
CO	220.79	A	6d	PPB	11.5	191.65	2.0
CU	227.40	A	-17	PPB	4.0	23.52	2.0
PB	220.35	A	-0.002d	REM	0.0448	2240.00	2.0
NI	231.40	A	1d	PPB	5.2	320.00	2.0
MN	257.61	A	22	PPB	0.7	3.18	2.0
MN	244.19	A	-1.4d	PPM	0.07	5.90	1.0
ZN	206.20	A	17d	PPB	1.2	7.95	1.0
ZN	217.06	A	5d	PPB	2.4	5.17	2.0
V	210.25	A	-8	PPB	2.1	38.53	2.0

Sec AA

Results for Ba, Al, Cr, & Mn incorrectly reported

	Reported	Actual
Aluminum	23,860 ug/l	684 ug/l
Barium	180 ug/l	<100 ug/l
Chromium	31 ug/l	<10 ug/l
Manganese	290 ug/l	22 ug/l

100200

ORIGINAL
(Red)

APPENDIX F

100201

C8248

F3-8402-20

CHECK LIST

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Head CompuChem
 Lab Sample ID No.: 22567
 Sample Matrix: Liquid
 Data Release Authorized By: Paul Ditt

Case Number: 2521
 QC Report No.:
 Contract No.: 68-01-6866
 Date Sample Received: 3-15-84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
 DATE EXTRACTED/PREPARED: 3-16-84
 DATE ANALYZED: 3-23-84
 PERCENT MOISTURE: NA

Multiply Detection limits by 1 ☐ or 10 ☐ or ☒ 2
 (Check Box for Appropriate Factor)

PP#	CAS#	ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6-trichlorophenol 10U
(22A)	59-50-7	p-chloro-m-cresol 20U
(24A)	95-57-8	2-chlorophenol 10U
(31A)	122-23-2	2,4-dichlorophenol 10U
(34A)	105-67-9	2,4-dichlorophenol 10U
(57A)	88-75-5	2-nitrophenol 20U
(58A)	100-02-7	4-nitrophenol 100U
(59A)	51-88-5	2,4-dinitrophenol 50U
(60A)	534-52-1	4,6-dinitro-2-methylphenol 20U
(64A)	87-36-5	pentachlorophenol 20U
(65A)	108-95-2	pentachlorophenol 10U
	65-85-0	benzoic acid 100U
	95-48-7	2-methylphenol 10U
	108-39-4	2-methylphenol 10U
	95-95-4	2,4,5-trichlorophenol 100U
(1B)	83-32-9	acetophenone 10U
(5B)	92-87-5	benzidine 40U
(8B)	120-82-1	1,2,4-trichlorobenzene 10U
(9B)	118-74-1	hexachlorobenzene 10U
(12B)	67-72-1	hexachloroethane 10U
(18B)	111-44-4	bis(2-chloroethyl)ether 10U
(20B)	91-58-7	2-chloronaphthalene 10U
(25B)	95-50-1	1,2-dichlorobenzene 10U
(26B)	541-73-1	1,3-dichlorobenzene 10U
(27B)	106-46-7	1,4-dichlorobenzene 10U
(28B)	91-94-1	3,3'-dichlorobenzidine 20U
(35B)	121-14-2	2,4-dinitrotoluene 20U
(36B)	606-20-2	2,6-dinitrotoluene 10U
(37B)	122-66-7	1,2-diphenylhydrazine 20U
(39B)	206-44-0	1,2-diphenylhydrazine 10U
(40B)	7005-72-3	4-chlorophenyl phenylether 10U
(41B)	101-55-3	4-bromophenyl phenyl ether 10U
(42B)	39638-32-9	bis-(2-chloroisopropyl)ether 10U
(43B)	111-91-1	bis-(2-chloroethoxy)methane 20U

PP#	CAS#	ug/l or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene 10U
(53B)	77-47-4	hexachlorocyclopentadiene 10U
(54B)	78-59-1	isophorone 10U
(55B)	91-20-3	isophorone 10U
(56B)	98-95-3	nitrobenzene 10U
(62B)	86-30-6	2-nitrophenol 10U
(63B)	621-64-7	N-nitrosodi-n-propylamine 20U
(66B)	117-81-7	bis(2-ethylhexyl)phthalate 10U
(67B)	85-68-7	butyl benzyl phthalate 10U
(68B)	84-74-2	di-n-butyl phthalate 10U
(69B)	117-84-0	di-n-butyl phthalate 10U
(70B)	84-66-2	diethyl phthalate 10U
(71B)	131-11-3	dimethyl phthalate 10U
(72B)	56-55-3	diethyl phthalate 10U
(73B)	50-33-8	diethyl phthalate 20U
(74B)	205-99-2	diethyl phthalate 20U
(75B)	207-08-9	diethyl phthalate 20U
(76B)	318-01-9	diethyl phthalate 10U
(77B)	208-96-8	diethyl phthalate 10U
(78B)	120-12-7	diethyl phthalate 10U
(79B)	181-24-2	diethyl phthalate 20U
(80B)	86-73-7	diethyl phthalate 10U
(81B)	85-01-8	diethyl phthalate 10U
(82B)	53-70-3	diethyl phthalate 20U
(83B)	183-39-5	diethyl phthalate 20U
(84B)	129-00-0	diethyl phthalate 10U
	62-53-3	aniline 10U
	100-51-6	benzyl alcohol 20U
	106-47-8	4-chloroaniline 50U
	132-64-9	diethyl phthalate 10U
	91-57-6	diethyl phthalate 20U
	88-74-4	2-nitroaniline 100U
	99-09-2	3-nitroaniline 100U
	100-01-6	4-nitroaniline 100U

AR100202

100202 1983

P3-8402-20

CHECK LIST
ORGANICS ANALYSIS DATA SHEET

C8248

Laboratory Name: CompuChem
 Lab Sample ID No: 22567
 Sample Matrix: Liquid
 Data Release Authorized By: Paul Hill

Case Number: 2521
 QC Report No.: _____
 Contract No.: 68-01-6866
 Date Sample Received: 3-15-84

VOLATILES

CONCENTRATION: LOW MEDIUM HIGH (circle one)
 DATE EXTRACTED/PREPARED: 3-13-84
 DATE ANALYZED: 3-16-84
 PERCENT MOISTURE: _____

Multiply Detection limits by 1 ☒ or ☐
 (Check Box for Appropriate Factor)

PP#	CAS#		ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	106-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	5U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	5U
(16V)	75-00-3	chloroethane	5U
(19V)	110-75-8	2-chloroethylvinyl ether	5U
(23V)	67-66-3	chloroform	5U
(29V)	75-35-2	1,1-dichloroethene	5U
(30V)	156-60-5	1,2-trans-dichloroethene	5U
(32V)	78-87-5	1,2-dichloropropane	5U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	10U
(38V)	100-41-4	vinylbenzene	5U
(44V)	75-09-2	methoxybenzene	5U
(45V)	74-87-3	chloromethane	5U
(46V)	74-83-9	bromomethane	5U
(47V)	75-25-2	bromoform	5U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorodichloromethane	5U
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	5U
(87V)	79-01-6	trichloroethene	5U
(88V)	75-01-4	vinyl chloride	5U
	67-64-1	benzene	100U
	78-93-3	2-butanone	200U
	75-15-0	carbonylsulfide	10U
	519-78-6	2-hexanone	100U
	108-10-1	4-methyl-2-pentanone	100U
	100-42-5	benzene	5U
	108-05-4	vinyl acetate	10U
	95-47-6	acrylonitrile	5U

PESTICIDES

CONCENTRATION: LOW MEDIUM HIGH (circle one)
 DATE EXTRACTED/PREPARED: 3-15-84
 DATE ANALYZED: 3-20-84
 PERCENT MOISTURE: _____

Multiply Detection limits by 1 ☒ or ☐
 (Check Box for Appropriate Factor)

PP#	CAS#		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	0.
(90P)	60-57-1	dieldrin	0.
(91P)	57-74-9	chlordane	0.
(92P)	50-29-3	4,4'-DDT	0.
(93P)	72-55-9	4,4'-DDE	0.
(94P)	72-54-8	4,4'-DDD	0.
(95P)	115-29-7	endosulfan I	0.
(96P)	115-29-7	endosulfan II	0.
(97P)	1031-07-8	endosulfan sulfate	0.
(98P)	78-20-8	endrin	0.
(99P)	7421-43-4	endrin aldehyde	0.
(100P)	76-44-8	heptachlor	0.
(101P)	1024-57-3	heptachlor epoxide	0.
(102P)	319-54-6	BHC-Alpha	0.
(103P)	319-85-7	BHC-Beta	0.
(104P)	319-86-8	BHC-Delta	0.
(105P)	58-89-9	BHC-Gamma	0.
(106P)	53469-21-9	PCB-1242	0.
(107P)	11097-69-7	PCB-1254	0.
(108P)	11104-28-2	PCB-1221	0.
(109P)	11141-16-5	PCB-1232	0.
(110P)	12672-29-6	PCB-1249	0.
(111P)	11096-82-5	PCB-1260	0.
(112P)	12674-11-2	PCB-1016	0.
(113P)	8001-35-2	toxaphene	0.

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
 DATE EXTRACTED/PREPARED: 3-15-84
 DATE ANALYZED: 3-19-84
 PERCENT MOISTURE: _____

(129B) 1746-01-6 2,3,7,8-tetrachlorodibenzo-p-dioxin

July

100203

Sample Number

C8248

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Mead CompuChem
Lab Sample ID No.: 22567
Sample Matrix: Liquid
Data Release Authorized By: Paul Neill

Case Number: 2521
QC Report No.:
Contract No.: 08-01-6866
Date Sample Received: 3-15-84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 3-16-84
DATE ANALYZED: 3-23-84
PERCENT MOISTURE: NR

Multiply Detection limits by 1 ☐ or 10 ☐ or ☒ 2
(Check Box for Appropriate Factor)

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

PP#	CASE#		<u>ug/l</u> or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene	10U
(53B)	77-47-4	hexachlorocyclopentadiene	10U
(54B)	78-59-1	isophorone	10U
(55B)	91-20-3	naphthalene	10U
(56B)	98-95-3	nitrobenzene	10U
(62B)	86-30-6	N-nitrosodiphenylamine	10U
(63B)	621-64-7	N-nitrosodi-n-propylamine	20U
(66B)	117-81-7	bis(2-ethylhexyl)phthalate	10U
(67B)	85-68-7	butyl benzyl phthalate	10U
(68B)	84-74-2	di-n-butyl phthalate	10U
(69B)	117-84-0	di-n-octyl phthalate	10U
(70B)	84-66-2	diethyl phthalate	10U
(71B)	131-11-3	dimethyl phthalate	10U
(72B)	56-55-3	benzo(a)anthracene	10U
(73B)	50-33-8	benzo(a)pyrene	20U
(74B)	205-99-2	benzo(b)fluoranthene	20U
(75B)	207-08-9	benzo(k)fluoranthene	20U
(76B)	318-01-9	chrysene	10U
(77B)	208-96-8	acenaphthylene	10U
(78B)	120-12-7	anthracene	10U
(79B)	181-24-2	benzo(ghi)perylene	20U
(80B)	86-73-7	fluorene	10U
(81B)	85-01-8	phenanthrene	10U
(82B)	53-70-3	dibenzo(a,h)anthracene	20U
(83B)	183-39-5	Indeno(1,2,3-cd)pyrene	20U
(84B)	129-00-0	pyrene	10U
	62-53-3	aniline	10U
	100-51-6	benzyl alcohol	20U
	106-47-8	4-chloroaniline	50U
	132-64-9	dibenzofuran	10U
	91-57-6	2-methylnaphthalene	20U
	88-74-4	2-nitroaniline	100U
	99-09-2	3-nitroaniline	100U
	100-01-6	4-nitroaniline	100U

100204

July, 1983

C8248

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: CompuChem
Lab Sample ID No: 22567
Sample Matrix: Liquid
Data Release Authorized By: Paul Hill

Case Number 2521
QC Report No. _____
Contract No.: 68-01-6866
Date Sample Received: 3-15-84

VOLATILES

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 3-13-84
DATE ANALYZED: 3-16-84
PERCENT MOISTURE: _____

Multiply Detection Limits by 1 ☒ or ☐
(Check Box for Appropriate Factor)

PP#	CAS#	NAME	ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	5U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	5U
(16V)	75-00-3	chloroethane	5U
(19V)	110-75-8	2-chloroethylvinyl ether	5U
(23V)	67-66-3	chloroform	5U
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	1,2-trans-dichloroethene	5U
(32V)	78-87-5	1,2-dichloropropane	5U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	10U
(38V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	5U
(45V)	74-87-3	chloromethane	5U
(46V)	74-83-9	bromomethane	5U
(47V)	75-25-2	bromoform	5U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	5U
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	5U
(87V)	79-01-6	trichloroethene	5U
(88V)	75-01-4	vinyl chloride	5U
	67-64-1	acetone	100U
	78-93-3	2-butanone	200U
	75-15-0	carbonyl sulfide	10U
	519-78-6	2-hexanone	100U
	108-10-1	4-methyl-2-pentanone	100U
	100-42-5	styrene	5U
	108-05-4	vinyl acetate	10U
	95-47-6	o-xylene	5U

PESTICIDES

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 3-15-84
DATE ANALYZED: 3-20-84
PERCENT MOISTURE: _____

Multiply Detection Limits by 1 ☒ or ☐
(Check Box for Appropriate Factor)

PP#	CAS#	NAME	ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	0.1U
(90P)	50-57-1	dieldrin	0.1U
(91P)	57-74-9	chlordane	0.1U
(92P)	50-29-3	4,4'-DDT	0.1U
(93P)	72-55-9	4,4'-DDE	0.1U
(94P)	72-54-8	4,4'-DDD	0.1U
(95P)	115-29-7	endosulfan I	0.1U
(96P)	115-29-7	endosulfan II	0.1U
(97P)	1031-07-8	endosulfan sulfate	0.1U
(98P)	78-20-8	endrin	0.1U
(99P)	7421-43-4	endrin aldehyde	0.1U
(100P)	76-44-8	heptachlor	0.1U
(101P)	1024-57-3	heptachlor epoxide	0.1U
(102P)	519-84-6	BHC-Alpha	0.1U
(103P)	519-85-7	BHC-Beta	0.1U
(104P)	519-86-8	BHC-Delta	0.1U
(105P)	58-89-9	BHC-Gamma	0.1U
(106P)	53469-21-9	PCB-1242	0.1U
(107P)	1097-69-7	PCB-1254	0.1U
(108P)	11104-28-2	PCB-1221	0.1U
(109P)	1141-16-5	PCB-1232	0.1U
(110P)	12672-29-6	PCB-1248	0.1U
(111P)	1096-82-5	PCB-1260	0.1U
(112P)	12674-11-2	PCB-1016	0.1U
(113P)	3001-35-2	toxaphene	0.1U

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 3-15-84
DATE ANALYZED: 3-19-84
PERCENT MOISTURE: _____

PP#	CAS#	NAME	ug/l or ug/kg (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	0.004

July, 19

100205

Sample Number

C8249

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Head CompuChem
Lab Sample ID No.: 22574
Sample Matrix: Liquid
Data Release Authorized By: Paul Murphy

Case Number: 2521
QC Report No.:
Contract No.: 68-01-6762
Date Sample Received: 3-15-84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 3-16-84
DATE ANALYZED: 3-23-84
PERCENT MOISTURE: AK

Multiply Detection limits by 1 ☐ or 10 ☐ or ☒ 2.4
(Check Box for Appropriate Factor)

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

PP#	CASE#		ug/l or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene	10U
(53B)	77-47-4	hexachlorocyclopentadiene	10U
(54B)	78-59-1	isophorone	10U
(55B)	91-20-3	naphthalene	10U
(56B)	98-95-3	nitrobenzene	10U
(62B)	86-30-6	N-nitrosodiphenylamine	10U
(63B)	621-64-7	N-nitrosodi-n-propylamine	20U
(66B)	117-81-7	bis(2-ethylhexyl)phthalate	10U
(67B)	83-68-7	butyl benzyl phthalate	10U
(68B)	84-74-2	di-n-butyl phthalate	10U
(69B)	117-84-1	di-n-octyl phthalate	10U
(70B)	84-66-2	diethyl phthalate	10U
(71B)	131-11-3	dimethyl phthalate	10U
(72B)	56-55-3	benzo(a)anthracene	10U
(73B)	50-33-8	benzo(a)pyrene	20U
(74B)	205-99-2	benzo(b)fluoranthene	20U
(75B)	207-08-9	benzo(k)fluoranthene	20U
(76B)	318-01-9	chrysene	10U
(77B)	208-96-8	acenaphthylene	10U
(78B)	120-12-7	anthracene	10U
(79B)	181-24-2	benzo(ghi)perylene	20U
(80B)	86-73-7	fluorene	10U
(81B)	85-01-8	phenanthrene	10U
(82B)	53-70-3	dibenzo(a,h)anthracene	20U
(83B)	183-39-5	indeno(1,2,3-cd)pyrene	20U
(84B)	129-00-0	pyrene	10U
	62-53-3	aniline	10U
	100-51-6	benzyl alcohol	20U
	106-47-8	4-chloroaniline	50U
	132-64-9	dibenzofuran	10U
	91-57-6	2-methylnaphthalene	20U
	88-74-4	2-nitroaniline	100U
	99-09-2	3-nitroaniline	100U
	100-01-6	4-nitroaniline	100U

100206

July, 1983

C8249

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: CompuChem
Lab Sample ID No: 22574
Sample Matrix: Liquid
Data Release Authorized By: Paul M. M.

Case Number 2521
QC Report No. _____
Contract No.: 68 01-6762
Date Sample Received: 3-15-84

VOLATILES

CONCENTRATION: LOW MEDIUM HIGH (circle)

DATE EXTRACTED/PREPARED: 3-17-84

DATE ANALYZED: 3-20-84

PERCENT MOISTURE: NR

Multiply Detection limits by 1 ☐ or ☒ _____
(Check Box for Appropriate Factor)

PP#	CAS#	Chemical Name	ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	5U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	5U
(16V)	75-00-3	chloroethane	5U
(19V)	110-73-8	2-chloroethylvinyl ether	5U
(23V)	67-66-3	chloroform	5U
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	1,2-trans-dichloroethene	5U
(32V)	78-87-5	1,2-dichloropropane	5U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	10U
(38V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	5U
(45V)	74-87-3	chloromethane	5U
(46V)	74-83-9	bromomethane	5U
(47V)	75-25-2	bromoform	5U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	5U
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	5U
(87V)	79-01-6	trichloroethene	5U
(88V)	75-01-4	vinyl chloride	5U
	67-64-1	acetone	100U
	78-93-3	2-butanone	200U
	75-15-0	carbonylsulfide	10U
	519-78-6	2-hexanone	100U
	108-10-1	4-methyl-2-pentanone	100U
	100-42-5	styrene	5U
	108-05-4	vinyl acetate	10U
	95-47-6	o-xylene	5U

PESTICIDES

CONCENTRATION: LOW MEDIUM HIGH (circle one)

DATE EXTRACTED/PREPARED: 3-15-84

DATE ANALYZED: 3-17-84

PERCENT MOISTURE: NR

Multiply Detection limits by 1 ☒ or ☐ _____
(Check Box for Appropriate Factor)

PP#	CAS#	Chemical Name	ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	0.1U
(90P)	60-57-1	dieldrin	0.1U
(91P)	57-74-9	chlordane	0.1U
(92P)	50-29-3	4,4'-DDT	0.1U
(93P)	12-55-9	4,4'-DDE	0.1U
(94P)	12-54-8	4,4'-DDD	0.1U
(95P)	115-29-7	endosulfan I	0.1U
(96P)	115-29-7	endosulfan II	0.1U
(97P)	1031-07-8	endosulfan sulfate	0.1U
(98P)	78-20-8	endrin	0.1U
(99P)	1421-43-4	endrin aldehyde	0.1U
(100P)	76-44-8	heptachlor	0.1U
(101P)	1024-57-3	heptachlor epoxide	0.1U
(102P)	319-84-6	BHC-Alpha	0.1U
(103P)	319-85-7	BHC-Beta	0.1U
(104P)	319-86-8	BHC-Delta	0.1U
(105P)	58-89-9	BHC-Gamma	0.1U
(106P)	53469-21-9	PCB-1242	0.1U
(107P)	11097-69-7	PCB-1254	0.1U
(108P)	11104-28-2	PCB-1221	0.1U
(109P)	11141-16-5	PCB-1232	0.1U
(110P)	12672-29-6	PCB-1248	0.1U
(111P)	11096-82-5	PCB-1260	0.1U
(112P)	12674-11-2	PCB-1016	0.1U
(113P)	8001-35-2	toxaphene	0.1U

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle)

DATE EXTRACTED/PREPARED: 3-15-84

DATE ANALYZED: 3-17-84

PERCENT MOISTURE: NR

PP#	CAS#	Chemical Name	ug/l or ug/kg (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	0.004U

July, 198

100207

Sample Number

C8250

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Head CompuChem
Lab Sample ID No.: 22575
Sample Matrix: Liquid
Data Release Authorized By: [Signature]

Case Number: 2521
QC Report No.: _____
Contract No.: 68-01-6262
Date Sample Received: 3/15/84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: (LO) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 3/16/84
DATE ANALYZED: 3/23/84
PERCENT MOISTURE: MB

Multiply Detection limits by 1 ☐ or 10 ☐ or ☒ 2
(Check Box for Appropriate Factor)

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

PP#	CAS#	ug/l or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene 10U
(53B)	77-47-4	hexachlorocyclopentadiene 10U
(54B)	78-59-1	isophorone 10U
(55B)	91-20-3	naphthalene 10U
(56B)	98-95-3	nitrobenzene 10U
(62B)	86-30-6	N-nitrosodiphenylamine 10U
(63B)	621-64-7	N-nitrosodi-n-propylamine 20U
(66B)	117-81-7	bis(2-ethylhexyl)phthalate 10U
(67B)	85-68-7	butyl benzyl phthalate 10U
(68B)	84-74-2	di-n-butyl phthalate 10U
(69B)	117-84-0	di-n-octyl phthalate 10U
(70B)	84-66-2	diethyl phthalate 10U
(71B)	131-11-3	dimethyl phthalate 10U
(72B)	56-55-3	benzo(a)anthracene 10U
(73B)	50-33-8	benzo(a)pyrene 20U
(74B)	205-99-2	benzo(b)fluoranthene 20U
(75B)	207-08-9	benzo(k)fluoranthene 20U
(76B)	318-01-9	chrysene 10U
(77B)	208-96-8	acenaphthylene 10U
(78B)	120-12-7	anthracene 10U
(79B)	181-24-2	benzo(ghi)perylene 20U
(80B)	86-73-7	fluorene 10U
(81B)	85-01-8	phenanthrene 10U
(82B)	53-70-3	dibenzo(a,h)anthracene 20U
(83B)	183-39-5	indeno(1,2,3-cd)pyrene 20U
(84B)	129-00-0	pyrene 10U
	62-53-3	aniline 10U
	100-51-6	benzyl alcohol 20U
	106-47-8	4-chloroaniline 50U
	132-64-9	dibenzofuran 10U
	91-57-6	2-methylnaphthalene 20U
	88-74-4	2-nitroaniline 100U
	99-09-2	3-nitroaniline 100U
	100-01-6	4-nitroaniline 100U

100208

July, 1983

C8250

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: CompuChem
Lab Sample ID No: 28575
Sample Matrix: Liquid
Date Release Authorized By: Paul N. [Signature]

Case Number 2521
QC Report No. _____
Contract No.: 68-01-6762
Date Sample Received: 2-15-84

VOLATILES

CONCENTRATION: LOW MEDIUM HIGH (circle)
DATE EXTRACTED/PREPARED: 3-13-84
DATE ANALYZED: 3-20-84
PERCENT MOISTURE: _____

PESTICIDES

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 3-15-84
DATE ANALYZED: 3-20-84
PERCENT MOISTURE: _____

Multiply Detection limits by 1 ☐ or ☒ L
(Check Box for Appropriate Factor)

PP#	CAS#	ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein 100U
(3V)	107-13-1	acrylonitrile 100U
(4V)	71-43-2	benzene 5U
(6V)	56-23-5	carbon tetrachloride 5U
(7V)	108-90-7	chlorobenzene 5U
(10V)	107-06-2	1,2-dichloroethane 5U
(11V)	71-55-6	1,1,1-trichloroethane 5U
(13V)	75-34-3	1,1-dichloroethane 5U
(14V)	79-00-5	1,1,2-trichloroethane 5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane 5U
(16V)	75-00-3	chloroethane 5U
(19V)	110-75-8	2-chloroethylvinyl ether 5U
(23V)	67-66-3	chloroform 5U
(29V)	75-35-4	1,1-dichloroethene 5U
(30V)	156-60-5	1,2-trans-dichloroethene 5U
(32V)	78-87-5	1,2-dichloropropane 5U
(33V)	10061-02-6	trans-1,3-dichloropropene 5U
	10061-01-05	cis-1,3-dichloropropene 10U
(38V)	100-41-4	ethylbenzene 5U
(44V)	75-09-2	methylene chloride 5U
(45V)	74-87-3	chloromethane 5U
(46V)	74-83-9	bromomethane 5U
(47V)	75-25-2	bromoform 5U
(48V)	75-27-4	bromodichloromethane 5U
(49V)	75-69-4	fluorotrichloromethane 5U
(51V)	124-48-1	chlorodibromomethane 5U
(85V)	127-18-4	tetrachloroethene 5U
(86V)	108-88-3	toluene 5U
(87V)	79-01-6	trichloroethene 5U
(88V)	75-01-4	vinyl chloride 5U
	67-64-1	acetone 100U
	78-93-3	2-butanone 200U
	75-15-0	carbonyl sulfide 10U
	519-78-6	2-hexanone 100U
	108-10-1	4-methyl-2-pentanone 100U
	100-42-5	styrene 5U
	108-05-4	vinyl acetate 10U
	95-47-6	o-xylene 5U

Multiply Detection limits by 1 ☒ or ☐
(Check Box for Appropriate Factor)

PP#	CAS#	ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin 0.1U
(90P)	60-57-1	dieldrin 0.1U
(91P)	57-74-9	chlordane 0.1U
(92P)	50-29-3	4,4'-DDT 0.1U
(93P)	72-55-9	4,4'-DDE 0.1U
(94P)	72-54-8	4,4'-DDD 0.1U
(95P)	115-29-7	endosulfan I 0.1U
(96P)	115-29-7	endosulfan II 0.1U
(97P)	1031-07-8	endosulfan sulfate 0.1U
(98P)	78-20-8	endrin 0.1U
(99P)	7421-43-4	endrin aldehyde 0.1U
(100P)	76-44-8	heptachlor 0.1U
(101P)	1024-57-3	heptachlor epoxide 0.1U
(102P)	319-84-6	BHC-Alpha 0.1U
(103P)	319-85-7	BHC-Beta 0.1U
(104P)	319-86-8	BHC-Delta 0.1U
(105P)	58-89-9	BHC-Gamma 0.1U
(106P)	53469-21-9	PCB-1242 0.1U
(107P)	11097-69-7	PCB-1254 0.1U
(108P)	1104-28-2	PCB-1221 0.1U
(109P)	11141-16-5	PCB-1232 0.1U
(110P)	12672-29-6	PCB-1248 0.1U
(111P)	11096-82-5	PCB-1260 0.1U
(112P)	12674-11-2	PCB-1016 0.1U
(113P)	8001-35-2	toxaphene 0.1U

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle)
DATE EXTRACTED/PREPARED: 3-15-84
DATE ANALYZED: 3-19-84
PERCENT MOISTURE: _____

PP#	CAS#	ug/l or ug/kg (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin 0.004U

July, 1983

100209

Sample Number

C 8251

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Mead CompuChem
Lab Sample ID No.: 22576
Sample Matrix: Liquid
Data Release Authorized By: (signature)

Case Number: 2521
QC Report No.: _____
Contract No.: 68-01-6762
Date Sample Received: 3/15/84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 3/15/84
DATE ANALYZED: 3/20/84
PERCENT MOISTURE: NK

Multiply Detection limits by 1 ☐ or 10 ☐ or ☒ 2
(Check Box for Appropriate Factor)

PP#	CAS#	<u>ug/l</u> or ug/kg (circle one)	PP#	CAS#	<u>ug/l</u> or ug/kg (circle one)		
(21A)	88-06-2	2,4,6-trichlorophenol	10U	(52B)	87-68-3	hexachlorobutadiene	10U
(22A)	59-50-7	p-chloro-m-cresol	20U	(53B)	77-47-4	hexachlorocyclopentadiene	10U
(24A)	95-57-8	2-chlorophenol	10U	(54B)	78-59-1	isophorone	10U
(31A)	122-83-2	2,4-dichlorophenol	10U	(55B)	91-20-3	naphthalene	10U
(34A)	105-67-9	2,4-dimethylphenol	10U	(56B)	98-95-3	nitrobenzene	10U
(57A)	88-75-5	2-nitrophenol	20U	(62B)	86-30-6	N-nitrosodiphenylamine	10U
(58A)	100-02-7	4-nitrophenol	100U	(63B)	621-64-7	N-nitrosodi-n-propylamine	20U
(59A)	51-88-5	2,4-dinitrophenol	50U	(66B)	117-81-7	bis(2-ethylhexyl)phthalate	10U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	20U	(67B)	85-68-7	butyl benzyl phthalate	10U
(64A)	87-36-5	pentachlorophenol	20U	(68B)	84-74-2	di-n-butyl phthalate	10U
(65A)	108-95-2	phenol	10U	(69B)	117-84-0	di-n-octyl phthalate	LT 10U
	65-85-0	benzoic acid	100U	(70B)	84-66-2	diethyl phthalate	10U
	95-48-7	2-methylphenol	10U	(71B)	131-11-3	dimethyl phthalate	10U
	108-39-4	4-methylphenol	10U	(72B)	56-55-3	benzo(a)anthracene	10U
	95-95-4	2,4,5-trichlorophenol	100U	(73B)	50-35-8	benzo(a)pyrene	20U
(1B)	83-32-9	acenaphthene	10U	(74B)	205-99-2	benzo(b)fluoranthene	20U
(5B)	92-87-5	benzidine	40U	(75B)	207-08-9	benzo(k)fluoranthene	20U
(8B)	120-82-1	1,2,4-trichlorobenzene	10U	(76B)	318-01-9	chrysene	10U
(9B)	118-74-1	hexachlorobenzene	10U	(77B)	208-96-8	acenaphthylene	10U
(12B)	67-72-1	hexachloroethane	10U	(78B)	120-12-7	anthracene	10U
(18B)	111-44-4	bis(2-chloroethyl)ether	10U	(79B)	181-24-2	benzo(ghi)perylene	20U
(20B)	91-58-7	2-chloronaphthalene	10U	(80B)	86-73-7	fluorene	10U
(25B)	95-50-1	1,2-dichlorobenzene	10U	(81B)	85-01-8	phenanthrene	10U
(26B)	541-73-1	1,3-dichlorobenzene	10U	(82B)	53-70-3	dibenzo(a,h)anthracene	20U
(27B)	106-46-7	1,4-dichlorobenzene	10U	(83B)	183-39-3	indeno(1,2,3-cd)pyrene	20U
(28B)	91-94-1	3,3'-dichlorobenzidine	20U	(84B)	129-00-0	pyrene	10U
(35B)	121-14-2	2,4-dinitrotoluene	20U		62-53-3	aniline	10U
(36B)	606-20-2	2,6-dinitrotoluene	10U		100-51-6	benzyl alcohol	20U
(37B)	122-66-7	1,2-diphenylhydrazine	20U		106-47-8	4-chloroaniline	50U
(39B)	206-44-0	fluorethene	10U		132-64-9	dibenzofuran	10U
(40B)	7005-72-3	4-chlorophenyl phenylether	10U		91-57-6	2-methylnaphthalene	20U
(41B)	101-55-3	4-bromophenyl phenyl ether	10U		88-74-4	2-nitroaniline	100U
(42B)	39638-32-9	bis-(2-chloroisopropyl)ether	10U		99-09-2	3-nitroaniline	100U
(43B)	111-91-1	bis-(2-chloroethoxy)methane	20U		100-01-6	4-nitroaniline	100U

100210

July, 1983

C8251

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: CompuChem
Lab Sample ID No: 22576
Sample Matrix: Liquid
Data Release Authorized By: Paul Vetter

Case Number 2521
QC Report No. _____
Contract No.: 68-01-6762
Date Sample Received: 3/15/84

VOLATILES

PESTICIDES

CONCENTRATION: LOW MEDIUM HIGH (circle)
DATE EXTRACTED/PREPARED: 3/13/84
DATE ANALYZED: 3/20/84
PERCENT MOISTURE: _____

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 3/15/84
DATE ANALYZED: 3/20/84
PERCENT MOISTURE: _____

Multiply Detection Limits by 1 ☒ or ☐
(Check Box for Appropriate Factor)

Multiply Detection Limits by 1 ☒ or ☐
(Check Box for Appropriate Factor)

PP#	CAS#	Chemical Name	ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	5U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	5U
(16V)	75-00-3	chloroethane	5U
(19V)	110-75-8	2-chloroethylvinyl ether	5U
(23V)	67-66-3	chloroform	5U
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	1,2-trans-dichloroethene	5U
(32V)	78-87-5	1,2-dichloropropene	5U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	10U
(38V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	5U
(45V)	74-87-3	chloromethane	5U
(46V)	74-83-9	bromomethane	5U
(47V)	75-25-2	bromoform	5U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	5U
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	5U
(87V)	79-01-6	trichloroethene	5U
(88V)	75-01-4	vinyl chloride	5U
	67-64-1	acetone	100U
	78-93-3	2-butanone	200U
	75-15-0	carbonylsulfide	10U
	519-78-6	2-hexanone	100U
	108-10-1	4-methyl-2-pentanone	100U
	100-42-5	styrene	5U
	108-05-4	vinyl acetate	10U
	95-47-6	o-xylene	5U

PP#	CAS#	Chemical Name	ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	0.1U
(90P)	50-57-1	dieldrin	0.1U
(91P)	57-74-9	chlordane	0.1U
(92P)	56-29-3	4,4'-DDT	0.1U
(93P)	72-55-9	4,4'-DDE	0.1U
(94P)	72-54-8	4,4'-DDD	0.1U
(95P)	115-29-7	endosulfan I	0.1U
(96P)	115-29-7	endosulfan II	0.1U
(97P)	1031-07-8	endosulfan sulfate	0.1U
(98P)	78-20-8	endrin	0.1U
(99P)	7421-43-4	endrin aldehyde	0.1U
(100P)	76-44-8	heptachlor	0.1U
(101P)	1024-57-3	heptachlor epoxide	0.1U
(102P)	319-84-6	BHC-Alpha	0.1U
(103P)	319-85-7	BHC-Beta	0.1U
(104P)	319-86-8	BHC-Delta	0.1U
(105P)	58-89-9	BHC-Gamma	0.1U
(106P)	53469-21-9	PCB-1242	0.1U
(107P)	11097-69-7	PCB-1254	0.1U
(108P)	11104-28-2	PCB-1221	0.1U
(109P)	11141-16-5	PCB-1232	0.1U
(110P)	12672-29-6	PCB-1248	0.1U
(111P)	11096-82-5	PCB-1260	0.1U
(112P)	12674-11-2	PCB-1016	0.1U
(113P)	8001-35-2	toxaphene	0.1U

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle)
DATE EXTRACTED/PREPARED: 3/15/84
DATE ANALYZED: 3/19/84
PERCENT MOISTURE: _____

PP#	CAS#	Chemical Name	ug/l or ug/kg (circle one)
(1298)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	0.00U

July, 19

100211

08252

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Mead CompuChem
 Lab Sample ID No.: 22583R
 Sample Matrix: Solid
 Data Release Authorized By: 88

Case Number: 2521
 QC Report No.:
 Contract No.: 68-01-6762
 Date Sample Received: 3-15-84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
 DATE EXTRACTED/PREPARED: 3-15-84
 DATE ANALYZED: 3-19-84
 PERCENT MOISTURE: 1.36 Factor = 2690

Multiply Detection Limits by 1 ☐ or 10 ☐ or ☒ 54
 (Check Box for Appropriate Factor)

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

PP#	CAS#	ug/l or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene 10U
(53B)	77-47-4	hexachlorocyclopentadiene 10U
(54B)	78-59-1	isophorone 10U
(55B)	91-20-3	naphthalene 10U
(56B)	98-95-3	nitrobenzene 10U
(62B)	86-30-6	N-nitrosodiphenylamine 10U
(63B)	621-64-7	N-nitrosodi-n-propylamine 20U
(66B)	117-81-7	bis(2-ethylhexyl)phthalate 10U
(67B)	85-68-7	butyl benzyl phthalate 10U
(68B)	84-74-2	di-n-butyl phthalate 10U
(69B)	117-84-0	di-n-octyl phthalate 10U
(70B)	84-66-2	diethyl phthalate 10U
(71B)	131-11-3	dimethyl phthalate 10U
(72B)	56-55-3	benzo(a)anthracene 10U
(73B)	50-33-8	benzo(a)pyrene 20U
(74B)	205-99-2	benzo(b)fluoranthene 20U
(75B)	207-08-9	benzo(k)fluoranthene 20U
(76B)	318-01-9	chrysene 10U
(77B)	208-96-8	acenaphthylene 10U
(78B)	120-12-7	anthracene 10U
(79B)	181-24-2	benzo(ghi)perylene 20U
(80B)	86-73-7	fluorene 10U
(81B)	85-01-8	phenanthrene 10U
(82B)	53-70-3	dibenzo(a,h)anthracene 20U
(83B)	183-39-5	indeno(1,2,3-cd)pyrene 20U
(84B)	129-00-0	pyrene 10U
	62-53-3	aniline 10U
	100-51-6	benzyl alcohol 20U
	106-47-8	4-chloroaniline 50U
	132-64-9	dibenzofuran 10U
	91-57-6	2-methylnaphthalene 20U
	88-74-4	2-nitroaniline 100U
	99-09-2	3-nitroaniline 100U
	100-01-6	4-nitroaniline 100U

July, 1983

100212

C8252

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: CompuChem
Lab Sample ID No: 22582
Sample Matrix: Solid
Data Release Authorized By: 178

Case Number 2521
QC Report No. _____
Contract No.: 68-01-6762
Date Sample Received: 3-15-84

VOLATILES

CONCENTRATION: LOW MEDIUM HIGH (circle)

DATE EXTRACTED/PREPARED: 3-15-84

DATE ANALYZED: 3-19-84

PERCENT MOISTURE: 1.36 Factor = 26%

Multiply Detection limits by 1 ☐ or ☒ 1.2
(Check Box for Appropriate Factor)

PP#	CAS#	ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein 50U
(3V)	107-13-1	acrylonitrile 50U
(4V)	71-43-2	benzene 2.5U
(6V)	56-23-5	carbon tetrachloride 2.5U
(7V)	108-90-7	chlorobenzene 2.5U
(10V)	107-06-2	1,2-dichloroethane 2.5U
(11V)	71-55-6	1,1,1-trichloroethane 2.5U
(13V)	75-34-3	1,1-dichloroethane 2.5U
(14V)	79-00-5	1,1,2-trichloroethane 2.5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane 2.5U
(16V)	75-00-3	chloroethane 2.5U
(19V)	110-75-8	2-chloroethylvinyl ether 2.5U
(23V)	67-66-3	chloroform 2.5U
(29V)	75-35-4	1,1-dichloroethene 2.5U
(30V)	156-60-5	1,2-trans-dichloroethene 2.5U
(32V)	78-87-5	1,2-dichloropropane 2.5U
(33V)	10061-02-6	trans-1,3-dichloropropene 2.5U
	10061-01-05	cis-1,3-dichloropropene 5U
(38V)	100-41-4	ethylbenzene 2.5U
(44V)	75-09-2	methylene chloride 43-2.5U and
(45V)	74-87-3	chloromethane 2.5U
(46V)	74-83-9	bromomethane 2.5U
(47V)	75-25-2	bromoform 2.5U
(48V)	75-27-4	bromodichloromethane 2.5U
(49V)	75-69-4	fluorotrichloromethane 4-2.5U and
(51V)	124-48-1	chlorodibromomethane 2.5U
(85V)	127-18-4	tetrachloroethene 2.5U
(86V)	108-88-3	toluene 2.5U
(87V)	79-01-6	trichloroethene 2.5U
(88V)	75-01-4	vinyl chloride 2.5U
	67-64-1	acetone 50U
	78-93-3	2-butanone 100U
	75-15-0	carbonyl sulfide 5U
	519-78-6	2-hexanone 50U
	108-10-1	4-methyl-2-pentanone 50U
	100-42-5	styrene 2.5U
	108-05-4	vinyl acetate 5U
	95-47-6	o-xylene 2.5U

PESTICIDES

CONCENTRATION: LOW MEDIUM HIGH (circle one)

DATE EXTRACTED/PREPARED: 3-15-84

DATE ANALYZED: 3-21-84

PERCENT MOISTURE: 1.36 Factor = 26%

Multiply Detection limits by 1 ☐ or ☒ 1.3
(Check Box for Appropriate Factor)

PP#	CAS#	ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin 4.0
(90P)	60-57-1	dieldrin 4.0
(91P)	57-74-9	chlordane 4.0
(92P)	50-29-3	4,4'-DDT 4.0
(93P)	72-55-9	4,4'-DDE 4.0
(94P)	72-54-8	4,4'-DDD 4.0
(95P)	115-29-7	endosulfan I 4.0
(96P)	115-29-7	endosulfan II 4.0
(97P)	1031-07-8	endosulfan sulfate 4.0
(98P)	78-20-8	endrin 4.0
(99P)	7421-43-4	endrin aldehyde 4.0
(100P)	76-44-8	heptachlor 4.0
(101P)	1024-57-3	heptachlor epoxide 4.0
(102P)	319-84-6	BHC-Alpha 4.0
(103P)	319-85-7	BHC-Beta 4.0
(104P)	319-86-8	BHC-Delta 4.0
(105P)	58-89-9	BHC-Gamma 4.0
(106P)	53469-21-9	PCB-1242 4.0
(107P)	11097-69-7	PCB-1254 4.0
(108P)	11104-28-2	PCB-1221 4.0
(109P)	11141-16-5	PCB-1232 4.0
(110P)	12672-29-6	PCB-1248 4.0
(111P)	11096-82-5	PCB-1260 4.0
(112P)	12674-11-2	PCB-1016 4.0
(113P)	8001-35-2	toxaphene 4.0

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle)

DATE EXTRACTED/PREPARED: 3-22-84

DATE ANALYZED: 3-23-84

PERCENT MOISTURE: 1.36 Factor = 26%

	ug/g or ug/kg (circle one)
(129B) 1746-01-6	2,3,7,8-tetrachlorodibenzo- p-dioxin 0.16

July, 15

100213

Sample Number

08253

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Head CompuChem
Lab Sample ID No.: 22577
Sample Matrix: Liquid
Data Release Authorized By: Paul Muel

Case Number: 2521
QC Report No.:
Contract No.: 68-01-6866
Date Sample Received: 3-15-84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 3-15-84
DATE ANALYZED: 3-21-84
PERCENT MOISTURE: AK

Multiply Detection limits by 1 ☐ or 10 ☐ or ☒ 2
(Check Box for Appropriate Factor)

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

PP#	CAS#	ug/l or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene 10U
(53B)	77-47-4	hexachlorocyclopentadiene 10U
(54B)	78-59-1	isophorone 10U
(55B)	91-20-3	naphthalene 10U
(56B)	98-95-3	nitrobenzene 10U
(62B)	86-30-6	N-nitrosodiphenylamine 10U
(63B)	621-64-7	N-nitrosodi-n-propylamine 20U
(66B)	117-81-7	bis(2-ethylhexyl)phthalate 10U
(67B)	85-68-7	butyl benzyl phthalate 10U
(68B)	84-74-2	di-n-butyl phthalate 10U
(69B)	117-84-0	di-n-octyl phthalate 10U
(70B)	84-66-2	diethyl phthalate 10U
(71B)	131-11-3	dimethyl phthalate 10U
(72B)	56-55-3	benzo(a)anthracene 10U
(73B)	50-33-8	benzo(a)pyrene 20U
(74B)	205-99-2	benzo(b)fluoranthene 20U
(75B)	207-08-9	benzo(k)fluoranthene 20U
(76B)	318-01-9	chrysene 10U
(77B)	208-96-8	acenaphthylene 10U
(78B)	120-12-7	anthracene 10U
(79B)	181-24-2	benzo(ghi)perylene 20U
(80B)	86-73-7	fluorene 10U
(81B)	85-01-8	phenanthrene 10U
(82B)	53-70-3	dibenzo(a,h)anthracene 20U
(83B)	183-39-5	indeno(1,2,3-cd)pyrene 20U
(84B)	129-00-0	pyrene 10U
	62-53-3	aniline 10U
	100-51-6	benzyl alcohol 20U
	106-47-8	4-chloroaniline 50U
	132-64-9	dibenzofuran 10U
	91-57-6	2-methylnaphthalene 20U
	88-74-4	2-nitroaniline 100U
	99-09-2	3-nitroaniline 100U
	100-01-6	4-nitroaniline 100U

July, 1983

100214

SAMPLE NUMBER

C8253

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: CompuChem
Lab Sample ID No: 22577
Sample Matrix: Liquid
Data Release Authorized By: Paul Harty

Case Number: 2521
QC Report No.: _____
Contract No.: 68-01-6866
Date Sample Received: 3-15-84

VOLATILES

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 3-13-84
DATE ANALYZED: 3-20-84
PERCENT MOISTURE: _____

PESTICIDES

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 3-15-84
DATE ANALYZED: 3-20-84
PERCENT MOISTURE: Nr

Multiply Detection Limits by 1 ☒ or ☐
(Check Box for Appropriate Factor)

Multiply Detection Limits by 1 ☒ or ☐
(Check Box for Appropriate Factor)

PP#	CAS#	ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein 100U
(3V)	107-13-1	acrylonitrile 100U
(4V)	71-43-2	benzene 5U
(6V)	56-23-5	carbon tetrachloride 5U
(7V)	108-90-7	chlorobenzene 5U
(10V)	107-06-2	1,2-dichloroethane 5U
(11V)	71-55-6	1,1,1-trichloroethane 5U
(13V)	75-34-3	1,1-dichloroethane 5U
(14V)	79-00-5	1,1,2-trichloroethane 5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane 5U
(16V)	75-00-3	chloroethane 5U
(19V)	110-75-8	2-chloroethylvinyl ether 5U
(23V)	67-66-3	chloroform 5U
(29V)	75-35-4	1,1-dichloroethene 5U
(30V)	156-60-5	1,2-trans-dichloroethene 5U
(32V)	78-87-5	1,2-dichloropropane 5U
(33V)	10061-02-6	trans-1,3-dichloropropene 5U
	10061-01-05	cis-1,3-dichloropropene 10U
(38V)	100-41-4	ethylbenzene 5U
(44V)	75-09-2	methylene chloride 5U
(45V)	74-87-3	chloromethane 5U
(46V)	74-83-9	bromomethane 5U
(47V)	75-25-2	bromoform 5U
(48V)	75-27-4	bromodichloromethane 5U
(49V)	75-69-4	fluorotrichloromethane 5U
(51V)	124-48-1	chlorodibromomethane 5U
(85V)	127-18-4	tetrachloroethene 5U
(86V)	108-88-3	toluene 5U
(87V)	79-01-6	trichloroethene 5U
(88V)	75-01-4	vinyl chloride 5U
	67-64-1	acetone 100U
	78-93-3	2-butanone 200U
	75-15-0	carbonylsulfide 10U
	519-78-6	2-hexanone 100U
	108-10-1	4-methyl-2-pentanone 100U
	100-42-5	styrene 5U
	108-05-4	vinyl acetate 10U
	95-47-6	o-xylene 5U

PP#	CAS#	ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin 0.1U
(90P)	50-57-1	dieldrin 0.1U
(91P)	57-74-9	chlordane 0.1U
(92P)	50-29-3	4,4'-DDT 0.1U
(93P)	72-55-9	4,4'-DDE 0.1U
(94P)	72-54-8	4,4'-DDD 0.1U
(95P)	115-29-7	endosulfan I 0.1U
(96P)	115-29-7	endosulfan II 0.1U
(97P)	1031-07-8	endosulfan sulfate 0.1U
(98P)	78-20-8	endrin 0.1U
(99P)	7421-43-4	endrin aldehyde 0.1U
(100P)	76-44-8	heptachlor 0.1U
(101P)	1024-57-3	heptachlor epoxide 0.1U
(102P)	319-84-6	BHC-Alpha 0.1U
(103P)	319-85-7	BHC-Beta 0.1U
(104P)	319-86-8	BHC-Delta 0.1U
(105P)	58-89-9	BHC-Gamma 0.1U
(106P)	53469-21-9	PCB-1242 0.1U
(107P)	11097-69-7	PCB-1254 0.1U
(108P)	11104-28-2	PCB-1221 0.1U
(109P)	11141-16-5	PCB-1232 0.1U
(110P)	12672-29-6	PCB-1248 0.1U
(111P)	11096-82-5	PCB-1260 0.1U
(112P)	12674-11-2	PCB-1016 0.1U
(113P)	8001-35-2	toxaphene 0.1U

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 3-15-84
DATE ANALYZED: 3-29-84
PERCENT MOISTURE: Nr

PP#	CAS#	ug/l or ug/kg (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin 0.004U

July, 1984

100215

C8254

ORGANICS ANALYSIS DATA SHEET

 Laboratory Name: Mead CompuChem
 Lab Sample ID No.: 2259
 Sample Matrix: Solid
 Date Release Authorized By:

 Case Number: 2521
 QC Report No.:
 Contract No.: 68-01-6762
 Date Sample Received: 3-15-84

SEMIVOLATILE COMPOUNDS

 CONCENTRATION: LOW MEDIUM HIGH (circle one)
 DATE EXTRACTED/PREPARED: 3-15-84
 DATE ANALYZED: 3-20-84
 PERCENT MOISTURE: 1.39 factor = 2790

 Multiply Detection limits by 1 ☐ or 10 ☐ or 4 ☒ 56
 (Check Box for Appropriate Factor)

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

PP#	CAS#		ug/l or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene	10U
(53B)	77-47-4	hexachlorocyclopentadiene	10U
(54B)	78-59-1	isophorone	10U
(55B)	91-20-3	naphthalene	10U
(56B)	98-95-3	nitrobenzene	10U
(62B)	86-30-6	N-nitrosodiphenylamine	10U
(63B)	621-64-7	N-nitrosodi-n-propylamine	20U
(66B)	117-81-7	bis(2-ethylhexyl)phthalate	10U
(67B)	85-68-7	butyl benzyl phthalate	10U
(68B)	84-74-2	di-n-butyl phthalate	10U
(69B)	117-84-0	di-n-octyl phthalate	10U
(70B)	84-66-2	diethyl phthalate	10U
(71B)	131-11-3	dimethyl phthalate	10U
(72B)	56-55-3	benzo(a)anthracene	10U
(73B)	50-33-8	benzo(a)pyrene	20U
(74B)	205-99-2	benzo(b)fluoranthene	20U
(75B)	207-08-9	benzo(k)fluoranthene	20U
(76B)	318-01-9	chrysene	10U
(77B)	208-96-8	acenaphthylene	10U
(78B)	120-12-7	anthracene	10U
(79B)	181-24-2	benzo(ghi)perylene	20U
(80B)	86-73-7	fluorene	10U
(81B)	85-01-8	phenanthrene	10U
(82B)	53-70-3	dibenzo(a,h)anthracene	20U
(83B)	183-39-5	indeno(1,2,3-cd)pyrene	20U
(84B)	129-00-0	pyrene	10U
	62-53-3	aniline	10U
	100-51-6	benzyl alcohol	20U
	106-47-8	4-chloroaniline	50U
	132-64-9	dibenzofuran	10U
	91-57-6	2-methylnaphthalene	20U
	88-74-4	2-nitroaniline	100U
	99-09-2	3-nitroaniline	100U
	100-01-6	4-nitroaniline	100U

July, 1983

100216

C8254

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: CompuChem
Lab Sample ID No: 22590
Sample Matrix: Solid
Data Release Authorized By: W

Case Number 2521
QC Report No. _____
Contract No.: 68-01-6762
Date Sample Received: 3-15-84

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle)
DATE EXTRACTED/PREPARED: 3-12-84
DATE ANALYZED: 3-19-84
PERCENT MOISTURE: 1.37 factor = 27%

Multiply Detection Limits by 1 ☐ or ☒ 1.2
(Check Box for Appropriate Factor)

PP#	CAS#	ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein 50U
(3V)	107-13-1	acrylonitrile 50U
(4V)	71-43-2	benzene 2.5U
(6V)	56-23-5	carbon tetrachloride 2.5U
(7V)	108-90-7	chlorobenzene 2.5U
(10V)	107-06-2	1,2-dichloroethane 2.5U
(11V)	71-55-6	1,1,1-trichloroethane 2.5U
(13V)	75-34-3	1,1-dichloroethane 2.5U
(14V)	79-00-5	1,1,2-trichloroethane 2.5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane 2.5U
(16V)	75-00-3	chloroethane 2.5U
(19V)	110-75-8	2-chloroethylvinyl ether 2.5U
(23V)	67-66-3	chloroform 2.5U
(29V)	75-35-4	1,1-dichloroethene 2.5U
(30V)	156-60-5	1,2-trans-dichloroethene 2.5U
(32V)	78-87-5	1,2-dichloropropane 2.5U
(33V)	10061-02-6	trans-1,3-dichloropropene 2.5U
	10061-01-05	cis-1,3-dichloropropene 5U
(38V)	100-41-4	ethylbenzene 2.5U
(44V)	75-09-2	methylene chloride <u>31</u> 2.5U
(45V)	74-87-3	chloromethane 2.5U
(46V)	74-83-9	bromomethane 2.5U
(47V)	75-25-2	bromoform 2.5U
(48V)	75-27-4	bromodichloromethane 2.5U
(49V)	75-69-4	fluorotrichloromethane <u>17</u> 2.5U
(51V)	124-48-1	chlorodibromomethane 2.5U
(85V)	127-18-4	tetrachloroethene 2.5U
(86V)	108-88-3	toluene 2.5U
(87V)	79-01-6	trichloroethene 2.5U
(88V)	75-01-4	vinyl chloride 2.5U
	67-64-1	acetone 50U
	78-93-3	2-butanone 100U
	75-15-0	carbonyl sulfide 5U
	519-78-6	2-hexanone 50U
	108-10-1	4-methyl-2-pentanone 50U
	100-42-5	styrene 2.5U
	108-05-4	vinyl acetate 5U
	95-47-6	o-xylene 2.5U

PESTICIDES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 3-15-84
DATE ANALYZED: 3-21-84
PERCENT MOISTURE: 1.37 factor = 27%

Multiply Detection Limits by 1 ☐ or ☒ 1.37
(Check Box for Appropriate Factor)

PP#	CAS#	ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin 4.0U
(90P)	60-57-1	dieldrin 4.0U
(91P)	57-74-9	chlordane 4.0U
(92P)	50-29-3	4,4'-DDT 4.0U
(93P)	72-55-9	4,4'-DDE 4.0U
(94P)	72-54-8	4,4'-DDD 4.0U
(95P)	115-29-7	endosulfan I 4.0U
(96P)	115-29-7	endosulfan II 4.0U
(97P)	1031-07-8	endosulfan sulfate 4.0U
(98P)	78-20-8	endrin 4.0U
(99P)	7421-43-4	endrin aldehyde 4.0U
(100P)	76-44-8	heptachlor 4.0U
(101P)	1024-37-3	heptachlor epoxide 4.0U
(102P)	319-84-6	BHC-Alpha 4.0U
(103P)	319-85-7	BHC-Beta 4.0U
(104P)	319-86-8	BHC-Delta 4.0U
(105P)	58-89-9	BHC-Gamma 4.0U
(106P)	53469-21-9	PCB-1242 4.0U
(107P)	11097-69-7	PCB-1254 4.0U
(108P)	11104-28-2	PCB-1221 4.0U
(109P)	11141-16-5	PCB-1232 4.0U
(110P)	12672-29-6	PCB-1248 4.0U
(111P)	11096-82-5	PCB-1260 4.0U
(112P)	12674-11-2	PCB-1016 4.0U
(113P)	8001-35-2	toxaphene 4.0U

DIOXINS

CONCENTRATION: (LOW) MEDIUM HIGH (circle)
DATE EXTRACTED/PREPARED: 3-15-84
DATE ANALYZED: 3-21-84
PERCENT MOISTURE: 1.37 factor = 27%

	ug/g or ug/l (circle one)
(129E) 1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin 0.1U

July, 19

100217

Sample Number

08255

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Mead CompuChem
Lab Sample ID No.: 22578
Sample Matrix: Liquid
Data Release Authorized By: Paul Nott

Case Number: 2521
QC Report No.:
Contract No.: 68-01-6866
Date Sample Received: 3-15-84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 3/15/84
DATE ANALYZED: 3/21/84
PERCENT MOISTURE: NA

Multiply Detection limits by 1 ☐ or 10 ☐ or ☒ 40
(Check Box for Appropriate Factor)

PP#	CAS#	ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6-trichlorophenol 10U
(22A)	59-50-7	p-chloro-m-cresol 20U
(24A)	95-57-8	2-chlorophenol 10U
(31A)	122-83-2	2,4-dichlorophenol 10U
(34A)	105-67-9	2,4-dimethylphenol 10U
(57A)	88-75-5	2-nitrophenol 20U
(58A)	100-02-7	4-nitrophenol 100U
(59A)	51-88-5	2,4-dinitrophenol 50U
(60A)	534-52-1	4,6-dinitro-2-methylphenol 20U
(64A)	87-36-5	pentachlorophenol 1800 20U ^{SP}
(65A)	108-95-2	phenol 10U
	63-85-0	benzoic acid 100U
	95-48-7	2-methylphenol 10U
	108-39-4	4-methylphenol 10U
	95-95-4	2,4,5-trichlorophenol 100U
(1B)	83-32-9	acenaphthene 2900 10U ^{SP}
(5B)	92-87-5	benzidine 40U
(8B)	120-82-1	1,2,4-trichlorobenzene 10U
(9B)	118-74-1	hexachlorobenzene 10U
(12B)	67-72-1	hexachloroethane 10U
(18B)	111-44-4	bis(2-chloroethyl)ether 10U
(20B)	91-58-7	2-chloronaphthalene 10U
(25B)	95-50-1	1,2-dichlorobenzene 10U
(26B)	541-73-1	1,3-dichlorobenzene 10U
(27B)	106-46-7	1,4-dichlorobenzene 10U
(28B)	91-94-1	3,3'-dichlorobenzidine 20U
(35B)	121-14-2	2,4-dinitrotoluene 20U
(36B)	606-20-2	2,6-dinitrotoluene 10U
(37B)	122-66-7	1,2-diphenylhydrazine 20U
(39B)	206-44-0	fluoranthene 3700 10U ^{SP}
(40B)	7005-72-3	4-chlorophenyl phenylether 10U
(41B)	101-55-3	4-bromophenyl phenyl ether 10U
(42B)	39538-32-9	bis-(2-chloroisopropyl)ether 10U
(43B)	111-91-1	bis-(2-chloroethoxy)methane 20U

PP#	CAS#	ug/l or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene 10U
(53B)	77-47-4	hexachlorocyclopentadiene 10U
(54B)	78-59-1	isophorone 10U
(55B)	91-20-3	naphthalene 17200 10U ^{SP}
(56B)	98-95-3	nitrobenzene 10U
(62B)	86-30-6	N-nitrosodiphenylamine 10U
(63B)	621-64-7	N-nitrosodi-n-propylamine 20U
(66B)	117-81-7	bis(2-ethylhexyl)phthalate 10U
(67B)	85-68-7	butyl benzyl phthalate 10U
(68B)	84-74-2	di-n-butyl phthalate 10U
(69B)	117-84-0	di-n-octyl phthalate 10U
(70B)	84-66-2	diethyl phthalate 10U
(71B)	131-11-3	dimethyl phthalate 10U
(72B)	56-55-3	benzo(a)anthracene 520 10U ^{SP}
(73B)	50-33-8	benzo(a)pyrene 20U
(74B)	205-99-2	benzo(b)fluoranthene LT 20U ^{SP}
(75B)	207-08-9	benzo(k)fluoranthene 20U
(76B)	318-01-9	chrysene 560 10U ^{SP}
(77B)	208-96-8	acenaphthylene LT 10U ^{SP}
(78B)	120-12-7	anthracene 880 10U ^{SP}
(79B)	181-24-2	benzo(ghi)perylene 20U
(80B)	86-73-7	fluorene 2800 10U ^{SP}
(81B)	85-01-8	phenanthrene 8000 10U ^{SP}
(82B)	53-70-3	dibenzo(a,h)anthracene 20U
(83B)	183-39-3	indeno(1,2,3-cd)pyrene 20U
(84B)	129-00-0	pyrene 2600 10U ^{SP}
	62-53-3	aniline 10U
	100-51-5	benzyl alcohol 20U
	106-47-3	4-chloroaniline 50U
	132-64-9	dibenzofuran 2400 10U ^{SP}
	91-57-6	2-methylnaphthalene 2900 20U ^{SP}
	88-74-4	2-nitroaniline 100U
	99-09-2	3-nitroaniline 100U
	100-01-6	4-nitroaniline 100U

July, 1983

100218

C8255

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: CompuChem
Lab Sample ID No: 22578
Sample Matrix: Liquid
Data Release Authorized By: J. M. M. M. M.

Case Number: 2521
QC Report No.:
Contract No.: 68-01-6866
Date Sample Received: 3-15-84

VOLATILES

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 3-13-84
DATE ANALYZED: 3-21-84
PERCENT MOISTURE: NR

Multiply Detection Limits by 1 ☒ or ☐
(Check Box for Appropriate Factor)

PP#	CAS#	Chemical Name	ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	5.3
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	5U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	5U
(16V)	75-00-3	chloroethane	5U
(19V)	110-75-8	2-chloroethylvinyl ether	5U
(23V)	67-66-3	chloroform	5U
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	1,2-trans-dichloroethene	5U
(32V)	78-87-5	1,2-dichloropropane	5U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	10U
(38V)	100-41-4	ethylbenzene	LT
(44V)	75-09-2	methylene chloride	5U
(45V)	74-87-3	chloromethane	5U
(46V)	74-83-9	bromomethane	5U
(47V)	75-25-2	bromoform	5U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	5U
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	5.3
(87V)	79-01-6	trichloroethene	5U
(88V)	75-01-4	vinyl chloride	5U
	67-64-1	acetone	LT
	78-93-3	2-butanone	200U
	75-15-0	carbonyl sulfide	10U
	519-78-6	2-hexanone	100U
	108-10-1	4-methyl-2-pentanone	100U
	100-42-3	styrene	LT
	108-05-4	vinyl acetate	10U
	95-47-6	o-xylene	16.5

PESTICIDES

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 3-15-84
DATE ANALYZED: 3-24-84
PERCENT MOISTURE: NR

Multiply Detection Limits by 1 ☐ or ☒ X500 X
(Check Box for Appropriate Factor)

PP#	CAS#	Chemical Name	ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	0.1U
(90P)	60-57-1	dieldrin	0.1U
(91P)	57-74-9	chlordane	0.1U
(92P)	50-29-3	4,4'-DDT	0.1U
(93P)	72-35-9	4,4'-DDE	0.1U
(94P)	72-54-8	4,4'-DDD	0.1U
(95P)	115-29-7	endosulfan I	0.1U
(96P)	115-29-7	endosulfan II	0.1U
(97P)	1031-07-8	endosulfan sulfate	0.1U
(98P)	78-20-8	endrin	0.1U
(99P)	7421-43-4	endrin aldehyde	0.1U
(100P)	76-44-8	heptachlor	0.1U
(101P)	1024-57-3	heptachlor epoxide	0.1U
(102P)	319-84-6	BHC-Alpha	0.1U
(103P)	319-85-7	BHC-Beta	0.1U
(104P)	319-86-8	BHC-Delta	0.1U
(105P)	58-89-9	BHC-Gamma	0.1U
(106P)	53469-21-9	PCB-1242	0.1U
(107P)	11097-69-7	PCB-1254	0.1U
(108P)	11104-28-2	PCB-1221	0.1U
(109P)	11141-16-5	PCB-1232	0.1U
(110P)	12672-29-6	PCB-1248	0.1U
(111P)	11096-82-5	PCB-1260	0.1U
(112P)	12674-11-2	PCB-1016	0.1U
(113P)	8001-35-2	toxaphene	0.1U

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 3-15-84
DATE ANALYZED: 3-26-84
PERCENT MOISTURE: NR

PP#	CAS#	Chemical Name	ug/l or ug/kg (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	0.004U

July, 198

100219

C8256

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Mead CompuChem
 Lab Sample ID No.: 22591
 Sample Matrix: Solid
 Data Release Authorized By: M

Case Number: 2521
 QC Report No.:
 Contract No.: 68-01-6866
 Date Sample Received: 3-15-84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
 DATE EXTRACTED/PREPARED: 3-15-84
 DATE ANALYZED: 3-27-84
 PERCENT MOISTURE: 5.52 factor = 826

Multiply Detection Limits by 1 ☐ or 10 ☐ or ☒ 1,300,000 (b)
 (Check Box for Appropriate Factor)

PP#	CAS#	ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6-trichlorophenol 10U
(22A)	59-50-7	p-chloro-m-cresol 20U
(24A)	95-57-8	2-chlorophenol 10U
(31A)	122-83-2	2,4-dichlorophenol 10U
(34A)	105-67-9	2,4-dimethylphenol 10U
(57A)	88-75-5	2-nitrophenol 20U
(58A)	100-02-7	4-nitrophenol 100U
(59A)	51-88-5	2,4-dinitrophenol 50U
(60A)	534-52-1	4,6-dinitro-2-methylphenol 20U
(64A)	87-36-5	pentachlorophenol 42,000,000 20U
(65A)	108-95-2	phenol 10U
	65-85-0	benzoic acid 100U
	95-48-7	2-methylphenol 10U
	108-39-4	4-methylphenol 10U
	95-95-4	2,4,5-trichlorophenol 100U
(1B)	83-32-9	acenaphthene 100,000,000 10U
(5B)	92-87-5	benzidine 40U
(8B)	120-82-1	1,2,4-trichlorobenzene 10U
(9B)	118-74-1	hexachlorobenzene 10U
(12B)	67-72-1	hexachloroethane 10U
(18B)	111-44-4	bis(2-chloroethyl)ether 10U
(20B)	91-58-7	2-chloronaphthalene 10U
(25B)	95-50-1	1,2-dichlorobenzene 10U
(26B)	541-73-1	1,3-dichlorobenzene 10U
(27B)	106-46-7	1,4-dichlorobenzene 10U
(28B)	91-94-1	3,3'-dichlorobenzidine 20U
(35B)	121-14-2	2,4-dinitrotoluene 20U
(36B)	606-20-2	2,6-dinitrotoluene 20U
(37B)	122-66-7	1,2-diphenylhydrazine 20U
(39B)	206-44-0	fluoranthene 130,000,000 10U
(40B)	7005-72-3	4-chlorophenyl phenylether 10U
(41B)	101-55-3	4-bromophenyl phenyl ether 10U
(42B)	39638-32-9	bis-(2-chloroisopropyl)ether 20U
(43B)	111-91-1	bis-(2-chloroethoxy)methane 20U

PP#	CAS#	ug/l or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene 10U
(53B)	77-47-4	hexachlorocyclopentadiene 10U
(54B)	78-59-1	isophorone 10U
(55B)	91-20-3	naphthalene 25,000,000 10U
(56B)	98-95-3	nitrobenzene 10U
(62B)	86-30-6	N-nitrosodiphenylamine 10U
(63B)	621-64-7	N-nitrosodi-n-propylamine 20U
(66B)	117-81-7	bis(2-ethylhexyl)phthalate 10U
(67B)	85-68-7	butyl benzyl phthalate 10U
(68B)	84-74-2	di-n-butyl phthalate 10U
(69B)	117-84-0	di-n-octyl phthalate 10U
(70B)	84-66-2	diethyl phthalate 10U
(71B)	131-11-3	dimethyl phthalate 10U
(72B)	56-55-3	benzo(a)anthracene 20,000,000 10U
(73B)	50-33-8	benzo(a)pyrene 20U
(74B)	205-99-2	benzo(b)fluoranthene 20U
(75B)	207-08-9	benzo(k)fluoranthene 20U
(76B)	318-01-9	chrysene 22,000,000 10U
(77B)	208-96-8	acenaphthylene 10U
(78B)	120-12-7	anthracene 31,000,000 10U
(79B)	181-24-2	benzo(ghi)perylene 20U
(80B)	86-73-7	fluorene 100,000,000 10U
(81B)	85-01-8	phenanthrene 290,000,000 10U
(82B)	53-70-3	dibenzo(a,h)anthracene 20U
(83B)	183-39-5	indeno(1,2,3-cd)pyrene 20U
(84B)	129-00-0	pyrene 88,000,000 10U
	62-53-3	aniline 10U
	100-51-6	benzyl alcohol 20U
	106-47-8	4-chloroaniline 50U
	132-64-9	dibenzofuran 85,000,000 10U
	91-57-6	2-methylnaphthalene 98,000,000 10U
	88-74-4	2-nitroaniline 100U
	99-09-2	3-nitroaniline 100U
	100-01-6	4-nitroaniline 100U

July, 1983

100220

SAMPLE NUMBER

C8256

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: CompuChem
Lab Sample ID No: 22591
Sample Matrix: Solid
Data Release Authorized By: H

Case Number: 2521
QC Report No.:
Contract No.: 68-01-6762
Date Sample Received: 3-15-84

VOLATILES

CONCENTRATION: LOW MEDIUM HIGH (circle)

DATE EXTRACTED/PREPARED:

DATE ANALYZED: 3/21/84

PERCENT MOISTURE: 5.52 factor = 82.90

Multiply Detection Limits by 1 ☐ or ☒ 5.52
(Check Box for Appropriate Factor)

PP#	CAS#	Chemical Name	ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	<u>67-50</u>
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	5U
(11V)	71-35-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	5U
(16V)	75-00-3	chloroethane	5U
(19V)	110-75-8	2-chloroethylvinyl ether	5U
(23V)	67-66-3	chloroform	5U
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	1,2-trans-dichloroethene	5U
(32V)	78-87-5	1,2-dichloropropane	5U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	<u>10U</u>
(38V)	100-41-4	ethylbenzene	<u>410-50</u>
(44V)	75-09-2	methylene chloride	<u>25-50</u>
(45V)	74-87-3	chloromethane	5U
(46V)	74-83-9	bromomethane	5U
(47V)	75-25-2	bromoform	5U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	5U
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	<u>136-50</u>
(87V)	79-01-6	trichloroethene	5U
(88V)	75-01-4	vinyl chloride	5U
	67-64-1	acetone	100U
	78-93-3	2-butanone	200U
	75-15-0	carbonyl sulfide	10U
	519-78-6	2-hexanone	100U
	108-10-1	4-methyl-2-pentanone	100U
	100-42-5	styrene	<u>210-50</u>
	108-05-4	vinyl acetate	10U
	95-47-6	o-xylene	<u>250-50</u>

PESTICIDES

CONCENTRATION: LOW MEDIUM HIGH (circle one)

DATE EXTRACTED/PREPARED: 3-15-84

DATE ANALYZED: 3-21-84

PERCENT MOISTURE: 5.52 factor = 82.90

Multiply Detection Limits by 1 ☐ or ☒ 1000x5.52
(Check Box for Appropriate Factor)

PP#	CAS#	Chemical Name	ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	4.0U
(90P)	60-57-1	dieldrin	4.0U
(91P)	57-74-9	chlordane	4.0U
(92P)	50-29-3	4,4'-DDT	4.0U
(93P)	72-55-9	4,4'-DDE	4.0U
(94P)	72-54-8	4,4'-DDD	4.0U
(95P)	115-29-7	endosulfan I	4.0U
(96P)	115-29-7	endosulfan II	4.0U
(97P)	1031-07-8	endosulfan sulfate	4.0U
(98P)	78-20-8	endrin	4.0U
(99P)	7421-43-4	endrin aldehyde	4.0U
(100P)	76-44-8	heptachlor	4.0U
(101P)	1024-57-3	heptachlor epoxide	4.0U
(102P)	319-84-6	BHC-Alpha	4.0U
(103P)	319-85-7	BHC-Beta	4.0U
(104P)	319-86-8	BHC-Delta	4.0U
(105P)	58-89-9	BHC-Gamma	4.0U
(106P)	53469-21-9	PCB-1242	4.0U
(107P)	11097-69-7	PCB-1254	4.0U
(108P)	11104-28-2	PCB-1221	4.0U
(109P)	11141-16-5	PCB-1232	4.0U
(110P)	12672-29-6	PCB-1248	4.0U
(111P)	11096-82-5	PCB-1260	4.0U
(112P)	12674-11-2	PCB-1016	4.0U
(113P)	8001-35-2	toxaphene	4.0U

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle)

DATE EXTRACTED/PREPARED: 3-15-84

DATE ANALYZED: 3-20-84

PERCENT MOISTURE: 5.52 factor = 82.90

PP#	CAS#	Chemical Name	ug/g or ug/kg (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	0.16U

July, 1983

106221

Sample Number

C8257

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Mead ConduChem
Lab Sample ID No.: 22579
Sample Matrix: Liquid
Data Release Authorized By: Paul M. Hall

Case Number: 2521
QC Report No.:
Contract No.: 68-01-6762
Date Sample Received: 3/15/84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 3/15/84
DATE ANALYZED: 3/21/84
PERCENT MOISTURE: NK

Multiply Detection limits by 1 ☐ or 10 ☐ or ☒ 40
(Check Box for Appropriate Factor)

PP#	CAS#	ug/l or ug/kg (circle one)	PP#	CAS#	ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6-trichlorophenol 10U	(52B)	87-68-3	hexachlorobutadiene 10U
(22A)	59-50-7	p-chloro-m-cresol 20U	(53B)	77-47-4	hexachlorocyclopentadiene 10U
(24A)	95-57-8	2-chlorophenol 10U	(54B)	78-59-1	isophorone 10U
(31A)	122-83-2	2,4-dichlorophenol 10U	(55B)	91-20-3	naphthalene 15000 Q 100 DE
(34A)	105-67-9	2,4-dimethylphenol 10U	(56B)	98-95-3	nitrobenzene 10U
(57A)	88-75-5	2-nitrophenol 20U	(62B)	86-30-6	N-nitrosodiphenylamine 760 100 DE
(58A)	100-02-7	4-nitrophenol 100U	(63B)	621-64-7	N-nitrosodi-n-propylamine 20U
(59A)	51-88-5	2,4-dinitrophenol 50U	(66B)	117-81-7	bis(2-ethylhexyl)phthalate 10U
(60A)	534-52-1	4,6-dinitro-2-methylphenol 20U	(67B)	85-68-7	butyl benzyl phthalate 10U
(64A)	87-36-5	pentachlorophenol 6000 200 DE	(68B)	84-74-2	di-n-butyl phthalate 10U
(65A)	108-95-2	phenol 10U	(69B)	117-84-0	di-n-octyl phthalate 10U
	65-85-0	benzoic acid 100U	(70B)	84-66-2	diethyl phthalate 10U
	95-48-7	2-methylphenol 10U	(71B)	131-11-3	dimethyl phthalate 10U
	108-39-4	4-methylphenol 10U	(72B)	56-55-3	benzo(a)anthracene 1200 100 DE
	95-95-4	2,4,5-trichlorophenol 100U	(73B)	50-33-8	benzo(a)pyrene 20U
(1B)	83-32-9	acenaphthene 5600 100 DE	(74B)	205-99-2	benzo(b)fluoranthene 1100 200 DE
(5B)	92-87-5	benzidine 40U	(75B)	207-08-9	benzo(k)fluoranthene 1100 200 DE
(8B)	120-82-1	1,2,4-trichlorobenzene 10U	(76B)	318-01-9	chrysene 1200 100 DE
(9B)	118-74-1	hexachlorobenzene 10U	(77B)	208-96-8	acenaphthylene 480 100 DE
(12B)	67-72-1	hexachloroethane 10U	(78B)	120-12-7	anthracene 2000 100 DE
(18B)	111-44-4	bis(2-chloroethyl)ether 10U	(79B)	181-24-2	benzo(g,h)perylene 20U
(20B)	91-58-7	2-chloronaphthalene 10U	(80B)	86-73-7	fluorene 5600 100 DE
(25B)	95-50-1	1,2-dichlorobenzene 10U	(81B)	85-01-8	phenanthrene 13000 Q 100 DE
(26B)	541-73-1	1,3-dichlorobenzene 10U	(82B)	53-70-3	dibenzo(a,h)anthracene 20U
(27B)	106-46-7	1,4-dichlorobenzene 10U	(83B)	183-39-3	indeno(1,2,3-cd)pyrene 20U
(28B)	91-94-1	3,3'-dichlorobenzidine 20U	(84B)	129-00-0	pyrene 5200 100 DE
(35B)	121-14-2	2,4-dinitrotoluene 20U		62-53-3	aniline 10U
(36B)	606-20-2	2,6-dinitrotoluene 10U		100-51-6	benzyl alcohol 20U
(37B)	122-66-7	1,2-diphenylhydrazine 20U		106-47-8	4-chloroaniline 50U
(39B)	206-44-0	fluoranthene 8000 100 DE		132-64-9	dibenzofuran 5200 100 DE
(40B)	7005-72-3	4-chlorophenyl phenylether 10U		91-57-6	2-methylnaphthalene 7200 200 DE
(41B)	101-55-3	4-bromophenyl phenyl ether 10U		88-74-4	2-nitroaniline 100U
(42B)	39638-32-9	bis-(2-chloroisopropyl)ether 10U		99-09-2	3-nitroaniline 100U
(43B)	111-91-1	bis-(2-chloroethoxy)methane 20U		100-01-6	4-nitroaniline 100U

July, 1983

100222

C8257

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: CompuChem
Lab Sample ID No: 22579
Sample Matrix: Liquid
Data Release Authorized By: Paul M. Hill

Case Number 2521
QC Report No. _____
Contract No.: 68-01-6762
Date Sample Received: 3/15/84

VOLATILES

PESTICIDES

CONCENTRATION: LOW MEDIUM HIGH (circle)
DATE EXTRACTED/PREPARED: 3/13/84
DATE ANALYZED: 3/20/84
PERCENT MOISTURE: N/A

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 3/15/84
DATE ANALYZED: 3/24/84
PERCENT MOISTURE: N/A

Multiply Detection Limits by 1 ☒ or ☐ _____
(Check Box for Appropriate Factor)

Multiply Detection Limits by 1 ☐ or ☒ 500
(Check Box for Appropriate Factor)

PP#	CAS#	ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein 100U
(3V)	107-13-1	acrylonitrile 100U
(4V)	71-43-2	benzene <u>LT</u> <u>50 DEC</u>
(6V)	56-23-5	carbon tetrachloride 5U
(7V)	108-90-7	chlorobenzene 5U
(10V)	107-06-2	1,2-dichloroethane 5U
(11V)	71-55-6	1,1,1-trichloroethane 5U
(13V)	75-34-3	1,1-dichloroethane 5U
(14V)	79-00-5	1,1,2-trichloroethane 5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane 5U
(16V)	75-00-3	chloroethane 5U
(19V)	110-75-8	2-chloroethylvinyl ether 5U
(23V)	67-66-3	chloroform 5U
(29V)	75-35-4	1,1-dichloroethene 5U
(30V)	156-60-5	1,2-trans-dichloroethene 5U
(32V)	78-87-5	1,2-dichloropropane 5U
(33V)	10061-02-6	trans-1,3-dichloropropene 5U
	10061-01-05	cis-1,3-dichloropropene 10U
(38V)	100-41-4	ethylbenzene <u>5</u> <u>50 DEC</u>
(44V)	75-09-2	methylene chloride 5U
(45V)	74-87-3	chloromethane 5U
(46V)	74-83-9	bromomethane 5U
(47V)	75-25-2	bromoform 5U
(48V)	75-27-4	bromodichloromethane 5U
(49V)	75-69-4	fluorotrichloromethane 5U
(51V)	124-48-1	chlorodibromomethane 5U
(85V)	127-18-4	tetrachloroethene 5U
(86V)	108-88-3	toluene <u>5</u> <u>50 DEC</u>
(87V)	79-01-6	trichloroethene 5U
(88V)	75-01-4	vinyl chloride 5U
	67-64-1	acetone 100U
	78-95-3	2-butanone 200U
	75-15-0	carbonylsulfide 10U
	519-78-6	2-hexanone 100U
	108-10-1	4-methyl-2-pentanone 100U
	100-42-5	styrene <u>LT</u> <u>50 DEC</u>
	108-05-4	vinyl acetate 10U
	95-47-6	o-xylene <u>5</u> <u>50 DEC</u>

PP#	CAS#	ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin 0.1U
(90P)	60-57-1	dieldrin 0.1U
(91P)	57-74-9	chlordane 0.1U
(92P)	50-29-3	4,4'-DDT 0.1U
(93P)	72-55-9	4,4'-DDE 0.1U
(94P)	72-54-8	4,4'-DDD 0.1U
(95P)	115-29-7	endosulfan I 0.1U
(96P)	115-29-7	endosulfan II 0.1U
(97P)	1031-07-8	endosulfan sulfate 0.1U
(98P)	78-20-8	endrin 0.1U
(99P)	7421-43-4	endrin aldehyde 0.1U
(100P)	76-44-8	heptachlor 0.1U
(101P)	1024-57-3	heptachlor epoxide 0.1U
(102P)	319-84-6	BHC-Alpha 0.1U
(103P)	319-85-7	BHC-Beta 0.1U
(104P)	319-86-8	BHC-Delta 0.1U
(105P)	58-89-9	BHC-Gamma 0.1U
(106P)	53469-21-9	PCB-1242 0.1U
(107P)	11097-69-7	PCB-1254 0.1U
(108P)	11104-28-2	PCB-1221 0.1U
(109P)	11141-16-5	PCB-1232 0.1U
(110P)	12672-29-6	PCB-1248 0.1U
(111P)	11096-82-5	PCB-1260 0.1U
(112P)	12674-11-2	PCB-1016 0.1U
(113P)	8001-35-2	toxaphene 0.1U

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle)
DATE EXTRACTED/PREPARED: 3-15-84
DATE ANALYZED: 3-20-84
PERCENT MOISTURE: 0

(129B) 1746-01-6 2,3,7,8-tetrachlorodibenzo-p-dioxin 0.004U

July, 1983

100223

C8258

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Mead CompuChem

Lab Sample ID No.: 22592

Sample Matrix: Solid

Data Release Authorized By: NY

Case Number: 2521

QC Report No.:

Contract No.: 68-01-6866

Date Sample Received: 3-15-84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: LOW MEDIUM HIGH (circle one)

DATE EXTRACTED/PREPARED: 3-15-84

DATE ANALYZED: 3-21-84

PERCENT MOISTURE: 3.96 FACTOR = 7.570

Multiply Detection Limits by 1 ☐ or 10 ☐ or 100 ☒ ^{A 16000}
 (Check Box for Appropriate Factor) _{B 32000}

PP#	CAS#	ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6-trichlorophenol 10U
(22A)	59-50-7	p-chloro-m-cresol 20U
(24A)	95-57-8	2-chlorophenol 10U
(31A)	122-83-2	2,4-dichlorophenol 10U
(34A)	105-67-9	2,4-dimethylphenol LT 10000
(57A)	88-75-5	2-nitrophenol 20U
(58A)	100-02-7	4-nitrophenol 100U
(59A)	51-88-5	2,4-dinitrophenol 50U
(60A)	534-52-1	4,6-dinitro-2-methylphenol 20U
(64A)	87-36-5	pentachlorophenol 7800000 20U
(65A)	108-95-2	phenol 240000 100U
	65-85-0	benzoic acid 100U
	95-48-7	2-methylphenol LT 10000
	108-39-4	4-methylphenol 260000 100U
	95-95-4	2,4,5-trichlorophenol 100U
(1B)	83-32-9	acenaphthene P 1000000 100U
(5B)	92-87-5	benzidine 40U
(8B)	120-82-1	1,2,4-trichlorobenzene 10U
(9B)	118-74-1	hexachlorobenzene 10U
(12B)	67-72-1	hexachloroethane 10U
(18B)	111-44-4	bis(2-chloroethyl)ether 10U
(20B)	91-58-7	2-chloronaphthalene 10U
(25B)	95-50-1	1,2-dichlorobenzene 10U
(26B)	541-73-1	1,3-dichlorobenzene 10U
(27B)	106-46-7	1,4-dichlorobenzene 10U
(28B)	91-94-1	3,3'-dichlorobenzidine 20U
(35B)	121-14-2	2,4-dinitrotoluene 20U
(36B)	606-20-2	2,6-dinitrotoluene 20U
(37B)	122-66-7	1,2-diphenylhydrazine 20U
(39B)	206-44-0	fluoranthene P 1500000 100U
(40B)	7005-72-3	4-chlorophenyl phenylether 10U
(41B)	101-55-3	4-bromophenyl phenyl ether 10U
(42B)	39638-32-9	bis-(2-chloroisopropyl)ether 20U
(43B)	111-91-1	bis-(2-chloroethoxy)methane 20U

PP#	CAS#	ug/l or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene 10U
(53B)	77-47-4	hexachlorocyclopentadiene 10U
(54B)	78-59-1	isophorone 10U
(55B)	91-20-3	naphthalene P 1000000 100U
(56B)	98-95-3	nitrobenzene 10U
(62B)	86-30-6	N-nitrosodiphenylamine 10U
(63B)	621-64-7	N-nitrosodi-n-propylamine 20U
(66B)	117-81-7	bis(2-ethylhexyl)phthalate 10U
(67B)	85-68-7	butyl benzyl phthalate 10U
(68B)	84-74-2	di-n-butyl phthalate 10U
(69B)	117-84-0	di-n-octyl phthalate 10U
(70B)	84-66-2	diethyl phthalate 10U
(71B)	131-11-3	dimethyl phthalate 10U
(72B)	56-55-3	benzo(a)anthracene 2100000 100U
(73B)	50-33-8	benzo(a)pyrene 670000 200U
(74B)	205-99-2	benzo(b)fluoranthene P 180000 200U
(75B)	207-08-9	benzo(k)fluoranthene P 180000 200U
(76B)	318-01-9	chrysene 230000 100U
(77B)	208-96-8	acenaphthylene 480,000 100U
(78B)	120-12-7	anthracene P 770000 100U
(79B)	181-24-2	benzo(ghi)perylene 20U
(80B)	86-73-7	fluorene G 9,300,000 100U
(81B)	85-01-8	phenanthrene P 2700000 100U
(82B)	53-70-3	dibenzo(a,h)anthracene 20U
(83B)	183-39-5	indeno(1,2,3-cd)pyrene 20U
(84B)	129-00-0	pyrene 700000 100U
	62-53-3	aniline 10U
	100-51-6	benzyl alcohol 20U
	106-47-3	4-chloroaniline 50U
	132-64-9	dibenzofuran P 670000 100U
	91-57-6	2-methylnaphthalene 800000 200U
	88-74-4	2-nitroaniline 100U
	99-09-2	3-nitroaniline 100U
	100-01-6	4-nitroaniline 100U

July, 1983

100224

SAMPLE NUMBER

C 8258

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: CompuChem
Lab Sample ID No: 22592
Sample Matrix: Solid
Data Release Authorized By: 186

Case Number 2521
QC Report No. _____
Contract No.: 68-01-6762
Date Sample Received: 3-15-84

VOLATILES

CONCENTRATION: LOW MEDIUM HIGH (circle)

DATE EXTRACTED/PREPARED: 3-13-84

DATE ANALYZED: 3-22-84

PERCENT MOISTURE: 3.96 factor = 7590

Multiply Detection Limits by 1 ☐ or ☒ 3.96
(Check Box for Appropriate Factor)

PP#	CASE#	ug/kg, ug/g or ug/kg (circle one)
(2V)	107-02-8	acrolein 100U
(3V)	107-13-1	acrylonitrile 100U
(4V)	71-43-2	benzene 20 - 50 <u>amp</u>
(6V)	56-23-5	carbon tetrachloride 5U
(7V)	108-90-7	chlorobenzene 5U
(10V)	107-06-2	1,2-dichloroethane 5U
(11V)	71-55-6	1,1,1-trichloroethane 5U
(13V)	75-34-3	1,1-dichloroethane 5U
(14V)	79-00-5	1,1,2-trichloroethane 5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane 5U
(16V)	75-00-3	chloroethane 5U
(19V)	110-75-8	2-chloroethylvinyl ether 5U
(23V)	67-66-3	chloroform 5U
(29V)	75-35-4	1,1-dichloroethene 5U
(30V)	156-60-5	1,2-trans-dichloroethene 5U
(32V)	78-87-5	1,2-dichloropropane 5U
(33V)	10061-02-6	trans-1,3-dichloropropene 5U
	10061-01-05	cis-1,3-dichloropropene 10U
(38V)	100-41-4	ethylbenzene 75 - 50 <u>amp</u>
(44V)	75-09-2	methylene chloride 47 - 50 <u>amp</u>
(45V)	74-87-3	chloromethane 5U
(46V)	74-83-9	bromomethane 5U
(47V)	75-25-2	bromoform 5U
(48V)	75-27-4	bromodichloromethane 5U
(49V)	75-69-4	fluorotrichloromethane 5U
(51V)	124-48-1	chlorodibromomethane 5U
(85V)	127-18-4	tetrachloroethene 5U
(86V)	108-88-3	toluene 59 - 50 <u>amp</u>
(87V)	79-01-6	trichloroethene 5U
(88V)	75-01-4	vinyl chloride 5U
	67-64-1	acetone 100U
	78-93-3	2-butanone 200U
	75-15-0	carbonylsulfide 10U
	519-78-6	2-hexanone 100U
	108-10-1	4-methyl-2-pentanone 100U
	100-42-3	styrene 75 - 50 <u>amp</u>
	108-05-4	vinyl acetate 10U
	95-47-6	o-xylene 110 - 50 <u>amp</u>

PESTICIDES

CONCENTRATION: LOW MEDIUM HIGH (circle one)

DATE EXTRACTED/PREPARED: 3-15-84

DATE ANALYZED: 3-24-84

PERCENT MOISTURE: 3.96 factor = 7590

Multiply Detection Limits by 1 ☐ or ☒ 110013.9
(Check Box for Appropriate Factor)

PP#	CASE#	ug/kg or ug/kg (circle one)
(89P)	309-00-2	aldrin 4.0U
(90P)	60-57-1	dieldrin 4.0U
(91P)	57-74-9	chlordane 4.0U
(92P)	50-29-3	4,4'-DDT 4.0U
(93P)	72-55-9	4,4'-DDE 4.0U
(94P)	72-54-8	4,4'-DDD 4.0U
(95P)	115-29-7	endosulfan I 4.0U
(96P)	115-29-7	endosulfan II 4.0U
(97P)	1031-07-8	endosulfan sulfate 4.0U
(98P)	78-20-8	endrin 4.0U
(99P)	7421-43-4	endrin aldehyde 4.0U
(100P)	76-44-8	heptachlor 4.0U
(101P)	1024-57-3	heptachlor epoxide 4.0U
(102P)	319-84-6	BHC-Alpha 4.0U
(103P)	319-85-7	BHC-Beta 4.0U
(104P)	319-86-8	BHC-Delta 4.0U
(105P)	58-89-9	BHC-Gamma 4.0U
(106P)	53469-21-9	PCB-1242 4.0U
(107P)	11097-69-7	PCB-1254 4.0U
(108P)	11104-28-2	PCB-1221 4.0U
(109P)	11141-16-5	PCB-1232 4.0U
(110P)	12672-29-6	PCB-1248 4.0U
(111P)	11096-82-5	PCB-1260 4.0U
(112P)	12674-11-2	PCB-1016 4.0U
(113P)	8001-35-2	toxaphene 4.0U

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle)

DATE EXTRACTED/PREPARED: 3-15-84

DATE ANALYZED: 3-23-84

PERCENT MOISTURE: 3.96 factor = 7590

	ug/g or ug/kg (circle one)
(1298) 1746-01-6	2,3,7,8-tetrachlorodibenzo- p-dioxin 0.16U

July, 1983

100225

Sample Number

C8259

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Mead CompuChem
Lab Sample ID No.: 22580
Sample Matrix: Liquid
Date Release Authorized By: Paul V. Vint

Case Number: 2521
QC Report No.:
Contract No.: 68-01-6866
Date Sample Received: 3-15-84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 3-15-84
DATE ANALYZED: 3-21-84
PERCENT MOISTURE: NK

Multiply Detection limits by 1 ☐ or 10 ☐ or ☒ 20
(Check Box for Appropriate Factor)

PP#	CAS#	ug/l or ug/kg (circle one)	PP#	CAS#	ug/l or ug/kg (circle one)		
(21A)	88-06-2	2,4,6-trichlorophenol	10U	(52B)	87-68-3	hexachlorobutadiene	10U
(22A)	59-50-7	p-chloro-m-cresol	20U	(53B)	77-47-4	hexachlorocyclopentadiene	10U
(24A)	95-57-8	2-chlorophenol	10U	(54B)	78-59-1	isophorone	10U
(31A)	122-83-2	2,4-dichlorophenol	10U	(55B)	91-20-3	naphthalene	10U
(34A)	105-67-9	2,4-dimethylphenol	10U	(56B)	98-95-3	nitrobenzene	10U
(57A)	88-75-5	2-nitrophenol	20U	(62B)	86-30-6	N-nitrosodiphenylamine	10U
(58A)	100-02-7	4-nitrophenol	100U	(63B)	621-64-7	N-nitrosodi-n-propylamine	20U
(59A)	51-88-5	2,4-dinitrophenol	50U	(66B)	117-81-7	bis(2-ethylhexyl)phthalate	10U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	20U	(67B)	85-68-7	butyl benzyl phthalate	10U
(64A)	87-36-5	pentachlorophenol	380 - 200 SP	(68B)	84-74-2	di-n-butyl phthalate	10U
(65A)	108-95-2	phenol	10U	(69B)	117-84-0	di-n-octyl phthalate (LT)	10U SP
	65-85-0	benzoic acid	100U	(70B)	84-66-2	diethyl phthalate	10U
	95-48-7	2-methylphenol	10U	(71B)	131-11-3	dimethyl phthalate	10U
	108-39-4	4-methylphenol	10U	(72B)	56-55-3	benzo(a)anthracene	30 - 100 SP
	95-95-4	2,4,5-trichlorophenol	100U	(73B)	50-33-8	benzo(a)pyrene	20U
(1B)	83-32-9	acenaphthene	10U	(74B)	205-99-2	benzo(b)fluoranthene	54 - 200 SP
(5B)	92-87-5	benzidine	40U	(75B)	207-08-9	benzo(k)fluoranthene	54 - 200 SP
(8B)	120-82-1	1,2,4-trichlorobenzene	10U	(76B)	318-01-9	chrysene	44 - 100 SP
(9B)	118-74-1	hexachlorobenzene	10U	(77B)	208-96-8	acenaphthylene	10U
(12B)	67-72-1	hexachloroethane	10U	(78B)	120-12-7	anthracene	LT - 100 SP
(18B)	111-44-4	bis(2-chloroethyl)ether	10U	(79B)	181-24-2	benzo(ghi)perylene	20U
(20B)	91-58-7	2-chloronaphthalene	10U	(80B)	86-73-7	fluorene	44 - 100 SP
(25B)	95-50-1	1,2-dichlorobenzene	10U	(81B)	85-01-8	phenanthrene	72 - 100 SP
(26B)	541-73-1	1,3-dichlorobenzene	10U	(82B)	53-70-3	dibenzo(a,h)anthracene	20U
(27B)	106-46-7	1,4-dichlorobenzene	10U	(83B)	183-39-5	indeno(1,2,3-cd)pyrene	20U
(28B)	91-94-1	3,3'-dichlorobenzidine	20U	(84B)	129-00-0	pyrene	130 - 100 SP
(35B)	121-14-2	2,4-dinitrotoluene	20U		62-53-3	aniline	10U
(36B)	606-20-2	2,6-dinitrotoluene	10U		100-51-6	benzyl alcohol	20U
(37B)	122-66-7	1,2-diphenylhydrazine	20U		106-47-8	4-chloroaniline	50U
(39B)	206-44-0	fluoranthene	230 - 100 SP		132-64-9	dibenzofuran	24 - 100 SP
(40B)	7005-72-3	4-chlorophenyl phenylether	10U		91-57-6	2-methylnaphthalene	20U
(41B)	101-55-3	4-bromophenyl phenyl ether	10U		88-74-4	2-nitroaniline	100U
(42B)	39638-32-9	bis-(2-chloroisopropyl)ether	10U		99-09-2	3-nitroaniline	100U
(43B)	111-91-1	bis-(2-chloroethoxy)methane	20U		100-01-6	4-nitroaniline	100U

July, 1983

100226

C 8209

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: CompuChem
Lab Sample ID No: 22580
Sample Matrix: Liquid
Data Release Authorized By: Paul Hogg

Case Number 2521
QC Report No. _____
Contract No.: 6801-6762
Date Sample Received: 3-15-84

VOLATILES

CONCENTRATION: LOW MEDIUM HIGH (circle)

DATE EXTRACTED/PREPARED: 3-12-84

DATE ANALYZED: 3-20-84

PERCENT MOISTURE: _____

PESTICIDES

CONCENTRATION: LOW MEDIUM HIGH (circle one)

DATE EXTRACTED/PREPARED: 3-15-84

DATE ANALYZED: 3-19-84

PERCENT MOISTURE: 1A

Multiply Detection limits by 1 ☐ or ☒ 10
(Check Box for Appropriate Factor)

PP#	CAS#	Chemical Name	ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	5U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	5U
(16V)	75-00-3	chloroethane	5U
(19V)	110-75-8	2-chloroethylvinyl ether	5U
(23V)	67-66-3	chloroform	5U
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	1,2-trans-dichloroethene	5U
(32V)	78-87-5	1,2-dichloropropane	5U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	10U
(38V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	5U
(45V)	74-87-3	chloromethane	5U
(46V)	74-83-9	bromomethane	5U
(47V)	75-25-2	bromoform	5U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	5U
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	5U
(87V)	79-01-6	trichloroethene	5U
(88V)	75-01-4	vinyl chloride	5U
	67-64-1	acetone	100U
	78-93-3	2-butanone	200U
	75-15-0	carbonylsulfide	10U
	519-78-6	2-hexanone	100U
	108-10-1	4-methyl-2-pentanone	100U
	100-42-5	styrene	5U
	108-05-4	vinyl acetate	10U
	95-47-6	o-xylene	5U

Multiply Detection limits by 1 ☐ or ☒ 10
(Check Box for Appropriate Factor)

PP#	CAS#	Chemical Name	ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	0.1U
(90P)	60-57-1	dieldrin	0.1U
(91P)	57-74-9	chlordane	0.1U
(92P)	50-29-3	4,4'-DDT	0.1U
(93P)	72-55-9	4,4'-DDE	0.1U
(94P)	72-54-8	4,4'-DDD	0.1U
(95P)	115-29-7	endosulfan I	0.1U
(96P)	115-29-7	endosulfan II	0.1U
(97P)	1031-07-8	endosulfan sulfate	0.1U
(98P)	78-20-8	endrin	0.1U
(99P)	7421-43-4	endrin aldehyde	0.1U
(100P)	76-44-8	heptachlor	0.1U
(101P)	1024-57-3	heptachlor epoxide	0.1U
(102P)	319-84-6	BHC-Alpha	0.1U
(103P)	319-85-7	BHC-Beta	0.1U
(104P)	319-86-8	BHC-Delta	0.1U
(105P)	58-89-9	BHC-Gamma	0.1U
(106P)	53469-21-9	PCB-1242	0.1U
(107P)	11097-69-7	PCB-1254	0.1U
(108P)	11104-28-2	PCB-1221	0.1U
(109P)	11141-16-5	PCB-1232	0.1U
(110P)	12672-29-6	PCB-1248	0.1U
(111P)	11096-82-5	PCB-1260	0.1U
(112P)	12674-11-2	PCB-1016	0.1U
(113P)	8001-35-2	toxaphene	0.1U

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle)

DATE EXTRACTED/PREPARED: 3-15-84

DATE ANALYZED: 3-20-84

PERCENT MOISTURE: 1E

PP#	CAS#	Chemical Name	ug/l or ug/kg (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	0.004U

July, 198:

100227

Sample Number

C8260

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Need CompuChem
Lab Sample ID No.: 22593
Sample Matrix: Liquid
Data Release Authorized By: NY

Case Number: 2521
QC Report No.:
Contract No.: 6801-6762
Date Sample Received: 3-15-84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 3-15-84
DATE ANALYZED: 2-21-84
PERCENT MOISTURE: 1.41 factor = 2490

Multiply Detection limits by 1 ☐ or 10 ☐ or 14 56
(Check Box for Appropriate Factor)

PP#	CAS#	ug/l or ug/kg (circle one)	PP#	CAS#	ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6-trichlorophenol 10U	(52B)	87-68-3	hexachlorobutadiene 10U
(22A)	59-50-7	p-chloro-m-cresol 20U	(53B)	77-47-4	hexachlorocyclopentadiene 10U
(24A)	95-57-8	2-chlorophenol 10U	(54B)	78-59-1	isophorone 10U
(31A)	122-83-2	2,4-dichlorophenol 10U	(55B)	91-20-3	naphthalene 10U
(34A)	105-67-9	2,4-dimethylphenol 10U	(56B)	98-95-3	nitrobenzene 10U
(57A)	88-75-5	2-nitrophenol 20U	(62B)	86-30-6	N-nitrosodiphenylamine 10U
(58A)	100-02-7	4-nitrophenol 100U	(63B)	621-64-7	N-nitrosodi-n-propylamine 20U
(59A)	51-88-5	2,4-dinitrophenol 50U	(66B)	117-81-7	bis(2-ethylhexyl)phthalate 10U
(60A)	534-52-1	4,6-dinitro-2-methylphenol 20U	(67B)	85-68-7	butyl benzyl phthalate 10U
(64A)	87-36-5	pentachlorophenol 13 000 20U (circled)	(68B)	84-74-2	di-n-butyl phthalate 10U
(65A)	108-95-2	phenol 10U	(69B)	117-84-0	di-n-octyl phthalate 10U
	65-85-0	benzoic acid 100U	(70B)	84-66-2	diethyl phthalate 10U
	95-48-7	2-methylphenol 10U	(71B)	131-11-3	dimethyl phthalate 10U
	108-39-4	4-methylphenol 10U	(72B)	56-55-3	benzo(a)anthracene 6700 10U (circled)
	95-95-4	2,4,5-trichlorophenol 100U	(73B)	50-33-8	benzo(a)pyrene 2 300 20U (circled)
(1B)	83-32-9	acenaphthene 2400 10U (circled)	(74B)	205-99-2	benzo(b)fluoranthene 12 000 20U (circled)
(5B)	92-87-5	benzidine 40U	(75B)	207-08-9	benzo(k)fluoranthene 12 000 20U (circled)
(8B)	120-82-1	1,2,4-trichlorobenzene 10U	(76B)	318-01-9	chrysene 6200 10U (circled)
(9B)	118-74-1	hexachlorobenzene 10U	(77B)	208-96-8	acenaphthylene 560 10U (circled)
(12B)	67-72-1	hexachloroethane 10U	(78B)	120-12-7	anthracene 330 10U (circled)
(18B)	111-44-4	bis(2-chloroethyl)ether 10U	(79B)	181-24-2	benzo(ghi)perylene 1500 20U (circled)
(20B)	91-58-7	2-chloronaphthalene 10U	(80B)	86-73-7	fluorene 800 10U (circled)
(25B)	95-50-1	1,2-dichlorobenzene 10U	(81B)	85-01-8	phenanthrene 800 10U (circled)
(26B)	541-73-1	1,3-dichlorobenzene 10U	(82B)	53-70-3	dibenzo(a,h)anthracene 17 20U (circled)
(27B)	106-46-7	1,4-dichlorobenzene 10U	(83B)	183-39-5	indeno(1,2,3-cd)pyrene 1800 20U (circled)
(28B)	91-94-1	3,3'-dichlorobenzidine 20U	(84B)	129-00-0	pyrene 12 500 10U (circled)
(35B)	121-14-2	2,4-dinitrotoluene 20U		62-53-3	aniline 10U
(36B)	606-20-2	2,6-dinitrotoluene 10U		100-51-6	benzyl alcohol 20U
(37B)	122-66-7	1,2-diphenylhydrazine 20U		106-47-8	4-chloroaniline 50U
(39B)	206-44-0	fluoranthene 17 000 10U (circled)		132-64-9	dibenzofuran 1500 10U (circled)
(40B)	7005-72-3	4-chlorophenyl phenylether 10U		91-57-6	2-methylnaphthalene 20U
(41B)	101-55-3	4-bromophenyl phenyl ether 10U		88-74-4	2-nitroaniline 100U
(42B)	39638-32-9	bis-(2-chloroisopropyl)ether 10U		99-05-2	3-nitroaniline 100U
(43B)	111-91-1	bis-(2-chloroethoxy)methane 20U		100-01-6	4-nitroaniline 100U

100228

July, 1983

SAMPLE NUMBER

C8260

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: CompuChem
Lab Sample ID No: 22543
Sample Matrix: Solid
Data Release Authorized By: 12

Case Number 2521
QC Report No. _____
Contract No.: 68-01-6762
Date Sample Received: 3-15-84

VOLATILES

CONCENTRATION: LOW MEDIUM HIGH (circle)
DATE EXTRACTED/PREPARED: 3-13-84
DATE ANALYZED: 3-19-84
PERCENT MOISTURE: 1.41 factor = 2490

Multiply Detection Limits by 1 ☐ or ☒ 1.3
(Check Box for Appropriate Factor)

PP#	CAS#		ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein	50U
(3V)	107-13-1	acrylonitrile	50U
(4V)	71-43-2	benzene	2.5U
(6V)	56-23-5	carbon tetrachloride	2.5U
(7V)	108-90-7	chlorobenzene	2.5U
(10V)	107-06-2	1,2-dichloroethane	2.5U
(11V)	71-55-6	1,1,1-trichloroethane	2.5U
(13V)	75-34-3	1,1-dichloroethane	2.5U
(14V)	79-00-5	1,1,2-trichloroethane	2.5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	2.5U
(16V)	75-00-3	chloroethane	2.5U
(19V)	110-75-8	2-chloroethylvinyl ether	2.5U
(23V)	67-66-3	chloroform	2.5U
(29V)	75-35-4	1,1-dichloroethene	2.5U
(30V)	156-60-5	1,2-trans-dichloroethene	2.5U
(32V)	78-87-5	1,2-dichloropropane	2.5U
(33V)	10061-02-6	trans-1,3-dichloropropene	2.5U
	10061-01-05	cis-1,3-dichloropropene	5U
(38V)	100-41-4	ethylbenzene	2.5U
(44V)	75-09-2	methylene chloride	10 - 2.5U
(45V)	74-87-3	chloromethane	2.5U
(46V)	74-83-9	bromomethane	2.5U
(47V)	75-25-2	bromoform	2.5U
(48V)	75-27-4	bromodichloromethane	2.5U
(49V)	75-69-4	fluorotrichloromethane	2.5U
(51V)	124-48-1	chlorodibromomethane	2.5U
(85V)	127-18-4	tetrachloroethene	2.5U
(86V)	108-88-3	toluene	2.5U
(87V)	79-01-6	trichloroethene	2.5U
(88V)	75-01-4	vinyl chloride	2.5U
	67-64-1	acetone	50U
	78-93-3	2-butanone	100U
	75-15-0	carbonyl sulfide	5U
	519-78-6	2-hexanone	50U
	108-10-1	4-methyl-2-pentanone	50U
	100-42-5	styrene	2.5U
	108-05-4	vinyl acetate	5U
	95-47-6	o-xylene	2.5U

PESTICIDES

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 3-15-84
DATE ANALYZED: 3-21-84
PERCENT MOISTURE: 1.41 factor = 2490

Multiply Detection Limits by 1 ☐ or ☒ 1.4
(Check Box for Appropriate Factor)

PP#	CAS#		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	4.0
(90P)	60-57-1	dieldrin	4.0
(91P)	57-74-9	chlordane	4.0
(92P)	50-29-3	4,4'-DDT	4.0
(93P)	72-35-9	4,4'-DDE	4.0
(94P)	72-54-8	4,4'-DDD	4.0
(95P)	115-29-7	endosulfan I	4.0
(96P)	115-29-7	endosulfan II	4.0
(97P)	1031-07-8	endosulfan sulfate	4.0
(98P)	78-20-8	endrin	4.0
(99P)	7421-43-4	endrin aldehyde	4.0
(100P)	76-44-8	heptachlor	4.0
(101P)	1024-57-3	heptachlor epoxide	4.0
(102P)	319-84-6	BHC-Alpha	4.0
(103P)	319-85-7	BHC-Beta	4.0
(104P)	319-86-8	BHC-Delta	4.0
(105P)	58-89-9	BHC-Gamma	4.0
(106P)	53469-21-9	PCB-1242	4.0
(107P)	11097-69-7	PCB-1254	4.0
(108P)	11104-28-2	PCB-1221	4.0
(109P)	11141-16-5	PCB-1232	4.0
(110P)	12672-29-6	PCB-1248	4.0
(111P)	11096-82-5	PCB-1260	4.0
(112P)	12674-11-2	PCB-1016	4.0
(113P)	8001-35-2	toxaphene	4.0

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle)
DATE EXTRACTED/PREPARED: 3-15-84
DATE ANALYZED: 3-20-84
PERCENT MOISTURE: 1.41 factor = 2490

		ug/g or <u>ug/kg</u> (circle one)
(129E)	1746-01-6	2,3,7,8-tetrachlorodibenzo- p-dioxin 0.16

July, 15

100229

Sample Number

C8261

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Head CompuChem
Lab Sample ID No.: 22581 R
Sample Matrix: Liquid
Data Release Authorized By: Paul Hall

Case Number: 2521
QC Report No.:
Contract No.: 68-01-6866
Date Sample Received: 3-15-84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 3-28-84
DATE ANALYZED: 3-30-84
PERCENT MOISTURE: NA

Multiply Detection limits by 1 ☐ or 10 ☐ or ☒ 3.5
(Check Box for Appropriate Factor)

PP#	CASE#	ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6-trichlorophenol 10U
(22A)	59-50-7	p-chloro-m-cresol 20U
(24A)	95-57-8	2-chlorophenol 10U
(31A)	122-83-2	2,4-dichlorophenol 10U
(34A)	105-67-9	2,4-dimethylphenol 10U
(57A)	88-75-5	2-nitrophenol 20U
(58A)	100-02-7	4-nitrophenol 100U
(59A)	51-88-5	2,4-dinitrophenol 50U
(60A)	534-52-1	4,6-dinitro-2-methylphenol 20U
(64A)	87-36-5	pentachlorophenol 20U
(65A)	108-95-2	phenol 10U
	65-85-0	benzoic acid 100U
	95-48-7	2-methylphenol 10U
	108-39-4	4-methylphenol 10U
	95-95-4	2,4,5-trichlorophenol 100U
(1B)	83-32-9	acenaphthene 10U
(5B)	92-87-5	benzidine 40U
(8B)	120-82-1	1,2,4-trichlorobenzene 10U
(9B)	118-74-1	hexachlorobenzene 10U
(12B)	67-72-1	hexachloroethane 10U
(18B)	111-44-4	bis(2-chloroethyl)ether 10U
(20B)	91-58-7	2-chloronaphthalene 10U
(25B)	95-50-1	1,2-dichlorobenzene 10U
(26B)	541-73-1	1,3-dichlorobenzene 10U
(27B)	106-45-7	1,4-dichlorobenzene 10U
(28B)	91-94-1	3,3'-dichlorobenzidine 20U
(35B)	121-14-2	2,4-dinitrotoluene 20U
(36B)	606-20-2	2,6-dinitrotoluene 10U
(37B)	122-66-7	1,2-diphenylhydrazine 20U
(39B)	206-44-0	fluoranthene 49 100 ²⁸
(40B)	7005-72-3	4-chlorophenyl phenylether 10U
(41B)	101-55-3	4-bromophenyl phenyl ether 10U
(42B)	39638-32-9	bis-(2-chloroisopropyl)ether 10U
(43B)	111-91-1	bis-(2-chloroethoxy)methane 20U

PP#	CASE#	ug/l or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene 10U
(53B)	77-47-4	hexachlorocyclopentadiene 10U
(54B)	78-59-1	isophorone 10U
(55B)	91-20-3	naphthalene 10U
(56B)	98-95-3	nitrobenzene 10U
(62B)	86-30-6	N-nitrosodiphenylamine 10U
(63B)	621-64-7	N-nitrosodi-n-propylamine 20U
(66B)	117-81-7	bis(2-ethylhexyl)phthalate 10U
(67B)	85-68-7	butyl benzyl phthalate 10U
(68B)	84-74-2	di-n-butyl phthalate 10U
(69B)	117-84-4	di-n-octyl phthalate 10U
(70B)	84-66-2	diethyl phthalate 10U
(71B)	131-11-3	dimethyl phthalate 10U
(72B)	96-55-3	benzo(a)anthracene 10U
(73B)	90-33-8	benzo(a)pyrene 20U
(74B)	205-99-2	benzo(b)fluoranthene 20U
(75B)	207-08-1	benzo(k)fluoranthene 20U
(76B)	318-01-1	chrysene 10U
(77B)	208-96-1	acenaphthylene 10U
(78B)	120-12-7	anthracene 10U
(79B)	181-24-2	benzo(ghi)perylene 20U
(80B)	86-73-7	fluorene 10U
(81B)	85-01-8	phenanthrene 10U
(82B)	53-70-3	dibenzo(a,h)anthracene 20U
(83B)	183-39-5	indeno(1,2,3-cd)pyrene 20U
(84B)	129-00-0	pyrene LT 100 ²⁹
	62-53-3	aniline 10U
	100-51-6	benzyl alcohol 20U
	106-47-8	4-chloroaniline 50U
	132-64-9	dibenzofuran 10U
	91-57-6	2-methylnaphthalene 20U
	88-74-4	2-nitroaniline 100U
	99-09-2	3-nitroaniline 100U
	100-01-6	4-nitroaniline 100U

July, 1983

100230

C8261

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: CompuChem
Lab Sample ID No: 22581
Sample Matrix: Liquid
Data Release Authorized By: P. J. [Signature]

Case Number 2521
QC Report No. _____
Contract No.: 68-01-6762
Date Sample Received: 3-15-84

VOLATILES

CONCENTRATION: LOW MEDIUM HIGH (circle)
DATE EXTRACTED/PREPARED: 3-2-84
DATE ANALYZED: 3-20-84
PERCENT MOISTURE: _____

Multiply Detection Limits by 1 ☒ or ☐
(Check Box for Appropriate Factor)

PP#	CAS#	ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein 100U
(3V)	107-13-1	acrylonitrile 100U
(4V)	71-43-2	benzene 5U
(6V)	56-23-5	carbon tetrachloride 5U
(7V)	108-90-7	chlorobenzene 5U
(10V)	107-06-2	1,2-dichloroethane 5U
(11V)	71-55-6	1,1,1-trichloroethane 5U
(13V)	75-34-3	1,1-dichloroethane 5U
(14V)	79-00-5	1,1,2-trichloroethane 5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane 5U
(16V)	75-00-3	chloroethane 5U
(19V)	110-75-8	2-chloroethylvinyl ether 5U
(23V)	67-66-3	chloroform 5U
(29V)	75-35-4	1,1-dichloroethene 5U
(30V)	156-60-5	1,2-trans-dichloroethene 5U
(32V)	78-87-5	1,2-dichloropropane 5U
(33V)	10061-02-6	trans-1,3-dichloropropene 5U
	10061-01-05	cis,1,3-dichloropropene 10U
(38V)	100-41-4	ethylbenzene 5U
(44V)	75-09-2	methylene chloride 5U
(45V)	74-87-3	chloromethane 5U
(46V)	74-83-9	bromomethane 5U
(47V)	75-25-2	bromoform 5U
(48V)	75-27-4	bromodichloromethane 5U
(49V)	75-69-4	fluorotrichloromethane 5U
(51V)	124-48-1	chlorodibromomethane 5U
(85V)	127-18-4	tetrachloroethene 5U
(86V)	108-88-3	toluene 5U
(87V)	79-01-6	trichloroethene 5U
(88V)	75-01-4	vinyl chloride 5U
	67-64-1	acetone 100U
	78-93-3	2-butanone 200U
	75-15-0	carbonylsulfide 10U
	519-78-6	2-hexanone 100U
	108-10-1	4-methyl-2-pentanone 100U
	100-42-5	styrene 5U
	108-05-4	vinyl acetate 10U
	95-47-6	o-xylene 5U

PESTICIDES

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 3-15-84
DATE ANALYZED: 2-19-84
PERCENT MOISTURE: _____

Multiply Detection Limits by 1 ☒ or ☐
(Check Box for Appropriate Factor)

PP#	CAS#	ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin 0.1U
(90P)	60-57-1	dieldrin 0.1U
(91P)	57-74-9	chlordane 0.1U
(92P)	50-29-3	4,4'-DDT 0.1U
(93P)	72-55-9	4,4'-DDE 0.1U
(94P)	72-54-8	4,4'-DDD 0.1U
(95P)	115-29-7	endosulfan I 0.1U
(96P)	115-29-7	endosulfan II 0.1U
(97P)	1031-07-8	endosulfan sulfate 0.1U
(98P)	78-20-8	endrin 0.1U
(99P)	7421-43-4	endrin aldehyde 0.1U
(100P)	76-44-8	heptachlor 0.1U
(101P)	1024-57-3	heptachlor epoxide 0.1U
(102P)	319-84-6	BHC-Alpha 0.1U
(103P)	319-85-7	BHC-Beta 0.1U
(104P)	319-86-8	BHC-Delta 0.1U
(105P)	58-89-9	BHC-Gamma 0.1U
(106P)	53469-21-9	PCB-1242 0.1U
(107P)	11097-69-7	PCB-1254 0.1U
(108P)	11104-28-2	PCB-1221 0.1U
(109P)	11141-16-5	PCB-1232 0.1U
(110P)	12672-29-6	PCB-1248 0.1U
(111P)	11096-82-5	PCB-1260 0.1U
(112P)	12674-11-2	PCB-1016 0.1U
(113P)	8001-35-2	toxaphene 0.1U

DIOXINS

CONCENTRATIONS: LOW MEDIUM HIGH (circle)
DATE EXTRACTED/PREPARED: 3-15-84
DATE ANALYZED: 3-20-84
PERCENT MOISTURE: _____

PP#	CAS#	ug/l or ug/kg (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin 0.004U

July, 198

100231

C8262

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Mead CompuChem
 Lab Sample ID No.: 22594
 Sample Matrix: Solid
 Data Release Authorized By: 88

Case Number: 2521
 QC Report No.:
 Contract No.: 68-01-6866
 Date Sample Received: 3-15-84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: LOW/MEDIUM HIGH (circle one)
 DATE EXTRACTED/PREPARED: 3-16-84
 DATE ANALYZED: 3-24-84
 PERCENT MOISTURE: 1.74% for = 96.90

Multiply Detection Limits by 1 ☐ or 10 ☐ or ☒ 20
 (Check Box for Appropriate Factor)

PP#	CAS#	ug/l or ug/kg (circle one)	PP#	CAS#	ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6-trichlorophenol 10U	(52B)	87-68-3	hexachlorobutadiene 10U
(22A)	59-50-7	p-chloro-m-cresol 20U	(53B)	77-47-4	hexachlorocyclopentadiene 10U
(24A)	95-57-8	2-chlorophenol 10U	(54B)	78-59-1	isophorone 10U
(31A)	122-83-2	2,4-dichlorophenol 10U	(55B)	91-20-3	naphthalene 10U
(34A)	105-67-9	2,4-dimethylphenol 10U	(56B)	98-95-3	nitrobenzene 10U
(57A)	88-75-5	2-nitrophenol 20U	(62B)	86-30-6	N-nitrosodiphenylamine 10U
(58A)	100-02-7	4-nitrophenol 100U	(63B)	621-64-7	N-nitrosodi-n-propylamine 20U
(59A)	51-88-5	2,4-dinitrophenol 50U	(66B)	117-81-7	bis(2-ethylhexyl)phthalate 10U
(60A)	534-52-1	4,6-dinitro-2-methylphenol 20U	(67B)	85-68-7	butyl benzyl phthalate 10U
(64A)	87-36-5	pentachlorophenol LT 2000	(68B)	84-74-2	di-n-butyl phthalate 10U
(65A)	108-95-2	phenol 10U	(69B)	117-84-0	di-n-octyl phthalate 10U
	65-85-0	benzoic acid 100U	(70B)	84-66-2	diethyl phthalate 10U
	95-48-7	2-methylphenol 10U	(71B)	131-11-3	dimethyl phthalate 10U
	108-39-4	4-methylphenol 10U	(72B)	56-55-3	benzo(a)anthracene 10U
	95-95-4	2,4,5-trichlorophenol 100U	(73B)	50-33-8	benzo(a)pyrene 20U
(1B)	83-32-9	acenaphthene 10U	(74B)	205-99-2	benzo(b)fluoranthene 100U 2000
(5B)	92-87-5	benzidine 40U	(75B)	207-08-9	benzo(k)fluoranthene 20U
(8B)	120-82-1	1,2,4-trichlorobenzene 10U	(76B)	318-01-9	chrysene 9.0 1000
(9B)	118-74-1	hexachlorobenzene 10U	(77B)	208-96-8	acenaphthylene 10U
(12B)	67-72-1	hexachloroethane 10U	(78B)	120-12-7	anthracene LT 1000
(18B)	111-44-4	bis(2-chloroethyl)ether 10U	(79B)	181-24-2	benzo(ghi)perylene 20U
(20B)	91-58-7	2-chloronaphthalene 10U	(80B)	86-73-7	fluorene 10U
(25B)	95-50-1	1,2-dichlorobenzene 10U	(81B)	85-01-8	phenanthrene 10U
(26B)	541-73-1	1,3-dichlorobenzene 10U	(82B)	53-70-3	dibenzo(a,h)anthracene 20U
(27B)	106-46-7	1,4-dichlorobenzene 10U	(83B)	183-39-5	indeno(1,2,3-cd)pyrene 20U
(28B)	91-94-1	3,3'-dichlorobenzidine 20U	(84B)	129-00-0	pyrene LT 1000
(35B)	121-14-2	2,4-dinitrotoluene 20U		62-53-3	aniline 10U
(36B)	606-20-2	2,6-dinitrotoluene 20U		100-51-6	benzyl alcohol 20U
(37B)	122-66-7	1,2-diphenylhydrazine 20U		106-47-8	4-chloroaniline 50U
(39B)	206-44-0	fluoranthene LT 1000		132-64-9	dibenzofuran 10U
(40B)	7005-72-3	4-chlorophenyl phenylether 10U		91-57-6	2-methylnaphthalene 20U
(41B)	101-55-3	4-bromophenyl phenyl ether 10U		88-74-4	2-nitroaniline 100U
(42B)	39638-32-9	bis-(2-chloroisopropyl)ether 20U		99-09-2	3-nitroaniline 100U
(43B)	111-91-1	bis-(2-chloroethoxy)methane 20U		100-01-6	4-nitroaniline 100U

July, 1983

100232

SAMPLE NUMBER

C8262

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: CompuChem
Lab Sample ID No: 22594
Sample Matrix: Solid
Data Release Authorized By: 88

Case Number: 2521
QC Report No.:
Contract No.: 68-01-6866
Date Sample Received: 3-15-84

VOLATILES

CONCENTRATION: LOW MEDIUM HIGH (circle)
DATE EXTRACTED/PREPARED: 3-13-84
DATE ANALYZED: 3-19-84
PERCENT MOISTURE: 1.74 factor = 46%

Multiply Detection limits by 1 ☐ or ☒ 1.1
(Check Box for Appropriate Factor)

PP#	CAS#		ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein	50U
(3V)	107-13-1	acrylonitrile	50U
(4V)	71-43-2	benzene	2.5U
(6V)	56-23-5	carbon tetrachloride	2.5U
(7V)	108-90-7	chlorobenzene	2.5U
(10V)	107-06-2	1,2-dichloroethane	2.5U
(11V)	71-55-6	1,1,1-trichloroethane	2.5U
(13V)	75-34-3	1,1-dichloroethane	2.5U
(14V)	79-00-5	1,1,2-trichloroethane	2.5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	2.5U
(16V)	75-00-3	chloroethane	2.5U
(19V)	110-75-8	2-chloroethylvinyl ether	2.5U
(23V)	67-66-3	chloroform	2.5U
(29V)	75-35-4	1,1-dichloroethene	2.5U
(30V)	156-60-5	1,2-trans-dichloroethene	2.5U
(32V)	78-87-5	1,2-dichloropropane	2.5U
(33V)	10061-02-6	trans-1,3-dichloropropene	2.5U
	10061-01-05	cis-1,3-dichloropropene	5U
(38V)	100-41-4	ethylbenzene	2.5U
(44V)	75-09-2	methylene chloride	64 2.5U
(45V)	74-87-3	chloromethane	2.5U
(46V)	74-83-9	bromomethane	2.5U
(47V)	75-25-2	bromoform	2.5U
(48V)	75-27-4	bromodichloromethane	2.5U
(49V)	75-69-4	fluorotrichloromethane	LT 2.5U
(51V)	124-48-1	chlorodibromomethane	2.5U
(85V)	127-18-4	tetrachloroethene	2.5U
(86V)	108-88-3	toluene	3 2.5U
(87V)	79-01-6	trichloroethene	2.5U
(88V)	75-01-4	vinyl chloride	2.5U
	67-64-1	acetone	50U
	78-93-3	2-butanone	100U
	75-15-0	carbonyl disulfide	5U
	519-78-6	2-hexanone	50U
	108-10-1	4-methyl-2-pentanone	50U
	100-42-5	styrene	2.5U
	108-05-4	vinyl acetate	5U
	95-47-6	o-xylene	2.5U

PESTICIDES

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 3-20-84
DATE ANALYZED: 3-22-84
PERCENT MOISTURE: 1.74 factor = 46%

Multiply Detection limits by 1 ☐ or ☒ 1.74
(Check Box for Appropriate Factor)

PP#	CAS#		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	4.0U
(90P)	60-57-1	dieldrin	4.0U
(91P)	57-74-9	chlordane	4.0U
(92P)	50-29-3	4,4'-DDT	4.0U
(93P)	72-55-9	4,4'-DDE	4.0U
(94P)	72-54-8	4,4'-DDD	4.0U
(95P)	115-29-7	endosulfan I	4.0U
(96P)	115-29-7	endosulfan II	4.0U
(97P)	1031-07-8	endosulfan sulfate	4.0U
(98P)	78-20-8	endrin	4.0U
(99P)	7421-43-4	endrin aldehyde	4.0U
(100P)	76-44-8	heptachlor	4.0U
(101P)	1024-57-3	heptachlor epoxide	4.0U
(102P)	319-84-6	BHC-Alpha	4.0U
(103P)	319-85-7	BHC-Beta	4.0U
(104P)	319-86-8	BHC-Delta	4.0U
(105P)	58-89-9	BHC-Gamma	4.0U
(106P)	53469-21-9	PCB-1242	4.0U
(107P)	11097-69-7	PCB-1254	4.0U
(108P)	11104-28-2	PCB-1221	4.0U
(109P)	11141-16-5	PCB-1232	4.0U
(110P)	12672-29-6	PCB-1248	4.0U
(111P)	11096-82-5	PCB-1260	4.0U
(112P)	12674-11-2	PCB-1016	4.0U
(113P)	8001-35-2	toxaphene	4.0U

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle)
DATE EXTRACTED/PREPARED: 4-11-84
DATE ANALYZED: 4-13-84
PERCENT MOISTURE: 1.74 factor = 46%

(129B) 1746-01-6 2,3,7,8-tetrachlorodibenzo-
p-dioxin 0.16U

July, 1983

100233

Sample Number

C8263

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Mead CompuChem
Lab Sample ID No.: 22582
Sample Matrix: Liquid
Data Release Authorized By: Paul Hines

Case Number: 2521
QC Report No.:
Contract No.: 68-01-6762
Date Sample Received: 3-15-84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 3-15-84
DATE ANALYZED: 3-20-84
PERCENT MOISTURE: NA

Multiply Detection limits by 1 ☐ or 10 ☐ or 4 ☒
(Check Box for Appropriate Factor)

PP#	CAS#	<u>ug/l</u> or ug/kg (circle one)	PP#	CAS#	<u>ug/l</u> or ug/kg (circle one)
(21A)	88-06-2	2,4,6-trichlorophenol 10U	(52B)	87-68-3	hexachlorobutadiene 10U
(22A)	59-50-7	p-chloro-m-cresol 20U	(53B)	77-47-4	hexachlorocyclopentadiene 10U
(24A)	95-57-8	2-chlorophenol 10U	(54B)	78-59-1	isophorone 10U
(31A)	122-83-2	2,4-dichlorophenol 10U	(55B)	91-20-3	naphthalene 10U
(34A)	105-67-9	2,4-dimethylphenol 10U	(56B)	98-95-3	nitrobenzene 10U
(57A)	88-75-5	2-nitrophenol 20U	(62B)	86-30-6	N-nitrosodiphenylamine 10U
(58A)	100-02-7	4-nitrophenol 100U	(63B)	621-64-7	N-nitrosodi-n-propylamine 20U
(59A)	51-88-5	2,4-dinitrophenol 50U	(66B)	117-81-7	bis(2-ethylhexyl)phthalate 10U
(60A)	534-52-1	4,6-dinitro-2-methylphenol 20U	(67B)	85-68-7	butyl benzyl phthalate 10U
(64A)	87-36-5	pentachlorophenol 20U	(68B)	84-74-2	di-n-butyl phthalate 10U
(65A)	108-95-2	phenol 10U	(69B)	117-84-0	di-n-octyl phthalate 10U
	65-85-0	benzoic acid 100U	(70B)	84-66-2	diethyl phthalate 10U
	95-48-7	2-methylphenol 10U	(71B)	131-11-3	dimethyl phthalate 10U
	108-39-4	4-methylphenol 10U	(72B)	56-55-3	benzo(a)anthracene 10U
	95-95-4	2,4,5-trichlorophenol 100U	(73B)	50-33-8	benzo(a)pyrene 20U
(1B)	83-32-9	acenaphthene 10U	(74B)	205-99-2	benzo(b)fluoranthene 20U
(5B)	92-87-5	benzidine 40U	(75B)	207-08-9	benzo(k)fluoranthene 20U
(8B)	120-82-1	1,2,4-trichlorobenzene 10U	(76B)	318-01-9	chrysene 10U
(9B)	118-74-1	hexachlorobenzene 10U	(77B)	208-96-8	acenaphthylene 10U
(12B)	67-72-1	hexachloroethane 10U	(78B)	120-12-7	anthracene 10U
(18B)	111-44-4	bis(2-chloroethyl)ether 10U	(79B)	181-24-2	benzo(ghi)perylene 20U
(20B)	91-58-7	2-chloronaphthalene 10U	(80B)	86-73-7	fluorene 10U
(25B)	95-50-1	1,2-dichlorobenzene 10U	(81B)	85-01-8	phenanthrene 10U
(26B)	541-73-1	1,3-dichlorobenzene 10U	(82B)	53-70-3	dibenzo(a,h)anthracene 20U
(27B)	106-46-7	1,4-dichlorobenzene 10U	(83B)	183-39-5	indeno(1,2,3-cd)pyrene 20U
(28B)	91-94-1	3,3'-dichlorobenzidine 20U	(84B)	129-00-0	pyrene 10U
(35B)	121-14-2	2,4-dinitrotoluene 20U		62-53-3	aniline 10U
(36B)	606-20-2	2,6-dinitrotoluene 10U		100-51-6	benzyl alcohol 20U
(37B)	122-66-7	1,2-diphenylhydrazine 20U		106-47-8	4-chloroaniline 50U
(39B)	206-44-0	fluoranthene 10U		132-64-9	dibenzofuran 10U
(40B)	7005-72-3	4-chlorophenyl phenylether 10U		91-57-6	2-methylnaphthalene 20U
(41B)	101-55-3	4-bromophenyl phenyl ether 10U		88-74-4	2-nitroaniline 100U
(42B)	39638-32-9	bis-(2-chloroisopropyl)ether 10U		99-09-2	3-nitroaniline 100U
(43B)	111-91-1	bis-(2-chloroethoxy)methane 20U		100-01-6	4-nitroaniline 100U

July, 1983

106234

C8263

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: CompuChem
 Lab Sample ID No: 22582
 Sample Matrix: Liquid
 Data Release Authorized By: J. M. M.

Case Number 2521
 QC Report No. _____
 Contract No.: 68 DL-6762
 Date Sample Received: 3-15-84

VOLATILES

CONCENTRATION: LOW MEDIUM HIGH (circle one)
 DATE EXTRACTED/PREPARED: 3-13-84
 DATE ANALYZED: 3-20-84
 PERCENT MOISTURE: NA

Multiply Detection limits by 1 ☐ or ☒ 1
 (Check Box for Appropriate Factor)

PP#	CAS#	Chemical Name	ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	5U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	5U
(16V)	75-00-3	chloroethane	5U
(19V)	110-75-8	2-chloroethylvinyl ether	5U
(23V)	67-66-3	chloroform	5U
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	1,2-trans-dichloroethene	5U
(32V)	78-87-5	1,2-dichloropropane	5U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	10U
(38V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	10-50 <u>ug/l</u>
(45V)	74-87-3	chloromethane	5U
(46V)	74-83-9	bromomethane	5U
(47V)	75-25-2	bromoform	5U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	5U
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	5U
(87V)	79-01-6	trichloroethene	5U
(88V)	75-01-4	vinyl chloride	5U
	67-64-1	acetone	100U
	78-93-3	2-butanone	200U
	75-15-0	carbonyl sulfide	10U
	519-78-6	2-hexanone	100U
	108-10-1	4-methyl-2-pentanone	100U
	100-42-5	styrene	5U
	108-05-4	vinyl acetate	10U
	95-47-6	o-xylene	5U

PESTICIDES

CONCENTRATION: LOW MEDIUM HIGH (circle one)
 DATE EXTRACTED/PREPARED: 3-15-84
 DATE ANALYZED: 3-20-84
 PERCENT MOISTURE: NA

Multiply Detection limits by 1 ☒ or ☐ 1
 (Check Box for Appropriate Factor)

PP#	CAS#	Chemical Name	ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	0.1U
(90P)	60-57-1	dieldrin	0.1U
(91P)	57-74-9	chlordane	0.1U
(92P)	50-29-3	4,4'-DDT	0.1U
(93P)	72-55-9	4,4'-DDE	0.1U
(94P)	72-54-8	4,4'-DDD	0.1U
(95P)	115-29-7	endosulfan I	0.1U
(96P)	115-29-7	endosulfan II	0.1U
(97P)	1031-07-8	endosulfan sulfate	0.1U
(98P)	78-20-8	endrin	0.1U
(99P)	7421-43-4	endrin aldehyde	0.1U
(100P)	78-44-8	heptachlor	0.1U
(101P)	1024-57-3	heptachlor epoxide	0.1U
(102P)	319-84-6	BHC-Alpha	0.1U
(103P)	319-85-7	BHC-Beta	0.1U
(104P)	319-86-8	BHC-Delta	0.1U
(105P)	58-89-9	BHC-Gamma	0.1U
(106P)	55469-21-9	PCB-1242	0.1U
(107P)	11097-69-7	PCB-1254	0.1U
(108P)	11104-28-2	PCB-1221	0.1U
(109P)	11141-16-5	PCB-1232	0.1U
(110P)	12672-29-6	PCB-1248	0.1U
(111P)	11096-82-5	PCB-1260	0.1U
(112P)	12674-11-2	PCB-1016	0.1U
(113P)	8001-35-2	toxaphene	0.1U

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
 DATE EXTRACTED/PREPARED: 3-15-84
 DATE ANALYZED: 3-20-84
 PERCENT MOISTURE: NA

PP#	CAS#	Chemical Name	ug/l or ug/kg (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	0.004U

July, 198

100235

08264

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Mead CompuChem
 Lab Sample ID No.: 22595
 Sample Matrix: Solid
 Data Release Authorized By: SS

Case Number: 2521
 QC Report No.:
 Contract No.: 68-01-6866
 Date Sample Received: 3-15-84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
 DATE EXTRACTED/PREPARED: 3-16-84
 DATE ANALYZED: 3-24-84
 PERCENT MOISTURE: EPA BLANK

Multiply Detection Limits by 1 ☐ or 10 ☐ or ☒ 40
 (Check Box for Appropriate Factor)

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

PP#	CAS#		ug/l or (ug/kg) (circle one)
(52B)	87-68-3	hexachlorobutadiene	10U
(53B)	77-47-4	hexachlorocyclopentadiene	10U
(54B)	78-59-1	isophorone	10U
(55B)	91-20-3	naphthalene	10U
(56B)	98-95-3	nitrobenzene	10U
(62B)	86-30-6	N-nitrosodiphenylamine	10U
(63B)	621-64-7	N-nitrosodi-n-propylamine	20U
(66B)	117-81-7	bis(2-ethylhexyl)phthalate	10U
(67B)	85-68-7	butyl benzyl phthalate	10U
(68B)	84-74-2	di-n-butyl phthalate	10U
(69B)	117-84-0	di-n-octyl phthalate	10U
(70B)	84-66-2	diethyl phthalate	10U
(71B)	131-11-3	dimethyl phthalate	10U
(72B)	56-55-3	benzo(a)anthracene	10U
(73B)	50-33-8	benzo(a)pyrene	20U
(74B)	205-99-2	benzo(b)fluoranthene	20U
(75B)	207-08-9	benzo(k)fluoranthene	20U
(76B)	318-01-9	chrysene	10U
(77B)	208-96-8	acenaphthylene	10U
(78B)	120-12-7	anthracene	10U
(79B)	181-24-2	benzo(ghi)perylene	20U
(80B)	86-73-7	fluorene	10U
(81B)	85-01-8	phenanthrene	10U
(82B)	53-70-3	dibenzo(a,h)anthracene	20U
(83B)	183-39-5	indeno(1,2,3-cd)pyrene	20U
(84B)	129-00-0	pyrene	10U
	62-53-3	aniline	10U
	100-51-6	benzyl alcohol	20U
	106-47-8	4-chloroaniline	50U
	132-64-9	dibenzofuran	10U
	91-57-6	2-methylnaphthalene	20U
	88-74-4	2-nitroaniline	100U
	99-09-2	3-nitroaniline	100U
	100-01-6	4-nitroaniline	100U

July, 1983

100236

SAMPLE NUMBER

C8264

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: CompuChem
Lab Sample ID No: 22595
Sample Matrix: Solid
Data Release Authorized By: LL

Case Number: 2521
QC Report No.: _____
Contract No.: 68-01-6866
Date Sample Received: 3-15-84

VOLATILES

CONCENTRATION: LOW MEDIUM HIGH (circle)
DATE EXTRACTED/PREPARED: 3-13-84
DATE ANALYZED: 3-19-84
PERCENT MOISTURE: TPA BLANK

Multiply Detection limits by 1 ☒ or ☐
(Check Box for Appropriate Factor)

PP#	CAS#		ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein	50U
(3V)	107-13-1	acrylonitrile	50U
(4V)	71-43-2	benzene	2.5U
(6V)	56-23-5	carbon tetrachloride	2.5U
(7V)	108-90-7	chlorobenzene	2.5U
(10V)	107-06-2	1,2-dichloroethane	2.5U
(11V)	71-55-6	1,1,1-trichloroethane	2.5U
(13V)	75-34-3	1,1-dichloroethane	2.5U
(14V)	79-00-5	1,1,2-trichloroethane	2.5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	2.5U
(16V)	75-00-3	chloroethane	2.5U
(19V)	110-75-8	2-chloroethylvinyl ether	2.5U
(23V)	67-66-3	chloroform	2.5U
(29V)	75-35-4	1,1-dichloroethene	2.5U
(30V)	156-60-5	1,2-trans-dichloroethene	2.5U
(32V)	78-87-5	1,2-dichloropropane	2.5U
(33V)	10061-02-6	trans-1,3-dichloropropene	2.5U
	10061-01-05	cis-1,3-dichloropropene	5U
(38V)	100-41-4	ethylbenzene	2.5U
(44V)	75-09-2	methylene chloride	3.2-2.5U
(45V)	74-87-3	chloromethane	2.5U
(46V)	74-83-9	bromomethane	2.5U
(47V)	75-25-2	bromoform	2.5U
(48V)	75-27-4	bromodichloromethane	2.5U
(49V)	75-69-4	fluorotrichloromethane	9.8-2.5U
(51V)	124-48-1	chlorodibromomethane	2.5U
(85V)	127-18-4	tetrachloroethene	2.5U
(86V)	108-88-3	toluene	2.5U
(87V)	79-01-6	trichloroethene	2.5U
(88V)	75-01-4	vinyl chloride	2.5U
	67-64-1	acetone	50U
	78-93-3	2-butanone	100U
	75-15-0	carbonyl disulfide	5U
	519-78-6	2-hexanone	50U
	108-10-1	4-methyl-2-pentanone	50U
	100-42-5	styrene	2.5U
	108-05-4	vinyl acetate	5U
	95-47-6	o-xylene	2.5U

PESTICIDES

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 3-20-84
DATE ANALYZED: 3-22-84
PERCENT MOISTURE: TPA BLANK

Multiply Detection limits by 1 ☒ or ☐
(Check Box for Appropriate Factor)

PP#	CAS#		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	4.0U
(90P)	50-57-1	dieldrin	4.0U
(91P)	57-74-9	chlordane	4.0U
(92P)	56-29-3	4,4'-DDT	4.0U
(93P)	72-55-9	4,4'-DDE	4.0U
(94P)	72-54-8	4,4'-DDD	4.0U
(95P)	115-29-7	endosulfan I	4.0U
(96P)	115-29-7	endosulfan II	4.0U
(97P)	1031-07-8	endosulfan sulfate	4.0U
(98P)	78-20-8	endrin	4.0U
(99P)	7421-43-4	endrin aldehyde	4.0U
(100P)	76-44-8	heptachlor	4.0U
(101P)	1024-57-3	heptachlor epoxide	4.0U
(102P)	319-84-6	BHC-Alpha	4.0U
(103P)	319-85-7	BHC-Beta	4.0U
(104P)	319-86-8	BHC-Delta	4.0U
(105P)	58-89-9	BHC-Gamma	4.0U
(106P)	33469-21-9	PCB-1242	4.0U
(107P)	11097-69-7	PCB-1254	4.0U
(108P)	11104-28-2	PCB-1221	4.0U
(109P)	11141-16-5	PCB-1232	4.0U
(110P)	12672-29-6	PCB-1248	4.0U
(111P)	11096-82-5	PCB-1260	4.0U
(112P)	12674-11-2	PCB-1016	4.0U
(113P)	8001-35-2	toxaphene	4.0U

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle)
DATE EXTRACTED/PREPARED: 3-19-84
DATE ANALYZED: 3-20-84
PERCENT MOISTURE: TPA BLANK

		ug/g or <u>ug/kg</u> (circle one)
(129B) 1746-01-6	2,3,7,8-tetrachlorodibenzo- p-dioxin	0.16U

July, 1983

100237

US ENVIRONMENTAL PROTECTION AGENCY

HWT Sample Management Office

P.O. Box 818 - Alexandria, Virginia 22313

703/557-2490 FTS 8-557-2490

Sample No.

MC 3271

INORGANICS ANALYSIS DATA SHEET

LAB NAME Cal Lab

CASE NO. 2521

LAB SAMPLE ID. NO. P672

QC REPORT NO. 2521

CAL SAMPLE ID P672
TASK 1 UG/L

1. ALUMINIUM-----600
2. CHROMIUM-----<10
3. BARIUM-----220
4. BERYLLIUM-----<5
5. COBALT-----<50
6. COPPER-----730
7. IRON-----270
8. NICKEL-----<40
9. MANGANESE-----28
10. ZINC-----94
11. VANADIUM-----<200
12. SILVER-----<10

TASK 2

1. ARSENIC-----<10
2. ANTIMONY-----<20
3. SELENIUM-----<2
4. THALLIUM-----<10
5. MERCURY-----<0.2
6. TIN-----<20
7. CADMIUM-----<1
8. LEAD-----6.7

TASK 3

1. AMMONIA-----N/A
2. CYANIDE-----<10
3. SULFIDE-----N/A

100238

INORGANICS ANALYSIS DATA SHEET

LAB NAME Cal Lab

CASE NO. 2521

LAB SAMPLE ID. NO. P673

QC REPORT NO. 2521

CAL SAMPLE ID P673
TASK 1 UG/L

1. ALUMINIUM-----460
2. CHROMIUM-----<10
3. BARIUM-----<100
4. BERYLLIUM-----<5
5. COBALT-----<50
6. COPPER-----750
7. IRON-----320
8. NICKEL-----<40
9. MANGANESE-----<15
10. ZINC-----160
11. VANADIUM-----<200
12. SILVER-----<10

TASK 2

1. ARSENIC-----<10
2. ANTIMONY-----<20
3. SELENIUM-----<2
4. THALLIUM-----<10
5. MERCURY-----<0.2
6. TIN-----<20
7. CADMIUM-----<1
8. LEAD-----7.1

TASK 3

1. AMMONIA-----N/A
2. CYANIDE-----<10
3. SULFIDE-----N/A

US ENVIRONMENTAL PROTECTION AGENCY

HWT Sample Management Office

P.O. Box 818 - Alexandria, Virginia 22313

703/557-2490 FTS 8-557-2490

Sample No.

MC 3273

INORGANICS ANALYSIS DATA SHEET

LAB NAME Cal Lab

CASE NO. 2521

LAB SAMPLE ID. NO. P674

QC REPORT NO. 2521

CAL SAMPLE ID P674
TASK 1 UG/L

1. ALUMINIUM-----650
2. CHROMIUM-----<10
3. BARIUM-----<100
4. BERYLLIUM-----<5
5. COBALT-----<50
6. COPPER-----1100
7. IRON-----280
8. NICKEL-----<40
9. MANGANESE-----15
10. ZINC-----99
11. VANADIUM-----<200
12. SILVER-----<10

TASK 2

1. ARSENIC-----<10
2. ANTIMONY-----23
3. SELENIUM-----<2
4. THALLIUM-----<10
5. MERCURY-----<0.2
6. TIN-----<20
7. CADMIUM-----2.2
8. LEAD-----12

TASK 3

1. AMMONIA-----N/A
2. CYANIDE-----<10
3. SULFIDE-----N/A

100240

US ENVIRONMENTAL PROTECTION AGENCY

HWI Sample Management Office

P.O. Box 818 - Alexandria, Virginia 22313

703/557-2490 FTS 8-557-2490

Sample No.

MC 3274

INORGANICS ANALYSIS DATA SHEET

LAB NAME Cal LabCASE NO. 2521LAB SAMPLE ID. NO. P675QC REPORT NO. 2521CAL SAMPLE ID P675
TASK 1 UG/L

- 
1. ALUMINIUM-----750
 2. CHROMIUM-----<10
 3. BARIUM-----<100
 4. BERYLLIUM-----<5
 5. COBALT-----<50
 6. COPPER-----<50
 7. IRON-----400
 8. NICKEL-----<40
 9. MANGANESE-----29
 10. ZINC-----71
 11. VANADIUM-----<200
 12. SILVER-----<10

TASK 2

1. ARSENIC-----<10
2. ANTIMONY-----24
3. SELENIUM-----<2
4. THALLIUM-----<10
5. MERCURY-----<0.2
6. TIN-----<20
7. CADMIUM-----<1
8. LEAD-----12

TASK 3

1. AMMONIA-----N/A
2. CYANIDE-----<10
3. SULFIDE-----N/A

100241

INORGANICS ANALYSIS DATA SHEET

LAB NAME Cal Lab
LAB SAMPLE ID. NO. P676

CASE NO. 2521
QC REPORT NO. 2521

CAL SAMPLE ID P676
TASK 1 MG/KG

1. ALUMINIUM-----1100
2. CHROMIUM-----1.6
3. BARIUM-----9
4. BERYLLIUM-----<0.25
5. COBALT-----<2.5
6. COPPER-----<2.5
7. IRON-----1400
8. NICKEL-----<2.0
9. MANGANESE-----14
10. ZINC-----12
11. VANADIUM-----<10
12. SILVER-----<0.5

TASK 2

1. ARSENIC-----1.4
2. ANTIMONY-----<1
3. SELENIUM-----<0.1
4. THALLIUM-----<0.5
5. MERCURY-----<0.1
6. TIN-----<1
7. CADMIUM-----<0.05
8. LEAD-----7

TASK 3

1. AMMONIA-----N/A
2. CYANIDE-----<1
3. SULFIDE-----N/A

US ENVIRONMENTAL PROTECTION AGENCY

HWT Sample Management Office

P.O. Box 818 - Alexandria, Virginia 22313

703/557-2490 FTS 8-557-2490

Sample No.

MC 3276

INORGANICS ANALYSIS DATA SHEET

LAB NAME Cal Lab

CASE NO. 2521

LAB SAMPLE ID. NO. P677

QC REPORT NO. 2521

CAL SAMPLE ID P677
TASK 1 UG/L

1. ALUMINIUM-----23000
2. CHROMIUM-----31
3. BARIUM-----180
4. BERYLLIUM-----<5
5. COBALT-----<50
6. COPPER-----<50
7. IRON-----440
8. NICKEL-----<40
9. MANGANESE-----290
10. ZINC-----80
11. VANADIUM-----<200
12. SILVER-----<10

TASK 2

1. ARSENIC-----12
2. ANTIMONY-----23
3. SELENIUM-----<2
4. THALLIUM-----<10
5. MERCURY-----<0.2
6. TIN-----<20
7. CADMIUM-----<1
8. LEAD-----5.6

TASK 3

1. AMMONIA-----N/A
2. CYANIDE-----<10
3. SULFIDE-----N/A

100243

US ENVIRONMENTAL PROTECTION AGENCY

HWT Sample Management Office

P.O. Box 818 - Alexandria, Virginia 22313

703/557-2490 FTS 8-557-2490

Sample No.

MC 32 77

INORGANICS ANALYSIS DATA SHEET

LAB NAME Cal Lab

CASE NO. 2521

LAB SAMPLE ID. NO. P678

QC REPORT NO. 2521

CAL SAMPLE ID P678
TASK 1 MG/KG

1. ALUMINIUM-----1000
2. CHROMIUM-----9
3. BARIUM-----9
4. BERYLLIUM-----<0.25
5. COBALT-----<2.5
6. COPPER-----3.5
7. IRON-----750
8. NICKEL-----<2.0
9. MANGANESE-----16
10. ZINC-----13
11. VANADIUM-----<10
12. SILVER-----<0.5

TASK 2

1. ARSENIC-----20
2. ANTIMONY-----1
3. SELENIUM-----<0.1
4. THALLIUM-----<0.5
5. MERCURY-----<0.1
6. TIN-----<1
7. CADMIUM-----<0.05
8. LEAD-----5.5

TASK 3

1. AMMONIA-----N/A
2. CYANIDE-----<1
3. SULFIDE-----N/A

100244

US ENVIRONMENTAL PROTECTION AGENCY

HWT Sample Management Office

P.O. Box 818 - Alexandria, Virginia 22313

703/557-2490 FTS 8-557-2490

Sample No.

MC 3278

INORGANICS ANALYSIS DATA SHEET

LAB NAME Cal LabCASE NO. 2521LAB SAMPLE ID. NO. P679QC REPORT NO. 2521CAL SAMPLE ID P679
TASK 1 UG/L

1. ALUMINIUM-----10000
2. CHROMIUM-----46000
3. BARIUM-----140
4. BERYLLIUM-----<5
5. COBALT-----<50
6. COPPER-----31000
7. IRON-----16000
8. NICKEL-----60
9. MANGANESE-----1200
10. ZINC-----1200
11. VANADIUM-----<200
12. SILVER-----<10

TASK 2

1. ARSENIC-----320000
2. ANTIMONY-----200
3. SELENIUM-----<2
4. THALLIUM-----<10
5. MERCURY-----<0.2
6. TIN-----<20
7. CADMIUM-----<1
8. LEAD-----16

TASK 3

1. AMMONIA-----N/A
2. CYANIDE-----<10
3. SULFIDE-----N/A

100245

US ENVIRONMENTAL PROTECTION AGENCY

HWT Sample Management Office

P.O. Box 818 - Alexandria, Virginia 22313

703/557-2490 FTS 8-557-2490

Sample No.

MC 3279

INORGANICS ANALYSIS DATA SHEET

LAB NAME Cal LabCASE NO. 2521LAB SAMPLE ID. NO. P680QC REPORT NO. 2521CAL SAMPLE ID
TASK 1 P680
MG/KG

1. ALUMINIUM-----750
2. CHROMIUM-----4000
3. BARIUM-----14
4. BERYLLIUM-----<0.25
5. COBALT-----<2.5
6. COPPER-----1900
7. IRON-----1600
8. NICKEL-----<2.0
9. MANGANESE-----27
10. ZINC-----90
11. VANADIUM-----<10
12. SILVER-----<0.5

TASK 2

1. ARSENIC-----5500
2. ANTIMONY-----22
3. SELENIUM-----0.1
4. THALLIUM-----<0.5
5. MERCURY-----<0.1
6. TIN-----1.4
7. CADMIUM-----0.1
8. LEAD-----7.5

TASK 3

1. AMMONIA-----N/A
2. CYANIDE-----2.1
3. SULFIDE-----N/A

100246

US ENVIRONMENTAL PROTECTION AGENCY

HWI Sample Management Office

P.O. Box 818 - Alexandria, Virginia 22313

703/557-2490 FTS 8-557-2490

Sample No.

MC 3280

INORGANICS ANALYSIS DATA SHEET

LAB NAME Cal Lab

CASE NO. 2521

LAB SAMPLE ID. NO. P681

QC REPORT NO. 2521

CAL SAMPLE ID P681
TASK 1 UG/L

1. ALUMINIUM-----15000
2. CHROMIUM-----69000
3. BARIUM-----230
4. BERYLLIUM-----<5
5. COBALT-----67
6. COPPER-----44000
7. IRON-----23000
8. NICKEL-----64
9. MANGANESE-----1700
10. ZINC-----2000
11. VANADIUM-----<200
12. SILVER-----<10

TASK 2

1. ARSENIC-----500000
2. ANTIMONY-----510
3. SELENIUM-----<2
4. THALLIUM-----10
5. MERCURY-----0.6
6. TIN-----<20
7. CADMIUM-----<1
8. LEAD-----<5

TASK 3

1. AMMONIA-----N/A
2. CYANIDE-----<10
3. SULFIDE-----N/A

100247

US ENVIRONMENTAL PROTECTION AGENCY

HWM Sample Management Office

P.O. Box 818 - Alexandria, Virginia 22313

703/557-2490 FTS 8-557-2490

Sample No.

MC 3281

INORGANICS ANALYSIS DATA SHEET

LAB NAME Cal LabCASE NO. 2521LAB SAMPLE ID. NO. P682QC REPORT NO. 2521CAL SAMPLE ID P682
TASK 1 MG/KG

1. ALUMINIUM-----3900
2. CHROMIUM-----3400
3. BARIUM-----13
4. BERYLLIUM-----<0.25
5. COBALT-----<2.5
6. COPPER-----1900
7. IRON-----3900
8. NICKEL-----2.2
9. MANGANESE-----43
10. ZINC-----70
11. VANADIUM-----<10
12. SILVER-----<0.5

TASK 2

1. ARSENIC-----5500
2. ANTIMONY-----3.2
3. SELENIUM-----0.16
4. THALLIUM-----<0.5
5. MERCURY-----<0.1
6. TIN-----<1
7. CADMIUM-----0.08
8. LEAD-----<0.25

TASK 3

1. AMMONIA-----N/A
2. CYANIDE-----<1
3. SULFIDE-----N/A

100248

INORGANICS ANALYSIS DATA SHEET

LAB NAME Cal Lab

CASE NO. 2521

LAB SAMPLE ID. NO. P683

QC REPORT NO. 2521

CAL SAMPLE ID P683
TASK 1 UG/L

1. ALUMINIUM-----6900
2. CHROMIUM-----2100
3. BARIUM-----<100
4. BERYLLIUM-----<5
5. COBALT-----<50
6. COPPER-----670
7. IRON-----4600
8. NICKEL-----<40
9. MANGANESE-----220
10. ZINC-----200
11. VANADIUM-----<200
12. SILVER-----<10

TASK 2

1. ARSENIC-----2800
2. ANTIMONY-----33
3. SELENIUM-----<2
4. THALLIUM-----<10
5. MERCURY-----<0.2
6. TIN-----<20
7. CADMIUM-----<1
8. LEAD-----15

TASK 3

1. AMMONIA-----N/A
2. CYANIDE-----<10
3. SULFIDE-----N/A

100249

US ENVIRONMENTAL PROTECTION AGENCY

HW1 Sample Management Office

P.O. Box 818 - Alexandria, Virginia 22313

703/557-2490 FTS 8-557-2490

Sample No.

MC 3283

INORGANICS ANALYSIS DATA SHEET

LAB NAME Cal Lab

CASE NO. 2521

LAB SAMPLE ID. NO. P684

QC REPORT NO. 2521

CAL SAMPLE ID P684
TASK 1 MG/KG

1. ALUMINIUM-----3700
2. CHROMIUM-----240
3. BARIUM-----10
4. BERYLLIUM-----<0.25
5. COBALT-----<2.5
6. COPPER-----120
7. IRON-----4600
8. NICKEL-----<2.0
9. MANGANESE-----23
10. ZINC-----25
11. VANADIUM-----<10
12. SILVER-----<0.5

TASK 2

1. ARSENIC-----340
2. ANTIMONY-----1
3. SELENIUM-----<0.1
4. THALLIUM-----<0.5
5. MERCURY-----<0.1
6. TIN-----<1
7. CADMIUM-----<0.05
8. LEAD-----7.2

TASK 3

1. AMMONIA-----N/A
2. CYANIDE-----<1
3. SULFIDE-----N/A

100250

Sample No.
MC 3284

INORGANICS ANALYSIS DATA SHEET

LAB NAME Cal Lab
LAB SAMPLE ID. NO. P685

CASE NO. 2521
QC REPORT NO. 2521

CAL SAMPLE ID P685
TASK 1 UG/L

1. ALUMINIUM-----4600
2. CHROMIUM-----730
3. BARIUM-----<100
4. BERYLLIUM-----<5
5. COBALT-----<50
6. COPPER-----430
7. IRON-----3900
8. NICKEL-----<40
9. MANGANESE-----150
10. ZINC-----200
11. VANADIUM-----<200
12. SILVER-----<10

TASK 2

1. ARSENIC-----2400
2. ANTIMONY-----31
3. SELENIUM-----<2
4. THALLIUM-----<10
5. MERCURY-----<0.2
6. TIN-----<20
7. CADMIUM-----<1
8. LEAD-----14

TASK 3

1. AMMONIA-----N/A
2. CYANIDE-----<10
3. SULFIDE-----N/A

Handwritten signature
RED

100251

US ENVIRONMENTAL PROTECTION AGENCY

HWT Sample Management Office

P.O. Box 818 - Alexandria, Virginia 22313

703/557-2490 FTS 8-557-2490

Sample No.

MC 3285

INORGANICS ANALYSIS DATA SHEET

LAB NAME Cal Lab

CASE NO. 2521

LAB SAMPLE ID. NO. P686

QC REPORT NO. 2521

CAL SAMPLE ID P686
TASK 1 MG/KG

1. ALUMINIUM-----10000
2. CHROMIUM-----180
3. BARIUM-----28
4. BERYLLIUM-----<0.25
5. COBALT-----<2.5
6. COPPER-----160
7. IRON-----10000
8. NICKEL-----2.2
9. MANGANESE-----33
10. ZINC-----26
11. VANADIUM-----20
12. SILVER-----<0.5

TASK 2

1. ARSENIC-----340
2. ANTIMONY-----<1
3. SELENIUM-----<0.1
4. THALLIUM-----<0.5
5. MERCURY-----<0.1
6. TIN-----4.4
7. CADMIUM-----<0.05
8. LEAD-----16

TASK 3

1. AMMONIA-----N/A
2. CYANIDE-----<1
3. SULFIDE-----N/A

100252

US ENVIRONMENTAL PROTECTION AGENCY
HWT Sample Management Office
P.O. Box 818 - Alexandria, Virginia 22313
703/557-2490 FTS 8-557-2490

Sample No.

MC 3286

INORGANICS ANALYSIS DATA SHEET

LAB NAME Cal Lab
LAB SAMPLE ID. NO. P687

CASE NO. 2521
QC REPORT NO. 2521

CAL SAMPLE ID P687
TASK 1 UG/L

1. ALUMINIUM-----640
2. CHROMIUM-----<10
3. BARIUM-----<100
4. BERYLLIUM-----<5
5. COBALT-----<50
6. COPPER-----<50
7. IRON-----370
8. NICKEL-----<40
9. MANGANESE-----<15
10. ZINC-----41
11. VANADIUM-----<200
12. SILVER-----<10

TASK 2

1. ARSENIC-----28
2. ANTIMONY-----23
3. SELENIUM-----<2
4. THALLIUM-----<10
5. MERCURY-----<0.2
6. TIN-----120
7. CADMIUM-----<1
8. LEAD-----6

TASK 3

1. AMMONIA-----N/A
2. CYANIDE-----<10
3. SULFIDE-----N/A

~~WED~~

100253

US ENVIRONMENTAL PROTECTION AGENCY

HQ Sample Management Office

P.O. Box 818 - Alexandria, Virginia 22313

703/557-2490 FTS 8-557-2490

Sample No.

MC 3287

INORGANICS ANALYSIS DATA SHEET

LAB NAME Cal Lab

CASE NO. 2521

LAB SAMPLE ID. NO. P688

QC REPORT NO. 2521

CAL SAMPLE ID P688
TASK 1 MG/KG

1. ALUMINIUM-----<10
2. CHROMIUM-----<0.5
3. BARIUM-----<5
4. BERYLLIUM-----<0.25
5. COBALT-----<2.5
6. COPPER-----<2.5
7. IRON-----<2.5
8. NICKEL-----<2.0
9. MANGANESE-----<0.75
10. ZINC-----1
11. VANADIUM-----<10
12. SILVER-----<0.5

TASK 2

1. ARSENIC-----0.82
2. ANTIMONY-----<1
3. SELENIUM-----<0.1
4. THALLIUM-----<0.5
5. MERCURY-----<0.1
6. TIN-----8
7. CADMIUM-----<0.05
8. LEAD-----0.52

TASK 3

1. AMMONIA-----N/A
2. CYANIDE-----<1
3. SULFIDE-----N/A

100254

ORIGINAL
(Red)

APPENDIX G

106255

NUS CORPORATION

TELECON NOTE

CONTROL NO:

DATE:

3/4/86

TIME:

3:00 p.m.

DISTRIBUTION:

BETWEEN:

M. Ke Cambell

OF:

VA.

PHONE:

Henrico Co. Health Dept (804) 747-4528

AND:

(NUS)

DISCUSSION:

Could not assist me with information on water supply within 3 mile radius of Rentokil. Mr. Cambell indicated that their Dept. completed a 1 KM study of water supply system and would be willing to offer information to me from their report.

Cambell did say that there were no community wells within 1 KM of the site.

ACTION ITEMS:

100256

C. J. Dietrich

NUS CORPORATION

TELECON NOTE

CONTROL NO:

DATE:

2/28/86

TIME:

9:45 A.M.

DISTRIBUTION:

BETWEEN:

Mr. Tim Perry

OF:

Va. State Water Control

PHONE:

(804) 257-6685

AND:

P.C.D.

(NUS)

DISCUSSION:

Mr. Perry referred me to a Mr. Ray Jenkins (257-6416) for help in determining whether Virginia Wood Pres. has a NPDES Permit or a "No Discharge Certificate"

Paul Dietrich

ACTION ITEMS:

100257

NUS CORPORATION

TELECON NOTE

CONTROL NO:

DATE:

2/27/86

TIME:

3:10 PM

DISTRIBUTION:

ORIGINAL

BETWEEN:

Mr. Farmer

OF: (Virginia Wood Pres.)
Rentokil

PHONE:

(804) 266-0267

AND:

P.C.D.

(NUS)

DISCUSSION:

I asked Mr. Farmer the following questions?

- 1) Is lagoon being used? MrF Nothing is being added and has not been added for at least 2-3 yrs.
- 2) Who owns the swamp east of the plant? MrF R.F.P. railroad
- 3) When did wood treatment begin at the plant? MrF - 1957

- 4) Between what period of time used the following wastes generated? MrF unable able to tell

MrF (Mr Farmer)

P.C.D. (Paul Dietrich)

ACTION ITEMS:

me off hand. He recommended that I contact a Mr. Salter at the parent company Rentokil Phone # (404) 476-4871

100258

Paul Dietrich 2/27/86

NUS CORPORATION

TELECON NOTE

CONTROL NO:

DATE:

3/4/86

TIME:

10:00

DISTRIBUTION:

BETWEEN:

Raymond Jenkins

OF: Dept. Health
DIV of Solid & Haz.
WHS-105

PHONE:

(804) 257-6777

AND:

P.C.D.

(NUS)

DISCUSSION:

Mr Jenkins did explain that Pentafid appears to be a small quartz generator under RORR. However, he stated that a Mr Saunders would have a letter understanding (804) 225-2351.

Mr Saunders was contacted and could not offer a definite answer on generator status. PD.

Paul Dittus

ACTION ITEMS:

100259

NUS CORPORATION

TELECON NOTE

CONTROL NO:

DATE:

2/28/86

TIME:

1:20 p.m.

DISTRIBUTION:

BETWEEN:

Mr. Farmer

OF:

Virginia Wood
Pres

PHONE:

(804) 266-0262

AND:

P.C.D

(NUS)

DISCUSSION:

Q: Does Virg Wood Recycle waste
to any degree?

A: Mr. Farmer yes

Mr. Farmer said that he could get
some data involving quantity of waste
produced during production time period.
However, it would take him at least
a week to sort through files. I told
him to wait (hold). ~~Later~~

Paul V. V. V.

ACTION ITEMS:

100260

NUS CORPORATION

TELECON NOTE

CONTROL NO:

DATE:

2/28/86

TIME:

10:50 A.M.

DISTRIBUTION:

BETWEEN:

Mr. Ed Stalker

OF:

Kentok
Atlanta, GA

PHONE:

(404) 476-4871

AND:

P.C.D.

(NUS)

DISCUSSION:

Mr. Stalker stated that Virginia Wood Processing does currently have a "NO DISCHARGE PERMIT". The facility does not have a NPDES permit.

Mr. Stalker listed some chemicals utilized at the facility.

Perachlorophenol (var. sizes)	1957-1974
" (#2 fuel oil)	1974-1981
Chromium Zinc Acetate	1957-1964
Chromate Copper Acetate	1964-1986
Cresols	1964-1983
Xylene	1959-1964

~~ACTION ITEMS~~

With respect to volumes produced as indicated in SI (F3-8402-25) p. 4-1, 1/2 9th Solid Waste Mgmt. gathered this information. (Mr. Horn & Wisner).

100261

Chad Dittus

NUS CORPORATION

TELECON NOTE

CONTROL NO:

DATE:

3/6/86

TIME:

10:00

DISTRIBUTION:

RENTOKIL

BETWEEN:

OF: HENRICO

PHONE:

MR. BLACKMAN

PUBLIC UTILITY

(804) 747-4503

AND:

P.C.D

(NUS)

DISCUSSION:

Mr. Blackman indicated to me that the major intake for Henrico County is located on the James River where RT. 195 crosses.

Con. District 3/6/86

ACTION ITEMS:

100262

ORIGINAL
(Red)

APPENDIX H

100263

Mr. Ostrowski

	N/NAME	ADDRESS	PHONE	CWING WELL	CONST DEPTH PW	DES CON SS PG	DES
	(1)	(2)	(FT.)	(3)	(4)	(5)	
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[illegible]

100264

Ref. 16

GROUNDWATER SURVEY OF RENTOKIL NEIGHBORHOOD (within 1 kilometer radius)

WELL	NAME	ADDRESS	PHONE	WELL DEPTH (FT.)	DES	CON	SS	PS	DES
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1200	MR. PAUL DAVIS	CHERRYSTONE AVE RICHMOND	786-5476	35	Y				
1203	JAMES LAYAL	CHERRYSTONE AVE RICHMOND		0 N	Y				
1204	MR. HAN TRINH	CHERRYSTONE AVE RICHMOND	262-5326	40 N	Y				
1205	G. W. KING	CHERRYSTONE AVE RICHMOND		32 N	Y				
1206	MARK STISLER	CHERRYSTONE AVE RICHMOND		32 N	Y				
1207	RICHARD L. DENTON	CHERRYSTONE AVE RICHMOND	266-1884	32 N	Y				
1208	JOSEPH HABERTY	CHERRYSTONE AVE RICHMOND		42 N	Y				
1209	MR. SAL CIREBI	CHERRYSTONE AVE RICHMOND	262-8059	35 N	Y				
1210	MR. A. W. DENTON	CHERRYSTONE AVE RICHMOND	266-2141	42 N	Y				
1213	A. E. REDFORD	CHERRYSTONE AVE RICHMOND		0 N	Y				
8617	MRS. E. SPRUISE	DIXON POWERS DR RICHMOND	266-0436	0 P	Y				
8600	MR. JOSEPH BRITTON	GILLIS ST RICHMOND	262-6134	86 N	Y				
8692	W. E. MARTIN	GILLIS ST RICHMOND		30 N	Y				
8416	SIMMONS ROCKECHANIC	GLAZEBROOK AVE RICHMOND	262-7323	0 P	Y				
8102	MR. FRANK BIANOTTI	HERMITAGE RD RICHMOND	282-9767	25	Y				
4003	MRS. M. MORING	HOOPER RD RICHMOND	266-3446	0 N	Y				
4004	J. G. HAWLEY	HOOPER RD RICHMOND	264-2176	34 N	Y				
4012	MR. HUGH M. HAYES	HOOPER RD RICHMOND		0 N	Y				
4013	M. D. HUBE	HOOPER RD RICHMOND	262-7595	0 N	Y				
4017	B. A. NASH	HOOPER RD RICHMOND	UNLISTED	0 P	Y				
8X327	J. E. TATE	HOOPER RD RICHMOND	266-0436	0 N	Y				
2411	MR. DAVE MYERS	HUNGARY RD RICHMOND	262-7760	0 P	Y				
2416	MS. PATRICIA ZUCKER	HUNGARY RD RICHMOND	264-2061	0 P	Y				
2422	MR. ED FLETCHER	HUNGARY RD RICHMOND	266-0616	32 P	Y				
2501	MRS. ALMA WAKEFIELD	HUNGARY RD RICHMOND	262-9572	0 P	Y				
2505	MR. W. L. JONES VAICA	HUNGARY RD RICHMOND		32 P	Y				
2507	KIDDIE COMPANY	HUNGARY RD RICHMOND	266-9162	0 P	Y				
2509	MR. & MRS. WRIGHT	HUNGARY RD RICHMOND	262-3741	0 P	Y				
2511	MR. PERCY E. GRUBBS	HUNGARY RD RICHMOND	266-5745	20 P	Y				
2513	MR. ALFRED L. APPLE	HUNGARY RD RICHMOND	262-7813	50 A	N				
2603	MR. E. W. JONES	HUNGARY RD RICHMOND	266-0575	0 P	Y				
2708	MRS. ANN BRIGHT	HUNGARY RD RICHMOND		0 A	N				
2710	MRS. EDITH LEAP	HUNGARY RD RICHMOND		0 A	N				
2714	MR. BARBEN HARDING	HUNGARY RD RICHMOND	262-5744	30 P	Y				
2715	DR. STEVEN KING	HUNGARY RD RICHMOND		0 P	Y				
2716	MRS. MERLE POWELL	HUNGARY RD RICHMOND	266-6600	30 P	Y				
2717	MR. DANIEL MERKH	HUNGARY RD RICHMOND	UNLISTED	0 P	Y				
2718	MR. WARNER JONES	HUNGARY RD RICHMOND	266-3499	0 P	Y				
2723	MRS. HATTIE TERRY	HUNGARY RD RICHMOND	262-3421	0 P	Y				
2725	MRS. LAURA MOORE	HUNGARY RD RICHMOND	264-2196	0 P	Y				
2727	MR. & MRS. W. KELLEY	HUNGARY RD RICHMOND	264-2196	42 A	Y				
2731	MRS. EDITH ROBERTS	HUNGARY RD RICHMOND	266-5549	24 P	Y				
2733	MS. PATRICIA HENGBEN	HUNGARY RD RICHMOND	266-0934	23 P	Y				
2805	CRYSTAL ICE CO.	HUNGARY RD RICHMOND	262-0888	0 P	Y				
2814	MR. JIM O'BRIEN	HUNGARY RD RICHMOND	266-5051	0 P	Y				
2816	MS. ANNE D. AMBROSIE	HUNGARY RD RICHMOND	266-0656	0 P	Y				
2818	GUY HARRIS	HUNGARY RD RICHMOND	262-4294	0 Y	N				
2820	MRS. R. A. WALTON	HUNGARY RD RICHMOND	266-0651	0 P	Y				
2900	DOMINION MEDICAL SUP	HUNGARY RD RICHMOND	262-3198	0 P	Y				

NO. 00003
01-27/05

GROUNDWATER SURVEY OF RENTOKIL NEIGHBORHOOD (within 1 kilometer radius)

SMPLE	NAME	ADDRESS	HUNGARY RD	RICHMOND	VA	33228	266-7007	Y	F	(1)	(2)	(3)	(4)	(5)
	B. F. BAIRD	2907	HUNGARY RD	RICHMOND	VA	33228	266-7007	Y	N					
	C. F. BAIRD	2909	HUNGARY RD	RICHMOND	VA	33228	262-8372	Y	N					
	MS. PHYLLIS IBEMAN	2911	HUNGARY RD	RICHMOND	VA	33228	262-9372	Y	N					
	MS. MARIE EDWARD	2913	HUNGARY RD	RICHMOND	VA	33228	266-6626	Y	N					
	MS. CINDY WRIGHT	2915	HUNGARY RD	RICHMOND	VA	33228	NO PHONE	N	N					
	MR. W. R. FAULKNER	358	HUNGARY RD	RICHMOND	VA	33228	266-0366	Y	N					
	MRS. BETTY LOWE	359	HUNGARY RD	RICHMOND	VA	33228		N	N					
	LAUREL ATHLETIC ASSO	RP&P	HUNGARY RD	RICHMOND	VA	33228	266-9879	N	P	2				
	RICHMOND BURGER SERV	6716	JANWAY ROAD	RICHMOND	VA	33228	266-4982	Y	D	1				
	84 LUMBER		LANDMARK RD	RICHMOND	VA	33228	266-2467	Y	N	2				
	MR. CLINTON L. JONES	362	LUCAS RD	RICHMOND	VA	33228	266-1762	Y	P	1				
	MS. ETHEL C. HARVEY	5301	LUCAS RD	RICHMOND	VA	33228	270-0568	Y	P	1				
	E. E. ROBERTS	5302	LUCAS RD	RICHMOND	VA	33228	270-0445	Y	P	1				
	MR. P. J. ROBERTSON	5303	LUCAS RD	RICHMOND	VA	33228	270-6073	Y	P	1				
	E. M. O'BRIEN	5307	LUCAS RD	RICHMOND	VA	33228	270-4843	Y	P	1				
	F. A. ROBERTSON	5309	LUCAS RD	RICHMOND	VA	33228	270-0894	Y	P	1				
	A. M. GOODLOE	5310	LUCAS RD	RICHMOND	VA	33228	270-0466	Y	Y	1				
	MS. CARRIE LUCAS	5311	LUCAS RD	RICHMOND	VA	33228	270-9322	Y	P	1				
	G. P. THOMPSON	5312	LUCAS RD	RICHMOND	VA	33228	270-7452	N	P	2				
	C. A. ALLEN	5400	LUCAS RD	RICHMOND	VA	33228		N	P	1				
	MR. HENRY CHENAULT	5401	LUCAS RD	RICHMOND	VA	33228	270-0221	Y	P	1				
	R. M. RANBONE	5404	LUCAS RD	RICHMOND	VA	33228	270-0589	Y	P	2				
	MR & MRS DAVID SMITH	9100	MAYFAIR AVE	RICHMOND	VA	33228	262-5738	Y	P	1				
	MR & MRS W. K. BELL	9113	MAYFAIR AVE	RICHMOND	VA	33228	266-1593	Y	P	1				
	MRS. DOROTHY ELLIS	9117	MAYFAIR AVE	RICHMOND	VA	33228	266-1919	Y	P	1				
	MR. & MRS. JAMES SNOW	9119	MAYFAIR AVE	RICHMOND	VA	33228	262-3108	N	P	1				
	OLD DOMINION BLASS C	8411	OAKVIEW AVE	RICHMOND	VA	33228	264-2755	Y	N					
	B & S VENDING	8419	OAKVIEW AVE	RICHMOND	VA	33228	264-1916	Y	N					
	KNIGHT ELEC. & LIGHT	8501	OAKVIEW AVE	RICHMOND	VA	33228	264-2047	Y	P	1				
	J. E. HOLLAND	8505	OAKVIEW AVE	RICHMOND	VA	33228	266-3437	Y	P	1				
	AMERICAN PARTITION &	8507	OAKVIEW AVE	RICHMOND	VA	33228	262-1039	Y	A	1				
	MRS. G. P. CLARKE	8509	OAKVIEW AVE	RICHMOND	VA	33228	266-1845	Y	A	1				
	JOHN MARSHALL, INC	8511	OAKVIEW AVE	RICHMOND	VA	33228	262-8657	N	N					
	KENDRICK-BROS. SVST	8513	OAKVIEW AVE	RICHMOND	VA	33228	262-8657	Y	N					
	WOODWORKING SPECIALI	8605	OAKVIEW AVE	RICHMOND	VA	33228		Y	N					
	SCHALOW MANUF. CO.	8607	OAKVIEW AVE	RICHMOND	VA	33228	262-9881	N	P	1				
	ALLIANCE-EQUIPMENT	8609	OAKVIEW AVE	RICHMOND	VA	33228	264-9014		P					
	GARDEN GATE CO.	8715	OAKVIEW AVE	RICHMOND	VA	33228	266-0661		D	1				
	BROWNING STEEL CO.	8717	OAKVIEW AVE	RICHMOND	VA	33228	262-2821		P	1				
	OAKVIEW-AUTO-SALES	9025	OAKVIEW AVE	RICHMOND	VA	33228	266-0447	N	P	1				
	MR. & MRS. L. HALL	9101	OAKVIEW AVE	RICHMOND	VA	33228	266-0355	Y	P	1				
	MR. THOMAS E. HICKS	9105	OAKVIEW AVE	RICHMOND	VA	33228	266-3901	Y	P	2				
	MS. RUBY-RAGLAND	9107	OAKVIEW AVE	RICHMOND	VA	33228	262-8121	N	P	2				
	MR. RICHARD RAGLAND	9109	OAKVIEW AVE	RICHMOND	VA	33228	264-1275	N	P	2				
	MS. PAM MAST	9111	OAKVIEW AVE	RICHMOND	VA	33228	266-4059	N	P	2				
	MS. PATRICIA LANE	9311	OAKVIEW AVE	RICHMOND	VA	33228	266-4059	N	P	2				
	MRS. DAISY H. HALL	9403	OAKVIEW AVE	RICHMOND	VA	33228	266-6474	Y	A	1				
	MS. MARGARET PEARCE	9410	OAKVIEW AVE	RICHMOND	VA	33228	266-0239	Y	D	1				
	MR. BOBBY VICKERS	9413	OAKVIEW AVE	RICHMOND	VA	33228	262-4377	N	P	1				

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07/19/85

GROUNDWATER SURVEY OF RENTOKIL NEIGHBORHOOD (within 1 kilometer radius)

SMPL.	NAME	ADDRESS	PHONE	OWN? WELL	DEPTH (1)	DEPTH (2)	DEPTH (3)	CON	SS	PS	DS
1433	MR. R. J. HARLOW	1433	262-0001	N	2	2	215 A	N	Y	A	N
9000	MR. J. H. BURTON	9000	266-0223	Y	D	1	0 P	Y	Y	N	N
9001	L. D. PERROSB	9001	UNLIT	Y	P	1	0 A	N	Y	N	N
9003	C. S. BATHON	9003	262-3045	N	P	1	0 A	Y	Y	N	Y
9004	MR. BARRY HUDSON	9004	262-0336	N	D	1	0 P	Y	Y	N	N
9005	MR. GLEN MILES	9005	262-1399	N	P	1	0 A	Y	Y	N	N
9006	G. M. ROBERTSON	9006	266-7738	Y	P	1	30 A	N	Y	N	N
9008	FAITH FULTON	9008	264-8240	Y	P	1	0 A	N	Y	N	M
9010	MR. DONALD E. KING	9010	266-2394	Y	P	1	0 A	N	Y	N	Y
9100	MS. LUCY HARRIS	9100	266-4880	Y	P	1	0 A	N	Y	N	N
9105	LIESFELD LUMBER CO.	9105	266-4790	Y	P	2	0	N	Y	D	Y
9105	W. M. WALDER, JR INC	9105	266-4790	Y	P	1	0 A	N	Y	D	Y
9106	MRS. G.E. ROBERTSON	9106	266-0074	N	P	1	0 P	Y	Y	D	Y
9204	PHIL BABBY SIGNS	9204	261-5804	N	P	1	0 A	N	Y	N	N
9207	MRS. P. COWLES	9207	266-0242	Y	P	1	0 P	N	Y	N	Y
9300	MS. MARY PESTER	9300	266-9638	Y	P	1	0 P	Y	Y	D	Y
9301	VIRGINIA IRON & META	9301	262-5836	Y	P	1	0 P	N	Y	D	Y
9302	E. G. HATTON	9302	262-1109	N	P	1	0 P	Y	Y	D	Y
9306	MS. JUDY THOMPSON	9306	266-4120	Y	P	1	0 P	N	Y	N	Y
9407	MAACO & LAUREL SERV	9407	261-5717	Y	P	1	0 P	N	Y	N	Y
9411	BARNES AUTO SERVICE	9411	266-6311	Y	P	1	0 N	N	Y	N	N
4000	MS. EDNA BLANCHARD	4000	266-3606	Y	P	1	28 N	N	Y	N	N
4010	MR. ELIJAH THORNTON	4010	264-2116	Y	P	1	0 P	N	Y	N	Y
4012	MS. EMMA A. KING	4012	266-0270	Y	P	1	0 P	N	Y	N	Y
2800	PARHAM FOREST BUSH	2800	266-4213	N	P	1	0 P	N	Y	N	Y
3001	WOODWORKING SPECIALI	3001	266-8771	Y	P	1	0	N	Y	N	Y
9701	MR. W.T. ATKINSON, J	9701	264-5105	Y	P	1	0 A	N	Y	A	N
8501	TEB LANGSING SUPPLY	8501	266-2990	Y	P	1	0 P	N	Y	N	Y
8405	MADELINE BOWER	8405	266-2990	Y	P	1	0 P	N	Y	N	Y
8411	E. R. ALLEN	8411	266-2990	Y	P	1	0 P	N	Y	N	Y
8418	MR. ALLEN	8418	266-2990	Y	P	1	0 P	N	Y	N	Y
8420	JERRY EPPS	8420	266-2990	Y	P	1	0 P	N	Y	N	Y
8500	SAM WOOD	8500	266-2990	Y	P	1	0 P	N	Y	N	Y
8502	JERRY SHERWOOD	8502	266-2990	Y	P	1	0 P	N	Y	N	Y
8504	JOYNER	8504	266-2990	Y	P	1	0 P	N	Y	N	Y
8505	W. S. HARRIS, SR.	8505	266-2990	Y	P	1	0 P	N	Y	N	Y
8610	BORRTHY G. HALL	8610	266-2990	Y	P	1	0 P	N	Y	N	Y
8611	JENET W. STEVENSON	8611	266-1795	Y	P	1	0 P	N	Y	N	Y
8613	CARL JOHNSON	8613	266-1795	Y	P	1	0 P	N	Y	N	Y
8702	WILLIAM BUTLER	8702	266-2990	Y	P	1	0 P	N	Y	N	Y
8704	MR. EUGENE PARKER	8704	266-2990	Y	P	1	0 P	N	Y	N	Y
8506	ROBERT VANDOVER	8506	266-2990	Y	P	1	0 P	N	Y	N	Y
8700	MR. MIKE PULLEY	8700	266-2990	Y	P	1	0 P	N	Y	N	Y
8704	UNOCCUPIED	8704	266-2990	Y	P	1	0 P	N	Y	N	Y
8706	UNOCCUPIED	8706	266-2990	Y	P	1	0 P	N	Y	N	Y
8406	ROBERT WILTON-OWNER	8406	266-2990	Y	P	1	0 P	N	Y	N	Y
8411	MR ROBERT WILTON III	8411	266-2990	Y	P	1	0 P	N	Y	N	Y
8501	DINS MORE TEACHER AN	8501	266-2990	Y	P	1	0 P	N	Y	N	Y
8503	MS. PHYLLIS BRASH	8503	266-2990	Y	P	1	0 P	N	Y	N	Y

100267

NO. 00000
0/85

GROUNDWATER SURVEY OF RENTOKIL NEIGHBORHOOD (within 1 kilometer radius)

SAMPLE	NAME	ADDRESS	PHONE	OWN? WELL	DEPTH	FW	DES	CON	SS	PS	DES
				(1)	(2)	(FT.)	(3)		(4)	(5)	
	CONTRACTOR, INC.	8509	STAPLES MILL RD RICHMOND	VA 23228	264-2727	N	P	1	0 N	Y	Y N N Y
	MR. RANDY SMITH	8520	STAPLES MILL RD RICHMOND	VA 23228	266-0365	Y	P	1	0 N	Y	Y N N Y
	W. W. WILLIS	8522	STAPLES MILL RD RICHMOND	VA 23228	266-0454	Y	D	1	0 P	Y	N D Y Y
	HENRICO CO. CREDIT U	8606	STAPLES MILL RD RICHMOND	VA 23228	266-0647	Y	B	1	0 P	Y	N D Y Y
	C. T. OVERSTREET	8610	STAPLES MILL RD RICHMOND	VA 23228	266-1290	Y	P	2	90 A	N	Y Y N Y
	DOROTHY MORRISBETT	8614	STAPLES MILL RD RICHMOND	VA 23228	266-6732	Y	P	1	0 A	N	Y Y N N
	MR. WILLIAM VORHAGES	8702	STAPLES MILL RD RICHMOND	VA 23228	266-6350	Y	P	1	30	Y	N Y Y N
	HERITAGE SAVINGS/STA	8721	STAPLES MILL RD RICHMOND	VA 23228	266-4973	Y	Y	F	0 P	Y	Y Y N N
	LAUREL GLEN BELL	8800	STAPLES MILL RD RICHMOND	VA 23228	262-6613	N	P	2	0 P	Y	N Y N N
	E & S MOBIL SERVICE	8801	STAPLES MILL RD RICHMOND	VA 23228	264-5148	Y	N	1	0	N	N D N N
	VACANT	8802	STAPLES MILL RD RICHMOND	VA 23228			Y	1	0 N	Y	N N N N
	J.K. TIMMONS & ASSOC	8803	STAPLES MILL RD RICHMOND	VA 23228			Y	1	0 Y	Y	Y Y Y Y
	GRANTHAM ENTERPRISES	8805	STAPLES MILL RD RICHMOND	VA 23228	262-8273	N	P	2	0 N	Y	Y Y N N
	MR. CLAY DUNLAP	8808	STAPLES MILL RD RICHMOND	VA 23228	264-2173	N	P	1	0 N	Y	Y Y N N
	MR. HOWARD ROBERTSON	8812	STAPLES MILL RD RICHMOND	VA 23228	266-0449	Y	P	1	27	Y	N Y Y Y
	MR. R. P. FRANZEN	8814	STAPLES MILL RD RICHMOND	VA 23228	266-3285	N	P	1	24 N	N	N Y Y Y
	MARTHA ADKINS	8816	STAPLES MILL RD RICHMOND	VA 23228	266-2095	N	P	1	24 N	N	N Y Y Y
	PROFESSIONAL OFFICE	8833	STAPLES MILL RD RICHMOND	VA 23228	262-7348	N	P	1	0 N	Y	Y Y Y Y
	J. L. FUKUA	8835	STAPLES MILL RD RICHMOND	VA 23228	262-0494	N	P	1	18 N	Y	Y Y N N
	MR WILLIAM P DARNELL	8900	STAPLES MILL RD RICHMOND	VA 23228	266-7218	Y	P	1	0 A	N	N Y Y Y
	MR & MRS L. MERKEL	9407	WAKEFIELD RD RICHMOND	VA 23228	266-2830	Y	P	1	20 N	Y	Y Y Y Y
	MR. & MRS. MERKEL	9409	WAKEFIELD RD RICHMOND	VA 23228	266-6662	Y	P	1	17 N	Y	Y Y Y Y
	MR. & MRS. C. PULLING	9413	WAKEFIELD RD RICHMOND	VA 23228	261-5532	N	P	1	0 N	Y	Y Y N N
	MRS. ETHEL PULLING	9415	WAKEFIELD RD RICHMOND	VA 23228	262-1844	Y	P	1	0 N	Y	Y Y N N

100268

Supplement

WELL = 2 P

100269

00024	MR. WILLMER E. ALLEN	8419	ACTLEY AVE	RICHMOND	VA	23228	266-2880	N P 1	30	A	N	Y	Y	A	N	Y
00030	MRS. DOROTHY SIMMS	8603	ACTLEY AVE	RICHMOND	VA	23228	262-4405	Y P 1	45	A	N	Y	A	N	Y	Y
00038	MR. RAY W. GRAY	8628	ACKLEY AVE	RICHMOND	VA	23228	262-2614	Y P 1	0	A	N	Y	N	Y	Y	Y
00052	MR. C. H. MARTIN	8409	BROADWAY AVE	RICHMOND	VA	23228	266-2211	Y P 1	35	A	N	N	Y	Y	Y	Y
00047	MR. C. T. WILBURN	8411	BROADWAY AVE	RICHMOND	VA	23228	266-0577	Y P 1	0	A	N	Y	A	N	Y	Y
00103	* MARION WRIGHT	8618	BROADWAY AVE	RICHMOND	VA	23228	264-5025	N P 1	14							N
00100	* MR. PAUL DAVIS	1200	CERRYSTONE AVE	RICHMOND	VA	23228	786-5476	Y P 1	35							N
00004	JAMES LAYAL	1203	CERRYSTONE AVE	RICHMOND	VA	23228		Y P 1	0	N	Y	D	Y	Y	Y	Y
00006	MR. HAN TRINH	1204	CERRYSTONE AVE	RICHMOND	VA	23228	262-5326	Y P 1	40	N	Y	Y	N	Y	Y	Y
00003	C. W. KING	1205	CERRYSTONE AVE	RICHMOND	VA	23228		Y P 1	32	N	Y	Y	D	Y	Y	Y
00007	MARK BISLER	1206	CERRYSTONE AVE	RICHMOND	VA	23228		Y P 1	32	N	Y	N	D	Y	Y	Y
00002	RICHARD L. DENTON	1207	CERRYSTONE AVE	RICHMOND	VA	23228	266-1884	Y P 1	32	N	Y	Y	D	Y	Y	Y
00008	JOSEPH HIGERTY	1208	CERRYSTONE AVE	RICHMOND	VA	23228		Y P 1	42	N	Y	Y	Y	A	N	Y
00001	MR. SAL CIRESI	1209	CERRYSTONE AVE	RICHMOND	VA	23228	262-8059	Y P 1	35	N	Y	Y	D	Y	Y	Y
00104	* MR. A. W. DENTON	1210	CERRYSTONE AVE	RICHMOND	VA	23228	266-2141	Y P 1	42	N	Y	Y	Y	Y	Y	N
00005	A. E. REDFORD	1213	CERRYSTONE AVE	RICHMOND	VA	23228		Y P 1	0	N	N	D	Y	Y	Y	Y
00105	* MR. JOSEPH BRITTON	8600	GILLIS ST	RICHMOND	VA	23228	262-6134	Y P 2	86	N	N	Y				N
00009	W. E. MARTIN	8602	GILLIS ST	RICHMOND	VA	23228		Y P 1	30	N	Y	Y	Y	A	N	Y
00099	* MR. FRANK GIANNOTTI	8102	HERMITAGE RD	RICHMOND	VA	23228	282-9767	Y P 1	25							N
00194	J. B. HOWLEY	6004	HOOPER RD	RICHMOND	VA	23228	264-2176	Y P 1	34	N	N	Y	Y	N	N	N
00195	MR. HUGH M. HAYES	4012	HOOPER RD	RICHMOND	VA	23228		Y P 1	0	N	N	N	Y	N	N	N
00196	M. D. MUSE	4013	HOOPER RD	RICHMOND	VA	23228	262-7595	Y P 1	0	N	N	N	Y	N	N	N
00193	J. E. TATE	8X327	HOOPER RD	RICHMOND	VA	23228	264-0438	Y P 1	0	N	N	Y	Y	N	N	N
00079	MR. ALFRED L. APPLE	2513	HUNGARY RD	RICHMOND	VA	23228	262-7813	Y P 1	50	A	N	N	Y	Y	Y	Y
00205	MRS. EDITH LEAP	2710	HUNGARY RD	RICHMOND	VA	23228		Y P 1	0	A	N	N	Y	Y	Y	N
00084	MRS. LAURA MOORE	2725	HUNGARY RD	RICHMOND	VA	23228		Y P 1	0	A	N	N	Y	Y	Y	N
00188	LAUREL ATHLETIC 8880 RF4P		HUNGARY RD , OFF	RICHMOND	VA	23228	266-9879	N P 2	0	A	N	N	Y	Y	Y	N
00220	* 84 LUMBER		LANDMARK RD	RICHMOND	VA	23228	266-2467	Y P 2	0	A	N	Y	N	Y	Y	N
00127	MR. CLINTON L. JONES	362	LUCAS RD	RICHMOND	VA	23228	264-1762	Y P 1	0	N	N	N	Y	Y	N	N
00136	MS. ETHEL C. HARVEY	5301	LUCAS RD	RICHMOND	VA	23228	270-0568	Y P 1	0	N	Y	Y	Y	A	Y	Y
00138	E. E. ROBERTS	5302	LUCAS RD	RICHMOND	VA	23228	270-0465	Y P 1	0	N	N	D	Y	N	Y	Y
00137	MR. P. J. ROBERTSON	5303	LUCAS RD	RICHMOND	VA	23228	270-6073	Y P 1	0	N	N	N	Y	A	Y	Y
00139	E. M. O'BRIEN	5307	LUCAS RD	RICHMOND	VA	23228	270-4843	Y P 1	0	N	N	Y	D	Y	Y	N
00140	P. A. ROBERTSON	5309	LUCAS RD	RICHMOND	VA	23228	270-0594	Y P 1	0	N	Y	Y	N	Y	Y	Y
00141	MS. CARRIE LUCAS	5311	LUCAS RD	RICHMOND	VA	23228	270-5322	Y P 1	0	N	N	Y	Y	N	Y	N
00143	C. P. THOMPSON	5312	LUCAS RD	RICHMOND	VA	23228	270-7652	N P 2	0	N	N	N	D	Y	N	N
00145	C. A. ALLEN	5400	LUCAS RD	RICHMOND	VA	23228		N P 1	0	N	N	Y	A	N	N	N
00144	MR. HENRY CHENAULT	5401	LUCAS RD	RICHMOND	VA	23228	270-0221	Y P 1	0	N	N	N	D	Y	N	N
00146	R. M. RANSONE	5404	LUCAS RD	RICHMOND	VA	23228	270-0589	Y P 2	125	N	N	Y	Y	A	Y	Y
00119	MR & MRS DAVID SMITH	9100	MAYFAIR AVE	RICHMOND	VA	23228	262-5738	Y P 1	15	N	Y	N	Y	N	Y	Y
00107	* MR. & MRS W. K. BELL	9113	MAYFAIR AVE	RICHMOND	VA	23228	266-1593	Y P 1	30	N	Y	Y	Y	N	Y	Y
00082	MRS. DOROTHY ELLIS	9117	MAYFAIR AVE	RICHMOND	VA	23228	266-1918	Y P 1	18	N	Y	Y	Y	N	Y	Y
00082	MR. & MRS. JAMES SNOW	9119	MAYFAIR AVE	RICHMOND	VA	23228	262-3108	N P 1	45	N	Y	Y	Y	N	Y	Y
00112	KNIGHT ELEC. & LIGHT	8501	OAKVIEW AVE	RICHMOND	VA	23228	264-2047	Y P 1	0	A	N	Y	N	A	Y	Y
00060	J. E. HOLLAND	8505	OAKVIEW AVE	RICHMOND	VA	23228	266-3437	Y P 1	0	A	Y	Y	N	A	Y	Y
00063	SCHALOW MANUF. CO.	8607	OAKVIEW AVE	RICHMOND	VA	23228	262-9881	N P 1	0	A	N	Y	N	Y	Y	Y
00066	ALLIANCE EQUIPMENT	8609	OAKVIEW AVE	RICHMOND	VA	23228	264-9014	P	0	A	N	Y	N	Y	Y	Y
00067	BROWNING STEEL CO.	8717	OAKVIEW AVE	RICHMOND	VA	23228	262-2821	F 1	0	A	N	Y	A	Y	Y	Y
00069	* OAKVIEW AUTO SALES	9025	OAKVIEW AVE	RICHMOND	VA	23228	266-0447	N P 1	23	A	Y	Y	N	Y	N	Y
00108	MR. & MRS. L. HALL	9101	OAKVIEW AVE	RICHMOND	VA	23228	266-0355	Y P 1	18	A	Y	Y	Y	N	Y	Y
00091	MS. RUBY RAGLAND	9107	OAKVIEW AVE	RICHMOND	VA	23228	262-8121	N P 2	90	N	Y	Y	Y	N	Y	Y
00114	MR. RICHARD RAGLAND	9109	OAKVIEW AVE	RICHMOND	VA	23228		N P 2	60	N	Y	Y	Y	N	Y	Y
00113	* MS. PAM MAST	9111	OAKVIEW AVE	RICHMOND	VA	23228	264-1275	N P 2	90	A	Y	N	Y	N	Y	Y
00089	MS. PATRICIA LANE	9311	OAKVIEW AVE	RICHMOND	VA	23228	266-4059	N P 1	0							N
00090	MR. BOBBY VICKERS	9313	OAKVIEW AVE	RICHMOND	VA	23228	262-4377	N P 1	24	A	N	Y	N	Y	N	Y
00162	L. D. FERROBS	9001	OLD STAPLES MIL	RICHMOND	VA	23228	UNLISTED	Y P 1	0	A	N	Y	N	N	N	N
00163	C. B. SALMON	9003	OLD STAPLES MIL	RICHMOND	VA	23228	262-3045	N P 1	0	A	N	Y	N	Y	N	N
00164	MR. GLEN MILES	9005	OLD STAPLES MIL	RICHMOND	VA	23228	262-1399	N P 1	0	A	Y	Y	Y	Y	N	N

NOTES: 1 WELL N= NO WELL

P= primary supply
A= auxiliary supply
D= not in use
F= filled/abandoned

2 CONST. 1= dug

2= drilled
3= other

3 PW

P= public water in use
A= public water available
N= public water not available

4 SS N= no septic system/on-site sewage disposal

Y= yes, using septic system/on-site disposal
D= old system not in use

5 PS

Y= public sewer in use
A= public sewer available
N= public sewer not available

DES Y= desire expressed for PW or PS

N= no desire to hook up to PW or PS

100271

(Don't
forget)