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State of North Carolina
Department of Environment, Health, and Natural Resources
Division of Solid Waste Management
P.O. Box 27687 · Raleigh, North Carolina 27611-7687

James G. Martin, Governor
William W. Cobey, Jr., Secretary

William L. Meyer
Director

August 31, 1992

Mr. Craig Benedikt
EPA NC CERCLA Project Officer
EPA Region IV Waste Division
345 Courtland Street, NE
Atlanta, Georgia 30365

RE: Phase II, Screening Site Investigation
Union Camp Corporation - Jamestown
Jamestown, Guilford County, North Carolina
NCD 003 216 959

Dear Mr. Benedikt:

Enclosed herewith is the Phase II, Screening Site Investigation (SSI) Report by Greenhorne & O'Mara, Inc. for Union Camp Corporation - Jamestown (NCD 003 216 959).

Based on the information gathered and presented in this report and on the results of the data validation, the North Carolina Superfund Section is recommending that the site move on to the next stage of the pre-remedial process.

The following discussion of the analytical results from the Phase II, SSI sampling event for the subject site, reflects data validation.

A total of nine (9) environmental samples were collected to characterize the site. To characterize whether a release of contaminants has occurred, a limited subsurface and surficial investigation was conducted to obtain ground water, surface water, soil and sediment samples for laboratory analysis. The sampling locations are shown on Appendix A, Figure 2. These samples consisted of two (2) ground water samples, two (2)

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surface water samples, three (3) soil samples and two (2) sediment samples.

Soils

A background surface soil sample (UCSS01) was collected at the site. No Purgable Organics were reported in this sample. No Base Neutral Acid Extractables (BNA) were reported in this sample. See Table 1 for the inorganic results.

A downgradient surface soil composite sample (UCSS02) was collected from southwest of the storage tank. No Purgable Organics were reported in this sample. No BNAs were reported in this sample. No pesticides/PCBs were reported in this sample. See Table 1 for the inorganic results.

A downgradient surface soil composite sample (UCSS03) was collected northeast of the main building. No Purgable Organics were reported in this sample. No BNAs were reported in this sample. See Table 1 for the inorganic results.

No observed release to soils has been documented from the data gathered relative to the soil samples. It appears that all inorganic materials found in the soils were within the soils natural range.

Sediments

An upstream sediment sample (UCSED01) was taken east of the site. No Purgable Organics were found in this sample. The only BNA found was 1,2,4-trichlorobenzene at 330K ppb. No pesticides/PCBs were reported in this sample. Arsenic (4.0 ppm), barium (20 ppm) and lead (80 ppm) were the only inorganics reported in this sample.

A downstream sediment sample (UCSED02) was taken south of the site. Methylene Chloride (12C ppb) was the only Purgable Organic found in the sample. However, 1,2,4-trichlorobenzene (330 ppb) was the only BNA found in the sample. No pesticides/PCBs were reported in this sample. Arsenic (1.9 ppm), barium (50 ppm), chromium (20 ppm)and lead (60 ppm) were the only inorganics reported in this sample.

An observed release to sediments is considered to be documented from the data gathered relative to sediment samples. Chromium was detected in significant concentrations in the downgradient sample. In the past, the inks that were used contained metals such as lead and chromium.

Surface Water

An upstream surface water sample (UCSW01) was taken east of the site. The Purgable Organics found in this sample were vinyl

chloride (47 ppb), methylene chloride (14 ppb), acetone (474 ppb) 1,1-dichloroethane (121 ppb), 1,2-dichloroethene (707J ppb), 2-butanone (120 ppb), 1,1,1-trichloroethane (107 ppb), 1,2-dichloropropane (31 ppb), benzene (trace), 4-methyl-2-pentanone (28 ppb), toluene (654 ppb), chlorobenzene (2J ppb), ethylbenzene (113 ppb) and xylenes (434 ppb). Two BNAs were reported in this sample. They were 2,4-dimethylphenol and 1,2,4-trichlorobenzene both at 10K ppb. Aroclor 1254 (32 ppb) was the only pesticide/PCB reported in this sample. Barium (80 ppm) was the only inorganic reported in this sample.

A downstream surface water sample (UCSW02) was taken south of the site. Purgable Organics found in the sample were vinyl chloride (38 ppb), 1,1-dichloroethane (3J ppb), 1,2-dichloroethene (35 ppb), 1,1,1-trichloroethane (trace), trichloroethylene (12 ppb), tetrachloroethane (12 ppb). No BNAs were reported in this sample. No pesticides/PCBs were reported in this sample. Barium (80 ppm) was the only inorganic reported in this sample.

An observed release of trichloroethylene and tetrachloroethene to sediments is documented from the data gathered relative to surface water samples. These contaminants are not known to be specifically attributable to the site, but due to the age of the site and the number of unregulated years of operation, these releases are considered significant.

Ground Water

A background ground water sample (UCGW01) was collected from an on-site monitoring well. The Purgable Organics detected in the water sample were 1,2-dichloroethene (12 ppb), trichloroethene (14 ppb) and tetrachloroethene (100 ppb). No BNAs were found in the this sample. No pesticides/PCBs were reported in this sample. See Table 2 for inorganic results.

A downgradient ground water sample (UCGW02) was collected south of the storage tank area. No Purgable Organics were reported significantly above background in this sample. One BNA, diethylphthalate (2J ppb), was reported in this sample. See Table 2 for inorganic results.

An observed release to ground water has been documented from the data gathered relative to ground water samples. It appears that significant releases of aluminum, barium, beryllium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese mercury, nickel, potassium, selenium, vanadium and zinc have occurred at the site. As can seen from Table 2, barium, beryllium, chromium, copper, iron, lead, manganese and nickel are greater than their respective NCMCL and/or MCL. Chromium and lead were detected in significant concentrations in the downgradient sample. In the past, the inks that were used contained metals such as lead and chromium.

Based on the information gathered and presented in this report, the North Carolina Superfund Section is recommending that the site move on to the next stage of the pre-remedial process. This investigation should focus on identifying where the organic contamination in groundwater and surface water is originating and whether the inorganics are attributable to site activities. Additionally, the location of the nearest drinking water well should be identified and sampled and the nearest sensitive environment should be identified and sampled.

If you have any questions, please contact me at 919-733-2801.

Sincerely

Grover Nicholson, Head
Contracts Management Branch

Enclosures

TABLE 1
UNION CAMP CORPORATION - JAMESTOWN
NCD 003 216 959

INORGANICS	SOILS NATURAL RANGE (PPM)	UCSS01 (PPM)	UCSS02 (PPM)	UCSS03 (PPM)
ALUMINUM	0.7->10%	21000	17000	11000
ANTIMONY	<1-8.8	20UR	20UR	8.8UR
ARSENIC	<0.1-73	1UJ	1UJ	2UJ
BARIUM	10-1500	180J	110J	100J
BERYLLIUM	<1-7	0.31J	0.38J	0.46J
CADMIUM	0.01-0.7	0.99UJ	0.98UJ	0.84UJ
CALCIUM	0.01-20%	2800	3600	2600
CHROMIUM	1-1000	23	28	17
COBALT	<0.3-70	18	20	11
COPPER	<1-700	51	23	24
IRON	0.01->10%	23000	26000	14000
LEAD	<10-300	5.1	3.6	8.2
MAGNESIUM	0.005-5%	7200	6900	3400
MANGANESE	<2-7000	250	330	190
MERCURY	0.01-3.4	0.26U	0.28U	0.27U
NICKEL	<3-700	14	23	29
POTASSIUM	0.005-3.7%	1900	680	1400
SELENIUM	<0.1-3.9	0.24U	0.23U	1U
SILVER	0.01-5	1.1UJ	1.2UJ	1UJ
SODIUM	0.05-5%	280U	340U	290U
THALLIUM	-	0.49U	0.47U	0.48U
VANADIUM	<7-500	68	69	160
ZINC	<5-2900	44	38	58
CYANIDE	-	5.8U	5.8U	5.4U

NOTES:

1) NA - NOT ANALYZED
2) N - PRESENCE OF CONTAMINANT PRESUMED
3) J - CONCENTRATION ESTIMATED
4) U - NON-DETECT
5) B - CONTAMINANT FOUND IN ASSOCIATED BLANK

TABLE 2
UNION CAMP CORPORATION - JAMESTOWN
NCD 003 216 959

INORGANICS	WATER NCMCL (PPB)	WATER MCL (PPB)	UCGW01 (PPB)	UCGW02 (PPB)
ALUMINUM	-	-	1300UJ	760000J *
ANTIMONY	-	10/5	42UJ	210UJ
ARSENIC	50	-	1UJ	2UJ
BARIUM	1000	5000	30UJ	7400J
BERYLLIUM	-	1	1UJ	21J
CADMIUM	5	5	4UJ	20UJ
CALCIUM	-	-	74000J	230000J *
CHROMIUM	50	100	5UJ	1600J
COBALT	-	-	5UJ	1300J *
COPPER	1000	1300	15J	1200J
IRON	300	-	1400J	1100000J
LEAD	50	50	10J	460J
MAGNESIUM	-	-	23000J	190000J
MANGANESE	50	-	430J	63000J
MERCURY	1.1	2	0.5UJ	0.67J
NICKEL	150	100	11UJ	670J
POTASSIUM	-	-	1900UJ	7300J
SELENIUM	10	50	1UJ	6J
SILVER	50	-	5UJ	25UJ
SODIUM	-	-	21000J	34000J
THALLIUM	-	2/1	2UJ	2UJ
VANADIUM	-	-	7J	3600J
ZINC	5000	-	220J	1700J
CYANIDE	154	200	10U	10U

NOTES:

1) NA - NOT ANALYZED
2) N - PRESENCE OF CONTAMINANT PRESUMED
3) J - CONCENTRATION ESTIMATED
4) U - NON-DETECT
5) R - DATA UNUSABLE
6) B - CONTAMINANT FOUND IN THE ASSOCIATED BLANK
7) NCMCL - NORTH CAROLINA MAXIMUM CONTAMINANT LEVEL
8) MCL - FEDERAL MAXIMUM CONTAMINANT LEVEL

STATE OF NORTH CAROLINA

Department of Environment, Health, and Natural Resources
Division of Solid Waste Management
Superfund Section

Union Camp Corporation - Jamestown
NCD 003216959

Phase II
Screening Site Inspection

Volume I

November 1991

By:

Greenhorne & O'Mara, Inc.

PHASE II

SCREENING SITE INVESTIGATION

FOR THE

UNION CAMP CORPORATION - JAMESTOWN

NCD 003216959

Submitted to:

State of North Carolina
Department of Environment, Health,
and Natural Resources
Division of Solid Waste Management
Superfund Section
Raleigh, North Carolina

Prepared By:

Greenhorne & O'Mara, Inc.
9001 Edmonston Road
Greenbelt, Maryland 20770

November 1991
Revised February 1992

CERCLA

EXECUTIVE SUMMARY

Union Camp Corporation is located in Jamestown, Guilford County, North Carolina. At this facility, Union Camp Corporation has manufactured cardboard boxes since 1946 when the site was opened by the Highland Container Company. In manufacturing the cardboard boxes the facility has used inks containing lead and chromium, caustic soda, a water-proofing agent called amerez resin, and formaldehyde, presumably as a preservative. Two spills have occurred on the site, one from a leaking underground tank and one as a result of a broken pipe. These spills were reported to the state environmental officials and were reportedly cleaned up. The Union Camp facility in Jamestown was deleted as a small-quantity generator in January 1985 and ceased being a RCRA facility at that time.

The facility is on 7.9 acres of land and has a main building, industrial well, water tower and an above-ground storage tank on the site property. The surface water pathway from the site flows overland in a southerly direction until it joins a small stream that enters Deep River. There is a surface water intake at the Oakdale treatment facility which is along the 15-mile surface water pathway. The site is located within the Carolina Slate Belt of the Piedmont Physiographic Province. The saprolite and bedrock act as a single hydrologic system since there is no confining layer. The site lies on the Enon-Mecklenburg soil association which is characterized by strongly sloping, well drained soils. There are no critical habitats for Federally endangered species identified in the vicinity of the facility.

There are approximately 61,912 residents who depend on surface water from public municipal water systems for their water supply within a four mile radius. Approximately 2,706 residents within a four-mile radius rely on groundwater for their drinking water.

A Phase I Screening Site Inspection (SSI) performed by NUS Corporation on August 3, 1990, recommended that the site proceed to Phase II SSI on a high priority basis. Consequently, on June 11, 1991, Greenhorne & O'Mara, Inc. (G&O) performed a Phase II SSI for the Union Camp Corporation site in Jamestown. A total of nine (9) environmental samples were taken at the site. Results of the sampling event indicate that releases of inorganic metals has occurred on the site. Therefore, G&O recommends that the site move on to the next stage of the pre-remedial process since there is a potential health risk to area residents as a result of contaminated groundwater at the facility.

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1.0 INTRODUCTION

1.1 OBJECTIVES

Greenhorne and O'Mara, Inc. (G&O) conducted a Phase II Screening Site Inspection (SSI) at the Union Camp Corporation site located in Jamestown, Guilford County, North Carolina. The overall objective of the Phase II SSI is to provide information to support the recommendation that a site should move onto the next stage of the pre-remedial process or be designated as "no further remedial action planned (NFRAP)" under the Federal Superfund program. Additional objectives of the Phase II SSI are the following:

- Identify the types of contaminants present.
- Assess whether a release of hazardous substances has occurred.
- Search for evidence of actual human and environmental exposure to contaminants.
- Determine the likelihood of the site scoring high enough on the HRS to be recommended for further pre-remedial action under the Federal Superfund program.

The SSI builds upon data obtained during the preliminary assessment (PA) and Phase I SSI stages to further characterize problems at or near the site and to support a management recommendation.

1.2 SCOPE OF WORK

The scope of work for the Phase II SSI includes the following tasks:

- Reviewing both EPA and state file material.

- Preparing an abbreviated site-specific sampling plan and Health and Safety Plan. This task included developing a site map to illustrate proposed sampling locations, the approximate number of samples, and the type of samples to be collected.

- Conducting a site reconnaissance with the NCDEHNR to determine and flag actual sampling locations based on the sampling plan and existing field conditions, and the professional judgement of the NCDEHNR and the G&O sampling team. During the site reconnaissance, G&O also developed a site layout map to illustrate all of the important site features including location of buildings, access roads, and waste source areas, as well as site drainage.

- Performing field sampling activities by collecting up to five (5) environmental media samples and three (3) QA/QC samples. The five environmental samples usually included two (2) groundwater samples (with a maximum well depth of 15 feet) and three (3) surface soil samples. The three (3) QA/QC samples included one (1) water duplicate, one (1) surface soil duplicate, and one (1) trip blank.

- Analyzing laboratory data and presenting the data in four summary

tables: volatile organic compounds, semi-volatile organic compounds, inorganic compounds, and pesticides/PCBs. Any releases that were observed were highlighted on the tables and discussed in the Phase II SSI report.

- Preparing a Phase II SSI report that presents information gathered during the site visit, field observations, and laboratory data with respect to observed releases. Any existing data gaps will be discussed in the text. **Greenhorne and O'Mara was not contracted to collect additional background information.**

2.0 SITE CHARACTERIZATION

2.1 SITE BACKGROUND AND HISTORY

Union Camp Corporation, located in Jamestown, Guilford County, North Carolina, has manufactured cardboard boxes since 1946, when the plant was opened by the Highland Container Company. Highland Container Company merged with Union Camp in 1959 (Ref. 1). In making cardboard containers, the facility has over the years used such raw materials as inks containing lead and chromium, caustic soda, a water-proofing agent called amerez resin, and formaldehyde, presumably as a preservative. Union Camp stopped using formaldehyde in 1978 (Ref. 1). The utilization of inks with a low lead content began in 1982 (Ref. 2). Approximately 2 gallons of oil suspected to contain PCBs from an old switch box was disposed of in 1982, as a hazardous waste (Ref. 1). The location of the disposal is unknown. Number 6 fuel oil was also reported to have spilled on the site and contaminated a nearby stream on at least two occasions in the past. The first spill resulted from a broken pipe, and the second spill resulted from a leaking underground storage tank. The two fuel oil spills occurred approximately eight years ago, were reported to state environmental officials and were reportedly cleaned up. The plant presently uses natural gas; however, number 6 fuel oil is sometimes used as an alternative (Ref. 1).

The Union Camp Corporation filed a RCRA Part A application for status as a generator and storer of hazardous waste in November 1980 (Ref. 3). In April 1982, the facility requested withdrawal of its Part A application on the grounds of a change in plant processes (Ref. 2). In May 1982, the facility was granted deletion as a generator and storer of waste (Ref. 4). Union Camp was subsequently classified as a small-quantity generator (Ref. 5). Union Camp was deleted as a small-quantity generator in January 1985 and ceased being a RCRA facility at that time (Ref. 5).

2.2 SITE DESCRIPTION

2.2.1 Site Location

The site is located on Ragsdale Road just south of Routes 29 and 70 (Appendix A, Figure 1). The site is found on the 7.5' quadrangle map High Point East (Ref. 6)

2.2.2 Site Features

The site is a single building on approximately 7.9 acres of land. There is an industrial well and water tower on site (Ref. 1). In addition, there is a smoke stack and a fenced above-ground storage tank that contains number 6 fuel oil (Ref. 7).

2.2.3 Waste Characteristics

Wastes generated from the operations at the facility resulted from washing the glue and ink off machinery. The wastewater was discharged to the Jamestown City sewer system without pretreatment (Ref. 1). Earlier

waste included a potentially hazardous sludge containing ink residues, such as lead (Ref. 2). It is not known where the sludge was disposed. A small amount of 1,1,1-trichloroethane is used to clean machinery and for removing pads from the printers. All of this is lost to evaporation during use. The rags are reused after off-site laundering. In the past, the inks that were used contained metals such as lead and chromium. Utilization of the ink with low lead content was begun in 1978 or 1979. The basic glue used is made in 660 gallon batches and contains about 1,000 pounds of corn starch and about 30 pounds of caustic soda to suppress the gel temperature of the glue. A waterproof glue is also produced by adding approximately 50 to 60 pounds of a waterproofing agent to the basic glue. This water proofing agent is called amerez resin and contains a small amount of formaldehyde. Previously, formaldehyde was also used in the basic glue formulation as a preservative. The use of formaldehyde was discontinued in 1975 (Ref. 1). Approximately 1,000 to 1,500 gallons per day of waste water is generated from the process of washing down the glue and ink from machinery. Occasionally, glue containing an excess of starch will solidify before it can be used. This off spec. glue is disposed of in the city landfill as a non-hazardous solid waste (Ref. 1).

3.0 ENVIRONMENTAL SETTING

3.1 TOPOGRAPHY

The site slope is approximately two percent tending toward the southeast. The site is approximately 750 feet above mean sea level (Appendix A, Figure 3).

3.2 SURFACE WATER

3.2.1 Overland Drainage and Potentially Affected Surface Water Bodies

The surface water pathway from the Union Camp Corporation flows overland in a southerly direction for 250 feet until it joins a small stream. The unnamed tributary flows approximately .38 miles to the Deep River. The fifteen mile pathway expires on the Deep River. The Oakdale treatment facility, the only surface water intake on the 15-mile surface water pathway, is located 1.04 miles downstream from the point where the tributary joins the Deep River. The Deep River has recreational fishing (Refs. 6 and 20).

3.2.2 Climatology

The mean annual precipitation is approximately 45 inches, and the mean annual lake evaporation is approximately 41 inches (Ref 9). Therefore, the net annual rainfall for this area is 4 inches. The 2-year, 24-hour rainfall is approximately 3.8 inches (Ref. 10).

3.3 GROUND WATER

3.3.1 Hydrogeology

Jamestown is located within the Carolina Slate Belt of the Piedmont Physiographic Province (Refs. 11, 12, and 13). The area is characterized by gently rolling topography with moderately steep slopes along the drainageways (Ref. 14). The geology of Jamestown consists of folded and fractured metamorphic bedrock overlain nearly everywhere by residual material called saprolite (Refs. 13 and 15). The saprolite ranges in thickness from a few feet near rock outcrops to more than 100 feet in interstream areas with an average thickness of 30 feet on most hills and ridges (Refs. 16 and 15). The metamorphosed granitic rock that the site lies on is predominantly medium to coarse-grained, equigranular to poryphytic quartz to monzonite and granodionite with lesser amounts of granite (Ref. 12).

3.3.2 Aquifer Use

The saprolite and bedrock act as a single hydrologic system, since there is no confining layer. In the saprolite, groundwater occurs within intergranular pore spaces (Ref. 15). In the bedrock, groundwater occurs

primarily within joints, fractures, and other secondary porosity openings (Ref. 15). The saprolite has a hydraulic conductivity of less than $1x10^{-7}$ cm/sec and acts as a reservoir that feeds water into the underlying bedrock (Ref. 15). It is also the unit from which most domestic water supplies in the region are obtained (Ref. 13). The water is supplied to both dug and bored wells that are completed within the saprolite at, and just below, the water table (Ref. 13). The depth to the water table in the facility area is about 15 feet below land surface (Ref. 16).

3.3.3 Soils

The site area is on the Enon-Mecklenburg soil association which is characterized by strongly sloping, well drained soils that have a sandy clay loam, clay and clay loam subsoil (Ref. 14). The site itself lies on Enon-Urban soils which are well drained and found on side slopes and broad interstream divides. The urban land part of this soil consists of disturbed areas where the original soil has been changed to the extent that most soil properties have been so altered that a soil series is not recognized (Ref. 14). The permeability of the Enon-Urban soils ranges from 0.2 in/hr (1.4×10^{-4} cm/sec) to 6.0 in/hr (4.2×10^{-3} cm/sec) (Ref. 14).

3.4 WATER SUPPLY

One mile south of Deep River is the Oakdale treatment facility, the location of the only surface water intake on the 15-mile surface water pathway. This intake serves the city of Jamestown, which maintains connections for 1,000 residences and 150 businesses. The city also purchases water from the Greensboro and High Point water departments, which have surface water intakes upstream or on different water routes, namely the Deep River and High Point Lake (Refs. 6, 18 and 20). A 182-foot deep well on the Union Camp site is used to wash down the corrugation equipment. The plant is also served by city water which is used for drinking, boilers, and to wash flexographic printing equipment (Ref. 1).

Groundwater use in the area is sporadic, with the majority of wells found to the south and southeast of the facility where there is no municipal service.

The following is a breakdown of the estimated population believed to be relying on domestic wells within a 4-mile radius of the Union Camp site:

Radius	# of Houses	Multiplier	Pop/Radii	Cumulative Pop.
1/4-mile	0	2.44	0	0
1/2-mile	0	2.44	0	0
1-mile	79	2.44	193	193
2-mile	279	2.44	681	874
3-mile	351	2.44	856	1730
4-mile	400	2.44	976	2706

This population was determined by counting the number of houses not served by the municipal water supply in each distance ring. The total number of houses were then multiplied by the U.S. Census Bureau's 1990 figure for persons per household in Guilford County to derive a groundwater population for each radius (Refs. 6 and 19).

3.5 POPULATION DISTRIBUTION

The total population within a 4-mile radius is approximately 64,618. The population within each radius ring is listed below:

Radius	# of Houses	Pop/Radii	City of High Point	Cumulative Pop.
1/4-mile	34	83	0	83
1/2-mile	135	329	0	412
1-mile	158	386	0	798
2-mile	627	1530	8888	11216
3-mile	848	2069	20423	33708
4-mile	4143	10109	20801	64618

The population within each radius ring was determined by multiplying the number of houses counted on the topographic maps by the estimated number of persons per household in Guilford County and then planimetering the area of the City of High Point within the four-mile radius and multiplying that by the persons per square mile for the City of High Point (1,891 persons per square mile) (Refs. 17, 19). The nearest residence is approximately one tenth of a mile northeast of the site.

3.6 LAND USE

The site is bordered on the north by the Southern Railroad, and on the east by a chemical facility, Chem Central. The south side of the site is heavily wooded down to the Deep River, located an overland distance of approximately 0.3 miles away. On the west side is Dillon Road and a convenience store. Approximately 0.15 mile northeast of Union Camp Corporation is the Jamestown Elementary School, and 0.6 mile to the east is High Point City Park (Refs. 7 and 20).

3.7 SENSITIVE ENVIRONMENTS

There are no critical habitats identified in the area of the facility (Ref. 21). Two state-designated threatened species, the Greensboro burrowing crayfish (Cambarus cataqius) and the plant Nestronia (Nestronia umbellula) are found in Guilford County (Ref. 22). There are no critical habitats of Federally listed endangered species in Guilford County (Ref. 23).

4.0 FIELD INVESTIGATION

4.1 DESCRIPTION OF SAMPLES AND SAMPLE LOCATIONS

A total of nine (9) environmental samples were collected to characterize the site. To determine whether a release of contaminants has occurred, limited subsurface and surficial investigation was recommended to obtain groundwater, surface water, and sediment samples for laboratory analysis. The locations of the sampling points were originally proposed in an abbreviated sampling plan prepared by G&O; however, the NCDEHNR made the final recommendations during the sampling effort conducted on June 11, 1991. Therefore, the final sampling locations as shown in Appendix A, Figure 2 reflects the decision of the NCDEHNR staff.

To determine whether contaminants were released into the environment, three (3) surface soil samples, and two (2) groundwater samples were obtained. A representative of the NCDEHNR collected two (2) surface water and two (2) sediment samples. All the samples collected on the site were contained, preserved and held in accordance with the Standard Operating Procedures (SOP) (Ref. 24).

4.2 FIELD MEASUREMENTS

Field measurements for groundwater samples include pH, temperature, and conductivity. These values are listed in Table 1.

TABLE 1

FIELD MEASUREMENTS FOR GROUNDWATER SAMPLES
FOR UNION CAMP CORPORATION
JAMESTOWN, GUILFORD COUNTY, NORTH CAROLINA
PHASE II

SAMPLE CODE	pH	TEMPERATURE (^{o}C)	CONDUCTIVITY (umhos/cm)
UCGW01		18.3	0.666
UCGW02		19.1	0.820

4.3 ANALYTICAL RESULTS

Upon completion of the sampling effort, samples were taken to Industrial and Environmental Analysts, Inc. (IEA) in Research Triangle Park, North Carolina for analysis (see Volume II). Level IV Routine Analytical Service (RAS) Contract Laboratory Program (CLP) data packages and associated narratives were assembled for this project by IEA. At the request of the EPA, the data was validated, but was not available for this report. Samples collected by NCDEHNR include UCSED01, UCSED02, UCSW01, and UCSW02. These samples were analyzed by the North Carolina State Laboratory of Public Health. The results of the sample analyses are summarized in Table 2A and 2B (Appendix A) and discussed below.

DOWNGRADIENT GROUNDWATER SAMPLE COLLECTED FROM AREA SOUTH OF THE ABOVE-GROUND STORAGE TANK (UCGW02) - A down gradient groundwater sample was collected from a hand-augured temporary well, from the area south of the above-ground storage tank and east of the main building. No volatile organic compounds (VOCs) or semivolatile organic compounds (BNAs) were identified at levels significantly above the CRDL. The following metals were identified at levels significantly above CRDL: aluminum (760000J ppb), barium (7400J ppb), beryllium (21J ppb), calcium (230000J ppb), chromium (1600J ppb), cobalt (1300J ppb), copper (1200J ppb), iron (1100000J ppb),lead (460J ppb), magnesium (190000J ppb), manganese (63000J ppb), mercury (.67J ppb), nickel (670J ppb), potassium (7300J ppb), selenium (6J ppb), vanadium (3600J ppb) and zinc (1700J ppb). The following contaminants exceed the U.S. EPA's Drinking Water Regulations and Health Advisories Maximum Contaminant level and/or the North Carolina Maximum Contaminant Level: barium, beryllium, chromium, copper, iron, lead, manganese and nickel.

DOWNGRADIENT SOIL SAMPLE COMPOSITE COLLECTED SOUTHWEST OF THE ABOVE-GROUND STORAGE TANK (UCSS02) - A down gradient soil sample was collected from several locations southwest of the above-ground storage tank and east of the main building. No VOCs or BNAs were detected at concentrations significantly above the CRDL. Several inorganic metals were positively identified, but none were at levels significantly above the background levels.

DOWNGRADIENT SOIL SAMPLE COMPOSITE COLLECTED NORTHEAST OF THE MAIN BUILDING (UCSS03) - A downgradient soil sample was collected near the northeast side of the main building in the vicinity of the above-ground storage tank and the smock stack. No VOCs or BNAs were detected at concentrations significantly above the CRDL. Several inorganic metals were positively identified, but none were at levels significantly above the background levels.

DOWNGRADIENT SEDIMENT SAMPLE COLLECTED SOUTH OF THE SITE (UCSED02) - A downgradient sediment sample was collected south of the site. Methylene chloride (12C ppb) was the only VOC found and 1,2,4-trichlorobenzene (330K ppb)was the only BNA found. Chromium (20 ppm) was the only inorganic reported in significant concentrations in this sample. There were no pesticides/PCBs found in this sediment sample.

DOWNGRADIENT SURFACE WATER SAMPLE COLLECTED SOUTH OF THE SITE (UCSW02) - A downgradient surface water sample was collected south of the site. The VOCs found were vinyl chloride (38 ppb), 1,1-dichloroethane (3J ppb), 1,2-dichloroethene (35 ppb), 1,1,1-trichloroethane (trace), trichloroethylene (12 ppb), and tetrachloroethene (12 ppb). There were no pesticides/PCBs found in this surface water sample.

In summary, groundwater appears to have releases of hazardous contaminants. Groundwater appears to be contaminated with the metals aluminum, barium, beryllium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, mercury, nickel, potassium, selenium, vanadium, and zinc. Barium, beryllium, chromium, copper, iron, lead, manganese and nickel exceeded the U.S. EPA's health-based benchmarks and/or North Carolina Maximum Contaminant Levels. It should be noted that the upgradient groundwater sample collected from an on-site monitoring well had elevated concentrations 1,2-dichloroethene (12 ppb), trichloroethene (14 ppb), tetrachloroethene (100 ppb). The presence of these contaminants may indicate that either there is an off-site source of contamination or the monitoring well may not be located hydrologically upgradient and therefore may be affected by the site. Soils on the site did not appear to have significant concentrations of contaminants. Surface water south of the site appears to be contaminated with trichloroethylene and tetrachloroethene.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the analytical results of the sampling event at the Union Camp facility, the following areas appear to have had environmental releases of hazardous contaminants that are assumed to be associated with the facility's operations:

- Groundwater in the area of the above-ground storage tank appears to be contaminated with barium, beryllium, chromium, cobalt, copper, iron, lead, magnesium, manganese, mercury, nickel, potassium, selenium, vanadium and zinc. The concentrations of barium, beryllium, chromium, copper, iron, lead, manganese and nickel exceeded the U.S. EPA's health - based bench marks.

- Surface water south of the site appears to be contaminated with trichloroethylene and tetrachloroethene.

There are approximately 2,706 residents within a four-mile radius of the site that rely on domestic wells for their drinking water. In addition, there are a total of 64,618 people living within a four-mile radius of the facility. Due to the fact that groundwater is contaminated in this area with inorganic metals, G&O is recommending that this site proceed to the next stage of the pre-remedial process. Both lead and chromium have been documented to have been used extensively on the site. Both of these contaminants exceed the U.S. EPA's health-based benchmarks. If any near-by domestic wells have been contaminated by these metals then the health effects could be severe.

LIST OF REFERENCES FOR UNION CAMP CORPORATION - JAMESTOWN, NORTH CAROLINA EPA REFERENCE ID NUMBER NCD003216959

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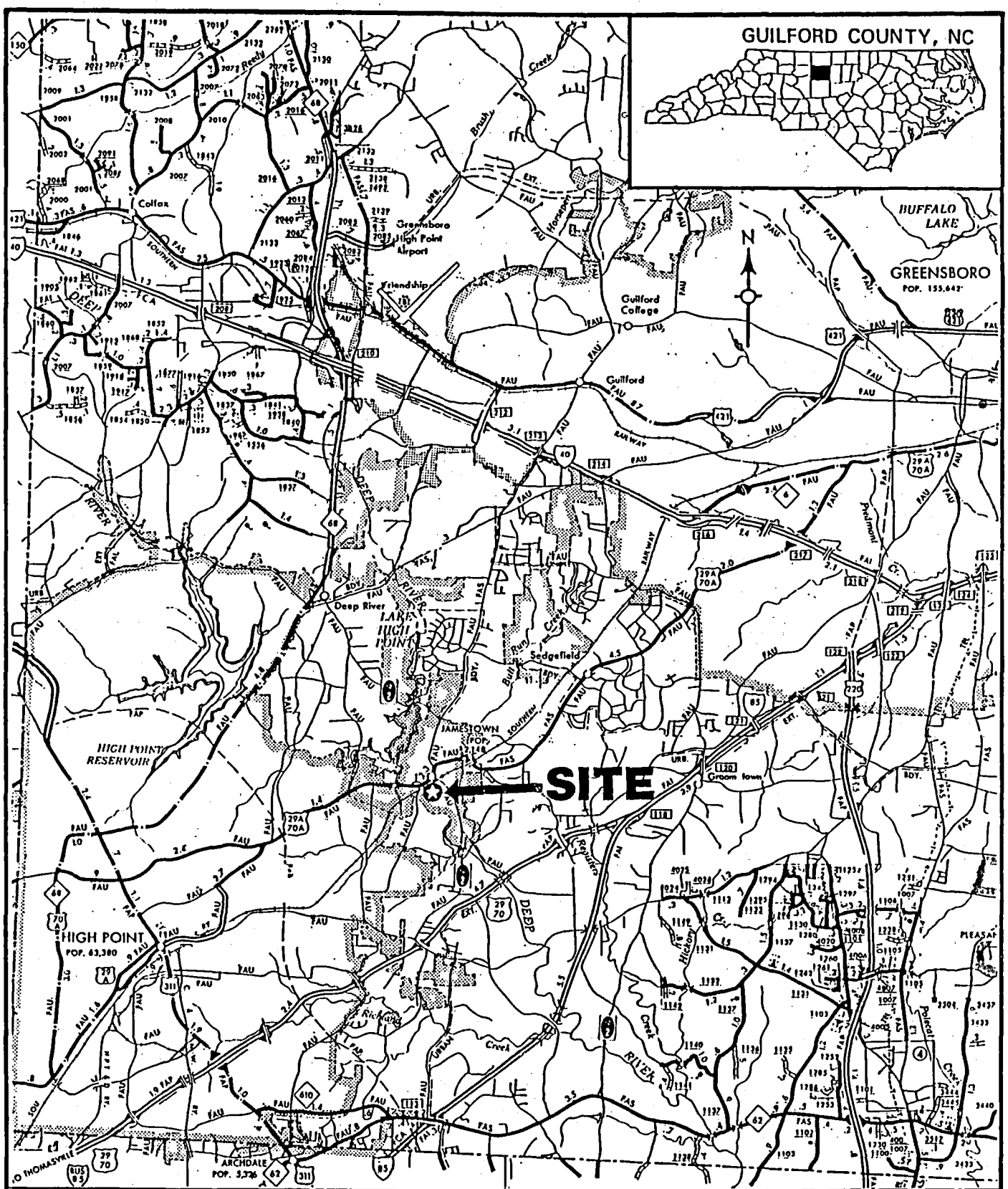
APPENDIX A
MAPS AND TABLES



UNION CAMP CORP. - JAMESTOWN

1 0 1 2 3 4 MILES

FIGURE 1

ENGINEERS • ARCHITECTS • PLANNERS • SCIENTISTS • SURVEYORS • PHOTOGRAMMETRISTS

GREENHORNE & O'MARA, INC.

9001 EDMONSTON ROAD, GREENBELT, MARYLAND 20770

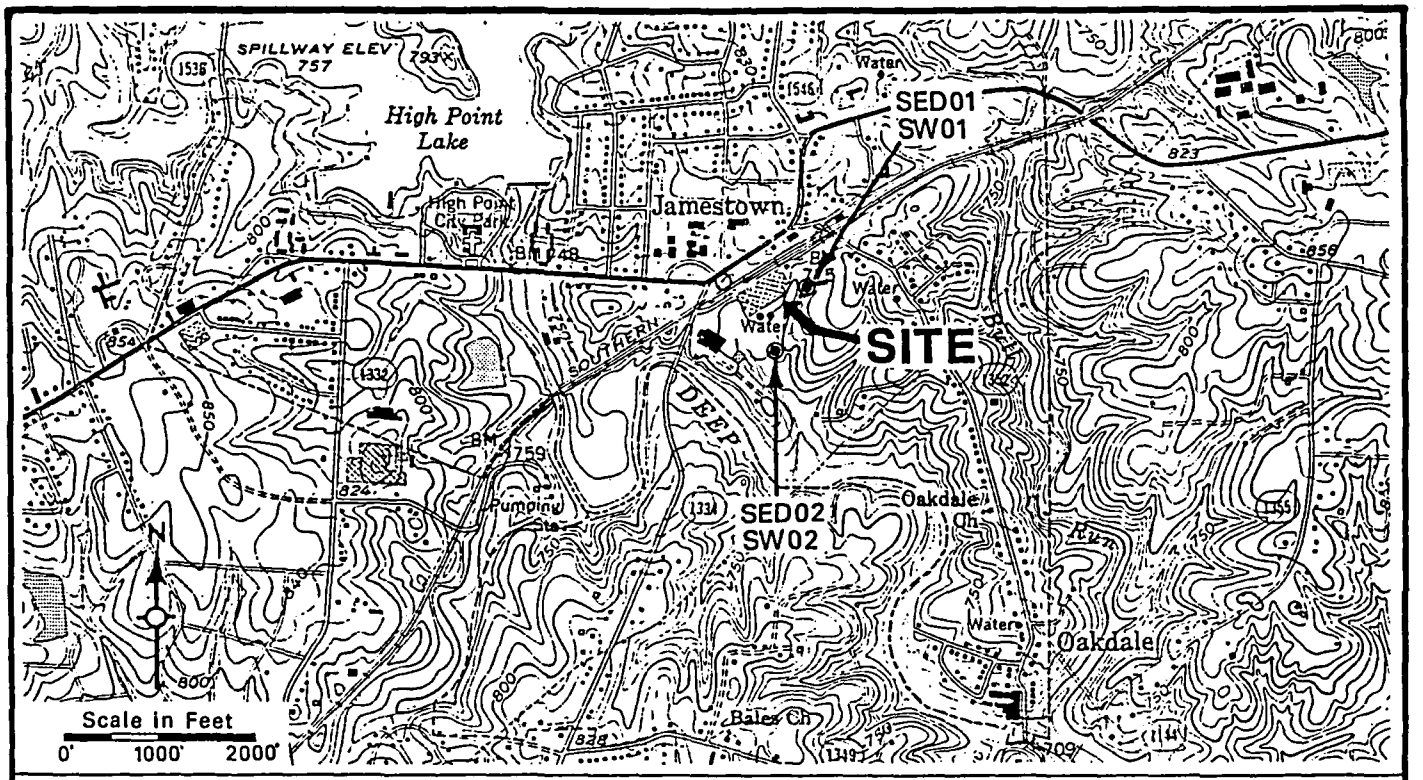
(301) 982-2800

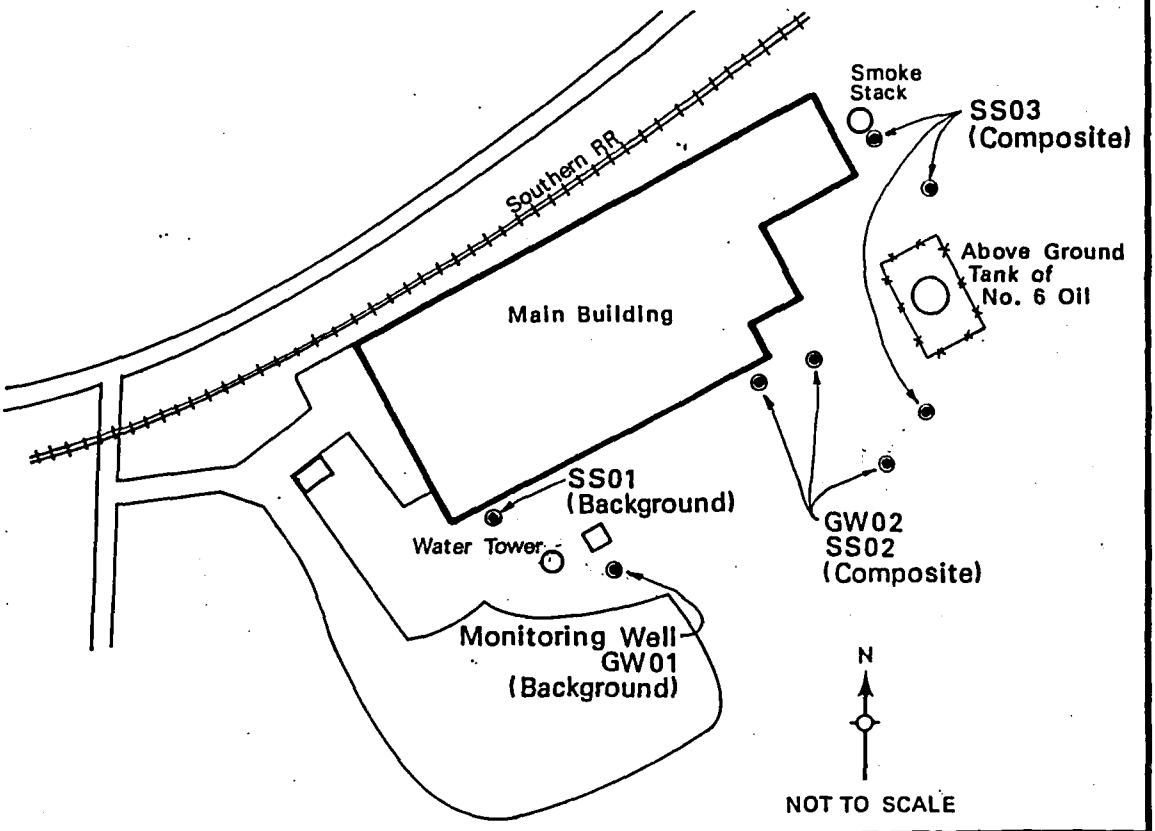
ANNAPOLIS, MD • ATLANTA, GA • AURORA, CO • BALTIMORE, MD • CULPEPER, VA • DENVER, CO • FAIRFAX, VA • MANASSAS, VA • RALEIGH, NC • RIVERVILLE, MD • TAMPA, FL

SITE LOCATION

NCD 003 216 959

SOURCE: North Carolina Department of Transportation, County Road Maps, 1990.





UNION CAMP CORP. – JAMESTOWN

FIGURE 2

ENGINEERS • ARCHITECTS • PLANNERS • SCIENTISTS • SURVEYORS • PHOTOGRAMMETRISTS

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9001 EDMONSTON ROAD, GREENBELT, MARYLAND 20770
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EXPORT PA • FAIRFAX VA • MANASSAS VA • RALEIGH NC • ROCKVILLE MD • TAMPA FL

SITE LAYOUT
SAMPLING POINTS

NCD 003 216 959

LEGEND

- GREENSBORO WATER DEPARTMENT
- CITY OF HIGH POINT WATER DEPARTMENT
- JAMESTOWN WATER DEPARTMENT

No.	REVISION	DATE	BY

ENGINEERS • ARCHITECTS • PLANNERS • SCIENTISTS • SURVEYORS • PHOTOGRAMMETRISTS

GREENHORNE & O'MARA, INC.

9001 EDMONSTON ROAD, GREENBELT, MARYLAND 20770
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ANNAPOLIS, MD • ATLANTA, GA • AURORA, CO • BALTIMORE, MD • CULPEPER, VA • DULUTH, GA • EXPORT, PA • FAIRFAX, VA • FREDRICKSBURG, VA
LEESBURG, VA • MANASSAS, VA • ORLANDO, FL • RALEIGH, NC • ROCKVILLE, MD • TAMPA, FL • WALDORF, MD • WEST PALM BEACH, FL

UNION CAMP, CORPORATION – JAMESTOWN

TOPOGRAPHIC MAP

NCD 003 216 959

SOURCE: USGS Topographic Maps; Kernersville, NC 1969, P.R.1987; Guilford, NC 1951, P.R.1968; Greensboro, NC 1951, P.R.1968; High Point West, NC 1969, P.R.1987; High Point East, NC 1950, P.R.1982; Pleasant Garden, NC 1970, P.R.1982.

DESIGN
DRAWN
CHECKED
DATE

1" = 2000' SCALE
Scale in feet: 0' 1000' 2000'
Contour Interval 10 Feet.

FIGURE 3

JOB No.
FILE No.

TABLE 2A
SUMMARY OF CHEMICAL ANALYSES FOR
UNION CAMP CORPORATION - JAMESTOWN
NCD 003216959
SAMPLE IDENTIFICATION

Physical State	Waste Characteristics*	Category	Sample Collection Information and Parameters	Background Groundwater Sample from On-Site Monitoring Well	Downgradient Groundwater Sample - South of Storage Tank	Trip Blank	Background Surface Soil Composite Near Water Tower	Downgradient Surface Soil Composite/SW of Storage Tank	Downgradient Surface Soil Sample N.E. of Main Building
			Date Collected	6/11/91	6/11/91	6/11/91	6/11/91	6/11/91	6/11/91
			Laboratory	IEA	IEA	IEA	IEA	IEA	IEA
			Well Depth (feet)	130					
			G&O Sample ID No.	UCGW01	UCGW02	UCTB01	UCSS01	UCSS02	UCSS03
			EPA Case No.	A2501	A2502	A2503	A2504	A2505	A2506
			Case No.	1041-26	1041-26	1041-26	1041-26	1041-26	1041-26
			Compounds Detected						
			VOLATILE ORGANICS						
			Matrix	Water	Water	Water	Soil	Soil	Soil
			Level	Low	Low	Low	Low	Low	Low
			% Moisture	100	100	100	13	16	11
			Concentration Units	ug/l	ug/l	ug/l	ug/kg	ug/kg	ug/kg
Gas	A,D,G,I	OCC	chloromethane						
Gas	A,D,G,I	OCC	bromomethane						
Gas	A,D,G,I	OCC	vinyl chloride						
Gas	A,D,G,I	OCC	chloroethane						
Liquid	A,D,H,I	SOL	methylene chloride						
Liquid	E,H,I,A	SOL	acetone						
Liquid	A,H,I	SOL	carbon disulfide						
Liquid	A,D,G,I	SOL	1,1-dichloroethene						
Liquid	A,D,H,G	SOL	1,1-dichloroethane						
Liquid	A,D,G	SOL	1,2-dichloroethene (total)	12					
Liquid	A,D	SOL	chloroform						
Liquid	A,D,G	SOL	1,2-dichloroethane						
Liquid	A,E,G	SOL	2-butanone (MEK)						
Liquid	A,D	SOL	1,1,1-trichloroethane						

TABLE 2A
SUMMARY OF CHEMICAL ANALYSES FOR
UNION CAMP CORPORATION - JAMESTOWN
NCD 003216959
SAMPLE IDENTIFICATION

Physical State	Waste Characteristics*	Category	Sample Collection Information and Parameters	Background Groundwater Sample from On-Site Monitoring Well	Downgradient Groundwater Sample - South of Storage Tank	Trip Blank	Background Surface Soil Composite Near Water Tower	Downgradient Surface Soil Composite/SW of Storage Tank	Downgradient Surface Soil Sample N.E. of Main Building
			VOLATILE ORGANICS (CONT.)						
Liquid	A,D	SOL	carbon tetrachloride						
Liquid	A,D,G	SOL	vinyl acetate						
Liquid	A,D	OCC	bromodichloromethane						
Liquid	A,D,G	SOL	1,2-dichloropropane						
Liquid	A,D,G	SOL	cis-1,3-dichloropropene						
Liquid	A,D,G,B	SOL	trichloroethene	14					
Liquid	A,D	OCC	dibromochloromethane						
Liquid	A,D	SOL	1,1,2-trichloroethane						
Liquid	A,G	SOL	benzene						
Liquid	A,D,G	SOL	trans-1,3-dichloropropene						
Liquid	A,D	SOL	bromoform						
Liquid	A,E,G	SOL	4-methyl-2-pentanone						
Liquid	A,E,G	SOL	2-hexanone						
Liquid	A,D	SOL	tetrachloroethene	100					
Liquid	A,G,E	SOL	toluene						
Liquid	A,D,E	SOL	1,1,2,2-tetrachloroethane						
Liquid	A,D,G	SOL	chlorobenzene						
Liquid	A,G	SOL	ethylbenzene						
Liquid	A,D,G	OCC	styrene						
Liquid	A,G	SOL	xylenes (total)						
			Tentatively Identified Compounds						
			Unknown (Total)						8JN
			C11 Hydrocarbon						9JN

TABLE 2A
SUMMARY OF CHEMICAL ANALYSES FOR
UNION CAMP CORPORATION - JAMESTOWN
NCD 003216959
SAMPLE IDENTIFICATION

Physical State	Waste Characteristics*	Category	Sample Collection Information and Parameters	Background Groundwater Sample from On-Site Monitoring Well	Downgradient Groundwater Sample - South of Storage Tank	Trip Blank	Background Surface Soil Composite Near Water Tower	Downgradient Surface Soil Composite/SW of Storage Tank	Downgradient Surface Soil Sample N.E. of Main Building
			SEMIVOLATILE ORGANICS						
			Matrix	Water	Water	NA	Soil	Soil	Soil
			Level	Low	Low	NA	Low	Low	Low
			% Moisture	100	100	NA	13	16	11
			Concentration Units	ug/l	ug/l /RE	NA	ug/kg	ug/kg	ug/kg
S,thick1	A,B,E	OCC	phenol			NA			
Liquid	A,D,B	OCC	bis(2-chloroethyl)ether			NA			
Liquid	A,D,B	OCC	2-chlorophenol			NA			
Liquid	A,D,H	SOL	1,3-dichlorobenzene			NA			
Solid	A,D,H	OCC	1,4-dichlorobenzene			NA			
Liquid	A,D,H	SOL	benzyl alcohol			NA			
Liquid	A,D,H	OCC	1,2-dichlorobenzene			NA			
Liquid	A,B	OCC	2-methylphenol			NA			
	A,D	OCC	bis(2-chloroisopropyl)ether			NA			
Liquid	A,B	OCC	4-methylphenol			NA			
	A	OCC	n-nitroso-di-n-dipropylamine			NA			
Solid	A,D	OCC	hexachloroethane			NA			
Liquid	A,D	OCC	nitrobenzene			NA			
Liquid	A,D	OCC	isophorone			NA			
Solid	A,D	OCC	2-nitrophenol			NA			
Solid	A,B	OCC	2,4-dimethylphenol			NA			
Solid	A	OCC	benzoic acid			NA			
	A,D	OCC	bis(2-chloroethoxy)methane			NA			
Liquid	A,D	OCC	2,4-dichlorophenol			NA			
Liquid	A,D	OCC	1,2,4-trichlorobenzene			NA			
Solid	A	OCC	naphthalene			NA			
Solid	A,D	OCC	4-chloroaniline			NA			

TABLE 2A
SUMMARY OF CHEMICAL ANALYSES FOR
UNION CAMP CORPORATION - JAMESTOWN
NCD 003216959
SAMPLE IDENTIFICATION

Physical State	Waste Characteristics*	Category	Sample Collection Information and Parameters	Background Groundwater Sample from On-Site Monitoring Well	Downgradient Groundwater Sample - South of Storage Tank	Trip Blank	Background Surface Soil Composite Near Water Tower	Downgradient Surface Soil Composite/SW of Storage Tank	Downgradient Surface Soil Sample N.E. of Main Building
			SEMIVOLATILE ORGANICS (CONT.)						
Liquid	A,D,B	OCC	hexachlorobutadiene			NA			
Solid	A,D	OCC	4-chloro-3-methylphenol			NA			
Liquid	A,D	OCC	2-methylnaphthalene			NA			
Liquid	A,D,B	OCC	hexachlorocyclopentadiene			NA			
Solid	A,D	OCC	2,4,6-trichlorophenol			NA			
Solid	A,D	OCC	2,4,5-trichlorophenol			NA			
Liquid	A,D	OCC	2-chloronaphthalene			NA			
Solid	A,D	OCC	2-nitroaniline			NA			
Liquid	A,D	OCC	dimethylphthalate			NA			
Solid	A,D	OCC	acenaphthylene			NA			
Solid	A,D	OCC	2,6-dinitrotoluene			NA			
Solid	A,D	OCC	3-nitroaniline			NA			
Solid	A,D	OCC	acenaphthene			NA			
Solid	A,D,G	OCC	2,4-dinitrophenol			NA			
Solid	A,D	OCC	4-nitrophenol			NA			
Solid	A,D	OCC	dibenzofuran			NA			
Solid	A,D	OCC	2,4-dinitrotoluene			NA			
Liquid	A,D	OCC	diethylphthalate	[11U]	[2J]/U	NA			
	A,D	OCC	4-chlorophenyl-Phenylether			NA			
Solid	A,D	OCC	fluorene			NA			
Solid	A,D,E	OCC	4-nitroaniline			NA			
Solid	A,D	OCC	4,6-dinitro-2-methylphenol			NA			
Solid	A,D	OCC	n-nitrosodiphenylamine			NA			
Liquid	A,D	OCC	4-bromophenyl-phenylether			NA			
Solid	A,D	OCC	hexachlorobenzene			NA			
Solid	A,D	OCC	pentachlorophenol			NA			

TABLE 2A
SUMMARY OF CHEMICAL ANALYSES FOR
UNION CAMP CORPORATION - JAMESTOWN
NCD 003216959
SAMPLE IDENTIFICATION

Physical State	Waste Characteristics*	Category	Sample Collection Information and Parameters	Background Groundwater Sample from On-Site Monitoring Well	Downgradient Groundwater Sample - South of Storage Tank	Trip Blank	Background Surface Soil Composite Near Water Tower	Downgradient Surface Soil Composite/SW of Storage Tank	Downgradient Surface Soil Sample N.E. of Main Building
			SEMIVOLATILE ORGANICS (CONT.)						
Solid	A,C	OCC	phenanthrene			NA			
Solid	A,D	OCC	anthracene			NA			
Solid	A,D	OCC	carbazole			NA			
Liquid	A,D	OCC	di-n-butylphthalate	[3J]	U/[4J]	NA	[380U]		[110J]
Solid	A,D	OCC	fluoranthene			NA			
Solid	A,D	OCC	pyrene			NA			
Liquid	A,D	OCC	butylbenzylphthalate			NA			
	A,D	OCC	3,3-dichlorobenzidine			NA			
Solid	A,D	OCC	benzo[a]anthracene			NA			
Solid	A,D	OCC	chrysene			NA			
Liquid	A,D	OCC	bis(2-ethylhexyl)phthalate			NA			
Liquid	A,D	OCC	di-n-octylphthalate			NA			
Solid	A,D	OCC	benzo[b]fluoranthene			NA			
Solid	A,D	OCC	benzo[k]fluoranthene			NA			
Solid	A,D,K,L	OCC	benzo[a]pyrene			NA			
Solid	A,D	OCC	indeno[1,2,3-cd]pyrene			NA			
Solid	A,D	OCC	dibenz[a,h]anthracene			NA			
Solid	A,D	OCC	benzo[g,h,i]perylene			NA			
			Tentatively Identified Compounds			NA			
			Unknown (Total)	51JN	240JN/24JN	NA	1350JN	1389JN	6080JN
			halogenated ketane			NA			180JN

TABLE 2A
SUMMARY OF CHEMICAL ANALYSES FOR
UNION CAMP CORPORATION - JAMESTOWN
NCD 003216959
SAMPLE IDENTIFICATION

Physical State	Waste Characteristics*	Category	Sample Collection Information and Parameters PESTICIDES/PCBs	Background Groundwater Sample from On-Site Monitoring Well	Downgradient Groundwater Sample - South of Storage Tank	Trip Blank	Background Surface Soil Composite Near Water Tower	Downgradient Surface Soil Composite/SW of Storage Tank	Downgradient Surface Soil Sample N.E. of Main Building
			Matrix	NA	NA	NA	NA	NA	NA
			Level	NA	NA	NA	NA	NA	NA
			% Moisture	NA	NA	NA	NA	NA	NA
			Concentration Units	NA	NA	NA	NA	NA	NA
Solid	A,D	PSD	alpha BHC	NA	NA	NA	NA	NA	NA
Solid	A,D	PSD	beta BHC	NA	NA	NA	NA	NA	NA
Solid	A,D	PSD	delta BHC	NA	NA	NA	NA	NA	NA
Solid	A,D	PSD	gamma BHC (Lindane)	NA	NA	NA	NA	NA	NA
Solid	A,D	PSD	Heptachlor	NA	NA	NA	NA	NA	NA
Solid	A,D	PSD	Aldrin	NA	NA	NA	NA	NA	NA
Solid	A,D	PSD	Heptachlor epoxide	NA	NA	NA	NA	NA	NA
Solid	A,D	PSD	Endosulfan I	NA	NA	NA	NA	NA	NA
Solid	A,D,E	PSD	Dieldrin	NA	NA	NA	NA	NA	NA
Solid	A,D	PSD	4,4'-DDE	NA	NA	NA	NA	NA	NA
Solid	A,D	PSD	Endrin	NA	NA	NA	NA	NA	NA
Solid	A,D	PSD	Endosulfan II	NA	NA	NA	NA	NA	NA
Solid	A,D	PSD	4,4'-DDD	NA	NA	NA	NA	NA	NA
Solid	A,D	PSD	Endosulfan sulfate	NA	NA	NA	NA	NA	NA
Solid	A,D	PSD	4,4'-DDT	NA	NA	NA	NA	NA	NA
Solid	A,D	PSD	Methoxychlor (Mariate)	NA	NA	NA	NA	NA	NA
Solid	A,D	PSD	Endrin ketone	NA	NA	NA	NA	NA	NA
Solid	A,D	PSD	alpha Chlordane	NA	NA	NA	NA	NA	NA
Solid	A,D	PSD	gamma Chlordane	NA	NA	NA	NA	NA	NA
Solid	A,D	PSD	Toxaphene	NA	NA	NA	NA	NA	NA

TABLE 2A
SUMMARY OF CHEMICAL ANALYSES FOR
UNION CAMP CORPORATION - JAMESTOWN
NCD 003216959
SAMPLE IDENTIFICATION

Physical State	Waste Characteristics*	Category	Sample Collection Information and Parameters	Background Groundwater Sample from On-Site Monitoring Well	Downgradient Groundwater Sample - South of Storage Tank	Trip Blank	Background Surface Soil Composite Near Water Tower	Downgradient Surface Soil Composite/SW of Storage Tank	Downgradient Surface Soil Sample N.E. of Main Building
			PESTICIDES/PCBS (CONT.)						
Liquid	A,D	OCC	Aroclor 1016	NA	NA	NA	NA	NA	NA
Liquid	A,D	OCC	Aroclor 1221	NA	NA	NA	NA	NA	NA
Liquid	A,D	OCC	Aroclor 1232	NA	NA	NA	NA	NA	NA
Liquid	A,D	OCC	Aroclor 1242	NA	NA	NA	NA	NA	NA
Liquid	A,D	OCC	Aroclor 1248	NA	NA	NA	NA	NA	NA
Liquid	A,D	OCC	Aroclor 1254	NA	NA	NA	NA	NA	NA
Liquid	A,D	OCC	Aroclor 1260	NA	NA	NA	NA	NA	NA

to go w/report

TABLE 2A
UNION CAMP CORPORATION - JAMESTOWN
NCD 003 216 959

INORGANICS	SOILS NATURAL RANGE (PPM)	UCSS01 (PPM)	UCSS02 (PPM)	UCSS03 (PPM)
ALUMINUM	0.7->10%	21000	17000	11000
ANTIMONY	<1-8.8	20UR	20UR	8.8UR
ARSENIC	<0.1-73	1UJ	1UJ	2UJ
BARIUM	10-1500	180J	110J	100J
BERYLLIUM	<1-7	0.31J	0.38J	0.46J
CADMIUM	0.01-0.7	0.99UJ	0.98UJ	0.84UJ
CALCIUM	0.01-20%	2800	3600	2600
CHROMIUM	1-1000	23	28	17
COBALT	<0.3-70	18	20	11
COPPER	<1-700	51	23	24
IRON	0.01->10%	23000	26000	14000
LEAD	<10-300	5.1	3.6	8.2
MAGNESIUM	0.005-5%	7200	6900	3400
MANGANESE	<2-7000	250	330	190
MERCURY	0.01-3.4	0.26U	0.28U	0.27U
NICKEL	<3-700	14	23	29
POTASSIUM	0.005-3.7%	1900	680	1400
SELENIUM	<0.1-3.9	0.24U	0.23U	1U
SILVER	0.01-5	1.1UJ	1.2UJ	1UJ
SODIUM	0.05-5%	280U	340U	290U
THALLIUM	-	0.49U	0.47U	0.48U
VANADIUM	<7-500	68	69	160
ZINC	<5-2900	44	38	58
CYANIDE	-	5.8U	5.8U	5.4U

NOTES:
1) NA - NOT ANALYZED
2) N - PRESENCE OF CONTAMINANT PRESUMED
3) J - CONCENTRATION ESTIMATED
4) U - NON-DETECT
5) B - CONTAMINANT FOUND IN ASSOCIATED BLANK

TABLE 2A
UNION CAMP CORPORATION - JAMESTOWN
NCD 003 216 959

INORGANICS	WATER NCMCL (PPB)	WATER MCL (PPB)	UCGW01 (PPB)	UCGW02 (PPB)
ALUMINUM	-	-	1300UJ	760000J
ANTIMONY	-	10/5	42UJ	210UJ
ARSENIC	50	-	1UJ	2UJ
BARIUM	1000	5000	30UJ	7400J
BERYLLIUM	-	1	1UJ	21J
CADMIUM	5	5	4UJ	20UJ
CALCIUM	-	-	74000J	230000J
CHROMIUM	50	100	5UJ	1600J
COBALT	-	-	5UJ	1300J
COPPER	1000	1300	15J	1200J
IRON	300	-	1400J	1100000J
LEAD	50	50	10J	460J
MAGNESIUM	-	-	23000J	190000J
MANGANESE	50	-	430J	63000J
MERCURY	1.1	2	0.5UJ	0.67J
NICKEL	150	100	11UJ	670J
POTASSIUM	-	-	1900UJ	7300J
SELENIUM	10	50	1UJ	6J
SILVER	50	-	5UJ	25UJ
SODIUM	-	-	21000J	34000J
THALLIUM	-	2/1	2UJ	2UJ
VANADIUM	-	-	7J	3600J
ZINC	5000	-	220J	1700J
CYANIDE	154	200	10U	10U

NOTES:

1) NA - NOT ANALYZED
2) N - PRESENCE OF CONTAMINANT PRESUMED
3) J - CONCENTRATION ESTIMATED
4) U - NON-DETECT
5) R - DATA UNUSABLE
6) B - CONTAMINANT FOUND IN THE ASSOCIATED BLANK
7) NCMCL - NORTH CAROLINA MAXIMUM CONTAMINANT LEVEL
8) MCL - FEDERAL MAXIMUM CONTAMINANT LEVEL

TABLE 2B
SUMMARY OF CHEMICAL ANALYSES FOR
UNION CAMP CORPORATION - JAMESTOWN
NCD 003216959
SAMPLE IDENTIFICATION
DATA ANALYZED BY STATE LABORATORY OF PUBLIC HEALTH

Physical State	Waste Characteristics*	Category	Sample Collection Information and Parameters	Background Sediment Sample Taken East of Site	Downgradient Sediment Sample Taken South of Site	Background Surface Water Sample Taken East of Site	Downgradient Surface Water Sample Taken South of Site
			Date Collected	6/11/91	6/11/91	6/11/91	6/11/91
			Laboratory	State Lab	State Lab	State Lab	State Lab
			G&O Sample ID No.	UCSED01	UCSED02	UCSW01	UCSW02
			State Case No.	16257	16259	16256	16258
				14938	14941	14936	14939
						14937	14940
			Compounds Detected VOLATILE ORGANICS				
			Matrix	Soil	Soil	Water	Water
			Concentration Units	ug/kg	ug/kg	ug/l	ug/l
Gas	A,D,G,I	OCC	chloromethane				
Gas	A,D,G,I	OCC	bromomethane				
Gas	A,D,G,I	OCC	vinyl chloride				
Gas	A,D,G,I	OCC	chloroethane				
Liquid	A,D,H,I	SOL	methylene chloride				
Liquid	E,H,I,A	SOL	acetone				
Liquid	A,H,I	SOL	carbon disulfide				
Liquid	A,D,G,I	SOL	1,1-dichloroethene				
Liquid	A,D,H,G	SOL	1,1-dichloroethane				
Liquid	A,D,G	SOL	1,2-dichloroethene (total)				
Liquid	A,D	SOL	chloroform				
Liquid	A,D,G	SOL	1,2-dichloroethane				
Liquid	A,E,G	SOL	2-butanone (MEK)				
Liquid	A,D	SOL	1,1,1-trichloroethane				

TABLE 2B
SUMMARY OF CHEMICAL ANALYSES FOR
UNION CAMP CORPORATION - JAMESTOWN
NCD 003216959
SAMPLE IDENTIFICATION
DATA ANALYZED BY STATE LABORATORY OF PUBLIC HEALTH

Physical State	Waste Characteristics*	Category	Sample Collection Information and Parameters	Background Sediment Sample Taken East of Site	Downgradient Sediment Sample Taken South of Site	Background Surface Water Sample Taken East of Site	Downgradient Surface Water Sample Taken South of Site
			VOLATILE ORGANICS (CONT.)				
Liquid	A,D	SOL	carbon tetrachloride				
Liquid	A,D,G	SOL	vinyl acetate				
Liquid	A,D	OCC	bromodichloromethane				
Liquid	A,D,G	SOL	1,2-dichloropropane				
Liquid	A,D,G	SOL	cis-1,3-dichloropropene				
Liquid	A,D,G,B	SOL	trichloroethene				
Liquid	A,D	OCC	dibromochloromethane				
Liquid	A,D	SOL	1,1,2-trichloroethane				
Liquid	A,G	SOL	benzene				
Liquid	A,D,G	SOL	trans-1,3-dichloropropene				
Liquid	A,D	SOL	bromoform				
Liquid	A,E,G	SOL	4-methyl-2-pentanone				
Liquid	A,E,G	SOL	2-hexanone				
Liquid	A,D	SOL	tetrachloroethene				
Liquid	A,G,E	SOL	toluene				
Liquid	A,D,E	SOL	1,1,2,2-tetrachloroethane				
Liquid	A,D,G	SOL	chlorobenzene				
Liquid	A,G	SOL	ethylbenzene				
Liquid	A,D,G	OCC	styrene				
Liquid	A,G	SOL	xylenes (total)				
			Tentatively Identified Compounds				
			Unknown (Total)				

TABLE 2B
SUMMARY OF CHEMICAL ANALYSES FOR
UNION CAMP CORPORATION - JAMESTOWN
NCD 003216959
SAMPLE IDENTIFICATION
DATA ANALYZED BY STATE LABORATORY OF PUBLIC HEALTH

State	Characteristics*	Category	Sample Collection Information and Parameters SEMIVOLATILE ORGANICS Matrix Concentration Units	Background Sediment Sample Taken East of Site	Downgradient Sediment Sample Taken South of Site	Background Surface Water Sample Taken East of Site	Downgradient Surface Water Sample Taken South of Site
S,thick1	A,B,E	OCC	phenol				
Liquid	A,D,B	OCC	bis(2-chloroethyl)ether				
Liquid	A,D,B	OCC	2-chlorophenol				
Liquid	A,D,H	SOL	1,3-dichlorobenzene				
Solid	A,D,H	OCC	1,4-dichlorobenzene				
Liquid	A,D,H	SOL	benzyl alcohol				
Liquid	A,D,H	OCC	1,2-dichlorobenzene				
Liquid	A,B	OCC	2-methylphenol				
	A,D	OCC	bis(2-chloroisopropyl)ether				
Liquid	A,B	OCC	4-methylphenol				
	A	OCC	n-nitroso-di-n-dipropylamine				
Solid	A,D	OCC	hexachloroethane				
Liquid	A,D	OCC	nitrobenzene				
Liquid	A,D	OCC	isophorone				
Solid	A,D	OCC	2-nitrophenol				
Solid	A,B	OCC	2,4-dimethylphenol			10K	
Solid	A	OCC	benzoic acid				
	A,D	OCC	bis(2-chloroethoxy)methane				
Liquid	A,D	OCC	2,4-dichlorophenol				
Liquid	A,D	OCC	1,2,4-trichlorobenzene	330K	330K	10K	
Solid	A	OCC	naphthalene				
Solid	A,D	OCC	4-chloroaniline				

TABLE 2B

SUMMARY OF CHEMICAL ANALYSES FOR

UNION CAMP CORPORATION - JAMESTOWN

NCD 003216959

SAMPLE IDENTIFICATION

DATA ANALYZED BY STATE LABORATORY OF PUBLIC HEALTH

Physical State	Waste Characteristics*	Category	Sample Collection Information and Parameters	Background Sediment Sample Taken East of Site	Downgradient Sediment Sample Taken South of Site	Background Surface Water Sample Taken East of Site	Downgradient Surface Water Sample Taken South of Site
			SEMIVOLATILE ORGANICS (CONT.)				
Liquid	A,D,B	OCC	hexachlorobutadiene				
Solid	A,D	OCC	4-chloro-3-methylphenol				
Liquid	A,D	OCC	2-methylnaphthalene				
Liquid	A,D,B	OCC	hexachlorocyclopentadiene				
Solid	A,D	OCC	2,4,6-trichlorophenol				
Solid	A,D	OCC	2,4,5-trichlorophenol				
Liquid	A,D	OCC	2-chloronaphthalene				
Solid	A,D	OCC	2-nitroaniline				
Liquid	A,D	OCC	dimethylphthalate				
Solid	A,D	OCC	acenaphthylene				
Solid	A,D	OCC	2,6-dinitrotoluene				
Solid	A,D	OCC	3-nitroaniline				
Solid	A,D	OCC	acenaphthene				
Solid	A,D,G	OCC	2,4-dinitrophenol				
Solid	A,D	OCC	4-nitrophenol				
Solid	A,D	OCC	dibenzofuran				
Solid	A,D	OCC	2,4-dinitrotoluene				
Liquid	A,D	OCC	diethylphthalate				
	A,D	OCC	4-chlorophenyl-Phenylether				
Solid	A,D	OCC	fluorene				
Solid	A,D,E	OCC	4-nitroaniline				
Solid	A,D	OCC	4,6-dinitro-2-methylphenol				
Solid	A,D	OCC	n-nitrosodiphenylamine				
Liquid	A,D	OCC	4-bromophenyl-phenylether				
Solid	A,D	OCC	hexachlorobenzene				
Solid	A,D	OCC	pentachlorophenol				

TABLE 2B
SUMMARY OF CHEMICAL ANALYSES FOR
UNION CAMP CORPORATION - JAMESTOWN
NCD 003216959
SAMPLE IDENTIFICATION
DATA ANALYZED BY STATE LABORATORY OF PUBLIC HEALTH

Physical State	Waste Characteristics*	Category	Sample Collection Information and Parameters	Background Sediment Sample Taken East of Site	Downgradient Sediment Sample Taken South of Site	Background Surface Water Sample Taken East of Site	Downgradient Surface Water Sample Taken South of Site
			SEMIVOLATILE ORGANICS (CONT.)				
Solid	A,C	OCC	phenanthrene				
Solid	A,D	OCC	anthracene				
Solid	A,D	OCC	carbazole				
Liquid	A,D	OCC	di-n-butylphthalate				
Solid	A,D	OCC	fluoranthene				
Solid	A,D	OCC	pyrene				
Liquid	A,D	OCC	butylbenzylphthalate				
	A,D	OCC	3,3-dichlorobenzidine				
Solid	A,D	OCC	benzo[a]anthracene				
Solid	A,D	OCC	chrysene				
Liquid	A,D	OCC	bis(2-ethylhexyl)phthalate				
Liquid	A,D	OCC	di-n-octylphthalate				
Solid	A,D	OCC	benzo[b]fluoranthene				
Solid	A,D	OCC	benzo[k]fluoranthene				
Solid	A,D,K,L	OCC	benzo[a]pyrene				
Solid	A,D	OCC	indeno[1,2,3-cd]pyrene				
Solid	A,D	OCC	dibenz[a,h]anthracene				
Solid	A,D	OCC	benzo[g,h,i]perylene				
			Tentatively Identified Compounds				
			Unknown (Total)				
			halogenated ketane				

TABLE 2B
SUMMARY OF CHEMICAL ANALYSES FOR
UNION CAMP CORPORATION - JAMESTOWN
NCD 003216959
SAMPLE IDENTIFICATION
DATA ANALYZED BY STATE LABORATORY OF PUBLIC HEALTH

State	Characteristics*	Category	Sample Collection Information and Parameters PESTICIDES/PCBs Matrix Concentration Units	Background Sediment Sample Taken East of Site	Downgradient Sediment Sample Taken South of Site	Background Surface Water Sample Taken East of Site	Downgradient Surface Water Sample Taken South of Site
Solid	A,D	PSD	alpha BHC				
Solid	A,D	PSD	beta BHC				
Solid	A,D	PSD	delta BHC				
Solid	A,D	PSD	gamma BHC (Lindane)				
Solid	A,D	PSD	Heptachlor				
Solid	A,D	PSD	Aldrin				
Solid	A,D	PSD	Heptachlor epoxide				
Solid	A,D	PSD	Endosulfan I				
Solid	A,D,E	PSD	Dieldrin				
Solid	A,D	PSD	4,4'-DDE				
Solid	A,D	PSD	Endrin				
Solid	A,D	PSD	Endosulfan II				
Solid	A,D	PSD	4,4'-DDD				
Solid	A,D	PSD	Endosulfan sulfate				
Solid	A,D	PSD	4,4'-DDT				
Solid	A,D	PSD	Methoxychlor (Mariate)				
Solid	A,D	PSD	Endrin ketone				
Solid	A,D	PSD	alpha Chlordane				
Solid	A,D	PSD	gamma Chlordane				
Solid	A,D	PSD	Toxaphene				

TABLE 2B

SUMMARY OF CHEMICAL ANALYSES FOR

UNION CAMP CORPORATION - JAMESTOWN

NCD 003216959

SAMPLE IDENTIFICATION

DATA ANALYZED BY STATE LABORATORY OF PUBLIC HEALTH

Physical State	Waste Characteristics*	Category	Sample Collection Information and Parameters	Background Sediment Sample Taken East of Site	Downgradient Sediment Sample Taken South of Site	Background Surface Water Sample Taken East of Site	Downgradient Surface Water Sample Taken South of Site
			PESTICIDES/PCBS (CONT.)				
Liquid	A,D	OCC	Aroclor 1016				
Liquid	A,D	OCC	Aroclor 1221				
Liquid	A,D	OCC	Aroclor 1232				
Liquid	A,D	OCC	Aroclor 1242				
Liquid	A,D	OCC	Aroclor 1248				
Liquid	A,D	OCC	Aroclor 1254			32	
Liquid	A,D	OCC	Aroclor 1260				

TABLE 2B
SUMMARY OF CHEMICAL ANALYSES FOR
UNION CAMP CORPORATION - JAMESTOWN
NCD 003216959
SAMPLE IDENTIFICATION
DATA ANALYZED BY STATE LABORATORY OF PUBLIC HEALTH

			Sample Collection Information and Parameters	Background Sediment Sample Taken East of Site	Downgradient Sediment Sample Taken South of Site	Background Surface Water Sample Taken East of Site	Downgradient Surface Water Sample Taken South of Site
			ANALYTE DETECTED				
State	Characteristics*	Category	Concentration Units	ug/kg	ug/kg	ug/l	ug/l
Solid	A,D	MES	aluminum	4.0	1.9	<0.02	<0.02
Solid	A,D	MES	antimony				
Solid	A,D	MES	arsenic				
Solid	A,D	MES	barium	32	50	0.08	0.08
Solid	A,D	MES	beryllium				
Solid	A,D	MES	cadmium	<16	<15	<0.02	<0.02
Solid	D	MES	calcium				
Solid	A,D	MES	chromium	<20	20	<0.02	<0.02
Solid	A,D	MES	cobalt				
Solid	A,D	MES	copper				
Solid	A,D	MES	iron				
Solid	A,D	MES	lead	80	60	<0.020	<0.020
Solid	A,D	MES	magnesium				
Solid	A,D	MES	manganese				
Liquid	A,D	MES	mercury	<0.07	<0.09	<0.0002	<0.0002
Solid	A,D	MES	nickel				
Solid	D	MES	potassium				
Solid	A,D	MES	selenium	<1.0	<1.0	<0.005	<0.005
Solid	A,D	MES	silver	<20	<20	<0.05	<0.05
Solid	D	MES	sodium				
Solid	A,D	MES	thallium				

TABLE 2B
SUMMARY OF CHEMICAL ANALYSES FOR
UNION CAMP CORPORATION - JAMESTOWN
NCD 003216959
SAMPLE IDENTIFICATION
DATA ANALYZED BY STATE LABORATORY OF PUBLIC HEALTH

Physical State	Waste Characteristics*	Category	Sample Collection Information and Parameters	Background Sediment Sample Taken East of Site	Downgradient Sediment Sample Taken South of Site	Background Surface Water Sample Taken East of Site	Downgradient Surface Water Sample Taken South of Site
			ANALYTE DETECTED (CONT.)				
Solid	A,D	MES	vanadium				
Solid	A,D	MES	zinc				
Solid	A	IOC	cyanide				

NA - Not Analyzed

* - Concentrations significant, considered to be a release

[] - Below CRDL

APPENDIX B
SITE INSPECTION FORM

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NC	D003216959

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Union Camp Corporation	Ragsdale Road

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Jamestown	NC	27282	Guilford	41	6

09 COORDINATES LATITUDE	LONGITUDE	10 TYPE OF OWNERSHIP (Check one)
35° 59' 30"	79° 56' 15"	☒ A PRIVATE ☐ B FEDERAL ☐ C STATE ☐ D COUNTY ☐ E MUNICIPAL ☐ F OTHER ☐ G UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
6/11/91 (MONTH DAY YEAR)	☒ ACTIVE ☐ INACTIVE	1946 (BEGINNING YEAR) / Present (ENDING YEAR) ___ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)

☐ A. EPA ☐ B. EPA CONTRACTOR _____ (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)

☐ E. STATE ☒ F. STATE CONTRACTOR Greenhorne&O'Mara (Name of firm) ☐ G. OTHER _____ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO
Billy Dixon	Environmental Scientist	G&O	(919) 782-9088

09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO
Jerry Johnson	Environmental Scientist	G&O	(919) 782-9088
Chris Huff	Environmental Scientist	G&O	(919) 782-9088
			( )
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
			( )
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT	8:00 a.m.	

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
Harvey Allen	NCDEHNR- Superfund Branch	(919) 733-2801

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Rachel Spangenberg		G&O	301-982-2800	/ / (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NC	D003216959

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

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

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

TONS unknown

CUBIC YARDS _____

NO OF DRUMS _____

03 WASTE CHARACTERISTICS (Check all that apply)

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

III. WASTE TYPE

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

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

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION

V. FEEDSTOCKS (See Appendix for CAS Numbers)

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

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

1. NCDEHNR - State File

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NC	D003216959

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ A GROUNDWATER CONTAMINATION — 02 ☒ OBSERVED (DATE 6/11/91) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED 2706 — 04 NARRATIVE DESCRIPTION

Groundwater samples collected at the site are contaminated with barium, chromium, cobalt, copper, lead, magnesium, iron, mercury, potassium, manganese, nickel, selenium, vanadium, and zinc. Barium, chromium, lead, and nickel exceeded the U.S. EPA's MCL. 2,706 people within a 4-mile radius depend on private wells for potable water.

01 ☒ B SURFACE WATER CONTAMINATION — 02 ☒ OBSERVED (DATE 6/11/91) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED 1000 — 04 NARRATIVE DESCRIPTION

Surface water samples collected by NCDEHNR were contaminated with trichloroethylene and tetrachloroethene. Approximately 1,000 people receive water from a surface water intake located approximately 1 mile south of the facility on the Deep River.

01 ☒ C CONTAMINATION OF AIR — 02 ☐ OBSERVED (DATE ____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED 64618 — 04 NARRATIVE DESCRIPTION

A release to air has not been documented. However, if a release did occur, 64,618 people within a 4-mile radius of the site could be affected.

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

N/A

01 ☒ E DIRECT CONTACT — 02 ☐ OBSERVED (DATE ____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED 798 — 04 NARRATIVE DESCRIPTION

There are 798 people that live wihtin one mile of the site facility.

01 ☐ F CONTAMINATION OF SOIL — 02 ☐ OBSERVED (DATE ____) ☐ POTENTIAL ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED 7.9 (acres) — 04 NARRATIVE DESCRIPTION

The site property is approximately 7.9 acres.

01 ☐ G DRINKING WATER CONTAMINATION — 02 ☐ OBSERVED (DATE ____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED ____ — 04 NARRATIVE DESCRIPTION

See discussion of groundwater and surface water above.

01 ☒ H WORKER EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: ____) ☐ POTENTIAL ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED unknown — 04 NARRATIVE DESCRIPTION

The site is currently active as a manufacturer of cardboard.

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

N/A

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NC	D003216959

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

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

N/A

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

N/A

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

N/A

01 ☐ M UNSTABLE CONTAINMENT OF WASTES (Spills, Runoff, Standing liquids, Leaking drums) — 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED _____ 04 NARRATIVE DESCRIPTION

Approximately ten years ago, number 6 fuel oil was reported to have spilled on the site and contaminated a nearby stream on at least 2 occassions. The first spill resulted from a broken pipe and the second spill resulted from a leaking underground storage tank. Each spill was reportedly cleaned up.

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

N/A

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

N/A

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

N/A

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

N/A

III. TOTAL POPULATION POTENTIALLY AFFECTED: 64,618 (4-mile radius)

IV. COMMENTS

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

1) NCDEHNR-State File
2) Field Notes

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NC	D003216959

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	NCD003126959	11/80		withdrew in 5/82
☐ E RCRA INTERIM STATUS	NCD003126959			small-quantity generator -
☐ F SPCC PLAN				until 1/85
☐ 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
☐ A SURFACE IMPOUNDMENT		
☐ B PILES		
☐ C DRUMS, ABOVE GROUND		
☒ D TANK, ABOVE GROUND	unknown	
☐ E TANK, BELOW GROUND		
☐ F LANDFILL		
☐ G LANDFARM		
☐ H OPEN DUMP		
☐ I. OTHER (Specify)		

04 TREATMENT (Check all that apply)

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

05 OTHER

- ☒ A BUILDINGS ON SITE

06 AREA OF SITE: 7.9 (Acres)

07 COMMENTS

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

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☐ YES ☒ NO

02 COMMENTS

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

1) G&O Field Notes
2) NCDEHNR-State File

EPA FORM 2070-13 (7-81)

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NC	D003216959

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as appropriate)	SURFACE	WELL	02 STATUS: ENDANGERED	AFFECTED	MONITORED	03 DISTANCE TO SITE
COMMUNITY	A ☒	B. ☐	A ☐	B ☐	C ☐	A _____ (mi)
NON-COMMUNITY	C ☐	D ☒	D ☐	E ☐	F ☐	B _____ (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

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

02 POPULATION SERVED BY GROUNDWATER 2,706

03 DISTANCE TO NEAREST DRINKING WATER WELL 0.5 (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
_____ (ft)	_____	_____ (ft)	_____ (gpd)	☐ YES ☒ NO

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

10 RECHARGE AREA		11 DISCHARGE AREA	
☐ YES	COMMENTS	☐ YES	COMMENTS
☐ NO		☐ NO	

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
Deep River	☐	0.3 (mi)
	☐	(mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN 4-mile radius - 64,618

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A 798 NO. OF PERSONS	B 11,216 NO. OF PERSONS	C. 33,708 NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION 0.1 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE 51

04 DISTANCE TO NEAREST OFF-SITE BUILDING 0.2 (mi)

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

The site is bordered on the north by the Southern Railroad and on the east by a chemical facility. The South side of the site is heavily wooded until it reaches the Deep River, located approximately 0.3 mile away. On the West sideis Dillon road and a Convenience Store. Approximately 0.15 mile northeast of the facility is the Jamestown Elementary School.

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NC	D003216959

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

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

02 PERMEABILITY OF BEDROCK (Check one)

☐ A IMPERMEABLE (Less than 10^{-7} cm/sec) ☐ B RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ☐ C RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH
_____ (ft)	_____ (ft)	_____

06 NET PRECIPITATION	07 ~~ONE~~ TWO YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
4 (in)	3.8 (in)	2 %	SE	2 %

09 FLOOD POTENTIAL	10
SITE IS IN _____ YEAR FLOODPLAIN	☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)	12 DISTANCE TO CRITICAL HABITAT (for endangered species)
ESTUARINE: A _____ (mi) NA; OTHER: B _____ (mi)	NA (mi); ENDANGERED SPECIES _____

13 LAND USE IN VICINITY

DISTANCE TO

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS, NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AGRICULTURAL LANDS: AG LAND
A 0.2 (mi)	B 0.2 (mi)	C unknown (mi)	D. unknown (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The site is approximately 750 feet above mean sea level. The site's slope is approximately 2 percent.

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

1) NCDEHNR-State Files
2) Soil Survey for Guilford County
3) USGS Quadrangle Maps

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NC	D003216959

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER	2	Industrial & Environmental Analysts, Inc.	7/91
SURFACE WATER	2	State Analytical Laboratory	11/91
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL	3	Industrial & Environmental Analysts,Inc.	7/91
VEGETATION			
OTHER (Sediment)	2	State Analytical Laboratory	11/91

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
Conductivity	0.666 umhos/Cm (GWØ1); 0.820 umhos/cm (GWØ2)
Water Temp.	18.3°C (GWØ1); 19.1°C (GWØ2)
depth to water	130 feet (GWØ1)

IV. PHOTOGRAPHS AND MAPS

01 TYPE ☒ GROUND ☐ AERIAL

02 IN CUSTODY OF Greenhorne & O'Mara, Inc. (Name of organization or individual)

03 MAPS ☒ YES ☐ NO

04 LOCATION OF MAPS Greenhorne & O'Mara, Inc.

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

N/A

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

1) NCDEHNR-State File
2) Field Notes (6/11/91)

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NC	D003216059

II. CURRENT OWNER(S)			PARENT COMPANY (If applicable)		
01 NAME: Union Camp Corp.		02 D+B NUMBER	08 NAME		09 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.): 1600 Valley Road		04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)		11 SIC CODE
05 CITY: Wayne	06 STATE: NJ	07 ZIP CODE: 07470	12 CITY	13 STATE	14 ZIP CODE
01 NAME		02 D+B NUMBER	08 NAME		09 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)		11 SIC CODE
05 CITY	06 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE
01 NAME		02 D+B NUMBER	08 NAME		09 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)		11 SIC CODE
05 CITY	06 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE
01 NAME		02 D+B NUMBER	08 NAME		09 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)		11 SIC CODE
05 CITY	06 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE

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

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

1) NCDEHNR-State File.

EPA FORM 2070-13 (7-81)

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NC	D003216959

II. CURRENT OPERATOR (Provide if different from owner) | **OPERATOR'S PARENT COMPANY** (If applicable)

01 NAME	02 D+B NUMBER	10 NAME	11 D+B NUMBER
Union Camp Corp.			

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
P.O. Box 759			

05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE
Jamestown	NC	27282			

08 YEARS OF OPERATION	09 NAME OF OWNER
1959-Present	Union Camp Corp.

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

01 NAME	02 D+B NUMBER	10 NAME	11 D+B NUMBER
Highland Container Company			

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
unknown			

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	02 D+B NUMBER	10 NAME	11 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

01 NAME	02 D+B NUMBER	10 NAME	11 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

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

1) NCDEHNR-State File
2) Field Notes (6/11/91)

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NC	D003216959

II. ON-SITE GENERATOR

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

III. OFF-SITE GENERATOR(S)

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

IV. TRANSPORTER(S)

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

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

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NC	D003216959

PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ C. PERMANENT WATER SUPPLY PROVIDED — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ D. SPILLED MATERIAL REMOVED — 02 DATE 1980-1981 03 AGENCY _____
04 DESCRIPTION Two spills of number 6 fuel oil reportedly spilledon the site & contaminated a nearby stream. The spills were reported to state Environmental officials & the site was reprotedly cleaned up.

01 ☐ E. CONTAMINATED SOIL REMOVED — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION
unknown

01 ☐ F. WASTE REPACKAGED — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☒ G. WASTE DISPOSED ELSEWHERE — 02 DATE 1982 03 AGENCY unknown
04 DESCRIPTION Approximately 2 gallons of oil suspected to contain PCB'S from an old Switch Box was disposed off site.

01 ☐ H. ON SITE BURIAL — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ I. IN SITU CHEMICAL TREATMENT — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ J. IN SITU BIOLOGICAL TREATMENT — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ K. IN SITU PHYSICAL TREATMENT — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ L. ENCAPSULATION — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ M. EMERGENCY WASTE TREATMENT — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ N. CUTOFF WALLS — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ O. EMERGENCY DIKING/SURFACE WATER DIVERSION — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ P. CUTOFF TRENCHES/SUMP — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ Q. SUBSURFACE CUTOFF WALL — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION
N/A

EPA

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

I. IDENTIFICATION
01 STATE NC | 02 SITE NUMBER D003216959

II. PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ S CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ T BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ U GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ V BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ W GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ X FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ Y LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ Z AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ 1 ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ 2 POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

N/A

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

1) NCDEHNR-State File.

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NC	D003216959

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☐ YES ☒ NO

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

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

1) NCDEHNR-State File

APPENDIX C
ANALYTICAL DATA

DATA ANALYZED BY NORTH CAROLINA STATE LABORATORY OF PUBLIC HEALTH

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

CERCLA

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

RECEIVED
SEP 10 1991
SUPERFUND SECTION

Site Number HID 003 216 959 Field Sample Number 162.5

Name of Site Union Camp Corp. Site Location JAMESTOWN

Collected By HARVEY ALLEN ID# 76 Date Collected 6-11-91 Time 10:00

Agency: ____ Hazardous Waste ____ Solid Waste ✓ Superfund

Sample Type

Environmental	Concentrate	Comments
____ Ground water (1)	____ Solid (5)	SED-01 (upstream) INORGAN. 250 ml
____ Surface water (2)	____ Liquid (6)	
____ Soil (3)	____ Sludge (7)	
✓ Other (4) SEDIMENT	____ Other (8)	

TCLP Compounds

Inorganic Compounds	Results(mg/l)
✓ Arsenic	<0.01
✓ Barium	0.59
✓ Cadmium	<0.08
✓ Chromium	<0.10
✓ Lead	<0.50
✓ Mercury	<0.03
✓ Selenium	<0.005
✓ Silver	<0.10

RECEIVED
SEP 25 1991
SUPERFUND SECTION

Organic Chemistry

Parameter	Results(mg/l)
____ P&T:GC/MS	
____ Acid:B/N Ext.	
____ MTBE	

Inorganic Chemistry

Parameter	Results ~~(mg/l)~~ (mg/kg)
✓ Arsenic	4.0
✓ Barium	32
✓ Cadmium	<16
____ Chloride	
✓ Chromium	<20
____ Copper	
____ Fluoride	
____ Iron	
✓ Lead	80
____ Manganese	
✓ Mercury	<0.07
____ Nitrate	
✓ Selenium	<1.0
✓ Silver	<20
____ Sulfates	
____ Zinc	
____ pH	
____ Conductivity	
____ TDS	
____ TOC	

Organic Compounds

Organic Compounds	Results(mg/l)
____ benzene	
____ carbon tetrachloride	
____ chlordane	
____ chlorobenzene	
____ chloroform	
____ o-cresol	
____ m-cresol	
____ p-cresol	
____ cresol	
____ 1,4-dichlorobenzene	
____ 1,2-dichloroethane	
____ 1,1-dichloroethylene	
____ 2,4-dinitrotoluene	
____ heptachlor	
____ hexachlorobenzene	
____ hexachlorobutadiene	
____ hexachloroethane	
____ methyl ethyl ketone	
____ nitrobenzene	
____ pentachlorophenol	
____ pyridine	
____ tetrachloroethylene	
____ trichloroethylene	
____ 2,4,5-trichlorophenol	
____ 2,4,6-trichlorophenol	
____ vinyl chloride	
____ endrin	
____ lindane	
____ methoxychlor	
____ toxaphene	
____ 2,4-D	

Radiochemistry

Parameter	Results (PCI/l)
____ Gross Alpha	
____ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Date Received ____ Reported by ____

Date Extracted ____ Date Reported ____

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

CERCLA

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, NC 27611

RECEIVED
SEP 16 1991
SUPERFUND SECTION

Site Number HID 003 216 959 Field Sample Number 162.59

Name of Site Union Camp Corp. Site Location JAMESTOWN

Collected By HARVEY ALLEN ID# 76 Date Collected 6-11-91 Time 11:10

Agency: ____ Hazardous Waste ____ Solid Waste ✓ Superfund

Sample Type

Environmental	Concentrate	Comments
____ Ground water (1)	____ Solid (5)	SED-02 (downstream)
____ Surface water (2)	____ Liquid (6)	INCREAN 250 ML
____ Soil (3)	____ Sludge (7)	
✓ Other (4) SEDIMENT	____ Other (8)	

TCLP Compounds

Inorganic Compounds	Results(mg/l)
✓ Arsenic	<0.01
✓ Barium	0.84
✓ Cadmium	<0.08
✓ Chromium	<0.10
✓ Lead	<0.50
✓ Mercury	<0.02
✓ Selenium	<0.005
✓ Silver	<0.10

RECEIVED
SEP 20 1991
SUPERFUND SECTION

Organic Chemistry

Parameter	Results(mg/l)
____ P&T:GC/MS	
____ Acid:B/N Ext.	
____ MTBE	

Inorganic Chemistry

Parameter	Results ~~(mg/l)~~ (mg/kg)
✓ Arsenic	1.9
✓ Barium	50
✓ Cadmium	<15
____ Chloride	
✓ Chromium	20
____ Copper	
____ Fluoride	
____ Iron	
✓ Lead	60
____ Manganese	
✓ Mercury	<0.09
____ Nitrate	
✓ Selenium	<1.0
✓ Silver	<20
____ Sulfates	
____ Zinc	
____ pH	
____ Conductivity	
____ TDS	
____ TOC	

Organic Compounds

Organic Compounds	Results(mg/l)
____ benzene	
____ carbon tetrachloride	
____ chlordane	
____ chlorobenzene	
____ chloroform	
____ o-cresol	
____ m-cresol	
____ p-cresol	
____ cresol	
____ 1,4-dichlorobenzene	
____ 1,2-dichloroethane	
____ 1,1-dichloroethylene	
____ 2,4-dinitrotoluene	
____ heptachlor	
____ hexachlorobenzene	
____ hexachlorobutadiene	
____ hexachloroethane	
____ methyl ethyl ketone	
____ nitrobenzene	
____ pentachlorophenol	
____ pyridine	
____ tetrachloroethylene	
____ trichloroethylene	
____ 2,4,5-trichlorophenol	
____ 2,4,6-trichlorophenol	
____ vinyl chloride	
____ endrin	
____ lindane	
____ methoxychlor	
____ toxaphene	
____ 2,4-D	
____ 2,4,5-TP (Silvex)	

Radiochemistry

Parameter	Results (PCI/l)
____ Gross Alpha	
____ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Date Received ____ Reported by ____

Date Extracted ____ Date Reported 01 OCT 1991

SOLID WASTE MANAGEMENT DIVISION
SUPERFUND SECTION

RECEIVED
CERCLA
SEP 16 1991
SUPERFUND SECTION

Chain of Custody Record

Hazardous Waste Materials

Location of Sampling: ✓ Generator ___ Transporter
___ Treatment Facility ___ Storage Facility
___ Disposal Facility ___ Landfill
___ Other: _____

Company's Name Union Camp Corp Telephone: —

Address JAMESTOWN N.C.

Collector's Name _____ Telephone: 919 733-2801
signature

Date Sampled 6-11-91 Time Sampled —

Type of Process Generating Waste _____

RECEIVED
SEP 2 5 1991
SUPERFUND SECTION

Field Information: _____

Field Sample No. 16256 16257 16258 16259 _____ _____ _____

Chain of Possession:

signature	title	inclusive dates
[illegible]	Env Engineer	6/11/91 - 6/13/91
[illegible]	[illegible] III	13 June 91

Results Reported:

signature	title	date
[illegible]	Chemist	11 Sept 91

Instructions: Complete all applicable information including signatures, and submit with analysis request forms.

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

CERCLA

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

RECEIVED
SEP 10 1991
SUPERFUND SECTION

Site Number HID 003 216 959 Field Sample Number 16255

Name of Site Union Camp Corp. Site Location JAMESTOWN

Collected By HARVEY ALLEN ID# 76 Date Collected 6-11-91 Time 10:00

Agency: ___ Hazardous Waste ___ Solid Waste ✓ Superfund

Sample Type

Environmental	Concentrate	Comments
___ Ground water (1)	___ Solid (5)	SED-01 (upstream)
___ Surface water (2)	___ Liquid (6)	INORGAN. 250 ml
___ Soil (3)	___ Sludge (7)	
✓ Other (4) SEDIMENT	___ Other (8)	

TCLP Compounds

Inorganic Compounds	Results(mg/l)
✓ Arsenic	<0.01
✓ Barium	0.59
✓ Cadmium	<0.08
✓ Chromium	<0.10
✓ Lead	<0.50
✓ Mercury	<0.02
✓ Selenium	<0.005
✓ Silver	<0.10

Organic Chemistry

Parameter	Results(mg/l)
___ P&T:GC/MS	
___ Acid:B/N Ext.	
___ MTBE	

Radiochemistry

Parameter	Results (PCI/l)
___ Gross Alpha	
___ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Inorganic Chemistry

Parameter	Results ~~(mg/l)~~ (mg/kg)
✓ Arsenic	4.0
✓ Barium	32
✓ Cadmium	<16
___ Chloride	
✓ Chromium	<20
___ Copper	
___ Fluoride	
___ Iron	
✓ Lead	80
___ Manganese	
✓ Mercury	<0.07
___ Nitrate	
✓ Selenium	<1.0
✓ Silver	<20
___ Sulfates	
___ Zinc	
___ pH	
___ Conductivity	
___ TDS	
___ TOC	

Organic Compounds	Results(mg/l)
___ benzene	
___ carbon tetrachloride	
___ chlordane	
___ chlorobenzene	
___ chloroform	
___ o-cresol	
___ m-cresol	
___ p-cresol	
___ cresol	
___ 1,4-dichlorobenzene	
___ 1,2-dichloroethane	
___ 1,1-dichloroethylene	
___ 2,4-dinitrotoluene	
___ heptachlor	
___ hexachlorobenzene	
___ hexachlorobutadiene	
___ hexachloroethane	
___ methyl ethyl ketone	
___ nitrobenzene	
___ pentachlorophenol	
___ pyridine	
___ tetrachloroethylene	
___ trichloroethylene	
___ 2,4,5-trichlorophenol	
___ 2,4,6-trichlorophenol	
___ vinyl chloride	
___ endrin	
___ lindane	
___ methoxychlor	
___ toxaphene	
___ 2,4-D	
___ 2,4,5-TP (Silvex)	

Date Received ___ Reported by ___

Date Extracted ___ Date Reported ___

012062 JUN 1991

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

CERCLA

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, N.C. 27611

RECEIVED
SEP 16 1991
SUPERFUND SECTION

Site Number HID 003 216 959 Field Sample Number 162.59

Name of Site Union Camp Corp. Site Location JAMESTOWN

Collected By HARVEY ALLEN ID# 76 Date Collected 6-11-91 Time 11:10

Agency: ____ Hazardous Waste ____ Solid Waste ✓ Superfund

Sample Type

Environmental	Concentrate	Comments
___ Ground water (1)	___ Solid (5)	SED-02 (downstream)
___ Surface water (2)	___ Liquid (6)	INCREAK 250 ML
___ Soil (3)	___ Sludge (7)	
✓ Other (4) SEDIMENT	___ Other (8)	

TCLP Compounds

Inorganic Compounds	Results(mg/l)
✓ Arsenic	<0.01
✓ Barium	0.84
✓ Cadmium	<0.08
✓ Chromium	<0.10
✓ Lead	<0.50
✓ Mercury	<0.02
✓ Selenium	<0.005
✓ Silver	<0.10

Organic Chemistry

Parameter	Results(mg/l)
___ P&T:GC/MS	
___ Acid:B/N Ext.	
___ MTBE	

Radiochemistry

Parameter	Results (PCI/l)
___ Gross Alpha	
___ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Inorganic Chemistry

Parameter	Results ~~(mg/l)~~ (mg/kg)
✓ Arsenic	1.9
✓ Barium	50
✓ Cadmium	<15
___ Chloride	
✓ Chromium	20
___ Copper	
___ Fluoride	
___ Iron	
✓ Lead	60
___ Manganese	
✓ Mercury	<0.09
___ Nitrate	
✓ Selenium	<1.0
✓ Silver	<20
___ Sulfates	
___ Zinc	
___ pH	
___ Conductivity	
___ TDS	
___ TOC	

Organic Compounds	Results(mg/l)
___ benzene	
___ carbon tetrachloride	
___ chlordane	
___ chlorobenzene	
___ chloroform	
___ o-cresol	
___ m-cresol	
___ p-cresol	
___ cresol	
___ 1,4-dichlorobenzene	
___ 1,2-dichloroethane	
___ 1,1-dichloroethylene	
___ 2,4-dinitrotoluene	
___ heptachlor	
___ hexachlorobenzene	
___ hexachlorobutadiene	
___ hexachloroethane	
___ methyl ethyl ketone	
___ nitrobenzene	
___ pentachlorophenol	
___ pyridine	
___ tetrachloroethylene	
___ trichloroethylene	
___ 2,4,5-trichlorophenol	
___ 2,4,6-trichlorophenol	
___ vinyl chloride	
___ endrin	
___ lindane	
___ methoxychlor	
___ toxaphene	
___ 2,4-D	
___ 2,4,5-TP (Silvex)	

Date Received ____ Reported by ____

Date Extracted ____ Date Reported ____

012053 JUL 1991

SOLID WASTE MANAGEMENT DIVISION
SUPERFUND SECTION

RECEIVED
CERCLA
SEP 16 1991
SUPERFUND SECTION

Chain of Custody Record

Hazardous Waste Materials

Location of Sampling: ✓ Generator ___ Transporter
___ Treatment Facility ___ Storage Facility
___ Disposal Facility ___ Landfill
___ Other: _____

Company's Name Union Camp Comp. Telephone: —

Address JAMESTOWN NC.

Collector's Name _____ Telephone: 919 733-2801
signature

Date Sampled 6-11-91 Time Sampled —

Type of Process Generating Waste _____

Field Information: _____

Field Sample No. 16256 16257 16258 16259

Chain of Possession:

signature	title	inclusive dates
Harvey H. Walker	Env Engineer	6/11/91 - 6/13/91
Joyce Davis	Chem Tech III	13 June 91

Results Reported:

signature	title	date
H.O. Walker	Chemist	11 Sept 91

Instructions: Complete all applicable information including signatures, and submit with analysis request forms.

CERCLA

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

CERCLA

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number HID 003 216 959 Field Sample Number 162556

Name of Site Union Camp Corp. Site Location JAMESTOWN, NC

Collected By HARVEY ALLEN ID# 76 Date Collected 6-11-91 Time 10:00

Agency: ___ Hazardous Waste ___ Solid Waste ✓ Superfund

Sample Type

Environmental	Concentrate	Comments
___ Ground water (1)	___ Solid (5)	SW-01 (upstream)
✓ Surface water (2)	___ Liquid (6)	Cubes
___ Soil (3)	___ Sludge (7)	
___ Other (4)	___ Other (8)	

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TCLP Compounds

Inorganic Compounds	Results(mg/l)
Arsenic	
Barium	
Cadmium	
Chromium	
Lead	
Mercury	
Selenium	
Silver	

Organic Chemistry

Parameter	Results(mg/l)
P&T:GC/MS	
Acid:B/N Ext.	
MTBE	

Inorganic Chemistry

Parameter	Results(mg/l)(mg/kg)
✓ Arsenic	<0.02
✓ Barium	0.08
✓ Cadmium	<0.02
Chloride	
✓ Chromium	<0.02
Copper	
Fluoride	
Iron	
✓ Lead	<0.020
Manganese	
✓ Mercury	<0.0002
Nitrate	
✓ Selenium	<0.005
✓ Silver	<0.05
Sulfates	
Zinc	
pH	
Conductivity	
TDS	
TOC	

Organic Compounds

Organic Compounds	Results(mg/l)
benzene	
carbon tetrachloride	
chlordane	
chlorobenzene	
chloroform	
o-cresol	
m-cresol	
p-cresol	
cresol	
1,4-dichlorobenzene	
1,2-dichloroethane	
1,1-dichloroethylene	
2,4-dinitrotoluene	
heptachlor	
hexachlorobenzene	
hexachlorobutadiene	
hexachloroethane	
methyl ethyl ketone	
nitrobenzene	
pentachlorophenol	
pyridine	
tetrachloroethylene	
trichloroethylene	
2,4,5-trichlorophenol	
2,4,6-trichlorophenol	
vinyl chloride	
endrin	
lindane	
methoxychlor	
toxaphene	
2,4-D	
2,4,5-TP (Silvex)	

Radiochemistry

Parameter	Results (PCI/l)
Gross Alpha	
Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Date Received ___ Reported by [illegible]

Date Extracted ___ Date Reported 25-Jy 91

012060 JUL 1 91

Date Analyzed ___ Lab Number ___

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

CERCLA

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number HID 003 216 959 Field Sample Number 16258

Name of Site Union Camp Corp. Site Location JAMESTOWN, NC

Collected By HARVEY ALLEN ID# 76 Date Collected 6-11-91 Time 11:10

Agency: ____ Hazardous Waste ____ Solid Waste ✓ Superfund

Sample Type

Environmental	Concentrate	Comments
___ Ground water (1)	___ Solid (5)	SW-02 (downstream)
✓ Surface water (2)	___ Liquid (6)	Cubes
___ Soil (3)	___ Sludge (7)	
___ Other (4)	___ Other (8)	

RECEIVED JUL 10 1991 SUPERFUND SECTION

Organic Chemistry

Parameter	Results(mg/l)
___ P&T:GC/MS	
___ Acid:B/N Ext.	
___ MTBE	

Radiochemistry

Parameter	Results (PCi/l)
___ Gross Alpha	
___ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Inorganic Chemistry

Parameter	Results(mg/l)(mg/kg)
✓ Arsenic	<0.02
✓ Barium	0.08
✓ Cadmium	<0.02
___ Chloride	
✓ Chromium	<0.02
___ Copper	
___ Fluoride	
___ Iron	
✓ Lead	<0.020
___ Manganese	
✓ Mercury	<0.0002
___ Nitrate	
✓ Selenium	<0.005
✓ Silver	<0.05
___ Sulfates	
___ Zinc	
___ pH	
___ Conductivity	
___ TDS	
___ TOC	

TCLP Compounds

Inorganic Compounds	Results(mg/l)
___ Arsenic	
___ Barium	
___ Cadmium	
___ Chromium	
___ Lead	
___ Mercury	
___ Selenium	
___ Silver	

Organic Compounds	Results(mg/l)
___ benzene	
___ carbon tetrachloride	
___ chlordane	
___ chlorobenzene	
___ chloroform	
___ o-cresol	
___ m-cresol	
___ p-cresol	
___ cresol	
___ 1,4-dichlorobenzene	
___ 1,2-dichloroethane	
___ 1,1-dichloroethylene	
___ 2,4-dinitrotoluene	
___ heptachlor	
___ hexachlorobenzene	
___ hexachlorobutadiene	
___ hexachloroethane	
___ methyl ethyl ketone	
___ nitrobenzene	
___ pentachlorophenol	
___ pyridine	
___ tetrachloroethylene	
___ trichloroethylene	
___ 2,4,5-trichlorophenol	
___ 2,4,6-trichlorophenol	
___ vinyl chloride	
___ endrin	
___ lindane	
___ methoxychlor	
___ toxaphene	
___ 2,4-D	
___ 2,4,5-TP (Silvex)	

Date Received ____ Reported by ____

Date Extracted ____ Date Reported ____

Date Analyzed ____ Lab Number 012051 JUN 1991

DHS 3101 (Rev. 4/90)

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

CERCLA

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number HID 003 216 959 Field Sample Number 14936

Name of Site [redacted] Site Location JAMESTOWN, NC

Collected By HARVEY ALLEN ID# 76 Date Collected 6-11-91 Time 10:00

Agency: ___ Hazardous Waste ___ Solid Waste ✓ Superfund

Sample Type

Environmental	Concentrate	Comments
___ Ground water (1)	___ Solid (5)	SW-01 (upstream)
✓ Surface water (2)	___ Liquid (6)	VOA
___ Soil (3)	___ Sludge (7)	
___ Other (4)	___ Other (8)	

Organic Chemistry

Parameter	Results(mg/l)
✓ P&T:GC/MS	
___ Acid:B/N Ext.	
___ MTBE	

Radiochemistry

Parameter	Results (PCi/l)
___ Gross Alpha	
___ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Inorganic Chemistry

Parameter	Results(mg/l)(mg/kg)
___ Arsenic	
___ Barium	
___ Cadmium	
___ Chloride	
___ Chromium	
___ Copper	
___ Fluoride	
___ Iron	
___ Lead	
___ Manganese	
___ Mercury	
___ Nitrate	
___ Selenium	
___ Silver	
___ Sulfates	
___ Zinc	
___ pH	
___ Conductivity	
___ TDS	
___ TOC	

TCLP Compounds

Inorganic Compounds	Results(mg/l)
___ Arsenic	
___ Barium	
___ Cadmium	
___ Chromium	
___ Lead	
___ Mercury	
___ Selenium	
___ Silver	

Organic Compounds	Results(mg/l)
___ benzene	
___ carbon tetrachloride	
___ chlordane	
___ chlorobenzene	
___ chloroform	
___ o-cresol	
___ m-cresol	
___ p-cresol	
___ cresol	
___ 1,4-dichlorobenzene	
___ 1,2-dichloroethane	
___ 1,1-dichloroethylene	
___ 2,4-dinitrotoluene	
___ heptachlor	
___ hexachlorobenzene	
___ hexachlorobutadiene	
___ hexachloroethane	
___ methyl ethyl ketone	
___ nitrobenzene	
___ pentachlorophenol	
___ pyridine	
___ tetrachloroethylene	
___ trichloroethylene	
___ 2,4,5-trichlorophenol	
___ 2,4,6-trichlorophenol	
___ vinyl chloride	
___ endrin	
___ lindane	
___ methoxychlor	
___ toxaphene	
___ 2,4-D	
___ 2,4,5-TP (Silvex)	

Date Received 6-13-91 Reported by John L. Neal

Date Extracted ___ Date Reported 8-19-91

Date Analyzed 8-14-91 Lab Number 912239

DHS 3191 (Revised 2/91)

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

CERCLA

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number HID 003 216 959 Field Sample Number 14937

Name of Site Union Camp Corp. Site Location JAMESTOWN, NC

Collected By HARVEY ALLEN ID# 76 Date Collected 6-11-91 Time 10:00

Agency: ____ Hazardous Waste ____ Solid Waste ✓ Superfund

Sample Type

Environmental	Concentrate	Comments
____ Ground water (1)	____ Solid (5)	SW-01 (upstream)
✓ Surface water (2)	____ Liquid (6)	2-L BNA's
____ Soil (3)	____ Sludge (7)	
____ Other (4)	____ Other (8)	

Organic Chemistry

Parameter	Results(mg/l)
____ P&T:GC/MS	
✓ Acid:B/N Ext.	
____ MTBE	

Radiochemistry

Parameter	Results (PCI/l)
____ Gross Alpha	
____ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Inorganic Chemistry

Parameter	Results(mg/l)(mg/kg)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chloride	
____ Chromium	
____ Copper	
____ Fluoride	
____ Iron	
____ Lead	
____ Manganese	
____ Mercury	
____ Nitrate	
____ Selenium	
____ Silver	
____ Sulfates	
____ Zinc	
____ pH	
____ Conductivity	
____ TDS	
____ TOC	

TCLP Compounds

Inorganic Compounds	Results(mg/l)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chromium	
____ Lead	
____ Mercury	
____ Selenium	
____ Silver	

Organic Compounds	Results(mg/l)
____ benzene	
____ carbon tetrachloride	
____ chlordane	
____ chlorobenzene	
____ chloroform	
____ o-cresol	
____ m-cresol	
____ p-cresol	
____ cresol	
____ 1,4-dichlorobenzene	
____ 1,2-dichloroethane	
____ 1,1-dichloroethylene	
____ 2,4-dinitrotoluene	
____ heptachlor	
____ hexachlorobenzene	
____ hexachlorobutadiene	
____ hexachloroethane	
____ methyl ethyl ketone	
____ nitrobenzene	
____ pentachlorophenol	
____ pyridine	
____ tetrachloroethylene	
____ trichloroethylene	
____ 2,4,5-trichlorophenol	
____ 2,4,6-trichlorophenol	
____ vinyl chloride	
____ endrin	
____ lindane	
____ methoxychlor	
____ toxaphene	
____ 2,4-D	
____ 2,4,5-TP (Silvex)	

Date Received 6-13-91 Reported by

Date Extracted 7-2-91 AA, WG Date Reported

Date Analyzed BNA 8-5-91 BD Lab Number 912240

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

CERCLA

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number HID 003 216 959 Field Sample Number 14938

Name of Site Union Camp Corp. Site Location JAMESTOWN, NC

Collected By HARVEY ALLEN ID# 76 Date Collected 6-11-91 Time 10:00

Agency: ____ Hazardous Waste ____ Solid Waste ✓ Superfund

Sample Type

Environmental	Concentrate	Comments
____ Ground water (1)	____ Solid (5)	SED-01 (upstream)
____ Surface water (2)	____ Liquid (6)	VOA/BNA's
____ Soil (3)	____ Sludge (7)	
✓ Other (4) SEDIMENT	____ Other (8)	

Organic Chemistry

Parameter	Results(mg/l)
✓ P&T:GC/MS	
✓ Acid:B/N Ext.	
____ MTBE	

Radiochemistry

Parameter	Results (PCi/l)
____ Gross Alpha	
____ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Inorganic Chemistry

Parameter	Results(mg/l)(mg/kg)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chloride	
____ Chromium	
____ Copper	
____ Fluoride	
____ Iron	
____ Lead	
____ Manganese	
____ Mercury	
____ Nitrate	
____ Selenium	
____ Silver	
____ Sulfates	
____ Zinc	
____ pH	
____ Conductivity	
____ TDS	
____ TOC	

TCLP Compounds

Inorganic Compounds	Results(mg/l)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chromium	
____ Lead	
____ Mercury	
____ Selenium	
____ Silver	

Organic Compounds	Results(mg/l)
____ benzene	
____ carbon tetrachloride	
____ chlordane	
____ chlorobenzene	
____ chloroform	
____ o-cresol	
____ m-cresol	
____ p-cresol	
____ cresol	
____ 1,4-dichlorobenzene	
____ 1,2-dichloroethane	
____ 1,1-dichloroethylene	
____ 2,4-dinitrotoluene	
____ heptachlor	
____ hexachlorobenzene	
____ hexachlorobutadiene	
____ hexachloroethane	
____ methyl ethyl ketone	
____ nitrobenzene	
____ pentachlorophenol	
____ pyridine	
____ tetrachloroethylene	
____ trichloroethylene	
____ 2,4,5-trichlorophenol	
____ 2,4,6-trichlorophenol	
____ vinyl chloride	
____ endrin	
____ lindane	
____ methoxychlor	
____ toxaphene	
____ 2,4-D	
____ 2,4,5-TP (Silvex)	

Date Received 6-13-91 Reported by

Date Extracted 7-16-91 AA Date Reported

Date Analyzed BNA 8-6-91 PT 8-14-91 Lab Number 912241

DHS 3191 (Revised 2/91)

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

CERCLA

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number 41D 003 216 959 Field Sample Number 14939

Name of Site Union Camp Corp. Site Location JAMESTOWN, NC

Collected By HARVEY ALLEN ID# 76 Date Collected 6-11-91 Time 11:10

Agency: ___ Hazardous Waste ___ Solid Waste ✓ Superfund

Sample Type

Environmental	Concentrate	Comments
___ Ground water (1)	___ Solid (5)	SW-02 (downstream)
✓ Surface water (2)	___ Liquid (6)	VOA
___ Soil (3)	___ Sludge (7)	
___ Other (4)	___ Other (8)	

Organic Chemistry

Parameter	Results(mg/l)
✓ P&T:GC/MS	
___ Acid:B/N Ext.	
___ MTBE	

Radiochemistry

Parameter	Results (PCI/l)
___ Gross Alpha	
___ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Inorganic Chemistry

Parameter	Results(mg/l)(mg/kg)
___ Arsenic	
___ Barium	
___ Cadmium	
___ Chloride	
___ Chromium	
___ Copper	
___ Fluoride	
___ Iron	
___ Lead	
___ Manganese	
___ Mercury	
___ Nitrate	
___ Selenium	
___ Silver	
___ Sulfates	
___ Zinc	
___ pH	
___ Conductivity	
___ TDS	
___ TOC	

TCLP Compounds

Inorganic Compounds	Results(mg/l)
___ Arsenic	
___ Barium	
___ Cadmium	
___ Chromium	
___ Lead	
___ Mercury	
___ Selenium	
___ Silver	

Organic Compounds	Results(mg/l)
___ benzene	
___ carbon tetrachloride	
___ chlordane	
___ chlorobenzene	
___ chloroform	
___ o-cresol	
___ m-cresol	
___ p-cresol	
___ cresol	
___ 1,4-dichlorobenzene	
___ 1,2-dichloroethane	
___ 1,1-dichloroethylene	
___ 2,4-dinitrotoluene	
___ heptachlor	
___ hexachlorobenzene	
___ hexachlorobutadiene	
___ hexachloroethane	
___ methyl ethyl ketone	
___ nitrobenzene	
___ pentachlorophenol	
___ pyridine	
___ tetrachloroethylene	
___ trichloroethylene	
___ 2,4,5-trichlorophenol	
___ 2,4,6-trichlorophenol	
___ vinyl chloride	
___ endrin	
___ lindane	
___ methoxychlor	
___ toxaphene	
___ 2,4-D	
___ 2,4,5-TP (Silvex)	

Date Received 6-13-91 NB Reported by

Date Extracted Date Reported

Date Analyzed 8-14-91 Lab Number 912242

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

CERCLA

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number HID 003 216 959 Field Sample Number 14940

Name of Site Union Camp Corp. Site Location JAMESTOWN, NC

Collected By HARVEY ALLEN ID# 76 Date Collected 6-11-91 Time 11:10

Agency: ____ Hazardous Waste ____ Solid Waste ✓ Superfund

Sample Type

Environmental	Concentrate	Comments
___ Ground water (1)	___ Solid (5)	SW-02 (downstream)
✓ Surface water (2)	___ Liquid (6)	2-L BNA's
___ Soil (3)	___ Sludge (7)	
___ Other (4)	___ Other (8)	

TCLP Compounds

Inorganic Compounds	Results(mg/l)
___ Arsenic	
___ Barium	
___ Cadmium	
___ Chromium	
___ Lead	
___ Mercury	
___ Selenium	
___ Silver	

Organic Chemistry

Parameter	Results(mg/l)
___ P&T:GC/MS	
✓ Acid:B/N Ext.	
___ MTBE	

Radiochemistry

Parameter	Results (PCI/l)
___ Gross Alpha	
___ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Inorganic Chemistry

Parameter	Results(mg/l)(mg/kg)
___ Arsenic	
___ Barium	
___ Cadmium	
___ Chloride	
___ Chromium	
___ Copper	
___ Fluoride	
___ Iron	
___ Lead	
___ Manganese	
___ Mercury	
___ Nitrate	
___ Selenium	
___ Silver	
___ Sulfates	
___ Zinc	
___ pH	
___ Conductivity	
___ TDS	
___ TOC	

Organic Compounds	Results(mg/l)
___ benzene	
___ carbon tetrachloride	
___ chlordane	
___ chlorobenzene	
___ chloroform	
___ o-cresol	
___ m-cresol	
___ p-cresol	
___ cresol	
___ 1,4-dichlorobenzene	
___ 1,2-dichloroethane	
___ 1,1-dichloroethylene	
___ 2,4-dinitrotoluene	
___ heptachlor	
___ hexachlorobenzene	
___ hexachlorobutadiene	
___ hexachloroethane	
___ methyl ethyl ketone	
___ nitrobenzene	
___ pentachlorophenol	
___ pyridine	
___ tetrachloroethylene	
___ trichloroethylene	
___ 2,4,5-trichlorophenol	
___ 2,4,6-trichlorophenol	
___ vinyl chloride	
___ endrin	
___ lindane	
___ methoxychlor	
___ toxaphene	
___ 2,4-D	
___ 2,4,5-TP (Silvex)	

Date Received 6-13-91 Reported by ____

Date Extracted 7-2-91 AA, WG Date Reported ____

Date Analyzed 8-5-91 BD Lab Number 912243

DHS 3101 (Revised 2/91)

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

CERCLA

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number HID 003 216 959 Field Sample Number 14941

Name of Site Union Camp Corp. Site Location JAMESTOWN, NC

Collected By HARVEY ALLEN ID# 76 Date Collected 6-11-91 Time 11:10

Agency: ____ Hazardous Waste ____ Solid Waste ✓ Superfund

Sample Type

Environmental	Concentrate	Comments
___ Ground water (1)	___ Solid (5)	SED-02 (downstream)
___ Surface water (2)	___ Liquid (6)	VOA/BNA's
___ Soil (3)	___ Sludge (7)	
✓ Other (4) SEDIMENT	___ Other (8)	

TCLP Compounds

Inorganic Compounds	Results(mg/l)
___ Arsenic	
___ Barium	
___ Cadmium	
___ Chromium	
___ Lead	
___ Mercury	
___ Selenium	
___ Silver	

Organic Chemistry

Parameter	Results(mg/l)
✓ P&T:GC/MS	
✓ Acid:B/N Ext.	
___ MTBE	

Radiochemistry

Parameter	Results (PCI/l)
___ Gross Alpha	
___ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Inorganic Chemistry

Parameter	Results(mg/l)(mg/kg)
___ Arsenic	
___ Barium	
___ Cadmium	
___ Chloride	
___ Chromium	
___ Copper	
___ Fluoride	
___ Iron	
___ Lead	
___ Manganese	
___ Mercury	
___ Nitrate	
___ Selenium	
___ Silver	
___ Sulfates	
___ Zinc	
___ pH	
___ Conductivity	
___ TDS	
___ TOC	

Organic Compounds

Organic Compounds	Results(mg/l)
___ benzene	
___ carbon tetrachloride	
___ chlordane	
___ chlorobenzene	
___ chloroform	
___ o-cresol	
___ m-cresol	
___ p-cresol	
___ cresol	
___ 1,4-dichlorobenzene	
___ 1,2-dichloroethane	
___ 1,1-dichloroethylene	
___ 2,4-dinitrotoluene	
___ heptachlor	
___ hexachlorobenzene	
___ hexachlorobutadiene	
___ hexachloroethane	
___ methyl ethyl ketone	
___ nitrobenzene	
___ pentachlorophenol	
___ pyridine	
___ tetrachloroethylene	
___ trichloroethylene	
___ 2,4,5-trichlorophenol	
___ 2,4,6-trichlorophenol	
___ vinyl chloride	
___ endrin	
___ lindane	
___ methoxychlor	
___ toxaphene	
___ 2,4-D	
___ 2,4,5-TP (Silvex)	

Date Received 6-13-91 Reported by

Date Extracted 7-16-91 AA Date Reported

Date Analyzed BNA 8-6-91 PT 8-14-91 Lab Number 912244

DHS 3191 (Revised 2/91)

SOLID WASTE MANAGEMENT DIVISION
SUPERFUND SECTION

CERCLA

Chain of Custody Record

Hazardous Waste Materials

Location of Sampling: ✓ Generator ___ Transporter
___ Treatment Facility ___ Storage Facility
___ Disposal Facility ___ Landfill
___ Other: _____

Company's Name Union Camp Corp Telephone: _____

Address JAMESTOWN, NC

Collector's Name _____ Telephone: 919 733-2801
signature

Date Sampled 6-11-91 Time Sampled —

Type of Process Generating Waste _____

Field Information: _____

Field Sample No. 14936 14937 14938 14939 14940 14941 _____

Chain of Possession:

signature	title	inclusive dates
[illegible]	Env Engineer	6/11/91 - 6/13/91
William C Glenn Jr	Chemistry Tech.	6-13-91

Results Reported:

signature	title	date
John L. Neal	Chemist	8-19-91

Instructions: Complete all applicable information including signatures, and submit with analysis request forms.

STATE LABORATORY OF PUBLIC HEALTH
DIVISION OF HEALTH SERVICES, N.C. DEPARTMENT OF HUMAN RESOURCES
P.O. BOX 28047 - 306 N. WILMINGTON, ST., RALEIGH, N.C. 27611

ORGANIC CHEMICAL ANALYSIS

BASE/NEUTRAL AND ACID EXTRACTABLES	LAB NO	912240	912241	912243	912244		
	FIELD #	14937	14938	14940	14941		
COMPOUND	TYPE	(2)	(4)	(2)	(4)	( )	( )
	UNITS	µg/l ~~µg/kg~~	~~µg/l~~ µg/kg	µg/l ~~µg/kg~~	~~µg/l~~ µg/kg	µg/l µg/kg	µg/l µg/kg
-nitrosodimethylamine	10/330	U	U	U	U		
(2-chloroethyl)ether	↓	↓	↓	↓	↓		
lorophenol	↓	↓	↓	↓	↓		
enol	↓	↓	↓	↓	↓		
3-dichlorobenzene	↓	↓	↓	↓	↓		
dichlorobenzene	↓	↓	↓	↓	↓		
-dichlorobenzene	↓	↓	↓	↓	↓		
s(2-chloroisopropyl)ether	↓	↓	↓	↓	↓		
chloroethane	↓	↓	↓	↓	↓		
troso-di-n-propylamine	↓	↓	↓	↓	↓		
trobenzene	↓	↓	↓	↓	↓		
horone	↓	↓	↓	↓	↓		
trophenol	↓	↓	↓	↓	↓		
4-dimethylphenol	↓	10K	↓	↓	↓		
s(2-chloroethoxy)methane	↓	U	↓	↓	↓		
dichlorophenol	↓	U	↓	↓	↓		
4-trichlorobenzene	↓	10K	330K	↓	330K		
phthalene	↓	U	U	↓	U		
chlorobutadiene	↓	↓	↓	↓	↓		
loro-m-cresol	↓	↓	↓	↓	↓		
exachlorocyclopentadiene	↓	↓	↓	↓	↓		
richlorophenol	↓	↓	↓	↓	↓		
loronaphthalene	↓	↓	↓	↓	↓		
cenaphthylene	↓	↓	↓	↓	↓		
imethyl phthalate	↓	↓	↓	↓	↓		
-dinitrotoluene	↓	↓	↓	↓	↓		
cenaphthene	↓	↓	↓	↓	↓		
,4-dinitrophenol	50/1650	↓	↓	↓	↓		
-dinitrotoluene	10/330	↓	↓	↓	↓		
itrophenol	50/1650	↓	↓	↓	↓		
luorene	10/330	↓	↓	↓	↓		
hlorophenylphenylether	↓	↓	↓	↓	↓		
thyl phthalate	↓	↓	↓	↓	↓		
,6-dinitro-o-cresol	50/1650	↓	↓	↓	↓		
iphenylamine	↓	↓	↓	↓	↓		
benzene	↓	↓	↓	↓	↓		
romophenylphenylether	10/330	↓	↓	↓	↓		
exachlorobenzene	10/330	↓	↓	↓	↓		
tachlorophenol	50/1650	↓	↓	↓	↓		
nanthrene	10/330	↓	↓	↓	↓		
nthracene	↓	↓	↓	↓	↓		
utyl phthalate	↓	↓	↓	↓	↓		
oranthene	↓	↓	↓	↓	↓		

MDL
H_2O/SOIL

- Estimated value.
- Actual value is known to be less than value given.
- Actual value is known to be greater than value given.
- Material was analyzed for but not detected. The number is the Minimum Detection Limit. MDL
- Not analyzed.
- Tentative identification.
- On NRDC List of Priority Pollutants.

f. Division of Health Services
S 3068-0 (4/86 Laboratory)

STATE LABORATORY OF PUBLIC HEALTH
DIVISION OF HEALTH SERVICES, N.C. DEPARTMENT OF HUMAN RESOURCES
P.O. BOX 28047 - 306 N. WILMINGTON, ST., RALEIGH, N.C. 27611

ORGANIC CHEMICAL ANALYSIS

BASE/NEUTRAL AND ACID EXTRACTABLES	LAB NO	912240	912241	912243	912244		
	FIELD #	14937	14938	14940	14941		
COMPOUND	TYPE	(2)	(4)	(2)	(4)	( )	( )
	UNITS	µg/l ~~µg/kg~~	~~µg/l~~ µg/kg	µg/l ~~µg/kg~~	~~µg/l~~ µg/kg	µg/l µg/kg	µg/l µg/kg
pyrene	10/330	U	U	U	U		
benzidine	50/1650						
butyl benzyl phthalate	10/330						
benz(a)anthracene							
chrysene							
3,3-dichlorobenzidine	50/1650						
bis(2-ethylhexyl)phthalate	10/330						
di-n-octyl phthalate	10/330						
benzo(b)fluoranthene	50/1650						
benzo(k)fluoranthene							
benzo(a)pyrene							
indeno(1,2,3-cd)pyrene							
dibenzo(a,h)anthracene							
benzo(g,h,i)perylene							
aniline	50/1650	U	U	U	U		
benzoic acid							
benzyl alcohol							
4-chloroaniline							
benzofuran	10/330						
2-methylnaphthalene							
2-methylphenol							
4-methylphenol							
2-nitroaniline	50/1650						
3-nitroaniline							
4-nitroaniline							
2,4,5-trichlorophenol							
PCB1254		32	U	U	U		

MDL
H2O/SOIL

J - Estimated value.
K - Actual value is known to be less than value given.
L - Actual value is known to be greater than value given.
U - Material was analyzed for but not detected. The number is the Minimum Detection Limit. MDL
NA - Not analyzed.
1/ - Tentative identification.
2/ - On NRDC List of Priority Pollutants.

N.C. Division of Health Services
DHS 3068-0 (4/86 Laboratory)

STATE LABORATORY OF PUBLIC HEALTH
DIVISION OF HEALTH SERVICES, N.C. DEPARTMENT OF HUMAN RESOURCES
P.O. BOX 28047 - 306 N. WILMINGTON, ST., RALEIGH, N.C. 27611

ORGANIC CHEMICAL ANALYSIS

PURGEABLE COMPOUNDS	LAB NO	912239	912241	912242	912244		
	FIELD #	149.36	14938	14939	14941		
COMPOUND	TYPE	(2)	(4)	(2)	(4)	( )	( )
	UNITS	(µg/l) µg/kg	µg/l (µg/kg)	(µg/l) µg/kg	µg/l (µg/kg)	µg/l µg/kg	µg/l µg/kg
chloromethane	10 ppb	u	u	u	u		
bromomethane	↓						
dichlorodifluoromethane	5 ppb	↓		↓			
vinyl chloride		47		38			
chloroethane		u		u	↓		
methylene chloride		14			12 C		
trichlorofluoromethane		u			u		
ethene, 1,1-dichloro		↓		↓			
ethane, 1,1-dichloro-		121		3J			
1,2-~~trans~~-dichloroethene		707 J		35			
chloroform		u		u			
ethane, 1,2-dichloro-		↓		↓			
ethane, 1,1,1-trichloro-		107		trace			
carbontetrachloride		u		u			
bromodichloromethane		↓					
propane, 1,2-dichloro-		31					
1,3-trans-dichloropropene		u		↓			
trichloroethylene				12			
bromodibromomethane		↓		u			
benzene		trace					
ethane, 1,1,2-trichloro-	↓	u					
1,3-cis-dichloropropene	10 ppb						
2-chloroethyl vinyl ether	↓						
bromoform	5 ppb						
ethane, 1,1,2,2-tetrachloro-				↓			
ethene, tetrachloro-		↓		12			
toluene		654		u			
chlorobenzene		25					
ethylbenzene	↓	113	↓	↓	↓		
acetone	10 ppb	474	u	u	u		
2-butanone	10	120					
carbondisulfide	5	u					
2-hexanone	10	↓					
4-methyl-2-pentanone	10	28					
styrene	5	u					
vinyl acetate	10	↓					
xylenes (total)	5 ↓	434	↓	↓	↓		
	↑MDL↑						

J - Estimated value.
K - Actual value is known to be less than value given.
[illegible] - Actual value is known to be greater than value given.
[illegible] - Material was analyzed for but not detected. The number is the Minimum Detection Limit.
NA - Not analyzed.
1/ - Tentative identification.
2/ - On NRDC List of Priority Pollutants.
C - SUSPECT LAB CONTAMINATION.
N.C. Division of Health Services

DHS 3068-O (4/86 Laboratory)

DATA ANALYZED BY IEA

See Volume II