#2132

FINAL

SITE INSPECTION

CBS Records
Carrollton, Carroll County, Georgia
EPA ID No. GAD980515241

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Prepared by	Reviewed by	Approved by
Jancie S. Hatcher	Ronald A. Wilde	Hubert L. Wieland
Site Manager	Technical Reviewer	Project Manager

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EXECUTIVE SUMMARY

CBS Records is a 145-acre property located 1.5 miles northwest of Carrollton, Carroll County, Georgia. The facility includes a large manufacturing building, a powerhouse, a solvent recovery system, cooling towers, and fuel storage tanks. Located on the western portion of the facility is a former surface impoundment. The property is currently owned by Sony Corp. of New York.

The CBS Records facility manufactures, packages, and duplicates cassette tapes and phonograph records. Wastes associated with the facility's operations include chromium and nickel-contaminated wastewater, chromium hydroxide sludge, nickel hydroxide sludge, and various solvents. The plant was at one time permitted under RCRA as a TSD facility, although the RCRA permit was withdrawn in January 1987. The surface impoundment, formerly used for the chromium and nickel wastewater, was clean closed in 1985. This wastewater is now diverted to an above-ground storage tank.

Seventeen environmental samples were collected during the field investigation associated with this study. The field investigation and sampling indicated the presence of inorganics on the CBS Records site, both in the area of the surface impoundment and other surface soils onsite. The downgradient monitoring wells were also found to contain elevated levels of various metals. Very few organics were detected on the property.

The facility is located in the Piedmont Physiographic Province. The rock underlying the site is of the Dog River Formation, which is part of the Sandy Springs Group. Groundwater is obtained from an unconfined residual soil/crystalline rock aquifer system. Depth to groundwater at the facility is approximately 30 feet.

The primary pathway of concern at CBS Records is soil exposure. A large number of onsite workers could potentially be exposed to contaminated surface soil. Although onsite groundwater wells have elevated levels of metals attributable to CBS Records' operations, there are few groundwater targets in the area.

Based upon the analysis of possible migration pathways, the results of the sampling investigation, and information obtained from the references, it is recommended that CBS Records receive no further action at this time.

1.0 INTRODUCTION

B&V Waste Science and Technology was tasked by the U.S. Environmental Protection Agency (EPA), Waste Management Division to conduct a Site Inspection (SI) at the CBS Records facility in Carrollton, Carroll County, Georgia. The inspection was performed under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986 (SARA). The field investigation was conducted during the week of December 16, 1991.

1.1 OBJECTIVES

The objectives of this inspection were to determine the nature of contaminants present at the site and to determine if a release of these substances has occurred or may occur. Further, this inspection sought to determine the possible pathways by which contamination could migrate from the site and the populations and environments it would potentially affect. Through these objectives, a recommendation was made regarding future activities at the site.

1.2 SCOPE OF WORK

The objectives were achieved through the completion of a number of specific tasks. These activities were to :

- Obtain and review relevant background materials
- Obtain information on local water systems.
- Determine location and distance to nearest well.
- Evaluate potentially affected populations and environments associated with the groundwater, surface water, air and soil exposure pathways.
- Develop a site sketch, to scale.
- Collect environmental samples.

2.0 SITE CHARACTERIZATION

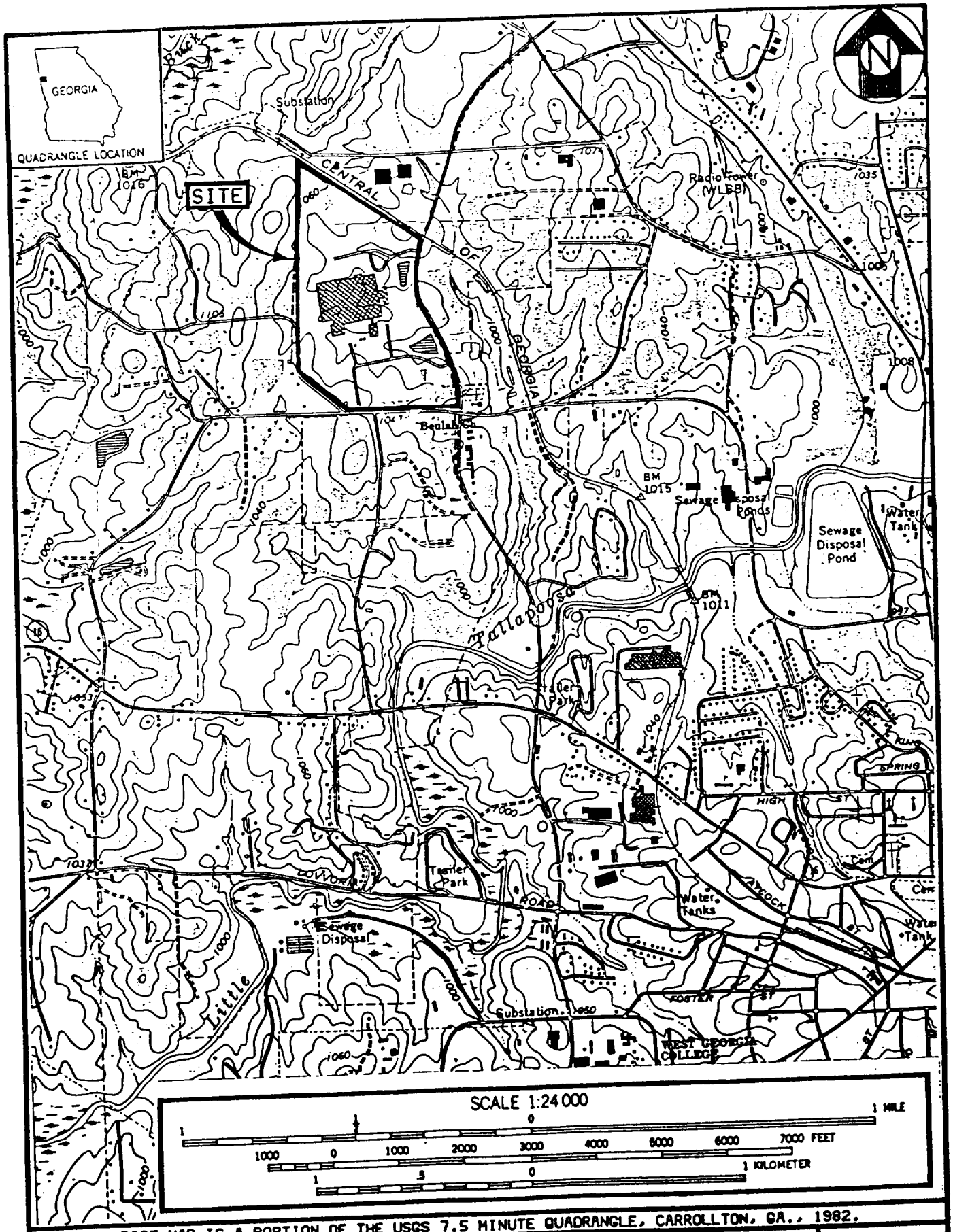
2.1 SITE LOCATION AND DESCRIPTION

CBS Records is located at 5152 Columbia Drive, approximately 1.5 miles northwest of the City of Carrollton, in Carroll County, Georgia. The site is more specifically located at 33° 36' 18" N latitude and 85° 06' 30" W longitude (Appendix A). The property encompasses approximately 145 acres, and contains a large building used for warehousing and manufacturing, a powerhouse, and a solvent recovery system with associated tanks. Other structures located onsite include two cooling towers, various fuel storage tanks, a heptane recovery system, and several small storage sheds. Two retention ponds are located in the eastern and southeastern portions of the property, and a surface impoundment was formerly located near the powerhouse. Access to the property is limited by fencing and camera surveillance. The property is currently owned by Sony Music. The surrounding area is primarily used for residential purposes (Refs. 1, 2). The site location and site layout maps are shown as Figures 1 and 2.

2.2 SITE HISTORY AND WASTE CHARACTERISTICS

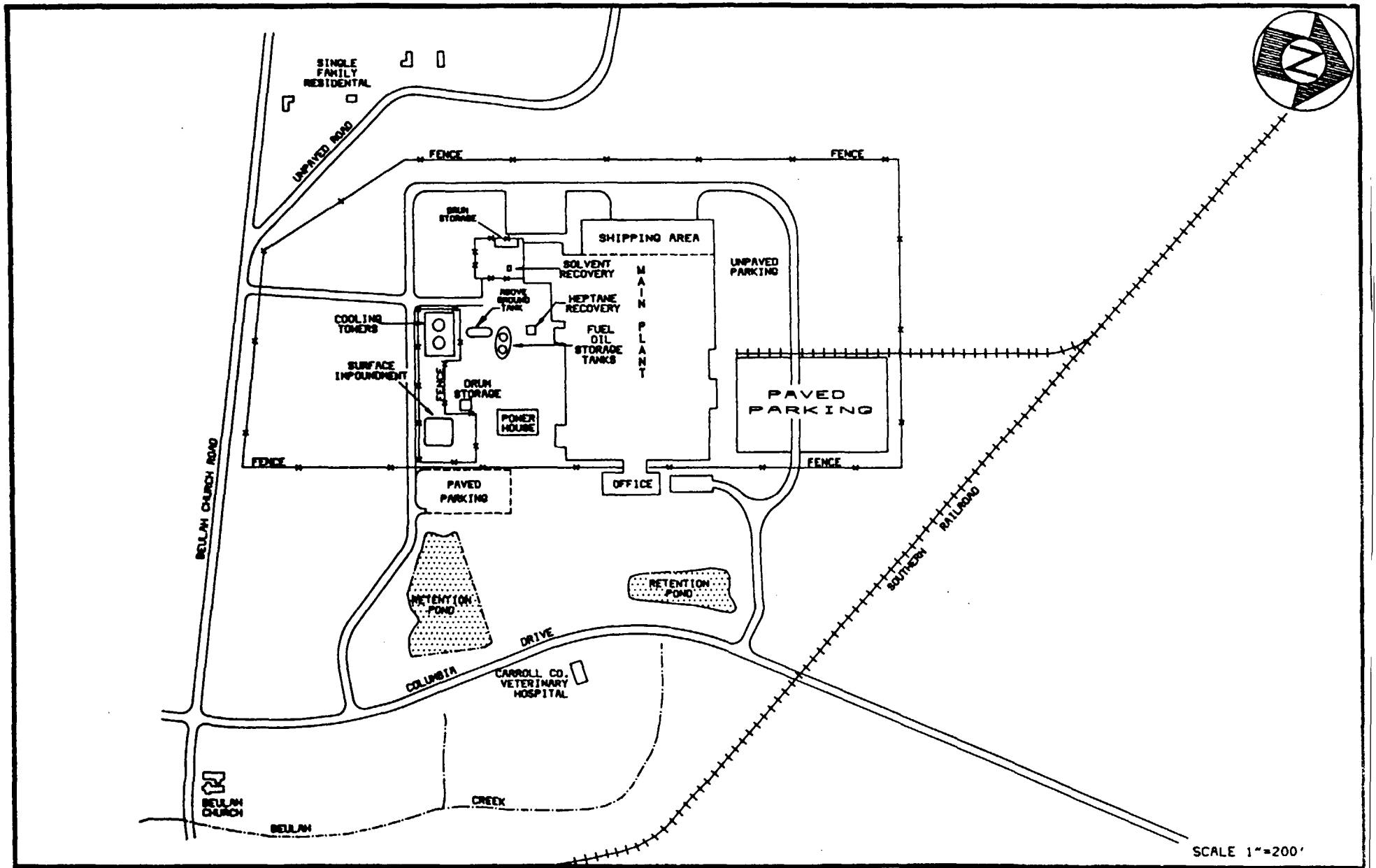
The CBS Records plant was built in 1978, and actual production in the facility began in 1981. The company manufactures, duplicates, and packages cassette tapes and phonograph records. Cassettes are coated with chromium dioxide or iron oxide (Ref. 2). Later correspondence indicates that CBS Records discontinued chromium coating in the Carrollton plant at some point (Ref. 3). Wastes associated with the facility's operations include chromium and nickel-contaminated wastewater, chromium hydroxide sludge, nickel hydroxide sludge, methylene chloride, toluene/tetrahydrofuran mixture, tetrachloroethylene, spent xylene and toluene, silver, and ignitable spent petroleum and heptane (Refs. 2, 4).

In April 1981, CBS Records filed a RCRA Part A Application as a TSD facility and as a generator. Permitted storage at this time included 140,000 gallons in containers and 880,000 gallons in the surface impoundment (Ref. 5). The Part B RCRA permit was filed on July 25, 1983 (Ref. 3). Beginning in 1985, the Georgia Department of Environmental Protection (GEPD) has observed numerous environmental violations at CBS Records. A Notice of Violation was served by the State on January 18, 1985,



BASE MAP IS A PORTION OF THE USGS 7.5 MINUTE QUADRANGLE, CARROLLTON, GA., 1982.

	SITE LOCATION MAP CBS RECORDS CARROLLTON, CARROLL COUNTY, GEORGIA	FIGURE 1



SITE LAYOUT MAP
CBS RECORDS
CARROLLTON, CARROLL COUNTY, GEORGIA

FIGURE 2

concerning the need for a formal groundwater assessment, and installation of additional downgradient monitoring wells (Ref. 6). After five months elapsed, the GEPD performed an onsite inspection, which found that some violations of state law had not yet been corrected (Ref. 7). Administrative Order No. EPD-HW-222 was subsequently issued to CBS Records as a response to this inspection (Ref. 8). CBS Records later appealed the Administrative Order and in August 1985 provided information to the State of Georgia to enable resolution of the order (Ref. 9, 10).

At the beginning of production, wastewater contaminated with chromium and nickel was discharged into the plastic-lined surface impoundment prior to treatment (Ref. 2). In August 1989, GEPD determined that CBS Records planned to close the surface impoundment and divert wastewater to a 400,000 gallon above-ground tank (Ref. 11). The surface impoundment was clean closed, and closure was approved by GEPD (Ref. 12). In November 1986, CBS Records formally withdrew their RCRA permit and requested a status change to that of generator only. This action was approved by the GEPD in January 1987 (Refs. 13, 14).

Other concerns about the site include a small tetrahydrofuran/toluene spill, a spill of nickel-contaminated wastewater, and numerous requests for extension of the 90-day hazardous waste storage limit (Refs. 15, 16). The THF/toluene spill area was sampled, and later remediated (Ref. 12). The nickel spill occurred during excavation of an underground storage tank, and remedial action was taken by CBS Records immediately (Ref. 17).

3.0 FIELD INVESTIGATION

3.1 SAMPLE COLLECTION

During the field investigation, conducted the week of December 16, 1991, B&V Waste Science and Technology attempted to identify and characterize contaminants which may be present in the environment as a result of activities that were conducted at the CBS Records facility. To accomplish this, BVWST collected environmental sediment, surface soil, subsurface soil, and groundwater samples from a number of strategic locations.

These locations were selected based on historical information, hydrogeological data for the region and site area, and direct observation at the site.

3.1.1 Sample Collection Methodology

All sample collection, sample preservation, and chain-of-custody procedures used during this inspection were in accordance with the standard operating procedures as specified in "Sections 3 and 4 of the Environmental Compliance Branch's Standard Operating Procedures and Quality Assurance Manual; United States Environmental Protection Agency, Region IV, Environmental Services Division, February 1, 1991, and with the Field Study Plan prepared by BVWST on November 14, 1991. Deviations from the study plan include the following: (1) no temporary wells were sited; (2) a private well near the site could not be located; (3) several of the subsurface soil samples were not collected; (4) some of the samples were moved based on observed field conditions at the time of sampling.

3.1.2 Duplicate Samples

Duplicate samples (with the exception of subsurface soils) were offered to and accepted by Cynthia Draper of Law Environmental, designated environmental consultant for CBS Records. Receipt for sample forms are on file at BVWST.

3.1.3 Description of Samples and Sample Locations

During the sampling investigation, a total of 17 environmental samples were collected. All sample locations are shown in Figure 3. Samples were collected in soil and from monitoring wells onsite, and in sediment in offsite locations. Sample codes, descriptions, locations, depth of collection, and rationale are contained in Table 1.

3.1.4 Field Measurements

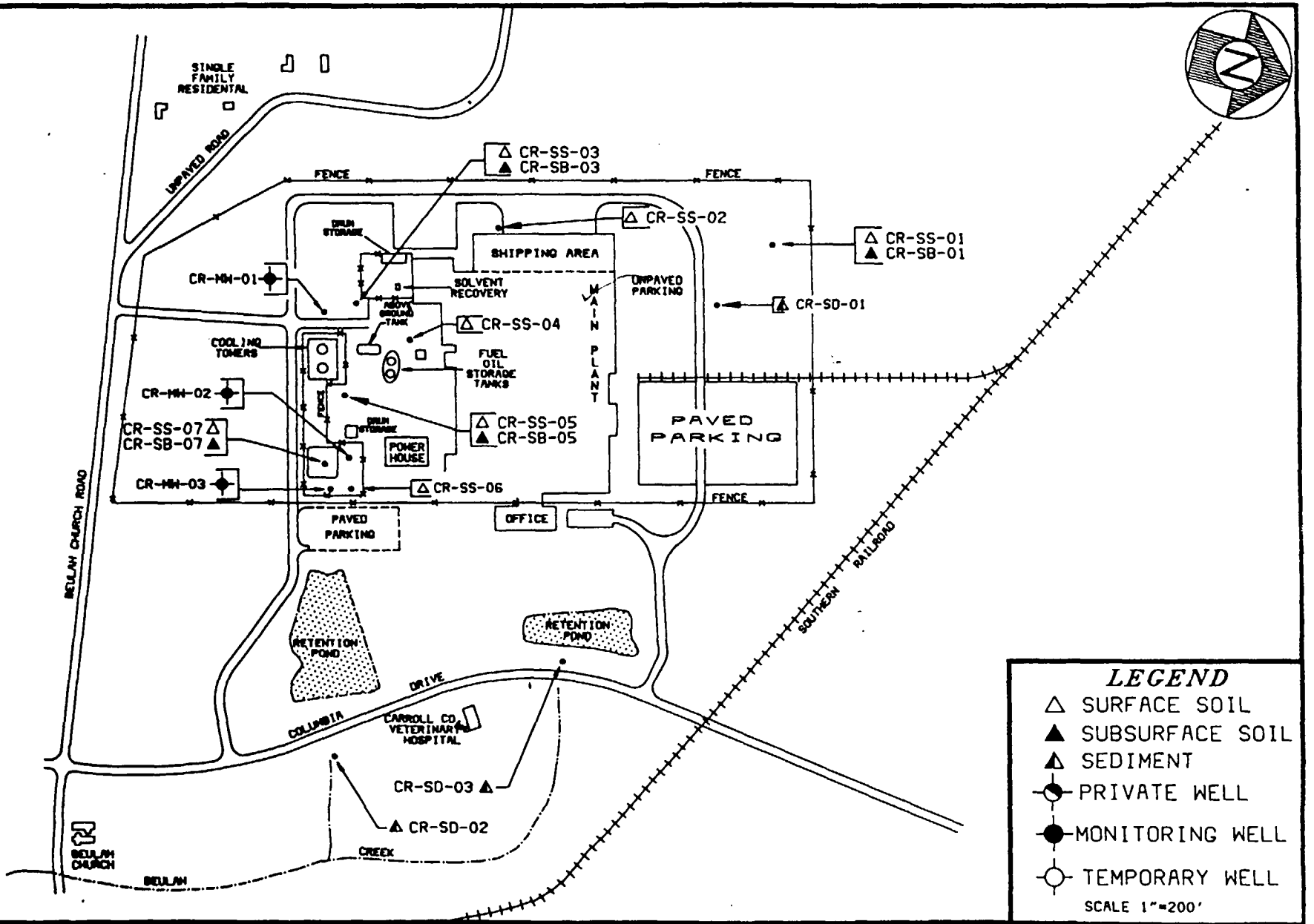
Field measurements were performed on the groundwater samples (Table 2). Parameters measured included temperature, pH, and specific conductivity of the water sample at the time of collection. No field measurements were performed on the soil samples during

TABLE 1
Sample Locations and Rationale
CBS Records
Carrollton, Carroll County, Georgia

SAMPLE CODE	SAMPLE TYPE	LOCATION	RATIONALE
CR-SS-01	Surface Soil	Just northwest of facility	Background
CR-SS-02	Surface Soil	Near Shipping area	To establish presence or absence of contaminants
CR-SS-03	Surface Soil	Just outside fenced Drum Storage area	To establish presence or absence of contaminants
CR-SS-04	Surface Soil	Near receiving area	To establish presence or absence of contaminants
CR-SS-05	Surface Soil	Near Drum Storage Shed	To establish presence or absence of contaminants
CR-SS-06	Surface Soil	Northern portion of Surface Impoundment	To establish presence or absence of contaminants
CR-SS-07	Surface Soil	Central portion of Surface Impoundment	To establish presence or absence of contaminants
CR-SB-01	Subsurface Soil	Just northwest of facility	Background
CR-SB-03	Subsurface Soil	Just outside fenced Drum Storage area	To establish presence or absence of contaminants
CR-SB-05	Subsurface Soil	Near Drum Storage Shed	To establish presence or absence of contaminants
CR-SB-07	Subsurface Soil	Central portion of Surface Impoundment	To establish presence or absence of contaminants
CR-SD-01	Sediment	Northwest of facility in ditch	Background
CR-SD-02	Sediment	East of North Retention Pond	To establish presence or absence of contaminants
CR-SD-03	Sediment	East of South Retention Pond	To establish presence or absence of contaminants
CR-MW-01	Groundwater	West of the Cooling Towers	Background
CR-MW-02	Groundwater	North of the Surface Impoundment	To establish presence or absence of contaminants
CR-MW-03	Groundwater	East of the Surface Impoundment	To establish presence or absence of contaminants

CR CBS Records
SS Surface Soil
SB Subsurface Soil
SD Sediment
SW Surface Water
MW Monitoring Well

pm/aro
July 7, 1992
A:\JUN92\JH\CARROLL\TABLE1



SAMPLE LOCATION MAP
CBS RECORDS
CARROLLTON, CARROLL COUNTY, GEORGIA

FIGURE 3

TABLE 2

FIELD MEASUREMENTS
CBS RECORDS
CARROLLTON, CARROLL COUNTY, GEORGIA

SAMPLE CODE	pH	Temperature o C	Conductivity umhos/cm
CR-MW-01	7.90	18	42.8
CR-MW-02	8.31	17	59.2
CR-MW-03	8.56	19	100.2

this inspection. The BVWST pH measurements were disputed by Sony Corp. and its consultant (Ref. 1).

3.2 SAMPLE ANALYSIS

3.2.1 Analytical Support and Methodology

All samples collected were analyzed under the Contract Laboratory Program (CLP) and analyzed for all parameters listed in the Target Compound List (TCL) and the Target Analyte List (TAL). Organic analysis of soil and water samples was performed by Compuchem Labs of Research Triangle Park, North Carolina. Inorganic analysis of soil and water samples was performed by Skinner & Sherman of Waltham, Massachusetts. All laboratory analyses and laboratory quality assurance procedures used during the investigation were in accordance with standard procedures and protocols as specified in the Laboratory Operations and Quality Control Manual, United States Environmental Protection Agency, Region IV, Environmental Services Division, issued October 24, 1990; or as specified by the existing United States Environmental Protection Agency standard procedures and protocols for the Contract Laboratory Program (CLP) Statement of Work (SOW), as applicable.

3.2.2 Analytical Data Quality and Data Qualifiers

All analytical data were subjected to a quality assurance review as described in the EPA Environmental Services Division laboratory data evaluation guidelines. In the tables, some of the concentrations of the organic and inorganic parameters have been qualified with a "J". This indicates that the qualitative analysis was acceptable, but the quantitative value has been estimated. A few other compounds are qualified with an "N, indicating that they were detected based only on the presumptive evidence of their presence. This means that the compound was tentatively identified, and its detection cannot be used as a positive indication of its presence. Results for some background samples are reported with a "U" qualifier. This qualifier means that the material was analyzed for but not detected. The reported number is the laboratory-derived minimum quantitation limit (MQL) for the compound or element in that sample. At times, miscellaneous organic compounds that do not appear on the target compound list are reported with the data set. These compounds are qualified as "JN", indicating that they are tentatively identified

at estimated quantities. Because these compounds are not routinely analyzed for or reported, background levels or MQL levels are not generally available for comparison. In these samples, irregularities in the data were that the water trip blank contained an estimated 20 ug/l of 2 unidentified extractable compounds. The complete analytical data sheets are presented in Appendix B.

3.3 PRESENTATION OF ANALYTICAL RESULTS

This section presents a discussion and interpretation of the analytical results form the environmental samples collected during the investigation at CBS Records. Results of organic and inorganic samples are presented in Tables 3 through 10. Background samples have been designated for all media. Values for background sample results are presented either as a measured value or as the minimum quantitation limit (MQL). Samples containing concentrations of contaminants greater than three times the background level, or equal to or greater than the MQL of these contaminants are considered to be elevated. These samples are noted in the text.

3.3.1 Organic Sampling Results

Unidentified extractable organics were detected in all the surface soil samples except CR-SS-03. Hexadecanoic acid was also found in several of the surface soil samples (Table 3). Unidentified extractables were found in samples CR-SB-03 and CR-SB-07. Sample CR-SB-05 contained only dodecanoic acid (Table 4).

All sediment samples contained unidentified extractables. Several miscellaneous organics were found in the sediment samples, and one miscellaneous purgeable was detected in CR-SD-03 (Table 5).

Carbon disulfide was detected at 43 ug/l in the background monitoring well (CR-MW-01). Unidentified extractables were also found in the trip blank, as well as in all three groundwater samples (Table 6).

3.3.2 Inorganic Surface Soil Sampling Results

Sample CR-SS-02 contained 0.55 mg/kg of beryllium (greater than MQL). Sample CR-SS-03 contained aluminum (4 times background), cobalt (5 times background), copper (3 times background), iron (4 times background), magnesium (4 times background),

TABLE 3
SUMMARY OF ORGANIC ANALYTICAL RESULTS
SURFACE SOIL SAMPLES
CBS RECORDS
CARROLLTON, CARROLL COUNTY, GEORGIA

PARAMETERS (UG/KG)	Background	Onsite Samples					
	CR-SS-01	CR-SS-02	CR-SS-03	CR-SS-04	CR-SS-05	CR-SS-06	CR-SS-07
EXTRACTABLE ORGANICS							
FLUORANTHENE	380U	42J	–	48J	–	–	–
BENZO(B AND/OR K) FLUORANTHENE	380U	57J	–	–	–	–	–
MISCELLANEOUS EXTRACTABLES							
HEXADECANOIC ACID	200JN	400JN		400JN	90JN		
UNIDENTIFIED COMPOUNDS/NO.	500J/1	5,000J/9		3,000J/5	1,000J/3	3,000J/5	900J/1
PESTICIDES							
DIELDRIN	3.9U	1.5J	–	–	–	–	–

– Material analyzed for but not detected above minimum quantitation limit.
U Material analyzed for but not detected above minimum quantitation limit. The value is the minimum quantitation limit for the sample.
J Estimated value
N Presumptive Evidence of material

TABLE 4
SUMMARY OF ORGANIC ANALYTICAL RESULTS
SUBSURFACE SOIL SAMPLES
CBS RECORDS
CARROLLTON, CARROLL COUNTY, GEORGIA

PARAMETERS (UG/KG)	Background	ONSITE		
	CR-SB-01	CR-SB-03	CR-SB-05	CR-SB-07
MISCELLANEOUS EXTRACTABLES				
DODECANOIC ACID			200JN	
UNIDENTIFIED COMPOUNDS/NO.		700J/1		1,000J/1

– Material analyzed for but not detected above minimum quantitation limit.
J Estimated value
N Presumptive Evidence of material

TABLE 5
SUMMARY OF ORGANIC ANALYTICAL RESULTS
SEDIMENT SAMPLES
CBS RECORDS
CARROLLTON, CARROLL COUNTY, GEORGIA

PARAMETERS (UG/KG)	Background	Downstream Samples	
	CR-SD-01	CR-SD-02	CR-SD-03
MISCELLANEOUS PURGEABLES			
PENTYNOL			80JN
MISCELLANEOUS EXTRACTABLES			
HEXADECANOIC ACID	300JN		
TETRAMETHYLPHENANTHRENE		600JN	700JN
OCTAHYDRODIMETHYL (METHYLETHYL) -			
PHENANTHRENE CARBOXALDEHYDE		1,000JN	
UNIDENTIFIED COMPOUNDS/NO.	3,000J/3	5,000J/4	5,000J/7

- Material analyzed for but not detected above minimum quantitation limit.
J Estimated value
N Presumptive Evidence of material

TABLE 6
SUMMARY OF ORGANIC ANALYTICAL RESULTS
GROUNDWATER SAMPLES
CBS RECORDS
CARROLLTON, CARROLL COUNTY, GEORGIA

PARAMETERS (UG/L)	Trip Blank	Background	Down gradient	
	CR-TB-01	CR-MW-01	CR-MW-02	CR-MW-03
PURGEABLE ORGANICS				
CARBON DISULFIDE	–	43	–	–
TETRACHLOROETHENE	–	10U	2J	3J
MISCELLANEOUS EXTRACTABLES				
UNIDENTIFIED COMPOUNDS/NO.	20J/2	200J/4	100J/3	300J/5

– Material analyzed for but not detected above minimum quantitation limit.
U Material analyzed for but not detected above minimum quantitation limit. The value is the minimum quantitation limit for the sample.
J Estimated value

nickel (3 times background), potassium (5 times MQL), vanadium (4 times background), and zinc (4 times MQL). Detected in sample CR-SS-04 at elevated levels were copper (3 times background), iron (3 times background), nickel (3 times background), potassium (above MQL), and vanadium (3 times background). Sample CR-SS-05 contained aluminum (3 times background), calcium (5 times background), cobalt (3 times background), copper (5 times background), iron (4 times background), magnesium (5 times background), nickel (3 times background), potassium (4 times MQL), vanadium (4 times background), and zinc (4 times MQL). Sample CR-SS-06 contained the following metals at elevated levels: copper (5 times background), aluminum (3 times background), iron (3 times background), potassium (greater than MQL), vanadium (4 times background), and zinc (5 times MQL). Aluminum (4 times background), copper (4 times background), iron (4 times background), vanadium (4 times background), potassium (3 times MQL), and zinc (6 times MQL) were found in CR-SS-07 (Table 7).

Most surface soil samples collected onsite at CBS Records contained a variety of metals at concentrations slightly elevated above background levels.

3.3.3 Inorganic Subsurface Soil Sampling Results

Sample CR-SB-03 contained barium (4 times background), cobalt (6 times background), magnesium (13 times background), manganese (3 times background), nickel (3 times background), potassium (22 times MQL), and zinc (5 times MQL). Barium (4 times background), cobalt (5 times background), magnesium (12 times background), manganese (3 times background), potassium (17 times MQL), and zinc (5 time MQL) were detected in CR-SB-05. Sample CR-SB-07 (taken in the surface impoundment) contained magnesium (3 times background), potassium (5 times MQL), and zinc (4 times MQL) (Table 8).

3.3.4 Inorganic Sediment Sampling Results

Very few inorganics were found at elevated levels in sediment samples. Sample CR-SD-02 contained lead (8.1 mg/kg, 3.5 times background). Beryllium was found in CR-SD-03 at an estimated concentration of 0.5 mg/kg (greater than MQL). A notable concentration of chromium was observed in all the sediment samples (range of 100-270 mg/kg) (Table 9).

TABLE 7

SUMMARY OF INORGANIC ANALYTICAL RESULTS
SURFACE SOIL SAMPLES
CBS RECORDS
CARROLLTON, CARROLL COUNTY, GEORGIA

Parameters (mg/kg)	Background	Onsite Samples					
	CR-SS-01	CR-SS-02	CR-SS-03	CR-SS-04	CR-SS-05	CR-SS-06	CR-SS-07
ALUMINUM	5,800	13,000	21,000	16,000	19,000	18,000	22,000
ARSENIC	2.3J	–	–	–	–	–	–
BARIUM	32	53	70	44	58	44	54
BERYLLIUM	0.23U	0.55J	–	–	–	–	–
CALCIUM	490	940	1,100	1,000	2,300	180	200
CHROMIUM	43	43	77	69	70	43	62
COBALT	6.8	13	36	17	21	17	20
COPPER	6.3	14	24	20	29	32	23
IRON	12,000	26,000	49,000	37,000	45,000	40,000	46,000
LEAD	9.1	13	11	11	11	11	11
MAGNESIUM	370	420	1,600	540	1,800	840	1,000
MANGANESE	340	840	770	770	770	1,000	680
NICKEL	4.1J	3.6	13	15	14	5.6	11
POTASSIUM	280U	–	1,300	500	1,000	640	880
VANADIUM	41	89	160	130	150	130	150
ZINC	8U	17	31	22	29	37	45

– Material analyzed for but not detected above minimum quantitation limit.
U Material analyzed for but not detected above minimum quantitation limit. The value is the minimum quantitation limit for the sample.
J Estimated value

TABLE 8

SUMMARY OF INORGANIC ANALYTICAL RESULTS
SUBSURFACE SAMPLES
CBS RECORDS
CARROLLTON, CARROLL COUNTY, GEORGIA

Parameters (mg/kg)	Background	Onsite		
	CR-SB-01	CR-SB-03	CR-SB-05	CR-SB-07
ALUMINUM	13,000	24,000	24,000	23,000
BARIUM	25	110	110	48
CALCIUM	590	120	170	170
CHROMIUM	160	77	73	54
COBALT	9	54	47	17
COPPER	15	33	27	22
IRON	33,000	41,000	45,000	43,000
LEAD	15	8	12	10
MAGNESIUM	270	3,400	3,100	820
MANGANESE	330	1,000	1,000	670
NICKEL	10	32	18	10
POTASSIUM	130U	2,800	2,200	660
VANADIUM	99	140	150	140
ZINC	9U	41	43	32

– Material analyzed for but not detected above minimum quantitation limit.
U Material analyzed for but not detected above minimum quantitation limit. The value is the minimum quantitation limit for the sample.

TABLE 9

SUMMARY OF INORGANIC ANALYTICAL RESULTS
SEDIMENT SAMPLES
CBS RECORDS
CARROLLTON, CARROLL COUNTY, GEORGIA

Parameters (mg/kg)	Background	Downstream Samples	
	CR-SD-01	CR-SD-02	CR-SD-03
ALUMINUM	13,000	16,000	14,000
BARIUM	56	45	75
BERYLLIUM	0.27U	–	0.50J
CALCIUM	2,300	570	470
CHROMIUM	210	270	100
COBALT	33	17	14
COPPER	22	23	21
IRON	33,000	48,000	29,000
LEAD	2.3	8.1	6.6
MAGNESIUM	8,600	510	1,300
MANGANESE	650	1,100	520
NICKEL	74	16	10
POTASSIUM	2,400	–	830
VANADIUM	61	160	130
ZINC	36	28	30

– Material analyzed for but not detected above minimum quantitation limit.
U Material analyzed for but not detected above minimum quantitation limit. The value is the minimum quantitation limit for the sample.
J Estimated value

3.3.5 Inorganic Groundwater Sampling Results

Sample CR-MW-02 contained an estimated 31,000 ug/l of aluminum (32 times background), barium (62 ug/l, greater than MQL), calcium (3,100 ug/l, 5 times MQL), chromium (69 ug/l, 23 times background), cobalt (19 ug/l, 6 times MQL), and copper (27 ug/l, 9 times MQL). Other metals detected in this sample include iron (55,000 ug/l, 83 times background), lead (estimated 29 ug/l, 10 times MQL), magnesium (34 times MQL), manganese (62 times background), mercury (0.95 ug/l, 5 times MQL), nickel (12 ug/l, 3 time MQL), and vanadium (170 ug/l, 57 times MQL).

CR-MW-03 (the most downgradient well sampled) contained the following: estimated 160,000 ug/l of aluminum (167 times background), estimated 51 ug/l of antimony (greater than MQL), calcium (8400 ug/l, 13 times MQL), barium (470 ug/l, 16 times MQL), chromium (480 ug/l, 160 times background), cobalt (40 times MQL), and copper (43 times MQL). Other inorganics found in this sample include iron at 290,000 ug/l (439 times background), magnesium (12,000 ug/l, 19 times MQL), manganese (4000 ug/l, 154 times background), nickel (100 ug/l, 25 times MQL), potassium (6500 ug/l, 9 times MQL), sodium (3500 ug/l, greater than MQL), vanadium (860 ug/l, 287 times MQL), and zinc (260 ug/l, 9 times MQL) (Table 10).

Monitoring wells in and downgradient of the former surface impoundment contain a variety of metals, some at rather elevated levels. Those metals that can be directly attributed to CBS Records' operations include chromium, nickel, iron, sodium, and potassium.

3.4 SUMMARY OF ANALYTICAL RESULTS

In general, organics were found at the CBS Records facility in very low quantities, and do not appear to be a significant problem at the site. The surface soils near and within the former surface impoundment are somewhat contaminated with metals, including some metals which can be directly attributed to CBS Records' operations. However, very few of these metals were detected in elevated concentrations in the subsurface samples, indicating that contamination seems to be only in surficial soils. In fact, some of these inorganics may be present in concentrations somewhat near expected naturally-occurring values for the west Georgia area. The downgradient monitoring wells sampled both

TABLE 10

SUMMARY OF INORGANIC ANALYTICAL RESULTS
GROUNDWATER SAMPLES
CBS RECORDS
CARROLLTON, CARROLL COUNTY, GEORGIA

Parameters (ug/l)	Pres. Blank	Background	Down gradient	
	CR-PB-01	CR-MW-01	CR-MW-02	CR-MW-03
ALUMINUM	–	960J	31,000J	160,000J
ANTIMONY	–	31U	–	51J
BARIUM	–	30U	62	470
CALCIUM	–	630U	3,100	8,400
CHROMIUM	–	3J	69	480
COBALT	–	3U	19	120
COPPER	–	3U	27	130
IRON	–	660	55,000	290,000
LEAD	–	3UJ	29J	–
MAGNESIUM	–	640U	2,200	12,000
MANGANESE	–	26	1,600	4,000
MERCURY	–	0.20U	0.95	–
NICKEL	–	4U	12	100
POTASSIUM	–	740U	–	6,500
SODIUM	–	1,700U	–	3,500
VANADIUM	–	3U	170	860
ZINC	–	30U	–	260

– Material analyzed for but not detected above minimum quantitation limit.
U Material analyzed for but not detected above minimum quantitation limit. The value is the minimum quantitation limit for the sample.
J Estimated value

contained elevated amounts of a variety of metals, indicating that some groundwater contamination may have occurred at the facility.

4.0 GROUNDWATER PATHWAY

4.1 HYDROGEOLOGY

CBS Records is located approximately 0.75 mile north of the southwestern-flowing Little Tallapoosa River, within the Piedmont Physiographic Province and hydrogeologic setting (Refs. 18, 19). The topography of the area consists of low, well-rounded hills, with elevations ranging from 1010 to 1075 feet above mean sea level (amsl) at the facility (Appendix A). The physiographic district in which CBS Records lies is the Central Uplands district in the Southern Piedmont Province. The Central Uplands area contains stream valleys that tend to be narrow, exhibit a rectangular drainage pattern and lie only 100 to 150 feet below the surrounding area (Ref. 20).

The soil beneath CBS Records is of the Davidson-Musella association which has been generally described as being well-drained and with a dark-red clay loam or clay subsoil (Ref. 21, Plate 1). More specifically, the dominant soil type beneath the facility is the Davidson gravelly clay loam (Ref. 21, Sheet 61). Characteristics of this soil type include: occurrance on broad ridges and their side slopes, poor tilth, slow infiltration, 6 to 10 percent slopes, and high erodeability (Ref. 21, p. 13). The Davidson soil series is generally well-drained, extends 6 to 7 feet, and is formed in materials weathered chiefly from diorite and hornblende gneiss (Ref. 21, p. 12).

Beneath the soil, the Piedmont region is characterized by a clay-rich, unconsolidated material which originates from "in-situ weathering" of the underlying bedrock, collectively called saprolite (Ref. 19, p. 252). Typical bedrock materials in the area are granites and gneisses. The saproite material exhibits an average thickness of 32.8 to 65.6 feet except on ridges where saprolite can reach thicknesses of up to 328 feet (Ref. 19, p. 252). Also, it should be noted that often saprolite deposits are generally thicker in valleys of the Piedmont due to extensive weathering. Dr. Crawford, Professor of Geology at West Georgia College, has estimated saprolite thickness in the area to be 40 to 50 feet thick (Ref. 22). CBS Records lies between two valleys, one associated with the Buck Creek

drainage basin, and the other corresponding to the Little Tallapoosa River (Appendix A). The underlying bedrock is composed mainly of metasedimentary and metavolcanic rocks, regionally metamorphosed and deformed into northeast trending folds (Ref. 23, p. 56). Specifically, the rocks of the Sandy Springs Group underlie the facility. The Sandy Springs Group is composed of the formations: Bill Arp, Andy Mountain, and Dog River (Ref. 23, Figure 11, Table 4). These formations typically consists of undifferentiated muscovite, biotite, quartz, feldspar gneiss, garnet, mica schist, muscovite schist, and amphibolite. The Sandy Springs Group is of Proterozoic to Lower Paleozoic age (Ref. 23, pp 38-39). The rocks are fractured and displaced by numerous faults and zones of shearing within the region, some of which are many miles in length (Ref. 24, pp. 14-15). The Brevard fault zone lies aproximately 12 miles southeast of CBS Records and trends northeast to southwest (Ref. 23, Figure 42). This fault zone is a continuous belt of cataclastic rocks approximately 2.6 to 9.7 miles wide, paralleling the southeastern boundary of the Blue Ridge province. The dominant bedrock beneath the facility's saprolite is the Garnet Mica Schist (Ref. 25).

These fractured and faulted rocks, combined with the overlying saprolite and residual soil, make up the unconfined saprolite-residual soil/crystalline rock aquifer system (Ref. 23). The fractured crystalline rocks and overlying saprolite are hydraulically connected. The approximate range of hydraulic conductivity for the saprolite underlying CBS Records is 1.0×10^{-5} to 1.0×10^{-3} cm/sec (Ref. 26, p. 29).

Groundwater in the Piedmont Province occupies joints, fractures, and other secondary openings in bedrock and pore spaces in the overlying saprolite. Water recharges the underground openings by seepage of precipitation through this material or by flowing directly into openings in exposed rock (Ref. 27, pp. 6-9). The depth to groundwater in the area surrounding CBS Records is estimated to be approximately 35 to 55 feet, based on topographic analysis of area streams (Appendix A). Depth to water in the three monitoring wells sampled ranged from 14 to 22 feet (Ref. 1). Local groundwater flow in the regolith/saprolite, if present, is anticipated to be to the east (Ref. 2).

The quality of groundwater available varies greatly with the location, rock type, topographic setting, and geologic structure. Localized increases in permeability may enhance well yields. This occurs mainly in association with stratigraphic features, such as contact zones within multilayered rock units, fault zones, stress relief fractures, shear

zones, and contact zones between rock units of contrasting character (Ref. 24, p. 10). Well yields in the rock types that underlie CBS Records range from 20 to 150 gallons per minute (gpm), averaging 47 gpm (Ref. 24, Plate 1).

4.2 GROUNDWATER TARGETS

The nearest private well to the CBS Records facility is located approximately 1.0 mile to the west (Appendix A). Scattered areas of private wells may exist in Carroll County, but most areas, including those very near the CBS site, have access to municipal water. Twenty-six houses utilizing private wells are located within 1-2 miles of the CBS Records site, corresponding to 71 persons. Within 2-3 miles of the facility, there are 15 houses (41 persons), and within 3-4 miles are 50 houses (136 persons) using private wells for potable water. No municipal systems utilize groundwater wells within 4 miles of the site (Ref. 28, Appendix A).

4.3 GROUNDWATER CONCLUSIONS

Although a variety of attributable inorganics were detected in the onsite downgradient monitoring wells, there is not a large number of persons utilizing groundwater wells for potable water. Therefore, this pathway is not considered to be of concern.

5.0 SURFACE WATER PATHWAY

5.1 HYDROLOGIC SETTING

5.1.1 Climatology

Carroll County and its surrounding area is characterized by a humid, temperate climate (Ref. 21, p. 1). Total annual precipitation averages 50 inches with annual evaporation of 41 inches, resulting in a net precipitation of 9 inches (Ref. 29). The 2-year, 24-hour rainfall total is 3.8 inches (Ref. 30).

5.1.2 Overland Drainage

Surface water for the entire CBS Records property is collected in a series of diversion ditches and routed into two retention ponds at the eastern end of the facility (Ref. 2). These retention ponds discharge to Beulah Creek, which flows approximately 1.0 mile south and enters the Little Tallapoosa River. The 15-mile, surface water pathway ends in this river, which flows to the southwest (Appendix A). Before construction of the plant, the portion of Beulah Creek which drained the northeast portion of the property was located in a 100-year floodplain. However, construction has diverted this drainage, and none of the waste management areas onsite are located in a floodplain (Ref. 2).

5.2 SURFACE WATER TARGETS

Beulah Creek and the Little Tallapoosa River may be affected by any contaminants carried by surface water runoff from the CBS Records retention ponds. The City of Carrollton intakes potable water from several surface water sources. These include Lake Carroll, Lake Buckhorn, the Little Tallapoosa River, and Sharpe Creek (at some times of the year). Water from these intakes is blended before distribution, and withdrawal is approximately equal for the three main intakes. The intake on the Little Tallapoosa River is located approximately 1.5 miles upstream of the confluence of Beulah Creek with the river, and therefore is not on the surface water pathway. The other three intakes are to the east and northeast of the site, and are not located along the 15-mile, surface water pathway (Ref. 1, Appendix A). The Carroll County Water District purchases all its water from the City of Carrollton or the City of Bowdon, which is located to the southwest of the facility (Ref. 31). Recreational fishing occurs at many locations along the Little Tallapoosa River (Ref. 32). There are no listed endangered aquatic species in Carroll County (Ref. 33). There are several areas of wetlands located along the 15-mile, surface water pathway. One area of approximately 1.3 miles frontage is located approximately 2 miles downstream from the site. Another area of approximately 2.1 miles frontage is located approximately 3.5 miles downstream (Appendix A).

5.3 SURFACE WATER CONCLUSIONS

Surface water runoff from the CBS Records facility is somewhat controlled by the runoff system, although some release of runoff stormwater does occur to the intermittent stream Beulah Creek. Few significant targets exist in the surface water pathway, although there are several areas of wetlands downstream of the site.

6.0 AIR AND SOIL EXPOSURE PATHWAYS

6.1 PHYSICAL CONDITIONS

The CBS Records facility is well-maintained, with either asphalt or grass covering the emajority of the property. The former surface impoundment is covered with grass, and no stressed vegetation was noted during sampling in this area. Access to the property is limited by fencing and camera surveillance (Ref. 1).

6.2 AIR AND SOIL TARGETS

6.2.1 Demography

The area surrounding CBS Records is mostly used for residential purposes, although there are several small businesses located along Columbia Drive. The City of Carrollton, a more densely populated area, is located within 1.5 miles southeast of the facility. The nearest occupied residence is located approximately 200 feet from the CBS Records western property boundary, and the nearest school is West Georgia College, located approximately 1.75 miles south (Ref. 1, Appendix A). Approximately 2,300 persons work at the CBS Records facility (Ref. 2). Population within 1 mile of the site is 640 persons, and within a 4-mile radius is 18,670 persons (Appendix A, Refs. 28, 34).

6.2.2 Land Use

Land in the immediate area of the CBS facility is primarily used for single-family residences. No areas of wetlands are located within 1 mile of the CBS Records facility (Appendix A). The Monkey-Face plant (*Platanthera integrilabia*) is currently under review for federal status as an endangered species (Ref. 33). There are no nearby recreational areas (Appendix A).

6.3 AIR AND SOIL EXPOSURE CONCLUSIONS

The area surrounding the CBS facility is sparsely populated, and the primary targets for the soil exposure and air pathways are the approximately 2,300 persons employed at the plant. No schools or daycare facilities are located near the site.

7.0 SUMMARY AND CONCLUSIONS

CBS Records is an approximately 145 acre manufacturing facility, engaged in processing and duplication of cassette tapes and phonograph records. The property is located in a sparsely populated area north of Carrollton, Georgia. The facility has numerous wastes associated with their manufacture, including wastewater which was formerly stored in an onsite surface impoundment. Analysis of contaminant migration pathways and sampling data shows the following: (1) onsite groundwater wells are contaminated with various metals, but there are very few groundwater targets; (2) some surface water targets do exist, but the surface water intake which serves the majority of the 4-mile radius is not located on the surface water pathway; (3) a large number of workers could be exposed to the surface soils onsite; (4) the air pathway is not particularly significant due to the sparse population of the area.

Based on the results of this field investigation, it is recommended that no further action be planned for the CBS Records site.

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8. State of Georgia Environmental Protection Division Administrative Order No. EPD-HW-222: Georgia EPD vs. CBS Records (June 28, 1985).

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12. Trip Report for CBS Records, filed by Bert Langley, Georgia Environmental Protection Division, January 2, 1986.

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32. Frank Ellis, Georgia DNR, telephone conversation with Stephany Fine, NUS Corporation, March 7, 1991. Subject: Fishing on the Little Tallapoosa River.

33. Charles V. Rabolli, Georgia Department of Natural Resources, letter to Ronald A. Wilde, B&V Waste Science and Technology Corp., March 24, 1992. Subject: Endangered species in Carroll County.

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NPL Characteristics Data Collection Form
CBS Records - 04/02/92

Record Information

1. Site Name: CBS Records
   (as entered in CERCLIS)

2. Site CERCLIS Number: GAD980515241

3. Site Reviewer: Jancie S. Hatcher

4. Date: April 2, 1992

5. Site Location: Carrollton, Carroll County, Georgia
   (City/County,State)

6. Congressional District:

7. Site Coordinates: Single

   Latitude: 33 36'18.0" Longitude: 085 06'30.0"

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Site Description

1. Setting: Rural

2. Current Owner: Private - Industrial

3. Current Site Status: Active

4. Years of Operation: Active Site , from and to dates: 1978 -present

5. How Initially Identified: State/Local Program

6. Entity Responsible for Waste Generation:

   - Manufacturing
     - Other Manufacturing

7. Site Activities/Waste Deposition:

   - Surface Impoundment
   - Drum/Container Storage
   - Tanks - Above Ground
   - Tanks - Below Ground
   - Airborne Release/Incineration

Waste Description

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8. Wastes Deposited or Detected Onsite:

   - Organic Chemicals
   - Metals

Response Actions

9. Response/Removal Actions:

RCRA Information

10. For All Active Facilities, RCRA Site Status:

    - -90 Day Accumulator

Demographic Information

11. Workers Present Onsite: Yes

12. Distance to Nearest Non-Worker Individual: > 10 Feet - 1/4 Mile

13. Residential Population Within 1 Mile: 0.0

14. Residential Population Within 4 Miles: 0.0

Water Use Information

15. Local Drinking Water Supply Source:

    - Ground Water (within 4 mile distance limit)

16. Total Population Served by Local Drinking Water Supply Source: 0.0

17. Drinking Water Supply System Type for Local Drinking Water Supply Sources:

    - Private

18. Surface Water Adjacent to/Draining Site:

- Stream

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HRS DOCUMENTATION RECORD
CBS Records - 05/28/92

1. Site Name: CBS Records
   (as entered in CERCLIS)

2. Site CERCLIS Number: GAD980515241

3. Site Reviewer: Jancie S. Hatcher

4. Date: April 2, 1992

5. Site Location: Carrollton, Carroll County, Georgia
   (City/County,State)

6. Congressional District:

7. Site Coordinates: Single

   Latitude: 33 36'18.0" Longitude: 085 06'30.0"

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	Score
Ground Water Migration Pathway Score (Sgw)	2.56
Surface Water Migration Pathway Score (Ssw)	1.07
Soil Exposure Pathway Score (Ss)	7.80
Air Migration Pathway Score (Sa)	1.34

Site Score	4.19

NOTE

EPA uses the terms "facility," "site," and "release" interchangeably. The term "facility" is broadly defined in CERCLA to include any area where hazardous substances have "come to be located" (CERCLA Section 109(9)), and the listing process is not intended to define or reflect boundaries of such facilities or releases. Site names, and references to specific parcels or properties, are provided for general identification purposes only. Knowledge regarding the extent of sites will be refined as more information is developed during the RI/FS and even during implementation of the remedy.

1. WASTESTREAM QUANTITY SUMMARY TABLE, SOURCE: surface impoundment

a. Wastestream ID	
b. Hazardous Constituent Quantity (C) (lbs.)	0.00
c. Data Complete?	NO
d. Hazardous Wastestream Quantity (W) (lbs.)	0.00
e. Data Complete?	NO
f. Wastestream Quantity Value (W/5,000)	0.00E+00

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2. SOURCE HAZARDOUS WASTE QUANTITY FACTOR TABLE

a. Source ID	surface impoundment
b. Source Type	Surface Impoundment
c. Secondary Source Type	N.A.
d. Source Volume (yd3) | Source Area (ft2)	4357.00 | 0.00
e. Source Volume/Area Value	1.74E+03
f. Source Hazardous Constituent Quantity (HCQ) Value (sum of 1b)	0.00E+00
g. Data Complete?	NO
h. Source Hazardous Wastestream Quantity (WSQ) Value (sum of 1f)	0.00E+00
i. Data Complete?	NO
k. Source Hazardous Waste Quantity (HWQ) Value (2e, 2f, or 2h)	1.74E+03

Source Hazardous Substances	Depth (feet)	Liquid	Concent.	Units
Aluminum	< 2	NO	2.2E+04	ppm
Copper	< 2	NO	3.2E+01	ppm
Iron	< 2	NO	4.6E+04	ppm
Zinc	< 2	NO	4.5E+01	ppm

Documentation for Source Type:

Source was used as a surface impoundment to contain wastewater from CBS processing.

Reference: 2

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Documentation for Source Hazardous Substances:

Surface soil samples taken in the source include CR-SS-06 and SS-07.
Background concentrations in SS-01 include:
Aluminum - 5800 mg/kg
copper - 6.3 mg/kg
iron - 12000 mg/kg
zinc - 8U mg/kg

Reference: Appendix B

Documentation for Source Volume:

880,000 gallon surface impoundment converts to 4357 cubic yards.

Reference: 5

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1. WASTESTREAM QUANTITY SUMMARY TABLE, SOURCE: contaminated soil

a. Wastestream ID	
b. Hazardous Constituent Quantity (C) (lbs.)	0.00
c. Data Complete?	NO
d. Hazardous Wastestream Quantity (W) (lbs.)	0.00
e. Data Complete?	NO
f. Wastestream Quantity Value (W/5,000)	0.00E+00

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2. SOURCE HAZARDOUS WASTE QUANTITY FACTOR TABLE

a. Source ID	contaminated soil
b. Source Type	Contaminated Soil
c. Secondary Source Type	N.A.
d. Source Volume (yd3) | Source Area (ft2)	0.00 | 6000.00
e. Source Volume/Area Value	1.76E-01
f. Source Hazardous Constituent Quantity (HCQ) Value (sum of 1b)	0.00E+00
g. Data Complete?	NO
h. Source Hazardous Wastestream Quantity (WSQ) Value (sum of 1f)	0.00E+00
i. Data Complete?	NO
k. Source Hazardous Waste Quantity (HWQ) Value (2e, 2f, or 2h)	1.76E-01

Source Hazardous Substances	Depth (feet)	Liquid	Concent.	Units
Aluminum	< 2	NO	2.1E+04	ppm
Cobalt	< 2	NO	3.6E+01	ppm
Copper	< 2	NO	2.9E+01	ppm
Iron	< 2	NO	4.9E+04	ppm
Nickel	< 2	NO	1.5E+01	ppm
Zinc	< 2	NO	3.1E+01	ppm

Documentation for Source Type:

Soil was found to be contaminated in the surface soil samples, and no other source applies.

Reference: Appendix B, Figure 3

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Documentation for Source Hazardous Substances:

Samples used to determine contaminated soil were SS-03, SS-04, SS-05. Background concentrations for the inorganics observed at elevated levels from SS-01 are as follows:
Aluminum - SS - 5800 mg/kg
cobalt - SS - 6.8 mg/kg
iron - SS - 12000 mg/kg
nickel - SS - 4.1J mg/kg
zinc - SS - 8U mg/kg
copper - SS - 6.3 mg/kg

Reference: Appendix B

Documentation for Source Area:

Source area was estimated from the map in figure 3 (to scale drawing) by extrapolating a triangle from the three surface soil samples that showed contamination.

Reference: Appendix B, Figure 3

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3. SITE HAZARDOUS WASTE QUANTITY SUMMARY

No.	Source ID	Migration Pathways	Vol. or Area Value (2e)	Constituent or Wastestream Value (2f,2h)	Hazardous Waste Qty. Value (2k)
1	surface impoundment	GW-SW-SE-A	1.74E+03	0.00E+00	1.74E+03
2	contaminated soil	GW-SW-SE-A	1.76E-01	0.00E+00	1.76E-01

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4. PATHWAY HAZARDOUS WASTE QUANTITY AND WASTE CHARACTERISTICS SUMMARY TABLE

Migration Pathway	Contaminant Values		HWQVs*	WCVs**
Ground Water	Toxicity/Mobility	1.00E+04	100	32
SW: Overland Flow, DW	Tox./Persistence	1.00E+04	100	32
SW: Overland Flow, HFC	Tox./Persis./Bioacc.	5.00E+06	100	100
SW: Overland Flow, Env	Etox./Persis./Bioacc.	5.00E+06	100	100
SW: GW to SW, DW	Tox./Persistence	1.00E+04	100	32
SW: GW to SW, HFC	Tox./Persis./Bioacc.	5.00E+06	100	100
SW: GW to SW, Env	Etox./Persis./Bioacc.	5.00E+06	100	100
Soil Exposure:Resident	Toxicity	1.00E+04	10	18
Soil Exposure: Nearby	Toxicity	1.00E+04	10	18
Air	Toxicity/Mobility	8.00E-01	100	2

* Hazardous Waste Quantity Factor Values
** Waste Characteristics Factor Category Values

Note: SW = Surface Water
GW = Ground Water
DW = Drinking Water Threat
HFC = Human Food Chain Threat
Env = Environmental Threat

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GROUND WATER MIGRATION PATHWAY SCORESHEET
CBS Records - 05/28/92

GROUND WATER MIGRATION PATHWAY Factor Categories & Factors	Maximum Value	Value Assigned
Likelihood of Release to an Aquifer Aquifer: Crystalline rock aqu		
1. Observed Release	550	550
2. Potential to Release		
2a. Containment	10	10
2b. Net Precipitation	10	0
2c. Depth to Aquifer	5	5
2d. Travel Time	35	35
2e. Potential to Release [lines 2a(2b+2c+2d)]	500	400
3. Likelihood of Release	550	550
Waste Characteristics		
4. Toxicity/Mobility	*	1.00E+04
5. Hazardous Waste Quantity	*	100
6. Waste Characteristics	100	32
Targets		
7. Nearest Well	50	9.00E+00
8. Population		
8a. Level I Concentrations	**	0.00E+00
8b. Level II Concentrations	**	0.00E+00
8c. Potential Contamination	**	3.00E+00
8d. Population (lines 8a+8b+8c)	**	3.00E+00
9. Resources	5	0.00E+00
10. Wellhead Protection Area	20	0.00E+00
11. Targets (lines 7+8d+9+10)	**	1.20E+01
12. Targets (including overlaying aquifers)	**	1.20E+01
13. Aquifer Score	100	2.56
GROUND WATER MIGRATION PATHWAY SCORE (Sgw)	100	2.56

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

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GROUND WATER PATHWAY AQUIFER SUMMARY
CBS Records - 05/28/92

No.	Aquifer ID	Type	Overlaying No.	Inter-Connected with	Likelihood of Release	Targets
1	Crystalline rock aqu	Non K	0	0	550	1.20E+01

Containment

No.	Source ID	HWQ Value	Containment Value
1	surface impoundment	1.74E+03	10
2	contaminated soil	1.76E-01	10

Containment Factor 10

Documentation for Ground Water Containment, Source surface impoundment:

Evidence of groundwater contamination is present in the monitoring wells.

Reference: Appendix B

Documentation for Ground Water Containment, Source contaminated soil:

There is no containment between the contaminated soil and the groundwater.

Reference: 1

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Net Precipitation

Net Precipitation (inches) 0.00

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Aquifer: Crystalline rock aqu.

Type of Aquifer: Non Karst

Overlaying Aquifer: 0

Interconnected with: 0

Documentation for Crystalline rock aqu. Aquifer:

The fractured and faulted rocks of the Dog River Formation, combined with the overlying residual soil material, make up the unconfined residual soil\crystalline rock aquifer system.

Reference: 23

OBSERVED RELEASE

No.	Well ID	Well Type	Distance (miles)	Level of Contamination
1	MW-02	Monitoring Well	0.000	Level I
2	MW-03	Monitoring Well	0.000	Level I

Well No.	Hazardous Substance	Concent.	MCL	Cancer	RFD	Units
1	Aluminum	3.1E+04	0.0E+00	0.0E+00	0.0E+00	ppb
1	Chromium	6.9E+01	5.0E+01	0.0E+00	1.8E+02	ppb
1	Cobalt	1.9E+01	0.0E+00	0.0E+00	0.0E+00	ppb
1	Copper	2.7E+01	0.0E+00	0.0E+00	1.3E+03	ppb
1	Iron	5.5E+04	0.0E+00	0.0E+00	0.0E+00	ppb
1	Nickel	1.2E+01	0.0E+00	0.0E+00	7.0E+02	ppb
2	Aluminum	1.6E+05	0.0E+00	0.0E+00	0.0E+00	ppb
2	Chromium	4.8E+02	5.0E+01	0.0E+00	1.8E+02	ppb
2	Cobalt	1.2E+02	0.0E+00	0.0E+00	0.0E+00	ppb
2	Copper	1.3E+02	0.0E+00	0.0E+00	1.3E+03	ppb
2	Iron	2.9E+05	0.0E+00	0.0E+00	0.0E+00	ppb
2	Nickel	1.0E+02	0.0E+00	0.0E+00	7.0E+02	ppb
2	Zinc	2.6E+02	0.0E+00	0.0E+00	7.0E+03	ppb

Observed Release Factor 550

Documentation for Well MW-02:

MW-02 is located at the northern side of the surface impoundment.

Reference: Figure 3

Documentation for Well MW-03:

MW-03 is located at the eastern border of the surface impoundment, in the most downgradient location sampled.

Reference: Figure 3, Appendix A

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GROUND WATER PATHWAY LIKELIHOOD OF RELEASE Crystalline rock aqu. AQUIFER
CBS Records - 05/28/92

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POTENTIAL TO RELEASE

Containment

Containment Factor	10	

Net Precipitation

Net Precipitation Factor	0	

Depth to Aquifer

A. Depth of Hazardous Substances	0.00	feet
B. Depth to Aquifer from Surface	0.00	feet
C. Depth to Aquifer (B - A)	0.00	feet
Depth to Aquifer Factor	5	

Travel Time

Are All Layers Karst?	NO	
Thickness of Layer(s) with Lowest Conductivity	0.00	feet
Hydraulic Conductivity (cm/sec)	0.0E-00	
Travel Time Factor	35	

==========

Potential to Release Factor 400

Source: 1 surface impoundment

Source Hazardous Waste Quantity Value: 1742.80

Hazardous Substance	Toxicity Value	Mobility Value	Toxicity/ Mobility Value
Aluminum	100	2.00E-05	2.00E-03
Copper	100	1.00E-02	1.00E+00
Iron	100	1.00E-02	1.00E+00
Zinc	10	2.00E-03	2.00E-02

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Source: 2 contaminated soil

Source Hazardous Waste Quantity Value: 0.18

Hazardous Substance	Toxicity Value	Mobility Value	Toxicity/ Mobility Value
Aluminum	100	2.00E-05	2.00E-03
Cobalt	100	1.00E-02	1.00E+00
Copper	100	1.00E-02	1.00E+00
Iron	100	1.00E-02	1.00E+00
Nickel	10000	2.00E-05	2.00E-01
Zinc	10	2.00E-03	2.00E-02

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Hazardous Substances Found in an Observed Release

Well No.	Observed Release Hazardous Substance	Toxicity Value	Mobility Value	Toxicity/ Mobility Value
1	Aluminum	100	1.00E+00	1.00E+02
1	Chromium	10000	1.00E+00	1.00E+04
1	Cobalt	100	1.00E+00	1.00E+02
1	Copper	100	1.00E+00	1.00E+02
1	Iron	100	1.00E+00	1.00E+02
1	Nickel	10000	1.00E+00	1.00E+04
2	Aluminum	100	1.00E+00	1.00E+02
2	Chromium	10000	1.00E+00	1.00E+04
2	Cobalt	100	1.00E+00	1.00E+02
2	Copper	100	1.00E+00	1.00E+02
2	Iron	100	1.00E+00	1.00E+02
2	Nickel	10000	1.00E+00	1.00E+04
2	Zinc	10	1.00E+00	1.00E+01

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Toxicity/Mobility Value from Source Hazardous Substances:	1.00E+00
Toxicity/Mobility Value from Observed Release Hazardous Substances:	1.00E+04
Toxicity/Mobility Factor:	1.00E+04
Sum of Source Hazardous Waste Quantity Values:	1.74E+03
Hazardous Waste Quantity Factor:	100
Waste Characteristics Factor Category:	32

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Population by Well

No.	Well ID	Sample Type	Distance (miles)	Level of Contamination	Population

- N/A and/or data not specified

Level I Population Factor: 0.00

Level II Population Factor: 0.00

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Potential Contamination by Distance Category

Distance Category (miles)	Population	Value
> 0 to 1/4	0.0	0.00E+00
> 1/4 to 1/2	0.0	0.00E+00
> 1/2 to 1	0.0	0.00E+00
> 1 to 2	71.0	1.00E+00
> 2 to 3	41.0	7.00E-01
> 3 to 4	136.0	1.30E+00

Potential Contamination Factor: 3.000

Documentation for Target Population > 1 to 2 miles Distance Category:

26 households x 2.71 persons per household = 71 persons.

Reference: Appendix A, Ref. 28

Documentation for Target Population > 2 to 3 miles Distance Category:

15 houses x 2.71 persons per household = 41 persons.

Reference: Appendix A, Ref. 28

Documentation for Target Population > 3 to 4 miles Distance Category:

50 houses x 2.71 persons per household = 136 persons.

Reference: Appendix A, Ref. 28

Nearest Well

Level of Contamination: Potential
Distance in miles: 1.00

Nearest Well Factor: 9.00E+00

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Documentation for Nearest Well:

The nearest private well was estimated by analysis of a topographic map that contained all the municipal water lines, and assuming that those not served are utilizing private wells for potable water.

Reference: Appendix A, 1, 30

Resources

Resource Use: NO

Resource Factor: 0.00E+00

Documentation for Resources:

No resources identified for groundwater.

Reference:

Wellhead Protection Area

No wellhead protection area

Wellhead Protection Area Factor: 0.00E+00

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET
CBS Records - 05/28/92

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT Factor Categories & Factors DRINKING WATER THREAT	Maximum Value	Value Assigned
Likelihood of Release		
1. Observed Release	550	0
2. Potential to Release by Overland Flow		
2a. Containment	10	9
2b. Runoff	25	1
2c. Distance to Surface Water	25	6
2d. Potential to Release by Overland Flow [lines 2a(2b+2c)]	500	63
3. Potential to Release by Flood		
3a. Containment (Flood)	10	0
3b. Flood Frequency	50	0
3c. Potential to Release by Flood (lines 3a x 3b)	500	0
4. Potential to Release (lines 2d+3c)	500	63
5. Likelihood of Release	550	63
Waste Characteristics		
6. Toxicity/Persistence	*	1.00E+04
7. Hazardous Waste Quantity	*	100
8. Waste Characteristics	100	32
Targets		
9. Nearest Intake	50	0.00E+00
10. Population		
10a. Level I Concentrations	**	0.00E+00
10b. Level II Concentrations	**	0.00E+00
10c. Potential Contamination	**	0.00E+00
10d. Population (lines 10a+10b+10c)	**	0.00E+00
11. Resources	5	5.00E+00
12. Targets (lines 9+10d+11)	**	5.00E+00
13. DRINKING WATER THREAT SCORE	100	0.12

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

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SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET
CBS Records - 05/28/92

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT Factor Categories & Factors HUMAN FOOD CHAIN THREAT	Maximum Value	Value Assigned
Likelihood of Release		
14. Likelihood of Release (same as line 5)	550	63
Waste Characteristics		
15. Toxicity/Persistence/Bioaccumulation	*	5.00E+06
16. Hazardous Waste Quantity	*	100
17. Waste Characteristics	1000	100
Targets		
18. Food Chain Individual	50	2.00E+00
19. Population		
19a. Level I Concentrations	**	0.00E+00
19b. Level II Concentrations	**	0.00E+00
19c. Pot. Human Food Chain Contamination	**	3.00E-04
19d. Population (lines 19a+19b+19c)	**	3.00E-04
20. Targets (lines 18+19d)	**	2.00E+00
21. HUMAN FOOD CHAIN THREAT SCORE	100	0.15

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

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SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET
CBS Records - 05/28/92

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT Factor Categories & Factors ENVIRONMENTAL THREAT	Maximum Value	Value Assigned
Likelihood of Release		
22. Likelihood of Release (same as line 5)	550	63
Waste Characteristics		
23. Ecosystem Toxicity/Persistence/Bioacc.	*	5.00E+06
24. Hazardous Waste Quantity	*	100
25. Waste Characteristics	1000	100
Targets		
26. Sensitive Environments	**	0.00E+00
26a. Level I Concentrations	**	0.00E+00
26b. Level II Concentrations	**	1.00E+00
26c. Potential Contamination	**	1.00E+00
26d. Sensitive Environments (lines 26a+26b+26c)	**	1.00E+00
27. Targets (line 26d)	60	0.08
28. ENVIRONMENTAL THREAT SCORE	100	0.35
29. WATERSHED SCORE	100	0.35
30. SW: OVERLAND/FLOOD COMPONENT SCORE (Sof)		

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

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SURFACE WATER PATHWAY SEGMENT SUMMARY
CBS Records - 05/28/92

No.	Segment ID	Segment Type	Water Type	Start Point (mi)	End Point (mi)	Average Flow (cfs)
1	Little Tallapoosa	River	Fresh	0.00	15.01	100

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SURFACE WATER PATHWAY OVERLAND FLOW/FLOOD COMPONENT LIKELIHOOD OF RELEASE
CBS Records - 05/28/92

OBSERVED RELEASE

No.	Sample ID	Sample Type	Distance (miles)	Level of Contamination DW	HFC	Env

- N/A and/or data not specified

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POTENTIAL TO RELEASE

Potential to Release by Overland Flow

Containment

No.	Source ID	HWQ Value	Containment Value

Containment Factor: 1
Containment Factor: 2

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Distance to Surface Water

Documentation for Overland Flow Containment, Source surface impoundment:

No free liquids are present, as the surface impoundment was closed. A runoff system is present to collect surface water runoff from the entire CBS Records facility.

Reference: 2

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Documentation for Overland Flow Containment, Source contaminated soil:

Some control for runoff is provided through channeling of onsite runoff through ditches into the retention ponds on the eastern portion of the site.

Reference: 2

Distance to Surface Water Factor: 0

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Runoff

Documentation for Distance to Surface Water:

Estimated distance along Beulah Creek (intermittent stream) to the Little Tallapoosa River. Distance is approximately 1 mile to perennial surface water.

Reference: Appendix A, 2

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Documentation for Drainage Area:

Approximately 1/3 of the total area of the CBS facility could potentially be drained by runoff that would contact source areas.

Reference: Figure 3, 1, 2

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Documentation for Rainfall:

Rainfall Frequency Atlas of the United States was used. Rainfall in the area is approximately 3.2 inches.

Reference: 30

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Documentation for Soil Group:

The land surface in the area is underlain by a clay-rich, residual material called saprolite. The fractured and faulted rocks of the Dog River Formation, along with this residual material, make up an unconfined crystalline rock aquifer system in which saturation rarely extends below 300 feet bls.

Reference: 20, 24, 25

SURFACE WATER PATHWAY OVERLAND FLOW/FLOOD COMPONENT LIKELIHOOD OF RELEASE
CBS Records - 05/28/92

==========

Potential to Release by Overland Flow Factor: 1

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Potential to Release by Flood

No.	Source ID	HWQ Value	Flood Containment Value	Flood Frequency Value	Potential to Release by Flood
63	- / y	6.01E-154	5888	13087	3906

- N/A and/or data not specified

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Documentation for Flood Containment, Source surface impoundment:

The surface impoundment is not located in a floodplain. No containment measures are present, however, except the runoff control system.

Reference: 2

Documentation for Flood Frequency, Source surface impoundment:

None of the waste management areas on the facility are in a floodplain.

Reference: 2

Documentation for Flood Containment, Source contaminated soil:

Source is on a high topographic location and is somewhat contained from flood by the runoff control system.

Reference: Appendix A, 2

Documentation for Flood Frequency, Source contaminated soil:

None of the soil is located in a floodplain.

Reference: 2

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CBS Records - 05/28/92

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CBS Records - 05/28/92

Source: 1 surface impoundment

Source Hazardous Waste Quantity Value: 1742.80

Hazardous Substance	Toxicity Value	Persistence Value	Toxicity/ Persistence Value
Aluminum	0	1.00E+00	0.00E+00
Copper	100	1.00E+00	1.00E+02
Iron	0	1.00E+00	0.00E+00
Zinc	10	1.00E+00	1.00E+01

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CBS Records - 05/28/92

Source: 2 contaminated soil

Source Hazardous Waste Quantity Value: 0.18

Hazardous Substance	Toxicity Value	Persistence Value	Toxicity/ Persistence Value
Aluminum	0	1.00E+00	0.00E+00
Cobalt	100	1.00E+00	1.00E+02
Copper	100	1.00E+00	1.00E+02
Iron	0	1.00E+00	0.00E+00
Nickel	10000	1.00E+00	1.00E+04
Zinc	10	1.00E+00	1.00E+01

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CBS Records - 05/28/92

Hazardous Substances Found in an Observed Release

Sample No.	Observed Release Hazardous Substance	Toxicity Value	Persistence Value	Toxicity/ Persistence Value

- N/A and/or data not specified

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Toxicity/Persistence Value from Source Hazardous Substances:	1.00E+04
Toxicity/Persistence Value from Observed Release Hazardous Substances:	0.00E+00
Toxicity/Persistence Factor:	1.00E+04
Sum of Source Hazardous Waste Quantity Values:	1.74E+03
Hazardous Waste Quantity Factor:	100
Waste Characteristics Factor Category:	32

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Level I Concentrations

- N/A and/or data not specified

Level II Concentrations

- N/A and/or data not specified

Most Distant Level I Sample

- N/A and/or data not specified

Most Distant Level II Sample

- N/A and/or data not specified

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SW PATHWAY: OVERLAND FLOW/FLOOD COMPONENT DRINKING WATER THREAT TARGETS
CBS Records - 05/28/92

Level I Concentrations

Intake	Distance Along the In-water Segment from the Probable Point of Entry (miles)	Population

- N/A and/or data not specified

==========

Population Served by Level I Intakes: 0.0

Level I Population Factor: 0.00E+00

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SW PATHWAY: OVERLAND FLOW/FLOOD COMPONENT DRINKING WATER THREAT TARGETS
CBS Records - 05/28/92

Level II Concentrations

Intake	Distance Along the In-water Segment from the Probable Point of Entry (miles)	Population
- N/A and/or data not specified		

Population Served by Level II Intakes: 0.0

Level II Population Factor: 0.00E+00

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SW PATHWAY: OVERLAND FLOW/FLOOD COMPONENT DRINKING WATER THREAT TARGETS
CBS Records - 05/28/92

Potential Contamination

Intake ID	Average Annual Flow (cfs)	Population Served

- N/A and/or data not specified

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Documentation for Intake :

There are no surface water intakes located along the surface water pathway.

Reference: 1, 31, Appendix A

Type of Surface Water Body	Total Population	Dilution-Weighted Population

- N/A and/or data not specified

==========

Dilution-Weighted Population Served
by Potentially Contaminated Intakes: 0.0

Potential Contamination Factor: 0.0

Nearest Intake

Location of Nearest Drinking Water Intake: N.A.

Nearest Intake Factor: 0.00

Resources

Resource Use: YES

Resource Value: 5.00E+00

Documentation for Resources:

Surface water upstream and downstream is suitable for drinking.

Reference: 1

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SW PATHWAY: OVERLAND/FLOOD HUMAN FOOD CHAIN THREAT WASTE CHARACTERISTICS
CBS Records - 05/28/92

Source: 1 surface impoundment

Source Hazardous Waste Quantity Value: 1742.80

Hazardous Substance	Toxicity Value	Persistence Value	Bio-accum. Value	Toxicity/ Persistence/ Bioaccum. Value
Aluminum	0	1.00E+00	5.00E-01	0.00E+00
Chromium	10000	1.00E+00	5.00E+02	5.00E+06
Cobalt	100	1.00E+00	5.00E+03	5.00E+05
Copper	100	1.00E+00	5.00E+04	5.00E+06
Iron	0	1.00E+00	5.00E-01	0.00E+00
Nickel	10000	1.00E+00	5.00E+02	5.00E+06
Zinc	10	1.00E+00	5.00E+04	5.00E+05

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SW PATHWAY: OVERLAND/FLOOD HUMAN FOOD CHAIN THREAT WASTE CHARACTERISTICS
CBS Records - 05/28/92

Source: 2 contaminated soil

Source Hazardous Waste Quantity Value: 0.18

Hazardous Substance	Toxicity Value	Persistence Value	Bio-accum. Value	Toxicity/ Persistence/ Bioaccum. Value
Aluminum	0	1.00E+00	5.00E-01	0.00E+00
Cobalt	100	1.00E+00	5.00E+03	5.00E+05
Copper	100	1.00E+00	5.00E+04	5.00E+06
Iron	0	1.00E+00	5.00E-01	0.00E+00
Nickel	10000	1.00E+00	5.00E+02	5.00E+06
Zinc	10	1.00E+00	5.00E+04	5.00E+05

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Hazardous Substances Found in an Observed Release

Sample No.	Observed Release Hazardous Substance	Toxicity Value	Persistence Value	Bio-accum. Value	Toxicity/ Persistence/ Bioaccum. Value

- N/A and/or data not specified

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Toxicity/Persistence/Bioaccumulation Value from Source Hazardous Substances:	5.00E+06
Toxicity/Persistence/Bioaccumulation Value from Observed Release Hazardous Substances:	0.00E+00
Toxicity/Persistence/Bioaccumulation Factor:	5.00E+06
Sum of Source Hazardous Waste Quantity Values:	1.74E+03
Hazardous Waste Quantity Factor:	100
Waste Characteristics Factor Category:	100

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Level I Concentrations

- N/A and/or data not specified

Level II Concentrations

- N/A and/or data not specified

Most Distant Level I Sample

- N/A and/or data not specified

Most Distant Level II Sample

- N/A and/or data not specified

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SW PATHWAY: OVERLAND FLOW/FLOOD COMPONENT HUMAN FOOD CHAIN THREAT TARGETS
CBS Records - 05/28/92

Level I Concentrations

Fishery	Annual Production (pounds)	Human Food Chain Population Value
- N/A and/or data not specified		

Sum of Human Food Chain Population Values: 0.00E+00

Level I Concentrations Factor: 0.00E+00

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Level II Concentrations

Fishery	Annual Production (pounds)	Human Food Chain Population Value
- N/A and/or data not specified		

Sum of Human Food Chain Population Values: 0.00E+00

Level II Concentrations Factor: 0.00E+00

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Potential Contamination

Fishery	Annnual Production (pounds)	Type of Surface Water Body	Average Annual Flow (cfs)	Pop. Value (Pi)	Dilution Weight (Di)	Pi*Di

- N/A and/or data not specified

Sum of (Pi*Di): 0.00E+00

Potential Human Food Chain Contamination Factor: 3.00E-04

Documentation for Little Tallapoosa Fishery:

Fishery production is estimated to give the most conservative score for the river as a fishery.

Reference:

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Food Chain Individual

Location of Nearest Fishery: Little Tallapoosa
Distance from the Probable Point of Entry: 0.00 miles
Type of Surface Water Body: River
Dilution Weight: 0.1000000
Level of Contamination: Potential

Food Chain Individual Factor: 2.00

Documentation for Little Tallapoosa:

The entire perennial surface water pathway is in the Little Tallapoosa River. Flow rate is estimated based on the topographic map and visual observation of the river.

Reference: Appendix A

Source: 1 surface impoundment

Source Hazardous Waste Quantity Value: 1742.80

Hazardous Substance	Eco-toxicity Value	Persistence Value	Bio-accum. Value	Ecotoxicity/ Persistence/ Bioaccum. Value
Aluminum	0	1.00E+00	5.00E-01	0.00E+00
Chromium	10	1.00E+00	5.00E+02	5.00E+03
Cobalt	0	1.00E+00	5.00E+03	0.00E+00
Copper	1000	1.00E+00	5.00E+04	5.00E+07
Iron	10	1.00E+00	5.00E-01	5.00E+00
Nickel	1000	1.00E+00	5.00E+02	5.00E+05
Zinc	100	1.00E+00	5.00E+04	5.00E+06

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SW PATHWAY: OVERLAND FLOW/FLOOD ENVIRONMENTAL THREAT WASTE CHARACTERISTICS
CBS Records - 05/28/92

Source: 2 contaminated soil

Source Hazardous Waste Quantity Value: 0.18

Hazardous Substance	Eco-toxicity Value	Persistence Value	Bio-accum. Value	Ecotoxicity/ Persistence/ Bioaccum. Value
Aluminum	0	1.00E+00	5.00E-01	0.00E+00
Cobalt	0	1.00E+00	5.00E+03	0.00E+00
Copper	1000	1.00E+00	5.00E+04	5.00E+07
Iron	10	1.00E+00	5.00E-01	5.00E+00
Nickel	1000	1.00E+00	5.00E+02	5.00E+05
Zinc	100	1.00E+00	5.00E+04	5.00E+06

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Hazardous Substances Found in an Observed Release

Sample No.	Observed Release Hazardous Substance	Eco-toxicity Value	Persistence Value	Bio-accum. Value	Ecotoxicity/ Persistence/ Bioaccum. Value

- N/A and/or data not specified

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Ecotoxicity/Persistence/Bioaccummulation Value from Source Hazardous Substances:	5.00E+06
Ecotoxicity/Persistence/Bioaccummulation Value from Observed Release Hazardous Substances:	0.00E+00
Ecotoxicity/Persistence/Bioaccummulation Factor:	5.00E+06
Sum of Source Hazardous Waste Quantity Values:	1.74E+03
Hazardous Waste Quantity Factor:	100
Waste Characteristics Factor Category:	100

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Level I Concentrations

- N/A and/or data not specified

Level II Concentrations

- N/A and/or data not specified

Most Distant Level I Sample

- N/A and/or data not specified

Most Distant Level II Sample

- N/A and/or data not specified

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SW PATHWAY: OVERLAND FLOW/FLOOD COMPONENT ENVIRONMENTAL THREAT TARGETS
CBS Records - 05/28/92

Level I Concentrations

Sensitive Environment	Distance from Probable Point of Entry to Sensitive Env. (miles)	Sensitive Environment Value
- N/A and/or data not specified		

Sum of Sensitive Environments Values: 0

Wetlands

Wetland	Distance from Probable Point of Entry to Wetland (miles)	Wetlands Frontage (miles)
- N/A and/or data not specified		

Total Wetlands Frontage: 0.00 Miles Total Wetlands Value: 0

Sum of Sensitive Environments Value + Wetlands Value: 0.00E+00

Level I Concentrations Factor: 0.00E+00

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Level II Concentrations

Sensitive Environment	Distance from Probable Point of Entry to Sensitive Env. (miles)	Sensitive Environment Value
- N/A and/or data not specified		

Sum of Sensitive Environments Values: 0

Wetlands

Wetland	Distance from Probable Point of Entry to Wetland (miles)	Wetlands Frontage (miles)
- N/A and/or data not specified		

Total Wetlands Frontage: 0.00 Miles Total Wetlands Value: 0

Sum of Sensitive Environments Value + Wetlands Value: 0.00E+00

Level II Concentrations Factor: 0.00E+00

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Potential Contamination

Sensitive Environments

Type of Surface Water Body	Sensitive Environment	Sensitive Environment Value

Wetlands

Type of Surface Water Body	Sensitive Environment	Wetlands Frontage	Wetlands Value
River	1 Wetlands	3.40	100

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SW PATHWAY: OVERLAND FLOW/FLOOD COMPONENT ENVIRONMENTAL THREAT TARGETS
CBS Records - 05/28/92

Type of Surface Water Body	Sum of Sens. Environment Values(Sj)	Sum of Wetland Frontage Values(Wj)	Dilution Weight (Dj)	Dj(Wj+Sj)
Small to Moderate Stream	0	100	1.00E-01	1.00E+01

Sum of Dj(Wj+Sj): 1.00E+01
Sum of Dj(Wj+Sj)/10: 1.00E+00

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Potential Contamination Sensitive Environment Factor: 1.00E+00

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SOIL EXPOSURE PATHWAY SCORESHEET
CBS Records - 05/28/92

SOIL EXPOSURE PATHWAY Factor Categories & Factors RESIDENT POPULATION THREAT	Maximum Value	Value Assigned
Likelihood of Exposure		
1. Likelihood of Exposure	550	550
Waste Characteristics		
2. Toxicity	*	1.00E+04
3. Hazardous Waste Quantity	*	10
4. Waste Characteristics	100	18
Targets		
5. Resident Individual	50	0.00E+00
6. Resident Population		
6a. Level I Concentrations	**	0.00E+00
6b. Level II Concentrations	**	0.00E+00
6c. Resident Population (lines 6a+6b)	**	0.00E+00
7. Workers	15	1.50E+01
8. Resources	5	0.00E+00
9. Terrestrial Sensitive Environments	***	5.00E+01
10. Targets (lines 5+6c+7+8+9)	**	6.50E+01
11. RESIDENT POPULATION THREAT SCORE	**	6.44E+05

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.
*** No specific maximum value applies, see HRS for details.

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SOIL EXPOSURE PATHWAY SCORESHEET
CBS Records - 05/28/92

SOIL EXPOSURE PATHWAY Factor Categories & Factors NEARBY POPULATION THREAT	Maximum Value	Value Assigned
Likelihood of Exposure		
12. Attractiveness/Accessibility	100	5.00E+00
13. Area of Contamination	100	2.00E+01
14. Likelihood of Exposure	500	5.00E+00
Waste Characteristics		
15. Toxicity	*	1.00E+04
16. Hazardous Waste Quantity	*	10
17. Waste Characteristics	100	18
Targets		
18. Nearby Individual	1	1.00E+00
19. Population Within 1 Mile	**	5.40E-01
20. Targets (lines 18+19)	**	1.54E+00
21. NEARBY POPULATION THREAT SCORE	**	1.39E+02
SOIL EXPOSURE PATHWAY SCORE (Ss)	100	7.80

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

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SOIL EXPOSURE PATHWAY RESIDENT POPULATION THREAT LIKELIHOOD OF EXPOSURE
CBS Records - 05/28/92

Likelihood of Exposure

No.	Source ID	Level of Contamination
1	surface impoundment	Level II
2	contaminated soil	Level II

Likelihood of Exposure Factor: 550

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Documentation for Area of Contamination, Source surface impoundment:

Surface impoundment area was extrapolated from the square shape of the area as measured off Figure 3, a scale map of the site.

Reference: Appendix B, Figure 3

Documentation for Area of Contamination, Source contaminated soil:

Estimated area of contaminated soil by extrapolating a triangle between surface soil sampling points on the to scale Figure 3.

Reference: Appendix B, Figure 3

Source No.	Hazardous Substance	Depth (ft.)	Concent.	Cancer	RFD	Units
1	Aluminum	< 2	2.2E+04	0.0E+00	0.0E+00	ppm
1	Copper	< 2	3.2E+01	0.0E+00	2.2E+04	ppm
1	Iron	< 2	4.6E+04	0.0E+00	0.0E+00	ppm
1	Zinc	< 2	4.5E+01	0.0E+00	1.2E+05	ppm
2	Aluminum	< 2	2.1E+04	0.0E+00	0.0E+00	ppm
2	Cobalt	< 2	3.6E+01	0.0E+00	0.0E+00	ppm
2	Copper	< 2	2.9E+01	0.0E+00	2.2E+04	ppm
2	Iron	< 2	4.9E+04	0.0E+00	0.0E+00	ppm
2	Nickel	< 2	1.5E+01	0.0E+00	1.2E+04	ppm
2	Zinc	< 2	3.1E+01	0.0E+00	1.2E+05	ppm

Documentation for Source surface impoundment, Contaminants:

Surface soil samples taken in the source include CR-SS-06 and SS-07.
Background concentrations in SS-01 include:
Aluminum - 5800 mg/kg
copper - 6.3 mg/kg
iron - 12000 mg/kg
zinc - 8U mg/kg

Reference: Appendix B

Documentation for Source contaminated soil, Contaminants:

Samples used to determine contaminated soil were SS-03, SS-04, SS-05. Background concentrations for the inorganics observed at elevated levels from SS-01 are as follows:
Aluminum - SS - 5800 mg/kg
cobalt - SS - 6.8 mg/kg
iron - SS - 12000 mg/kg
nickel - SS - 4.1J mg/kg
zinc - SS - 8U mg/kg
copper - SS - 6.3 mg/kg

Reference: Appendix B

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Source: 1 surface impoundment

Source Hazardous Waste Quantity Value: 0.00

Hazardous Substance	Toxicity Value
Aluminum	0
Copper	100
Iron	0
Zinc	10

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Source: 2 contaminated soil

Source Hazardous Waste Quantity Value: 0.18

Hazardous Substance	Toxicity Value
Aluminum	0
Cobalt	100
Copper	100
Iron	0
Nickel	10000
Zinc	10

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Toxicity Factor:	1.00E+04
Sum of Source Hazardous Waste Quantity Values:	1.76E-01
Hazardous Waste Quantity Factor:	10
Waste Characteristics Factor Category:	18

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Targets

Level I Population:	0.0	Value:	0.00
Level II Population:	0.0	Value:	0.00
Workers:	2300.0	Value:	15.00

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Documentation for Workers:

Approximately 2300 persons work in several shifts at the CBS Records facility.

Reference: 2

Resident Individual:	Potentia	Value:	0.00
Resources:	NO	Value:	0.00

Terrestial Sensitive Environment	Value
Monkey-face plant	50

Terrestrial Sensitive Environments Factor: 50.00

Documentation for Terrestrial Environment Monkey-face plant:

The Monkey-face plant (Platanthera integrilabia) is a plant species currently under review as to its federal status.

Reference: 33

Likelihood of Exposure

No.	Source ID	Level of Contamination	Attractiveness/ Accessibility	Area of Contam. (sq. feet)
1	surface impoundment	Level II	5	6400
2	contaminated soil	Level II	5	6000

Highest Attractiveness/Accessibility Value: 5
Sum of Eligible Areas Of Contamination (sq. feet): 12400
Area of Contamination Value: 20

Likelihood of Exposure Factor Category: 5

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Documentation for Attractiveness/Accessibility, Source surface impoundment:

The contaminated soil and the former surface impoundment are both located within a fenced area.

Reference: 1

Documentation for Attractiveness/Accessibility, Source contaminated soil:

Source is completely surrounded by a well-maintained fence, and is not accessible to public.

Reference: 1

Source No.	Hazardous Substance	Depth (ft.)	Concent.	Cancer	RFD	Units
1	Aluminum	< 2	2.2E+04	0.0E+00	0.0E+00	ppm
1	Copper	< 2	3.2E+01	0.0E+00	2.2E+04	ppm
1	Iron	< 2	4.6E+04	0.0E+00	0.0E+00	ppm
1	Zinc	< 2	4.5E+01	0.0E+00	1.2E+05	ppm
2	Aluminum	< 2	2.1E+04	0.0E+00	0.0E+00	ppm
2	Cobalt	< 2	3.6E+01	0.0E+00	0.0E+00	ppm
2	Copper	< 2	2.9E+01	0.0E+00	2.2E+04	ppm
2	Iron	< 2	4.9E+04	0.0E+00	0.0E+00	ppm

2	Nickel	< 2	1.5E+01	0.0E+00	1.2E+04	ppm
2	Zinc	< 2	3.1E+01	0.0E+00	1.2E+05	ppm

Documentation for Source surface impoundment, Contaminants:

Surface soil samples taken in the source include CR-SS-06 and SS-07.
Background concentrations in SS-01 include:
Aluminum - 5800 mg/kg
copper - 6.3 mg/kg
iron - 12000 mg/kg
zinc - 8U mg/kg

Reference: Appendix B

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Documentation for Source contaminated soil, Contaminants:

Samples used to determine contaminated soil were SS-03, SS-04, SS-05. Background concentrations for the inorganics observed at elevated levels from SS-01 are as follows:
Aluminum - SS - 5800 mg/kg
cobalt - SS - 6.8 mg/kg
iron - SS - 12000 mg/kg
nickel - SS - 4.1J mg/kg
zinc - SS - 8U mg/kg
copper - SS - 6.3 mg/kg

Reference: Appendix B

SOIL EXPOSURE PATHWAY NEARBY POPULATION THREAT WASTE CHARACTERISTICS
CBS Records - 05/28/92

Source: 1 surface impoundment

Source Hazardous Waste Quantity Value: 0.00

Hazardous Substance	Toxicity Value
Aluminum	0
Copper	100
Iron	0
Zinc	10

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Source: 2 contaminated soil

Source Hazardous Waste Quantity Value: 0.18

Hazardous Substance	Toxicity Value
Aluminum	0
Cobalt	100
Copper	100
Iron	0
Nickel	10000
Zinc	10

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Toxicity Factor:	1.00E+04
Sum of Source Hazardous Waste Quantity Values:	1.76E-01
Hazardous Waste Quantity Factor:	10
Waste Characteristics Factor Category:	18

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SOIL EXPOSURE PATHWAY NEARBY POPULATION THREAT TARGETS
CBS Records - 05/28/92

Nearby Individual

Population within 1/4 mile: 27.0

Nearby Individual Value: 1.0

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Population Within 1 Mile

Travel Distance Category	Number of People	Value
> 0 to 1/4 mile	27.0	0.0
> 1/4 to 1/2 mile	141.0	0.2
> 1/2 to 1 mile	472.0	0.3
	Population Within 1 Mile Factor:	0.5

Documentation for Population > 0 to 1/4 mile Distance Category:

Obtained from house count - 10 houses x 2.71 persons per household = 27 persons.

Reference: Appendix A, 28

Documentation for Population > 1/4 to 1/2 mile Distance Category:

Obtained from house count - 52 houses x 2.71 persons per household = 141 persons

Reference: Appendix A, 28

Documentation for Population > 1/2 to 1 mile Distance Category:

Obtained from house count - 174 houses x 2.71 persons per household = 472 persons.

Reference: Appendix A, 28

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AIR PATHWAY SCORESHEET
CBS Records - 05/28/92

AIR MIGRATION PATHWAY Factor Categories & Factors	Maximum Value	Value Assigned
Likelihood of Release		
1. Observed Release	550	0
2. Potential to Release		
2a. Gas Potential to Release	500	0
2b. Particulate Potential to Release	500	280
2c. Potential to Release	500	280
3. Likelihood of Release	550	280
Waste Characteristics		
4. Toxicity/Mobility	*	8.00E-01
5. Hazardous Waste Quantity	*	100
6. Waste Characteristics	100	2
Targets		
7. Nearest Individual	50	2.00E+01
8. Population		
8a. Level I Concentrations	**	0.00E+00
8b. Level II Concentrations	**	0.00E+00
8c. Potential Contamination	**	1.70E+02
8d. Population (lines 8a+8b+8c)	**	1.70E+02
9. Resources	5	0.00E+00
10. Sensitive Environments		
10a. Actual Contamination	***	0.00E+00
10b. Potential Contamination	***	7.00E+00
10c. Sens. Environments(lines 10a+10b)	***	7.00E+00
11. Targets (lines 7+8d+9+10c)	**	1.97E+02
AIR MIGRATION PATHWAY SCORE (Sa)	100	1.34E+00

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.
*** No specific maximum value applies, see HRS for details.

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OBSERVED RELEASE

No.	Sample ID	Distance (miles)	Level of Contamination

- N/A and/or data not specified

Observed Release Factor: 0

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Gas Migration Potential

GAS POTENTIAL TO RELEASE

Source ID	Source Type	Gas Contain. Value (A)	Gas Source Type Value (B)	Gas Migrtn. Potent. Value (C)	Sum (B+C)	Gas Potential to Rel. Value A(B+C)
- N/A and/or data not specified						

Gas Potential to Release Factor: 0

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Documentation for Gas Containment, Source surface impoundment:

The soil cover has been shown to be contaminated.

Reference: Appendix B

Documentation for Source Type, Source surface impoundment:

Source was used as a surface impoundment to contain wastewater from CBS processing.

Reference: 2

Documentation for Gas Containment, Source contaminated soil:

No containment is present for the contaminated soil.

Reference: 1

Documentation for Source Type, Source contaminated soil:

Soil was found to be contaminated in the surface soil samples, and no other source applies.

Reference: Appendix B, Figure 3

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Source: surface impoundment

Gaseous Hazardous Substance	Hazardous Substance Gas Migration Potential Value

Average of Gas Migration Potential Value for 3 Hazardous Substances: 0.000

Gas Migration Potential Value From Table 6-7: 0

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Source: contaminated soil

Gaseous Hazardous Substance	Hazardous Substance Gas Migration Potential Value

Average of Gas Migration Potential Value for 3 Hazardous Substances: 0.000

Gas Migration Potential Value From Table 6-7: 0

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Particulate Migration Potential

PARTICULATE POTENTIAL TO RELEASE

Source ID	Source Type	Partic. Contain. Value (A)	Partic. Source Type Value (B)	Partic. Migrtn. Potent. Value (C)	Sum (B+C)	Partic. Potential to Rel. Value A(B+C)
surface impoundment	Surface Impoundment	10	22	6	28	280
contaminated soil	Contaminated Soil	10	0	6	6	60

Particulate Potential to Release Factor: 280

Documentation for Particulate Containment, Source surface impoundment:

Sources are covered with soil that has shown inorganic contamination. Some vegetation is present.

Reference: Appendix B, 1

Documentation for Source Type, Source surface impoundment:

Source was used as a surface impoundment to contain wastewater from CBS processing.

Reference: 2

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Documentation for Particulate Containment, Source contaminated soil:

No containment is present for the contaminated soil.

Reference: 1

Documentation for Source Type, Source contaminated soil:

Soil was found to be contaminated in the surface soil samples, and no other source applies.

Reference: Appendix B, Figure 3

Documentation for Particulate Migration Potential:

Obtained From Figure 6-2 in the HRS Final Rule.

Reference: Final Rule

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Source: surface impoundment

Particulate Hazardous Substance
Aluminum
Copper
Iron
Zinc

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Source: contaminated soil

Particulate Hazardous Substance

Aluminum
Cobalt
Copper
Iron
Nickel
Zinc

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AIR PATHWAY WASTE CHARACTERISTICS
CBS Records - 05/28/92

Source: 1 surface impoundment

Source Hazardous Waste Quantity Value: 1742.80

Hazardous Substance	Toxicity Value	Gas Mobility Value	Particulate Mobility Value	Toxicity/ Mobility Value
Aluminum	100	NA	8.00E-05	8.00E-03
Copper	100	NA	8.00E-05	8.00E-03
Iron	100	NA	8.00E-05	8.00E-03
Zinc	10	NA	8.00E-05	8.00E-04

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Source: 2 contaminated soil

Source Hazardous Waste Quantity Value: 0.18

Hazardous Substance	Toxicity Value	Gas Mobility Value	Particulate Mobility Value	Toxicity/ Mobility Value
Aluminum	100	NA	8.00E-05	8.00E-03
Cobalt	100	NA	8.00E-05	8.00E-03
Copper	100	NA	8.00E-05	8.00E-03
Iron	100	NA	8.00E-05	8.00E-03
Nickel	10000	NA	8.00E-05	8.00E-01
Zinc	10	NA	8.00E-05	8.00E-04

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Hazardous Substances Found in an Observed Release

Sample ID	Observed Release Hazardous Substance	Particulate Toxicity/ Mobility Value	Gas Toxicity/ Mobility Value

- N/A and/or data not specified

Documentation for Particulate Mobility:

Obtained from the HRS Figure 6-3 in the Final Rule.

Reference: Final Rule

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Toxicity/Mobility Value from Source Hazardous Substances:	8.00E-01
Toxicity/Mobility Value from Observed Release Hazardous Substances:	0.00E+00
Toxicity/Mobility Factor:	8.00E-01
Sum of Source Hazardous Waste Quantity Values:	1.74E+03
Hazardous Waste Quantity Factor:	100
Waste Characteristics Factor Category:	2

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Actual Contamination

No.	Sample ID	Distance (miles)	Level of Contamination

- N/A and/or data not specified

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Potential Contamination

Distance Categories Subject to Potential Contamination	Population	Value
Onsite	2300.0	163.3000
> 0 to 1/4 mile	27.0	0.4000
> 1/4 to 1/2 mile	141.0	0.9000
> 1/2 to 1 mile	472.0	0.8000
> 1 to 2 miles	4088.0	2.7000
> 2 to 3 miles	7854.0	1.2000
> 3 to 4 miles	6088.0	0.7000
	Potential Contaminantion Factor:	170.0000

Documentation for Population Onsite Distance Category:

Approximately 2300 workers onsite.

Reference: 2

Documentation for Population > 0 to 1/4 mile Distance Category:

10 houses in 1/4 mile radius x 2.71 persons per household = 27 persons.

Reference: Appendix A, 28

Documentation for Population > 1/4 to 1/2 mile Distance Category:

House count within 1/4-1/2 mile radius was 52 houses x 2.71 persons per household = 141 persons.

Reference: Appendix A, 28

Documentation for Population > 1/2 to 1 mile Distance Category:

House count in 1/2 -1 mile radius equals 174 houses x 2.71 persons per household = 472 persons.

Reference: Appendix A, 28

Documentation for Population > 1 to 2 miles Distance Category:

Obtained from GEMS database.

Reference: 34

Documentation for Population > 2 to 3 miles Distance Category:

Obtained from GEMS database.

Reference: 34

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Documentation for Population > 3 to 4 miles Distance Category:

Obtained from GEMS database.

Reference: 34

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Nearest Individual Factor

Level of Contamination: Potential
Distance in miles: 0 to 1/8

Nearest Individual Value: 20

Documentation for Nearest Individual:

Nearest individuals are workers.

Reference: 1, 2

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Resources

Resource Use: NO

Resource Value: 0

Documentation for Resources:

No resources identified for the air pathway.

Reference:

Actual Contamination, Sensitive Environments

Sensitive Environment	Distance (miles)	Sensitive Environment Value
- N/A and/or data not specified		

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Actual Contamination, Wetlands

Distance Category	Wetland Acreage	Wetland Acreage Value
- N/A and/or data not specified		

==========

Sensitive Environments Actual Contamination Factor: 0.000
(Sum of Sensitive Environments + Wetlands Values)

Potential Contamination, Sensitive Environments

Sensitive Environment	Distance (miles)	Sensitive Environment Value	Distance Weight	Weighted Value/10
Species under revie	0.000	50	1.0000	5.000

Sum of Sensitive Environments Weighted Values/10: 5.000

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Potential Contamination, Wetlands

Distance Category	Wetland Acreage	Wetland Acreage Value	Distance Weight	Weighted Value/10
> 1/4 to 1/2 mile	475.0	450.0	0.0540	2.430

Total Wetland Acreage: 475.0

Sum of Wetland Weighted Acreage Values/10: 2.430

==========

Sensitive Environment Potential Contamination Factor: 7.000

Documentation for Sensitive Environment wetlands:

Approximately 475 acres of wetlands are delineated on the topographic map.

Reference: Appendix A

CBS Records
Project No. 50011.010

Carrollton, Carroll County, Georgia

Site Manager: Jancie Hatcher
Jancie S. Hatcher

Crew:
Bryan Williams
Laura Morrisson
Victor Blix

REFERENCE 1

12-16-91

0945 Arrived at CBS Records (Sony Corp) I went in, signed in and signed confidentiality agreement regarding anything, machines or processes I might see. Not everyone involved with project is here yet.

Tape Blank CR-TB-01 is pulled by Laura Morrisson and ~~Victor Blu~~.
JH 12-16-91

Bryan Williams offsite.

1000 Mr. Flagg showed Victor & I where we could park truck and set up. We are in paved parking near the powerhouse. Went back to plant to meet other people and have short meeting. Weather is clear, sunny, cold - ≈ 35° and windy.

12-16-91

1020 Met with Cynthia Draper of Law Environmental. John McKeown and Janice Thomas of EPA, Bob Flagg of CBS Records, and Victor Blix of BVWST were also present.
Mr. Flagg provided us with some general information - aerial photos, plant layout, etc. Mr. Mark Danas of CBS Records showed up. Flagg documented what was given and to whom it was given.

Mr. Flagg requested that monitoring wells ~~log~~ locks be removed this morning.
JAH

Mr. Flagg stated that they had bottles for splits. It was clarified that the Law Environmental splits would be the only splits. However, Mr. Flagg has extra bottles.

John told them that we would provide them a copy of the report when it became available.

JSH

~~1030~~ 1045 12-16-91

Hiked out and did set-up of decon line, etc. with crew. Plan to bail wells first. Took 3 picture panorama of cooling towers to right.

1120 Victor Blix calibrated HNu serial # 81632. At first, didn't calibrate correctly. Probably too cold.

59 ppm on 10.2 eV probe span setting of 9.8

1135 Drove to Monitoring well B-1 to begin bailing.

1150 Victor monitored MW B-1. No readings on HNu. Total depth of well is 32 feet according to Mark Danas. Depth to water at last sampling was 15 feet.

12-16-91

Had some problems with the water level indicator. Approx. 15 feet from top of casing to water. Ended up checking depth with bailer and tape measure.

~~26 feet~~ - 28 feet, 2 inches total depth

$V = \pi r^2 h$

28 feet, 2 inches
15 feet
13 feet, 2 inches

$V = \pi (2 \text{ in})^2 (158 \text{ inches})$

$V = 1994 \text{ in}^3 \rightarrow$ gallons

1 cu ft = 7.48 gallons
1728 cu inches = 1 cu ft

$1994 \text{ in}^3 \left(\frac{1 \text{ cu ft}}{1728 \text{ in}^3}\right)\left(\frac{7.48 \text{ gal}}{1 \text{ cu ft}}\right) =$

8.59 gallons x 3
volumes = 25.8 gallons
total purge

Begin bailing wells.

12-16-91

1235 Sent Laura & Victor to decon the water-level indicator. They will go to B-5 and get water level and total depth.

1250 Went down to check on Laura and Victor. They have opened B-5. No readings were noted on the HNu.

4 x 4 1/2 feet = 18 feet + 4 feet = depth to water 22 feet

5 x 4 feet = 20 feet + 6 feet, 1 inch = 26 feet, 1 inch.

49 inches $V = \pi r^2 h$

$= \pi (2 in)^2 (49 inches)$

$= 615.4 in^3$

$615.4 in^3 \left(\frac{1 cu ft}{1728 in^3}\right)\left(\frac{7.48 g}{1 cu ft}\right) =$

2.66 gal x 3 = 8 gallons total

12-16-91

1310 Bryan finishes 3-volume purge of B-1 monitoring well. We custody seal off. He takes a break.

1345 Finished bailing B-5. Bailed 3 volumes. Victor and several other people take lunch break.

1400 John McKeown leaves site. Laura & I go to measure B-8 well, but was still locked. Mr. Danas went to get key. No readings on HNu in ~~borehole~~ casing or breathing zone. B-8 monitoring well.

5 x 4 feet + 4½ feet = 24½ feet total depth

14 feet, 3 inches to water

24 feet, 6 inches
14 feet, 3 inches
10 feet, 3 inches

12-16-91

$V = \pi r^2 h$

$= 3.14\,(2\,in)^2\,(123\text{ inches})$

$= 1545\ in^3$

$1545\ in^3 \left(\frac{1\ cu\ ft}{1728\ in^3}\right)\left(\frac{7.48\ gal}{1\ cu\ ft}\right) =$

6.69 gallons x 3 = 20.07 gallons

Laura dropped bailer in well, so it had to be fished out. I went walking to look at other sampling sites. Flagged several sample locations at areas of stained soil. Decided to drop subsurface samples SB-02, -04, and -06, as these are really only good for piping migration. Got bailer out of well. Continued bailing.

1500 Finished bailing. Custody-sealed well. Reset up to take SS-01, SB-01.

1535 Arrived at sampling location.

12-16-91

Just on top of grassy knoll above a culvert. Lined up approx. with culvert opening. above paved parking lot and railroad spur. Cynthia Draper will do all her own custody seals.

CR-SS-01 — 1545

Soil is dark - sandy to loamy - not much clay. No reading on HNu. Ms. Draper has 3 bottles for each surface soil sample. They will not be splitting any of the subsurface soil samples. Taken at 6 inches depth.

CR-SB-01 — Soil is reddish - more clayey than topsoil. Sample taken at approx. 3 feet depth.

1600 SB-01 sampletime. No reading on HNu.

12-16-91

1630 - Arrived at SS-02 Location. Soil is dark brown loamy - not very clayey. Sample Time CR-SS-02 1635 - taken at approx. 4 inches.

1645 - went back to base - packed up for the day.

1715 - Left site for day.

12-17-91

0810 Arrived on site.
Weather is clear, cold - 31°.

Nobody around - we go up to office to let them know we are here. Office is locked apparently their office people start work at 8:30

0830 Mr. Flagg arrives onsite. Mr. Dancs and Jennifer Nolan also arrive.

0845 Bryan Williams calibrates HNu. Serial # 81632
Calibrated 59 ppm at span setting of 9.5.

0905 Left for sediment location.

0915 - Picked SD-01 location. In culvert - below SS SB-01 sampling location. Mr. Flagg confirmed that all runoff

12-17-91

from this point goes into the retention ponds.

0915 CR-SD-01 sample time. Dark brown sediment - good amount of flowing water. There was a large piece of plastic (discolored) near the sediment location. No readings on HNu.

0945 Arrived at MW-01 (B-1) location. Cynthia has just received a shipment of bottles, so she needs a few minutes to set up. No readings on HNu. First bailer is thrown away because the bailer was in the well overnight. Custody seal was intact.

12-17-91

This sample was matrix duplicate for BYWST samples. Cynthia has 8 bottles - all are preperserved. Sample time is 1005.

1045 Bryan Williams calibrates conductivity, pH meter - Serial # 670813.
Temp. - 13°C
Cond. - 42.8
pH - 7.90 ← MW-01
The probe seemed a little loose.

1110 MW-02 Sample Time - This was Law Environ. duplicate water sample. They asked us if there was any rinsate sample done on the field equipment after decon. I told her not to my knowledge, but offered to let her take a rinseate off another bailer or other equipment that had been cleaned at the warehouse.

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1145 Bryan Williams calibrates pH/ cond. meter. & preserves MW-02

Temp. — 17° C
pH — 8.31
Conductivity — 59.2

1200 Proceeded to MW-03. Custody seal intact. No reading on HNu.

1210 — Sample time for MW-03. Water was very sedimenty.

1230 Bryan Williams calibrated pH/ cond. meter. MW-03

Temp — 19 °C
pH — 8.56
Cond. — 100.2

12-17-91

1235 - Took break. Laura and I go to find pay phone. Joe was not in the office to tell us the lab. Hubert was at lunch - so we'll have to call later. Drove up Beulah Church Road to nearest houses. One of them had a shed that looked small enough to be a wellhouse. Took some pictures - well casing appearance, etc.

1320 Arrived at SD-02 location. Directly in front of outfall on side of Columbia Drive nearest the plant building. This sampling location was abandoned because everything on bottom was rock.

1340 Sample time CR-SD-02 Soil was very dark brown - lots of organic matter. Sample was moved to the far side of Columbia Drive.

1355 12-17-91

1400 Left for SD-03 location.

1405 CR-SD-03 sample time.
Reddish clay w/ some grey-blue
Clay mixed in. No readings on HNu.
This sample taken on side near the
Plant at culvert from other
retention pond.

1435
CR-SS-03 - Taken at corner of
sewerd facility outside gate.
Area of stained soil and
Standing water (approx. 1 inch).
Soil is very red clay mud.

1500 CR-SB-03 - Taken at
same location. Approx. 3 feet
deep - still reddish clay. Mr.
Flagg mentioned that they had
had a major gas leak at
one point, but that it was
fixed quickly. He thought we

12-17-91

might be digging in a gas line. He didn't tell us this until we were 3 feet down but sampling was OK. No readings on HNu.

1525 CR-SS-04
Taken close to road - near receiving department, in grass at corner of road. Tan brown loose crumbly soil with some plant material. No readings on HNu.

1600 CR-SS-05
Taken very near monitoring well at center bottom of surface impoundment. Soil is reddish-brown, crumbly. No readings on HNu. This was Law Environ. duplicate for soil - they take 2 volumes for soil.

12-17-91

1615 Began packing up for day.

1625 Left site for day.

12-18-91

0820 Arrived at site.

0830 Found that one of the vehicles (white van- EPA 770) had some sort of starting problem (battery?) Crew starts setup.

0845 Bryan Williams calibrates HNu Serial 81632. 5.1 ppm at span setting of 9.4.

0900 CR-5S-05 soil is reddish-clay type - No readings on HNu. Taken at approx. 4 inches.

0915 CR-5B-05 - soil remains very reddish-clay. Taken at approx. 3 feet down. No readings on HNu.

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0935 CR-SS-07
Soil is lumpy, reddish sandy, with some clay mixed in - No reading on HNu.

0950 CR-SB-07
Soil remains pretty much the same. This could possibly be fill dirt or top soil; I'm not sure. No readings on HNu.

1000 Crew begins to clean up. Cynthia & I drive to houses visible to west of plant to check on possibility of private well sample. First house had nobody home - 712 was street number.

1015 Next house - Brooks residence - 88 street number. They have county water - and have had it for 5 or 6

12-18-91

years. She said it was possible that some of the houses nearby would. We drove a little further up the road and found some new houses - not yet lived in - looks like city water.
Couldn't find a very nearby well so dropped this sample also. Cynthia asked if we were going to retake the pH because of probe - I told her samples were sealed.
1030 Crew tries to jump off van.
I go inside and we meet in conference room with:

Cynthia Draper
Jennifer Nolan
Mark Danas
Paul Kucsera
Bob Flagg
Michael McNeely

Mr. Flagg handed out list of people who had been involved and information provided to everyone involved.

12-18-91

Mr. Flagg went over the three major areas of EPA concern:

leak of THF & toluene in tape coating area

fish kill

leak of Ni waste

He reviewed that these had been successfully taken care of by CBS. Fishkill was explained by County extension agency — An article which I never saw. County had overpopulation of fish in small ponds and abrupt change in temperature.

~~At~~ He also stated that there would not be a free exchange of information between EPA & CBS (Sony) except as directed by their lawyers. I stated that we certainly appreciated their hospitality and helpfulness - that it made our job easier. They stated that ~~us~~ CBS/Sony has a history of cooperation with the government (Bob Flagg).

12-18-91

I discussed what they could expect from EPA — approx. 6 months to get final report. Draft report is not releasable — Score will never be releasable. I discussed 4 major pathways of HRS, and gave them a hypothetical situation of how targets are determined. Mr. Flagg asked if this was what EPA based its decision for further action on. I said yes, and stated that my report conclusion would be either further action or no further action. I suggested that they could get a very good idea of the score if they had their consultants run a HRS score. Mr. Flagg is going to mail me a few more pieces of file material.

1120 Bryan Williams preserved preservative blank portion of the trip blank.

12-18-91

General Notes about site:
They split all sediment, all monitoring well, and all surface soil samples. Subsurface soil samples were not split.
Cynthia did all her own custody seals, labeling, bagging. Her bottles were prepreserved. It's not known if she was shipping these bottles together or not.

LAW ENVIRONMENTAL, INC.

112 TOWNPARK DRIVE
KENNESAW, GEORGIA 30144-5599
404-421-3565
FAX 404-421-3486

CYNTHIA E. DRAPER, P.E.
SENIOR ENGINEER

Jennifer Nolan
Regulatory Analyst

ENSR

Formerly ERT

ENSR Consulting
and Engineering
35 Nagog Park
Acton, Massachusetts 01720
(508) 635-9500/FAX (9180)

Robert B. Flagg
Enviromental Engineer
Post Office Box 1528
5152 Columbia Drive
Carrollton, Georgia 30117
(404) 836-2343
FAX (404) 836-2109

Sony Music

Mark Danes
Process Chemist
Post Office Box 1528
5152 Columbia Drive
Carrollton, Georgia 30117
(404) 836-2052
FAX (404) 836-2109

Sony Music

Sony Music

Paul J. Kucsera
Manager
Process/Project Engineering
Post Office Box 1528
5152 Columbia Drive
Carrollton, Georgia 30117
(404) 836-2334
FAX (404) 836-2109

Sony Music

Michael L. McNeely
Director, Engineering Services
5152 Columbia Drive
Post Office Box 1528
Carrollton, Georgia 30117
(404) 836-2220

RFA

CBS RECORDS

CARROLLTON, GEORGIA

I. INTRODUCTION

OBJECTIVE/SCOPE

The objective of this RCRA Facility Assessment (RFA) is to:

1. Identify all Solid Waste Management Units (SWMUs) which have operated at CBS Records, Inc., Carrollton, Georgia;

2. Collect SWMU-related data from file reviews and a site visit and evaluate these data to assess the potential for release of hazardous wastes or constituents from each SWMU; and,

3. For each unit, determine what course of action, if any, should be followed to safeguard human health and the environment from a SWMU release.

ASSESSMENT BASIS

The findings, conclusions, and suggested actions contained in this report are based on:

1. A desk top study of the EPD RCRA permitting, compliance, enforcement, files obtained.

2. A visual site inspection performed in December, 1986.

SITE CONDITIONS

General Conditions

a. Location

The CBS Records plant is located within the city limits of the City of Carrollton off Georgia Highway 27. The plant is situated on a 145-acre site at the intersection of Columbia Drive and Beulah Church Road, in an industrial park area about two miles northwest of the center of town. The street address is:

CBS Records
5152 Columbia Drive
Carrollton, Georgia 30117

The mailing address is:

CBS Records
PO Box 1528
Carrollton, Georgia 30117

Topographic Map

Figure 1 is a topographic map of the CBS Records plant site and the area within 1000 feet of the regulated hazardous waste management unit. It can be seen that mean sea level elevations on the plant site range from about 1010 near Columbia Drive on the eastern side of the site to about 1075 on the northwest corner of the site. The general drainage pattern across the site is from west to east.

Figure 2 is a graphic representation of the CBS Records plant site. This figure identifies the legal property boundary, as well as provides a more detailed depiction of plant facilities.

a. 100-Year Floodplain Area

None of the hazardous waste management facilities at the CBS Records plant fall within the boundaries of a designated 100-year floodplain. The only area on the site to fall within a designated 100-year floodplain is an area along the drainage channel upstream of the retention pond on the northeast corner of the property. Prior to plant construction, this channel was classified as a tributary to Beulah Creek and included in the floodplain study for that stream. Since that tributary channel has now been incorporated into the site drainage system and discharges into a retention basin, it is unclear as to exactly where the 100-year floodplain limits are actually are located. It is clear however, that none of the hazardous waste management facilities, which are on the south side of the plant, are in any way impacted by a designated 100-year floodplain.

b. Surface Waters

There are no significant water streams located on the CBS Records plant site. The closest surface water stream is Beulah Creek, a tributary of the Little Tallapoosa River, which runs generally parallel to Columbia Drive about 500 to 1000 feet east of that road and the CBS site. Prior to plant construction, Beulah Creek received all of the runoff from the CBS plant site and drained into the Little Tallapoosa River approximately one mile south of the Beulah Church Road. Today however, surface runoff from the CBS plant site is captured in on-site retention basins and Beulah Creek, north of Beulah Church Road, has been reduced to a dry channel most of the time.

There are two stormwater retention basins located in the east and southeast sections of the CBS plant site, immediately adjacent to Columbia Drive. These retention basins receive runoff from the on-site stormwater collection systems. Each basin has a valved outlet structure and an emergency spillway, both of which allow water in the basin to drain under Columbia Drive into Beulah Creek and eventually into the Little Tallapoosa River. Because of evaporative losses and refilling during wet weather periods, the water level in the retention basins fluctuates somewhat. However, only during prolonged or severe rainfall periods are any significant stormwater discharges generated from them.

c. Surrounding Land Use

Land use surrounding the CBS Records facility consists of commercial/industrial development, low density residential development and undeveloped property. To the north of the site, four industrial facilities have been constructed along Adamson Industrial Boulevard. These include Bridan Industries, Sun Products and Transco Truck Leasing Company. These facilities are about 0.5 miles from the CBS Records plant. To the east and northeast, the only development consists of the Carroll County Veterinary Hospital, located immediately across Columbia Drive from CBS. To the southeast, Beulah Church and a commercial strip development are located at the intersection of Beulah Church Road and Columbia Drive, approximately 0.5 miles from the plant. An abandoned house is also located at the northeast corner of this intersection.

To the south, across Beulah Church Road from the site, all land is currently undeveloped. There is some light industrial/warehousing development on the west side of Columbia Drive south of Beulah Church Road, but this is about 0.75 miles from the plant. Single family residential development is located to the southwest, along Beulah Church Road and an unpaved road immediately adjacent to the plant site. A total of four homes are within 1000 feet of the CBS property, with additional residences located further west along Beulah Church Road. To the west and northwest, there is no development of any kind with adjacent properties covered in dense trees and lighter vegetation.

f. Injection and Withdrawal Wells

All of the area surrounding the CBS Records plant site is served by the City of Carrollton municipal water system. However, three single family residences located immediately adjacent to the southwest side of the plant site have not tied on to the municipal water system and are still served by wells. Residents report these wells to be approximately 300 feet deep, although well logs are not available. Other development in the area, including Beulah Church, the commercial/industrial strip development on Columbia Drive south of Beulah Church Road, the veterinary clinic on Columbia Drive, and the industrial development north of the CBS site, is all served by the municipal water system. There are no injection wells on, or in the vicinity of, the CBS Records plant site.

g. Buildings and Structures

The primary buildings on the CBS Records site are the main plant, which houses all office, manufacturing and warehouse facilities, and the powerhouse, which contains all boiler and heating/cooling facilities, as well as all process water and wastewater treatment equipment. Other structures on the site include the two cooling towers, several large fuel storage tanks, two fire pump houses, a heptane recovery system and storage shelter, a solvent recovery system with tank storage for reclaimed material, and several small miscellaneous structures used for storage of non-hazardous materials.

h. Sewers

Connection to the Carrollton Municipal Sewer System is made at a manhole in the right-of-way of Columbia Drive to the east of the main plant. Sanitary sewers serving the main plant and the powerhouse are joined near the office section of the main plant and a common line run to Columbia Drive where connection is made to the City system.

i. Loading and Unloading Areas

All loading and unloading associated with manufacturing operations is performed in the shipping/staging area on the west side of the main plant facility and the receiving area on the south side of the plant facility. Process chemicals are received at the receiving area or at the powerhouse, depending on where they are to be used. There are no designated loading areas for hazardous materials being shipped off-site for reclamation or disposal. Since all materials to be shipped off-site are stored in drums, loading of trucks is accomplished in areas immediately adjacent to the two drum storage areas. However, no specific areas have been designated for this purpose.

j. Run-off Control Facilities

The primary element in the site runoff control system is a stormwater collection channel which runs around the outer periphery of the access road looping the plant. All of the roof drains and area drains on the plant site discharge into this channel by means of pipes carried under the access road. The channel also picks up any stormwater runoff generated on the south, southwest, west and northwest sides of the plant site.

Stormwater collected in the perimeter channel is carried either around the south or north side of the plant to one of two retention basins, located on the east side of the plant adjacent to Columbia Drive. The basins also receive direct drainage from several roof and area drains on the east side of the plant, as well as direct surface runoff from portions of the northeast, east and southeast sides of the plant site.

Site Geology and Hydrogeology

Prior to construction of the record plant, an extensive soils investigation was conducted. As part of this investigation, 65 soil borings were made on CBS property. Extensive regrading was performed during construction; thus, the stratigraphy of the surface soils may have been changed considerably since the borings were conducted. Based upon the boring data and the cut and fill pattern used during construction, however, it is believed that the uppermost ten feet of soil beneath the tape coating area consists of a light brown to red brown sandy silt. Below approximately ten feet, it is believed that the soil consists of silty fine to medium sand. The shallow ground water is believed to exist at approximately ten to fifteen feet beneath the surface, and the flow gradient is towards the east to southeast.

Nature of Operations

a. Manufacturing Processes

CBS Records currently operates as a manufacturer of prerecorded audio cassettes, audio cassette tape, and phonograph records. For a short time, video discs were also produced. This process has been discontinued. The Carrollton plant contains 450,000 square feet of manufacturing and office area and 200,000 square feet of warehouse. The facility employs approximately 2300 persons and operates on a 24 hour per day, 7 day per week basis. Construction of the facility was completed in 1981, and operation of most processes has been underway for less than 5 years.

Cassettes are injection molded using polystrene and acetal, and are automatically assembled on four cassette assembly machines. Cassette jewel boxes are also injection molded and automatically assembled.

Cassette tape is manufactured by blending iron oxide with a urethane binder and coating a continuous web of polyester film. The coated web is then dried and slit into reels of cassette tape. There are one coater and two slitters currently in operation. The use of chrome dioxide as a tape coating will be initiated within the next six months, and is expected to account for approximately 50 percent of the tape coating operation. The other 50 percent will continue to be coated with iron oxide.

The cassette tape reels are placed on a duplicator and recorded with the proper program. The programs are received as master tapes from the recording studio. Master tapes can simultaneously duplicate 15 reels of cassette tape at speeds 64 times faster than the playback speed of 1-7/8 inches per second. There are a total of 100 duplicates and 8 master transports available for operation.

The duplicated cassette tape is automatically loaded in the cassette. There are 88 automatic cassette loaders at the plant. The loaded cassettes are then printed, packaged in jewel boxes, and loaded into cartons for shipment. There are five automatic packaging lines for cassette tapes.

Both 45 RPM single records and 33 1/3 RPM album records are manufactured from the recording studio product, called a "Lacquer". A Lacquer is an acetate covered aluminum disc with grooves representing one side of a phonograph record. The Lacquer is spray coated with silver and placed in a solution where a master layer of nickel is electroformed on the silver surface. At the CBS Records facility, the electroforming process and related processes are referred to as the "matrix" operation.

The Lacquer and the "Master" are mechanically stripped apart and the Master is returned to the solution. A layer of nickel is then electroformed on the surface of the Master. The resultant part is called a "Mother". The Mother has the same groove impression as a record and can be checked for audio quality. If acceptable, the Mother is returned to the solution and another layer of nickel, termed

a "Stamper", is electroformed. The Mother/Stamper unit is mechanically stripped apart and the Stamper is mechanically formed to fit the record press. There are 64 automatic compression presses that manufacture 33 1/3 RPM album records from a PVC record compound. There are 8 automatic injection presses that manufacture 45 RPM single records from a polystyrene record compound. Molded records are then inspected for defects and packaged for distribution.

Video discs were made in the same way as 33 1/3 RPM album records, except that the process began with the Master, which is received from CBS Labs. The molded video discs were inspected, washed, and lubricated prior to placement into protective "caddies" and packaging for distribution.

In terms of production capacity, the CBS Records facility in Carrollton can produce 75 million cassette tapes, 44 million album records, 27 million single records and 4 million video discs per year. However, since the plant has been in operation for only about 5 years, not all manufacturing processes have reached full production at the present time.

b. Use of Hazardous Materials and Generation of Hazardous Waste

As would be expected in a manufacturing operation as varied and complex as the one at CBS Records, a variety of chemical processes are used. Some of these processes employ chemicals and generate wastes which are classified as hazardous either by EPA listing or by characteristic. The following paragraphs detail the hazardous materials used at CBS, the processes in which they are used, and the method by which they are handled after they become waste materials. Not all of the materials discussed are regulated as hazardous waste materials under RCRA.

1. Cooling Tower Blowdown

Water used for process cooling in plant facilities is treated with chemicals containing chromium for algae and corrosion control. Blowdown from the process cooling tower contains significant quanities of hexavalent chromium. Chromium is an Appendix VIII constituent which is considered hazardous due to toxicity. This blowdown, or process wastewater, was discharged into a lined surface impoundment prior to treatment and discharge to the POTW. This has been discontinued and currently all blowdown is discharged to a 500,000 gallon tank prior to treatment and discharge to the POTW.

2. Matrix (Nickel) Wastewater

Wastewater from the matrix operation consists of a nickel suflomate solution used in the electroforming process described previously. This wastewater is generated from spills, leaks or section transfer, and drains to three underground tanks located outside the powerhouse. These tanks are used strictly as wet wells for control of pumps

which pumped the nickel wastewater into the lined surface impoundment, where it was combined with the chromium laden cooling tower blowdown prior to treatment and discharge to the POTW. This wastewater is also currently discharged to the 500,000 gallon tank.

3. Chromium Hydroxide Sludge

Combined wastewater is pumped to a treatment facility located in the powerhouse. Flow first enters a 600-gallon, fiberglass reinforced plastic tank in which the hexavalent chromium is reduced to trivalent chromium by using sulfur dioxide as the reducing agent and lowering the pH to 3.0-3.2 by adding sulfuric acid. The reduced trivalent chromium wastewater then passes to a 600-gallon neutralization tank where sodium hydroxide is added to adjust the pH to a range of 7.5 to 8.0, thereby precipitating chromium hydroxide. The chromium hydroxide in suspension, is then pumped into a plate and frame filter press, containing 23 plates and precoated with diatomaceous earth. The chromium hydroxide is captured on the precoated filter cloths, discharged to a collection pan below the press, and drummed for storage.

Because the chromium hydroxide sludge is not a listed waste, it can be considered hazardous only by characteristic. EP Toxicity tests performed on the sludge indicates that it generates in excess of 5.0 mg/l total chromium in the extract, and therefore, must be considered hazardous.

4. Nickel Hydroxide Sludge

Wastewater from the chromium treatment process next moves into a 250-gallon, pressurized pH adjustment tank where sodium hydroxide is added to raise pH to a range of 11.2 to 11.8. In this pH range, nickel hydroxide is precipitated out. The resultant wastewater slurry is pumped into a second filter press, again, precoated with diatomaceous earth. The nickel hydroxide is captured on the precoated filter cloths, discharged to a collection pan below the press, and drummed for storage. The pH of the treated wastewater is adjusted to a range of 6.5 to 7.0 using sulfuric acid prior to discharge to the Carrollton sewer system.

The nickel hydroxide sludge is a listed waste (F006), and therefore, must be delisted before it can be considered non-hazardous. Since nickel is not one of the parameters identified in the EP Toxicity test, there is some question as to what is required for delisting. The latest guidance available is that 20 mg/l total nickel, as determined by the standard EP Toxicity test, is the maximum concentration allowable. Tests run on samples of the nickel hydroxide sludge indicate levels in excess of 20 mg/l, and consequently, this sludge must be considered hazardous.

5. Spent Freon

Spent Freon (1,1,3 trichlorotrifluoroethane) is generated in two of the manufacturing processes. The majority of this waste is generated in the matrix area. Video "stampers" are washed with water and isopropyl alcohol and then dried with freon. The freon is vaporized in the drying process, condensed in a coil, and collected for reuse. However, to assure quality control, the reservoir of freon in the drying unit (about 100 gallons) is replaced every two weeks. The waste freon is drummed for storage prior to shipment to a reclaimer.

The other source of spent freon is the video disc post treatment area. Finished video discs pass through a series of final washes and are dried using freon in a process similar to that described above. The freon is collected for reuse, but is not replaced on a regular basis. Periodically, spent freon is drawn off the bottom of the reservoir and fresh material added as make-up. Some additional waste freon is generated during the annual overhaul of equipment. The waste freon is drummed for storage prior to shipment to the reclaimer.

6. Spent Heptane

Following the drying of the video discs in the post treatment area, the video discs are lubricated with a silicone oil. To assure even application, heptane is used as a carrier and the mixture is spray coated on the disc. The heptane is vaporized during the spraying and is exhausted to a carbon adsorption recovery unit located outside the plant. The heptane is stripped from the adsorber, condensed, decanted and drummed for resale either to the original supplier or another buyer. Heptane is not a listed waste and is hazardous only because it exhibits the characteristic of ignitability (D001).

7. Perchloroethylene Distallation Bottoms

Wax is used in the matrix process to coat metal parts for vault storage. Perchloroethylene is used to remove the wax when the parts are to be reused. During the dewaxing operation, the perchloroethylene is continuously recycled through a distallation apparatus. Hot wax is returned to the wax tank and the perchloroethylene is returned to the make-up tank. Periodically, however, distallation bottoms containing wax and other contaminants are drained from the distallation unit and placed in drums for storage prior to shipment to a disposal facility. Perchloroethylene is a listed waste (F001, U210) due to toxicity.

8. Methylene Chloride

A Scotch-Clad plastic coating and plastic lamination are also used to coat certain metal parts that are being stored or shipped to other plants. Methylene chloride is used to remove trace amounts of the Scotch-Clad and glue from the lamination process following mechanical stripping. Since methylene chloride is highly volatile, there is no wastewater generated from this process. However, since the Scotch-Clad coating is insoluble, some sludge material will probably have to be removed from the process unit. This material will certainly contain some methylene chloride which is a listed waste (F001, U080). None of the materials has been removed from the process unit to date and no estimate is available concerning when this waste will be generated for the first time.

9. Toluene/Tetrahydrafuran

Toluene and tetrahydrafuran (THF) are used in combination as the carrier solvent for application of the magnetic coating dispersion on the cassette tape. The two solvents are used in different mixtures, depending on the tape product involved and are referred to as the "pre-mix". The vast majority of the solvents are reclaimed on-site by means of a carbon adsorption, distallation and decant recovery system, and used again in the tape coating process. However, since the dispersion is continually filtered, sampled and analyzed for proper solvent content, significant quantities of contaminated filters, sampling containers, disposable gloves, etc., are generated. At the present time, an additional solvent recovery system is used to recover solvent contained in these materials. With this system in operation, no toluene or THF wastes require storage since virtually all of the solvent is recovered.

10. Acetone

Acetone is used as a cleaning agent in the washing of audio matrix parts. When a Master is stripped from the Lacquer, traces of acetate adhere to the Master. The Master is hand dipped into acetone to remove the acetate. The acetone is removed on a daily basis and manually discharged to the underground wet well tank, outside the powerhouse, from where it is pumped with nickel wastewater to the 500,000 gallon tank. On the average, only about one gallon of waste acetone is generated per week. However, acetone is a listed waste (U002) and must be handled as a hazardous material.

11. Isopropyl Alcohol

Isopropyl alcohol is used for cleaning video disc caddies and as a intermediate rinsing agent in the washing of video disc matrix parts. The alcohol process vessels are changed

periodically, but all of the isopropyl alcohol removed is further used as a wetting agent or adhesive in the manufacture of cassette cartridges. Any excess alcohol fromthis wetting process is lost to evaporation and no waste alcohol is generated. All of the spent isopropyl alcohol generated at the CBS plant is handled in this manner, thereby eliminating isopropyl alcohol from the plant waste stream.

12. Cyanide

Sodium and potassium cyanide are used to clean various pieces of matrix equipment and as a process chemical in the audio finishing area of the matrix operation. All cyanide wastewater is collected in process vessels and fully reduced and neutralized before being discharged to the POTW. Comprehensive laboratory analyses are performed on each batch of treated cyanide wastewater prior to discharge to the sewer system. No cyanide wastes are stored on-site.

13. Chromium Dioxide

Modification to existing tape coating operation, resulted in chromium dioxide (CrO_2) replacing iron oxide as the magnetic coating on about 50 percent of the cassette tape being manufactured. The chromium dioxide is applied in the same manner as the iron oxide, using a toluene/THF mixture as the solvent carrier. The only difference will be that after all of the solvent has been recovered, the resulting waste material will contain chromium dioxide, a hazardous substance, instead of iron oxide, a non-hazardous substance. Chromium dioxide waste will be drummed and stored on-site prior to shipment to a disposal facility.

14. Silver

Prior to the nickel electroforming operations, metal parts are pre-plated to enhance the operation. Stannous chloride, used as a sensitizing or bonding agent, and silver nitrate solution, used as a pre-plate medium, are sprayed onto the metal parts. Silver overspray is discharged into a polypropylene tank and allowed to settle. The silver is collected in the bottom of the tank and the clear liquid is decanted off periodically and discharged with the nickel wastewater to the surface impoundment. All of the silver collected to date is still in the bottom of the collection tank. Current plans are to reclaim the silver directly from this tank. Consequently, no silver waste will be stored on site in hazardous waste management facilities.

Wastewater Treatment and Disposal

Figure 3 is a process flow diagram of the wastewater flow at the Carrollton Plant until November 1985. At that time the flow was modified as indicated on Figure 4. All flow to the surface impoundment was discontinued

and the impoundment taken out of service and replaced by a 100,000 gallon tank. Currently, all treatment effluent is discharged to the sanitary sewer system.

Air Emission Control

CBS records currently has two sources of air emissions which are permitted by the Georgia EPD.

Release Pathways

1. Normal Plant Operations

   a. Soil and Groundwater.

      CBS operates several below-grade tanks as part of the wastewater treatment operation (Figure 4). Prior to plant construction and as a portion of the permit application process, CBS has performed extensive geological and geohydrological investigations. The results of these studies are detailed in groundwater quality assessment reports in the facility file.

      No adverse impact on the groundwater has been documented to date.

   b. Surface waters.

      All runoff from the CBS site is captured in two storm-water retention basins as described earlier. No surface water systems are anticipated to be impacted by the facility.

2. Spills.

   Several spills of potentially hazardous material have occurred at the plant and are documented in the facility files. In all cases documentation regarding remedial measures indicates that the spills have been cleaned up.

SUMMARY OF FINDINGS

Numerous SWMU's exist at the CBS site. However, this is a relatively new plant and was constructed in a manner designed to eliminate or reduce releases of hazardous materials. Overall the probability of any significant release at CBS is currently low.

During the December 7, 1986 site visit the above impression was confirmed. Further, as the surface impoundment which was the only regulated unit, has clean-closed CBS will not be issued a permit for this site.

BL:lsh:1100R

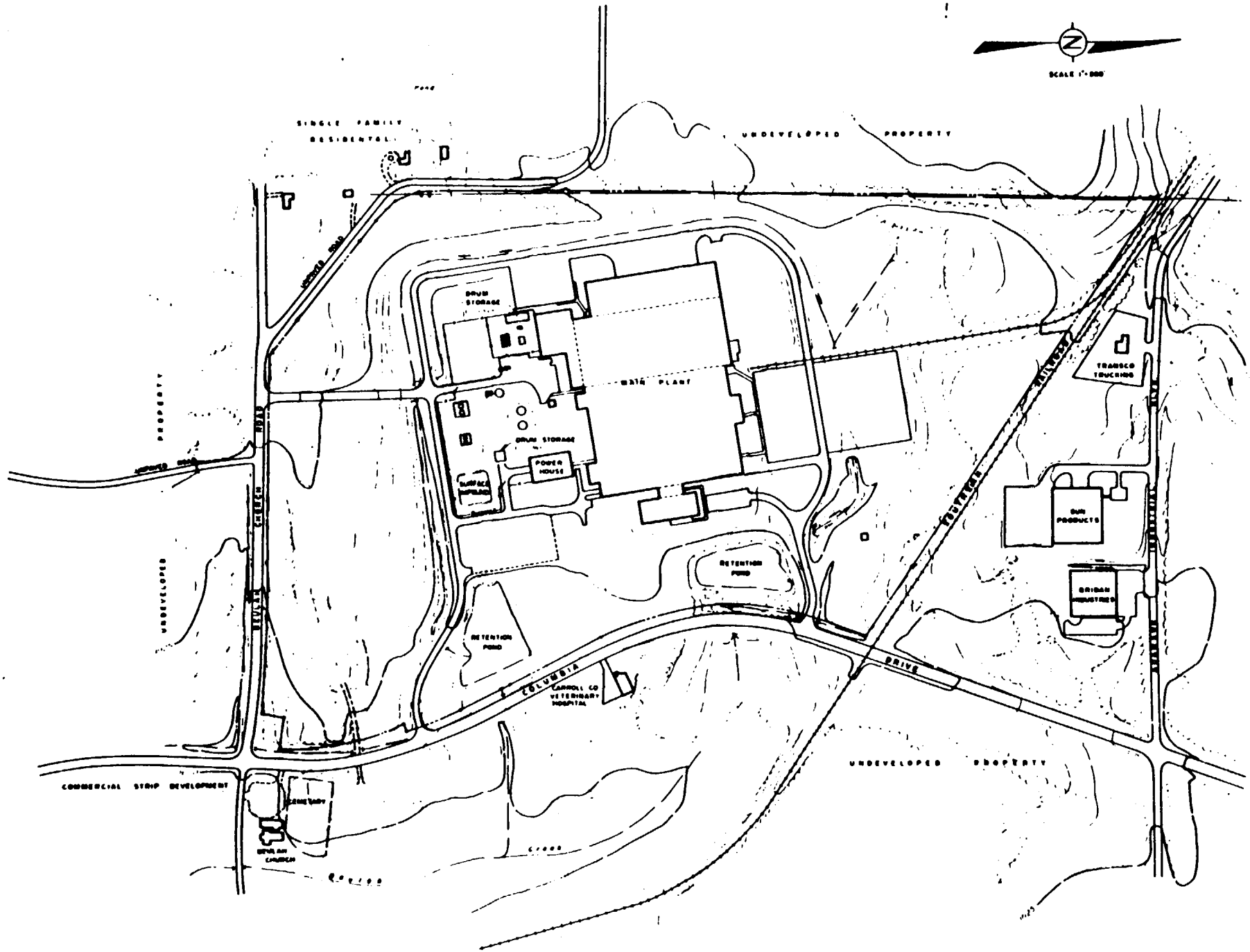


Figure 1

SITE

SURR

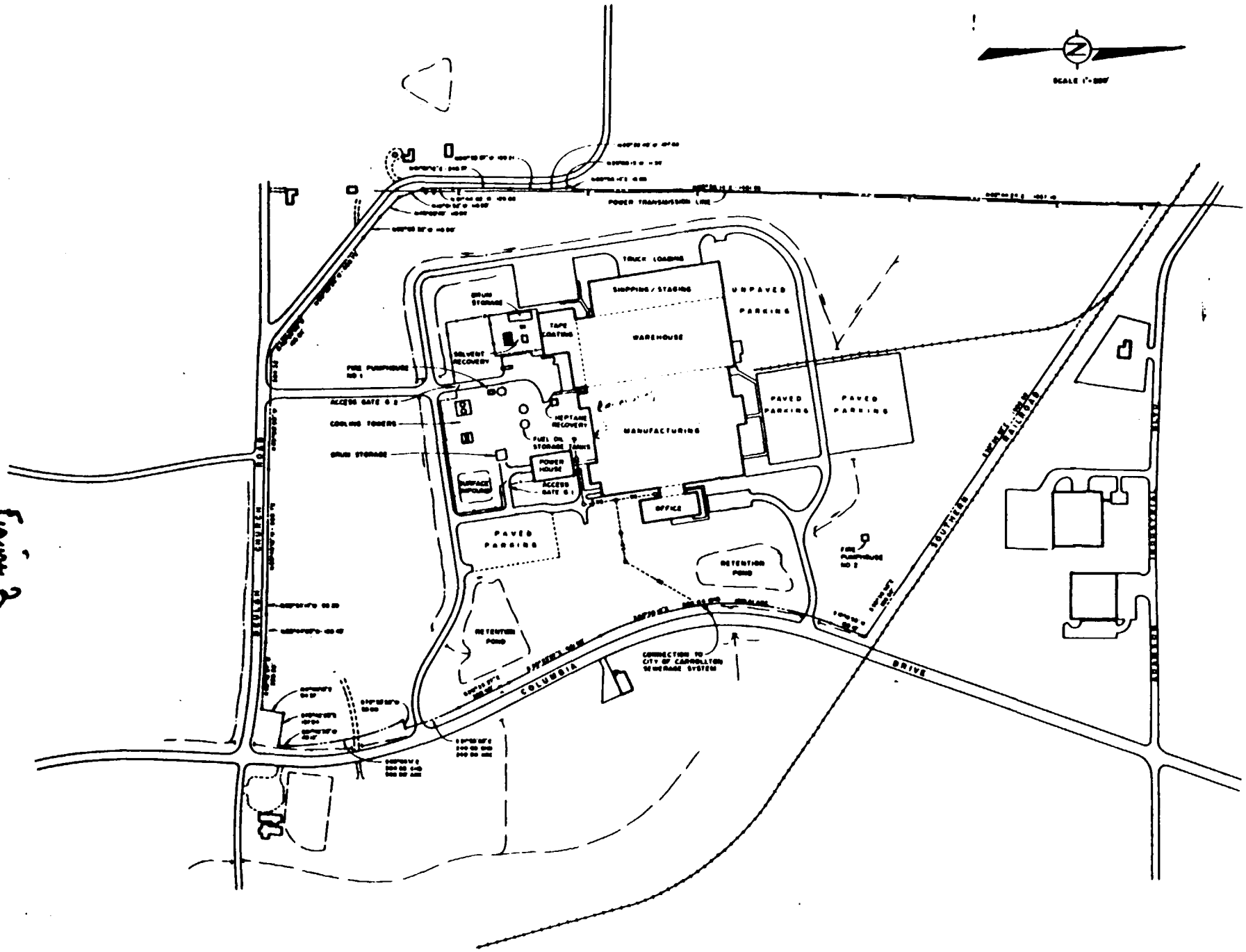


Figure 2

FI

MANUFACTURI

WASTE FA

Figure 3

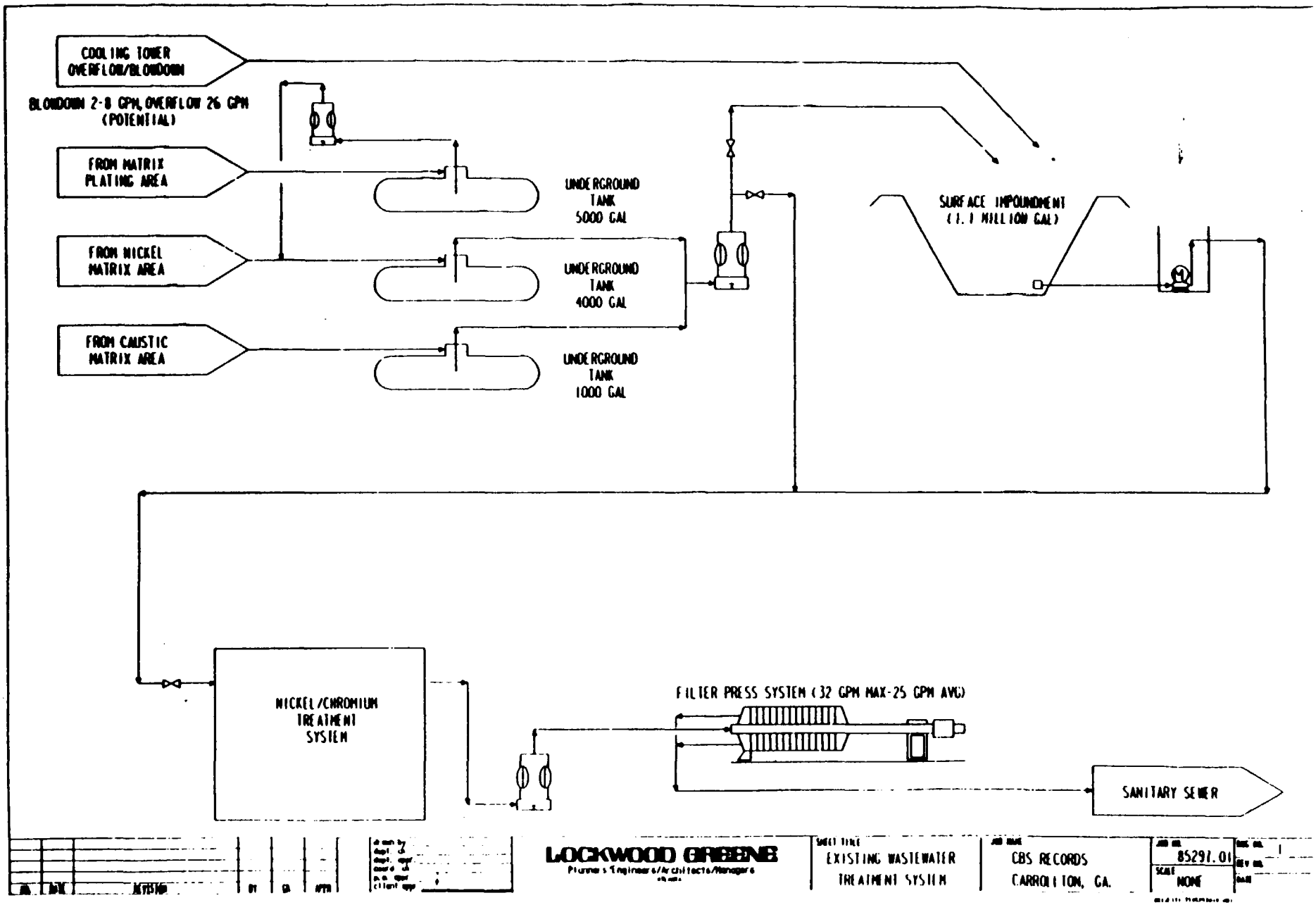
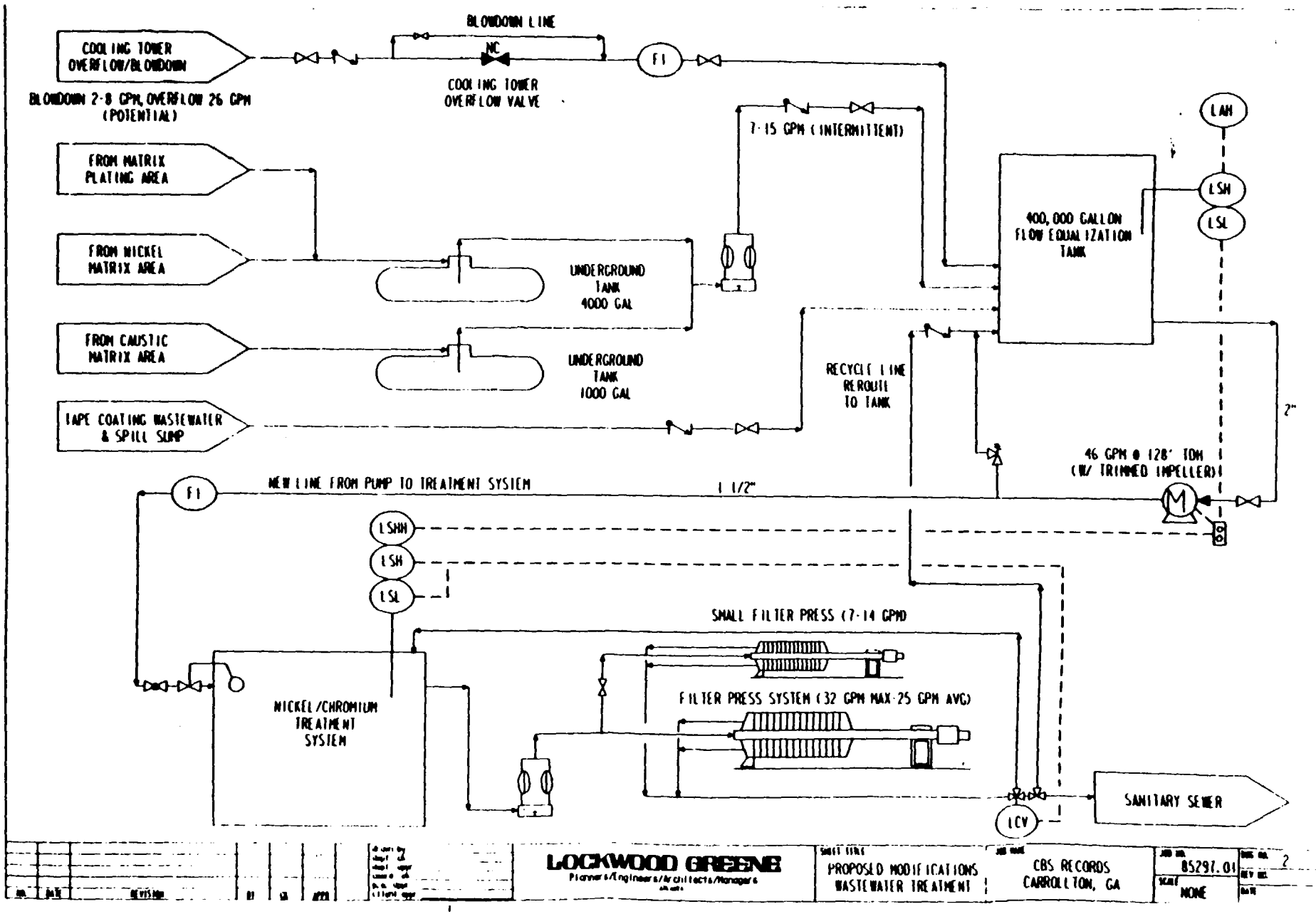

COOLING TOWER OVERFLOW/BLOWDOWN
BLOWDOWN 2-8 GPM, OVERFLOW 26 GPM (POTENTIAL)
FROM MATRIX PLATING AREA
FROM NICKEL MATRIX AREA
FROM CAUSTIC MATRIX AREA
UNDERGROUND TANK 5000 GAL
UNDERGROUND TANK 4000 GAL
UNDERGROUND TANK 1000 GAL
SURFACE IMPOUNDMENT (1.1 MILLION GAL)
NICKEL/CHROMIUM TREATMENT SYSTEM
FILTER PRESS SYSTEM (32 GPM MAX-25 GPM AVG)
SANITARY SEWER
LOCKWOOD GREENE
Planners/Engineers/Architects/Managers
EXISTING WASTEWATER TREATMENT SYSTEM
CBS RECORDS
CARROLLTON, GA.
85297.01
NONE

Figure 4


COOLING TOWER OVERFLOW/BLOWDOWN
BLOWDOWN 2-8 GPM, OVERFLOW 26 GPM (POTENTIAL)
BLOWDOWN LINE
NC
COOLING TOWER OVERFLOW VALVE
FI
7-15 GPM (INTERMITTENT)
LAH
LSH
LSL
400,000 GALLON FLOW EQUALIZATION TANK
FROM MATRIX PLATING AREA
FROM NICKEL MATRIX AREA
UNDERGROUND TANK 4000 GAL
FROM CAUSTIC MATRIX AREA
UNDERGROUND TANK 1000 GAL
TAPE COATING WASTEWATER & SPILL SUMP
RECYCLE LINE REROUTE TO TANK
2"
46 GPM @ 128' TDH (W/ TRIMMED IMPELLER)
M
FI
NEW LINE FROM PUMP TO TREATMENT SYSTEM
1 1/2"
LSHH
LSH
LSL
SMALL FILTER PRESS (7-14 GPM)
NICKEL/CHROMIUM TREATMENT SYSTEM
FILTER PRESS SYSTEM (32 GPM MAX-25 GPM AVG)
LCV
SANITARY SEWER
LOCKWOOD GREENE
Planners/Engineers/Architects/Managers
PROPOSED MODIFICATIONS WASTEWATER TREATMENT
CBS RECORDS CARROLLTON, GA
85297.01
NONE
2

CBS RECORDS
OPERATIONS (U.S.)

CBS Records Group CBS Inc.
5152 Columbia Drive
Post Office Box 1528
Carrollton, Georgia 30117
(404) 836-2000

REFERENCE 3

August 11, 1989

Georgia Department of Natural Resources
Land Protection Branch
Environmental Protection Division
[illegible] Washington Street, S.W., Room 824
Atlanta, Georgia 30334

United States Environmental Protection Agency
Region IV
Hazardous Waste Management Division
345 Courtland Street, N.E.
Atlanta, Georgi 30365

Re: CBS Records Inc., Facility, Carrollton, Georgia

Dear Sirs:

Enclosed is a revised EPA Form 8700-12 Notification of Hazardous Waste Activity.

In 1981, CBS Records submitted a detailed Part A application on EPA Form 3510. Pursuant to this submission, CBS Records operated under interim status. Subsequently, on July 25, 1983 CBS Records submitted its Part B application on EPA Form 3510.

During that time period, the CBS Records facility operated a surface impoundment. This surface impoundment was the focus of the Part A permit application, interim status, and the Part B permit application.

Later, in 1985, the surface impoundment at the facility was clean closed. Closure of the former surface impoundment was accomplished under the close supervision and scrutiny of the Georgia Department of Natural Resources, Environmental Protection Division, Hazardous Waste Management program which approved the closure pursuant to federal and state rules, regulations and standards. We believe that the closure did meet the standards for closure by removal or decontamination as set forth in 40 C.F.R. Section 264.228. CBS Records has already informed the United States Environmental Protection Agency that, at the appropriate time, it intends to submit to the Agency a petition for a determination that the closure met the applicable Part 264 closure standards.

Subsequent to the clean closure of the former surface impoundment the CBS Records facility became a generator only facility. Thus, in 1986, CBS Records requested that its Part B permit application be withdrawn. By letter dated January 9, 1989 the Georgia Department of Natural Resources agreed that the withdrawal was justified and that CBS Records was a generator only.

As you know from our previous submissions which discussed and described in detail the nature of the operations at CBS Records' Carrollton Facility, the facility manufactures records, coats ferric based tape, and duplicates both ferric and chromium based tapes. This tape duplication process yields the single pack pre-recorded cassette tapes found in music retail stores throughout the country. CBS Records manufactures the ferric based tape used in the duplication process. The ferric based tape accounts for well over 90% of the facilities duplication output. The chromium based tape used in the duplication process is purchased from outside vendors and represents less than 10% of the total tape duplicated. Generally this material is considered to be innocuous. Recently tests performed on the incoming blank chromium tape, from one vendor only, have suggested that limitations established for chromium concentration pursuant to the extraction procedure test are in excess of prescribed limits. CBS Records is not aware that the waste generated as the result of the manufacturing process exceeded applicable limitations, although this is possible. This waste material which was thought to be innocuous was discarded.

We have now discontinued purchases of this vendor's chromium tape and have located other sources which have been tested and do not exhibit this characteristic.

In the meantime, existing stocks of this suspect chromium tape will be depleted and any waste generated manifested per all applicable regulations.

Hence, we are filing this revised Form 8700-12. Please call me if you need any further information.

Sincerely,

Robert Myers

Robert Myers
Vice President, Manufacturing

REFERENCE 4

Georgia Department of Natural Resources

205 Butler Street, S.E., Floyd Towers East, Atlanta, Georgia 30334
Lonice C. Barrett, Commissioner
Harold F. Reheis, Assistant Director
Environmental Protection Division

TRIP REPORT
September 10, 1990

SITE NAME AND LOCATION:	CBS Records 5152 Columbia Drive Carrollton, Georgia 30117
EPA ID NUMBER:	GAD 980515241
COUNTY:	Carroll County
TRIP BY:	Betty Burns BB Environmental Specialist Hazardous Waste Generator Unit
ACCOMPANIED BY:	none
DATE AND TIME OF INVESTIGATION:	July 13, 1990
OFFICIALS CONTACTED:	Robert Flagg
REFERENCE:	Facility File

COMMENTS:
The site was inspected to determine compliance status with Chapter 391-3-11-.08, Standards Applicable to Generators of Hazardous Waste. The company makes tapes, records and CDs. The facility renotified as a generator of hazardous waste by application signed February 14, 1990. The company's status was changed to a generator on May 4, 1990. Previously, the Georgia Hazardous Waste Corrective Action Unit worked with the company to close out a surface impoundment on site. According to Mr. Flagg, the impoundment was properly closed and certification of said closure was done by Bert Langley of the subject Corrective Action Unit. The company uses a tank for storage of electroplating wastewater, and this eliminated the use of the surface impoundment. The site generates Hazardous Wastes: F001 - tectrachloro ethylene degreaser in print shop from cleaning plates on printing press; F002 - Methylene Chloride cleaning compounds for electric parts and floor stripper; F003 & F005 - spent xylene and toluene, from tape coating operations (tape coating filters and distillate slurry); F006 - electroplating wastewater treatment sludge; and D001 - ignitable spent petroleum. The site operates a wastewater treatment system for electroplating wastewater under effluent discharge limits designated by the City. The site operates two (2) hazardous waste drum storage areas.

CONCLUSIONS:

1. At the time of this inspection, the company needed to amend it's contingency plan and resubmit to local emergency authorities, and this was complied with in accordance with documentation submitted to this office on August 23, 1990.

2. The site is operating in violation of Chapter 391-3-11-.08 as noted below:

   {262.34 "Accumulation Time," because the facility does not keep containers of hazardous waste closed as required by {265.173.

   {262.34 "Accumulation Time," because the facility had not marked the beginning accumulation date on containers of hazardous waste as required.

RECOMMENDATIONS AND FOLLOW-UP REQUIRED:
Send the facility a Notice of Violation.

PHOTOGRAPHS: none

NUMBER OF WASTE/ENVIRONMENTAL SAMPLES TAKEN: none

REVIEWED BY: **DATE:**

ATTACHMENTS: none

BB:cs/wp2
File: CBS Records

Please print or type in the unshaded areas only
(fill- in areas are spaced for elite type, i.e., 12 ch ers/inch).

REFERENCE 5

Form Approved OMB No. 158-R0175

FORM 1 GENERAL

EPA

U.S. ENVIRONMENTAL
GENERAL INF
Consolidated Pe
(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER

F GAD 980515241 3

LABEL ITEMS

I. EPA I.D. NUMBER

III. FACILITY NAME

V. FACILITY MAILING ADDRESS

VI. FACILITY LOCATION

000387

RECEIVED
EPA REGION IV

PLEASE PLACE LABEL IN THIS SPACE

APR 15 9 28 AM '81

ENFORCEMENT

GENERAL INSTRUCTIONS

If a preprinted label has been provided, ef it in the designated space. Review the infor ation carefully; if any of it is incorrect, cr through it and enter the correct data in t appropriate fill-in area below. Also, if any the preprinted data is absent (the area to t left of the label space lists the informati that should appear), please provide it in t proper fill-in area(s) below. If the label complete and correct, you need not compl Items I, III, V, and VI (except VI-B wh must be completed regardless). Complete items if no label has been provided. Refer the instructions for detailed item descr tions and for the legal authorizations un which this data is collected.

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of bold-faced terms.

SPECIFIC QUESTIONS	MARK 'X' YES	NO	FORM ATTACHED	SPECIFIC QUESTIONS	MARK 'X' YES	NO	FORM ATTACHED
A. Is this facility a publicly owned treatment works which results in a discharge to waters of the U.S.? (FORM 2A)		X		B. Does or will this facility (either existing or proposed) include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters of the U.S.? (FORM 2B)		X	
C. Is this a facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C)		X		D. Is this a proposed facility (other than those described in A or B above) which will result in a discharge to waters of the U.S.? (FORM 2D)		X	
E. Does or will this facility treat, store, or dispose of hazardous wastes? (FORM 3)	X			F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X	
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		X		H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)		X	
I. Is this facility a proposed stationary source which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X		J. Is this facility a proposed stationary source which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	

III. NAME OF FACILITY

1 SKIP CBS RECORDS

IV. FACILITY CONTACT

A. NAME & TITLE (last, first, & title)	B. PHONE (area code & no.)
2 KROLL JOE - VICE PRES. MFG.	404 836 2000

V. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX

3 5152 COLUMBIA DRIVE

B. CITY OR TOWN	C. STATE	D. ZIP CODE
4 CARROLLTON	GA	30117

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER

5 5152 COLUMBIA DRIVE

B. COUNTY NAME

CARROLL

C. CITY OR TOWN	D. STATE	E. ZIP CODE	F. COUNTY CODE (if known)
6 CARROLLTON	GA	30117	

CONTINUE ON RE

CONTINUED FROM THE FRONT

VII. SIC CODES (4-digit, in order of priority)

A. FIRST	B. SECOND
3652 (specify) PHONOGRAPH RECORDS	3679 (specify) MAGNETIC RECORDING TAPES
C. THIRD	**D. FOURTH**
(specify)	(specify)

VIII. OPERATOR INFORMATION

A. NAME: CBS, INC.

B. Is the name listed in Item VIII-A also the owner? [X] YES [ ] NO

C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other", specify.)
F = FEDERAL, M = PUBLIC (other than federal or state), S = STATE, O = OTHER (specify), P = PRIVATE: P (specify)

D. PHONE (area code & no.): A 212 975 4321

E. STREET OR P.O. BOX: 51 WEST 52ND STREET

F. CITY OR TOWN: NEW YORK | G. STATE: NY | H. ZIP CODE: 10019

IX. INDIAN LAND
Is the facility located on Indian lands? [ ] YES [X] NO

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Water): N	D. PSD (Air Emissions from Proposed Sources): P 3652-022-7783-C	(Tapes) Construction Permit--Operations Permit Application Pending
B. UIC (Underground Injection of Fluids): U	E. OTHER (specify): 3552-022-7167-C	(specify) (Air Emissions Process)
C. RCRA (Hazardous Wastes): R	E. OTHER (specify): 3552-022-6875-C	(specify) (Air Emissions Process)

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS (provide a brief description)

MANUFACTURE MAGNETIC RECORDING TAPE, 12" L.P. RECORDS, AND 7" 45 RPM RECORDS.

XIII. CERTIFICATION (see instructions)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE (type or print)	B. SIGNATURE	C. DATE SIGNED
V.P.- Manufacturing Administration John F. Ryan	John F. Ryan	April 9, 1981

COMMENTS FOR OFFICIAL USE ONLY

C

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 characters/inch). CBS Records

Form Approved OMB No. 158-S80004

FORM 3 RCRA

EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY

HAZARDOUS WASTE PERMIT APPLICATION

Consolidated Permits Program

(This information is required under Section 3005 of RCRA.)

I. EPA I.D. NUMBER F G A D 9 8 0 5 1 5 2 4 1 3

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (yr., mo., & day)	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below *(mark one box only)* to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA I.D. Number, or if this is a revised application, enter your facility's EPA I.D. Number in Item I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)* Contract Date Oct. 13, 1978 Brown's Bluff

☒ 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

FOR EXISTING FACILITIES, PROVIDE THE DATE *(yr., mo., & day)* OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*: C 8 — YR. 7 8 — MO. 1 0 — DAY 1 7

☐ 2. NEW FACILITY *(Complete item below.)*

FOR NEW FACILITIES PROVIDE THE DATE *(yr., mo., & day)* OPERATION BEGAN OR IS EXPECTED TO BEGIN: YR. — MO. — DAY

B. REVISED APPLICATION *(place an "X" below and complete Item I above)*

☐ 1. FACILITY HAS INTERIM STATUS

☐ 2. FACILITY HAS A RCRA PERMIT

III. PROCESSES – CODES AND DESIGN CAPACITIES

A. PROCESS CODE – Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the form *(Item III-C)*.

B. PROCESS DESIGN CAPACITY – For each code entered in column A enter the capacity of the process.
1. AMOUNT – Enter the amount.
2. UNIT OF MEASURE – For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER *(barrel, drum, etc.)*	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D79	GALLONS OR LITERS
LANDFILL	D80	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D81	ACRES OR HECTARES
OCEAN DISPOSAL	D82	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D83	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR, GALLONS PER HOUR OR LITERS PER HOUR
OTHER *(Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Item III-C.)*	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	G

RECEIVED EPA REGION IV — ENVIRONMENTAL ENFORCEMENT DIVISION

EXAMPLE FOR COMPLETING ITEM III *(shown in line numbers X-1 and X-2 below)*: A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons. The facility also has an incinerator that can burn up to 20 gallons per hour.

C – DUP 1

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT	2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY
X-1	S 0 2	600	G		5				
X-2	T 0 3	20	E		6				
1	S 0 1	140,000	G		7				
2	S 0 4	880,000	G		8				
3	T 0 1	1,700	U		9				
4					10				

Continued from the front

III. PROCESSES *(continued)*

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESSES *(code "T04")*. FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

IV. DESCRIPTION OF HAZARDOUS WASTES

A. EPA HAZARDOUS WASTE NUMBER — Enter the four-digit number from 40 CFR, Subpart D for each listed hazardous waste you will handle. If you handle hazardous wastes which are not listed in 40 CFR, Subpart D, enter the four-digit number*(s)* from 40 CFR, Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.

B. ESTIMATED ANNUAL QUANTITY — For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste*(s)* that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE — For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:
   For listed hazardous waste: For each listed hazardous waste entered in column A select the code*(s)* from the list of process codes contained in Item III to indicate how the waste will be stored, treated, and/or disposed of at the facility.
   For non-listed hazardous wastes: For each characteristic or toxic contaminant entered in column A, select the code*(s)* from the list of process codes contained in Item III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed hazardous wastes that possess that characteristic or toxic contaminant.
   Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code*(s)*.

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER — Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

1. Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B,C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other EPA Hazardous Waste Number that can be used to describe the hazardous waste.

EXAMPLE FOR COMPLETING ITEM IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* — A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (If a code is not entered in D(1))
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2				*included with above*

 CONTINUE ON PAGE

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

Form Approved OMB No. 158-S80004

EPA I.D. NUMBER (enter from page 1)	FOR OFFICIAL USE ONLY
W G A D 3 1	W DUP 2 DUP

IV. DESCRIPTION OF HAZARDOUS WASTES (continued)

LINE NO.	A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)				D. PROCESSES 2. PROCESS DESCRIPTION (if a code is not entered in D(1))
1	F 0 0 1	425	T	S 0 1	Projected figure			NOT in operation 1982 Applicability new
2	F 0 0 3	2	T	S 0 1				
3	F 0 0 5	15	T	S 0 1				
4	F 0 0 6	2600	T	S 0 1				
5	F 0 0 7	30	T	S 0 4	T 0 1	S 0 1		Ni + Chrome Sludges HW sites alstorea
6	F 0 0 8	3	T	S 0 1				
7	F 0 0 9	540	T	T 0 1	S 0 1			
8	D 0 0 1	18	T	S 0 1				
9	U 0 0 2	1300	P	S 0 1				filter presses
10	U 0 3 1	1100	P	S 0 1				
11	U 0 5 7	2400	P	S 0 1				
12	U 1 4 0	1000	P	S 0 1				
13	U 1 5 4	1600	P	S 0 1				
14	U 2 1 0	3900	P	S 0 1				
15	U 2 2 0	1500	P	S 0 1				
16								
17								no groundwater wells yet
18								on yet
19								
20								
21								
22								
23								
24								
25								
26								

12/82

EPA Form 3510-3 (6-80)

CONTINUE ON REVE

(enter "A", "B", "C", etc. behind the "3" to identify photocopied pages)

Continued from the front.

IV. DESCRIPTION OF HAZARDOUS WASTES *(continued)*

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM ITEM D(1) ON PAGE 3.

EPA I.D. NO. *(enter from page 1)*

F G A D 3 6

V. FACILITY DRAWING

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail)*.

VI. PHOTOGRAPHS

All existing facilities must include photographs *(aerial or ground—level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail)*.

VII. FACILITY GEOGRAPHIC LOCATION

(degrees, minutes, & seconds)	*(degrees, minutes, & seconds)*
LONGITUDE -085 06 030	LATITUDE -33 36 020

VIII. FACILITY OWNER

[X] A. If the facility owner is also the facility operator as listed in Section VIII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VIII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. *(area code & no.)*
E:	

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST	6. ZIP CODE
F:	G		

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME *(print or type)*	B. SIGNATURE	C. DATE SIGNED
John F. Ryan		April 9, 1981

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME *(print or type)*	B. SIGNATURE	C. DATE SIGNED

CONTINUE ON PAGE

CBS RECORDS

A Division of CBS Inc.

5152 COLUMBIA DR. P.O. BOX 1528, CARROLLTON, GA 30117 (404) 836-2000

JOSEPH F. KROLL
Vice President, Manufacturing

April 9, 1981

Ms. Rita D. Ford
Acting RCRA Project Officer
Region IV
UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY
345 Courtland Street
Atlanta, Georgia 30365

CBS
RECORDS

Dear Ms. Ford:

Your letter to me of March 18th of this year indicated certain deficiencies in Part A of the Hazardous Waste Permit application forwarded to you on March 12th of this year.

Attached hereto is the fully executed application which we believe covers the deficiencies noted in your letter of March 18th.

If any further questions arise on this application, please give me a call at (404) 836-2100.

Very truly yours,

Joseph F. Kroll

Attachments

REFERENCE 6

Docket #4

JOE D. TANNER
Commissioner

J. LEONARD LEDBETTER
Division Director

Department of Natural Resources
ENVIRONMENTAL PROTECTION DIVISION
270 WASHINGTON STREET S.W.
ATLANTA, GEORGIA 30334

January 18, 1985

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Harry Kealey
Director Engineering Services
CBS Records
P.O. Box 1528
Carrollton, Georgia 30117

FILE COPY

RE: Notice of Violation
Notice of Deficiency

Dear Mr. Kealey:

The initial review of the Part B Hazardous Waste Permit application for the CBS Records Carrollton, Georgia facility has been completed. In general the application is well prepared. There are several minor deficiencies which should be easily corrected. These are described in detail below.

There is only one section of the application which will require substantial changes. This is the groundwater monitoring section. There are several items which will require modification both in the application and at the facility itself.

CBS has recently submitted results of the first semi-annual sampling of the groundwater. CBS is noted to be in violation of several provisions of the Georgia Hazardous Waste Management Act. The specific violations identified below are identified by the regulatory citations found at 40CFR 265 which Georgia has adopted by reference.

After determining that there has been a significant change in an indicator parameter as indicated by the student's t-test 265.93(d)(2) requires that an owner or operator must submit a detailed groundwater quality assessment plan. This plan must be certified by either a qualified geologist or geotechnical engineer. Further 265.93(d)(5) requires that such a plan be implemented as soon as possible.

Although CBS has taken several steps to determine if there has been groundwater contamination (reference letter of December 19, 1984 to Mr. Bill Mundy), no certified groundwater quality assessment plan has been reviewed by EPD. Until such a plan has been developed CBS records will remain in violation.

CBS Records has proposed that as an alternative to constructing additional downgradient wells a mandatory inspection of the liner be instituted. The Georgia Rules for Hazardous Waste Management do not provide for such an alternative. A manual inspection of a liner also would provide a significant opportunity for damage to the liner, in particular to the liner seams. Since it would probably not be possible to thoroughly inspect all liner seams such damage may not be detected. CBS Records is required to upgrade the existing groundwater monitoring system to meet the minimum requirement of one upgradient and three downgradient wells. Since the impoundment does have a impermeable liner this minimum system should prove sufficient and more than three downgradient wells should not be required.

The remaining items which are detailed below are of a relatively minor nature and should be corrected in the next submittal:

Permit Section	Comment
Part A	Part A indicates that only F003 waste enters surface impoundment. No indication of the chrome wastewater entering the impoundment.
Section B - Topographic Map	Map does not extend 1000 feet in all directions. No date on map. A loading area for the hazardous waste must be designated.
Traffic Information	Estimated volume of traffic is not given.
Section C	There needs to be a discussion directly relating to how ignitables are handled to prevent ignition, etc. This should be similar to the discussion found in Section F-5(a) - (h).

Section D	Pg. D-9 discusses how storm-water is managed and states that if hazardous constituents are found in excess of applicable limits the water is drummed and managed as hazardous waste. The application should state which parameters will be tested for and what the various limits are. The secondary containment system must be able to contain in addition to 10% of the permitted volume of waste (or the contents of the largest container) the rain from a 24 hour 25 year storm. Calculations showing this should be included in the application. The description of the tape coating drum storage area could be interpreted to indicate that drums may at times be stored in contact with standing water. The description should be clarified to indicate that this is not the case.
Section E - Groundwater Monitoring	As indicated earlier the monitoring well system must be upgraded. Need to provide information on how the flow rates and flow direction of the uppermost aquifer will be determined on an annual basis.
Section F	Are there any system alarms which require daily testing? Need to include on inspection forms a space to indicate type of remedial action taken and when this was done.

#4

	Need to specify the type of external communications available at the storage areas.
	Discussion of prevention of undue worker exposure is weak.
Section G	All emergency coordinators must have the authority to commit the necessary resources of the company during an emergency.
	A little more detail on criteria used to assess the degree of hazard is appropriate.
	Should state that EPD will be contacted anytime the contingency plan is implemented.
Section H	Little or nothing in any of the job descriptions regarding handling hazardous waste.
	Nothing regarding training for collecting groundwater monitoring samples or conducting the required inspections.
	No indication of who collects groundwater samples or who conducts the various inspections.
	Nothing is provided to indicate that the training director is qualified in the area of hazardous waste management.
	Need more detail on procedures for repairing and inspecting monitoring and emergency equipment.

Section I

What about sludge which accumulates on liner? What will soil be tested for, and what will criteria for determining contamination be?

Please arrange to correct the above deficiencies and re-submit four copies of the application to this office within 45 days of receipt of this letter. The re-submittal can either be in the form of completely new applications or changes in the existing application.

If you have any questions please contact Bill Mundy at 404/656-7802.

Sincerely,

Jennifer R. Kaduck
Program Manager
Industrial & Hazardous Waste
Management Program

JRK:blb:12

cc: John Taylor

File: CBS Records (R)

REFERENCE 7

Draft #64

J. LEONARD LEDBETTER
Commissioner

partment of Na . .ral Resources
ENVIRONMENTAL PROTECTION DIVISION
270 WASHINGTON STREET, S W
ATLANTA, GEORGIA 30334

July 22, 1985

FILE COPY

Mr. Harry Kealey
CBS Records
P.O. Box 1528
Carrollton, GA 30117

RE: Notice Of Violation
Notice of Deficiency

Dear Mr. Kealey:

Please reference the inspection of the CBS Records' Carrollton facility on June 25, 1985 by Bert Langley of the Industrial and Hazardous Waste Management Program. During this inspection several violations of the Rules for Hazardous Waste Management were noted. Additionally there were several areas of discrepancy between the activities at the plant and the Part B permit application currently on file with the Environmental Protection Division.

The specific violations noted during the inspection are indexed to the federal regulations found at 40 CFR which Georgia has adopted by reference. These violations include:

*265.171 Condition of containers. Several containers in both storage areas were in poor condition and/or leaking.

*262.34(c)(1) Accumulation time. Since 17 drums of waste were stored in the tape mixing area rather than in the interim status storage areas.

*265.15(a) General Inspection Requirements. Routine inspection of the drum storage areas did not reveal that there were drums in both storage areas leaking and in poor condition.

*265.15(c) General Inspection Requirements. Routine inspections of the two container storage areas revealed that several drums were stored without labels and that the tape coating area was full and drums were being stored in the tape mixing area. Yet no remedial action was performed over a several month period.

In addition to the above violations the following items and practices at the facility were not as described in the Part B application.

Section D-1 of the application describes the container management practices at CBS. In particular it states that drums would not be stacked more than one level high. During the inspection drums in both storage areas were stacked two high.

#64

The secondary containment system for both areas is described in the application as a 6" high curb. This curb is 6" of poured concrete but it is perforated at approximately one foot intervals by holes about 3/4 inch in diameter. Thus the effective contaimant system is of substantially less volume than stated in the application.

Page D-9 of the application describes how water falling into the powerhouse container storage area is drained to a 300 gallon sump, tested for contamination and then either pumped to the surface impoundment or drummed as hazardous waste. No records of any such activity were seen nor did the plant personnel indicate that any such activity occured. An apparent drain from the powerhouse storage area which was discharging to the ground outside the bermed area was seen. Not only is this in conflict with the Part B but it is a potential violation of the Georgia Water Quality Control Act.

Finally, the Part B application mentions that underground tanks are used to feed the surface impoundment, that a 300 gallon sump receives water from the powerhouse storage area and that a 10,000 gallon underground tank is located under the tape coating storage area. Any tank which receives hazardous waste, must be certified as meeting the RCRA defintion of "tank". This is particularly important for underground tanks since if such a tank does not meet the RCRA definition it becomes regulated as a surface impoundment or landfill.

The above violations must be corrected within 15 days of receiving this Notice of Violation.

The discrepancies noted between the actual operating conditions and the descriptions in the Part B must be rectified with the next revision of the Part B application. Please be aware that when a hazardous waste storage permit is issued the Part B application becomes part of the permit. If the practices described in the Part B are not conducted as described then the facility is in violation of the permit and is subject to enforcement actions.

If you have any questions regarding the above please contact Bert Langley at 404-656-7802.

Sincerely,

Bill Mundy

Bill Mundy
Unit Coordinator
Industrial & Hazardous Waste
Management Program

BM:BL:cm:010
File: CBS REcords (R)

REFERENCE 8

J. LEONARD LEDBETTER
Commissioner

Department of Natural Resources
ENVIRONMENTAL PROTECTION DIVISION
270 WASHINGTON STREET, S W
ATLANTA, GEORGIA 30334

Docket A56

FILE CO

June 28, 1985

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Harry Kealey
C B S Records
5152 Columbia Drive
Carrollton, Georgia 30117

Dear Mr. Kealey:

Enclosed please find an Administrative Order No. EPD-HW-222 issued to C B S Records. The purpose of this Order is to mitigate continuing violations of the Georgia Hazardous Waste Management Act which are occurring at C B S Records. Specifically these violations relate to the lack of appropriate financial documents, lack of groundwater data and an incomplete permit application. The violations are detailed in the attached Order.

This Order requires specific actions by C B S Records on a strict schedule. Please examine the Order carefully since failure to respond to items required by the Order will result in further enforcement action against C B S Records by the Environmental Protection Division.

Sincerely,

J. Leonard Ledbetter

J. Leonard Ledbetter

JLL:bld (01740)

cc: Robert S. Bomar, A.G.
James H. Scarbrough, U.S.EPA

File: C B S Records (R)

#56

ENVIRONMENTAL PROTECTION DIVISION
DEPARTMENT OF NATURAL RESOURCES
STATE OF GEORGIA

IN RE: C B S Records
5152 Columbia Drive
Carrollton, Georgia 30117

Order No. EPD-HW- 222

ADMINISTRATIVE ORDER

WHEREAS, CBS Records, a division of CBS Inc. (hereinafter the "Respondent"), owns and operates a plant for the manufacture of audio tapes and records in Carrollton, Carroll County, Georgia; and

WHEREAS, wastewater from the plant's production process is classified as hazardous waste and is stored and treated in an on-site surface impoundment; and

WHEREAS, the plant produces several other wastes which are classified as hazardous and are stored in two container storage areas; and

WHEREAS, storage and treatment of hazardous waste in surface impoundments and container storage areas are subject to the provisions of the Georgia Hazardous Waste Management Act, O.C.G.A. §12-8-60, et seq., as amended, and the Rules promulgated pursuant thereto (hereinafter the "Rules"); and

WHEREAS, during an inspection of the plant by representatives of the Environmental Protection Division, Department of Natural Resources, State of Georgia (hereinafter "EPD") on June 25, 1985 the facility was noted to be in violation of the following Rules:

1. Chapter 391-3-11-.05 "Financial Responsibility" since the Respondent has not filed acceptable financial assurance documents with the EPD.

2. Chapter 391-3-11-.10 "Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities" since during the June 25, 1985 inspection the following specific violations were noted:

#56

- 265.15(c) since inspections performed by the Respondent revealed that drums were stored improperly in areas of the plant not designated as storage areas. These inspections also revealed that drums were stored without labels. The Rules require that when such items are identified during inspections that the facility take timely action to correct them. No actions were taken by the Respondent.

- 265.93d(2) since the Respondent notified that the groundwater monitoring system detected significant changes in indicator parameters on December 19, 1984 but the Respondent has not yet submitted the required certified groundwater quality assessment plan.

- 265.93d(4) since a ground water assessment plan has not been implemented.

- 265.171 since several containers in the tape coating storage area were noted to be leaking and in poor condition; and

WHEREAS, the Part B hazardous waste permit application for the facility was reviewed and found to be incomplete such that a Notice of Deficiency was issued on December 28, 1984 requiring resubmission of a completed Part B within 45 days; and

WHEREAS, the Respondent requested and was granted an extension to April 26, 1985 to submit the revised application; and

WHEREAS, this application has not been received; and

WHEREAS, on May 7, 1985 a second Notice of Deficiency detailing additional groundwater investigations which will be required to complete the Part B was issued; and

WHEREAS, a Notice of Violation for unacceptable Financial Assurance documents was issued on May 3, 1985 and such documents have not been received by EPD; and

#5c

WHEREAS, the Director of EPD has been empowered to administer and enforce the Georgia Hazardous Waste Management Act, O.C.G.A. §12-8-60, et seq., as amended, and the Rules promulgated pursuant thereto, and the aforementioned violations by the Respondent are subject to abatement by the Director through a duly issued order.

NOW THEREFORE, the Respondent is hereby ORDERED to do and accomplish the following:

1. Correctly worded financial assurance documents must be submitted to EPD within 30 days of execution of this Order.

2. A certified groundwater quality assessment plan as required in 265.93(d)(2) must be submitted to EPD within 30 days of execution of this order.

3. The facility specific violations noted during the June 25, 1985 inspection must be corrected within 15 days of execution of this Order.

4. A complete Part B hazardous waste permit application must be submitted to EPD by October 15, 1985.

The Respondent is hereby informed of the right to be represented by legal counsel; and file an appeal from this Order; and that this Order shall become final unless a request for a hearing is made within thirty (30) days of receipt of this Order.

#56

The original of any petition for hearing, response or other pleading in this matter shall be filed with the Senior Administrative Law Judge for the Board of Natural Resources, to wit:

The Honorable Mark A. Dickerson
Senior Administrative Law Judge
Department of Natural Resources
Room 815, Trinity-Washington Building
270 Washington Street, S.W.
Atlanta, Georgia 30334

One copy of any such petition for hearing, response or other pleading in this matter shall be filed with the Director of EPD, to wit:

J. Leonard Ledbetter, Director
Environmental Protection Division
Department of Natural Resources
Room 825, Trinity-Washington Building
270 Washington Street, S.W.
Atlanta, Georgia 30334

and a separate copy on his counsel of record, to wit:

The Honorable Robert S. Bomar
Senior Assistant Attorney General
Room 108, State Judicial Building
Atlanta, Georgia 30334

It is so ORDERED this 28th day of JUNE, 1985.

J. Leonard Ledbetter

J. Leonard Ledbetter, Director

(01740)

REFERENCE 9

Docket #60 To: Reher

GOODWIN, PROCTER & HOAR
(A PARTNERSHIP INCLUDING PROFESSIONAL CORPORATIONS)
COUNSELLORS AT LAW
28 STATE STREET
BOSTON, MASSACHUSETTS 02109

TELEPHONE (617) 523-5700
TELECOPIER (617) 523-1231
TELEX 94-0640
CABLE GOODPROCT, BOSTON

August 1, 1985

COMMISSIONER'S OFFICE

AUG 2 1985

NATURAL RESOURCES

FEDERAL EXPRESS

The Honorable Mark A. Dickerson
Senior Administrative Law Judge
Department of Natural Resources
Room 815, Trinity-Washington Bldg.
270 Washington Street, S.W.
Atlanta, GA 30334

Re: Administrative Order No. EPD-HW-222

Dear Judge Dickerson:

Enclosed for filing in the above-referenced matter please find CBS Records' Appeal and Petition for Hearing.

Kindly acknowledge receipt of this document by signing the acknowledgment copy of this letter and returning it to me in the stamped, self-addressed envelope provided.

Thank you for your attention to this matter.

Sincerely,

Bradford S. Gentry

Bradford S. Gentry

BSG/dc
Enclosures
cc: J. Leonard Ledbetter
Robert S. Bomar, Esq.

#40

ENVIRONMENTAL PROTECTION DIVISION
DEPARTMENT OF NATURAL RESOURCES
STATE OF GEORGIA

IN RE: CBS Records 5152 Columbia Drive Carrollton, GA	* * *	Order No. EPD-HW-222

APPEAL AND PETITION FOR HEARING

CBS Records (hereinafter the "Respondent"), hereby appeals Administrative Order No. EPD-HW-222 (the "Administrative Order") issued to Respondent by the Environmental Protection Division, Department of Natural Resources, State of Georgia (the "EPD") and requests that a hearing be held in this matter.

As grounds for its appeal, Respondent states the following:

1. The Administrative Order contains several factual inaccuracies which are relevant to the existence or severity of the alleged violations.

2. Respondent is not in violation of the "Financial Responsibility" provisions of Chapter 391-3-11-.05 of the rules promulgated pursuant to the Georgia Hazardous Waste Management Act, O.C.G.A. § 12-8-60 et seq. (the "Rules") because:

(a) A course of communication has existed between Respondent and the EPD concerning Respondent's documentation of its financial responsibility, which communications have resulted in the provision of most, if not all, relevant information to the EPD; and

(b) The EPD has already received sufficient information from Respondent in support of the financial

test to demonstrate financial assurance, as specified in Chapter 391-3-11-.05 of the Rules, to establish that any failure of Respondent to provide specific pieces of information with respect to its liability insurance coverage does not pose a threat to the environment or undermine Respondent's ability to pay any damage awards which may arise from its handling of hazardous wastes.

3. Respondent has not violated the "Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities" set forth in Chapter 391-3-11-.10 of the Rules with respect to the submission and implementation of a groundwater quality assessment plan (Section 265.93) because such a plan:

(a) was prepared within the time frame provided by the EPD;

(b) has been orally presented to, discussed with and approved by representatives of the EPD; and

(c) has been and is being implemented by Respondent in accordance with the comments and instructions received from the EPD.

4. Respondent's Part B Hazardous Waste Permit Application is not required to be submitted to the EPD by October 15, 1985, because, in accordance with a letter dated May 7, 1985, the EPD has extended the application's submission date until November 8, 1985.

Based upon the foregoing, Respondent requests that the Administrative Order be vacated.

#60

CERTIFICATE OF SERVICE

I, Bradford S. Gentry, attorney for Respondent CBS Records, hereby certify that I have, on this day, forwarded a copy of Respondents' Appeal and Petition for Hearing to the following individuals:

J. Leonard Ledbetter, Director
Environmental Protection Division
Department of Natural Resources
Room 825
Trinity-Washington Bldg.
270 Washington Street, S.W.
Atlanta, GA 30334

The Honorable Robert S. Bomar
Senior Assistant Attorney General
Room 108, State Judicial Bldg.
Atlanta, GA 30334

Bradford S. Gentry

Dated: August 1, 1985

#60

Respectfully submitted,

CBS RECORDS

By its attorneys,

Paul E. Ware, Jr.
Bradford S. Gentry
GOODWIN, PROCTER & HOAR
28 State Street
Boston, MA 02109
(617) 523-5700

Dated: August 1, 1985

REFERENCE 10

Docket A61

GOODWIN, PROCTER & HOAR
(A PARTNERSHIP INCLUDING PROFESSIONAL CORPORATIONS)
COUNSELLORS AT LAW
28 STATE STREET
BOSTON, MASSACHUSETTS 02109

TELEPHONE (617) 523-5700
TELECOPIER (617) 523-1231
TELEX 94-0640
CABLE GOODPROCT, BOSTON

August 8, 1985

FEDERAL EXPRESS

Mr. Bert Langley
Georgia Department of Natural Resources
Environmental Protection Division
270 Washington Street, S.W.
Atlanta, GA 30334

REC

0918

ENVIRONMENTAL PROTECTION DIVISION
LAND PROTECTION BRANCH

Re: Administrative Order No. EPD-HW-222
NOV/NOD dated July 22, 1985

Dear Mr. Langley:

As we discussed, although CBS has appealed the above-reference Administrative Order, we are providing you with the following information in order to assist in the resolution of this matter.

Accordingly, enclosed are copies of the following documents:

1. Certificates of insurance for sudden and accidental (Continental Insurance Co. and New England Reinsurance Co.) and non-sudden (National Union Fire Insurance Co.) occurrences; and

2. The certified groundwater quality assessment plan.

All drums of hazardous waste are now stored in the powerhouse or tape coating storage areas, and all wastes which were found to be in drums in marginal condition have been repackaged. Finally, the two drums that were not labeled were found not to contain hazardous wastes and have been removed from the hazardous waste storage area.

With respect to the items to be included in CBS Records' revised Part B Permit Application (as described in the Notice of Deficiency dated July 22, 1985), the application will be revised to include the following:

1. The possibility that drums would be stacked two high in the drum storage areas;

2. The construction of a roof over the powerhouse container storage area (thus eliminating the need for the 300 gallon sump); and

3. A description of the 10,000 gallon impound tank in the tape coating storage area which will note that the tank is a steel tank and thus meets the RCRA definition of "tank".

No change will be made in the Part B Permit Application for the alleged perforations in the six-inch curb, as those "perforations" do not extend through the curb, but rather are marks left over from the mold in which the curb was formed.

If you have any questions about any of this information, please let me know. While this information is being provided as part of CBS Records' effort to resolve these matters, it does not address CBS Records' defenses to the alleged violations described in the Administrative Order. CBS Records reserves its right to present those defenses at the appropriate time, be it a meeting or an administrative hearing.

Thank you for your attention to this matter.

Sincerely,

Bradford S. Gentry

Bradford S. Gentry

BSG/dc
Enclosures
cc: J. Leonard Ledbetter (w/o enc.)
Honorable Mark A. Dickerson (w/o enc.)
Robert S. Bomar, Esq. (w/o enc.)

Docket #6

REFERENCE 11

Department of Natural Resources
ENVIRONMENTAL PROTECTION DIVISION
270 WASHINGTON STREET S W
ATLANTA GEORGIA 30334

J LEONARD LEDBETTER
Commissioner

August 26, 1985

TRIP REPORT

FILE COPY

FACILITY NAME & LOCATION:.....CBS Records
Columbia Drive
Carrollton, GA.

TRIP BY:.....Bert Langley

ACCOMPANIED BY:.....Rochelle Routman

DATE OF TRIP:.....August 15, 1985

OFFICIALS CONTACTED:.....Bob Meyers - Plant Manager
Harry Kealey - Director of Engineering
Mark Dumas - Environmental Engineer
David Russell - Lockwood Greene Engineers

REFERENCE:.....Follow-up inspection

COMMENTS:

This meeting had a two-fold purpose. CBS requested a follow-up inspection of the facility to verify that the violatons noted during the ISS inspection were corrected. In addition CBS wished to explain their planned process changes which would eliminate the need for the surface impoundment.

The first items discussed were the process changes. CBS has on-site a 400,000 gallon above ground steel tank. They plan to route all of the existing discharges to the surface impoundment into this tank. Since the tank is directly connected to the facility waste water treatment system the tank would be considered permit by rule. By directing all of the wastewater into this tank CBS will be able to remove the current surface impoundment from service. They are particulary interested in doing so now since a recent inspection of the impoundment by CBS revealed a large tear in the impoundment liner as well as the fact that the entire liner seems to be deteriorating rapidly.

CBS was informed that they would have to complete a groudnwater quality assessment program since they have detected significant differences in the indicator parameters between upgradient and downgradient wells. However if no hazardous consituents are detected in the Appendix VIII analysis (results of which should be available by September 20, 1985) they should be able to effect clean closure of the impoundment.

Following the meeting an inspection of the facility was conducted. All of the violations noted during the previous ISS inspection had been corrected and the facility is now in compliance with the interim status standards, if the recent financial information was submitted correctly.

#66

CBS plans to submit a formal closure plan and revised Part B permit application shortly. The Part B will be revised to eliminate the surface impoundment and to include more accurate descriptions of the current drum storage areas. The closure plan will address the surface impoundment.

A meeting is scheduled for August 22 with the consultant for CBS to discuss the exact content of the closure plan.

A final item discussed was a complaint received in Atlanta from a former CBS employee. This person alleged that in the past CBS had used Toluene containing waste water to kill weeds along a fence-line and in one instance to kill a rat. Mr. Meyers indicated that his investigation had substantiated some of these allegations. He played a tape recording of his interview with a superintendent who had observed the rat killing incident. He had not been able to verify the weed control incident. CBS has taken soil samples from both areas and these are currently being analyzed. Results will be forwarded to EPD.

CONCLUSIONS:

CBS has apparently made a good effort to correct previously noted violations. Their plan to remove the surface impoundment from service is adequate and should lead to clean closure of this unit.

RECOMMENDATION AND FOLLOW-UP REQUIRED:

Send letter to CBS, meet with consultant and schedule resubmission of Part B and surface impoundment closure plan. Await results of samples to complete complaint investigations.

PHOTO: None

REVIEWED BY: Bill Mundy

ATTACHMENTS: NONE

BL:cm:018

REFERENCE 12

Georgia Department of Natural Resources
205 Butler Street, S.E., Floyd Towers East, Atlanta, Georgia 30334
J. Leonard Ledbetter, Commissioner
Harold F. Reheis, Assistant Director
Environmental Protection Division

January 2, 1986

TRIP REPORT

SITE NAME AND LOCATION: CBS Records
Columbia Drive
Carrollton, Ga.

TRIP BY: Bert Langley

ACCOMPANIED BY: None

DATE OF TRIP: December 17, 1986

OFFICIALS CONTACTED: Bob Flagg - Environmental Manager
Mark Danas

REFERENCE: Completion of Surface Impoundment Closure and Annual ISS Inspection.

COMMENTS:
CBS recently completed closure of a hazardous waste surface impoundment and has submitted a closure certification statement. The purpose of this trip was to both verify the closure of the surface impoundment and perform an annual inspection of CBS.

The regulated units at CBS consist of drum storage and the surface impoundment. CBS requested that upon certification of closure of the surface impoundment that their permit application be withdrawn and that they revert to generator status only.

Upon meeting Bob Flagg, the new environmental manager, at the plant we proceeded to inspect both the drum storage area and the surface impoundment. The surface impoundment has been completely excavated, filled and a grass cover has been established. The area appears to be graded to prevent run-on. Based on my inspection and the detailed closure certification submitted the surface impoundment may be considered closed.

All drums in the drum storage area were properly labeled and none had been in storage over 90 days. CBS recycles most of its spent solvents and has been acting as a generator only, for several months. Based on my inspection the application may be withdrawn and CBS will become a generator only.

In a related matter, the remedial actions undertaken to correct a spill of solvents which had been reported by CBS were reviewed. CBS prepared a detailed report of the actions undertaken and correct this spill and it appears that it has been successfully resolved.

CONCLUSION:
The surface impoundment at CBS has been successfully closed and the permit application may be withdrawn. CBS will become a generator of hazardous waste, and is currently in compliance with the generator standards.

RECOMMENDATIONS AND FOLLOW-UP: Send closure approval letter. Change status to generator.

PHOTO: None

REVIEWED BY: Bill Mundy

ATTACHMENTS: None

BL:cm:0300T
File:

CBS RECORDS
OPERATIONS (U.S.)

CBS Records Group CBS Inc
5152 Columbia Drive
Post Office Box 1528
Carrollton Georgia 30117
(404) 836-2000

REFERENCE 13

RECEIVED
NOV 7 1986
Environmental Protection Division
Land Protection Branch

Dear Mr. Langley: November 5, 1986

In accordance with the Rules of the Georgia EPD, please find enclosed the engineer's and owner's certifications for the closure of the surface impoundment. Lockwood Greene engineers prepared and professionally certified the engineer's certification. The owner's certification was signed by Robert Myers, Vice President, Carrollton Manufacturing, a duly authorized corporate official.

In addition, CBS Records hereby requests that the Carrollton Facility be declassified as a storage facility and reclassified as a generator storing hazardous waste for less than 90 days. With completion of the surface impoundment closure and our current storage of drummed wastes on site for less than 90 days, such reclassification is warranted. Accordingly, we would like to withdraw the application for a Hazardous Waste Permit as a storage facility which we previously submitted to you.

If you should have any questions, please do not hesitate to contact me.

Sincerely,

Mark S. Danas

Mark S. Danas
Environmental Engineer
(404) 836-2343

Dr. Albert Langley
Environmental Protection Division
Department of Natural Resources
Floyd Towers East
205 Butler Street, SE Room 1154
Atlanta, GA 30334

/kbt
encl:

REFERENCE 14

Georgia Department of Natural Resources
205 Butler Street, S.E., Floyd Towers East, Atlanta, Georgia 30334
J. Leonard Ledbetter, Commissioner
Harold F. Reheis, Assistant Director
Environmental Protection Division

January 9, 1987

FILE COPY

Mr. Bob Flagg
CBS Records
P.O. Box 1528
Carrollton, GA. 30117

Dear Mr. Flagg:

Please reference the December 17, 1986 inspection by Bert Langley. At that time the closure of the former hazardous waste surface impoundment was reviewed. The visual inspection of the impoundment area and a review of the closure certification prepared by Lockwood Greene confirms that the impoundment has been successfully clean-closed. CBS may discontinue groundwater monitoring of this unit and our records will be revised to reflect the changed status of CBS.

Along with the November 7, 1986 closure certification submitted by Mark Danas, a request to withdraw CBS' permit application was included. Based on the December inspection this withdrawal is justified. CBS will now become a generator of hazardous waste and will be subject to the generator standards found in the Georgia Rules for Hazardous Waste Management at 40 CFR 262. Should CBS desire to begin longer than 90 days storage of waste, a permit application will have to be submitted and a permit issued before such storage may begin.

In a related matter, the remedial actions undertaken to correct the solvent spill (near the tape coating area) have been reviewed. Based on the evidence submitted in the ERM Southeast report the actions appear appropriate and the matter may be considered resolved.

If you have any questions please contact Bert Langley or Betty Burns who will be your new compliance officer.

Sincerely,

Jennifer Kaduck
Program Manager
Hazardous Waste Management Program

JK:blm:0301T
File: CBS Records (R) ✓

REFERENCE 15

CBS RECORDS

A Division of CBS Inc.
P.O. Box 1528
5152 Columbia Drive
Carrollton, Georgia 30117
(404) 836-2000

RECEIVED
SEP 11 1987
Environmental Protection Division
Land Protection Branch

September 4, 1987

Registered Mail
Return Receipt Requested

Ms. Jan Simmons
Land Protection Branch
Environmental Protection Division
Georgia Dept. of Natural Resources
205 Butler St. S.E.
Floyd Tower East
Atlanta, GA 30334

RE: REQUEST FOR 30 DAY EXTENSION
ALLOWABLE STORAGE TIME FOR HAZARDOUS WASTE
CBS RECORDS CARROLLTON, GA

Dear Ms. Simmons,

Per your instructions during our phone conversation 9/2/87, CBS Records requests a 30 day extension for the allowable storage time for hazardous waste. This will allow time for issuance of an Operating Permit to Chemical Conservation Corporation of Georgia, located in Valdosta, GA.

After the Operating Permit is issued, CBS will inspect the facility prior to shipment of our solvent waste to this location for inclusion in the fuel blending program.

Your cooperation in this matter is appreciated.

Sincerely,

Robert B. Flagg

Robert B. Flagg
Environmental Engineer
CBS Records
5152 Columbia Drive
Carrollton, GA 30117
(404) 836-2343

/tw
A:SIMMONS.TXT

CBS RECORDS
OPERATIONS (U.S.)

CBS Records Inc
5152 Columbia Drive
Post Office Box 1528
Carrollton, Georgia 30117
(404) 836-2000

REFERENCE 16

RECEIVED
SEP 1 1988
Environmental Protection Division
Land Protection Branch

August 30, 1988

Ms. Jennifer Kaduck
Environmental Protection Division
Land Protection Branch
Industrial and Hazardous Waste Program
Floyd Towers East
205 Butler Street, S.E.
Atlanta, GA 30334

Dear Ms. Kaduck:

RE: REQUEST FOR 30 DAY EXTENSION FOR STORAGE-
EPA I.D. NO. GAD 980515241

As instructed by Mr. Albert Langley yesterday, CBS Records Inc., requests a 30 day extension for storage of a new type of hazardous waste because of a very lengthy delay by Chemical Waste Management, Emelle, AL in approving acceptance of this waste.

In early spring of 1988 CBS Records began production of chromium dioxide (CrO_2) type cassette tape and in May generated several wastes containing CrO_2. On May 22, 1988, 8 drums of CrO_2 dispersion-cartridge filters as well as some other CrO_2 waste was generated.

On June 2, 1988, CBS Records shipped samples of all the CrO_2 wastes except CrO_2 dispersion-filters to Chemical Waste Management. A sample of the filter waste was not included due to the difficulty in shipping this type sample. However, an analysis of the filter waste was given in the letter. Approval for all of the wastes except the filter waste was given within one month.

On July 22, 1988, (seven weeks after approval of the waste was requested) SCA Chemical Services, Chicago, Illinois (an incinerator owned by Chemical Waste Management) notified CBS Records that a sample of the filter waste was required. CBS Records shipped a

filter sample promptly and is still waiting for approval on the filter waste. SCA Chemical Services now hopes to approve the waste by September 2, 1988. Based upon receiving approval by this date or soon thereafter, a 30 day extension is required.

Your timely consideration of this request will be appreciated.

Sincerely,

Robert B. Flagg

Robert B. Flagg
Environmental Engineer
CBS Records Inc.
5152 Columbia Drive
Carrollton, GA 30117

/dm

REFERENCE 17

CBS RECORDS

A Division of CBS Inc.
P.O. Box 1528
5152 Columbia Drive
Carrollton, Georgia 30117
(404) 836-2000

RECEIVED
OCT 2 1986
Environmental Protection Division
Land Protection Branch

September 17, 1986

RECEIVED
SEP 24 1986
ENVIRONMENTAL PROTECTION
NATURAL RESOURCES

Mr. Thomas Hopkins
INDUSTRIAL WASTEWATER PROGRAM
Environmental Protection Division
Floyd Towers East
205 Butler Street, S.E. Room 1070
Atlanta, GA 30334

Dear Mr. Hopkins:

On Wednesday, August 10, 1986, CBS had an accidental spill of nickel bearing wastewater while removing an underground tank. The wastewater was contained in the tank excavation, and it was immediately pumped to the wastewater treatment plant. We estimated that 1000 gallons of wastewater was spilled.

In addition, the tank contained carbon from the purification of electroplating bathes. After the wastewater was pumped from the excavation, the spilled carbon and surrounding soils were excavated. The soils which contained wastewater were shipped to Chemical Waste Management's Emelle, AL facility. There was approximately 50 tons of soil shipped. We removed an excessive amount of soil to ensure the removal of the wastewater.

If you have any further questions, please do not hesitate to contact me.

Sincerely,

Mark S. Danas

Mark S. Danas
Environmental Engineer

/tw
A:TOMHOPK.TXT

I 19.13:2242

REFERENCE 18

Ground-Water Regions of the United States

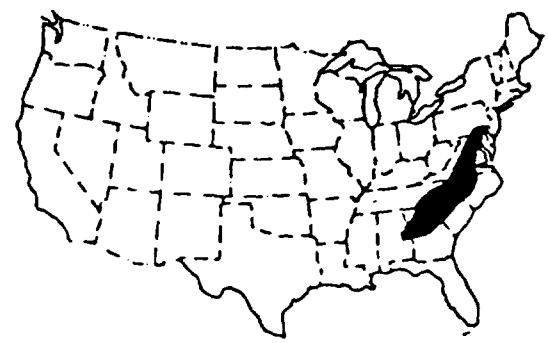
United States Geological Survey Water-Supply Paper 2242

reservoir for the bedrock.

The Glaciated Central region and the Northeast and Superior Uplands region are similar in that the unconsolidated material in both consists of glacial deposits. However, the bedrock in the two regions is different. The bedrock in the Glaciated Central region, as we have already seen, consists of consolidated sedimentary rocks that contain both steeply dipping fractures and fractures along bedding planes. In the Northeast and Superior Uplands, on the other hand, the bedrock is composed of intrusive igneous and metamorphic rocks (nonbedded) in which most water-bearing openings are steeply-dipping fractures. As a result of the differences in fractures, the bedrock in the Glaciated Central region is, in general, a more productive and more important source of ground water than the bedrock in the Northeast and Superior Uplands region.

8. PIEDMONT BLUE RIDGE REGION

(Thick regolith over fractured crystalline and metamorphosed sedimentary rocks)



The Piedmont and Blue Ridge region is an area of about 247,000 km^2 extending from Alabama on the south to Pennsylvania on the north. The Piedmont part of the region consists of low, rounded hills and long, rolling, northeast-southwest tranding ridges whose summits range from about a hundred meters above sea level along its eastern boundary with the Coastal Plain to 500 to 600 m along its boundary with the Blue Ridge area to the west. The Blue Ridge is mountainous and includes the highest peaks east of the Mississippi. The mountains, some of which reach altitudes of more than 2,000 m, have smooth-rounded outlines and are bordered by well-graded streams flowing in relatively narrow valleys.

The Piedmont and Blue Ridge region is underlain by bedrock of Precambrian and Paleozoic age consisting of igneous and metamorphosed igneous and sedimentary rocks. These include granite, gneiss, schist, quartzite, slate, marble, and phyllite. The land surface in the Piedmont and Blue Ridge is underlain by clay-rich, unconsolidated material derived from in situ weathering of the underlying bedrock. This material, which averages about 10 to 20 m in thickness and may be as much as 100 m thick on some ridges, is referred to as saprolite. In many valleys, especially those of larger streams, flood plains are underlain by thin, moderately well-sorted alluvium deposited by the streams. When the distinction between saprolite and alluvium is not important, the term regolith is used to refer to the layer of unconsolidated deposits.

The regolith contains water in pore spaces between rock particles. The bedrock, on the other hand, does not have any significant intergranular porosity. It contains water, instead, in sheetlike openings formed along fractures (that is, breaks in the otherwise "solid" rock) (fig. 36). The hydraulic conductivities of the regolith and the bedrock are similar and range from about 0.001 to 1 m day^{-1}. The major difference in their water-bearing characteristics is their porosities, that of regolith being about 20 to 30 percent and that of the bedrock about 0.01 to 2 percent (fig. 37). Small supplies of water adequate for domestic needs can be obtained from the regolith through large-diameter bored or dug wells. However, most wells, especially those where moderate supplies of water are needed, are relatively small in diameter and are cased through the regolith and finished with open holes in the bedrock. Although, as noted, the hydraulic conductivity of the bedrock is similar to that of the regolith, bedrock wells generally have much larger yields than regolith wells because, being deeper, they have a much larger available drawdown.

All ground-water systems function both as reservoirs that store water and as pipelines (or conduits) that transmit water from recharge areas to discharge areas. The yield of bedrock wells in the Piedmont and Blue Ridge region depends on the number and size of fractures penetrated by the open hole and on the replenishment of the fractures by seepage into them from the overlying regolith. Thus, the ground-water system in this region can be viewed, from the standpoint of ground-water development, as a terrane in which the reservoir and pipeline functions are effectively separated. Because of its larger porosity, the regolith functions as a reservoir which slowly feeds water downward into the fractures in

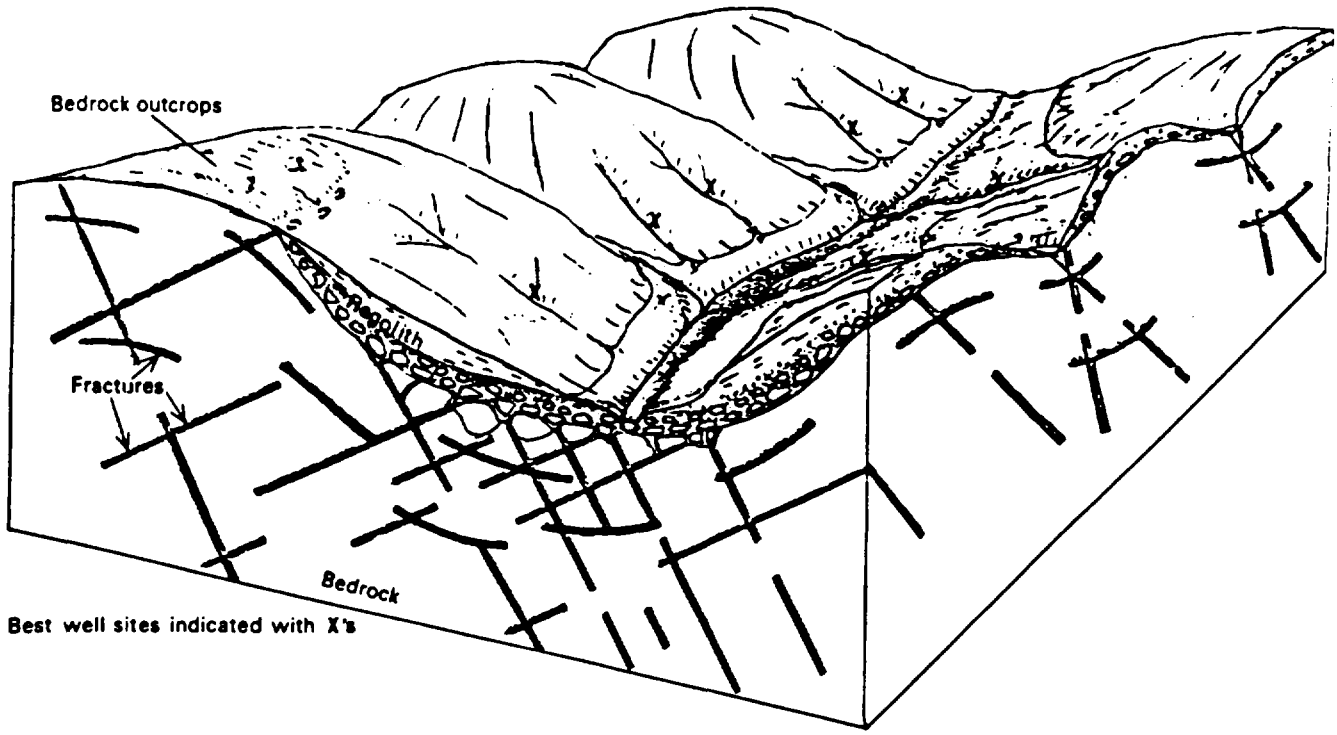


Figure 36. Topographic and geologic features of the Piedmont and Blue Ridge region.

the bedrock. The fractures serve as an intricate interconnected network of pipelines that transmit water either to springs or streams or to wells (fig. 38).

Recharge of the ground-water system occurs on the areas above the flood plains of streams, and natural discharge occurs as seepage springs that are common near the bases of slopes and as seepage into streams. With respect to recharge conditions, it is important to note that forested areas, which include most of the Blue Ridge and much of the Piedmont, have thick and very permeable soils overlain by a thick layer of forest litter. In these areas, even on steep slopes, most of the precipitation seeps into the soil zone, and most of this moves laterally through the soil in a thin, temporary, saturated zone to surface depressions or streams to discharge. The remainder seeps into the regolith below the soil zone, and much of this ultimately seeps into the underlying bedrock.

Because the yield of bedrock wells depends on the number of fractures penetrated by the wells, the key element in selecting well sites is recognizing the relation between the present surface topography and the location of fractures in the bedrock. Most of the valleys, draws, and other surface depressions indicate the presence of more intensely fractured zones in the bedrock which are more susceptible to weathering and erosion than are the intervening areas. Because fractures in the bedrock are the principal avenues along which ground water moves, the best well sites appear to be in draws on the sides of the valleys of perennial streams where the bordering ridges are underlain by substantial thicknesses of regolith (fig. 36). Wells located at such sites seem to be most effective in penetrating open water-bearing fractures and in intercepting ground water draining from the regolith. Chan-

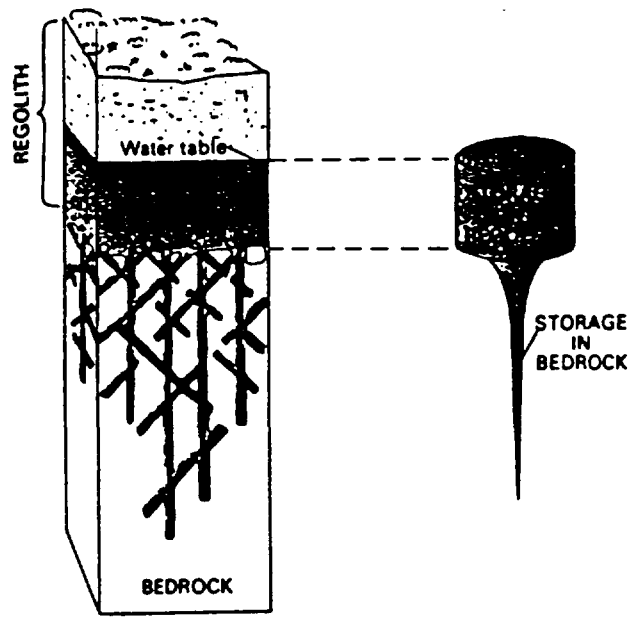


Figure 37. Differences in storage capacity of regolith and bedrock.

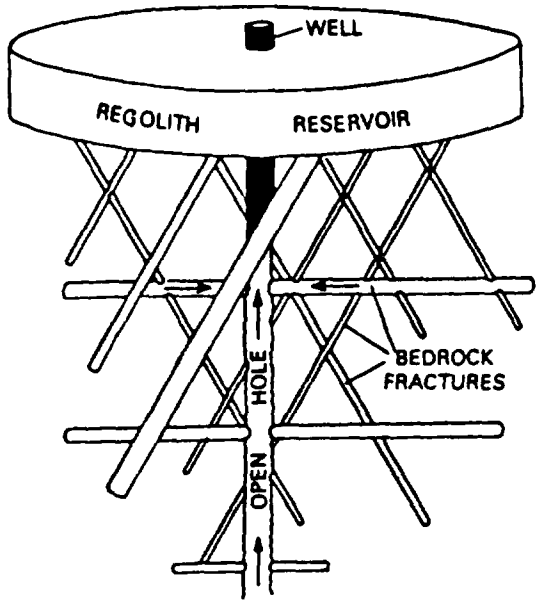


Figure 38. Separation of the storage and pipeline functions in the Piedmont and Blue Ridge region.

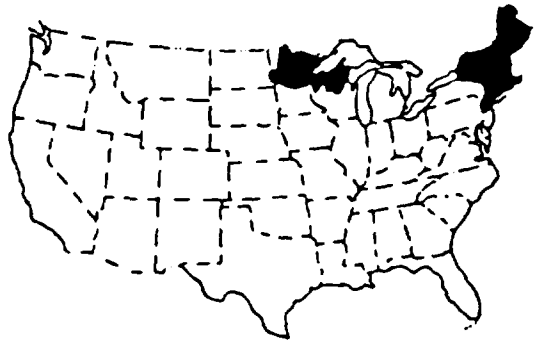
ces of success seem to be somewhat less for wells on the flood plains of perennial streams, possibly because the alluvium obscures the topographic expression of bedrock fractures. The poorest sites for wells are on the tops of ridges and mountains where the regolith cover is thin or absent and the bedrock is sparsely fractured.

As a general rule, fractures near the bedrock surface are most numerous and have the largest openings, so that the yield of most wells is not increased by drilling to depths greater than about 100 m. Exceptions to this occur in Georgia and some other areas where water-bearing, low-angle faults or fractured zones are present at depths as great as 200 to 300 m.

The Piedmont and Blue Ridge region has long been known as an area generally unfavorable for ground-water development. This reputation seems to have resulted both from the small reported yields of the numerous domestic wells in use in the region that were, generally, sited as a matter of convenience and from a failure to apply existing technology to the careful selection of well sites where moderate yields are needed. As water needs in the region increase and as reservoir sites on streams become increasingly more difficult to obtain, it will be necessary to make more intensive use of ground water.

9. NORTHEAST AND SUPERIOR UPLANDS

(Glacial deposits over fractured crystalline rocks)

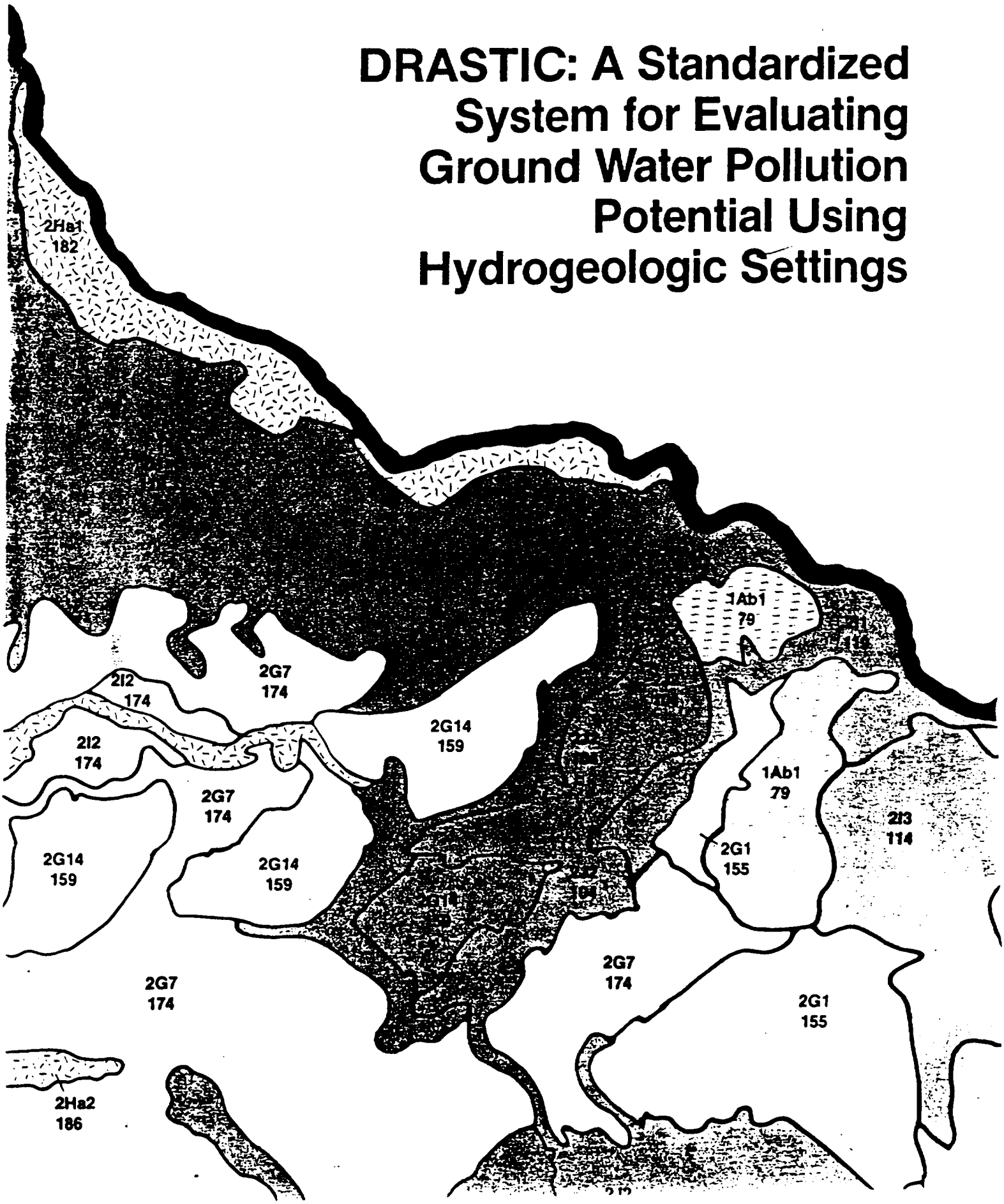


The Northeast and Superior Uplands region is made up of two separate areas totaling about 415,000 km². The Northeast Upland encompasses the Adirondack Mountains, the Lake Champlain valley, and nearly all of New England. The parts of New England not included are the Cape Cod area and nearby islands, which are included in the Atlantic and Gulf Coastal Plain region, and the Triassic lowland along the Connecticut River in Connecticut and Massachusetts, which is included in the Glaciated Central region. The Superior Upland encompasses most of the northern parts of Minnesota and Wisconsin adjacent to the western end of Lake Superior. The Northeast and Superior Uplands are characterized by rolling hills and low mountains. Land-surface altitudes in the Northeast Upland range from sea level to more than 1,500 m on some of the peaks in the Adirondacks and White Mountains. In contrast to the mountainous areas in the Northeast, the Superior Upland is in an area of rolling hills whose summits reach altitudes of only 300 to 600 m.

Bedrock in the region ranges in age from Precambrian to Paleozoic and consists mostly of granite, syenite, anorthosite, and other intrusive igneous rocks and metamorphosed sedimentary rocks consisting of gneiss, schist, quartzite, slate, and marble (fig. 39). Most of the igneous and metamorphosed sedimentary rocks have been intensely folded and cut by numerous faults.

The bedrock is overlain by unconsolidated deposits laid down by ice sheets that covered the areas one or more times during the Pleistocene (fig. 40) and by gravel, sand, silt, and clay laid down by meltwater streams and in lakes that formed during the melting of the ice (fig. 39). The thickness of the glacial deposits ranges from a few meters on the higher mountains, which also have large expanses of barren rock, to more than 100 m in some valleys. The most extensive glacial deposit is till, which was laid down

DRASTIC: A Standardized System for Evaluating Ground Water Pollution Potential Using Hydrogeologic Settings



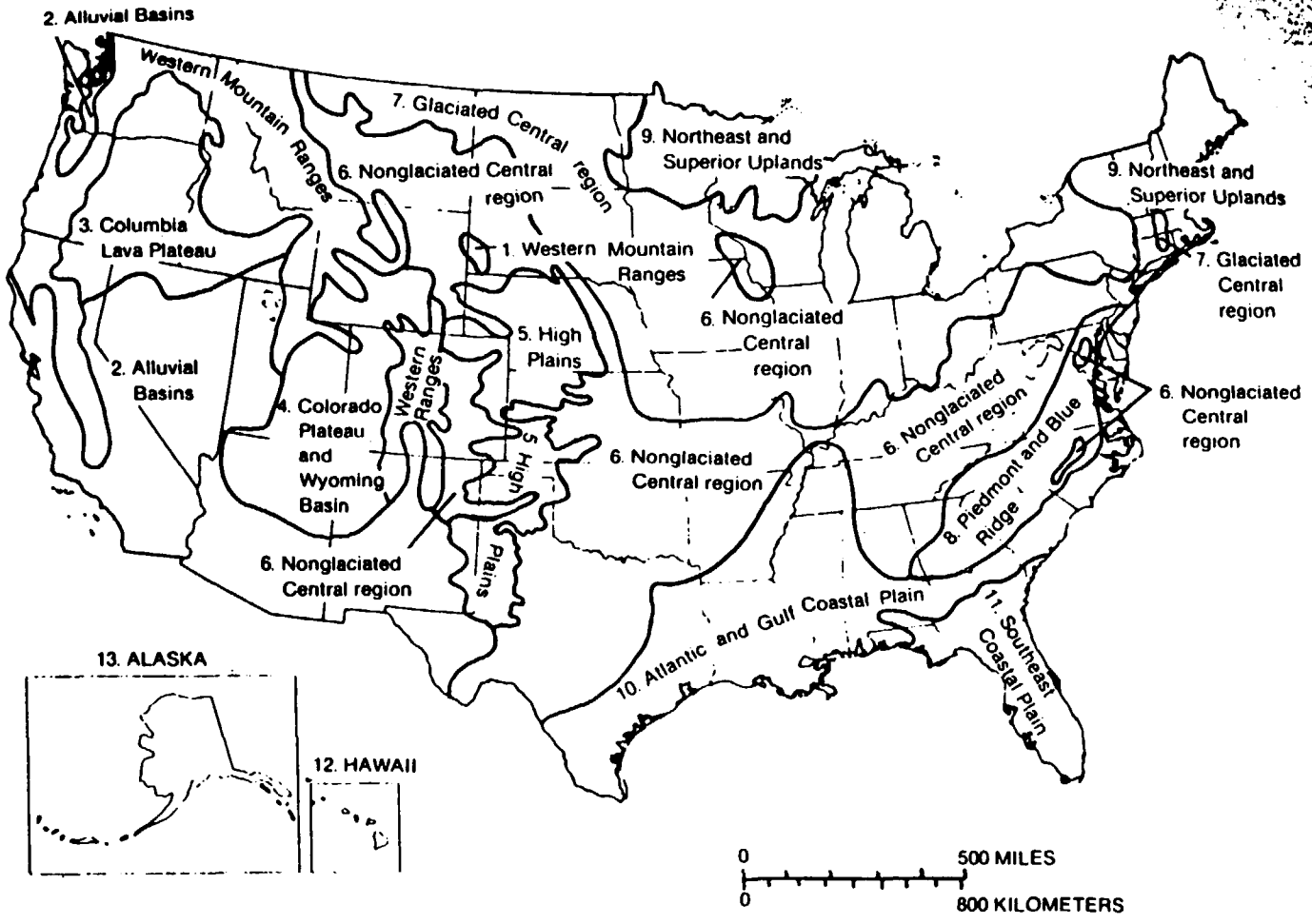


Figure 1. Ground-water regions of the United States (After Heath, 1984).

8. PIEDMONT BLUE RIDGE REGION

(Thick regolith over fractured crystalline and metamorphosed sedimentary rocks)

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Recharge of the ground-water system occurs on the areas above the flood plains of streams, and natural discharge occurs as seepage springs that are common near the bases of slopes and as seepage into streams. With respect to recharge conditions, it is important to note that forested areas, which include most of the Blue Ridge and much of the Piedmont, have thick and very permeable soils overlain by a thick layer of forest litter. In these areas, even on steep slopes, most of the precipitation seeps into the soil zone, and most of this moves laterally through the soil in a thin, temporary, saturated zone to surface depressions or streams to discharge. The remainder seeps into the regolith below the soil zone, and much of this ultimately seeps into the underlying bedrock.

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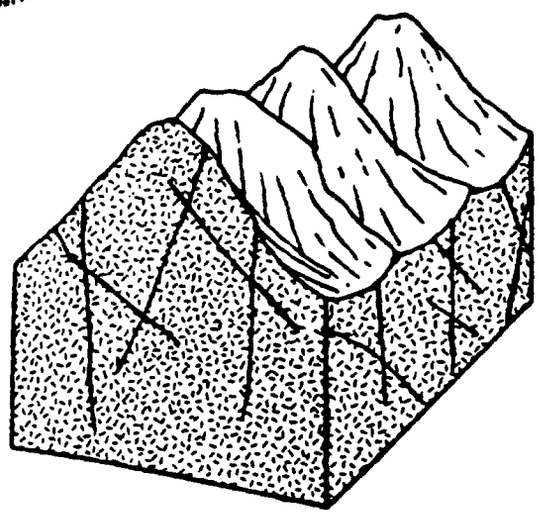
As a general rule, fractures near the bedrock surface are most numerous and have the largest openings, so that the yield of most wells is not increased by drilling to depths greater than about 100 m. Exceptions to this occur in Georgia, South Carolina and North Carolina and some other areas where water-bearing, low-angle faults or fractured zones are present at depths as great as 200 to 300 m.

The Piedmont and Blue Ridge region has long been known as an area generally unfavorable for ground water development. This reputation seems t have resulted both from the small reported yields of the numerous domestic wells in use in the region that were, generally, sited as a matter of convenience and from a failure to apply existing technology to the careful selection of well sites where moderate yields are needed. As water needs in the region increase and as reservoir sites on streams become increasingly mo difficult to obtain, it will be necessary to make more intensive use of grou water.

PIEDMONT AND BLUE RIDGE

(8A) Mountain Slopes

This hydrogeologic setting is characterized by steep slopes on the side of mountains, a thin soil cover and fractured bedrock. Ground water is obtained primarily from the fractures in the bedrock which may be of sedimentary, metamorphic or igneous origin, but which is commonly metamorphic or igneous. The fractures provide localized sources of ground water and well yields are typically limited. Although precipitation is abundant, due to the steep slopes, thin soil cover and small storage capacity of the fractures, runoff is significant and ground-water recharge is only moderate. Water levels are extremely variable but are commonly deep.



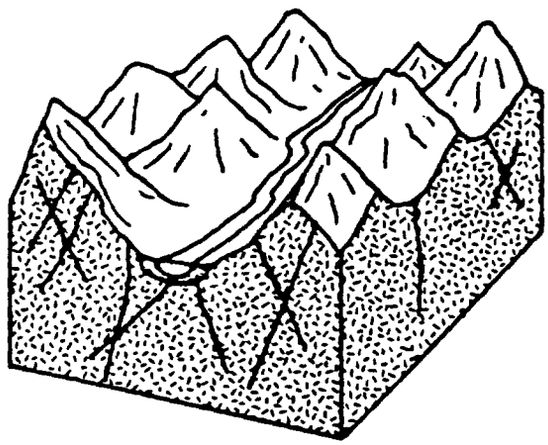
SETTING 8 A Mountain Slopes		GENERAL		
FEATURE	RANGE	WEIGHT	RATING	NUMBER
Depth to Water	75-100	5	2	10
Net Recharge	2-4	4	3	12
Aquifer Media	Metamorphic/Igneous	3	3	9
Soil Media	Thin or Absent	2	10	20
Topography	18+	1	1	1
Impact Vadose Zone	Metamorphic/Igneous	5	4	20
Hydraulic Conductivity	1-100	3	1	3
			Drastic Index	75

SETTING 8 A Mountain Slopes		PESTICIDE		
FEATURE	RANGE	WEIGHT	RATING	NUMBER
Depth to Water	75-100	5	2	10
Net Recharge	2-4	4	3	12
Aquifer Media	Metamorphic/Igneous	3	3	9
Soil Media	Thin or Absent	5	10	50
Topography	18+	3	1	3
Impact Vadose Zone	Metamorphic/Igneous	4	4	16
Hydraulic Conductivity	1-100	3	1	3
			Pesticide Drastic Index	103

PIEDMONT AND BLUE RIDGE

(8B) Alluvial Mountain Valleys

This hydrogeologic setting is characterized by thin, bouldery alluvium which overlies fractured bedrock of sedimentary, metamorphic or igneous origin. The alluvium, which includes both mass-wastage and water-sorted debris, is derived from the surrounding slopes, and serves as a localized source of water. Water is obtained from sand and gravel layers which are interspersed between finer-grained deposits. Surficial deposits have typically weathered to a loam. Water levels are usually relatively shallow but are extremely variable. Ground water is also obtained from the fractures in the underlying bedrock, which are typically in direct hydraulic connection with the overlying alluvium.



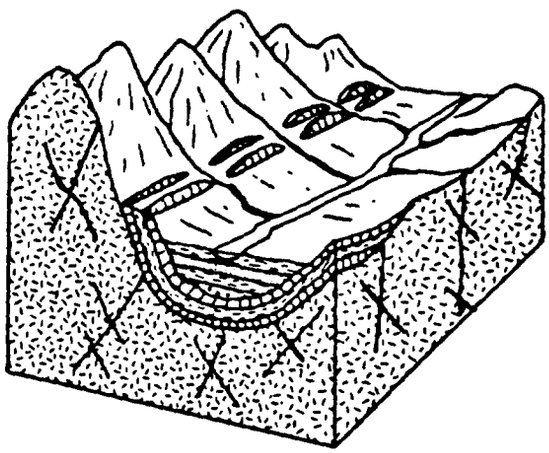
SETTING 8 B Alluvial Mountain Valleys		GENERAL		
FEATURE	RANGE	WEIGHT	RATING	NUMBER
Depth to Water	5-15	5	9	45
Net Recharge	7-10	4	8	32
Aquifer Media	Sand and Gravel	3	8	24
Soil Media	Loam	2	5	10
Topography	2-6%	1	9	9
Impact Vadose Zone	S & G w/ sig. Silt and Clay	5	6	30
Hydraulic Conductivity	300-700	3	4	12
			Drastic Index	162

SETTING 8 B Alluvial Mountain Valleys		PESTICIDE		
FEATURE	RANGE	WEIGHT	RATING	NUMBER
Depth to Water	5-15	5	9	45
Net Recharge	7-10	4	8	32
Aquifer Media	Sand and Gravel	3	8	24
Soil Media	Loam	5	5	25
Topography	2-6%	3	9	27
Impact Vadose Zone	S & G w/ sig. Silt and Clay	4	6	24
Hydraulic Conductivity	300-700	2	4	8
			Pesticide Drastic Index	185

PIEDMONT AND BLUE RIDGE

(8C) Mountain Flanks

This hydrogeologic setting is characterized by moderate topographic relief and moderately-dipping, fractured, consolidated sedimentary rocks. Soil cover is usually thicker than on the mountain slopes and typically has weathered to a sandy loam or loam. Although precipitation is abundant, ground-water recharge is moderate due to the soil cover and slope. Water levels are typically moderately-deep although they are extremely variable. The mountain flanks serve as the recharge area for aquifers which are typically confined in adjacent valley areas.



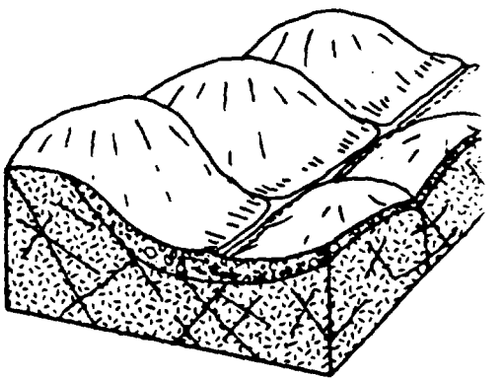
SETTING 8 C Mountain Flanks		GENERAL		
FEATURE	RANGE	WEIGHT	RATING	NUMBER
Depth to Water	30-50	5	5	25
Net Recharge	2-4	4	3	12
Aquifer Media	Bedded SS, LS, SH Sequences	3	6	18
Soil Media	Loam	2	5	10
Topography	6-12%	1	5	5
Impact Vadose Zone	Bedded LS, SS, SH	5	6	30
Hydraulic Conductivity	100-300	3	2	6
			Drastic Index	106

SETTING 8 C Mountain Flanks		PESTICIDE		
FEATURE	RANGE	WEIGHT	RATING	NUMBER
Depth to Water	30-50	5	5	25
Net Recharge	2-4	4	3	12
Aquifer Media	Bedded SS, LS, SH Sequences	3	6	18
Soil Media	Loam	5	5	25
Topography	6-12%	3	5	15
Impact Vadose Zone	Bedded LS, SS, SH	6	6	36
Hydraulic Conductivity	100-300	2	2	4
			Pesticide Drastic Index	133

PIEDMONT AND BLUE RIDGE

(8D) Regolith

This hydrogeologic setting is characterized by mod. low slopes covered by regolith and underlain by fr. bedrock of igneous, sedimentary or metamorphic ori regolith is typically clay-rich but may also serve source of ground water for low-yield wells. The r functions as a reservoir for ground-water recharge bedrock which is in direct hydraulic connection wi overlying regolith. The bedrock typically yields amounts of ground water than the regolith when the intersects fractures in the bedrock.



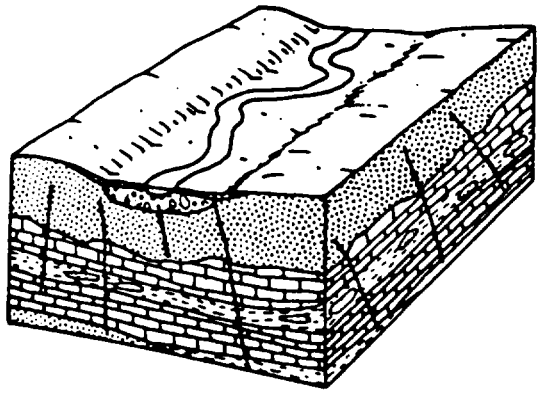
SETTING 8 D Regolith		GENERA
FEATURE	RANGE	WEIGHT RATING
Depth to Water	5-15	5 9
Net Recharge	6-7	4 6
Aquifer Media	Weathered Meta./Ig.	3 4
Soil Media	Clay Loam	2 3
Topography	6-12%	1 5
Impact Vadose Zone	Silt/Clay	5 1
Hydraulic Conductivity	1-100	3 1
		Drastic Index

SETTING 8 C Regolith		PESTICIDE
FEATURE	RANGE	WEIGHT RATING
Depth to Water	5-15	5 9
Net Recharge	6-7	4 6
Aquifer Media	Weathered Meta./Ig.	3 4
Soil Media	Clay Loam	5 3
Topography	6-12%	3 5
Impact Vadose Zone	Silt/Clay	4 1
Hydraulic Conductivity	1-100	2 1
		Pesticide Drastic Index

PIEDMONT AND BLUE RIDGE

(8E) River Alluvium

This hydrogeologic setting is characterized by low topography and deposits of varying thickness of alluvium along parts of stream valleys. The alluvium is underlain by fractured igneous, metamorphic or consolidated sedimentary rocks. Water is obtained from sand and gravel which is overlain and interbedded with finer-grained alluvial deposits. Surficial deposits usually weather to a sandy loam. The sand and gravel within the alluvium serves as the principal aquifer, but the alluvium also serves as the source of ground-water recharge for the underlying aquifer. Precipitation is abundant and recharge is moderately high, limited only by the loamy surficial deposits. Water levels are extremely variable, but are typically moderately shallow.



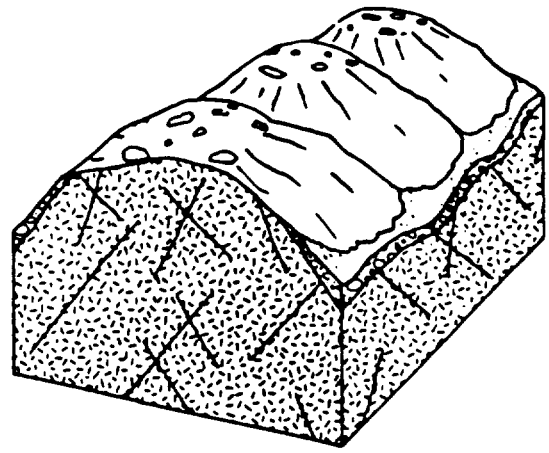
SETTING 8 E River Alluvium		GENERAL		
FEATURE	RANGE	WEIGHT	RATING	NUMBER
Depth to Water	5-15	5	9	45
Net Recharge	7-10	4	8	32
Aquifer Media	Sand and Gravel	3	8	24
Soil Media	Sandy Loam	2	6	12
Topography	2-6%	1	9	9
Impact Vadose Zone	S & G w/ sig. Silt and Clay	5	6	30
Hydraulic Conductivity	1000-2000	3	8	24
		Drastic Index		176

SETTING 8 E River Alluvium		PESTICIDE		
FEATURE	RANGE	WEIGHT	RATING	NUMBER
Depth to Water	5-15	5	9	45
Net Recharge	7-10	4	8	32
Aquifer Media	Sand and Gravel	3	8	24
Soil Media	Sandy Loam	5	6	30
Topography	2-6%	3	9	27
Impact Vadose Zone	S & G w/ sig. Silt and Clay	4	6	24
Hydraulic Conductivity	1000-2000	2	8	16
		Pesticide Drastic Index		198

PIEDMONT AND BLUE RIDGE

(8F) Mountain Crests

This hydrogeologic setting is characterized by moderate to steep topography on the crests of mountains with thin soil cover and exposed fractured bedrock. Ground water is obtained primarily from the fractures in the bedrock which may be of sedimentary, metamorphic or igneous origin but which is commonly metamorphic or igneous. The fractures provide localized sources of ground water and well yields are typically limited. Although precipitation is abundant, due to the slopes, thin soil cover and small storage capacity of the fractures, runoff is significant and ground-water recharge is low. Water levels are extremely variable but commonly deep.



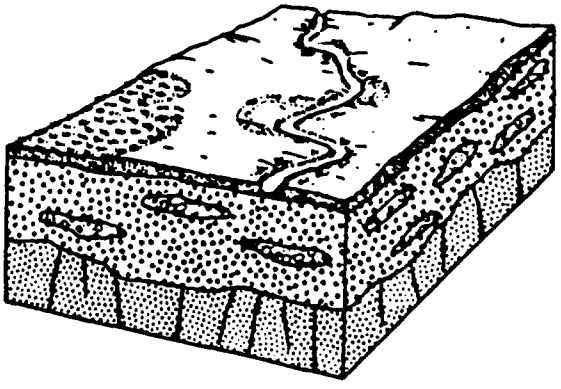
SETTING 8 F Mountain Crests		GENERAL		
FEATURE	RANGE	WEIGHT	RATING	NUMBER
Depth to Water	100+	5	1	5
Net Recharge	0-2	4	1	4
Aquifer Media	Metamorphic/Igneous	3	3	9
Soil Media	Thin or Absent	2	10	20
Topography	2-6%	1	9	9
Impact Vadose Zone	Metamorphic/Igneous	5	4	20
Hydraulic Conductivity	1-100	3	1	3
		Drastic Index		70

SETTING 8 F Mountain Crests		PESTICIDE		
FEATURE	RANGE	WEIGHT	RATING	NUMBER
Depth to Water	100+	5	1	5
Net Recharge	0-2	4	1	4
Aquifer Media	Metamorphic/Igneous	3	3	9
Soil Media	Thin or Absent	5	10	50
Topography	2-6%	3	9	27
Impact Vadose Zone	Metamorphic/Igneous	4	4	16
Hydraulic Conductivity	1-100	2	1	2
		Pesticide Drastic Index		113

PIEDMONT AND BLUE RIDGE

(8G) Swamp/Marsh

This hydrogeologic setting is characterized by low topographic relief, high water levels and high organic silt and clay deposits. These wetlands occur along the courses of floodplains and in upland areas as a result of vertically restricted drainage. Recharge is commonly low to moderate as a result of low topography and low conductivities even though rainfall is high. These areas may be discharge zones or may alternate as recharge and discharge zones as seasons change.



SETTING 8 G Swamp/Marsh		GENERAL		
FEATURE	RANGE	WEIGHT	RATING	NUMBER
Depth to Water	0-5	5	10	50
Net Recharge	4-7	4	6	24
Aquifer Media	Metamorphic/Igneous	3	3	9
Soil Media	Muck	2	2	4
Topography	0-2	1	10	10
Impact Vadose Zone	Metamorphic/Igneous	5	4	20
Hydraulic Conductivity	1-100	3	1	3
			Drastic Index	120

SETTING 8 G Swamp/Marsh		PESTICIDE		
FEATURE	RANGE	WEIGHT	RATING	NUMBER
Depth to Water	0-5	5	10	50
Net Recharge	4-7	4	6	24
Aquifer Media	Metamorphic/Igneous	3	3	9
Soil Media	Muck	5	2	10
Topography	0-2	3	10	30
Impact Vadose Zone	Metamorphic/Igneous	4	4	16
Hydraulic Conductivity	1-100	2	1	2
			Pesticide Drastic Index	141

PHYSIOGRAPHIC MAP OF GEORGIA

by

William Z. Clark, Jr. and Arnold C. Zisa

DEPARTMENT OF NATURAL RESOURCES
Joe D. Tanner, Commissioner

THE GEOLOGIC AND WATER RESOURCES DIVISION
Sam M. Pickering, State Geologist and Division Director

Atlanta
1976

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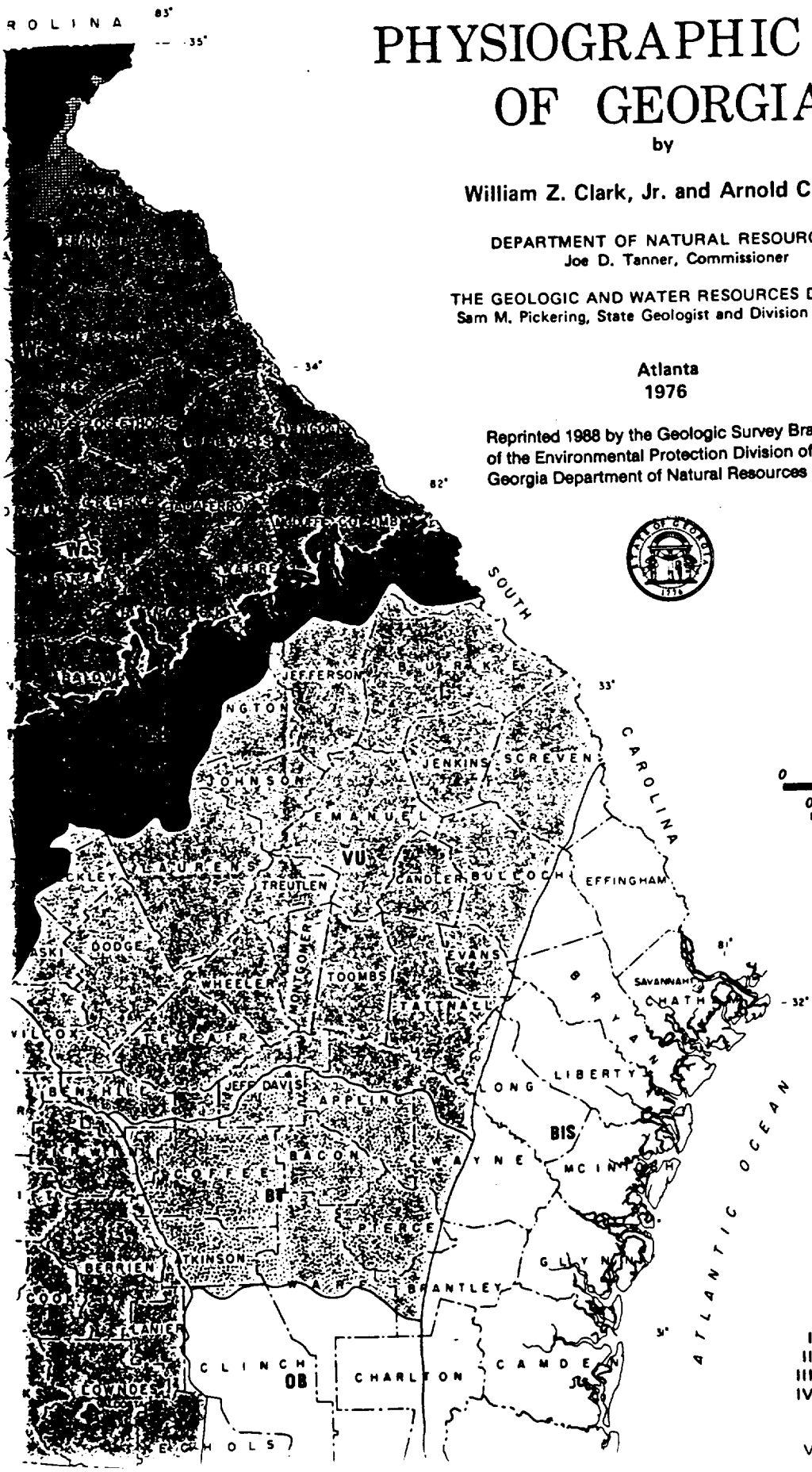


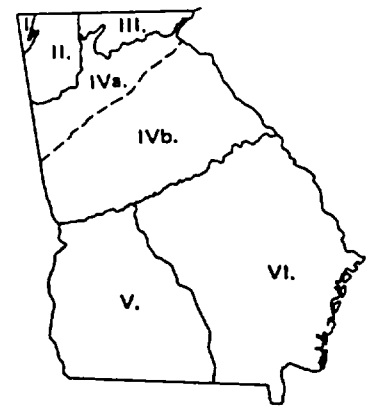
SCALE

1:2,000,000

0 10 20 30 40 50 Miles

0 20 40 60 Kilometers

PHYSIOGRAPHIC SECTIONS



I. Cumberland-Plateau Section
II. Southern Valley and Ridge Section
III. Southern Blue Ridge Section
IV. Southern Piedmont Section
IVa. Upland Georgia Subsection
IVb. Midland Georgia Subsection
V. East Gulf Coastal Plain Section

PHYSIOGR
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William Z. Clark

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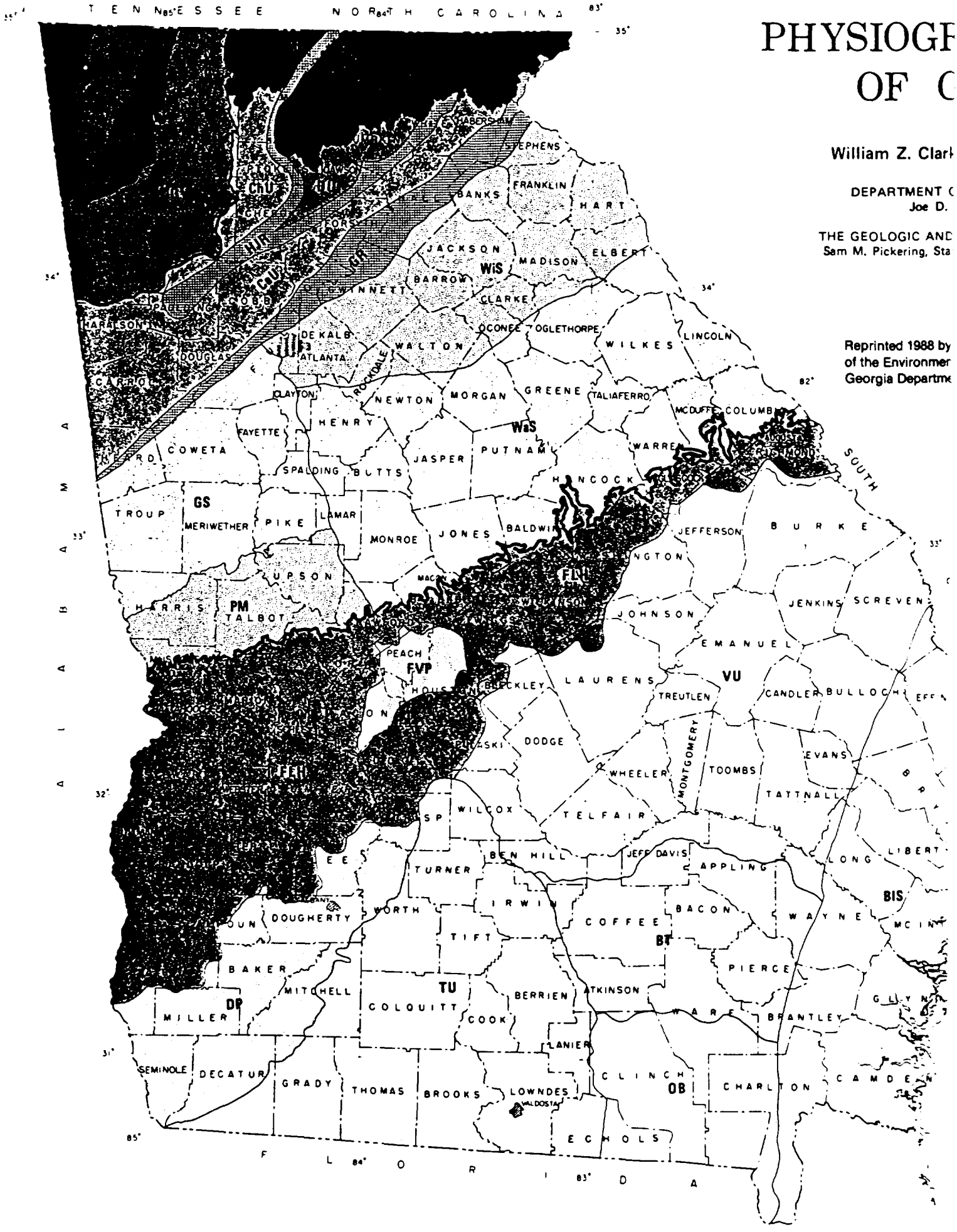


1AJOR DIVISION

)VINCE

.out Mountain District is
ıntains, Lookout-Pigeon
‹out Valley which is a
ɔed by Rockcastle Sand-
/ is underlain by Chicka-
ɔland slopes gently to the
200 feet near Durham to
ɜma-Georgia border. The
ıin and the southeastern
a continuous escarpment
okout Valley. Elevations
ıt. The escarpment on the
ɔuntain, the district and
:000 feet to the Chicka-
re breached by numerous
ı top of the upland and
ı the cliffs.

NCE

on

ckamauga Valley District
ng, discontinuous, north-
near, parallel ridges. The
and dolomite of Cambro-
ad by the more resistant
Cambro-Ordovician age.
et in elevation and stand
ys. Rectangular drainage
structural control.

prominent, narrow, chev-
ɜe Ridges District. These
: Chickamauga Valley Dis-
' District to the south and
closely parallels the Rome
ly by the Red Mountain
tions of 1400-1600 feet.
erlain by shales and lime-
cian age, respectively.

Valley District is typically
dges and hills. Elevations
feet above sea level with
ne valley is underlain by
ɔrian and Ordovician age.
follows the escarpment of

ılar mass of rugged moun-
0 feet is characteristic of
of metamorphosed sedi-
ater tributaries of south-
ns has produced valleys
s. The southern boundary
r elevations of the Chero-
ıutta Mountains are sepa-
Ridge by the McCaysville

; almost completely en-
se from the 2000 foot ele-
of 4000-4500 feet above
:d by the northeast-trend-
hy on both sides of these
rolling topography, pro-
Group, varies in elevation
ɔut the Basin varies from
flowing stream valleys and
ı 300-500 feet.

ıass of rugged mountains
)0-4700 feet in the north
est is the dominant topo-
ns District. Differing rates
ɔy the headwater tributary
the Atlantic Ocean or the
at are 1500-2000 feet be-
n boundary of the Blue
ɔroximately the 1700 foot
slope occurs.

PIEDMONT PROVINCE

Southern Piedmont Section

Upland Georgia Subsection

Cherokee Upland District - The northern portion of the Cherokee Upland District is a rough, hilly surface with elevations ranging from 1300-1500 feet. Except for a few isolated mountains, elevations gradually decrease to 1000 feet in the southern part. The westward-flowing streams in the northern area occupy deep, narrow valleys 300-600 feet below the surrounding surface, while the southwestward flowing streams in the southern portion have wider, more open valleys 200-300 feet below the adjacent ridges. The eastern and southern boundaries are formed by the low, linear, parallel ridges of the Hightower-Jasper Ridges District.

Dahlonega Upland District - The rough and hilly northeastern part of the Dahlonega Upland District stands 1500-1700 feet above sea level. Streams in this area flow south out of the Blue Ridge Mountains District, and have cut deep, narrow valleys 500-600 feet below the surrounding surface. In the southern and southwestern portions, surface elevations decrease to 1200 feet. Stream valleys are wider, more open, and only 200-300 feet below the adjacent surface. The southern and western boundaries are formed by the low linear, parallel ridges of the Hightower-Jasper Ridges District.

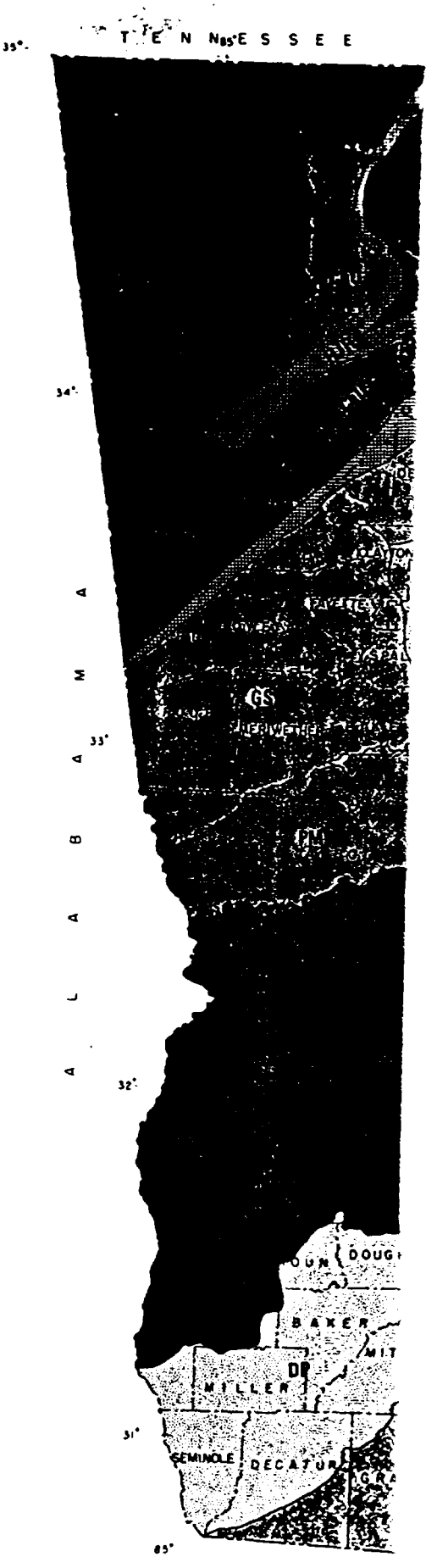
Hightower-Jasper Ridges District - Although the Hightower Ridges and Jasper Ridges have different structural and lithologic histories, they are topographically so similar that they may be discussed together. The Hightower-Jasper Ridges District consists of a series of low, linear, parallel ridges separated by narrow valleys. The Hightower Ridges range in elevation from 1500 feet in the northeast to 1000 feet in the southwest. Relief in this area varies from 500 feet in the northeast to 200 feet in the southwest. The Jasper Ridges bisect the McCaysville Basin District and continue southward as a low area between the Cohutta and Blue Ridge Mountains. These ridges range in elevation from 2400 feet in the north to 1200 feet near Canton where they join the Hightower Ridges. Relief varies from 800 feet in the north to 200 feet near Lake Allatoona. Some structural control of streams in the district is exhibited by the modified rectangular drainage patterns. The southern and western boundaries are located where there is a decrease in the density of the linear ridges.

Central Uplands District - The northeastern and central portions of the Central Upland District are a series of low, linear ridges, 1300-1500 feet above sea level, and separated by broad, open valleys. Streams flowing through this section are generally transverse to the structure and occupy valleys 150-200 feet below the ridge crests. In the southwestern part, elevations decrease to 1100 feet, and the linearity of the topography is not so apparent. Stream valleys in the southwestern portion are not as open as those to the northeast. They exhibit a rectangular drainage pattern and lie only 100-150 feet below the surrounding area. The southern boundary of this district is the ridge crest that marks the beginning of the Gainesville Ridges District.

Gainesville Ridges District - A series of northeast-trending, low, linear, parallel ridges separated by narrow valleys characterizes the Gainesville Ridges District. The ridges are composed of quartzite and gneiss, while the valleys are underlain by phyllonite and schist. These ridges vary in elevation from 1500-1600 feet in the northeast and decrease gradually to 700 feet in the southwest. Relief varies from 100-200 feet in the northeast to 70-100 feet in the southwest. The courses of the Chattahoochee River and its tributaries are strongly controlled by the ridges in this district and exhibit a good example of rectangular drainage. The southern boundary follows a ridge that is continuous throughout most of its extent, decreasing in elevation from 1100 feet in the northeast to 700 feet in the southwest. This ridge crest is the drainage divide between southwest flowing streams and those streams draining to the south.

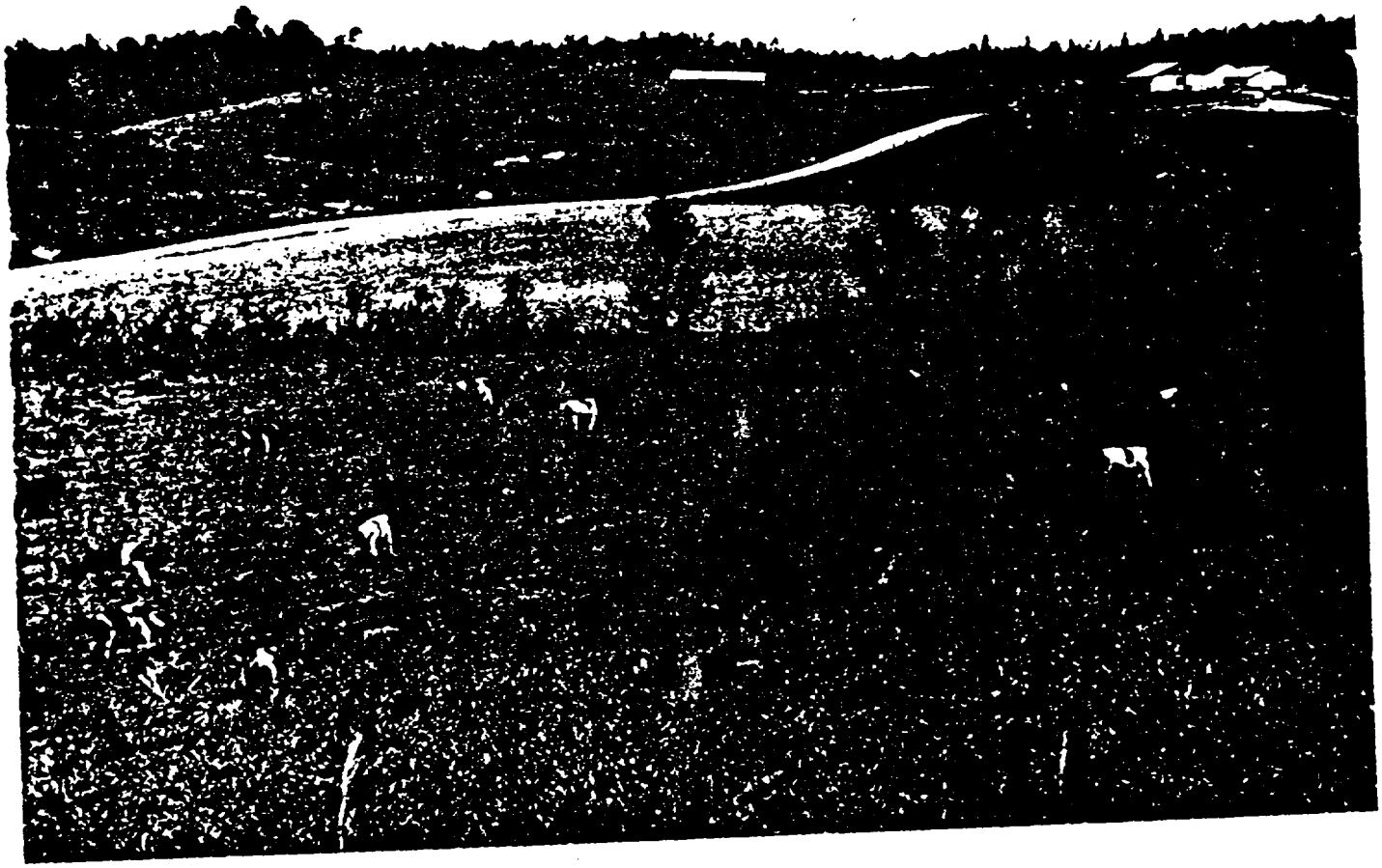
Midland Georgia Subsection

Winder Slope District - The gently rolling topography of the Winder Slope District slopes gradually from an elevation of 1000 feet in the north to 700 feet at the southern edge. This district is dissected by the headwater tributaries of the major streams draining to the Atlantic Ocean. Numerous dome-shaped, granitic mountains are located on the interfluves in the southern and western portion of this district. The stream valleys which are fairly deep and narrow, lie 100-200 feet below the narrow, rounded stream divides. The western boundary follows the drainage divide that separates streams draining to the Atlantic Ocean from those draining to the Gulf of Mexico. The southern boundary approximates the 700 foot elevation where a sharp break in regional slope occurs.



REFERENCE 21

SOIL SURVEY
Carroll and Haralson Counties
Georgia



UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service
In cooperation with
UNIVERSITY OF GEORGIA, COLLEGE OF AGRICULTURE
AGRICULTURAL EXPERIMENT STATIONS

Issued March 1971

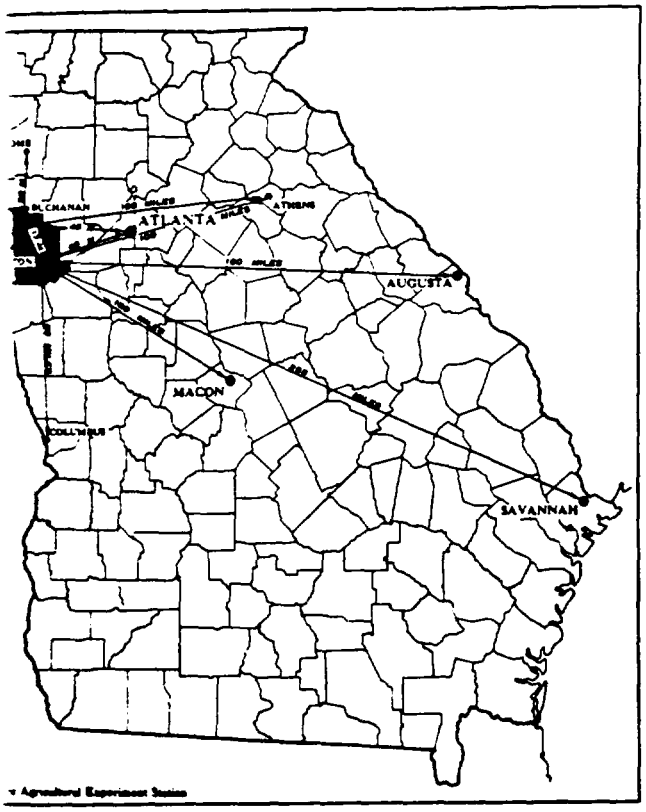
SOIL SURVEY OF CARROLL AND HARALSON COUNTIES, GEORGIA

REPORT BY J. F. BROOKS, SOIL CONSERVATION SERVICE

SOILS SURVEYED BY J. F. BROOKS, T. N. CRABB, AND R. D. WELLS, SOIL CONSERVATION SERVICE

ED STATES DEPARTMENT OF AGRICULTURE IN COOPERATION WITH THE UNIVERSITY OF GEORGIA, COLLEGE OF AGRICULTURE, AGRICULTURAL EXPERIMENT STATIONS

RROLL AND HARALSON COUNTIES are in the northern half of Georgia on the western boundary of state (fig. 1). The Chattahoochee River flows along the eastern boundary. Douglas and Paulding Counties these counties on the east and separate the two coun- from the metropolitan area of Atlanta.



e 1.—Location of Carroll and Haralson Counties in Georgia.

The total area of Carroll and Haralson counties is 780 square miles, or 499,200 acres. The dominantly loamy soils in these counties are mainly rolling, but in places are hilly.

Most of the income from farming is from the sale of poultry, livestock, and livestock products. Corn, cotton, pimento peppers, and vegetables are grown for sale on a number of farms.

The population of the two counties was 48,775 in 1950 and 50,994 in 1960. About 60 percent of the people live in the rural areas. Carrollton is the largest town and county seat of Carroll County, and Buchanan is the county seat of Haralson County.

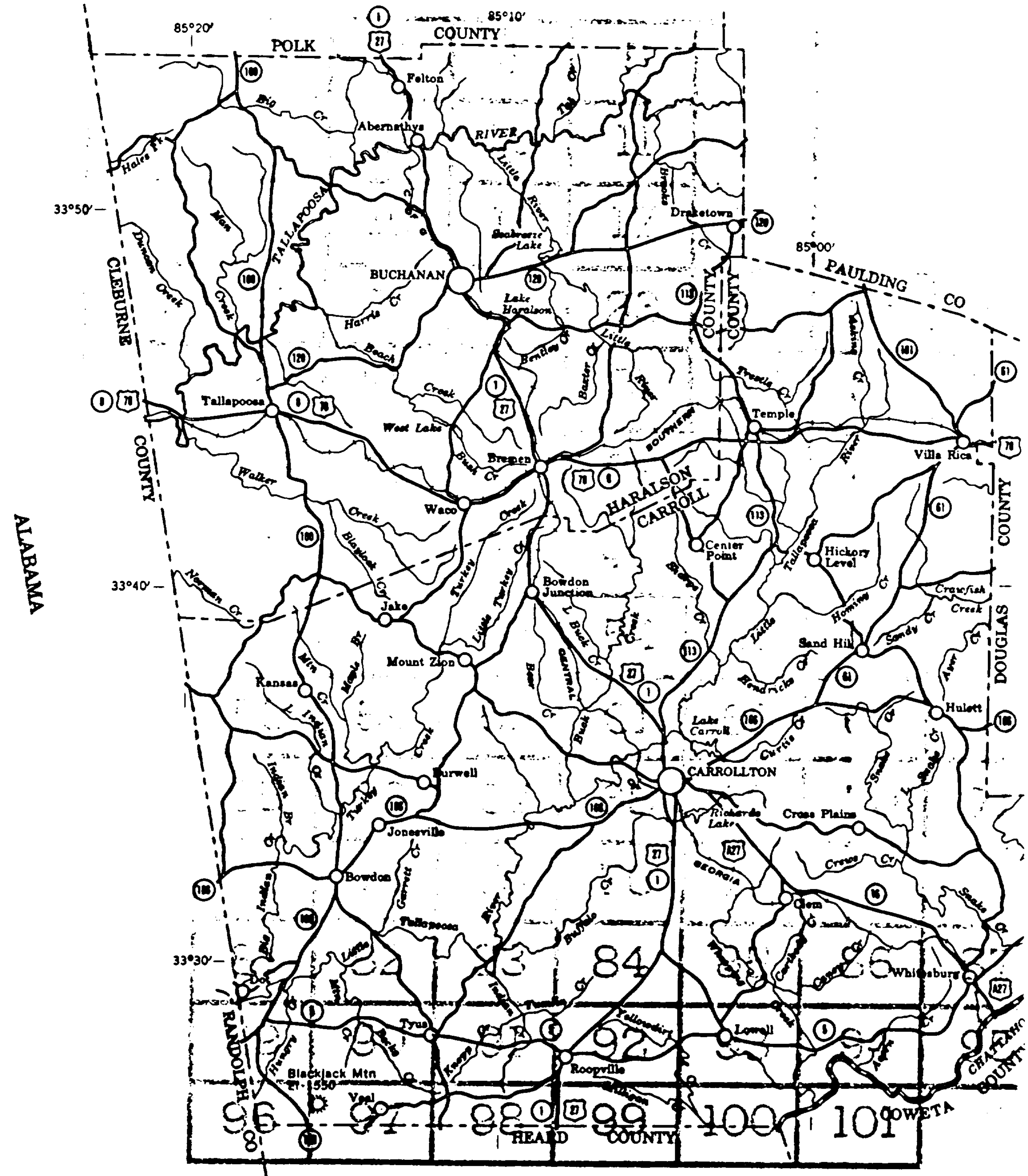
The climate of the area is characterized by long, moderately hot summers and short, mild winters. In summer, daytime temperatures between 85° and 90° F. are common, but the nights are moderately cool. Occasionally the temperature drops to around 15° in winter, but only for short periods. Precipitation averages about 51 inches per year.

How This Survey Was Made

Soil scientists made this survey to learn what kinds of soils are in Carroll and Haralson Counties, where they are located, and how they can be used.

The soil scientists went into the survey area knowing they likely would find many soils they had already seen and perhaps some they had not. As they traveled over the two counties, they observed steepness, length, and shape of slopes; size and speed of streams; kinds of native plants or crops; kinds of rock; and many facts about the soils. They dug or bored many holes to expose soil profiles. A profile is the sequence of natural layers, or horizons, in a soil; it extends from the surface down into parent material that has not been changed much by leaching or by the action of plant roots.

The soil scientists made comparisons among the profiles they studied, and they compared these profiles with those in counties nearby and in places more distant. They classified and named the soils according to uniform procedures.



ALABAMA
POLK COUNTY
CLEBURNE COUNTY
PAULDING CO
DOUGLAS COUNTY
HEARD COUNTY
RANDOLPH
COWETA
HARALSON
CARROLL
85°20′
85°10′
85°00′
33°50′
33°40′
33°30′
Felton
Abernathys
Draketown
BUCHANAN
Tallapoosa
West Lake
Bremen
Waco
Temple
Villa Rica
Center Point
Hickory Level
Bowdon Junction
Jake
Mount Zion
Kansas
Sand Hill
Hulett
Lake Carroll
CARROLLTON
Burwell
Jonesville
Bowdon
Cross Plains
Clem
Whitesburg
Tyus
Lowell
Roopville
Blackjack Mtn
Vael
TALLAPOOSA
RIVER
Lake Haralson
SOUTHERN
CENTRAL
GEORGIA
84
92
100
101

Davidson Series

The Davidson series consists of well-drained soils that formed in materials weathered chiefly from diorite and hornblende gneiss. These soils are on broad ridges and slopes adjacent to drainageways. Slopes range from 2 to 15 percent. Depth to hard rock is more than 6 feet.

In a typical profile the surface layer is dark reddish-brown gravelly loam about 4 inches thick. The subsoil is dark-red clay to clay loam about 56 inches thick.

Davidson soils are low in organic-matter content, medium in natural fertility, and medium acid to strongly acid. Permeability is moderate, and the available water capacity is medium. The root zone is thick.

Davidson soils are fairly extensive. The largest areas extend from Villa Rica southwestward through Carrollton to a point just west of Roopville. Most of the acreage has been cleared of native vegetation, which consisted mostly of various oaks, hickory, dogwood, sourwood, poplar, and shortleaf pine. The less sloping soils that are not severely eroded are suited to most crops grown locally and are generally cultivated and pastured. The natural vegetation on abandoned fields is sassafras and loblolly pine.

Typical profile of Davidson gravelly loam, 2 to 6 percent slopes, eroded, in a cultivated field, 5 miles northwest of Carrollton, 1 mile east of Millers Academy Road on a county road, and 0.4 mile north of bridge on Buck Creek, Carroll County:

Ap—0 to 4 inches, dark reddish-brown (5YR 3/3) gravelly loam; weak, coarse, granular and fine, subangular blocky structure; very friable; many fine roots; few small maganese concretions; 20 to 30 percent gravel; medium acid; clear, smooth boundary; horizon 2 to 6 inches thick.

B2t—4 to 36 inches, dark-red (2.5YR 3/6) clay; strong, fine and medium, subangular blocky structure; firm; many, distinct, continuous clay films on ped surfaces; many fine roots; few small manganese concretions; a few quartz pebbles; medium acid to strongly acid; diffuse, wavy boundary; horizon 17 to 37 inches thick.

B3t—36 to 60 inches, dark-red (2.5YR 3/6) clay loam with few, fine, distinct mottles of strong brown (7.5YR 5/6); moderate, fine and medium, subangular blocky structure; firm; many, distinct, continuous clay films on ped surfaces; few fine mica flakes; medium acid to strongly acid; diffuse, wavy boundary; horizon 20 to 30 inches thick.

C—60 to 75 inches +, highly weathered basic rock material with pockets of dark-red (2.5YR 3/6) clay loam; common fine mica flakes; medium acid to strongly acid.

The Ap horizon ranges from dark red and dark reddish brown to dusky red and dark brown. In eroded areas the Ap horizon ranges from 3 to 6 inches in thickness, but in severely eroded areas it is only 2 to 5 inches thick and consists of clay loam.

Davidson soils occur with Musella and Iredell soils. The Davidson soils are redder and less sticky in the subsoil than are the Iredell soils. The Davidson soils have more distinct horizons than the Musella soils and are thicker.

Davidson gravelly loam, 2 to 6 percent slopes, eroded (DrB2).—This soil is on broad, convex ridges. It has the profile described as typical for the series (fig. 5). The combined thickness of the surface layer and subsoil ranges from 60 to 72 inches. Ordinary tillage extends into the subsoil and has mixed some of the clayey subsoil with the original surface layer. In some places there is little difference in color between the surface layer and the subsoil.

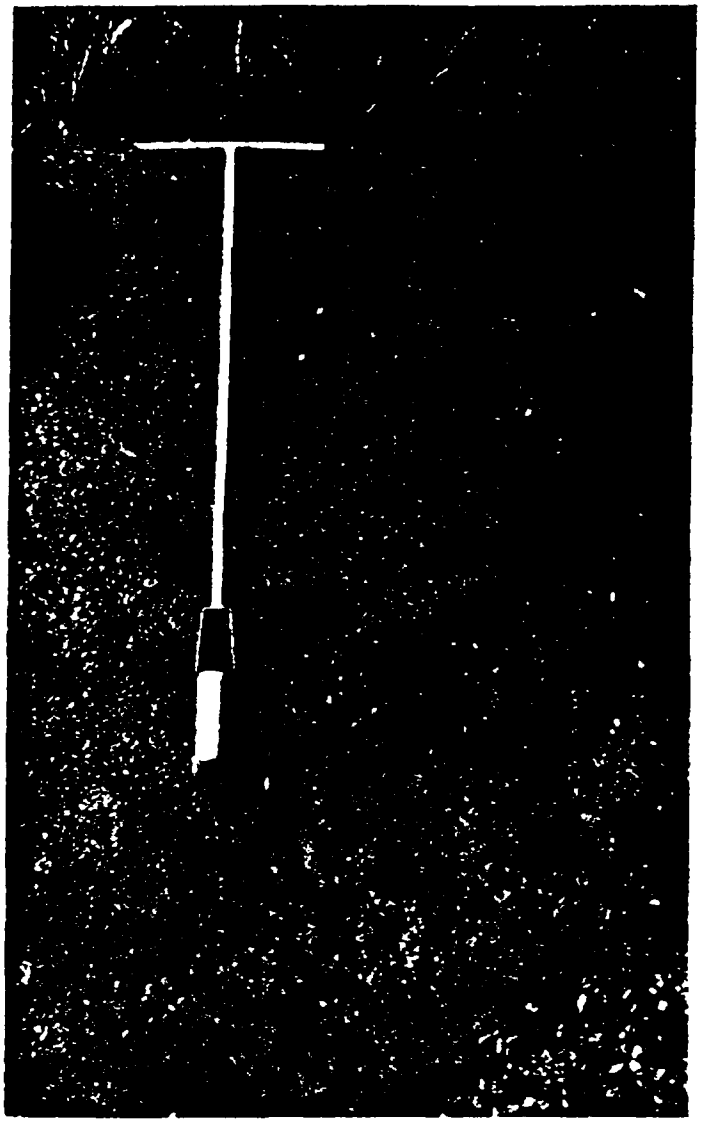


Figure 5.—Profile of Davidson gravelly loam, 2 to 6 percent slopes, eroded, along roadbank. Soil auger is 52 inches long.

Included in the mapping were areas that have a fine sandy loam surface layer.

Good tilth is maintained on this soil if it is tilled only within a fairly narrow range in moisture content. This soil is suited to most crops grown locally and responds well to good management practices, especially fertilization. Surface runoff in barren fields is medium, and erosion is a moderate hazard if the soil is not protected. Most of the acreage is pastured or cultivated. (Capability unit IIe-1; woodland suitability group 2; wildlife suitability group 1)

Davidson gravelly loam, 6 to 10 percent slopes, eroded (DrC2).—This soil occupies the tops and gentle side slopes of broad, convex ridges. It has a dark reddish-brown gravelly loam surface layer that ranges from 3 to 5 inches in thickness and is underlain by a thick, dark-red clay subsoil. The combined thickness of the surface layer and subsoil is 50 to 72 inches. The plow layer consists partly of the

inal surface layer and partly of the upper subsoil ixed up during tillage.

Included with this soil in mapping were a few galled ots and a few shallow gullies. Also included was a very all, severely eroded acreage where the plow layer is in upper part of the subsoil and tilth is poor.

This soil retains its good tilth if it is tilled only within airly narrow range of moisture content. It is suited to st crops grown locally and responds to good manage- nt, especially fertilization. Because surface runoff is dium to rapid on barren fields, erosion is a severe hazard he soil is not protected.

Most of the acreage is cultivated and pastured. (Capa- ity unit IIIe-1; woodland suitability group 2; wildlife itability group 1)

Davidson gravelly loam, 10 to 15 percent slopes, oded (DrD2).—This soil is on the moderate side slopes ridges adjacent to drainageways and streams. The sur- ce layer is dark reddish-brown gravelly loam 3 to 5 ches thick. The subsoil is thick, dark-red clay. The com- ned thickness of the surface layer and subsoil is 50 to 70 ches. Ordinary tillage extends into the subsoil and has ixed some of the clayey subsoil with part of the original rface layer.

Included in mapping were a few severely eroded areas hat have a few shallow gullies. In this area the plow yer is in the upper part of the subsoil. A small acreage included that has slopes of as much as 25 percent.

This soil has fair tilth but is friable only within a nar- w range of moisture content. Surface runoff is rapid barren fields, and erosion is a very severe hazard if the il is not protected. Because of the erosion hazard, this oil is better suited to permanent pasture and forest than cultivated crops, but with very careful management, ltivated crops can be grown to a limited extent.

Most of the acreage is pastured and forested. (Capa- lity unit IVe-1; woodland suitability group 2; wildlife itability group 2)

Davidson gravelly clay loam, 2 to 6 percent slopes, verely eroded (DsB3).—This soil occupies broad ridge- ps. It has a dark-red gravelly clay loam surface layer, to 5 inches thick, and a thick, dark-red clay subsoil. The ombined thickness of the surface layer and subsoil is 55 o 70 inches. The plow layer consists largely of material rom the subsoil. Shallow gullies and galled spots are common.

Tilth is poor, and the soil can be worked only within a narrow range of moisture content. The plow layer bakes and hardens upon drying and is cloddy in many places.

The rate of infiltration is slow, and surface runoff is oderate to rapid on barren fields. If the soil is not pro- cted, the hazard of further erosion is severe. This soil suited to most crops grown locally, and it responds to ood management practices, especially fertilization.

Most of the acreage is used for crops and pastures. (Ca- bility unit IIIe-1; woodland suitability group 3; wild- e suitability group 3)

Davidson gravelly clay loam, 6 to 10 percent slopes, verely eroded (DsC3).—This soil is on broad ridgetops nd their side slopes. The surface layer is dark-red ravelly clay loam 2 to 5 inches thick. The subsoil is hick, dark-red clay. The combined thickness of the sur- ce layer and subsoil is 50 to 70 inches. The plow layer is composed largely of material from the subsoil. Shallow gullies and galled spots are common.

Tilth is poor. Because of the clay, this soil can be worked only within a narrow range of moisture content. Upon drying the plow layer bakes and hardens and in many places becomes cloddy. Infiltration is slow, and surface runoff is rapid in areas left bare. Erosion is a very severe hazard if the soil is not protected.

This soil is suited to most locally grown crops, but it is better suited to pasture and hay crops than to cultivated crops. Most of the acreage is in pasture and hay crops. (Capability unit IVe-1; woodland suitability group 3; wildlife suitability group 3)

Davidson gravelly clay loam, 10 to 15 percent slopes, severely eroded (DsD3).—This soil occupies the moderate side slopes of ridges and is adjacent to drainageways and streams. It has a dark-red gravelly clay loam surface layer, 2 to 5 inches thick, and a thick, dark-red clay subsoil. The combined thickness of the surface layer and subsoil is 50 to 60 inches. The plow layer consists largely of material from the subsoil. Shallow gullies and galled spots are common, and there are a few gullies 2 to 5 feet deep.

Included in the mapping were some areas that have slopes as steep as 25 percent.

Tilth is poor, and because of the clay, this soil can be worked only within a narrow range of moisture content. The plow layer bakes and hardens upon drying and is usually cloddy. Infiltration is slow, and surface runoff is rapid in bare areas. The hazard of erosion is very severe if the soil is not protected.

Most of this soil is in pasture or hay crops and forest. The soil is better suited to pasture and hay crops than to cultivated crops because surface runoff is rapid and the hazard of erosion is very severe. (Capability unit IVe-1; woodland suitability group 3; wildlife suitability group 3)

Grover Series

The Grover series consists of well-drained soils that formed in materials weathered chiefly from quartz mica schist and phyllite. These soils are on the tops and sides of medium and narrow ridges. Slopes range from 2 to 15 percent.

In a typical profile the surface layer is brown gravelly fine sandy loam about 5 inches thick. The subsoil extends to a depth of 36 inches. It is strong-brown clay loam in the upper 4 inches and yellowish-red silty clay loam below. Depth to hard rock exceeds 10 feet.

Grover soils are strongly acid and low in organic-matter content and natural fertility. Permeability is moderate, and the available water capacity is medium.

These soils are widely distributed and extensive in the two counties. The largest areas are in the northern and western parts of Haralson County. The native vegetation consisted of mixed oaks, hickory, dogwood, sourwood, poplar, and shortleaf pine. The less sloping soils are mostly cultivated and pastured and are well suited to those uses. The steeper soils are wooded.

Typical profile of Grover gravelly fine sandy loam, 2 to 6 percent slopes, eroded, in a wooded area, 3 miles east of Tallapoosa on U.S. Highway No. 78, then 0.6 mile north of junction on Bagwell Road, Haralson County:

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

UNIVERSITY OF GEORGIA, COLLEGE OF AGRICULTURE, AGRICULTURAL EXPERIMENT STATIONS

GENERAL SOIL MAP

CARROLL AND HARALSON COUNTIES, GEORGIA

SCALE IN MILES

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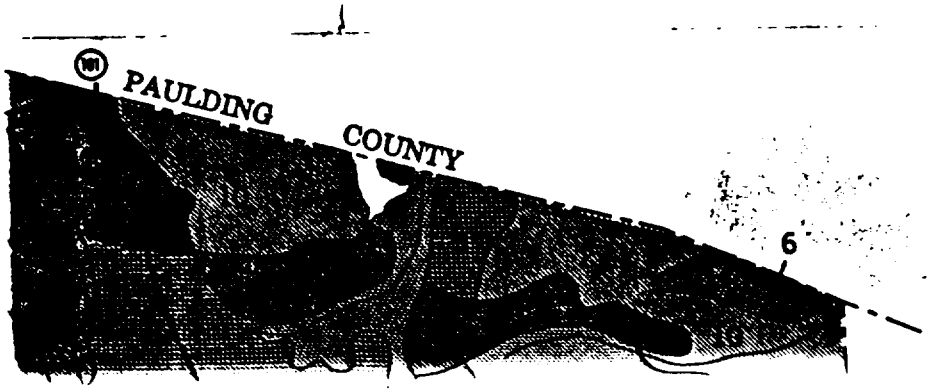
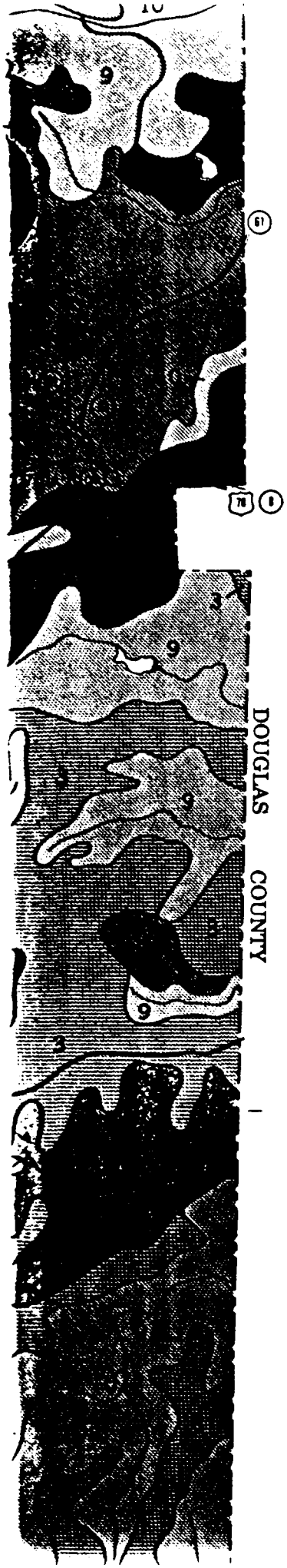
N



Creek
RIVER
Lake Carroll
TALLAPOOSA
CARROLLT
GEORGIA
LITTLE
Creek



SOIL ASSOCIATIONS

NEARLY LEVEL SOILS ON BOTTOM LANDS AND LOW STREAM TERRACES

1 Chewacla-Augusta association: Somewhat poorly drained, nearly level soils on frequently flooded bottom lands and on low stream terraces

2 Congaree-Buncombe association: Well-drained to excessively drained, nearly level soils on infrequently flooded bottom lands

GENTLY SLOPING AND MODERATELY SLOPING SOILS OF THE UPLANDS

3 Madison-Tallapoosa association: Well-drained, micaceous soils that have a subsoil of red clay or clay loam

Grover association: Well-drained, micaceous soils that have a subsoil of yellowish-red to strong-brown clay loam

Hulett-Grover association: Well-drained soils that have a subsoil of yellowish-brown to yellowish-red clay or clay loam

Masada association: Well-drained soils that occur on stream terraces and have a brownish clay loam subsoil

Davidson-Musella association: Well-drained soils that have a dark-red clay loam or clay subsoil

STRONGLY SLOPING AND STEEP SOILS OF THE UPLANDS

8 Tallapoosa-Grover association: Well-drained, micaceous soils that have a thin subsoil of yellowish-red or strong-brown clay loam

9 Madison-Louisa-Tallapoosa association: Well-drained to somewhat excessively drained, micaceous soils that have a moderately thick to thin subsoil of red or yellowish-red clay to clay loam

Davidson-Musella association: Well-drained soils that have a subsoil of dark-red clay or clay loam

Louisburg-Wilkes association: Somewhat excessively drained to well-drained, stony, shallow soils that have a coarse sandy loam or silty clay loam subsoil

February 1969

The soils in most of the higher areas have slight limitations if used for foundations for dwellings, picnic areas, and septic tank filter fields. They have moderate limitations if used for oxidation ponds, sites for light industries, and trafficways. Limitations for these uses vary in the lower areas, which are less well drained and sometimes flooded.

7. *Davidson-Musella association*

Well-drained soils that have a dark-red clay loam or clay subsoil

This association consists of soils on broad and narrow ridgetops and of gently sloping soils on side slopes. The larger areas occur between Villa Rica and Carrollton in Carroll County and near Draketown in Haralson County. Slopes are 6 to 10 percent in about two-thirds of this association and are 2 to 6 percent in the rest. This association occupies about 4 percent of the two counties.

The Davidson soils make up about 85 percent of the association: Musella soils, about 10 percent; and minor soils, the remaining 5 percent.

Davidson soils occur on broad ridges and slopes adjacent to drainageways. These soils have a dark reddish-brown gravelly loam surface layer about 4 inches thick. The subsoil extends to a depth of 60 inches and is dark-red, firm clay loam and clay. Depth to hard rock exceeds 6 feet.

Musella soils occur on narrow, broken ridgetops. These soils have a dark reddish-brown gravelly clay loam surface layer about 5 inches thick. The subsoil extends to a depth of 18 inches and is dark-red, friable gravelly clay loam. Fractured rock lies beneath this layer at a depth of 1 to 5 feet.

Minor soils in this association are the Madison, Wilkes, and Iredell. The well-drained Madison soils are micaceous and occur on broad, smooth interstream ridges and on slopes adjacent to drainageways. The Wilkes soils are well drained to somewhat excessively drained and occur on uplands. Iredell soils are moderately well drained to somewhat poorly drained and occur in low areas of the uplands.

Most of this association has been cleared and is cultivated or pastured. The soils are well suited to cotton, corn, small grains, pimento peppers, soybeans, bermudagrass, tall fescue, and lespedeza. In most areas the soils are in good tilth, but they can be worked easily only within a narrow range of moisture content. In about 35 percent of this association the soils are severely eroded and plowing extends into the upper part of the subsoil. In these areas, tilth is poor.

Most of the farms in the association are small and are owned by part-time farmers who are converting cropland to pasture and pine forest. Beef-cattle farms and dairy farms are few.

The major soils of the association have moderate to slight limitations if used for homesites, campsites, picnic areas, intensive play areas, and sites for light industries. Limitations are moderate to severe if oxidation ponds are constructed.

Strongly Sloping and Steep Soils of the Uplands

The soils of four soil associations are strongly sloping and steep and occur mainly on wooded hillsides and narrow ridgetops. Slopes generally range from 10 to 40 percent. These soils range from shallow to deep. They are dominantly yellowish brown to dark red, and they have a subsoil that ranges from coarse loamy sand to clay. These soils formed in residual parent materials, such as hornblende gneiss, quartz mica schist, phyllite, and diorite.

8. *Tallapoosa-Grover association*

Well-drained, micaceous soils that have a thin subsoil of yellowish-red or strong-brown clay loam

This association consists of moderately sloping to steep soils on broken ridges with narrow crests that are adjacent to numerous drainageways. Slopes are 15 to 25 percent in about three-fourths of the association, and 10 to 15 percent in the rest. The larger areas are in the northern and western parts of Haralson County. This association occupies about 14 percent of the two counties.

Tallapoosa soils make up about 70 percent of the association; Grover soils, about 20 percent; and the minor soils, the remaining 10 percent.

The Tallapoosa soils are on narrow, broken ridgetops and hillsides that are dissected by drainageways and streams. These soils have a brown gravelly fine sandy loam surface layer about 4 inches thick. The subsoil is yellowish-red, friable clay loam. Soft micaceous rock is at a depth of 14 to 24 inches. Depth to hard rock exceeds 10 feet.

Grover soils are on medium and narrow ridgetops and their side slopes. These soils have a brown gravelly fine sandy loam surface layer about 5 inches thick. The subsoil extends to a depth of 36 inches and is strong-brown and yellowish-red, friable clay loam and silty clay loam. Soft micaceous rock is at a depth of 24 to 40 inches. Depth to hard rock exceeds 10 feet.

Minor soils in the association are in the Madison and Louisa series. The well-drained Madison soils are micaceous and occur on broad, smooth interstream ridges and on slopes adjacent to drainageways. The Louisa soils are somewhat excessively drained and occur on narrow, broken ridgetops and their side slopes.

Most of this association is still in native trees consisting of mixed oaks, hickory, dogwood, sourwood, and shortleaf pine. A few areas have been cleared and are cultivated or pastured, but in most places the soils are better suited to pasture than to cultivated crops.

Much of this association is sparsely populated. Several large areas belong to timber companies or other absentee owners. Many people commute daily to industrial jobs in nearby towns.

The major soils of this association generally have severe limitations if used for homesites, picnic areas, campsites, intensive play areas, sites for light industries, and oxidation ponds. In some places, however, limitations for homesites and picnic areas are moderate. These soils have moderate limitations if used for trafficways.

9. *Madison-Louisa-Tallapoosa association*

Well-drained to somewhat excessively drained, micaceous soils that have a moderately thick to thin subsoil of red or yellowish-red clay to clay loam

This association consists of moderately sloping to strongly sloping soils on hillsides and strongly sloping to steep soils on narrow, broken ridges. These soils are dis-

(Joins sheet 54)

(Joins sheet 68)

1 Mile

Scale 1:15 840

0

5 000 Feet

B&V WASTE SCIENCE AND TECHNOLOGY CORP.

TELEPHONE MEMORANDUM

U.S. EPA, Region IV
CBS Records
Geology near northwest Carrollton, Georgia

BVWST Project 52011.010
BVWST File
May 18, 1992
9:15 A.M.

To: Dr. Thomas Crawford
Company: West Georgia College, Professor of Geology
Phone No.: (706) 836-6479

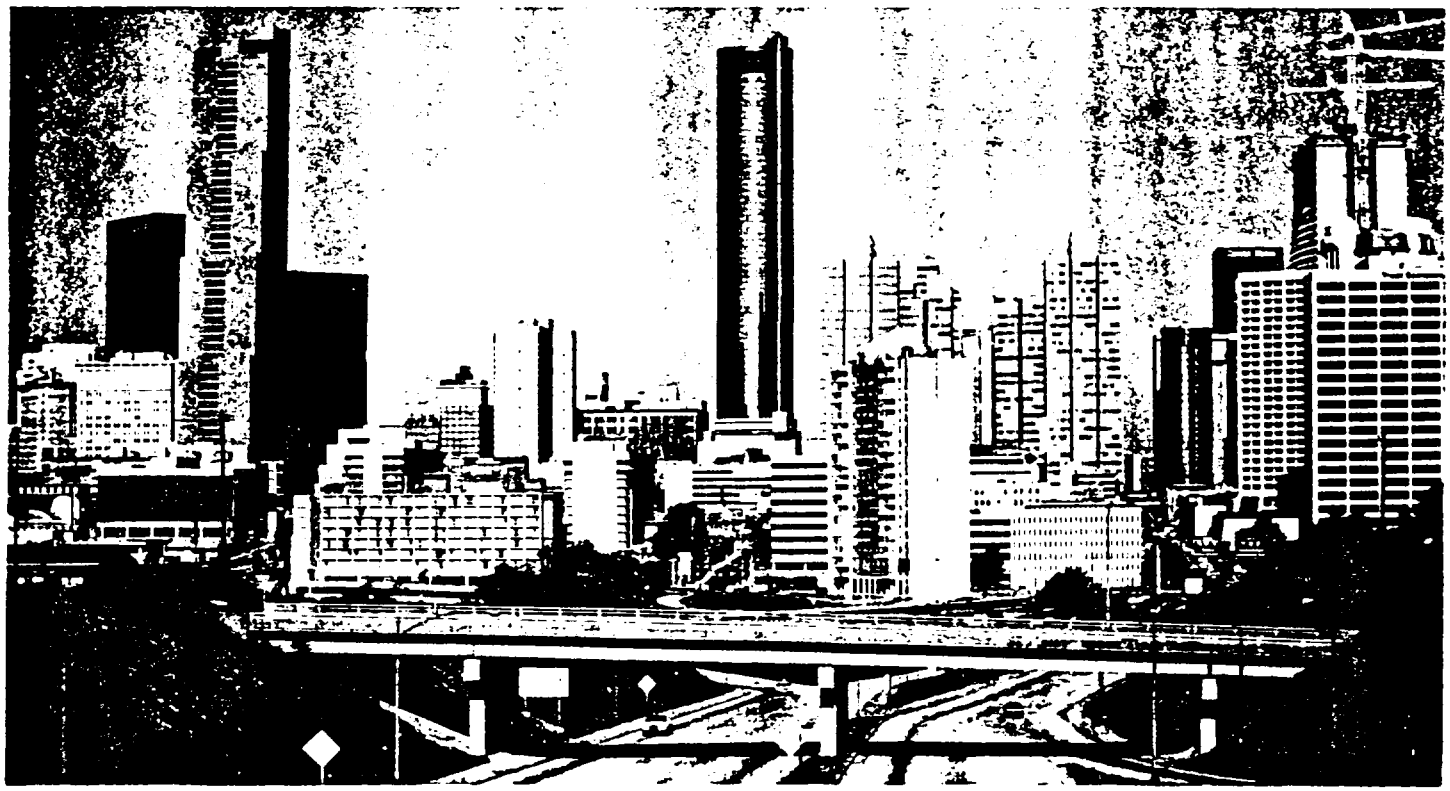
Recorded by: Carter Helm

Dr. Crawford stated that the geology differs greatly in the area and is very site-specific. Dr. Crawford has mapped the Carroll County area extensively. He estimated that typical alluvial thickness is 20-30 feet in the vicinity of the Little Tallapoosa River. However, CBS Records is too far from Buck Creek or the Little Tallapoosa River to be considering alluvial deposits beneath the site. Dr. Crawford said saprolite thickness in the vicinity of CBS Records is probably 40 to 50 feet. He also mentioned that schist is a prominant bedrock in the area.

REFERENCE 23

GEOLOGY OF THE GREATER ATLANTA REGION

Keith I. McConnell and Charlotte E. Abrams



Department of Natural Resources
Environmental Protection Division
Georgia Geologic Survey

BULLETIN 96

GEOLOGY OF THE GREATER ATLANTA REGION

Keith I. McConnell and Charlotte E. Abrams

ABSTRACT

The oldest rocks present in the Greater Atlanta Region (i.e., Corbin Gneiss Complex) are exposed in the crest of the Salem Church anticlinorium, a major northeast trending fold in the Blue Ridge portion of the study area. Nonconformably overlying these 1 b.y.-old Grenville gneisses are metasedimentary rocks of the Pinelog and Wilhite Formations. These two formations are interpreted as lithostratigraphic equivalents of units within the late Precambrian Snowbird and Walden Creek Groups of the Ocoee Supergroup. Stratigraphically above the Wilhite Formation is a metamorphosed clastic sequence that is interpreted as a lithostratigraphic equivalent of the Great Smoky Group as defined to the northeast of the study area. Rocks of the Murphy belt group are exposed in the Murphy synclinorium conformably above the Great Smoky Group. The Murphy belt group is composed predominantly of a metamorphosed succession of clastic rocks and also includes the Murphy Marble. The Murphy belt group does not extend southwest of the Murphy synclinorium east of Cartersville; however, rocks of the Great Smoky Group trend around the reentrant in the Cartersville fault into what is referred to as the Talladega belt. Units of the Talladega belt in this area are at least partially equivalent to the Ocoee Supergroup and therefore are late Precambrian in age.

Lithologic units of the Blue Ridge are separated from the rocks of the northern Piedmont by the Allatoona fault. The northern Piedmont can be divided into two major lithologic units, New Georgia and Sandy Springs Groups. The New Georgia Group is interpreted to contain the oldest units in this portion of the northern Piedmont and is characterized by a metamorphosed sequence of predominantly felsic and mafic volcanic and plutonic lithologies. The Sandy Springs Group is interpreted to conformably overlie the New Georgia Group and is composed dominantly of interlayered metavolcanic and metasedimentary rocks with a decreasing metavolcanic component upward in the stratigraphic sequence. Eastern and western belts of the Sandy Springs Group are separated by the Chattahoochee fault, a major tectonic boundary in the northern Piedmont.

Northern Piedmont rocks are separated from similar lithologies and stratigraphic sequences in the southern Piedmont by the Brevard fault zone. In the Greater Atlanta Regional Map area, the Brevard zone is a zone of early ductile and late, brittle shearing that is interpreted to have formed, at least in part, as a result of high strain along the axial zone of a large F_1 isocline. No major vertical displacement is apparent along this segment of the Brevard zone.

South of the Brevard fault zone, units defined as Atlanta Group by previous workers are interpreted in this report to be exposed in a large-scale synformal anticline. The Atlanta Group is characterized by metamorphosed sedimentary and volcanic rocks that have many similarities to lithologies north of the Brevard zone. Possible correlations between the Atlanta Group and the New Georgia and Sandy Springs Groups are presented in this report.

Paleozoic plutonic rocks present within the Greater Atlanta Regional Map area are divided into three major categories based upon chemical composition, depth of intrusion and time of intrusion relative to Paleozoic metamorphism. Earliest (category 1) intrusions were emplaced at shallow levels coincident with volcanism, are concordant to the regional trend, and are characterized by dacitic subvolcanic plutons and volcanics. Category 2 plutons were intruded syntectonically, at an intermediate level in the crust, and are characterized by moderately high concentrations of potassium, nearly concordant contacts with the country rocks and a lack of any association with volcanism. Both category 1 and 2 plutons have a metamorphic overprint. The final category of Paleozoic intrusive rocks present in the study area is dominantly granitic in composition, lacks a metamorphic overprint, is discordant to the regional trend and does not have a volcanic component. Plutons of category 3 are known to occur only south of the Brevard fault zone.

Two major regional progressive metamorphic events and seven deformational events have been recognized in the study area. The earliest deformation and metamorphism recognized occurred during the Grenville orogeny (approximately 1,000 m.y. ago) and is reflected only in basement gneisses of the Blue Ridge. The second metamorphic event is interpreted to have occurred approximately 365 m.y. ago and was associated with a major episode of isoclinal recumbent folding (F_1). Axial planar foliation (S_1) associated with this fold event represents the dominant planar feature in crystalline rocks of the area. Folds related to this deformation have not been recognized within the Valley and Ridge west of the Cartersville fault, partially supporting the existence of the fault east of Cartersville. F_2 folding postdated Paleozoic metamorphism and is responsible for the geometry of outcrop patterns in the Greater Atlanta Region. Subsequent folding events (F_3 and F_4) interfere with earlier fold patterns and complicate outcrop patterns of map units.

Twenty-eight commodities have been mined or prospected within the boundaries of the Greater Atlanta Regional Map. Of these various commodities only barite, ocher, sand, granite (dimension stone and crushed), limestone, structural clays, and marble are still being mined. Areas of extensive mining and (or) prospecting include the limestone, bauxite, and shale deposits of Floyd and Polk Counties; barite, ocher, iron and manganese deposits of the Cartersville district; volcanogenic massive sulfide and gold deposits in the northern Piedmont; and crushed and dimension stone from quarries in the Stone Mountain, Panola, Palmetto, and Ben Hill Granites and Lithonia Gneiss south of the Brevard fault zone and in the Austell, Sand Hill, Kennesaw and Dallas gneisses north of the Brevard zone.

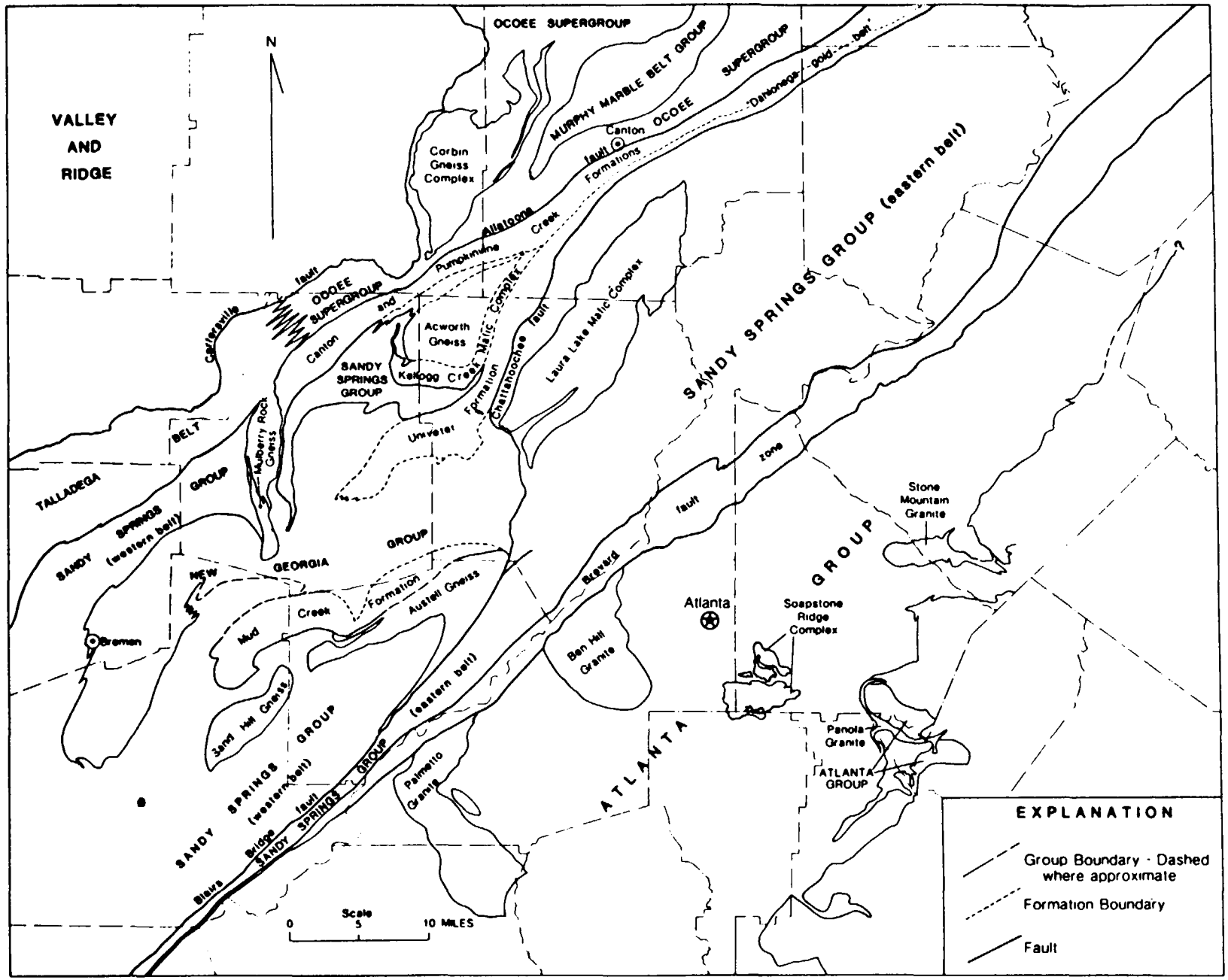


Figure 11. Group and formation boundaries of the crystalline rocks of the Greater Atlanta Regional Map.

Table 4. **Proposed correlation chart of lithologic units in the Alabama, Georgia and South Carolina Piedmont.**

Alabama (Modified after Tull (1978))	Georgia (this report) west		Georgia (this report) east	Northeast Georgia and South Carolina (Hatcher (1974))		Georgia (Modified after Hurst* (1973))
Emuckfaw Formation	Sandy Springs Group	Bill Arp Formation	Factory Shoals Formation	Tallulah Falls Formation	Greywacke, schist Quartzite, schist	Wedowee Formation
Wedowee Group	Sandy Springs Group	Andy Mountain Formation	Factory Shoals Formation	Tallulah Falls Formation	Aluminous schist	Wedowee Formation
Wedowee Group	Sandy Springs Group	Andy Mountain Formation	Chattahoochee Palisades Quartzite	Tallulah Falls Formation	not present	Wedowee Formation
Ashland Supergroup: Mad Indian and Hatchet Creek Groups	Sandy Springs Group	Dog River Formation	Powers Ferry Formation	Tallulah Falls Formation	Greywacke, schist, amphibolite	Wedowee Formation
Ashland Supergroup: Higgins Ferry and Poe Bridge Mountain Formations	New Georgia Group			Hornblende gneiss, amphibolite		Ashland Group
Fault						
Hillabee Chlorite Schist	New Georgia Group			Basement		Ashland Group

*Hurst (1973) interpreted the Wedowee to be older than Ashland.

facing criteria, and (or) fossils, this interpretation relies in part on the lithologic similarities between rocks of the Sandy Springs Group and Tallulah Falls Formation defined in northeastern Georgia by Hatcher (1971a). The similarities between these two sequences have been noted by many geologists (Hatcher, 1974, 1975; Higgins and McConnell, 1978a; Gillon, 1982). The stratigraphic interpretation presented herein is also in part dependent on Hatcher's (1971a, 1974) interpretation of an unconformable contact between Grenville basement and the Tallulah Falls Formation.

New Georgia Group

Rocks of the New Georgia Group (Abrams and McConnell, 1981a) form an irregular belt that extends from the Bremen area on the west northeastward to Canton where the belt narrows considerably and continues northeastward to at least the Dahlonega area, forming the "Dahlonega gold belt" (Fig. 11). The outcrop belt of the New Georgia Group, which is at least 130 mi. long and, at its widest, is 17 mi. wide, contains most of the base and precious metal deposits in the Greater Atlanta Regional Map area. New Georgia Group rocks are exposed in the core of a large-scale second-generation synform that plunges to the northeast. The base of the New Georgia Group is not exposed and its exact thickness is unknown. Sandy Springs Group (eastern belt) rocks are in fault contact with the New Georgia Group along the Chattahoochee and Blairs Bridge faults in the eastern and northern part of the belt (Plate I and Fig. 11). The contact between the Sandy Springs Group (western belt) and New Georgia Group near Villa Rica is gradational and this gradation is expressed by the apparent waning of volcanic activity as time progressed. The New Georgia Group is characterized by the dominance of metavolcanic rocks over metasedimentary rocks. On the other hand, the Sandy Springs Group is dominantly metasedimentary and contains a steadily decreasing volcanic component upward.

That part of the New Georgia Group that is exposed in the study area is composed of an intermingled sequence of metamorphosed felsic and mafic volcanic and subvolcanic rocks, plutonic rocks and a proportionally smaller amount of sedimentary rocks. At least two cycles of volcanism are recognizable in the New Georgia Group, but the scarcity of distinct volcanic textures due to metamorphic overprinting and deformation limits the accuracy of estimates regarding the exact proportions of felsic to mafic volcanic material in these cycles. The obliteration of original sedimentary or volcanic textures during metamorphism and intense deformation and complexities within the original volcanic pile combine to make definition of internal stratigraphy in the New Georgia Group very difficult. However, portions of the New Georgia Group are relatively well known and provide some understanding of the stratigraphy of the group. Two areas studied in detail occur on the borders of the New Georgia Group outcrop belt. Lithologic units in these areas are the Mud Creek Formation in the Villa Rica area to the southwest and the Pumpkinvine Creek Formation to the northeast. A third formation in which some idea of internal stratigraphy of the New Georgia Group can be ascertained is in the Univeter Formation located near the center of the outcrop belt of the New Georgia Group (Fig. 11).

In the vicinity of Villa Rica, Abrams and McConnell (1981a) were able to define the Mud Creek Formation of the

The Powers Ferry Formation is the oldest unit in the Sandy Springs Group. The base of the Powers Ferry is not present in the eastern belt of the Sandy Springs Group, but the base of an equivalent unit (i.e., Dog River Formation?) in the western belt is exposed to the northwest where it is gradational with rocks of the New Georgia Group. In general, the Powers Ferry Formation is composed of intercalated gneiss, schist, and amphibolite. Biotite-quartz-plagioclase gneiss ("metagreywacke") occurs locally within the formation. Within the lower part of the Powers Ferry Formation, layered amphibolite is mappable for short distances. One such amphibolite layer was termed the Mableton Amphibolite Member by Higgins and McConnell (1978a).

Overlying the Powers Ferry Formation is the Chattahoochee Palisades Quartzite. This quartzite was originally interpreted to unconformably overlie the Powers Ferry Formation (Higgins, 1966), but is now interpreted in this report to be gradational with the more siliceous members of the Powers Ferry (i.e., metagreywacke). The Chattahoochee Palisades Quartzite, although locally absent due to nondeposition or tectonic thinning, is commonly exposed as a massive, white, yellowish, or bluish, sugary to vitreous quartzite containing accessory mica and elongate garnets. Locally, graded bedding is present; but transposition of original layering has limited the usefulness of this feature as a stratigraphic indicator. Interlayered with the above are feldspathic quartzite and muscovite schist.

Gradationally above the Chattahoochee Palisades Quartzite is the Factory Shoals Formation (Higgins and McConnell, 1978a). The Factory Shoals Formation is composed predominantly of a light-gray, lustrous, garnet-biotite-oligoclase or muscovite-biotite-plagioclase metagraywacke that varies to a kyanite-quartz schist or staurolite-muscovite-quartz schist. This schist unit grades laterally into a graphite-muscovite schist. An important characteristic of the Factory Shoals Formation is the almost complete lack of amphibolite.

Sandy Springs Group (western belt). Just to the northwest of the Chattahoochee fault is a major northeast-trending antiform termed the Austell-Frolona antiform. As originally defined by Medlin and Crawford (1973) and Crawford and Medlin (1974), the Austell-Frolona antiform is traceable from near Roanoke, Alabama, to Austell, Georgia. Rocks in the Austell-Frolona antiform (Fig. 13) were previously correlated with the Wedowee Formation (Hurst, 1973) or termed Unit II (Crawford and Medlin, 1973). All of the above authors based their stratigraphic interpretations on the assumption of the occurrence of only one major folding event in the northern Piedmont. Wrapping of the regional foliation around the noses of large second-generation folds (i.e., Austell-Frolona antiform; Abrams and McConnell, 1981a) and the effect of multiple deformation on the stratigraphic sequence in this area were not recognized.

McConnell and Abrams (1982a) revised the stratigraphy of the northeastern part of the Austell-Frolona antiform. In general, rocks of the Austell-Frolona were divided into four formations: an unnamed lower unit (i.e., Dog River Formation of this report), Andy Mountain Formation, Bill Arp Formation and Austell Gneiss (Abrams and McConnell, 1981a). In their report, Abrams and McConnell (1981a) interpreted the Austell-Frolona to represent an antiformal syncline. This interpretation was based on similarities between the Sandy Springs Group and the rock sequence observed in the Austell-Frolona antiform. The Sandy Springs Group, as already outlined, is composed of a basal gneiss-schist-amphibolite unit with significant amounts of amphibolite and banded iron formation in the lower part of the unit. This is overlain by a quartzite that, in turn, is overlain by a metagraywacke with little to no amphibolite but substantial amounts of graphitic phyllite. This sequence is very similar to the Dog River-Andy Mountain-Bill Arp sequence in the Austell-Frolona antiform.

Rocks lying gradationally above the Mud Creek Formation on the northwestern limb of the Austell-Frolona antiform herein are termed the Dog River Formation for exposures near and along Dog River in northeastern Douglas County (Fig. 25). The Dog River Formation is composed of an intercalated sequence of muscovite-biotite-quartz-feldspar gneiss (metagraywacke), garnet-muscovite schist, amphibolite and thin (1 to 3 in.) layers of banded iron formation. The presence of this banded iron formation and the lithologic similarity of this unit to upper parts of the underlying New Georgia Group suggest that the contact with the New Georgia Group is gradational and represents a gradual waning of volcanism in this area.

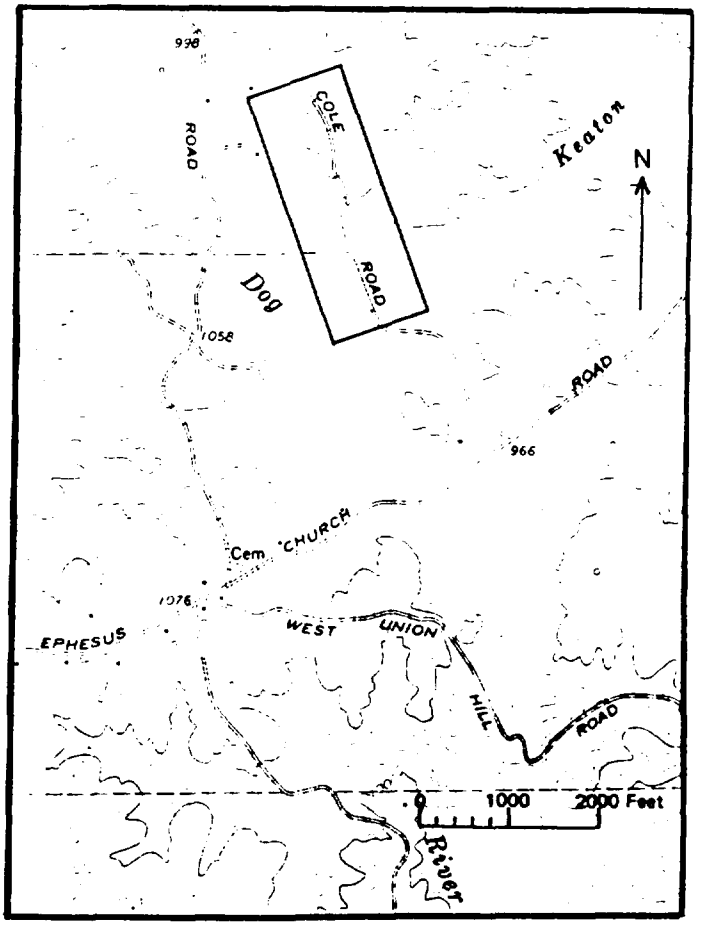


Figure 25. Type locality of the Dog River Formation of the Sandy Springs Group, western belt (US. Geological Survey, Villa Rica, Georgia, 1:24,000 topographic quadrangle).

Conformably above the Dog River Formation is the Andy Mountain Formation (Abrams and McConnell, 1981a). Based on the stratigraphic succession observed in the Sandy Springs Group, eastern belt, rocks of the Andy Mountain Formation are interpreted to stratigraphically underlie rocks of the Bill Arp Formation, but, due to refolding, now structurally overlie them (Fig. 26). In the crestal portion of the Austell-Frolona antiform is a unit termed the Frolona formation by Crawford and Medlin (1974). They defined the Frolona formation as containing layered graphitic staurolite-kyanite-garnet-feldspar-quartz-mica schist, non-graphitic mica schist, feldspathic micaceous quartzite, clean quartzite and quartz-pebble conglomerate. The Andy Mountain Formation is composed of garnet-muscovite-quartz-schist ± staurolite, graphitic garnet-muscovite-quartz schist and clean, sugary quartzite. Abrams and McConnell (1981a) interpreted the Frolona and Andy Mountain Formations to be lithostratigraphic equivalents of each other and dropped the term Frolona formation. Rocks of the Andy Mountain Formation occur both in the crest of the Austell-Frolona antiform (Plate I) and as a tectonically thinned unit on its northwestern limb (Plate I, Fig. 13). These two occurrences define the limbs of the antiformal syncline that is the Austell-Frolona fold (Fig. 26). Crawford and Medlin (1970) traced graphite-bearing rocks northwest of the Austell-Frolona antiform (Plate I). These rocks are the continuation of the Andy Mountain Formation which occurs on the northwestern limb of the antiform. The outcrop pattern of the Andy Mountain Formation defines the limbs of a regional second-generation synform conjugate to the Austell-Frolona. Mapping related to the Greater Atlanta Regional Map project has shown that rocks of the Dog River Formation trend around this fold and the stratigraphic sequence in this area is complete with respect to the sequence of units defined in the Sandy Springs Group, eastern belt. These units, with the New Georgia Group forming the core of this second-generation fold, define a major first-order nappe structure that was subsequently refolded by later deformational events (Fig. 27).

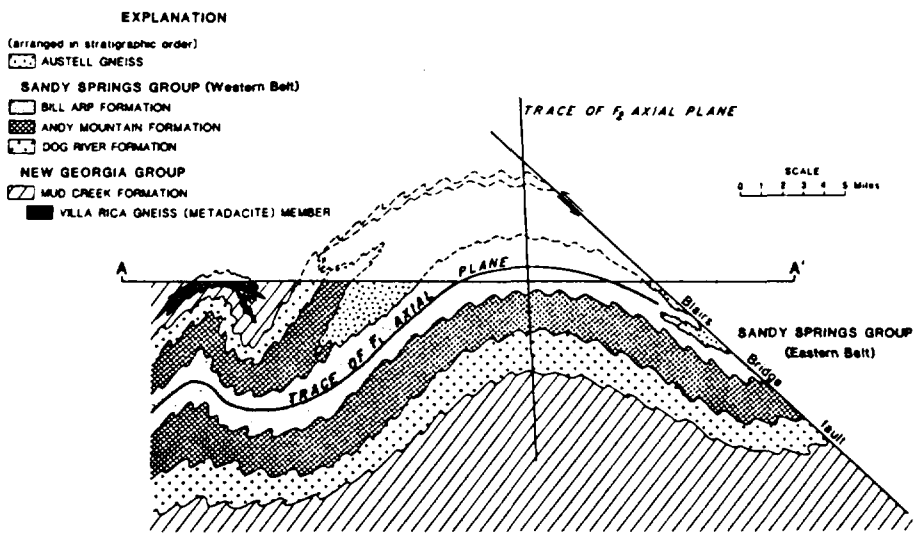


Figure 26. Cross section through the Austell-Frolona antiform (modified from Abrams and McConnell, 1981a). See Figure 13 for trace of cross section.

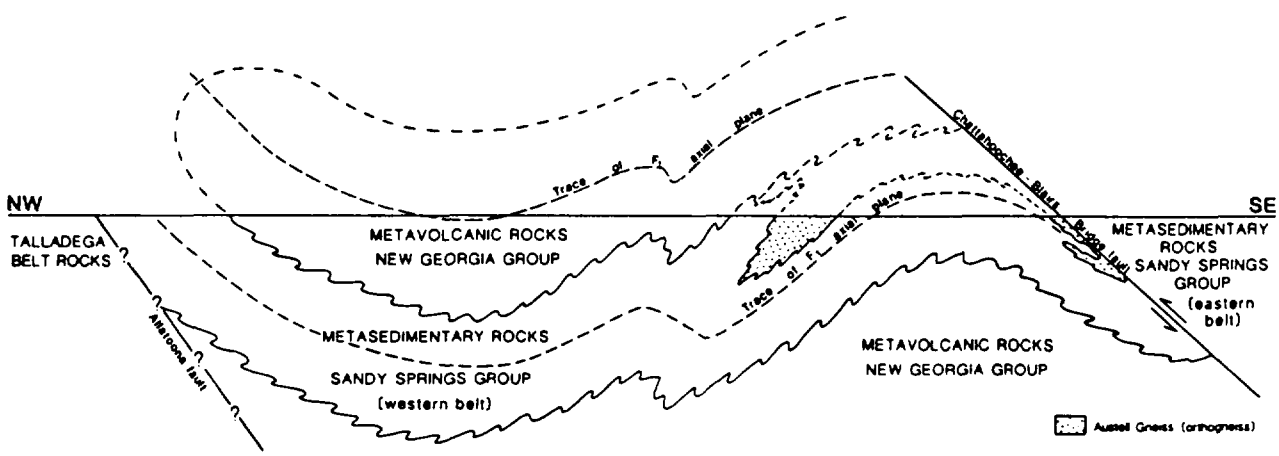


Figure 27. Diagrammatic cross section through the northern Piedmont.

Following the peak of the metamorphism and deformation in the Piedmont, a third group of plutons was emplaced. Most of these plutons are approximately 300 m.y. old (Whitney and Wenner, 1980; Higgins and Atkins, 1981) and lack the penetrative fabric associated with regional metamorphism. Sinha and Zietz (1982) have proposed that intrusives in the postmetamorphic category used in this report are part of a Hercynian magmatic arc along the eastern margin of the Appalachian orogen. This magmatic arc formed over a western-dipping subduction zone.

Diabase dikes were intruded along tensional fractures during the initial stages of rifting along the continental margin of eastern North America (Weigand and Ragland, 1970). This stage of rifting began approximately 280 m.y. ago (Weigand and Ragland, 1970).

METAMORPHISM AND DEFORMATION

As with most other aspects of geology in the Greater Atlanta Region, previous workers limited their interpretations and discussions of deformation to a particular belt, e.g., northern Piedmont or southern Piedmont, but regional relations generally were not addressed. This report serves to combine data and interpretations from various geographic subdivisions in the Greater Atlanta Regional Map into a comprehensive interpretation of metamorphism and deformation. The only two prior attempts to describe metamorphism on a regional scale were by Smith and others (1969) and Hurst (1970); however, little detailed mapping was available at that time.

Metamorphism

At least two episodes of progressive regional metamorphism and one episode of localized retrogressive metamorphism are apparent in rocks of the Greater Atlanta Region. A late, localized zeolitic facies event also is recognized across most of the Piedmont (R.D. Hatcher, personal commun., 1983). Progressive regional metamorphic events occurred in Grenville and mid-Paleozoic time, and localized retrogressive metamorphism occurred along major fault zones in the mid- to late Paleozoic. Butler (1972) suggested that two major episodes of regional metamorphism occurred in the Paleozoic (i.e., Taconic and Acadian in age). Direct evidence for two major progressive metamorphic events is lacking in rocks of both the Greater Atlanta Region and Tallulah Falls Dome (Hatcher, 1974). Although Atkins and Higgins (1980) have proposed that two major metamorphic events affected rocks southeast of the Brevard fault zone in the Paleozoic, this interpretation was based largely on the interpretation of a major unconformity between the Lithonia Gneiss and Snellville Formation (Atkins and Higgins, 1980). However, O'Connor and others (1974) and Atkins and Higgins (1980) also present evidence that supports a fault solution for this contact. If the correct interpretation of this contact is that it is a fault, then evidence supporting a second progressive metamorphic event in the Paleozoic is significantly reduced. Until direct evidence for a second progressive metamorphic event in the Paleozoic is found in the Greater Atlanta Region, it is assumed that only a single event occurred.

Basement gneisses exposed in the Salem Church anticlinorium (i.e., Corbin Gneiss Complex) contain evidence of Grenville-age granulite facies metamorphism. Ferro-hypersthene and Mg-rich garnet-bearing facies of the Corbin Gneiss Complex (Martin, 1974; K. Gillon, written commun., 1980) are indicative of this granulite facies event. Precambrian rocks stratigraphically overlying the Corbin show no evidence of this event. Textures related to this metamorphism, for the most part, have a retrogressive metamorphic overprint produced by the Paleozoic metamorphic event, although some rocks do retain a marked discordance between the planar fabric present in the Corbin and the more dominant planar fabric in the cover rocks. Dallmeyer (1975) presented isotopic evidence supporting a Grenville age for the pre-Paleozoic metamorphic event. $^{40}Ar/^{39}Ar$ ages of 702 and 735 m.y. from biotite concentrates of the coarse-grained phase of the Corbin were interpreted to represent cooling ages following Grenville metamorphism (Dallmeyer, 1975).

Paleozoic metamorphism affected rocks of the Corbin Gneiss Complex as well as most other rocks in the Greater Atlanta Region. Exact timing of this event is uncertain, but Dallmeyer (1978) concluded that peak metamorphism in the southern Piedmont southeast of the Brevard fault zone occurred approximately 365 m.y. ago. Abrams and McConnell (1981b) extrapolated Dallmeyer's (1978) data northwest of the Brevard zone and concluded that regional metamorphism in the northern Piedmont of Georgia occurred approximately 365 m.y. ago. Tull (1978) also recognized only one major Paleozoic event in the northern Piedmont of Alabama and inferred that peak metamorphism occurred there approximately 348 m.y. ago based on evidence derived by Wampler, Neathery and Bentley (1970). Based on Rb-Sr whole-rock ages from the northern Alabama Piedmont, Russell (1978) placed the peak of metamorphism at 360 to 380 m.y. ago. Thomas and others (1979) suggested that the major dynamothermal phase to affect the northern Piedmont of Alabama occurred during the Devonian.

Metamorphic isograds formed during Paleozoic metamorphism probably defined a Barrovian series increasing from the northwest to southeast prior to subsequent deformation. Late folding and faulting have deformed isograds and locally retrograded mineral assemblages. Figure 42 is a representation of isograds drawn on the first appearance of metamorphic index minerals in the Greater Atlanta Regional Map. This diagram must be taken in the context that it is highly interpretive and that all rocks in the Greater Atlanta Region do not have the necessary bulk compositions to accurately reflect metamorphic grade. Smith (*in* Bentley and others, 1966) and Hurst (1970) reported that rocks of the lower Cambrian sequence just west and north of the Cartersville fault have undergone low-grade metamorphism and that there is a metamorphic break across the fault. Just east of the Cartersville fault, rocks of the Pinelog and Wilhite Formations are metamorphosed to chlorite grade. Although data are sparse, the pattern of isograds suggests that they were folded by the formation of the Salem Church anticlinorium (F_2) (McConnell and Costello, 1984).

From the Cartersville fault metamorphic grade increases up to kyanite grade toward the axis of the Murphy synclinorium, but the core of the Murphy synclinorium contains lower grade rocks than the surrounding area. This relationship is similar to that observed in northern Georgia (Dallmeyer and

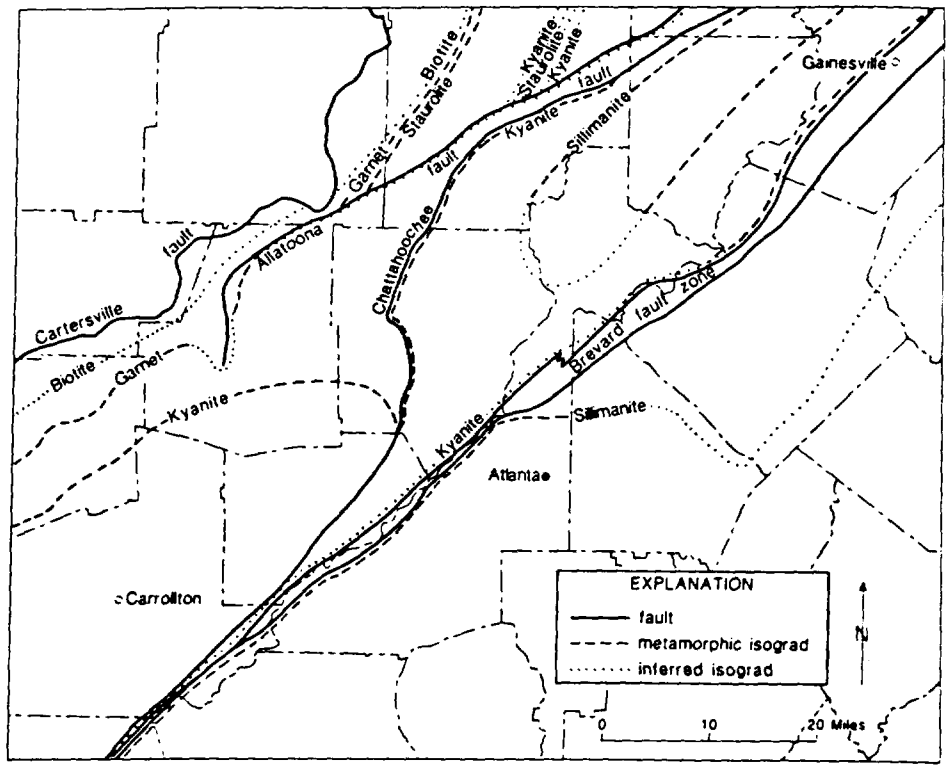


Figure 42. Generalized plot of post Grenville metamorphic isograds in the Greater Atlanta Regional Map area.

others, 1978). The trace of the Allatoona fault and rocks of the New Georgia Group that lie just southeast of the fault in the Dahlonega trend form a distinct metamorphic "low" (Fig. 42) that is traceable northeastward along trend into the area of Helen, Georgia (K. Gillon, 1982). Rocks of the New Georgia Group in the Dahlonega trend in the Greater Atlanta Region are characterized by garnet-grade metamorphism, while rocks on either side of the Dahlonega trend (Fig. 11) are of kyanite or higher grade (Fig. 42). Kyanite does occur locally in the Canton Formation southeast of the Allatoona fault. McConnell (1980a) reported that biotite was altered to chlorite in some of the rocks in the Pumpkinvine Creek Formation just south of the Allatoona fault near Emerson. This suggests that the metamorphic low associated with the Allatoona fault may be, at least partially, caused by retrogression. The trace of the Chattahoochee fault (modified after Hurst, 1973) is present just southeast of the Dahlonega trend in the northeastern part of the Greater Atlanta Regional Map (Fig. 11). The Chattahoochee fault forms the boundary between rocks of the Sandy Springs Group to the southeast and New Georgia Group to the northwest and is a distinctly traceable tectonic boundary across the northern Piedmont of Georgia. The Chattahoochee fault is a migmatitic front with little to no anatectic melting apparent north of the fault and abundant pegmatites and aplites south of the fault. Metamorphic grade also increases across the Chattahoochee fault trace (Fig. 42), from garnet on the northwest to kyanite to the southeast. Unrecrystallized mylonite locally occurs along the trace of the Chattahoochee fault and is interpreted to suggest that the Chattahoochee fault is a syn- to post-metamorphic (post-peak metamorphism) fault that displaces units of the Sandy Springs Group over the New Georgia Group.

Southeast of the Chattahoochee fault, metamorphic grade remains at kyanite with a few reported sillimanite occurrences except for localities where metamorphic mineral assemblages are retrogressed by late movements along the Brevard fault zone. Although the significance of the Brevard zone is debated by many authors, the fact that it is a zone of retrogressive metamorphism is widely accepted (Higgins, 1966; Hurst, 1970; Hatcher, 1975). In the Atlanta area Higgins (1966) reported that metamorphism of the Brevard zone is characterized by the presence of muscovite, quartz, biotite, epidote, chlorite and garnet. Hurst (1973), Crawford and Medlin (1973), and Kline (1981) report kyanite and staurolite occurrences in rocks of the Brevard zone.

Southeast of the Brevard fault zone metamorphic grade increases to sillimanite (Higgins, 1966). Sillimanite grade dominates throughout the southern Piedmont to the southeastern margin of the Greater Atlanta Regional Map.

Deformation

The style, intensity, and number of deformational events vary significantly across the area of the Greater Atlanta Regional Map. While tracing individual fold events across major tectonic boundaries is possible, some fold events, particularly late events, are not present in all areas. In this report, major deformational and folding events are listed and described numerically in sequence of their occurrence. This numbering system, like stratigraphic names, can only be used with certainty in the area of its definition; the relationship with deformational events recognized in other areas must be displayed by use of a correlation chart for tectonic events

(Table 16). Geographic names used to describe fold generations south of the Brevard zone (Atkins and Higgins, 1980) are not employed in this bulletin.

The first deformational event (Table 17) recognized in the Greater Atlanta Region is premetamorphic faulting along the Allatoona fault zone. (Hatcher, 1978a; McConnell and Costello, 1980b; McConnell, 1980a). The Allatoona fault as used in this bulletin is a redefinition of the Allatoona fault as described by Hurst (1973). Hurst (1973) defined the Allatoona fault as separating Talladega belt rocks from "Ashland Group" rocks in Paulding County and Lower Cambrian sediments from "Ashland Group" rocks in Bartow County. McConnell and Costello (1980b) redefined the Allatoona fault as thrusting northern Piedmont rocks (Sandy Springs and New Georgia Groups in this report) over Blue Ridge rocks (Talladega belt-Ocoee Supergroup rocks). In this bulletin, the usage of the Allatoona fault follows that of McConnell and Costello (1980b). In the northeastern part of the Greater Atlanta Regional Map, the Allatoona fault separates two distinct terranes. On the northwest are rocks of the Corbin Gneiss Complex, Ocoee Supergroup and Murphy belt group which lack: a significant volcanic component; any large post-Grenville age plutons; and significantly large mafic and ultramafic bodies. To the southeast of the Allatoona fault in this area, are rocks of the New Georgia and Sandy Springs Groups that are characterized by the presence of large amounts of metavolcanic rocks, Paleozoic plutons, and mafic and ultramafic rocks. The contact between these two rock sequences is sharp and is locally denoted by the absence of units and evidence of retrogressive metamorphic effects. In the western part of the Greater Atlanta Regional Map, along the trend of the Allatoona fault, phyllites and metasandstones of the Talladega belt are in contact with units interpreted to be the upper portion of the Sandy Springs Group, western belt. The distinction between rocks of the Talladega belt and Sandy Springs Group in this area is not clear owing to the absence of large amounts of mafic metavolcanics in the upper portion of the Sandy Springs Group. Also, there is no apparent retrogressive metamorphism associated with the contact. Therefore, the transition from Sandy Springs Group to Talladega belt rocks is not as abrupt as the transition from New Georgia Group to Ocoee Supergroup rocks observed to the northeast. In this regard, we have indicated on Figure 11 that the trace of the Allatoona fault through this area would most likely be along the Sandy Springs-Talladega belt boundary. However, an alternative interpretation would be that the Allatoona fault is not present in this area and rocks of the Talladega belt represent stratigraphic equivalents to rocks of the Sandy Springs Group.

As stated above, the Allatoona fault, at least in the northeastern part of the Greater Atlanta Regional Map, separates two distinct geologic terranes. A similar relationship is observed in northeastern Georgia where the Hayesville fault (Hatcher and others, 1979; Hatcher and Odom, 1980) separates a dominantly volcanic, ultramafic, granite-bearing terrane on the southeast from a nonvolcanic, abundant basement-bearing terrane on the northwest. The Allatoona fault probably represents the southwestern extension of the Hayesville fault.

The most intense deformational event recognized in the Greater Atlanta Region is the second (D_2, Table 17). Rocks of

Table 16. Correlation chart of fold events in the Piedmont and Blue Ridge.

Northeast Georgia (after Hatcher and Butler, 1979)	ARM area (this report, includes Blue Ridge and northern and southern Piedmont)	Southern Piedmont (after Atkins and Higgins, 1980)
F_1 isoclinal recumbent EW-NE trend (S_1 rarely observed)	not recognized	not recognized
F_2 isoclinal recumbent EW-NE trend, dominant S-surface	F_1 isoclinal recumbent ENE trend, dominant S-surface.	Buck Branch generation
F_3 upright isoclinal to open, NE trend	F_2 upright isoclinal to open, NE trend	
		Klondike generation
F_4 crenulation cleavage, NE trend	F_{2a} upright, open, NE trend	
not recognized	F_3 open to isoclinal, SW vergent, SE trend	Elijah Mountain generation
F_5 upright, open NE trend	not recognized	not recognized
		Scott Creek generation
F_6 upright, open, NW trend	F_4 upright, open NW trend	
		Tara generation

Table 17. Post-Grenville tectonic elements of the Greater Atlanta Region.

Generation	Fold Style	Lineations Generation	Lineations Type	Timing	Event
D_1	not observed	—	—	Pre-metamorphic	Hayesville & Greenbrier faults.
D_2 (F_1)	Isoclinal recumbent; NE trending, NW vergence	L_{1a}	Elongation	Late Paleozoic (350-480 m.y.)	Regional metamorphism. Intrusion of Austell and Sand Hill Gneisses.
		L_{1b}	Intersection	Late Paleozoic (370 m.y.)	Ductile shearing in basement gneisses and along Allatoona, Cartersville and Brevard faults. Retrograde metamorphism.
(F_2)	Tight, upright to overturned; NE trending, NW vergence	L_2	Intersection	Late Paleozoic (post-metamorphic)	Salem Church anticlinorium, Austell-Frolona antiform, Newnan-Tucker synform.
(F_{2a})	Tight, upright to overturned; NNE trending, NW vergence	L_{2a}	Intersection	Late Paleozoic (post-metamorphic)	Sand Hill antiform.
D_4	not observed	—	—	Late Carboniferous	Brittle faulting; emplacement of Blue Ridge thrust sheet.
D_5 (F_3)	Open, Upright to overturned; SE trending, SW vergence	L_3	Intersection	Hercynian (?)	Folds plane of Great Smoky fault.
D_6 (F_4)	Open, upright; NW trending			(?)	

the Blue Ridge and Piedmont portions of the Greater Atlanta Regional Map are affected by D_2 which is characterized by isoclinal, recumbent, northeast-trending and northwest-vergent folds (F_1). Regional progressive metamorphism was coeval with F_1 and is indicated by development of an axial-planar foliation (S_1). Axial-planar foliation formed during D_2 is the predominant S-surface present in the Blue Ridge and Piedmont portion of the Greater Atlanta Regional Map and completely transposes earlier surfaces. Ductile shear zones in the Fort Mountain Gneiss, Corbin Gneiss Complex, and those associated with the Brevard fault zone are believed to have developed during this event, but after the peak of metamorphism as indicated by retrograde mineral assemblages. Russell (1976) indicates a 368 m.y. Rb-Sr whole-rock age for mylonites in the Grenville-aged Fort Mountain Gneiss which lies to the north of the Corbin Gneiss outside the boundaries of the Greater Atlanta Regional Map. Major ductile shearing along the Brevard zone was dated as last occurring approximately 356 m.y. ago by Odom and Fullagar (1973) and 387 m.y. ago by Bond and Fullagar (1974). From zircons analyzed from the Henderson Gneiss in North Carolina, Sinha and Glover (1978) derived ages of 440 m.y. and 360-390 m.y. for mylonitization and reactivation of the Brevard zone. As described in a previous section, the peak of metamorphism in the Piedmont near Atlanta is believed to have occurred approximately 365 m.y. ago (Dallmeyer, 1978). The near coincidence of the timing of ductile shearing and peak metamorphism in this area and structural evidence given below suggest that the Brevard zone in the Atlanta area and shear zones in the Fort Mountain Gneiss and Corbin Gneiss Complex developed, at least in part, simultaneously with and possibly as a result of intense shearing and transposition along the axial zone of F_1 isoclines. Intrafolial folds in the Brevard zone have axes parallel to F_1 fold trends and F_1 axial-planes are aligned parallel to the mylonitic foliation. The above evidence supports a genetic relationship between the ductile shearing in the Brevard zone and the F_1 fold event. Roper and Dunn (1973) previously proposed a similar, albeit more complex, mechanism for the formation of mylonites in the Brevard zone in South Carolina.

A later, perhaps local episode of ductile shearing along the Brevard fault zone is suggested by textures present in the Palmetto and Ben Hill Granites. Both plutons are approximately 325 m.y. old (Higgins and Atkins, 1981) and contain a mylonitic fabric near the Brevard zone. This suggests that at least two stages of ductile shearing occurred after the peak of metamorphism (356 m.y. and 325 m.y.). Hatcher and Butler (1979) previously referred to this history of multiple movements along the Brevard zone to the northeast in North and South Carolina.

In the Piedmont and Blue Ridge, F_1 folds are large-scale recumbent isoclines. In the Blue Ridge, the axial zone of one recumbent anticline is occupied by the Corbin Gneiss Complex, while in the northern Piedmont the axial zone of another

recumbent anticline is occupied by rocks of the New Georgia Group. The lower limb of the northern Piedmont recumbent anticline is interpreted to be exposed along the north side of the Austell-Frolona antiform (F_2) (Figs. 26 and 27). The same limb is interpreted in this report to be exposed along the northwestern limb of the Carroll-Paulding synform (Fig. 3; modified after Crawford and Medlin, 1973) where rocks of the Sandy Springs Group are again exposed. Sandy Springs Group rocks east of the Chattahoochee fault are highly migmatized, while rocks of the Sandy Springs Group west of the Chattahoochee fault lack evidence of anatectic melting. In addition, in the southwestern part of the Sandy Springs outcrop area on the southeastern limb of the Austell-Frolona antiform (Plate I), Sandy Springs Group rocks (western belt) are in contact with Sandy Springs Group rocks (eastern belt) along the Blairs Bridge fault. The two relationships mentioned above are interpreted in this report to suggest that the eastern belt of Sandy Springs Group rocks represents the limb of a tectonically lower nappe that was thrust over rocks of the New Georgia Group along the Chattahoochee fault. Southeast of the Brevard fault zone, rocks of the Atlanta Group are interpreted to be exposed in the core of another recumbent anticline (F_1). The Brevard zone, present between two recumbent anticlines, may represent a tightly compressed and sheared syncline (i.e., tectonic slide).

An important aspect of D_2 deformation is its apparent absence in rocks of the Valley and Ridge west of the Cartersville fault. Isoclinal recumbent folds are present in rocks of the Blue Ridge just east of the Cartersville fault (Costello and McConnell, 1981), but nowhere are described in rocks of the Valley and Ridge; therefore, rocks west of the Cartersville fault seem to lack the pervasive deformation characteristic of rocks in the Blue Ridge. Deformation in Lower Cambrian rocks of the Chilhowee Group, Shady Dolomite, and Rome Formation is characterized by dominance of thrust faults over folds (Hull, 1920) and lack of pervasive deformation that is characteristic of rocks east of the Cartersville fault. Folds recognized in the Valley and Ridge closely resemble in style and orientation F_2 folds that are present in the Blue Ridge. Differences noted in the number of fold events on either side of the Cartersville fault are interpreted to suggest that the early F_1 fold event is not present in the Valley and Ridge and therefore, the presence of the Cartersville fault, in part, is justified by the absence of F_1 in the Valley and Ridge.

Deformation related to D_3 is characterized by large, open to isoclinal, upright to overturned, northeast-trending folds (F_2). Outcrop patterns in all geographic subdivisions of the Greater Atlanta Regional Map are controlled by folds of this generation. Northeast-trending folds in the Valley and Ridge as well as the Salem Church anticlinorium in the Blue Ridge, and the Austell-Frolona antiform, Carroll-Paulding synform (modified after Crawford and Medlin, 1973), Villa Rica antiform, and Newnan-Tucker synform (Fig. 3) in the Piedmont were formed during this event. Generally, folds of this generation (F_2) are tight to isoclinal near the Brevard fault zone but open away from the Brevard. Axial-planar foliation is well developed only in the hinges of F_2 folds, and transposition of the S_1 surface is locally apparent. The Austell-Frolona antiform is the best known structure related to F_2 folding. Based on stratigraphic relationships, the Austell-Frolona antiform was interpreted to represent an antiformal syncline (Fig. 26) by Abrams and McConnell (1981a). Older rocks of the New Georgia Group now structurally overlie younger rocks of the Sandy Springs Group along the northwestern limb of the Austell-Frolona antiform (Fig. 27).

Subsequent to the formation of the Austell-Frolona antiform, a series of open to tight, upright to overturned to the northwest, northeast-trending folds was generated (e.g., Sand Hill antiform, Fig. 3). Crawford and Medlin (1973) interpreted these folds to be digitations of the same generation of folds that formed the Austell-Frolona antiform and indicated that they are cylindrical. The Austell-Frolona antiform also is cylindrical (Abrams and McConnell, 1981a) and is oriented east-northeast in contrast to the north-northeast trend of the later folds. Because both fold generations are cylindrical and have differing trends, they can not be of the same generation. We interpret those folds that lie along the northwestern limb of the Austell-Frolona to be representative of changes in the stress field during the latter stage of D_3 deformation.

D_4 deformation is characterized by brittle faulting present most notably along the Cartersville and Blue Ridge thrusts as well as the Brevard fault zone. Late movements along these fault zones, characterized by brittle deformation and a correspondingly shallow overburden, probably represent the last stages of northwest directed stress. Crawford (1977c) indicated that rocks as young as Mississippian in age were overthrust by rocks in the Cartersville thrust sheet. Timing of this stage of deformation must, therefore, be post-Early Mississippian.

Costello and others (1982) and Costello and McConnell (1983) suggested that the fault that separates late Precambrian Ocoee Supergroup rocks on the east from the Lower Cambrian sequence on the west may not represent the Great Smoky fault as it is defined in Tennessee (Neuman and Nelson, 1965). Numerous authors (Georgia Geologic Survey, 1976; Cressler and others, 1979; McConnell and Costello, 1980b; Reade and others, 1980) following the lead of Stose and Stose (1944) have extended the Great Smoky fault southward and connected it with the Cartersville fault in Georgia. In the Greater Atlanta Regional Map area, the Cartersville fault thrusts late Precambrian Ocoee Supergroup rocks over Lower Cambrian rocks. In Tennessee, the Miller Cove-Sylco Creek faults form a thrust relationship similar to the Cartersville fault (i.e., thrusting late Precambrian Ocoee Supergroup rocks over the Lower Cambrian and late Precambrian sequence); therefore, Costello and McConnell (1983) have proposed that the Cartersville fault is an extension of the Miller Cove-Sylco Creek faults and that the Great Smoky thrust sheet must lie farther to the west.

At least two other major faults formed during D_4 traverse the area underlain by rocks of the Valley and Ridge in the Greater Atlanta Region. These are the Rome and Coosa faults. Hayes (1902) defined both the Rome and Coosa faults in his Rome folio. The Rome fault is the westernmost fault in the Greater Atlanta Regional Map and thrusts Conasauga Group over Mississippian Floyd Shale. Hayes (1902) noted that the Rome fault was folded during deformation subsequent to the emplacement of the thrust sheet. In the hanging wall of the Rome fault, rocks of the Conasauga Group are overthrust by rocks of the Coosa thrust sheet (Hayes, 1902). Hayes (1902) indicated that the Coosa thrust sheet was emplaced later than the Rome thrust sheet.

Subsequent to the emplacement of the Blue Ridge and Cartersville thrust sheets, southeast-trending, moderately tight, upright to overturned folds formed. These folds are recognized only in the northern part of the northern Piedmont, Blue Ridge and Valley and Ridge. Fairley (1965) recognized these folds in the Tate quadrangle while McConnell and Costello (1982a) described these folds and their effect on the trend of units in the Blue Ridge south and east of Emerson as well as their deformation of the plane of the Cartersville fault in that area. Folds of this generation may also be present southeast of the Brevard fault zone where O'Connor (1977) and Atkins and Higgins (1980) show southeast-trending folds that Atkins and Higgins (1980) termed Elijah Mountain folds (Table 16).

The last major compressive tectonic event recorded in rocks of the Greater Atlanta Region is characterized by gentle open warps that in the northern Piedmont have a northwest trend. Atkins and Higgins (1980) indicated that two late-stage warping events occurred in the southern Piedmont. In this report, these two late warp fold generations are grouped together into the F_4 fold generations (Table 16).

ECONOMIC RESOURCES

Introduction

Many parts of the Greater Atlanta Region have been prospected and mined extensively in the past for commodities ranging from gold to sand. As the Greater Atlanta Regional Map encompasses portions of three major geologic provinces (i.e., Valley and Ridge, Blue Ridge, and Piedmont, Fig. 1), there is a wide variety of both commodities and host rocks within its boundaries. Host rocks range from the limestones and shales of the Valley and Ridge to granites and granite gneisses of the Piedmont.

Twenty-eight commodities were mined or prospected in the Greater Atlanta Region. Of these, only barite, ocher, sand, granite and granite gneisses (dimension stone and crushed), limestone, structural clays, and marble are still actively mined (Martin and Stafford, 1972; Kline and O'Connor, 1981). Appendix B presents a comprehensive list of mines and prospects (active and inactive, by commodity) within the Greater Atlanta Regional Map. This list was compiled from various sources listed at the end of Appendix B. A map delineating approximate locations for these mines and prospects also accompanies this report (Plate II).

Because host rocks vary from geologic province to province, commodities of each province are discussed separately. The Piedmont province is divided into two sections, northern and southern, at the Brevard fault zone. As the authors of this report mapped predominantly in the northern Piedmont, base metal and gold deposits of that area are discussed in greater detail than those in other areas of the Greater Atlanta Regional Map.

Valley and Ridge

The most extensively mined and prospected area within the Greater Atlanta Region is the Valley and Ridge Province, with most of the activity centered on the Cartersville district. In the past, bauxite, barite, limonite, manganese, tripoli, ocher and umber, limestone, shale and clay, slate, and sand and gravel were mined or quarried for commercial use. Some of these commodities had limited workings; others were worked extensively for limited periods, while commodities such as barite, ocher, limestone, shale, clay, and sand and gravel are still worked today (Kline and O'Connor, 1981).

Limonite, ocher and umber, manganese, bauxite, and barite are, for the most part, secondary deposits (O'Neil and Wyndham, 1954). Mining of these deposits has been mostly by open-pit method. Secondary deposits of limonite, ocher, manganese, and barite occur in association with each other, commonly in the same cut (Hull and others, 1919). This type of deposit is largely confined to the Cartersville mining district and is associated with the Shady Dolomite, Knox Group, Rome Formation, Conasauga Formation, and Chilhowee Group (McCallie, 1900; Watson, 1906; Hull and others, 1919; Butts and Gildersleeve, 1948).

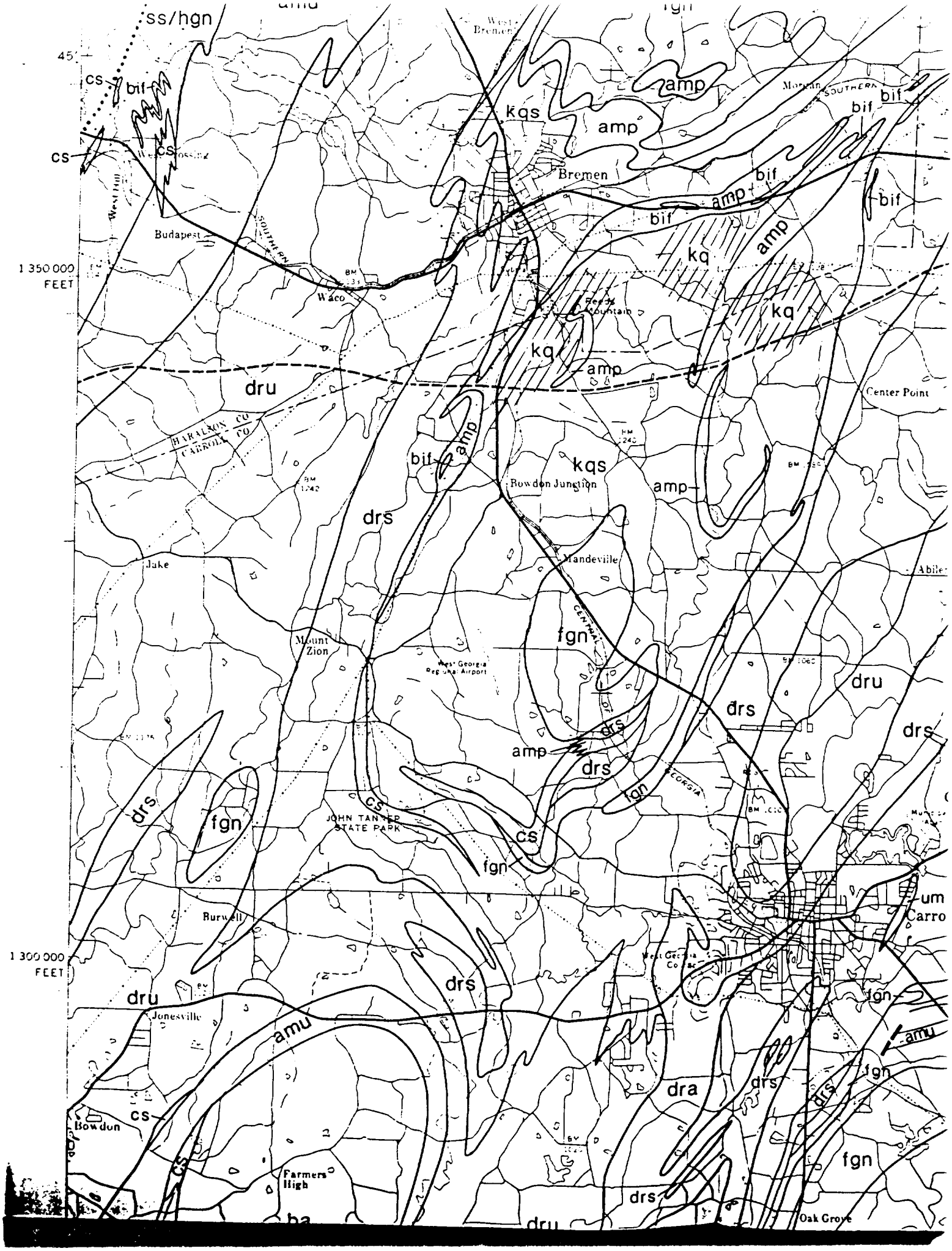
BARITE

Barite deposits are largely confined to the Cartersville mining district (Plate IIa), although some occurrences are reported from western Bartow, eastern Floyd, and western Cherokee Counties. Barite has been mined in the Cartersville district since 1887 (Kesler, 1950). Primary barite occurs in veins within the Rome Formation and in veins and as fossil replacements in Shady Dolomite (Kesler, 1950). Barite is mined for use as a medium in drilling muds, in the production of barium chemicals and glass, or as a filler, pigment, or extender (Brobst, 1973). Ore varies from crystalline to granular barite (Hull, 1920) and is accompanied by or encloses sulfides (generally pyrite) (Kesler, 1950).

Barite deposits occur as several types: vein, replacement, breccia, residual, colluvial and alluvial. Of these, the residual, colluvial and alluvial deposits are the largest and best commercial deposits (Hull, 1920). Barite is found associated with the Rome Formation, Conasauga shale and limestone, Knox Group, Weisner Formation (Chilhowee Group), Shady Dolomite and at the Shady-Weisner contact (Hull, 1920; Butts and Gildersleeve, 1948; Kesler, 1950). Hull (1920), Butts and Gildersleeve (1948) and Chowns (1977) viewed the Shady Dolomite as the host for most of the important barite occurrences, whereas Kesler (1950) indicates that the main deposits of barite are found associated with the calcareous metashale of the Rome Formation. Reade and others (1980) indicate that dolostones of the Rome Formation are the main source of the barite. Stan Bearden (written commun., 1982) indicates that the host rock for barite is a light-grey dolostone which overlies ocherous clays. The reader is referred to the Valley and Ridge stratigraphy section of this report for a discussion of the Rome-Shady stratigraphic problem.

OCHER AND UMBER

Ocher and umber deposits are confined to a narrow, north-south trending belt adjacent to the west side of the Cartersville fault in Bartow County (Butts and Gildersleeve, 1948). The ochers of this area were used predominantly in the manufacture of linoleum and oil cloth, in addition to some use as a coloring agent (Butts and Gildersleeve, 1948). Currently, the deposits are mined for use as a pigment in paint, in



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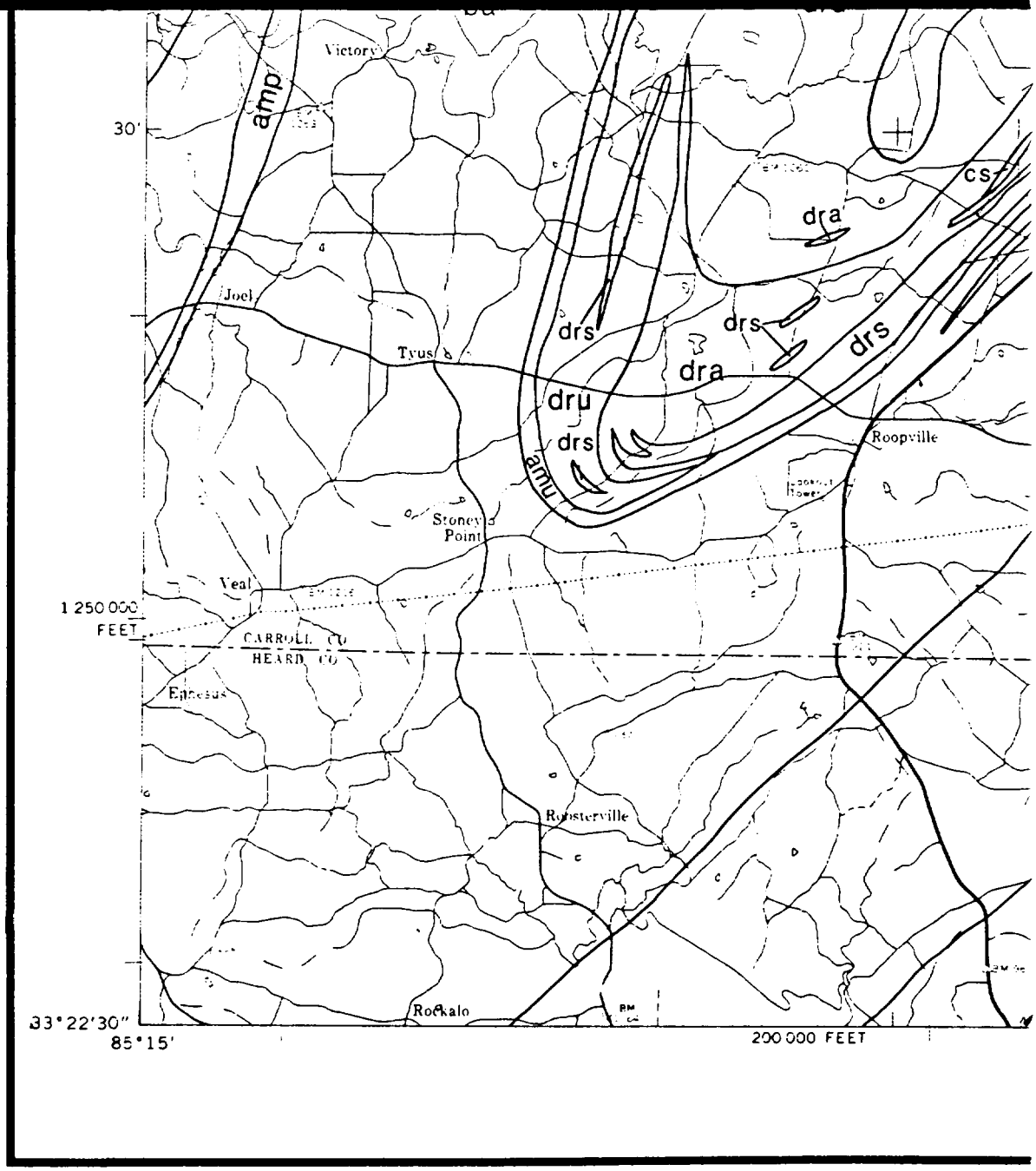

Plate I West, Bulletin 96

REFERENCE 24

GROUND WATER IN THE GREATER ATLANTA REGION, GEORGIA

by

C. W. Cressler, C. J. Thurmond, and W. G. Hester

Prepared in cooperation with the

U. S. Geological Survey

Department of Natural Resources

Environmental Protection Division

Georgia Geologic Survey

INFORMATION CIRCULAR 63

Cressler (1970) reported on the geology and ground-water resources of Floyd and Polk Counties. Cressler and others (1979) presented results of a study on geohydrology in Cherokee, Forsyth, and eastern Bartow Counties.

LaForge and others (1925) discussed the drainage systems of the Georgia Piedmont. Staheli (1976) reported on drainage styles of the area's streams that have a bearing on the distribution of ground water in the GAR.

Acknowledgments

This study was made by the U.S. Geological Survey in cooperation with the Georgia Department of Natural Resources, Geologic Survey Branch. The authors wish to acknowledge the many people who gave assistance during this study. Hundreds of property owners throughout the study area willingly supplied information about their wells and permitted access to their property. The following companies and personnel furnished construction and yield data on large-yielding wells:

Mr. W. A. Martin and Mrs. Mary Dutton, Virginia Supply and Well Co., Atlanta
Mr. Jim Adams and Mrs. Willie A. Massey, Adams-Massey Well Drilling Co., Carrollton
Mr. and Mrs. Ed Livingston, Explora Contractors, Inc., Conyers
Mr. and Mrs. Hoyt W. Waller, Waller Well Co., Griffin
Mr. Ray Ward of Ward Drilling Co., Inc., Powder Springs
Mr. and Mrs. H. G. Holder, Holder Well Co., Covington
Mr. Jimmy Fowler, Fowler Well Co., Cumming
Mr. P. T. Price, Price Well Co., Dallas
Weisner Drilling Co., Inc., Riverdale
Askew Water Systems, Griffin

Thomas J. Crawford of West Georgia College devoted long hours to discussing the occurrence and availability of ground water in the western part of the report area, especially Carroll County. Many of his observations and methods for selecting well sites are included in this report. He also provided construction, yield, geologic, and location data for hundreds of wells in the Carroll County area.

City clerks and water department personnel provided information on locations, histories, and use of wells in numerous towns and cities of the GAR. These included the cities of Conyers, Hampton, Clarkston, Acworth, Lawrenceville, Flowery Branch, Senoia, Milstead, Riverdale, Jonesboro, Grayson, Brooks, Peachtree City, and Turin.

Appreciation is extended to Janet K. Groseclose for assistance in preparation of this manuscript.

Well-Numbering System

The GAR is covered by 111 7.5-minute topographic quadrangles and parts of quadrangles. Wells in this report are numbered according to a system based on the 7.5-minute topographic quadrangle maps of the U.S. Geological Survey. Each 7.5-minute quadrangle in Georgia has been given a number and a letter designation according to its location. The numbers begin in the southwest corner of the State and increase numerically eastward. The letters begin in the same place, but progress alphabetically to the north, following the rule of "read right up." Because the alphabet contains fewer letters than there are quadrangles, those in the northern part of the State have double letter designations, as in 9HH. (Refer to fig. 37.)

Wells in each quadrangle are numbered consecutively, beginning with number 1, as in 8CC1. Complete well numbers, as in 5CC11, are used in well tables and most illustrations. On plate 1 the well numbers lack quadrangle designations because of space limitations. The quadrangle designations for these wells can be obtained from figure 37 and from the inset on plate 1.

In table 7, which lists chemical analyses of well water, some wells retain numbers used in previous reports.

WATER-BEARING UNITS AND THEIR HYDROLOGIC PROPERTIES

The part of the GAR included in this study lies wholly within the Piedmont physiographic province (Clark and Zisa, 1976; Fenneman, 1938). The area is underlain by a complex of metamorphic and igneous rocks that have been divided by various workers into more than 50 named formations and unnamed mappable units. Individual rock units range in thickness from less than 10 ft to possibly more than 10,000 ft.

Regional stresses have warped the rocks into complex folds and refolded folds, and the sequence has been injected by igneous plutons and dikes and broken by faults. Erosion of these folded and faulted rocks produced the complex outcrop patterns that exist today. The large number of rock types in the area and their varied outcrop patterns greatly complicate the occurrence and availability of ground water in the area. Nevertheless, many of the more than 50 named formations and unnamed mappable units in the GAR are made up of rocks that have similar physical properties and yield water of comparable quantity and chemical quality. Thus, for convenience, the rocks in the report area have been grouped into nine principal water-bearing units and assigned letter designations. The areal distribution of the water-bearing units and their lithologies are shown on plate 1. Data on wells in the water-bearing units are summarized in tables 1-3.

OCCURRENCE AND AVAILABILITY OF GROUND WATER

Ground water in the GAR occupies joints, fractures, and other secondary openings in bedrock and pore spaces in the overlying mantle of residual material. Water recharges the underground

Table 1.--Summary of well data for the Greater Atlanta Region

Water-bearing unit	Number of wells	Yield (gal/min)		Depth (ft)		Casing depth (ft)		Topography (percent of wells in each setting)						
		Range	Average	Range	Average	Range	Average	Slope	Broad lowlands	Uplands-ridge crests	Draw, hollow	Stream or lake	Saddle	Other
A Amphibolite-gneiss-schist	385	20-275	56	35-2,175	294	0-200	60	22	35	22	4	11	2	4
B Granitic gneiss	166	20-348	72	40-825	271	3-266	54	33	45	2	14	6	0	0
C Schist	185	20-150	47	67-700	195	4-144	53	19	19	27	20	11	4	0
D Biotite gneiss	70	20-351	56	82-710	270	7-140	56	20	27	36	6	11	0	0
E Mafic	32	20-471	79	67-386	191	8-116	46	17	35	28	3	17	0	0
F Granite	43	20-150	43	43-422	192	11-187	57	30	30	15	15	10	0	0
G Cataclastic	55	20-225	74	110-800	323	8-207	84	4	75	15	4	2	0	0
H Quartzite	12	20-200	72	122-500	297	30-85	58	45	9	27	18	0	0	0
J Carbonate	5	31-150	76	240-505	376	28-314	138	0	100	0	0	0	0	0

openings by seeping through this material or by flowing directly into openings in exposed rock. This recharge is from precipitation that falls in the area.

Unweathered and unfractured bedrock in the report area has very low porosity and permeability. Thus, the quantity of water that a rock unit can store is determined by the capacity and distribution of joints, fractures, and other types of secondary openings. The quantity of stored water that can be withdrawn by wells depends largely on the extent to which the rock openings are interconnected.

The size, spacing, and interconnection of openings differ greatly from one type of rock to another and with depth below land surface. Open joints and fractures tend to become tighter and more widely spaced with increasing depth. Joints and other openings in soft rocks such as phyllite tend to be tight and poorly connected; wells in rocks of this character generally have small yields. On the other hand, openings in more brittle rocks such as quartzite and graywacke tend to be larger and are better connected; wells in these rocks normally supply greater yields. Other rocks, including amphibolite, schist, and gneiss, are variable in the size and connection of secondary openings and generally yield small to moderate quantities of water to wells. Carbonate rocks, which include marble, can contain much larger and more extensively interconnected fracture systems. Openings in carbonate rocks commonly are enlarged by solution, and are capable of transmitting large quantities of water.

Effects of Drainage Style

The GAR is divided nearly in half by the Chattahoochee River, which follows a comparatively straight southwesterly course for nearly 110 miles across the area (fig. 1). Streams in the north half of the area, including the Chattahoochee River and its tributaries, mainly have rectangular and trellis drainage styles. In contrast, streams in the south half of the area, beginning at about the south edge of the Chattahoochee River basin, have a dendritic drainage style (Staheli, 1976).

Streams having rectangular drainage style flow in strongly angular courses that follow the rectangular pattern of the joints that break up the rocks. Areas having trellis drainage style are characterized by strongly folded and dipping rocks; the larger streams follow the outcrops of less resistant rocks and tributaries enter at right angles across the dip of the strata (Lobeck, 1939, p. 175). All of the streams in the north half of the area show the influence of geologic control, their drainage styles reflecting the varied outcrop pattern, the different lithologies present, and the geologic structure.

In the south half of the area, the dendritic drainage style is indicative of streams that developed independently of the underlying geology (LaForge and others, 1925; Staheli, 1976). According to Staheli (1976, p. 451), dendritic drainage, in which streams run in all directions like the branches of a tree, probably was established on some preexisting surface and later superimposed on the underlying crystalline rocks. Such streams are said to be superimposed when they acquire a course on nearly flat-lying material that covered the rocks beneath. Streams flowing on the veneer of material that covers the bedrock are superimposed above the concealed rocks. When rejuvenated by uplift, they become incised and develop courses without regard to the structure or lithology of the underlying rocks. Eventually, the cover material may be entirely removed and then only the physiographic pattern of the streams will suggest their having been let down from a superimposed position (Lobeck, 1939, p. 173).

According to Staheli (1976, p. 451), to explain the different drainage styles in regions underlain by similar rocks and

structures, it is suggested that an earlier Coastal Plain sedimentary cover buried the Piedmont and extended inland at least to the Chattahoochee River valley. Thus, according to Staheli, drainage to the north developed originally on Piedmont rocks and so reflects their structural orientations. Staheli believes that streams south of the Chattahoochee River valley developed as consequent streams on a flat Coastal Plain cover. These streams extended headward as sea levels lowered, developed dendritic drainage, and eventually became superimposed across regional Piedmont structures. Thus, the general area of the Chattahoochee River valley might well coincide with a fossil Fall Line in Georgia (Staheli, 1976, p. 451). As Staheli points out, in areas near the Chattahoochee River, the drainage pattern suggests that higher, more resistant rocks could have existed as islands that locally controlled stream development even though the lower areas were covered by Coastal Plain sediment. For example, drainage obviously has been diverted by such prominences as Stone Mountain.

Observations made during the present study indicate that in the south half of the GAR, many of the smaller elements of the drainages, such as draws, hollows, and intermittent streams in the uppermost headwaters areas seem to have developed under geologic control. The presence of geologic control is indicated by smaller drainages that parallel prominent joint sets or that are alined with bedrock foliation. Presumably these late-forming drainages were established after removal of a preexisting cover and, therefore, developed under geologic control. The fact that the smaller drainages may reflect bedrock weaknesses, whereas the larger streams generally may not, has a profound influence on the occurrence of ground water in the south half of the GAR and on the methods that can be used successfully to locate large ground-water supplies. The relations between drainage styles and the occurrence of ground water, and the effects that drainage styles have on the methods that can be used to locate sites for high-yielding wells, are discussed in later sections of this report.

AVAILABILITY OF LARGE GROUND-WATER SUPPLIES

The quantity of ground water available in the GAR varies greatly with the location, rock type, topographic setting, drainage style, and the geologic structure. In some areas, most wells yield less than 3 gal/min, which generally is considered a minimum requirement for domestic and stock supplies. In more favorable areas, yields commonly range between 3 and 10 gal/min. It should be pointed out, however, that obtaining this quantity may require drilling in more than one site.

High-yielding wells--ones that supply 20 gal/min or more--generally can be developed only where the rocks possess localized increases in permeability. This occurs mainly in association with certain structural and stratigraphic features, including: (1) contact zones between rock units of contrasting character, (2) contact zones within multilayered rock units, (3) fault zones, (4) stress relief fractures, (5) zones of fracture concentration, (6) small-scale structures, including joints, foliation planes, and fold axes, that localize drainage development, (7) folds that produce concentrated jointing, and (8) shear zones. Other factors, such as topographic setting, drainage style, rock type, depth of weathering, thickness of soil cover, and the pervasiveness and orientation of foliation can interact to increase or decrease the availability of ground water. The nature and occurrence of structural and stratigraphic features known to increase bedrock permeability, and the relation of these features to drainage style, topography, and other factors, are discussed in the following sections.

water level in some observation wells declined more than a foot per day. Other wells responded slowly and showed little change in water level after 4 days of pumping. With continued pumping, however, the water levels in all observation wells declined, and by May 25, 1978, were drawn down to depths of 16 to 38 ft below land surface. By August 1978 the water level was generally in the range of 27 to 39 ft below land surface, well below the bottom of the construction ditch. The low water level kept the ditch free of seepage except immediately following heavy rains. This decline in water levels and the reduced yield of the few active wells, clearly indicated that ground-water storage in the saprolite largely had been depleted.

The monitoring of water levels also revealed that saprolite of layered rocks at the site (amphibolite, gneiss, and schist) has strong preferential permeability. Observation wells that had shown little response to nearby pumping wells located across the strike of the rocks immediately began drawing down with the start-up of wells along the strike. Preferential permeability in the saprolite of layered rocks (documented by Stewart, 1964) accounts for differing rates of drawdown that occurred during the dewatering operation.

The highest yielding well (70 gal/min at site A, fig. 2) penetrated interlayered schist, gneiss, and amphibolite and probably derived water from more than one interformational contact zone. Other wells in the 20-30 gal/min yield range (sites B, C, and D, fig. 2) penetrated interlayered schist, granite gneiss, and some amphibolite.

The dewatering operation demonstrated the importance of locating high-yielding wells in topographic settings that can supply recharge in quantities large enough to balance intended withdrawals. After months of pumping, only the wells in stream valleys downgradient from sizable catchment areas (sites A and B, fig. 2) continued to supply significant yields. Wells in interstream areas (sites C and D, fig. 2), on the other hand, where the quantity of recharge is limited, declined in yield and eventually were pumped dry.

The response of this well field to pumping was much the same as others in the GAR and adjacent areas of the Georgia Piedmont. Over the long term, wells tapping permeable contact zones or other types of permeable zones, no matter how large the initial yield, can supply water only at the rate it is replaced by recharge. Normally, the recharge needed to sustain high well yields for extended periods, and especially through prolonged droughts, is available only in stream valleys, drainages, and draws that receive constant recharge from large catchment areas, or in broad flat areas covered by deep saturated soil. A leading cause of declining well yields in the report area is the practice of locating wells without regard to the adequacy of available recharge. For this reason, successful methods for locating high-yielding well sites emphasize the importance of considering the adequacy of available recharge.

Fault Zones

Faults in the report area consist of two types: (1) large fault zones, such as the Brevard Zone (Unit G, plate 1), that have extensive rock deformation (cataclasis) and numerous small faults within the zones, and (2) faults that displace rock units without extensive deformation around the fault zone.

In large fault zones, shearing and deformation within the zone may reduce the overall permeability of some types of rock and increase the permeability of others. Limited data indicate that wells in broad lowland settings may be highly productive in the Brevard Zone. Owing to the small number of wells and to poor exposures in lowland areas, however, data are not available to indicate which lithologies within the Brevard Zone are the most productive.

Faults that displace rock units without extensive deformation may be highly permeable and supply large well yields. The largest yields generally are available from faults that involve both resistant rocks such as massive gneiss or granite (Units B and F) and less resistant rocks such as feldspathic schist (Unit C). Increases in permeability along these faults result from differential weathering of the contrasting rock types, much the same as occurs in permeable contact zones. Although fractures produced by movement on the faults typically have been healed by mineralization and no longer are fully open, the shearing and mixing of rock types contribute to increasing the permeability along the faults. A good example of a permeable fault zone is the one that extends from eastern Carrollton, Carroll County, southwestward more than 5 miles, involving schist (Unit C) and granite (Unit F). Several wells in the fault zone yield 20 to 80 gal/min.

Work in crystalline rocks in eastern Georgia by David C. Prowell (U.S. Geological Survey, oral commun., 1980) has shown that relatively recent faults are unmineralized and contain open fractures. The faults consist of one or more zones 10 to 30 ft wide in which the rock is broken by numerous vertical or nearly vertical fractures 1 to 4 inches apart. Between the individual fractures, the rock commonly is brecciated and the pieces are rotated at various angles. A 4- to 6-inch wide zone of fault gouge (rock flour) generally occurs near the middle of each fracture zone. The fractures in the fault zone are open and should be capable of storing and transmitting large volumes of ground water. Although no recent faults were recognized during the present study, they may be present in the GAR. Where they project into topographically low areas favoring increased recharge, recent faults should supply large well yields.

According to Prowell (U.S. Geological Survey, oral commun., 1980), except in fresh-rock exposures such as in deep road cuts and quarries, these recent faults are difficult to recognize. Their presence cannot be detected in the soil horizon, but relicts of breccia or variously oriented rock fragments may remain visible in saprolite. It is not known whether the faults would produce a surface trace recognizable as a topographic feature such as a lineament, but it seems likely that they might bring about noticeable changes in vegetative vigor. The likelihood of their producing lineaments probably would be greater in the north half of the area than in the south half.

Stress Relief Fractures

Water-bearing openings in crystalline rocks traditionally have been described as steeply inclined and "X"-shaped fractures and joints similar to those pictured in figure 3 (LeGrand, 1967, p. 6). These openings are reported to be most numerous and to have the largest water-bearing capacity near the surface and to become tighter and more widely spaced with increasing depth.

According to LeGrand (1967, p. 5), most of the interconnecting openings occur less than 150 ft below land surface and few extend deeper than 300 ft. Tradition also has held, as stated by LeGrand (1967, p. 1-2), that high-yielding wells are common where relatively low topographic areas and thick residual soils are combined, and low-yielding wells are common where hilltops and thin soils are combined. Accordingly, sites having the largest yield potential are assumed to be draws and valleys in or downgradient from large catchment areas having a deep soil cover. Sites having the lowest yield potential are narrow ridge tops and upland steep slopes having little, if any, soil cover.

From the beginning of this study, it was apparent that many high-yielding wells, particularly in the south half of the GAR, occupy topographic settings indicated by previous workers to have low

and the surrounding soil, and 69 percent lacked a sanitary seal at the top of the casing. Thus, many poorly constructed wells are contaminated by surface water that leaks down between the casing and the surrounding soil.

The widespread pollution of wells results, in part, from the common practice of locating drilling sites for convenience rather than for protection of the water supply. Many wells are located as close as possible to the point of use without regard to potential sources of pollution such as septic tanks. Located in this manner, many poorly constructed wells are subject to pollution.

The well sites that are least likely to become polluted are those located, as far as practical, upgradient from sources of contamination. Sealing wells against the entry of surface water and fitting pump caps tightly to keep out insects, rodents, and other impurities, are also necessary safety measures to protect wells from contamination.

No detailed study has been made of well pollution in the remainder of the GAR, but wells there are subject to contamination in much the same way as those in Bartow County. Faulty well construction and improper site selection may result in polluted wells.

WATER-LEVEL FLUCTUATIONS

Seasonal changes in precipitation and evapotranspiration produce corresponding changes in ground-water levels. Rainfall in the area is heavy in winter and midsummer and relatively light in spring and autumn. Autumn is the driest season of the year. Ground-water levels rise rapidly with the onset of late winter rains and reduced evapotranspiration, and generally reach their highest levels for the year in March and April, as indicated by the hydrograph of well 10DD2 (fig. 35). Increases in evapotranspiration and decreases in rainfall during the spring and early summer cause ground-water levels to decline. Heavy precipitation in midsummer may cause small rises in ground-water levels, but the lack of recharge from light rainfall in the autumn results in water levels declining to the annual lows, generally in October or November (Matthews and others, 1980).

Annual water-level fluctuations in observation wells in the GAR range from 4 to 8 ft. During the past 10 years, average water levels in the wells generally have varied less than 2 ft and indicate no long-term trend (fig. 36).

EMERGENCY AND SUPPLEMENTAL WATER SUPPLIES

High-yielding wells in the GAR are numerous enough to supply large quantities of water for supplemental or emergency use. During this study, 1,165 wells were inventoried and accurately located, most of which yield 40 to more than 200 gal/min.

Because most high-yielding wells in the GAR are in use and would not quickly be made available for emergency supply, a list of wells in good condition, currently (1980) not in use is presented in table 8 (Appendix). Many of these wells probably could be made available on short notice, although most would require installation of a large-capacity pump. More accurate location data for each well are given in the well table (table 9, Appendix) and figure 37.

CONCLUSIONS

This study of the ground-water resources of the Greater Atlanta Region (GAR) has produced a series of unexpected findings. Among the most significant are:

1. The area has different drainage styles that profoundly affect the occurrence and availability of ground water. From the Chattahoochee River basin north, the area has mainly rectangular and trellis drainage styles and streams show the

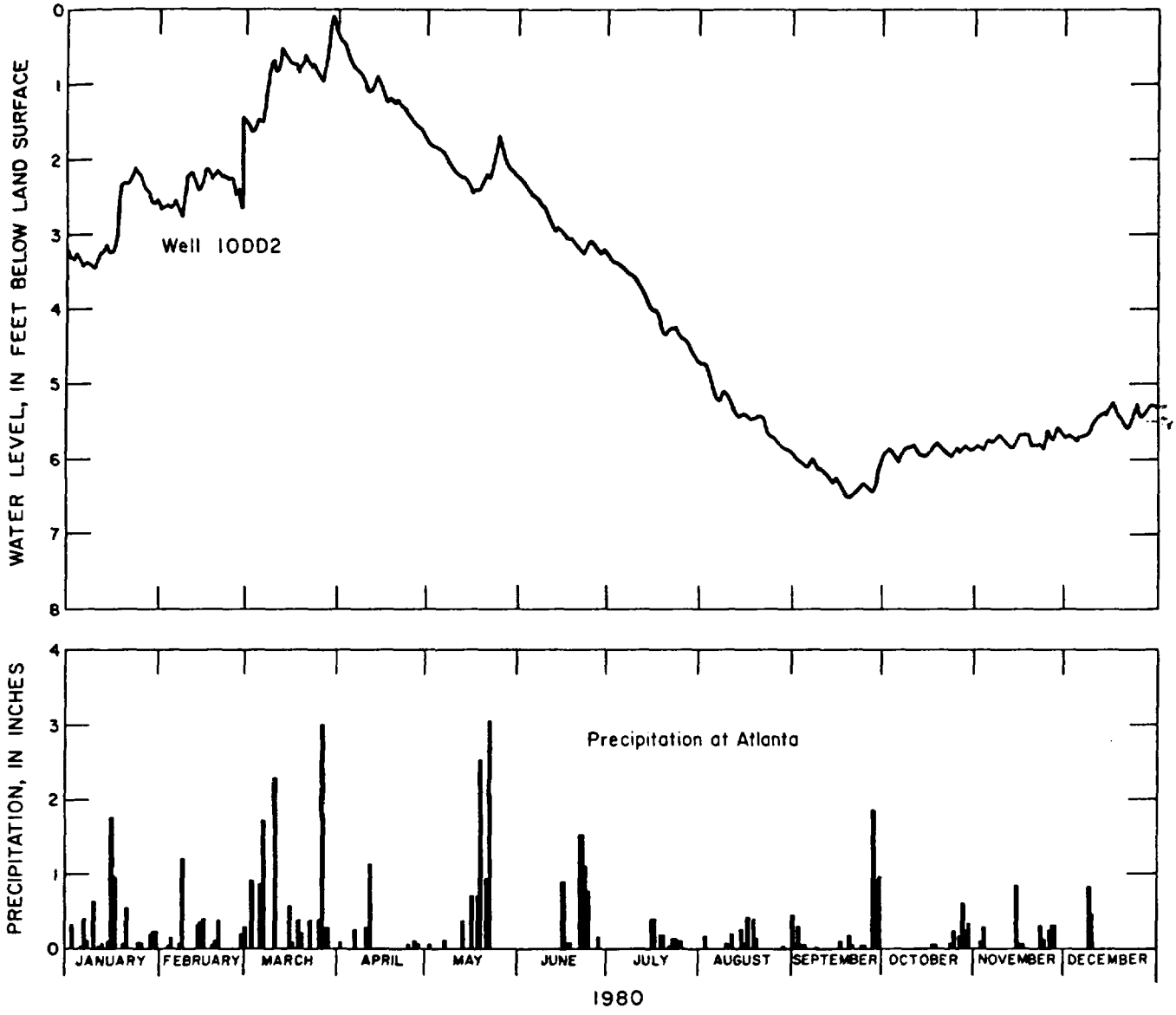

Figure 35. Water-level fluctuations in the U.S. Army, Fort McPherson observation well 10DD2, Fulton County, and precipitation at Atlanta.

influence of geologic control. The topography and drainage are closely related to bedrock permeability and therefore conventional methods for locating high-yielding well sites apply to most of the area. The south half of the area, on the other hand, has superimposed dendritic drainage style in which streams developed independently of the underlying bedrock. There, the topography and drainage are poorly related to bedrock permeability and high-yielding wells commonly occupy ridge crests, steep slopes, and bare-rock areas normally considered sites having low yield potential.

2. Geologic and topographic studies of 1,051 high-yielding well sites revealed that large well yields are available only where aquifers possess localized increases in permeability. This occurs mainly in association with specific structural and stratigraphic features: (1) contact zones between rock units of contrasting character and within multilayered rock units, (2) fault zones, (3) stress relief fractures, (4) zones of fracture concentration, (5) small-scale geologic structures that localize drainage development, (6) folds that produce concentrated jointing, and (7) shear zones. Methods were developed for selecting high-yielding well sites using these structural and stratigraph features.

3. Borehole sonic televiewer logs revealed that high-yielding water-bearing openings in granitic gneiss (Unit B), biotite gneiss (Unit D), gneiss interlayered with schist (Unit A), and quartz-mica schist (Unit C) consist mainly of horizontal or nearly horizontal fractures 1 to 8 inches in vertical dimension. The writers believe these are stress relief fractures formed by the upward expansion of the rock column in response to erosional unloading. Core drilling at two well sites confirmed the horizontal nature of the fractures and showed no indication of lateral movement that could be interpreted as faulting.

Wells that derive water from horizontal fractures characteristically remain essentially dry during drilling until they penetrate the high-yielding fracture. The high-yielding fractures are at or near the bottom of wells because: (1) the large yields were in excess of the desired quantity and, therefore, drilling ceased, or (2) in deep wells yielding 50 to 100 gal/min or more the large volume of water from the fracture(s) "drowned out" the pneumatic hammers in the drill bits, effectively preventing deeper drilling. Twenty-five wells in the report area are known to derive water from bottom-hole fractures, all of which are believed to be horizontal stress relief fractures. The wells occupy a variety of topographic settings, including broad valleys, ridge crests, steep slopes, and bare-rock areas, because horizontal fractures are present beneath uplands and lowlands alike.

Wells deriving water from stress relief fractures have much greater average depth than wells reported from other crystalline rock areas. Many of the wells are 400 to 600 feet deep and derive water from a single fracture at the bottom of the hole.

4. Contrary to popular belief, many wells in the GAR are highly dependable and have records of sustaining large yields for many years. Sixty-six mainly industrial and municipal wells have been pumped continuously for periods of 12 to more than 30 years without experiencing declining yields.

5. Large supplies of ground water presently are available in the area. Most of the 1,165 high-yielding wells inventoried during the study supply from 40 to more than 200 gal/min. The distribution of these wells with respect to topography and geology indicates that most were located for the convenience of the users and that the large yields resulted mainly from chance, rather than from thoughtful site selection. By em-

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EXPLANATION

Principal Water-Bearing Units

A

YIELD—Well yields range from 20 to 275 gal/min, averaging 56 gal/min.
DEPTH—Wells range in depth from 35 to 2,175 ft, averaging 294 ft. Casing depths range from 0 to 200 ft, averaging 60 ft.
TOPOGRAPHIC SETTINGS—Twenty-two percent of the wells occupy slopes, 35 percent are in broad lowlands, 22 percent are on uplands-ridge crests, and 4 percent are in draws and hollows.
METHODS—Effective methods for selecting high-yielding well sites are (1) contact zones within multilayered rock units, (2) small-scale structures that localize drainage development, (3) zones of fracture concentration, (4) topography and soil thickness, and (5) stress relief fractures in settings similar to the one shown in figure 28. In the area of dendritic drainage, the methods are effective mainly in headwaters areas, especially where the strike of the rock layers and drainage courses are parallel.
ROCK TYPE—Unit A is a complex aquifer consisting of interlayered amphibolite, gneiss, and schist in varying proportions and thicknesses. In some areas the unit is predominantly amphibolite containing thin layers of gneiss. In others, the dominant rock type is gneiss interlayered with amphibolite or schist, or both. Also common are areas of gneiss interlayered with schist and schist interlayered with gneiss. Interlayering of two different lithologies, and commonly three, is highly significant because the contact zones between the contrasting layers have the potential for developing increased permeability. Wells in the unit may penetrate several permeable contact zones that contribute to the total yield.

B

YIELD—Well yields in Unit B range from 20 to 348 gal/min, averaging 72 gal/min.
DEPTH—Wells range in depth from 40 to 825 ft, averaging 271 ft. Casing depths range from 3 to 266 ft, averaging 54 ft.
TOPOGRAPHIC SETTINGS—Thirty-three percent of the wells occupy slopes, 45 percent are in broad lowlands, 2 percent are on uplands-ridge crests, and 14 percent are in draws and hollows.
METHODS—Effective methods for well site selection are (1) stress relief fractures in topographic settings similar to those shown in figures 12-14 and 28, (2) shear zones, (3) contact zones with Units A, C, E, and possibly G, (4) small-scale structures that localize drainage development, and (5) fault zones. In the area of dendritic drainage, the last three methods are effective mainly in headwaters areas.
ROCK TYPE—Unit B consists of granitic gneiss containing biotite, muscovite, quartz, and feldspar in order of increasing abundance. In some areas the unit includes layers of amphibolite and other rocks.

C

YIELD—Well yields range from 20 to 150 gal/min, averaging 47 gal/min.
DEPTH—Wells range in depth from 67 to 700 ft, averaging 195 ft. Casing depths range from 4 to 144 ft, averaging 53 ft.
TOPOGRAPHIC SETTINGS—Nineteen percent of the wells occupy slopes, 19 percent are in broad lowlands, 27 percent are on uplands-ridge crests, and 20 percent are in draws and hollows.

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METHODS—Effective methods for selecting well sites are (1) small-scale structures that localize drainage development, (2) contact zones with Units B, D, E, F, H, and in some areas G, and (3) contact zones between schists and graywacke and quartzite layers within the unit. In the area of dendritic drainage, the methods will be effective mainly in headwaters areas.
ROCK TYPE—The unit consists of muscovite, feldspar, sillimanite, and quartz schists locally interlayered with thin to thick beds of graywacke, quartzite, and other rocks. Garnet, graphite, and biotite are common accessary minerals. In places, the schists are interlayered with hornblendic units.

POLK CO
HARALSON CO
Lake Olympia
Buchanan
Lake Hurlson
Draketown
CARROLL CO
Lake Paradise
Villa Rica
Lake Backhorn
Mansion Lake
Sandy Cr
Sand Hill
Carrollton
Richards Lake
Hannah
TALLAPOOSA RIVER
LITTLE TALLAPOOSA
45'
30'

GEOLOGIC MAP (

Atlanta
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S. M. Pickering, Jr., Director and

J. B. Murray, Chief Geo

GEOLOGIC MAPPING, COMPILATION,

D. E. Lawton (Head, North Ga. Unit)
F. J. Moye
J. B. Murray
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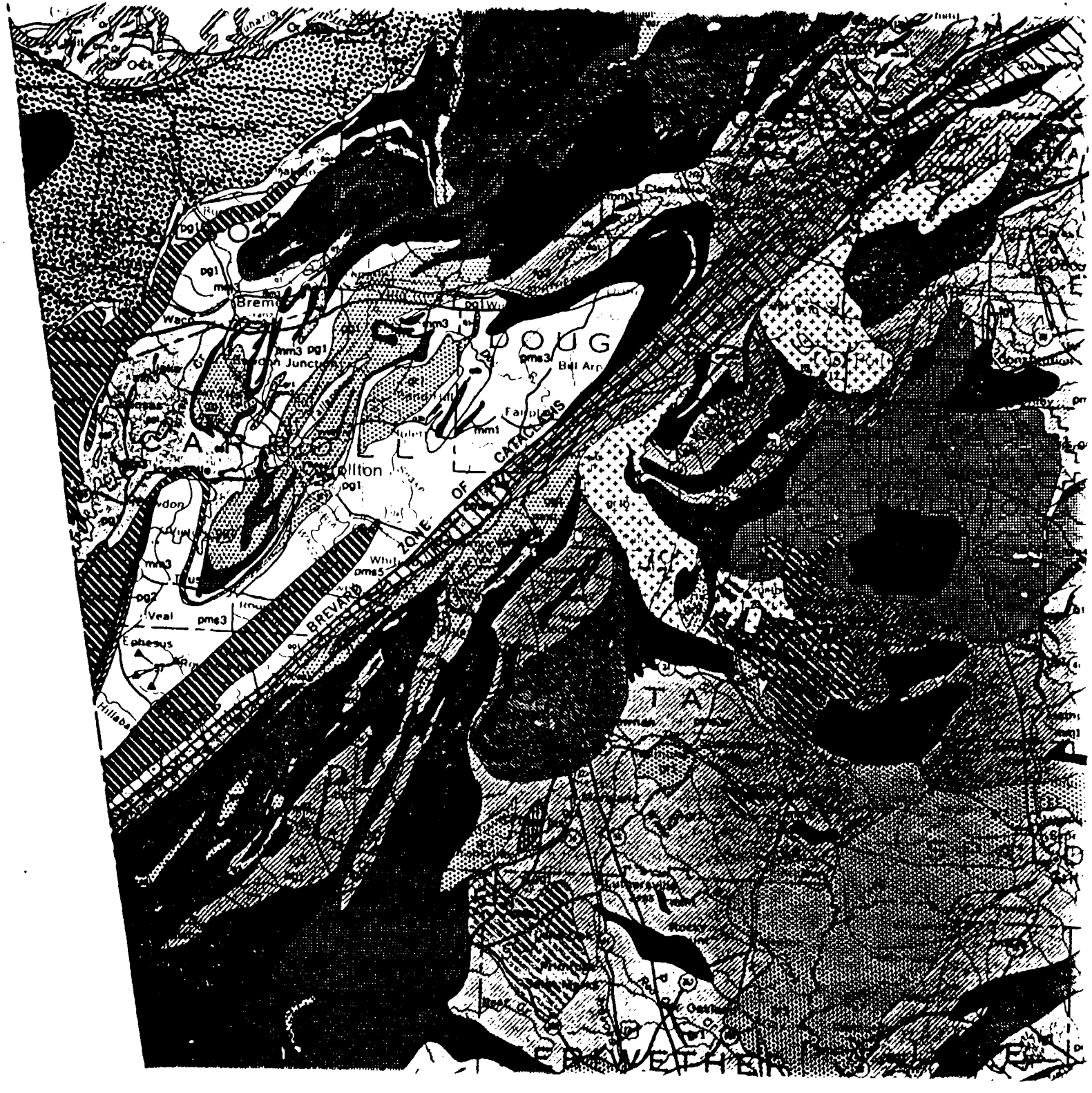

DOUG
Bill Arp
Fairplains
Brem
Waco
Junction
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Ephesus
Hillaba
BREVARD ZONE OF CATACLASIS
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pms5

BIOTITIC GNEISS UNDIFFERENTIATED

BIOTITIC GNEISS/MICA SCHIST/AMPHIBOLITE

BIOTITIC GNEISS/ AMPHIBOLITE

BIOTITE GNEISS

BIOTITE GNEISS

BIOTITE GNEISS/ AMPHIBOLITE

BIOTITE GNEISS/ HORNBLENDE GNEISS/ GRANITE GNEISS

BIOTITE GNEISS/MICA SCHIST

METAMORPHOSED MAFIC ROCKS (MAY INCLUDE METASEDIMENTARY VARIETIES)

AMPHIBOLITE

HORNBLENDE GNEISS

HORNBLENDE GNEISS/ AMPHIBOLITE

HORNBLENDE GNEISS/ AMPHIBOLITE/ GRANITE GNEISS

HORNBLENDE-BIOTITE GNEISS/AMPHIBOLITE

HORNBLENDE GNEISS/ GRANITE GNEISS/BIOTITE GNEISS

AMPHIBOLITE/EPIDOTE QUARTZITE/GRANITE GNEISS

AMPHIBOLITE/BIOTITIC GNEISS/QUARTZ SERICITE SCHIST

AMPHIBOLITE/MICA SCHIST/ BIOTITIC GNEISS

AMPHIBOLITE/

PHYLLITIC ROCKS

PHYLLITE UNDIFFERENTIATED

META-ARGILLITE/PHYLLITE

GRAPHITIC PHYLLITE

PHYLLITE AND QUARTZITE

PHYLLITE/QUARTZITE/ CALC-SILICATE GNEISS

ALUMINOUS SCHIST

GARNET MICA SCHIST

GARNET MICA SCHIST/GNEISS

GARNET MICA SCHIST/ AMPHIBOLITE

ALUMINOUS SCHIST

SILLIMANITE SCHIST

SILLIMANITE SCHIST/GNEISS

SILLIMANITE SCHIST/GNEISS/ AMPHIBOLITE

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QUARTZITE

QUARTZITE

QUARTZITE/MICA SCHIST

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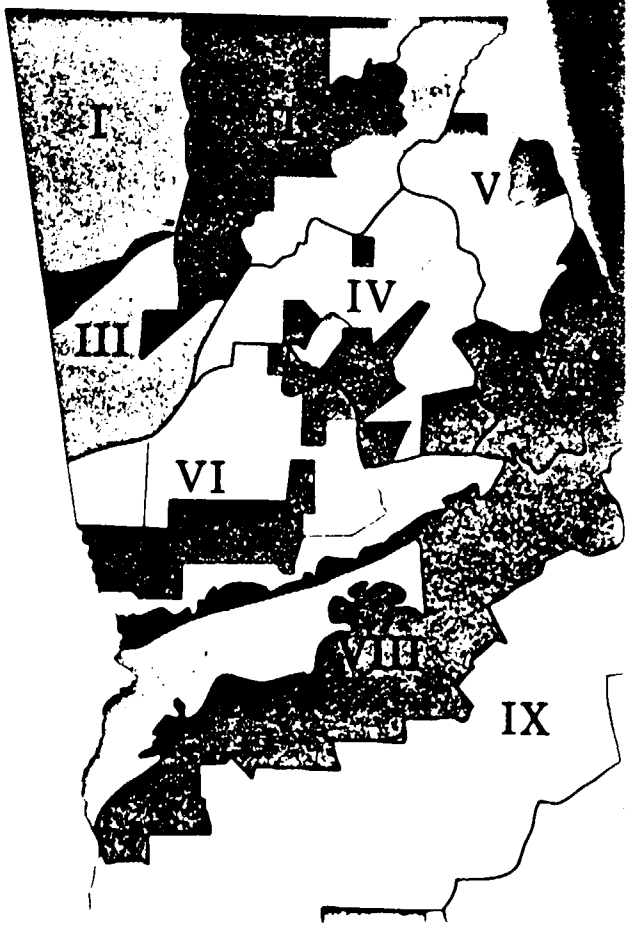

REFERENCE 26

GROUNDWATER

R. Allan Freeze/John A. Cherry

R. Allan Freeze

Department of Geological Sciences
University of British Columbia
Vancouver, British Columbia

John A. Cherry

Department of Earth Sciences
University of Waterloo
Waterloo, Ontario

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Table 2.2 Range of Values of Hydraulic Conductivity and Permeability

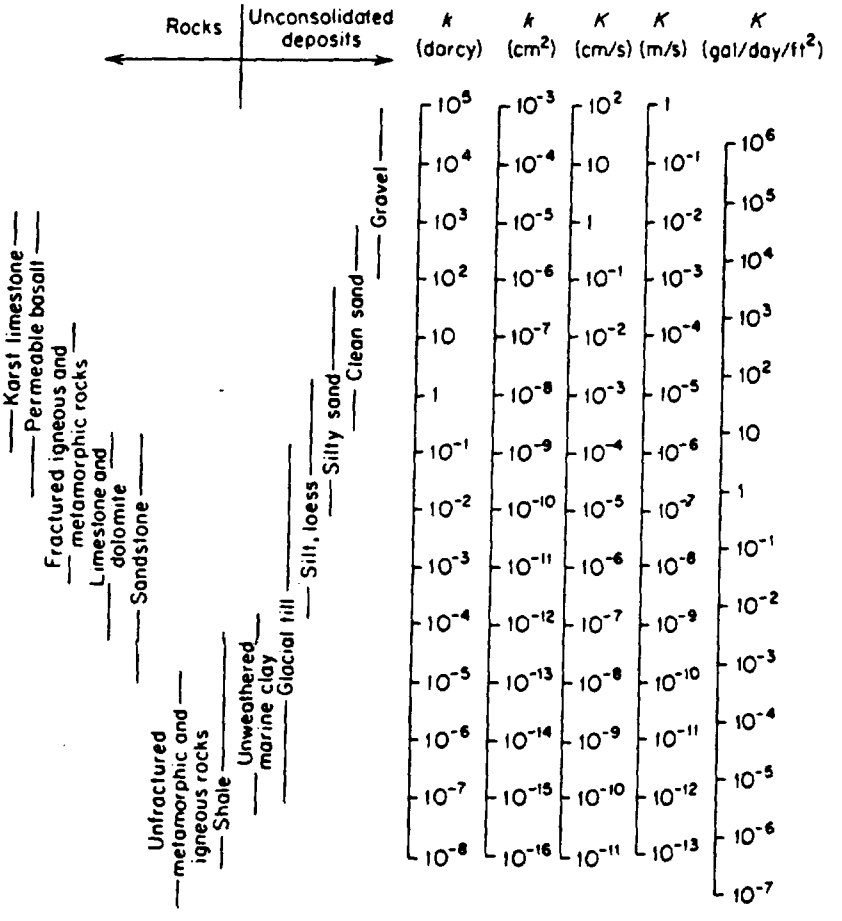

Table 2.3 Conversion Factors for Permeability and Hydraulic Conductivity Units

	Permeability, k*			Hydraulic conductivity, K		
	cm^2	ft^2	darcy	m/s	ft/s	gal/day/ft^2
cm^2	1	1.08×10^{-3}	1.01×10^{8}	9.80×10^{2}	3.22×10^{3}	1.85×10^{9}
ft^2	9.29×10^{2}	1	9.42×10^{10}	9.11×10^{5}	2.99×10^{6}	1.71×10^{12}
darcy	9.87×10^{-9}	1.06×10^{-11}	1	9.66×10^{-6}	3.17×10^{-5}	1.82×10^{1}
m/s	1.02×10^{-3}	1.10×10^{-6}	1.04×10^{5}	1	3.28	2.12×10^{6}
ft/s	3.11×10^{-4}	3.35×10^{-7}	3.15×10^{4}	3.05×10^{-1}	1	5.74×10^{5}
gal/day/ft^2	5.42×10^{-10}	5.83×10^{-13}	5.49×10^{-2}	4.72×10^{-7}	1.74×10^{-6}	1

*To obtain k in ft^2, multiply k in cm^2 by 1.08×10^{-3}.

REFERENCE 27

National Water Summary 1984

Hydrologic Events, Selected Water-Quality Trends, and Ground-Water Resources

By United States Geological Survey

REFERENCE
#27

United States Geological Survey
Water-Supply Paper 2275

DEPARTMENT OF THE INTERIOR
DONALD PAUL HODEL, Secretary

U.S. GEOLOGICAL SURVEY
Dallas L. Peck, Director

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GEORGIA
Ground-Water Resources

Ground water is an abundant natural resource in Georgia and comprises 18 percent of the total freshwater used (including thermoelectric) in the State. Georgia's aquifers provide water for more than 2.6 million people, or almost one-half of the total population of the State. Of this number, about one-half are served by public water-supply systems and one-half by rural water-supply systems. Most ground-water withdrawals are in the southern one-half of the State where the aquifers are very productive. Ground-water withdrawals in 1980 for various uses, and related statistics, are given in table 1.

Table 1. Ground-water facts for Georgia

[Withdrawal data rounded to two significant figures and may not add to totals because of independent rounding. Mgal/d = million gallons per day; gal/d = gallons per day. Source: Solley, Chase, and Mann, 1983]

Population served by ground water, 1980	
Number (thousands)	2,604
Percentage of total population	48
From public water-supply systems:	
Number (thousands)	1,320
Percentage of total population	24
From rural self-supplied systems:	
Number (thousands)	1,284
Percentage of total population	23
Freshwater withdrawals, 1980	
Surface water and ground water, total (Mgal/d)	6,700
Ground water only (Mgal/d)	1,200
Percentage of total	18
Percentage of total excluding withdrawals for thermoelectric power	52
Category of use	
Public-supply withdrawals:	
Ground water (Mgal/d)	230
Percentage of total ground water	19
Percentage of total public supply	29
Per capita (gal/d)	174
Rural-supply withdrawals:	
Domestic:	
Ground water (Mgal/d)	140
Percentage of total ground water	12
Percentage of total rural domestic	100
Per capita (gal/d)	109
Livestock:	
Ground water (Mgal/d)	17
Percentage of total ground water	1
Percentage of total livestock	61
Industrial self-supplied withdrawals:	
Ground water (Mgal/d)	400
Percentage of total ground water	34
Percentage of total industrial self-supplied:	
Including withdrawals for thermoelectric power	8
Excluding withdrawals for thermoelectric power	57
Irrigation withdrawals:	
Ground water (Mgal/d)	380
Percentage of total ground water	32
Percentage of total irrigation	66

GENERAL SETTING

Differing geologic features and landforms of the several physiographic provinces of Georgia cause significant differences in ground-water conditions from one part of the State to another (fig. 1). The most productive aquifers in the State are located in the Coastal Plain province in the southern one-half of Georgia; the province is underlain by alternating layers of sand, clay, and limestone that dip and thicken to the southeast. Aquifers generally are confined in the Coastal Plain, except near their northern limit where the formations are exposed or are near land surface. Principal aquifers of the Coastal Plain include the Floridan aquifer system, the Claiborne aquifer, the Clayton aquifer, and the Cretaceous aquifer system (table 2). The Piedmont and Blue Ridge provinces, which include most of the northern one-half of Georgia, are underlain by massive igneous and metamorphic rocks that form aquifers of very low permeability. The Valley and Ridge and Appalachian Plateaus provinces, which are in the northwestern corner of Georgia, are underlain by layers of sandstone, limestone, dolostone, and shale of Paleozoic age.

Recharge to the ground-water system in Georgia is derived almost entirely from precipitation. Average annual precipitation based on the 30-year period of record (1941–70) is about 50 inches (in.) statewide and ranges from about 44 in. in the east-central part of the State to about 76 in. in the northeastern corner of the State. Of this amount, about 88 percent is discharged to streams or is lost to evapotranspiration, and about 12 percent enters the ground-water system as recharge (Carter and Stiles, 1983).

PRINCIPAL AQUIFERS

FLORIDAN AQUIFER SYSTEM

The Floridan aquifer system is one of the most productive ground-water reservoirs in the United States. More than 600 million gallons per day (Mgal/d) is withdrawn from the aquifer system in Georgia (1980), making it the principal source of ground water in the State. The aquifer system generally is confined but is semiconfined to unconfined near its northern limit and near areas of karst topography in the Dougherty Plain and near Valdosta. In parts of the area where the Floridan aquifer system is exposed or is near land surface, intensive pumping can contribute to the formation of sinkholes. Although water suitable for most uses can be obtained from the aquifer system throughout most of the Coastal Plain, water-quality problems have occurred in some areas. The following examples serve to illustrate the problem: (1) at Brunswick, the intrusion of brackish water into the aquifer system resulted in chloride concentrations of as much as 1,000 milligrams per liter (mg/L) in some wells (Wait and Gregg, 1973), (2) in the area of Wheeler and Montgomery Counties in central-south Georgia, naturally occurring radioactivity exceeds 25 picocuries per liter (S. S. McFadden, Georgia Geologic Survey, oral commun., September 1984), (3) in nearby Ben Hill County, barium concentrations of as much as 2.1 mg/L are present in some wells (S. S. McFadden, Georgia Geologic Survey, oral commun., September 1984), (4) at Valdosta, naturally occurring organic substances, color, and hydrogen sulfide gas have been a cause of concern (Krause, 1979), and (5) in the Dougherty Plain area, small concentrations of commonly used pesticides have been detected in some farm wells (Hayes and others, 1983).

Table 2. Aquifer and well characteristics in Georgia

[Ft = feet; gal/min = gallons per minute. Sources: Reports of the U.S. Geological Survey and Georgia Geologic Survey]

Aquifer name and description	Well characteristics			Remarks
	Depth (ft)	Yield (gal/min)		
	Common range	Common range	May exceed	
Floridan aquifer system: Limestone, dolomite, and calcareous sand. Generally confined.	40 - 900	1,000 - 5,000	11,000	Supplies 50 percent of ground water in State. Major users include the Savannah, the Brunswick, the Jesup, the St. Marys, the Albany, and the Dougherty Plain areas. Water-level declines at Savannah and Brunswick. Intrusion of brackish water from deeper zones at Brunswick. In some areas, water has natural radioactivity that exceeds State and national drinking-water regulations. Formerly called principal artesian aquifer.
Claiborne aquifer: Sand and sandy limestone. Generally confined.	20 - 450	150 - 600	1,500	Major source of water in southwestern Georgia. Supplies industrial and municipal users at Dougherty, Crisp and Dooly Counties and provides irrigation water north of Dougherty Plain. Called Tertiary sands aquifer in South Carolina and Tennessee. Part of Tertiary sedimentary aquifer system in Alabama.
Clayton aquifer: Limestone and sand. Generally confined.	40 - 800	250 - 600	2,150	Major source of water in southwestern Georgia. Supplies industrial and municipal users at Albany and provides irrigation water northwest of Albany. Water-level declines exceed 100 ft at Albany. Iron concentrations in Randolph County exceed national drinking-water regulations. Part of Tertiary sedimentary aquifer system in Alabama.
Cretaceous aquifer system: Sand and gravel. Generally confined.	30 - 750	50 - 1,200	3,300	Major source of water in east-central Georgia. Supplies water for kaolin mining and processing. Includes Providence aquifer in southwestern Georgia. Water-level declines greater than 50 ft at kaolin mining centers and 100 ft near Albany. Iron concentrations exceed national drinking-water regulations in some areas. Called Black Creek and Middendorf aquifers in South Carolina.
Paleozoic aquifers: Sandstone, limestone, and dolomite; storage is in regolith and fractures and solution openings in rock. Generally unconfined.	15 - 2,100	1 - 50	3,500	Not laterally extensive. Limestone and dolomite aquifers most productive. Springs in limestone and dolostone aquifers discharge at rates of as much as 5,000 gal/min. Sinkholes can form in areas of intensive pumping. Water is generally of good quality, although contamination from septic tanks and farm waste reported in some areas. Laterally equivalent to Paleozoic carbonate aquifers in Alabama and Pennsylvanian sandstone aquifers in Alabama and Tennessee.
Crystalline rock aquifers: Granite, gneiss, schist, and quartzite; storage is in fractures in rock and in regolith. Generally unconfined.	40 - 600	1 - 25	500	Not laterally extensive. Water of good quality with exception of large concentrations of iron and manganese in some areas and contamination from septic tank effluent in densely populated areas.

Claiborne Aquifer

The Claiborne aquifer is an important source of water in part of southwestern Georgia (fig. 1) and supplied an estimated 36 Mgal/d in 1980, primarily for irrigation (McFadden and Perriello, 1983). Although the Claiborne aquifer yields water suitable for most uses over most of its extent, naturally occurring concentrations of dissolved solids and chloride in the south-central part of the State have been reported as 22,200 and 11,900 mg/L, respectively (Wait, 1960).

Clayton Aquifer

The Clayton aquifer is an important source of water in southwestern Georgia (fig. 1), where it supplied an estimated 20 Mgal/d in 1980. Most of the withdrawals were for public supply (58 percent) and irrigation (35 percent). With the exception of large concentrations of iron (greater than 0.3 mg/L) in Randolph County, water from the aquifer is suitable for most uses (Clarke and others, 1984).

Cretaceous Aquifer System

The Cretaceous aquifer system is a major source of water in the northern one-third of the Coastal Plain (fig. 1). During 1980, the aquifer system yielded an estimated 128 Mgal/d, primarily for industrial and public-supply use. The aquifer system consists of sand and gravel that locally contain layers of clay and silt which function as confining beds. These confining beds locally separate the aquifer system into two or more aquifers. In southwestern Georgia, the Providence aquifer is part of the Cretaceous aquifer system. Water from the aquifer system is soft (less than 60 mg/L as calcium carbonate), has little dissolved solids (generally less than 100 mg/L), and is of a sodium bicarbonate type that is suitable for most uses. In the center of the area of usage (fig. 1), the iron concentration may be as much as 6.7 mg/L.

Paleozoic Aquifers

Water in the Paleozoic aquifers generally is unconfined, and storage is limited mainly to joints, fractures, and solution openings in the bedrock. During 1980, an estimated 33 Mgal/d was withdrawn from the Paleozoic aquifers, primarily for industrial supply. Wells that tap the Paleozoic aquifers yield differing amounts of water, depending on the aquifer used. Dolostone aquifers typically yield 5 to 50 gallons per minute (gal/min), whereas limestone and sandstone aquifers typically yield 1 to 20 gal/min; maximum reported yields from these aquifers are 3,500 and 300 gal/min, respectively. Springs discharge from the limestone and dolostone aquifers at rates of as much as 5,000 gal/min. Where the limestone and dolostone aquifers are near land surface, pumping can contribute to the formation of sinkholes. Water from wells and springs in the Paleozoic aquifers generally is suitable for most uses, although contamination from septic tanks and farm waste has been reported (Cressler and others, 1976).

Crystalline Rock Aquifers

Although individual crystalline rock aquifers are not laterally extensive, collectively they yielded an estimated 99 Mgal/d in 1980, primarily for rural supply. Ground-water storage occurs in the regolith and where the rocks have joints, fractures, and other types of secondary openings (Cressler and others, 1983). Crystalline rock aquifers in these areas generally are unconfined and show a pronounced response to rainfall, although deep fracture systems commonly are confined. Water from the aquifers generally is suitable for most uses, and, with the exception of iron (as much as 14 mg/L) and manganese (as much as 1.5 mg/L), constituent concentrations rarely exceed national drinking-water regulations (U.S. Environmental Protection Agency, 1982a,b). In some densely populated areas, septic-tank effluent has contaminated the aquifers (Cressler and others, 1983).

GROUND-WATER WITHDRAWALS AND WATER-LEVEL TRENDS

Major areas of ground-water withdrawals and trends in ground-water levels near selected pumping centers are shown in figure 2. With the exception of one center in the Valley and Ridge province (location 1, fig. 2), all major pumping centers are in the Coastal Plain, where aquifers are very productive. The largest pumping center is the Dougherty Plain area where ground-water withdrawal for irrigation exceeds 200 Mgal/d.

The hydrographs shown in figure 2 reflect the responses of aquifers to pumping at selected pumping centers under a variety of hydrologic conditions. In the Floridan aquifer system, large cones of depression have formed at Savannah, Brunswick, Jesup, and St. Marys as a result of pumping for industrial and public supply. At Savannah (location 5, fig 2.), the water level has declined at least 160 feet (ft) since pumping began in the late 1800's (McCollum and Counts, 1964). The hydrograph shows that the water level declined 45 ft from 1954 to 1961 and less than 10 ft from 1961 to 1984. These changes reflect pumping patterns in the area. At Brunswick, the water level in the aquifer system declined 65 ft from predevelopment to 1964 (Wait and Gregg, 1973). The decline continued until 1982 (location 7, fig. 2), then rose about 10 ft as the result of a significant decrease in pumping by a major water user. Near Valdosta (location 9, fig. 2), the water level in the Floridan aquifer system responds to changes in recharge derived from streamflow and to local pumping. The hydrograph shows a moderate long-term response to changing recharge rates and to pumping. Pumpage from the Floridan aquifer system in the Dougherty Plain area (location 11, fig. 2) is primarily for seasonal irrigation which, averaged over the year, exceeded 200 Mgal/d in 1980. In this area, pumpage is scattered widely. Some recharge to the Floridan aquifer system occurs locally. As a result, water-levels recover annually.

In the Albany area (location 10, fig. 2), water is withdrawn from the Tertiary Floridan aquifer system, the Claiborne aquifer, and the Clayton aquifer and the Cretaceous Providence aquifer. Water-level declines of more than 100 ft have occurred in the Clayton and Providence aquifers (Clarke and others, 1983, 1984). The water level in the Clayton aquifer near withdrawal location 10 (fig. 2) generally declined from 1958 to 1984 in response to increased pumping for public supply and agriculture.

The water level in the Cretaceous aquifer system has declined more than 50 ft since 1950 in areas of heavy pumping for public supply and industrial use. However, in the Huber-Warner Robins area (location 4, fig. 2), the water level has not declined significantly from 1975 to 1984 despite a slight increase in ground-water withdrawals during that period.

GROUND-WATER MANAGEMENT

Georgia has a comprehensive set of laws governing the quality and use of ground water. The Ground-Water Use Act of 1972 provided for the permitting of withdrawals for industrial and municipal use that exceed 100,000 gallons per day (gal/d) and authorized the Georgia Environmental Protection Division to issue regulations about reporting, timing of withdrawals, abatement of saltwater encroachment, well depth and spacing, and pumping levels or rates. Amendments to the

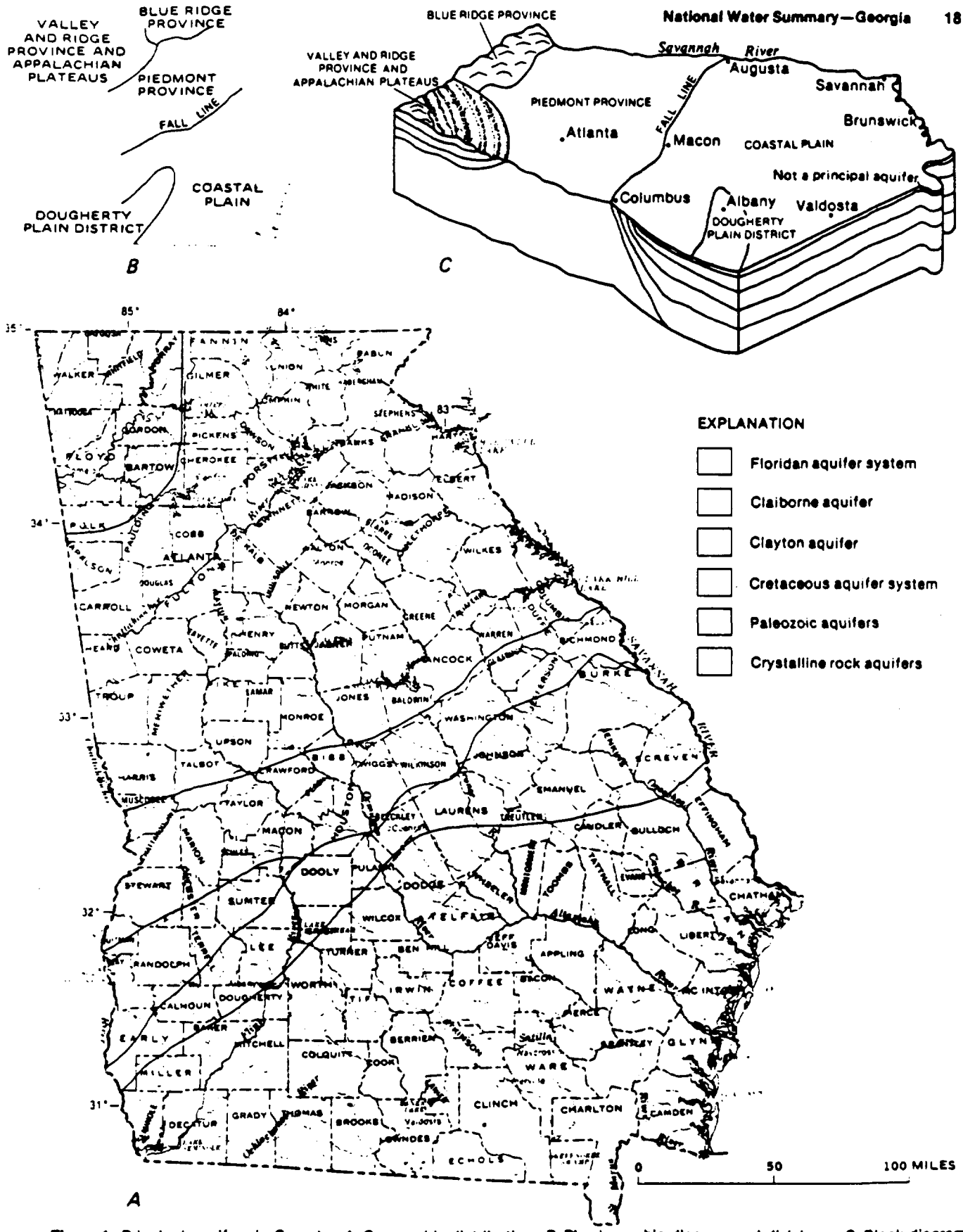
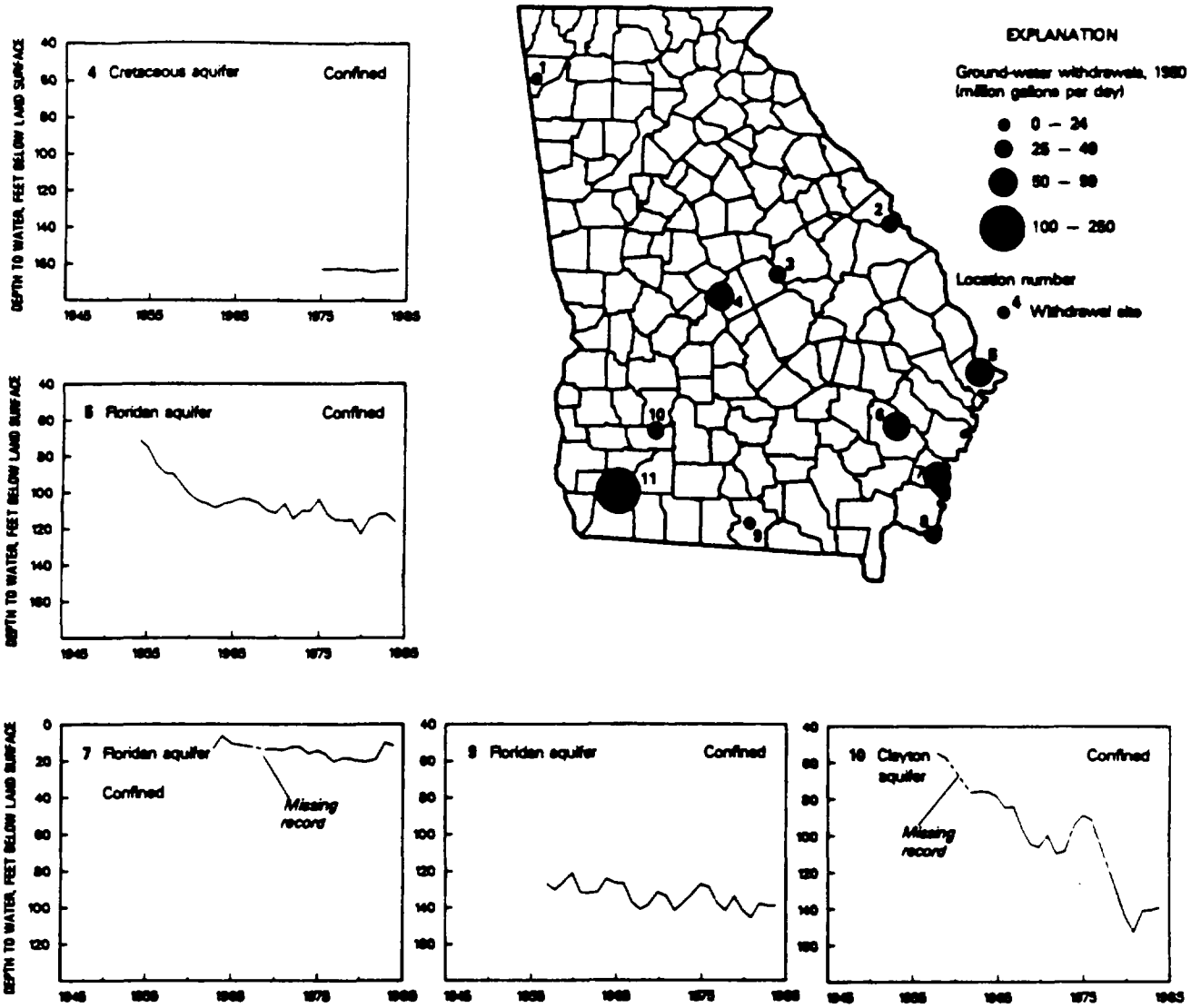


Figure 1. Principal aquifers in Georgia. *A*, Geographic distribution. *B*, Physiographic diagram and divisions. *C*, Block diagram showing principal aquifers and physiographic divisions. (See table 2 for a more detailed description of the aquifers. Sources: *A* J. S. Clarke, U.S. Geological Survey, written commun., 1984. *B*, Fenneman, 1938; Raisz, 1954. *C*, Modified from Pierce ar others, 1984.)



WITHDRAWAL SITES			
No. on map	Geographic area	Aquifer	Principal uses
1	Valley and Ridge . . .	Paleozoic.	Carpet mill industry.
2	Richmond-Burke . . .	Cretaceous. . . .	Public supply, industrial, irrigation.
3	Kaolin Belt.	. . . .do	Clay mining and processing.
4	Huber-Warner Robins.	. . . .do	Clay mining and processing, public supply.
5	Savannah.	Floridan	Public supply, chemical industry, pulp and paper industry.
6	Jesup	. . . .do	Pulp and paper industry.
7	Brunswick	. . . .do	Pulp and paper industry, public supply.
8	St. Marys.	. . . .do	Pulp and paper industry.
9	Valdosta	. . . .do	Public supply, industrial.
10	Albany	Floridan, Clayton, Claiborne, Providence.	Public supply, industrial, irrigation.
11	Dougherty Plain. . . .	Floridan	Irrigation.

Figure 2. Areal distribution of major ground-water withdrawals and graphs of annual greatest depth to water in selected wells in Georgia. (Sources: Withdrawal data from Pierce and others, 1982; water-level data from U.S. Geological Survey files.)

Act in 1982 required that irrigation withdrawals in excess of 100,000 gal/d be reported to the State, although permits for that use still are not required. The Oil and Gas Deep Drilling Act of 1975 authorized the Board of Natural Resources to regulate drilling and use of oil, gas, and other types of wells for the purpose of protecting fresh ground-water supplies. The Georgia Safe Drinking Water Act of 1977 provides for regulation of water quality in public-water systems.

The Georgia Environmental Protection Division (EPD) and its branches are responsible for enforcing all surface-water, ground-water, and water-quality laws. In 1984, a ground-water management plan for Georgia was implemented to identify key activities performed by EPD management, to control and regulate potential pollution sources, and to develop a monitoring program to provide water-quality and water-quantity data on the State's principal aquifers. The Water Resources Management Branch issues permits for ground-water withdrawals that exceed 100,000 gal/d by industrial and municipal users and oversees the reporting of ground-water use for irrigation in excess of 100,000 gal/d. The Ground-Water Program of the Water Protection Branch provides for the permitting of operators of public water-supply systems that use ground water and monitors water quality for compliance with drinking-water standards. The Industrial and Hazardous Waste Management Program of the Land Protection Branch monitors ground water at hazardous waste sites. The Geologic Survey Branch provides technical support for the other branches and has a cooperative program with the U.S. Geological Survey that provides much of the basic data and interpretive information needed to manage the quality and quantity of ground water in the State.

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Prepared by John S. Clarke and Robert R. Pierce

For further information contact District Chief, U.S. Geological Survey, 6481 Peachtree Industrial Blvd., Suite B, Doraville, GA 30360

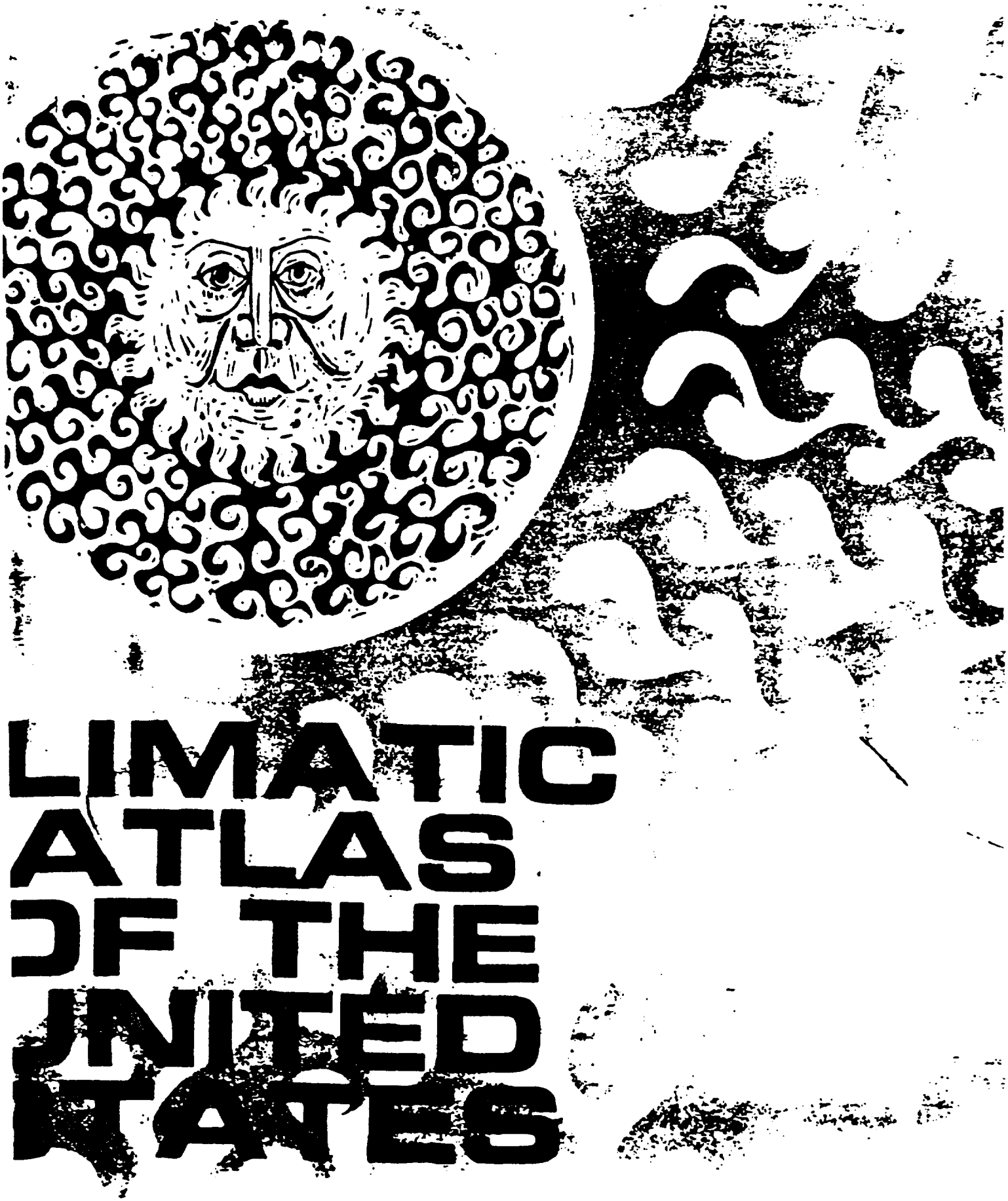
Table 5. Household, Family, and Group Quarters Characteristics: 1990

[For definitions of terms and meanings of symbols, see text]

State / County / Place and [In Selected States] County Subdivision	Persons in households	All households	Family households: Total	Family households: Married-couple family	Family households: Female householder, no husband present	Nonfamily households: Total	Nonfamily households: Householder living alone: Total	Householder living alone: 65 years and over: Total	Householder living alone: 65 years and over: Female	Persons per—: Household	Persons per—: Family	Persons in group quarters: Total	Persons in group quarters: Institutionalized persons	Persons in group quarters: Other persons in group quarters
The State	6 304 583	2 366 615	1 713 072	1 380 7[illegible]	[illegible] 041	653 543	537 7[illegible]	[illegible] 627	14[illegible] 417	2.66	3.16	173 633	87 266	86 367
COUNTY														
Appling County	15 580	5 634	4 275	3 423	687	1 3[illegible]	1 [illegible]	[illegible]	535	2.67	3.21	164	164	-
Atkinson County	6 209	2 210	1 647	1 2[illegible]	[illegible]	563	517	[illegible]	220	2.81	3.33	4	4	-
Bacon County	9 436	3 442	2 645	2 000	539	797	742	376	301	2.74	3.17	130	121	9
Baker County	3 610	1 300	940	686	220	361	[illegible]	174	140	2.78	3.33	5	5	-
Baldwin County	32 270	12 166	8 736	6 085	2 163	3 430	2 770	1 037	815	2.66	3.14	7 260	6 515	745
Banks County	10 202	3 775	2 973	2 383	283	802	724	383	301	2.73	3.13	16	16	-
Barrow County	29 400	10 676	8 361	6 826	1 140	2 315	2 016	941	765	2.76	3.15	232	209	23
Bartow County	55 485	20 081	15 665	12 626	2 140	4 436	3 861	1 606	1 328	2.76	3.17	426	336	90
Ben Hill County	15 923	5 972	4 343	3 153	1 007	1 629	1 506	706	620	2.67	3.22	332	252	70
Berrien County	13 850	5 140	3 980	3 208	[illegible]	1 [illegible]	1 105	530	427	2.[illegible]	3.13	384	108	[illegible]
Bibb County	145 108	56 307	39 301	28 742	10 753	17 006	14 882	5 916	4 812	2.58	3.14	4 [illegible]	2 904	1 [illegible]
Bleckley County	10 005	3 516	2 864	2 223	534	652	604	452	380	2.82	3.[illegible]	425	121	304
Brantley County	11 050	3 811	3 109	2 586	364	702	629	273	217	2.90	3.25	8	8	-
Brooks County	15 026	5 362	4 040	2 851	974	1 322	1 223	[illegible]	496	2.79	3.30	372	279	93
Bryan County	15 301	5 070	4 226	3 514	554	844	735	305	218	3.02	3.34	137	-	137
Bulloch County	39 456	14 964	[illegible]	7 440	1 702	5 [illegible]	3 [illegible]	1 [illegible]	1 042	2.63	3.15	3 687	607	3 080
Burke County	20 363	7 037	[illegible]	3 482	1 543	1 749	1 573	736	594	2.89	3.41	214	214	-

Reference

REFERENCE 29



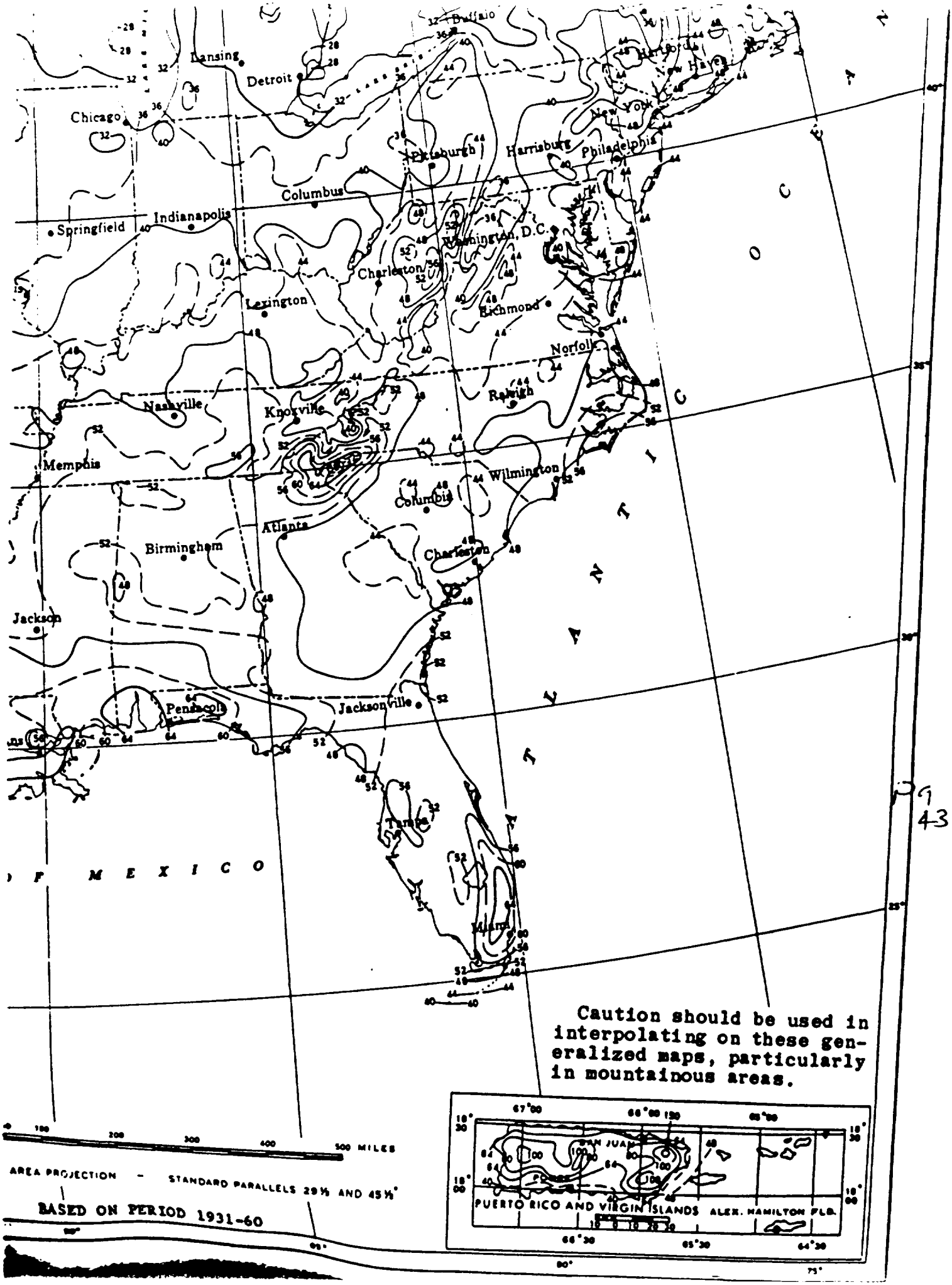
U.S. DEPARTMENT OF COMMI
C. R. Smith, Secretary

ENVIRONMENTAL SCIENCE SERVICES ADMII
Robert M. White, Administrator

ENVIRONMENTAL DATA SERVICE
Woodrow C. Jacobs, Director

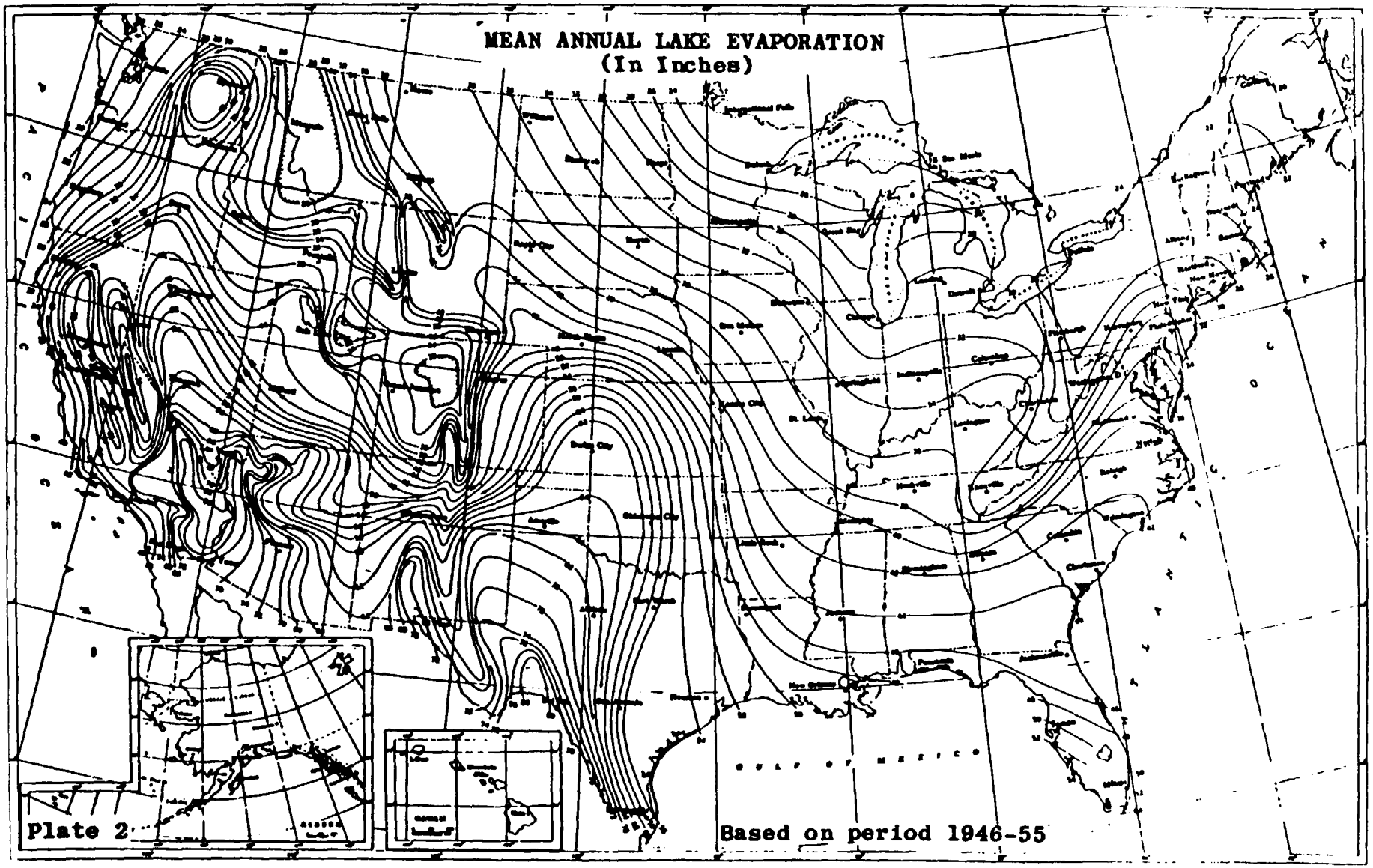
JUNE 1968

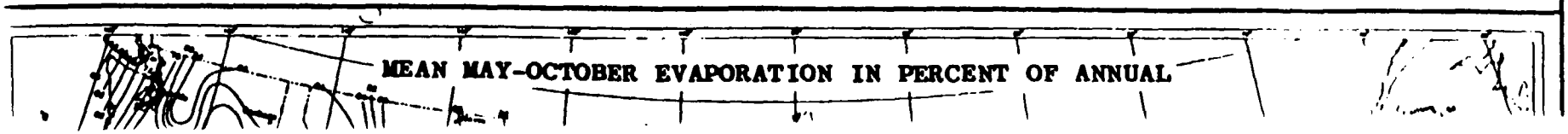
REPRINTED BY THE
NATIONAL OCEANIC AND ATMOSPHERIC ADM
1983


Lansing
Detroit
Chicago
Springfield
Indianapolis
Columbus
Pittsburgh
Harrisburg
Philadelphia
New York
New Haven
Hartford
Buffalo
Washington, D.C.
Charleston
Richmond
Lexington
Norfolk
Raleigh
Nashville
Knoxville
Memphis
Wilmington
Columbia
Atlanta
Birmingham
Charleston
Jackson
Pensacola
Jacksonville
Tampa
Miami
ATLANTIC OCEAN
GULF OF MEXICO
Caution should be used in interpolating on these generalized maps, particularly in mountainous areas.
100 200 300 400 500 MILES
AREA PROJECTION - STANDARD PARALLELS 29½ AND 45½°
BASED ON PERIOD 1931-60
PUERTO RICO AND VIRGIN ISLANDS
ALEX. HAMILTON FLD.

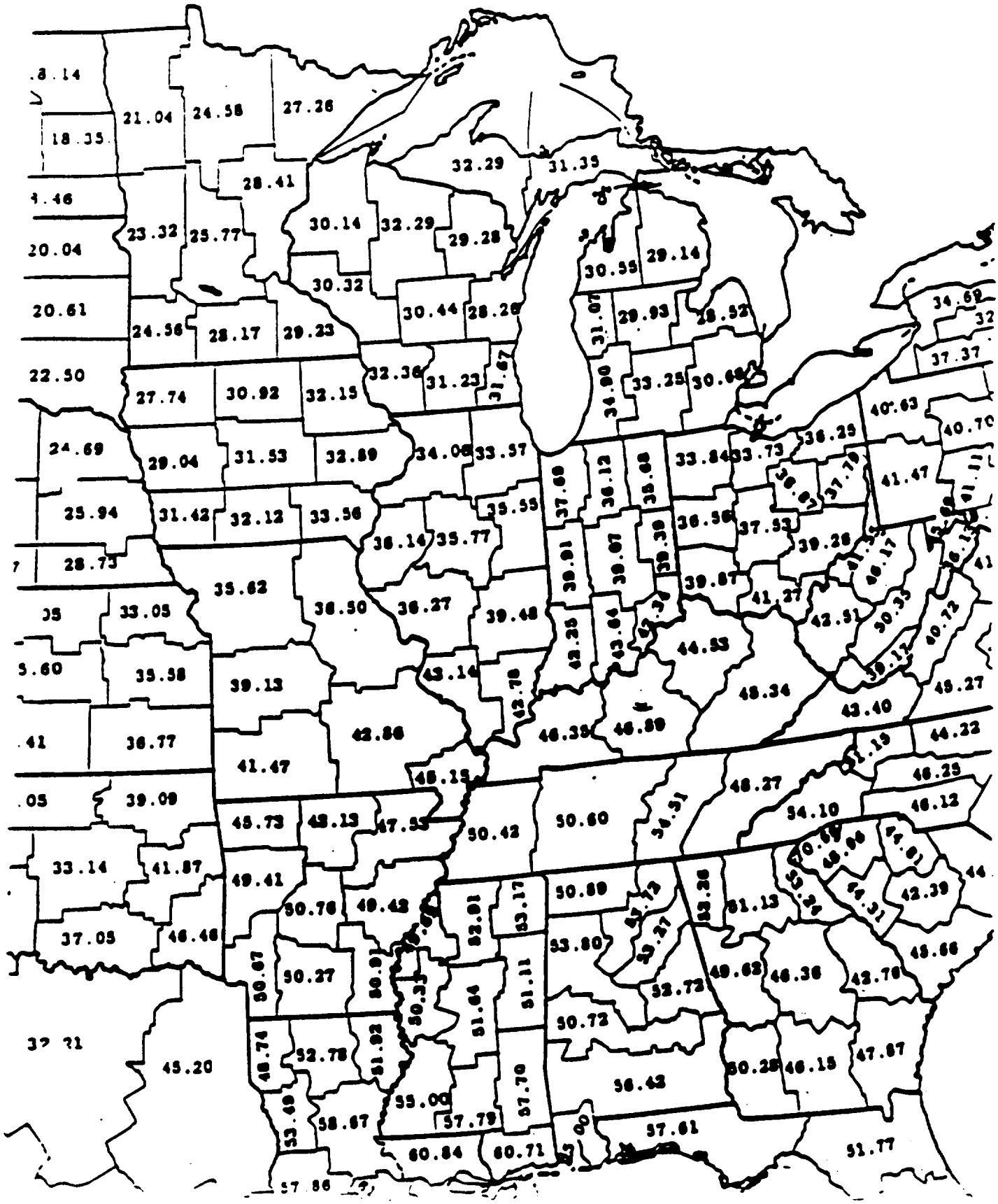
43

LAKE EVAPORATION





ON (inches) BY STATE CLIMATIC DIVISIONS



REFERENCE 30

MENT OF COMMERCE
Secretary

WEATHER BUREAU
F. W. Reichelderfer, Chief

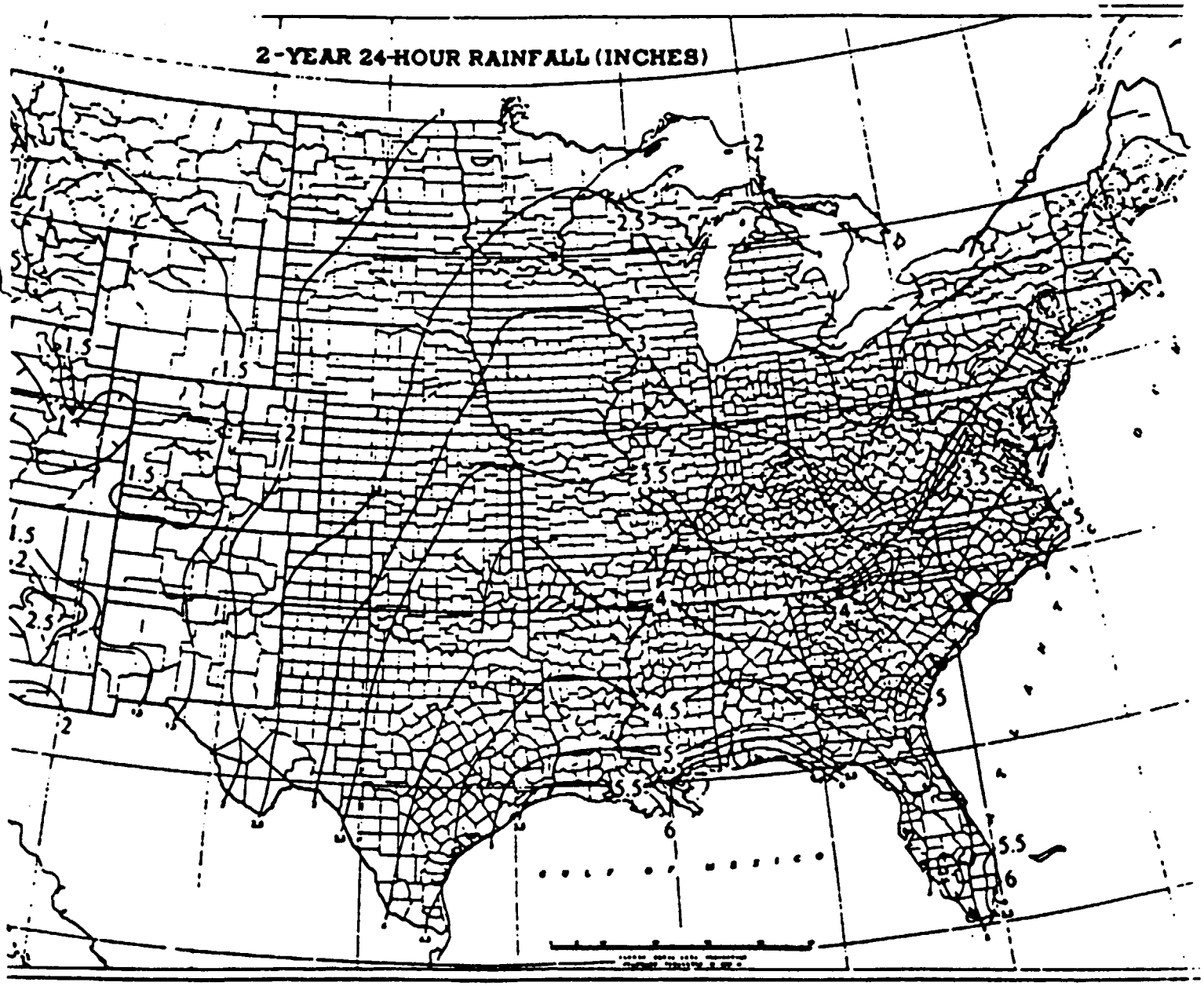
TECHNICAL PAPER NO. 40

RAINFALL FREQUENCY ATLAS OF THE UNITED STATES

for Durations from 30 Minutes to 24 Hours and Return Periods from 1 to 100 Years

Prepared by
DAVID M. HERSHFIELD
Comparative Studies Section, Hydrologic Services Division
for
Engineering Division, Soil Conservation Service
U.S. Department of Agriculture

PROPERTY OF EPA
FIT IV


2-YEAR 24-HOUR RAINFALL (INCHES)
2
2.5
3
1.5
1.5
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1.5
2
2.5
4
4
4.5
5
5
5.5
6
5.5
6
2

20

REFERENCE 31

NUS CORPORATION AND SUBSIDIARIES — **TELE**

CONTROL NO.	DATE: February 8, 1991	TIME: 1405

DISTRIBUTION:

Carrollton Landfill

BETWEEN: Jim Baxley, Manager	OF: Carroll County Water Authority	PHONE: 404-834-6667

AND: A.D. Douglas, NUS Corporation

A. D. Douglas 2/8/91

DISCUSSION:

Mr. Baxley stated water lines running along Highway 166 have been completed. He indicated the county purchases its water from the cities of Carrollton and Bowdon. Some residences use private wells for their source of water.

NUS CORPORATION AND SUBSIDIARIES

CONTROL NO.:	DATE:	TIME:
F4-9011-41	03/07/91	09:45

DISTRIBUTION:
Southwire Company

REFERENCE # 21

BETWEEN:	OF: Georgia DNR	PHONE:
Frank Ellis		(404)846-8448

AND:
Stephany Fine, NUS

DISCUSSION:

Mr. Ellis said that fishing occurs on the Little Tallapoosa River and that he knows of no problems there. Wildlife Ranger, Mr. Baskin, at (404) 832-9719, would have more specific information about the river, such as fish species.

REFERENCE 33

Georgia Department of Natural Resources

Game and Fish Division
Freshwater Wetlands and Heritage Inventory Program
John Bozeman, Program Manager
2117 U.S. Hwy 278 SE
Social Circle, Georgia 30279
(404) 557-2514

JOE TANNER, COMMISSIONER
DAVID WALLER, DIVISION DIRECTOR

March 24, 1992

Mr. Ronald A. Wilde
B & V Waste Science and Technology Corporation
1117 Perimeter Center West
Suite W-212
Atlanta, Georgia 30338

Dear Mr. Wilde:

Enclosed is the information you requested on rare species possibly occurring in Walker, Gordon, Murray, Whitfield and Gilmer Counties, Georgia. For each of these counties you will find a list of all the rare species and important natural communities for which we have records of occurrence. These could therefore occur in the area of interest. For each of the specific 12 topographic quadrangles of interest we have likewise listed those rare elements known to occur in the quadrangle area. The county lists provide the information on which of these are state of federally protected.

The exact location of the occurrences is considered sensitive information due to the potential harm that could be done to these populations by publishing this information. If more detail or additional information is needed, please let me know.

Sincerely,

Charles V. Rabolli

Charles V. Rabolli
Asst. Program Manager

CVR/lg
see enclosures
cc: John Bozeman

TOPOGRAPHIC QUAD

Carrollton	No Element Occurrence
Tunnel Hill	No Element Occurrence

OCCURRENCE RECORDS FOR RARE ELEMENTS IN CARROLL COUNTY

SPECIES/COMMUNITY	COMMON NAME	FEDERAL STATUS	STATE STATUS	GLOBAL RANK	STATE RANK	LAST OBSERVATION
*** CARROLL						
HEXASTYLIS SHUTTLEWORTHII VAR HARPERI	HARPER HEARTLEAF			G4T7	S2	1988-08-11
PLATANTHERA INTEGRILABIA	MONKEY-FACE	C2	PE	G2	S1	1966-08-25
PLATANTHERA INTEGRILABIA	MONKEY-FACE	C2	PE	G2	S1	1988-08-11

i

CBS Records
LATITUDE 33:36:18 LONGITUDE 85: 6:30 1983 POPULATION

KM	0.00-.400	.400-.810	.810-1.60	1.60-3.20	3.20-4.80	4.80-6.40	SECTOR TOTALS
S 1	0	0	0	0	0	0	0
S 2	0	0	0	0	2611	0	2611
S 3	0	0	0	0	0	2023	2023
S 4	0	0	0	2434	1447	1565	5446
S 5	0	0	0	0	3796	2500	6296
S 6	0	0	0	1654	0	0	1654
S 7	0	0	0	0	0	0	0
S 8	0	0	0	0	0	0	0
RING TOTALS	0	0	0	4088	7854	6088	18030

press RETURN to continue
MENU: Geodata Handling Data List procedures
Ente[illegible]ame (in parentheses) ([illegible])
or a command: HELP, HELP option, BACK, CLEAR, EXIT, TUTOR
GEMS> next

[ERR-039]

Type YES to confirm the EXIT command; type NO to restart GEMS
GEMS> yes
$ logout
HTW logged out at 2-APR-1992 11:08:33.23
Itemized resource charges, for this session, follow:

NODE: VAXTM1
ACCT: 9040
PROJ: GEMS0001
USER: HTW
UIC: [000710,000012]
BAUD:

START TIME: 2-APR-1992 11:05:33.16
FINISH TIME: 2-APR-1992 11:08:33.23
BILLING PERIOD:920401
WEEKDAY: THURSDAY
TERMINAL PORT: VTA3524

DESCRIPTION OF CHARGE		QUANTITY	EXPENDITURE
ALL CHARGE LEVELS			
300 baud	(Seconds)	180	0.0000
CPU TIME	(Seconds)	8	0.4444
TOTAL FOR THIS SESSION			$ 0.4444

** Note: This total reflects the charges for this process only, subprocesses created during this session are accounted for separately
Enter selection:

OVERSIZED

DOCUMENT

POOR LEGIBILITY

PORTIONS OF THIS DOCUMENT MAY BE UNREADABLE, DUE TO THE QUALITY OF THE ORIGINAL

APPENDIX B

ANALYTICAL DATA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV
Environmental Services Division
College Station Road, Athens, Ga. 30613

*****MEMORANDUM******

DATE: 02/01/92

SUBJECT: Results of Specified Analysis;
92-0189 CBS RECORDS
CARROLLTON GA
CASE NO: 17582

FROM: Robert W. Knight for
Chief, Laboratory Evaluation/Quality Assurance Section

TO: JOE SLYKERMAN

Attached are the results of analysis of samples collected as part of the subject project.

As a result of the Quality Assurance Review, certain data qualifiers may have been placed on the data. Attached is a DATA QUALIFIER REPORT which explains the reasons that these qualifiers were required.

If you have any questions please contact me.

ATTACHMENT

INORGANIC DATA QUALIFIERS REPORT

Case Number: 17582
Project Number: 92-0189
Site: CBS Records, Carrollton, GA

Element	Flag	Samples Affected	Reason
A. Water			
Cd, Cu, Mn, Ag, V	U	All positives >IDL but <CRDL	Baseline instability
Al, Ba, Ca, Fe, Mg, K, Na, Zn	U	All positives >IDL but <10X contaminant level	Positives in Blanks
Ag	JN	All positives in with Fe concentrations in solution > 56,000 ug/L	Suspected positive interference as noted in the contractor ICS
Pb	J	All	Matrix spike recovery = 31.2% Matrix duplicate RPD = 152.1%
Se	J R	All positives All negatives	Matrix spike recovery = 0%
Tl	J R	All positives All negatives	Matrix spike recovery = 0%
Al	J	All	Matrix duplicate RPD = 23.9%
CN	J	All positives	Matrix spike recovery = 948.3%
CN	J	All	Technical holding time exceeded
Sb	J	MDCE84	% RSD > 20% for ICP multiple exposures
Be	J	MDCE84	% RSD > 20% for ICP multiple exposures
Cr	J	MDCE82	% RSD > 20% for ICP multiple exposures
B. Soil			
Cd, Cu, Mn, Ag, V	U	All positives >IDL but <CRDL	Baseline instability
Al, Ca, Fe, Mg, K, Ma, Zn	U	All positives >IDL but <10X contaminant level	Positives in Blanks
Ag	J	All with Fe concentrations in solution > 95,000 ug/L	Suspected over correction as noted in the contractor ICS
Sb	J R	All positives All negatives	Matrix spike recovery = 24.9%
As	J	All	Matrix spike recovery = 49.1%
Se	J R	All positives All negatives	Matrix spike recovery = 0%
CN	J R	All positives All negatives	Matrix spike recovery = 0%

INORGANIC DATA QUALIFIERS REPORT (continued)

Case Number: 17582
Project Number: 92-0189
Site: CBS Records, Carrollton, GA

Element	Flag	Samples Affected	Reason
Be	J	MDCE80 and 86	% RSD > 20% for ICP multiple exposures
Ni	J	MDCE78	% RSD > 20% for ICP multiple exposures

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV
Environmental Services Division
College Station Road, Athens, Ga. 30613

*****MEMORANDUM******

DATE: 02/01/92

SUBJECT: Results of Metals Analysis;
92-0189 CBS RECORDS
CARROLLTON GA
CASE NO: 17582

FROM: Robert W. Knight
Chief, Laboratory Evaluation/Quality Assurance Section

TO: JOE SLYKERMAN

Attached are the results of analysis of samples collected as part of the subject project.

As a result of the Quality Assurance Review, certain data qualifiers may have been placed on the data. Attached is a DATA QUALIFIER REPORT which explains the reasons that these qualifiers were required.

If you have any questions please contact me.

ATTACHMENT

INORGANIC DATA QUALIFIERS REPORT

Case Number: 17582
Project Number: 92-0189
Site: CBS Records, Carrollton, GA

Element	Flag	Samples Affected	Reason
A. Water			
Cd, Cu, Mn, Ag, V	U	All positives >IDL but <CRDL	Baseline instability
Al, Ba, Ca, Fe, Mg, K, Na, Zn	U	All positives >IDL but <10X contaminant level	Positives in Blanks
Ag	JN	All positives in with Fe concentrations in solution > 56,000 ug/L	Suspected positive interference as noted in the contractor ICS
Pb	J	All	Matrix spike recovery = 31.2% Matrix duplicate RPD = 152.1%
Se	J R	All positives All negatives	Matrix spike recovery = 0%
Tl	J R	All positives All negatives	Matrix spike recovery = 0%
Al	J	All	Matrix duplicate RPD = 23.9%
CN	J	All positives	Matrix spike recovery = 948.3%
CN	J	All	Technical holding time exceeded
Sb	J	MDCE84	% RSD > 20% for ICP multiple exposures
Be	J	MDCE84	% RSD > 20% for ICP multiple exposures
Cr	J	MDCE82	% RSD > 20% for ICP multiple exposures
B. Soil			
Cd, Cu, Mn, Ag, V	U	All positives >IDL but <CRDL	Baseline instability
Al, Ca, Fe, Mg, K, Ma, Zn	U	All positives >IDL but <10X contaminant level	Positives in Blanks
Ag	J	All with Fe concentrations in solution > 95,000 ug/L	Suspected over correction as noted in the contractor ICS
Sb	J R	All positives All negatives	Matrix spike recovery = 24.9%
As	J	All	Matrix spike recovery = 49.1%
Se	J R	All positives All negatives	Matrix spike recovery = 0%
CN	J R	All positives All negatives	Matrix spike recovery = 0%

INORGANIC DATA QUALIFIERS REPORT (continued)

Case Number: 17582
Project Number: 92-0189
Site: CBS Records, Carrollton, GA

Element	Flag	Samples Affected	Reason
Be	J	MDCE80 and 86	% RSD > 20% for ICP multiple exposures
Ni	J	MDCE78	% RSD > 20% for ICP multiple exposures

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV
Environmental Services Division
College Station Road, Athens, Ga. 30613

*****MEMORANDUM******

DATE: 02/19/92

SUBJECT: Results of Purgeable Organic Analysis;
92-0189 CBS RECORDS
CARROLLTON GA
CASE NO: 17582

FROM: Robert W. Knight
Chief, Laboratory Evaluation/Quality Assurance Section

TO: JOE SLYKERMAN

Attached are the results of analysis of samples collected as part of the subject project.

As a result of the Quality Assurance Review, certain data qualifiers may have been placed on the data. Attached is a DATA QUALIFIER REPORT which explains the reasons that these qualifiers were required.

If you have any questions please contact me.

ATTACHMENT

ORGANIC DATA QUALIFIER REPORT

Case Number 17582 Project Number 92-0189 SAS Number
Site ID. CBS Records, Carrollton, GA.

Affected Samples	Compound or Fraction	Flag Used	Reason
Volatiles			
64309,64310	tetrachloroethene	J	<quantitation limit
Extractables			
all soil samples	acenaphthylene	R	unacceptable blind spike recovery
64311,64315	all other extractables	J	excessive holding time
all soil samples	4-methylphenol	J	low blind spike recovery
	2,4,6-trichlorophenol	J	low blind spike recovery
	benzo(g,h,i)perylene	J	low blind spike recovery
all water samples	pentachlorophenol	R	unacceptable blind spike recovery
	chrysene	R	unacceptable blind spike recovery
	benzo(g,h,i)perylene	R	unacceptable blind spike recovery
64306	all positives	J	<quantitation limit
Pesticides			
all soil samples	aroclor 1221	R	unacceptable standards
all water samples	aroclors 1221,1232	R	unacceptable standards
64306	dieldrin	J	<quantitation limit

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV
Environmental Services Division
College Station Road, Athens, Ga. 30613

*****MEMORANDUM******

DATE: 02/19/92

SUBJECT: Results of Extractable Organic Analysis;
92-0189 CBS RECORDS
CARROLLTON GA
CASE NO: 17582

FROM: Robert W. Knight
Chief, Laboratory Evaluation/Quality Assurance Section

TO: JOE SLYKERMAN

Attached are the results of analysis of samples collected as part of the subject project.

As a result of the Quality Assurance Review, certain data qualifiers may have been placed on the data. Attached is a DATA QUALIFIER REPORT which explains the reasons that these qualifiers were required.

If you have any questions please contact me.

ATTACHMENT

ORGANIC DATA QUALIFIER REPORT

Case Number 17582 Project Number 92-0189 SAS Number
Site ID. CBS Records, Carrollton, GA.

Affected Samples	Compound or Fraction	Flag Used	Reason
Volatiles			
64309,64310	tetrachloroethene	J	<quantitation limit
Extractables			
all soil samples	acenaphthylene	R	unacceptable blind spike recovery
64311,64315	all other extractables	J	excessive holding time
all soil samples	4-methylphenol	J	low blind spike recovery
	2,4,6-trichlorophenol	J	low blind spike recovery
	benzo(g,h,i)perylene	J	low blind spike recovery
all water samples	pentachlorophenol	R	unacceptable blind spike recovery
	chrysene	R	unacceptable blind spike recovery
	benzo(g,h,i)perylene	R	unacceptable blind spike recovery
64306	all positives	J	<quantitation limit
Pesticides			
all soil samples	aroclor 1221	R	unacceptable standards
all water samples	aroclors 1221,1232	R	unacceptable standards
64306	dieldrin	J	<quantitation limit

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV
Environmental Services Division
College Station Road, Athens, Ga. 30613

*****MEMORANDUM******

DATE: 02/19/92

SUBJECT: Results of Pesticide/PCB Analysis;
92-0189 CBS RECORDS
CARROLLTON GA
CASE NO: 17582

FROM: Robert W. Knight
Chief, Laboratory Evaluation/Quality Assurance Section

TO: JOE SLYKERMAN

Attached are the results of analysis of samples collected as part of the subject project.

As a result of the Quality Assurance Review, certain data qualifiers may have been placed on the data. Attached is a DATA QUALIFIER REPORT which explains the reasons that these qualifiers were required.

If you have any questions please contact me.

ATTACHMENT

ORGANIC DATA QUALIFIER REPORT

Case Number 17582 Project Number 92-0189 SAS Number
Site ID. CBS Records, Carrollton, GA.

Affected Samples	Compound or Fraction	Flag Used	Reason
Volatiles			
64309,64310	tetrachloroethene	J	<quantitation limit
Extractables			
all soil samples	acenaphthylene	R	unacceptable blind spike recovery
64311,64315	all other extractables	J	excessive holding time
all soil samples	4-methylphenol	J	low blind spike recovery
	2,4,6-trichlorophenol	J	low blind spike recovery
	benzo(g,h,i)perylene	J	low blind spike recovery
all water samples	pentachlorophenol	R	unacceptable blind spike recovery
	chrysene	R	unacceptable blind spike recovery
	benzo(g,h,i)perylene	R	unacceptable blind spike recovery
64306	all positives	J	<quantitation limit
Pesticides			
all soil samples	aroclor 1221	R	unacceptable standards
all water samples	aroclors 1221,1232	R	unacceptable standards
64306	dieldrin	J	<quantitation limit

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64325 SAMPLE TYPE: GROUNDWA
SOURCE: CBS RECORDS
STATION ID: TB-01

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/16/91 1030 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE77

UG/L	ANALYTICAL RESULTS
10U	CHLOROMETHANE
10U	BROMOMETHANE
10U	VINYL CHLORIDE
10U	CHLOROETHANE
30U	METHYLENE CHLORIDE
10U	ACETONE
10U	CARBON DISULFIDE
10U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
10U	1,1-DICHLOROETHANE
10U	1,2-DICHLOROETHENE (TOTAL)
10U	CHLOROFORM
10U	1,2-DICHLOROETHANE
10U	METHYL ETHYL KETONE
10U	1,1,1-TRICHLOROETHANE
10U	CARBON TETRACHLORIDE
10U	BROMODICHLOROMETHANE

UG/L	ANALYTICAL RESULTS
10U	1,2-DICHLOROPROPANE
10U	CIS-1,3-DICHLOROPROPENE
10U	TRICHLOROETHENE(TRICHLOROETHYLENE)
10U	DIBROMOCHLOROMETHANE
10U	1,1,2-TRICHLOROETHANE
10U	BENZENE
10U	TRANS-1,3-DICHLOROPROPENE
10U	BROMOFORM
10U	METHYL ISOBUTYL KETONE
10U	METHYL BUTYL KETONE
10U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
10U	1,1,2,2-TETRACHLOROETHANE
10U	TOLUENE
10U	CHLOROBENZENE
10U	ETHYL BENZENE
10U	STYRENE
10U	TOTAL XYLENES

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64325 SAMPLE TYPE: GROUNDWA
SOURCE: CBS RECORDS
STATION ID: TB-01

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/16/91 1030 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE77

UG/L	ANALYTICAL RESULTS
10U	PHENOL
10U	BIS(2-CHLOROETHYL) ETHER
10U	2-CHLOROPHENOL
10U	1,3-DICHLOROBENZENE
10U	1,4-DICHLOROBENZENE
10U	1,2-DICHLOROBENZENE
10U	2-METHYLPHENOL
10U	2,2'-CHLOROISOPROPYLETHER
10U	(3-AND/OR 4-)METHYLPHENOL
10U	N-NITROSODI-N-PROPYLAMINE
10U	HEXACHLOROETHANE
10U	NITROBENZENE
10U	ISOPHORONE
10U	2-NITROPHENOL
10U	2,4-DIMETHYLPHENOL
10U	BIS(2-CHLOROETHOXY) METHANE
10U	2,4-DICHLOROPHENOL
10U	1,2,4-TRICHLOROBENZENE
10U	NAPHTHALENE
10U	4-CHLOROANILINE
10U	HEXACHLOROBUTADIENE
10U	4-CHLORO-3-METHYLPHENOL
10U	2-METHYLNAPHTHALENE
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)
10U	2,4,6-TRICHLOROPHENOL
25U	2,4,5-TRICHLOROPHENOL
10U	2-CHLORONAPHTHALENE
25U	2-NITROANILINE
10U	DIMETHYL PHTHALATE
10U	ACENAPHTHYLENE
10U	2,6-DINITROTOLUENE

UG/L	ANALYTICAL RESULTS
25U	3-NITROANILINE
10U	ACENAPHTHENE
25U	2,4-DINITROPHENOL
25U	4-NITROPHENOL
10U	DIBENZOFURAN
10U	2,4-DINITROTOLUENE
10U	DIETHYL PHTHALATE
10U	4-CHLOROPHENYL PHENYL ETHER
10U	FLUORENE
25U	4-NITROANILINE
25U	2-METHYL-4,6-DINITROPHENOL
10U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10U	4-BROMOPHENYL PHENYL ETHER
10U	HEXACHLOROBENZENE (HCB)
25UR	PENTACHLOROPHENOL
10U	PHENANTHRENE
10U	ANTHRACENE
10U	CARBAZOLE
10U	DI-N-BUTYLPHTHALATE
10U	FLUORANTHENE
10U	PYRENE
10U	BENZYL BUTYL PHTHALATE
10U	3,3'-DICHLOROBENZIDINE
10U	BENZO(A)ANTHRACENE
10UR	CHRYSENE
10U	BIS(2-ETHYLHEXYL) PHTHALATE
10U	DI-N-OCTYLPHTHALATE
10U	BENZO(B AND/OR K)FLUORANTHENE
10U	BENZO-A-PYRENE
10U	INDENO (1,2,3-CD) PYRENE
10U	DIBENZO(A,H)ANTHRACENE
10UR	BENZO(GHI)PERYLENE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

*** ***
** PROJECT NO. 92-0189 SAMPLE NO. 64325 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: J HATCHER **
** SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA **
** STATION ID: TB-01 COLLECTION START: 12/16/91 1030 STOP: 00/00/00 **
** CASE.NO.: 17582 SAS NO.: D. NO.: CE77 MD NO: **
** **
*** ***

ANALYTICAL RESULTS UG/L

20J 2 UNIDENTIFIED COMPOUNDS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64325 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: J HATCHER
SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA
STATION ID: TB-01 COLLECTION START: 12/16/91 1030 STOP: 00/00/00
CASE NUMBER: 17582 SAS NUMBER: D. NUMBER: CE77

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
0.050U	ALPHA-BHC	0.50U	METHOXYCHLOR
0.050U	BETA-BHC	0.10U	ENDRIN KETONE
0.050U	DELTA-BHC	0.10U	ENDRIN ALDEHYDE
0.050U	GAMMA-BHC (LINDANE)		CHLORDANE (TECH. MIXTURE) /1
0.050U	HEPTACHLOR	0.050U	GAMMA-CHLORDANE /2
0.050U	ALDRIN	0.050U	ALPHA-CHLORDANE /2
0.050U	HEPTACHLOR EPOXIDE	5.0U	TOXAPHENE
0.050U	ENDOSULFAN I (ALPHA)	1.0U	PCB-1016 (AROCLOR 1016)
0.10U	DIELDRIN	2.0UR	PCB-1221 (AROCLOR 1221)
0.10U	4,4'-DDE (P,P'-DDE)	1.0UR	PCB-1232 (AROCLOR 1232)
0.10U	ENDRIN	1.0U	PCB-1242 (AROCLOR 1242)
0.10U	ENDOSULFAN II (BETA)	1.0U	PCB-1248 (AROCLOR 1248)
0.10U	4,4'-DDD (P,P'-DDD)	1.0U	PCB-1254 (AROCLOR 1254)
0.10U	ENDOSULFAN SULFATE	1.0U	PCB-1260 (AROCLOR 1260)
0.10U	4,4'-DDT (P,P'-DDT)		

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64308 SAMPLE TYPE: GROUNDA
SOURCE: CBS RECORDS
STATION ID: MW-01

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1005 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE82

UG/L	ANALYTICAL RESULTS
10U	CHLOROMETHANE
10U	BROMOMETHANE
10U	VINYL CHLORIDE
10U	CHLOROETHANE
20U	METHYLENE CHLORIDE
10U	ACETONE
43	CARBON DISULFIDE
10U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
10U	1,1-DICHLOROETHANE
10U	1,2-DICHLOROETHENE (TOTAL)
10U	CHLOROFORM
10U	1,2-DICHLOROETHANE
10U	METHYL ETHYL KETONE
10U	1,1,1-TRICHLOROETHANE
10U	CARBON TETRACHLORIDE
10U	BROMODICHLOROMETHANE

UG/L	ANALYTICAL RESULTS
10U	1,2-DICHLOROPROPANE
10U	CIS-1,3-DICHLOROPROPENE
10U	TRICHLOROETHENE(TRICHLOROETHYLENE)
10U	DIBROMOCHLOROMETHANE
10U	1,1,2-TRICHLOROETHANE
10U	BENZENE
10U	TRANS-1,3-DICHLOROPROPENE
10U	BROMOFORM
10U	METHYL ISOBUTYL KETONE
10U	METHYL BUTYL KETONE
10U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
10U	1,1,2,2-TETRACHLOROETHANE
10U	TOLUENE
10U	CHLOROBENZENE
10U	ETHYL BENZENE
10U	STYRENE
10U	TOTAL XYLENES

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

EXTRACTABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64308 SAMPLE TYPE: GROUNDA
SOURCE: CBS RECORDS
STATION ID: MW-01

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1005 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE82

UG/L	ANALYTICAL RESULTS
10U	PHENOL
10U	BIS(2-CHLOROETHYL) ETHER
10U	2-CHLOROPHENOL
10U	1,3-DICHLOROBENZENE
10U	1,4-DICHLOROBENZENE
10U	1,2-DICHLOROBENZENE
10U	2-METHYLPHENOL
10U	2,2'-CHLOROISOPROPYLETHER
10U	(3-AND/OR 4-)METHYLPHENOL
10U	N-NITROSODI-N-PROPYLAMINE
10U	HEXACHLOROETHANE
10U	NITROBENZENE
10U	ISOPHORONE
10U	2-NITROPHENOL
10U	2,4-DIMETHYLPHENOL
10U	BIS(2-CHLOROETHOXY) METHANE
10U	2,4-DICHLOROPHENOL
10U	1,2,4-TRICHLOROBENZENE
10U	NAPHTHALENE
10U	4-CHLOROANILINE
10U	HEXACHLOROBUTADIENE
10U	4-CHLORO-3-METHYLPHENOL
10U	2-METHYLNAPHTHALENE
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)
10U	2,4,6-TRICHLOROPHENOL
25U	2,4,5-TRICHLOROPHENOL
10U	2-CHLORONAPHTHALENE
25U	2-NITROANILINE
10U	DIMETHYL PHTHALATE
10U	ACENAPHTHYLENE
10U	2,6-DINITROTOLUENE

UG/L	ANALYTICAL RESULTS
25U	3-NITROANILINE
10U	ACENAPHTHENE
25U	2,4-DINITROPHENOL
25U	4-NITROPHENOL
10U	DIBENZOFURAN
10U	2,4-DINITROTOLUENE
10U	DIETHYL PHTHALATE
10U	4-CHLOROPHENYL PHENYL ETHER
10U	FLUORENE
25U	4-NITROANILINE
25U	2-METHYL-4,6-DINITROPHENOL
10U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10U	4-BROMOPHENYL PHENYL ETHER
10U	HEXACHLOROBENZENE (HCB)
25UR	PENTACHLOROPHENOL
10U	PHENANTHRENE
10U	ANTHRACENE
10U	CARBAZOLE
10U	DI-N-BUTYLPHTHALATE
10U	FLUORANTHENE
10U	PYRENE
10U	BENZYL BUTYL PHTHALATE
10U	3,3'-DICHLOROBENZIDINE
10U	BENZO(A)ANTHRACENE
10UR	CHRYSENE
10U	BIS(2-ETHYLHEXYL) PHTHALATE
10U	DI-N-OCTYLPHTHALATE
10U	BENZO(B AND/OR K)FLUORANTHENE
10U	BENZO-A-PYRENE
10U	INDENO (1,2,3-CD) PYRENE
10U	DIBENZO(A,H)ANTHRACENE
10UR	BENZO(GHI)PERYLENE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

*** ***

** PROJECT NO. 92-0189 SAMPLE NO. 64308 SAMPLE TYPE: GROUNDA PROG ELEM: NSF COLLECTED BY: J HATCHER **
** SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA **
** STATION ID: MW-01 COLLECTION START: 12/17/91 1005 STOP: 00/00/00 **
** CASE.NO.: 17582 SAS NO.: D. NO.: CE82 MD NO: CE82 **
** **

*** ***

ANALYTICAL RESULTS UG/L

200J 4 UNIDENTIFIED COMPOUNDS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 92-0189   SAMPLE NO. 64308   SAMPLE TYPE: GROUNDA   PROG ELEM: NSF   COLLECTED BY: J HATCHER
SOURCE: CBS RECORDS   CITY: CARROLLTON   ST: GA
STATION ID: MW-01   COLLECTION START: 12/17/91 1005   STOP: 00/00/00
CASE NUMBER: 17582   SAS NUMBER: D. NUMBER: CE82

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
0.050U	ALPHA-BHC	0.50U	METHOXYCHLOR
0.050U	BETA-BHC	0.10U	ENDRIN KETONE
0.050U	DELTA-BHC	0.10U	ENDRIN ALDEHYDE
0.050U	GAMMA-BHC (LINDANE)		CHLORDANE (TECH. MIXTURE) /1
0.050U	HEPTACHLOR	0.050U	GAMMA-CHLORDANE /2
0.050U	ALDRIN	0.050U	ALPHA-CHLORDANE /2
0.050U	HEPTACHLOR EPOXIDE	5.0U	TOXAPHENE
0.050U	ENDOSULFAN I (ALPHA)	1.0U	PCB-1016 (AROCLOR 1016)
0.10U	DIELDRIN	2.0UR	PCB-1221 (AROCLOR 1221)
0.10U	4,4'-DDE (P,P'-DDE)	1.0UR	PCB-1232 (AROCLOR 1232)
0.10U	ENDRIN	1.0U	PCB-1242 (AROCLOR 1242)
0.10U	ENDOSULFAN II (BETA)	1.0U	PCB-1248 (AROCLOR 1248)
0.10U	4,4'-DDD (P,P'-DDD)	1.0U	PCB-1254 (AROCLOR 1254)
0.10U	ENDOSULFAN SULFATE	1.0U	PCB-1260 (AROCLOR 1260)
0.10U	4,4'-DDT (P,P'-DDT)		

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE   *NA-NOT ANALYZED   *NAI-INTERFERENCES   *J-ESTIMATED VALUE   *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN   *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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*C-CONFIRMED BY GCMS   1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64309 SAMPLE TYPE: GROUNDA
SOURCE: CBS RECORDS
STATION ID: MW-02

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1110 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE83

UG/L	ANALYTICAL RESULTS
10U	CHLOROMETHANE
10U	BROMOMETHANE
10U	VINYL CHLORIDE
10U	CHLOROETHANE
20U	METHYLENE CHLORIDE
10U	ACETONE
10U	CARBON DISULFIDE
10U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
10U	1,1-DICHLOROETHANE
10U	1,2-DICHLOROETHENE (TOTAL)
10U	CHLOROFORM
10U	1,2-DICHLOROETHANE
10U	METHYL ETHYL KETONE
10U	1,1,1-TRICHLOROETHANE
10U	CARBON TETRACHLORIDE
10U	BROMODICHLOROMETHANE

UG/L	ANALYTICAL RESULTS
10U	1,2-DICHLOROPROPANE
10U	CIS-1,3-DICHLOROPROPENE
10U	TRICHLOROETHENE(TRICHLOROETHYLENE)
10U	DIBROMOCHLOROMETHANE
10U	1,1,2-TRICHLOROETHANE
10U	BENZENE
10U	TRANS-1,3-DICHLOROPROPENE
10U	BROMOFORM
10U	METHYL ISOBUTYL KETONE
10U	METHYL BUTYL KETONE
2J	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
10U	1,1,2,2-TETRACHLOROETHANE
10U	TOLUENE
10U	CHLOROBENZENE
10U	ETHYL BENZENE
10U	STYRENE
10U	TOTAL XYLENES

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

EXTRACTABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64309 SAMPLE TYPE: GROUNDA
SOURCE: CBS RECORDS
STATION ID: MW-02

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1110 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE83

UG/L	ANALYTICAL RESULTS
10U	PHENOL
10U	BIS(2-CHLOROETHYL) ETHER
10U	2-CHLOROPHENOL
10U	1,3-DICHLOROBENZENE
10U	1,4-DICHLOROBENZENE
10U	1,2-DICHLOROBENZENE
10U	2-METHYLPHENOL
10U	2,2'-CHLOROISOPROPYLETHER
10U	(3-AND/OR 4-)METHYLPHENOL
10U	N-NITROSODI-N-PROPYLAMINE
10U	HEXACHLOROETHANE
10U	NITROBENZENE
10U	ISOPHORONE
10U	2-NITROPHENOL
10U	2,4-DIMETHYLPHENOL
10U	BIS(2-CHLOROETHOXY) METHANE
10U	2,4-DICHLOROPHENOL
10U	1,2,4-TRICHLOROBENZENE
10U	NAPHTHALENE
10U	4-CHLOROANILINE
10U	HEXACHLOROBUTADIENE
10U	4-CHLORO-3-METHYLPHENOL
10U	2-METHYLNAPHTHALENE
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)
10U	2,4,6-TRICHLOROPHENOL
25U	2,4,5-TRICHLOROPHENOL
10U	2-CHLORONAPHTHALENE
25U	2-NITROANILINE
10U	DIMETHYL PHTHALATE
10U	ACENAPHTHYLENE
10U	2,6-DINITROTOLUENE

UG/L	ANALYTICAL RESULTS
25U	3-NITROANILINE
10U	ACENAPHTHENE
25U	2,4-DINITROPHENOL
25U	4-NITROPHENOL
10U	DIBENZOFURAN
10U	2,4-DINITROTOLUENE
10U	DIETHYL PHTHALATE
10U	4-CHLOROPHENYL PHENYL ETHER
10U	FLUORENE
25U	4-NITROANILINE
25U	2-METHYL-4,6-DINITROPHENOL
10U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10U	4-BROMOPHENYL PHENYL ETHER
10U	HEXACHLOROBENZENE (HCB)
25UR	PENTACHLOROPHENOL
10U	PHENANTHRENE
10U	ANTHRACENE
10U	CARBAZOLE
10U	DI-N-BUTYLPHTHALATE
10U	FLUORANTHENE
10U	PYRENE
10U	BENZYL BUTYL PHTHALATE
10U	3,3'-DICHLOROBENZIDINE
10U	BENZO(A)ANTHRACENE
10UR	CHRYSENE
10U	BIS(2-ETHYLHEXYL) PHTHALATE
10U	DI-N-OCTYLPHTHALATE
10U	BENZO(B AND/OR K)FLUORANTHENE
10U	BENZO-A-PYRENE
10U	INDENO (1,2,3-CD) PYRENE
10U	DIBENZO(A,H)ANTHRACENE
10UR	BENZO(GHI)PERYLENE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64309 SAMPLE TYPE: GROUNDA PROG ELEM: NSF COLLECTED BY: J HATCHER
SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA
STATION ID: MW-02 COLLECTION START: 12/17/91 1110 STOP: 00/00/00
CASE.NO.: 17582 SAS NO.: D. NO.: CE83 MD NO: CE83

ANALYTICAL RESULTS UG/L

100J 3 UNIDENTIFIED COMPOUNDS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64309 SAMPLE TYPE: GROUNDA
SOURCE: CBS RECORDS
STATION ID: MW-02
CASE NUMBER: 17582 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1110 STOP: 00/00/00
D. NUMBER: CE83

UG/L	ANALYTICAL RESULTS
0.050U	ALPHA-BHC
0.050U	BETA-BHC
0.050U	DELTA-BHC
0.050U	GAMMA-BHC (LINDANE)
0.050U	HEPTACHLOR
0.050U	ALDRIN
0.050U	HEPTACHLOR EPOXIDE
0.050U	ENDOSULFAN I (ALPHA)
0.10U	DIELDRIN
0.10U	4,4'-DDE (P,P'-DDE)
0.10U	ENDRIN
0.10U	ENDOSULFAN II (BETA)
0.10U	4,4'-DDD (P,P'-DDD)
0.10U	ENDOSULFAN SULFATE
0.10U	4,4'-DDT (P,P'-DDT)

UG/L	ANALYTICAL RESULTS
0.50U	METHOXYCHLOR
0.10U	ENDRIN KETONE
0.10U	ENDRIN ALDEHYDE
	CHLORDANE (TECH. MIXTURE) /1
0.050U	GAMMA-CHLORDANE /2
0.050U	ALPHA-CHLORDANE /2
5.0U	TOXAPHENE
1.0U	PCB-1016 (AROCLOR 1016)
2.0UR	PCB-1221 (AROCLOR 1221)
1.0UR	PCB-1232 (AROCLOR 1232)
1.0U	PCB-1242 (AROCLOR 1242)
1.0U	PCB-1248 (AROCLOR 1248)
1.0U	PCB-1254 (AROCLOR 1254)
1.0U	PCB-1260 (AROCLOR 1260)

REMARKS

REMARKS

FOOTNOTES
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*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64310 SAMPLE TYPE: GROUNDA
SOURCE: CBS RECORDS
STATION ID: MW-03

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1210 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE84

UG/L	ANALYTICAL RESULTS
10U	CHLOROMETHANE
10U	BROMOMETHANE
10U	VINYL CHLORIDE
10U	CHLOROETHANE
20U	METHYLENE CHLORIDE
10U	ACETONE
10U	CARBON DISULFIDE
10U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
10U	1,1-DICHLOROETHANE
10U	1,2-DICHLOROETHENE (TOTAL)
10U	CHLOROFORM
10U	1,2-DICHLOROETHANE
10U	METHYL ETHYL KETONE
10U	1,1,1-TRICHLOROETHANE
10U	CARBON TETRACHLORIDE
10U	BROMODICHLOROMETHANE

UG/L	ANALYTICAL RESULTS
10U	1,2-DICHLOROPROPANE
10U	CIS-1,3-DICHLOROPROPENE
10U	TRICHLOROETHENE(TRICHLOROETHYLENE)
10U	DIBROMOCHLOROMETHANE
10U	1,1,2-TRICHLOROETHANE
10U	BENZENE
10U	TRANS-1,3-DICHLOROPROPENE
10U	BROMOFORM
10U	METHYL ISOBUTYL KETONE
10U	METHYL BUTYL KETONE
3J	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
10U	1,1,2,2-TETRACHLOROETHANE
10U	TOLUENE
10U	CHLOROBENZENE
10U	ETHYL BENZENE
10U	STYRENE
10U	TOTAL XYLENES

REMARKS

REMARKS

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64310 SAMPLE TYPE: GROUNDA
SOURCE: CBS RECORDS
STATION ID: MW-03

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1210 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE84

UG/L	ANALYTICAL RESULTS
10U	PHENOL
10U	BIS(2-CHLOROETHYL) ETHER
10U	2-CHLOROPHENOL
10U	1,3-DICHLOROBENZENE
10U	1,4-DICHLOROBENZENE
10U	1,2-DICHLOROBENZENE
10U	2-METHYLPHENOL
10U	2,2'-CHLOROISOPROPYLETHER
10U	(3-AND/OR 4-)METHYLPHENOL
10U	N-NITROSODI-N-PROPYLAMINE
10U	HEXACHLOROETHANE
10U	NITROBENZENE
10U	ISOPHORONE
10U	2-NITROPHENOL
10U	2,4-DIMETHYLPHENOL
10U	BIS(2-CHLOROETHOXY) METHANE
10U	2,4-DICHLOROPHENOL
10U	1,2,4-TRICHLOROBENZENE
10U	NAPHTHALENE
10U	4-CHLOROANILINE
10U	HEXACHLOROBUTADIENE
10U	4-CHLORO-3-METHYLPHENOL
10U	2-METHYLNAPHTHALENE
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)
10U	2,4,6-TRICHLOROPHENOL
25U	2,4,5-TRICHLOROPHENOL
10U	2-CHLORONAPHTHALENE
25U	2-NITROANILINE
10U	DIMETHYL PHTHALATE
10U	ACENAPHTHYLENE
10U	2,6-DINITROTOLUENE

UG/L	ANALYTICAL RESULTS
25U	3-NITROANILINE
10U	ACENAPHTHENE
25U	2,4-DINITROPHENOL
25U	4-NITROPHENOL
10U	DIBENZOFURAN
10U	2,4-DINITROTOLUENE
10U	DIETHYL PHTHALATE
10U	4-CHLOROPHENYL PHENYL ETHER
10U	FLUORENE
25U	4-NITROANILINE
25U	2-METHYL-4,6-DINITROPHENOL
10U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10U	4-BROMOPHENYL PHENYL ETHER
10U	HEXACHLOROBENZENE (HCB)
25UR	PENTACHLOROPHENOL
10U	PHENANTHRENE
10U	ANTHRACENE
10U	CARBAZOLE
10U	DI-N-BUTYLPHTHALATE
10U	FLUORANTHENE
10U	PYRENE
10U	BENZYL BUTYL PHTHALATE
10U	3,3'-DICHLOROBENZIDINE
10U	BENZO(A)ANTHRACENE
10UR	CHRYSENE
10U	BIS(2-ETHYLHEXYL) PHTHALATE
10U	DI-N-OCTYLPHTHALATE
10U	BENZO(B AND/OR K)FLUORANTHENE
10U	BENZO-A-PYRENE
10U	INDENO (1,2,3-CD) PYRENE
10U	DIBENZO(A,H)ANTHRACENE
10UR	BENZO(GHI)PERYLENE

REMARKS

REMARKS

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

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**   PROJECT NO. 92-0189   SAMPLE NO. 64310  SAMPLE TYPE: GROUNDA     PROG ELEM: NSF   COLLECTED BY: J HATCHER                                **
**   SOURCE: CBS RECORDS                                             CITY: CARROLLTON            ST: GA                                   **
**   STATION ID: MW-03                                               COLLECTION START: 12/17/91  1210   STOP: 00/00/00                    **
**   CASE.NO.: 17582          SAS NO.:                               D. NO.: CE84               MD NO: CE84                              **
**                                                                                                                                          **
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ANALYTICAL RESULTS UG/L

300J 5 UNIDENTIFIED COMPOUNDS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64310 SAMPLE TYPE: GROUNDA
SOURCE: CBS RECORDS
STATION ID: MW-03
CASE NUMBER: 17582 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1210 STOP: 00/00/00
D. NUMBER: CE84

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
0.050U	ALPHA-BHC	0.50U	METHOXYCHLOR
0.050U	BETA-BHC	0.10U	ENDRIN KETONE
0.050U	DELTA-BHC	0.10U	ENDRIN ALDEHYDE
0.050U	GAMMA-BHC (LINDANE)		CHLORDANE (TECH. MIXTURE) /1
0.050U	HEPTACHLOR	0.050U	GAMMA-CHLORDANE /2
0.050U	ALDRIN	0.050U	ALPHA-CHLORDANE /2
0.050U	HEPTACHLOR EPOXIDE	5.0U	TOXAPHENE
0.050U	ENDOSULFAN I (ALPHA)	1.0U	PCB-1016 (AROCLOR 1016)
0.10U	DIELDRIN	2.0UR	PCB-1221 (AROCLOR 1221)
0.10U	4,4'-DDE (P,P'-DDE)	1.0UR	PCB-1232 (AROCLOR 1232)
0.10U	ENDRIN	1.0U	PCB-1242 (AROCLOR 1242)
0.10U	ENDOSULFAN II (BETA)	1.0U	PCB-1248 (AROCLOR 1248)
0.10U	4,4'-DDD (P,P'-DDD)	1.0U	PCB-1254 (AROCLOR 1254)
0.10U	ENDOSULFAN SULFATE	1.0U	PCB-1260 (AROCLOR 1260)
0.10U	4,4'-DDT (P,P'-DDT)		

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64307 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SD-01

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 0915 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE81

UG/KG	ANALYTICAL RESULTS
16U	CHLOROMETHANE
16U	BROMOMETHANE
16U	VINYL CHLORIDE
16U	CHLOROETHANE
40U	METHYLENE CHLORIDE
30U	ACETONE
16U	CARBON DISULFIDE
16U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
16U	1,1-DICHLOROETHANE
16U	1,2-DICHLOROETHENE (TOTAL)
16U	CHLOROFORM
16U	1,2-DICHLOROETHANE
16U	METHYL ETHYL KETONE
16U	1,1,1-TRICHLOROETHANE
16U	CARBON TETRACHLORIDE
16U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
16U	1,2-DICHLOROPROPANE
16U	CIS-1,3-DICHLOROPROPENE
16U	TRICHLOROETHENE(TRICHLOROETHYLENE)
16U	DIBROMOCHLOROMETHANE
16U	1,1,2-TRICHLOROETHANE
16U	BENZENE
16U	TRANS-1,3-DICHLOROPROPENE
16U	BROMOFORM
16U	METHYL ISOBUTYL KETONE
16U	METHYL BUTYL KETONE
16U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
16U	1,1,2,2-TETRACHLOROETHANE
16U	TOLUENE
16U	CHLOROBENZENE
16U	ETHYL BENZENE
16U	STYRENE
16U	TOTAL XYLENES
36	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64307 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SD-01

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 0915 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE81

UG/KG	ANALYTICAL RESULTS
510U	PHENOL
510U	BIS(2-CHLOROETHYL) ETHER
510U	2-CHLOROPHENOL
510U	1,3-DICHLOROBENZENE
510U	1,4-DICHLOROBENZENE
510U	1,2-DICHLOROBENZENE
510U	2-METHYLPHENOL
510U	2,2'-CHLOROISOPROPYLETHER
510UJ	(3-AND/OR 4-)METHYLPHENOL
510U	N-NITROSODI-N-PROPYLAMINE
510U	HEXACHLOROETHANE
510U	NITROBENZENE
510U	ISOPHORONE
510U	2-NITROPHENOL
510U	2,4-DIMETHYLPHENOL
510U	BIS(2-CHLOROETHOXY) METHANE
510U	2,4-DICHLOROPHENOL
510U	1,2,4-TRICHLOROBENZENE
510U	NAPHTHALENE
510U	4-CHLOROANILINE
510U	HEXACHLOROBUTADIENE
510U	4-CHLORO-3-METHYLPHENOL
510U	2-METHYLNAPHTHALENE
510U	HEXACHLOROCYCLOPENTADIENE (HCCP)
510UJ	2,4,6-TRICHLOROPHENOL
1200U	2,4,5-TRICHLOROPHENOL
510U	2-CHLORONAPHTHALENE
1200U	2-NITROANILINE
510U	DIMETHYL PHTHALATE
510UR	ACENAPHTHYLENE
510U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
1200U	3-NITROANILINE
510U	ACENAPHTHENE
1200U	2,4-DINITROPHENOL
1200U	4-NITROPHENOL
510U	DIBENZOFURAN
510U	2,4-DINITROTOLUENE
510U	DIETHYL PHTHALATE
510U	4-CHLOROPHENYL PHENYL ETHER
510U	FLUORENE
1200U	4-NITROANILINE
1200U	2-METHYL-4,6-DINITROPHENOL
510U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
510U	4-BROMOPHENYL PHENYL ETHER
510U	HEXACHLOROBENZENE (HCB)
1200U	PENTACHLOROPHENOL
510U	PHENANTHRENE
510U	ANTHRACENE
510U	CARBAZOLE
510U	DI-N-BUTYLPHTHALATE
510U	FLUORANTHENE
510U	PYRENE
510U	BENZYL BUTYL PHTHALATE
510U	3,3'-DICHLOROBENZIDINE
510U	BENZO(A)ANTHRACENE
510U	CHRYSENE
510U	BIS(2-ETHYLHEXYL) PHTHALATE
510U	DI-N-OCTYLPHTHALATE
510U	BENZO(B AND/OR K)FLUORANTHENE
510U	BENZO-A-PYRENE
510U	INDENO (1,2,3-CD) PYRENE
510U	DIBENZO(A,H)ANTHRACENE
510UJ	BENZO(GHI)PERYLENE
36	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64307 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SD-01
CASE.NO.: 17582 SAS NO.:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 0915 STOP: 00/00/00
D. NO.: CE81 MD NO: CE81

ANALYTICAL RESULTS UG/KG

3000J	3 UNIDENTIFIED COMPOUNDS
300JN	HEXADECANOIC ACID

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64307 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SD-01
CASE NUMBER: 17582 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 0915 STOP: 00/00/00
D. NUMBER: CE81

UG/KG	ANALYTICAL RESULTS	UG/KG	ANALYTICAL RESULTS
2.2U	ALPHA-BHC	22U	METHOXYCHLOR
2.2U	BETA-BHC	4.2U	ENDRIN KETONE
2.2U	DELTA-BHC	4.2U	ENDRIN ALDEHYDE
2.2U	GAMMA-BHC (LINDANE)		CHLORDANE (TECH. MIXTURE) /1
2.2U	HEPTACHLOR	2.2U	GAMMA-CHLORDANE /2
2.2U	ALDRIN	2.2U	ALPHA-CHLORDANE /2
2.2U	HEPTACHLOR EPOXIDE	220U	TOXAPHENE
2.2U	ENDOSULFAN I (ALPHA)	42U	PCB-1016 (AROCLOR 1016)
4.2U	DIELDRIN	85UR	PCB-1221 (AROCLOR 1221)
4.2U	4,4'-DDE (P,P'-DDE)	42U	PCB-1232 (AROCLOR 1232)
4.2U	ENDRIN	42U	PCB-1242 (AROCLOR 1242)
4.2U	ENDOSULFAN II (BETA)	42U	PCB-1248 (AROCLOR 1248)
4.2U	4,4'-DDD (P,P'-DDD)	42U	PCB-1254 (AROCLOR 1254)
4.2U	ENDOSULFAN SULFATE	42U	PCB-1260 (AROCLOR 1260)
4.2U	4,4'-DDT (P,P'-DDT)	21	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64311 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SD-02

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1340 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE85

UG/KG	ANALYTICAL RESULTS
15U	CHLOROMETHANE
15U	BROMOMETHANE
15U	VINYL CHLORIDE
15U	CHLOROETHANE
90U	METHYLENE CHLORIDE
180U	ACETONE
15U	CARBON DISULFIDE
15U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
15U	1,1-DICHLOROETHANE
15U	1,2-DICHLOROETHENE (TOTAL)
15U	CHLOROFORM
15U	1,2-DICHLOROETHANE
15U	METHYL ETHYL KETONE
15U	1,1,1-TRICHLOROETHANE
15U	CARBON TETRACHLORIDE
15U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
15U	1,2-DICHLOROPROPANE
15U	CIS-1,3-DICHLOROPROPENE
15U	TRICHLOROETHENE(TRICHLOROETHYLENE)
15U	DIBROMOCHLOROMETHANE
15U	1,1,2-TRICHLOROETHANE
15U	BENZENE
15U	TRANS-1,3-DICHLOROPROPENE
15U	BROMOFORM
15U	METHYL ISOBUTYL KETONE
15U	METHYL BUTYL KETONE
15U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
15U	1,1,2,2-TETRACHLOROETHANE
15U	TOLUENE
15U	CHLOROBENZENE
15U	ETHYL BENZENE
15U	STYRENE
15U	TOTAL XYLENES
34	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

EXTRACTABLE ORGANICS DATA REPORT

** PROJECT NO. 92-0189 SAMPLE NO. 64311 SAMPLE TYPE: SOIL
** SOURCE: CBS RECORDS
** STATION ID: SD-02
**
** CASE NO.: 17582 SAS NO.:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1340 STOP: 00/00/00

D. NO.: CE85

UG/KG	ANALYTICAL RESULTS
500UJ	PHENOL
500UJ	BIS(2-CHLOROETHYL) ETHER
500UJ	2-CHLOROPHENOL
500UJ	1,3-DICHLOROBENZENE
500UJ	1,4-DICHLOROBENZENE
500UJ	1,2-DICHLOROBENZENE
500UJ	2-METHYLPHENOL
500UJ	2,2'-CHLOROISOPROPYLETHER
500UJ	(3-AND/OR 4-)METHYLPHENOL
500UJ	N-NITROSODI-N-PROPYLAMINE
500UJ	HEXACHLOROETHANE
500UJ	NITROBENZENE
500UJ	ISOPHORONE
500UJ	2-NITROPHENOL
500UJ	2,4-DIMETHYLPHENOL
500UJ	BIS(2-CHLOROETHOXY) METHANE
500UJ	2,4-DICHLOROPHENOL
500UJ	1,2,4-TRICHLOROBENZENE
500UJ	NAPHTHALENE
500UJ	4-CHLOROANILINE
500UJ	HEXACHLOROBUTADIENE
500UJ	4-CHLORO-3-METHYLPHENOL
500UJ	2-METHYLNAPHTHALENE
500UJ	HEXACHLOROCYCLOPENTADIENE (HCCP)
500UJ	2,4,6-TRICHLOROPHENOL
1200UJ	2,4,5-TRICHLOROPHENOL
500UJ	2-CHLORONAPHTHALENE
1200UJ	2-NITROANILINE
500UJ	DIMETHYL PHTHALATE
500UR	ACENAPHTHYLENE
500UJ	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
1200UJ	3-NITROANILINE
500UJ	ACENAPHTHENE
1200UJ	2,4-DINITROPHENOL
1200UJ	4-NITROPHENOL
500UJ	DIBENZOFURAN
500UJ	2,4-DINITROTOLUENE
500UJ	DIETHYL PHTHALATE
500UJ	4-CHLOROPHENYL PHENYL ETHER
500UJ	FLUORENE
1200UJ	4-NITROANILINE
1200UJ	2-METHYL-4,6-DINITROPHENOL
500UJ	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
500UJ	4-BROMOPHENYL PHENYL ETHER
500UJ	HEXACHLOROBENZENE (HCB)
1200UJ	PENTACHLOROPHENOL
500UJ	PHENANTHRENE
500UJ	ANTHRACENE
500UJ	CARBAZOLE
500UJ	DI-N-BUTYLPHTHALATE
500UJ	FLUORANTHENE
500UJ	PYRENE
500UJ	BENZYL BUTYL PHTHALATE
500UJ	3,3'-DICHLOROBENZIDINE
500UJ	BENZO(A)ANTHRACENE
500UJ	CHRYSENE
500UJ	BIS(2-ETHYLHEXYL) PHTHALATE
500UJ	DI-N-OCTYLPHTHALATE
500UJ	BENZO(B AND/OR K)FLUORANTHENE
500UJ	BENZO-A-PYRENE
500UJ	INDENO (1,2,3-CD) PYRENE
500UJ	DIBENZO(A,H)ANTHRACENE
500UJ	BENZO(GHI)PERYLENE
34	PERCENT MOISTURE

REMARKS
EXCESSIVE HOLDING TIME

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

*** ***
** PROJECT NO. 92-0189 SAMPLE NO. 64311 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: J HATCHER **
** SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA **
** STATION ID: SD-02 COLLECTION START: 12/17/91 1340 STOP: 00/00/00 **
** CASE.NO.: 17582 SAS NO.: D. NO.: CE85 MD NO: CE85 **
** **
*** ***

ANALYTICAL RESULTS UG/KG

*	OCTAHYDRODIMETHYL(METHYLETHYL)PHENANTHRENE-
1000JN	CARBOXALDEHYDE 1000JN
600JN	TETRAMETHYLPHENANTHRENE
5000J	4 UNIDENTIFIED COMPOUNDS

REMARKS
EXCESSIVE HOLDING TIME

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 92-0189   SAMPLE NO. 64304   SAMPLE TYPE: SOIL   PROG ELEM: NSF   COLLECTED BY: J HATCHER
SOURCE: CBS RECORDS   CITY: CARROLLTON   ST: GA
STATION ID: SS-01   COLLECTION START: 12/16/91 1545   STOP: 00/00/00

CASE NO.: 17582   SAS NO.:   D. NO.: CE78

UG/KG	ANALYTICAL RESULTS	UG/KG	ANALYTICAL RESULTS
12U	CHLOROMETHANE	12U	1,2-DICHLOROPROPANE
12U	BROMOMETHANE	12U	CIS-1,3-DICHLOROPROPENE
12U	VINYL CHLORIDE	12U	TRICHLOROETHENE(TRICHLOROETHYLENE)
12U	CHLOROETHANE	12U	DIBROMOCHLOROMETHANE
60U	METHYLENE CHLORIDE	12U	1,1,2-TRICHLOROETHANE
30U	ACETONE	12U	BENZENE
12U	CARBON DISULFIDE	12U	TRANS-1,3-DICHLOROPROPENE
12U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)	12U	BROMOFORM
12U	1,1-DICHLOROETHANE	12U	METHYL ISOBUTYL KETONE
12U	1,2-DICHLOROETHENE (TOTAL)	12U	METHYL BUTYL KETONE
12U	CHLOROFORM	12U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
12U	1,2-DICHLOROETHANE	12U	1,1,2,2-TETRACHLOROETHANE
12U	METHYL ETHYL KETONE	12U	TOLUENE
12U	1,1,1-TRICHLOROETHANE	12U	CHLOROBENZENE
12U	CARBON TETRACHLORIDE	12U	ETHYL BENZENE
12U	BROMODICHLOROMETHANE	12U	STYRENE
		12U	TOTAL XYLENES
		14	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE   *NA-NOT ANALYZED   *NAI-INTERFERENCES   *J-ESTIMATED VALUE   *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN   *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64304 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-01

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/16/91 1545 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE78

UG/KG	ANALYTICAL RESULTS
380U	PHENOL
380U	BIS(2-CHLOROETHYL) ETHER
380U	2-CHLOROPHENOL
380U	1,3-DICHLOROBENZENE
380U	1,4-DICHLOROBENZENE
380U	1,2-DICHLOROBENZENE
380U	2-METHYLPHENOL
380U	2,2'-CHLOROISOPROPYLETHER
380UJ	(3-AND/OR 4-)METHYLPHENOL
380U	N-NITROSODI-N-PROPYLAMINE
380U	HEXACHLOROETHANE
380U	NITROBENZENE
380U	ISOPHORONE
380U	2-NITROPHENOL
380U	2,4-DIMETHYLPHENOL
380U	BIS(2-CHLOROETHOXY) METHANE
380U	2,4-DICHLOROPHENOL
380U	1,2,4-TRICHLOROBENZENE
380U	NAPHTHALENE
380U	4-CHLOROANILINE
380U	HEXACHLOROBUTADIENE
380U	4-CHLORO-3-METHYLPHENOL
380U	2-METHYLNAPHTHALENE
380U	HEXACHLOROCYCLOPENTADIENE (HCCP)
380UJ	2,4,6-TRICHLOROPHENOL
920U	2,4,5-TRICHLOROPHENOL
380U	2-CHLORONAPHTHALENE
920U	2-NITROANILINE
380U	DIMETHYL PHTHALATE
380UR	ACENAPHTHYLENE
380U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
920U	3-NITROANILINE
380U	ACENAPHTHENE
920U	2,4-DINITROPHENOL
920U	4-NITROPHENOL
380U	DIBENZOFURAN
380U	2,4-DINITROTOLUENE
380U	DIETHYL PHTHALATE
380U	4-CHLOROPHENYL PHENYL ETHER
380U	FLUORENE
920U	4-NITROANILINE
920U	2-METHYL-4,6-DINITROPHENOL
380U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
380U	4-BROMOPHENYL PHENYL ETHER
380U	HEXACHLOROBENZENE (HCB)
920U	PENTACHLOROPHENOL
380U	PHENANTHRENE
380U	ANTHRACENE
380U	CARBAZOLE
380U	DI-N-BUTYLPHTHALATE
380U	FLUORANTHENE
380U	PYRENE
380U	BENZYL BUTYL PHTHALATE
380U	3,3'-DICHLOROBENZIDINE
380U	BENZO(A)ANTHRACENE
380U	CHRYSENE
380U	BIS(2-ETHYLHEXYL) PHTHALATE
380U	DI-N-OCTYLPHTHALATE
380U	BENZO(B AND/OR K)FLUORANTHENE
380U	BENZO-A-PYRENE
380U	INDENO (1,2,3-CD) PYRENE
380U	DIBENZO(A,H)ANTHRACENE
380UJ	BENZO(GHI)PERYLENE
14	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.
02/18/92

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64304 SAMPLE TYPE: SOIL	PROG ELEM: NSF COLLECTED BY: J HATCHER
SOURCE: CBS RECORDS	CITY: CARROLLTON ST: GA
STATION ID: SS-01	COLLECTION START: 12/16/91 1545 STOP: 00/00/00
CASE.NO.: 17582 SAS NO.:	D. NO.: CE78 MD NO: CE78

ANALYTICAL RESULTS UG/KG

500J	1 UNIDENTIFIED COMPOUND
200JN	HEXADECANOIC ACID

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64304 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-01
CASE NUMBER: 17582 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/16/91 1545 STOP: 00/00/00
D. NUMBER: CE78

UG/KG	ANALYTICAL RESULTS
2.0U	ALPHA-BHC
2.0U	BETA-BHC
2.0U	DELTA-BHC
2.0U	GAMMA-BHC (LINDANE)
2.0U	HEPTACHLOR
2.0U	ALDRIN
2.0U	HEPTACHLOR EPOXIDE
2.0U	ENDOSULFAN I (ALPHA)
3.9U	DIELDRIN
3.9U	4,4'-DDE (P,P'-DDE)
3.9U	ENDRIN
3.9U	ENDOSULFAN II (BETA)
3.9U	4,4'-DDD (P,P'-DDD)
3.9U	ENDOSULFAN SULFATE
3.9U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
20U	METHOXYCHLOR
3.9U	ENDRIN KETONE
3.9U	ENDRIN ALDEHYDE
	CHLORDANE (TECH. MIXTURE) /1
2.0U	GAMMA-CHLORDANE /2
2.0U	ALPHA-CHLORDANE /2
200U	TOXAPHENE
39U	PCB-1016 (AROCLOR 1016)
79UR	PCB-1221 (AROCLOR 1221)
39U	PCB-1232 (AROCLOR 1232)
39U	PCB-1242 (AROCLOR 1242)
39U	PCB-1248 (AROCLOR 1248)
39U	PCB-1254 (AROCLOR 1254)
39U	PCB-1260 (AROCLOR 1260)
15	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64306 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-02

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/16/91 1635 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE80

UG/KG	ANALYTICAL RESULTS
12U	CHLOROMETHANE
12U	BROMOMETHANE
12U	VINYL CHLORIDE
12U	CHLOROETHANE
40U	METHYLENE CHLORIDE
40U	ACETONE
12U	CARBON DISULFIDE
12U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
12U	1,1-DICHLOROETHANE
12U	1,2-DICHLOROETHENE (TOTAL)
12U	CHLOROFORM
12U	1,2-DICHLOROETHANE
12U	METHYL ETHYL KETONE
12U	1,1,1-TRICHLOROETHANE
12U	CARBON TETRACHLORIDE
12U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
12U	1,2-DICHLOROPROPANE
12U	CIS-1,3-DICHLOROPROPENE
12U	TRICHLOROETHENE(TRICHLOROETHYLENE)
12U	DIBROMOCHLOROMETHANE
12U	1,1,2-TRICHLOROETHANE
12U	BENZENE
12U	TRANS-1,3-DICHLOROPROPENE
12U	BROMOFORM
12U	METHYL ISOBUTYL KETONE
12U	METHYL BUTYL KETONE
12U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
12U	1,1,2,2-TETRACHLOROETHANE
12U	TOLUENE
12U	CHLOROBENZENE
12U	ETHYL BENZENE
12U	STYRENE
12U	TOTAL XYLENES
17	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

EXTRACTABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64306 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-02

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/16/91 1635 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE80

UG/KG	ANALYTICAL RESULTS
390U	PHENOL
390U	BIS(2-CHLOROETHYL) ETHER
390U	2-CHLOROPHENOL
390U	1,3-DICHLOROBENZENE
390U	1,4-DICHLOROBENZENE
390U	1,2-DICHLOROBENZENE
390U	2-METHYLPHENOL
390U	2,2'-CHLOROISOPROPYLETHER
390UJ	(3-AND/OR 4-)METHYLPHENOL
390U	N-NITROSODI-N-PROPYLAMINE
390U	HEXACHLOROETHANE
390U	NITROBENZENE
390U	ISOPHORONE
390U	2-NITROPHENOL
390U	2,4-DIMETHYLPHENOL
390U	BIS(2-CHLOROETHOXY) METHANE
390U	2,4-DICHLOROPHENOL
390U	1,2,4-TRICHLOROBENZENE
390U	NAPHTHALENE
390U	4-CHLOROANILINE
390U	HEXACHLOROBUTADIENE
390U	4-CHLORO-3-METHYLPHENOL
390U	2-METHYLNAPHTHALENE
390U	HEXACHLOROCYCLOPENTADIENE (HCCP)
390UJ	2,4,6-TRICHLOROPHENOL
950U	2,4,5-TRICHLOROPHENOL
390U	2-CHLORONAPHTHALENE
950U	2-NITROANILINE
390U	DIMETHYL PHTHALATE
390UR	ACENAPHTHYLENE
390U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
950U	3-NITROANILINE
390U	ACENAPHTHENE
950U	2,4-DINITROPHENOL
950U	4-NITROPHENOL
390U	DIBENZOFURAN
390U	2,4-DINITROTOLUENE
390U	DIETHYL PHTHALATE
390U	4-CHLOROPHENYL PHENYL ETHER
390U	FLUORENE
950U	4-NITROANILINE
950U	2-METHYL-4,6-DINITROPHENOL
390U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
390U	4-BROMOPHENYL PHENYL ETHER
390U	HEXACHLOROBENZENE (HCB)
950U	PENTACHLOROPHENOL
390U	PHENANTHRENE
390U	ANTHRACENE
390U	CARBAZOLE
390U	DI-N-BUTYLPHTHALATE
42J	FLUORANTHENE
390U	PYRENE
390U	BENZYL BUTYL PHTHALATE
390U	3,3'-DICHLOROBENZIDINE
390U	BENZO(A)ANTHRACENE
390U	CHRYSENE
390U	BIS(2-ETHYLHEXYL) PHTHALATE
390U	DI-N-OCTYLPHTHALATE
57J	BENZO(B AND/OR K)FLUORANTHENE
390U	BENZO-A-PYRENE
390U	INDENO (1,2,3-CD) PYRENE
390U	DIBENZO(A,H)ANTHRACENE
390UJ	BENZO(GHI)PERYLENE
17	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.   02/18/92

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

*** ***
** PROJECT NO. 92-0189   SAMPLE NO. 64306   SAMPLE TYPE: SOIL   PROG ELEM: NSF   COLLECTED BY: J HATCHER **
** SOURCE: CBS RECORDS   CITY: CARROLLTON   ST: GA **
** STATION ID: SS-02   COLLECTION START: 12/16/91 1635   STOP: 00/00/00 **
** CASE.NO.: 17582   SAS NO.:   D. NO.: CE80   MD NO: CE80 **
** **
*** ***

ANALYTICAL RESULTS UG/KG

400JN	HEXADECANOIC ACID
5000J	9 UNIDENTIFIED COMPOUNDS

FOOTNOTES
*A-AVERAGE VALUE   *NA-NOT ANALYZED   *NAI-INTERFERENCES   *J-ESTIMATED VALUE   *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN   *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64306 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-02
CASE NUMBER: 17582 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/16/91 1635 STOP: 00/00/00
D. NUMBER: CE80

UG/KG	ANALYTICAL RESULTS	UG/KG	ANALYTICAL RESULTS
2.0U	ALPHA-BHC	20U	METHOXYCHLOR
2.0U	BETA-BHC	4.0U	ENDRIN KETONE
2.0U	DELTA-BHC	4.0U	ENDRIN ALDEHYDE
2.0U	GAMMA-BHC (LINDANE)		CHLORDANE (TECH. MIXTURE) /1
2.0U	HEPTACHLOR	2.0U	GAMMA-CHLORDANE /2
2.0U	ALDRIN	2.0U	ALPHA-CHLORDANE /2
2.0U	HEPTACHLOR EPOXIDE	200U	TOXAPHENE
2.0U	ENDOSULFAN I (ALPHA)	40U	PCB-1016 (AROCLOR 1016)
1.5J	DIELDRIN	81UR	PCB-1221 (AROCLOR 1221)
4.0U	4,4'-DDE (P,P'-DDE)	40U	PCB-1232 (AROCLOR 1232)
4.0U	ENDRIN	40U	PCB-1242 (AROCLOR 1242)
4.0U	ENDOSULFAN II (BETA)	40U	PCB-1248 (AROCLOR 1248)
4.0U	4,4'-DDD (P,P'-DDD)	40U	PCB-1254 (AROCLOR 1254)
4.0U	ENDOSULFAN SULFATE	40U	PCB-1260 (AROCLOR 1260)
4.0U	4,4'-DDT (P,P'-DDT)	17	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64313 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-03

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1435 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE87

UG/KG	ANALYTICAL RESULTS
14U	CHLOROMETHANE
14U	BROMOMETHANE
14U	VINYL CHLORIDE
14U	CHLOROETHANE
70U	METHYLENE CHLORIDE
60U	ACETONE
14U	CARBON DISULFIDE
14U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
14U	1,1-DICHLOROETHANE
14U	1,2-DICHLOROETHENE (TOTAL)
14U	CHLOROFORM
14U	1,2-DICHLOROETHANE
14U	METHYL ETHYL KETONE
14U	1,1,1-TRICHLOROETHANE
14U	CARBON TETRACHLORIDE
14U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
14U	1,2-DICHLOROPROPANE
14U	CIS-1,3-DICHLOROPROPENE
14U	TRICHLOROETHENE(TRICHLOROETHYLENE)
14U	DIBROMOCHLOROMETHANE
14U	1,1,2-TRICHLOROETHANE
14U	BENZENE
14U	TRANS-1,3-DICHLOROPROPENE
14U	BROMOFORM
14U	METHYL ISOBUTYL KETONE
14U	METHYL BUTYL KETONE
14U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
14U	1,1,2,2-TETRACHLOROETHANE
14U	TOLUENE
14U	CHLOROBENZENE
14U	ETHYL BENZENE
14U	STYRENE
14U	TOTAL XYLENES
26	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

EXTRACTABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64313 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-03

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1435 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE87

UG/KG	ANALYTICAL RESULTS
440U	PHENOL
440U	BIS(2-CHLOROETHYL) ETHER
440U	2-CHLOROPHENOL
440U	1,3-DICHLOROBENZENE
440U	1,4-DICHLOROBENZENE
440U	1,2-DICHLOROBENZENE
440U	2-METHYLPHENOL
440U	2,2'-CHLOROISOPROPYLETHER
440UJ	(3-AND/OR 4-)METHYLPHENOL
440U	N-NITROSODI-N-PROPYLAMINE
440U	HEXACHLOROETHANE
440U	NITROBENZENE
440U	ISOPHORONE
440U	2-NITROPHENOL
440U	2,4-DIMETHYLPHENOL
440U	BIS(2-CHLOROETHOXY) METHANE
440U	2,4-DICHLOROPHENOL
440U	1,2,4-TRICHLOROBENZENE
440U	NAPHTHALENE
440U	4-CHLOROANILINE
440U	HEXACHLOROBUTADIENE
440U	4-CHLORO-3-METHYLPHENOL
440U	2-METHYLNAPHTHALENE
440U	HEXACHLOROCYCLOPENTADIENE (HCCP)
440UJ	2,4,6-TRICHLOROPHENOL
1100U	2,4,5-TRICHLOROPHENOL
440U	2-CHLORONAPHTHALENE
1100U	2-NITROANILINE
440U	DIMETHYL PHTHALATE
440UR	ACENAPHTHYLENE
440U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
1100U	3-NITROANILINE
440U	ACENAPHTHENE
1100U	2,4-DINITROPHENOL
1100U	4-NITROPHENOL
440U	DIBENZOFURAN
440U	2,4-DINITROTOLUENE
440U	DIETHYL PHTHALATE
440U	4-CHLOROPHENYL PHENYL ETHER
440U	FLUORENE
1100U	4-NITROANILINE
1100U	2-METHYL-4,6-DINITROPHENOL
440U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
440U	4-BROMOPHENYL PHENYL ETHER
440U	HEXACHLOROBENZENE (HCB)
1100U	PENTACHLOROPHENOL
440U	PHENANTHRENE
440U	ANTHRACENE
440U	CARBAZOLE
440U	DI-N-BUTYLPHTHALATE
440U	FLUORANTHENE
440U	PYRENE
440U	BENZYL BUTYL PHTHALATE
440U	3,3'-DICHLOROBENZIDINE
440U	BENZO(A)ANTHRACENE
440U	CHRYSENE
440U	BIS(2-ETHYLHEXYL) PHTHALATE
440U	DI-N-OCTYLPHTHALATE
440U	BENZO(B AND/OR K)FLUORANTHENE
440U	BENZO-A-PYRENE
440U	INDENO (1,2,3-CD) PYRENE
440U	DIBENZO(A,H)ANTHRACENE
440UJ	BENZO(GHI)PERYLENE
26	PERCENT MOISTURE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64313 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-03
CASE NUMBER: 17582 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1435 STOP: 00/00/00
D. NUMBER: CE87

UG/KG	ANALYTICAL RESULTS
2.3U	ALPHA-BHC
2.3U	BETA-BHC
2.3U	DELTA-BHC
2.3U	GAMMA-BHC (LINDANE)
2.3U	HEPTACHLOR
2.3U	ALDRIN
2.3U	HEPTACHLOR EPOXIDE
2.3U	ENDOSULFAN I (ALPHA)
4.5U	DIELDRIN
4.5U	4,4'-DDE (P,P'-DDE)
4.5U	ENDRIN
4.5U	ENDOSULFAN II (BETA)
4.5U	4,4'-DDD (P,P'-DDD)
4.5U	ENDOSULFAN SULFATE
4.5U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
23U	METHOXYCHLOR
4.5U	ENDRIN KETONE
4.5U	ENDRIN ALDEHYDE
	CHLORDANE (TECH. MIXTURE) /1
2.3U	GAMMA-CHLORDANE /2
2.3U	ALPHA-CHLORDANE /2
230U	TOXAPHENE
45U	PCB-1016 (AROCLOR 1016)
91UR	PCB-1221 (AROCLOR 1221)
45U	PCB-1232 (AROCLOR 1232)
45U	PCB-1242 (AROCLOR 1242)
45U	PCB-1248 (AROCLOR 1248)
45U	PCB-1254 (AROCLOR 1254)
45U	PCB-1260 (AROCLOR 1260)
26	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64315 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-04

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1525 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE89

UG/KG	ANALYTICAL RESULTS
12U	CHLOROMETHANE
12U	BROMOMETHANE
12U	VINYL CHLORIDE
12U	CHLOROETHANE
60U	METHYLENE CHLORIDE
30U	ACETONE
12U	CARBON DISULFIDE
12U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
12U	1,1-DICHLOROETHANE
12U	1,2-DICHLOROETHENE (TOTAL)
12U	CHLOROFORM
12U	1,2-DICHLOROETHANE
12U	METHYL ETHYL KETONE
12U	1,1,1-TRICHLOROETHANE
12U	CARBON TETRACHLORIDE
12U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
12U	1,2-DICHLOROPROPANE
12U	CIS-1,3-DICHLOROPROPENE
12U	TRICHLOROETHENE(TRICHLOROETHYLENE)
12U	DIBROMOCHLOROMETHANE
12U	1,1,2-TRICHLOROETHANE
12U	BENZENE
12U	TRANS-1,3-DICHLOROPROPENE
12U	BROMOFORM
12U	METHYL ISOBUTYL KETONE
12U	METHYL BUTYL KETONE
12U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
12U	1,1,2,2-TETRACHLOROETHANE
12U	TOLUENE
12U	CHLOROBENZENE
12U	ETHYL BENZENE
12U	STYRENE
12U	TOTAL XYLENES
20	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

EXTRACTABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64315 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-04

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1525 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE89

UG/KG	ANALYTICAL RESULTS
410UJ	PHENOL
410UJ	BIS(2-CHLOROETHYL) ETHER
410UJ	2-CHLOROPHENOL
410UJ	1,3-DICHLOROBENZENE
410UJ	1,4-DICHLOROBENZENE
410UJ	1,2-DICHLOROBENZENE
410UJ	2-METHYLPHENOL
410UJ	2,2'-CHLOROISOPROPYLETHER
410UJ	(3-AND/OR 4-)METHYLPHENOL
410UJ	N-NITROSODI-N-PROPYLAMINE
410UJ	HEXACHLOROETHANE
410UJ	NITROBENZENE
410UJ	ISOPHORONE
410UJ	2-NITROPHENOL
410UJ	2,4-DIMETHYLPHENOL
410UJ	BIS(2-CHLOROETHOXY) METHANE
410UJ	2,4-DICHLOROPHENOL
410UJ	1,2,4-TRICHLOROBENZENE
410UJ	NAPHTHALENE
410UJ	4-CHLOROANILINE
410UJ	HEXACHLOROBUTADIENE
410UJ	4-CHLORO-3-METHYLPHENOL
410UJ	2-METHYLNAPHTHALENE
410UJ	HEXACHLOROCYCLOPENTADIENE (HCCP)
410UJ	2,4,6-TRICHLOROPHENOL
1000UJ	2,4,5-TRICHLOROPHENOL
410UJ	2-CHLORONAPHTHALENE
1000UJ	2-NITROANILINE
410UJ	DIMETHYL PHTHALATE
410UR	ACENAPHTHYLENE
410UJ	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
1000UJ	3-NITROANILINE
410UJ	ACENAPHTHENE
1000UJ	2,4-DINITROPHENOL
1000UJ	4-NITROPHENOL
410UJ	DIBENZOFURAN
410UJ	2,4-DINITROTOLUENE
410UJ	DIETHYL PHTHALATE
410UJ	4-CHLOROPHENYL PHENYL ETHER
410UJ	FLUORENE
1000UJ	4-NITROANILINE
1000UJ	2-METHYL-4,6-DINITROPHENOL
410UJ	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
410UJ	4-BROMOPHENYL PHENYL ETHER
410UJ	HEXACHLOROBENZENE (HCB)
1000UJ	PENTACHLOROPHENOL
410UJ	PHENANTHRENE
410UJ	ANTHRACENE
410UJ	CARBAZOLE
410UJ	DI-N-BUTYLPHTHALATE
48J	FLUORANTHENE
410UJ	PYRENE
410UJ	BENZYL BUTYL PHTHALATE
410UJ	3,3'-DICHLOROBENZIDINE
410UJ	BENZO(A)ANTHRACENE
410UJ	CHRYSENE
410UJ	BIS(2-ETHYLHEXYL) PHTHALATE
410UJ	DI-N-OCTYLPHTHALATE
410UJ	BENZO(B AND/OR K)FLUORANTHENE
410UJ	BENZO-A-PYRENE
410UJ	INDENO (1,2,3-CD) PYRENE
410UJ	DIBENZO(A,H)ANTHRACENE
410UJ	BENZO(GHI)PERYLENE
20	PERCENT MOISTURE

REMARKS
EXCESSIVE HOLDING TIME

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA. 02/18/92

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

*** ***
** PROJECT NO. 92-0189 SAMPLE NO. 64315 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: J HATCHER **
** SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA **
** STATION ID: SS-04 COLLECTION START: 12/17/91 1525 STOP: 00/00/00 **
** CASE.NO.: 17582 SAS NO.: D. NO.: CE89 MD NO: CE89 **
** **
*** ***

ANALYTICAL RESULTS UG/KG

3000J	5 UNIDENTIFIED COMPOUNDS
400JN	HEXADECANOIC ACID

REMARKS
EXCESSIVE HOLDING TIME

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64315 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-04
CASE NUMBER: 17582 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1525 STOP: 00/00/00
D. NUMBER: CE89

UG/KG	ANALYTICAL RESULTS
2.1U	ALPHA-BHC
2.1U	BETA-BHC
2.1U	DELTA-BHC
2.1U	GAMMA-BHC (LINDANE)
2.1U	HEPTACHLOR
2.1U	ALDRIN
2.1U	HEPTACHLOR EPOXIDE
2.1U	ENDOSULFAN I (ALPHA)
4.1U	DIELDRIN
4.1U	4,4'-DDE (P,P'-DDE)
4.1U	ENDRIN
4.1U	ENDOSULFAN II (BETA)
4.1U	4,4'-DDD (P,P'-DDD)
4.1U	ENDOSULFAN SULFATE
4.1U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
21U	METHOXYCHLOR
4.1U	ENDRIN KETONE
4.1U	ENDRIN ALDEHYDE
	CHLORDANE (TECH. MIXTURE) /1
2.1U	GAMMA-CHLORDANE /2
2.1U	ALPHA-CHLORDANE /2
210U	TOXAPHENE
41U	PCB-1016 (AROCLOR 1016)
84UR	PCB-1221 (AROCLOR 1221)
41U	PCB-1232 (AROCLOR 1232)
41U	PCB-1242 (AROCLOR 1242)
41U	PCB-1248 (AROCLOR 1248)
41U	PCB-1254 (AROCLOR 1254)
41U	PCB-1260 (AROCLOR 1260)
20	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
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*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64317 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-05

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/18/91 0900 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE90

UG/KG	ANALYTICAL RESULTS
13U	CHLOROMETHANE
13U	BROMOMETHANE
13U	VINYL CHLORIDE
13U	CHLOROETHANE
60U	METHYLENE CHLORIDE
20U	ACETONE
13U	CARBON DISULFIDE
13U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
13U	1,1-DICHLOROETHANE
13U	1,2-DICHLOROETHENE (TOTAL)
13U	CHLOROFORM
13U	1,2-DICHLOROETHANE
13U	METHYL ETHYL KETONE
13U	1,1,1-TRICHLOROETHANE
13U	CARBON TETRACHLORIDE
13U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
13U	1,2-DICHLOROPROPANE
13U	CIS-1,3-DICHLOROPROPENE
13U	TRICHLOROETHENE(TRICHLOROETHYLENE)
13U	DIBROMOCHLOROMETHANE
13U	1,1,2-TRICHLOROETHANE
13U	BENZENE
13U	TRANS-1,3-DICHLOROPROPENE
13U	BROMOFORM
13U	METHYL ISOBUTYL KETONE
13U	METHYL BUTYL KETONE
13U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
13U	1,1,2,2-TETRACHLOROETHANE
13U	TOLUENE
13U	CHLOROBENZENE
13U	ETHYL BENZENE
13U	STYRENE
13U	TOTAL XYLENES
22	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

EXTRACTABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64317 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-05

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/18/91 0900 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE90

UG/KG	ANALYTICAL RESULTS
420U	PHENOL
420U	BIS(2-CHLOROETHYL) ETHER
420U	2-CHLOROPHENOL
420U	1,3-DICHLOROBENZENE
420U	1,4-DICHLOROBENZENE
420U	1,2-DICHLOROBENZENE
420U	2-METHYLPHENOL
420U	2,2'-CHLOROISOPROPYLETHER
420UJ	(3-AND/OR 4-)METHYLPHENOL
420U	N-NITROSODI-N-PROPYLAMINE
420U	HEXACHLOROETHANE
420U	NITROBENZENE
420U	ISOPHORONE
420U	2-NITROPHENOL
420U	2,4-DIMETHYLPHENOL
420U	BIS(2-CHLOROETHOXY) METHANE
420U	2,4-DICHLOROPHENOL
420U	1,2,4-TRICHLOROBENZENE
420U	NAPHTHALENE
420U	4-CHLOROANILINE
420U	HEXACHLOROBUTADIENE
420U	4-CHLORO-3-METHYLPHENOL
420U	2-METHYLNAPHTHALENE
420U	HEXACHLOROCYCLOPENTADIENE (HCCP)
420UJ	2,4,6-TRICHLOROPHENOL
1000U	2,4,5-TRICHLOROPHENOL
420U	2-CHLORONAPHTHALENE
1000U	2-NITROANILINE
420U	DIMETHYL PHTHALATE
420UR	ACENAPHTHYLENE
420U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
1000U	3-NITROANILINE
420U	ACENAPHTHENE
1000U	2,4-DINITROPHENOL
1000U	4-NITROPHENOL
420U	DIBENZOFURAN
420U	2,4-DINITROTOLUENE
420U	DIETHYL PHTHALATE
420U	4-CHLOROPHENYL PHENYL ETHER
420U	FLUORENE
1000U	4-NITROANILINE
1000U	2-METHYL-4,6-DINITROPHENOL
420U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
420U	4-BROMOPHENYL PHENYL ETHER
420U	HEXACHLOROBENZENE (HCB)
1000U	PENTACHLOROPHENOL
420U	PHENANTHRENE
420U	ANTHRACENE
420U	CARBAZOLE
420U	DI-N-BUTYLPHTHALATE
420U	FLUORANTHENE
420U	PYRENE
420U	BENZYL BUTYL PHTHALATE
420U	3,3'-DICHLOROBENZIDINE
420U	BENZO(A)ANTHRACENE
420U	CHRYSENE
420U	BIS(2-ETHYLHEXYL) PHTHALATE
420U	DI-N-OCTYLPHTHALATE
420U	BENZO(B AND/OR K)FLUORANTHENE
420U	BENZO-A-PYRENE
420U	INDENO (1,2,3-CD) PYRENE
420U	DIBENZO(A,H)ANTHRACENE
420UJ	BENZO(GHI)PERYLENE
22	PERCENT MOISTURE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

*** ***

** PROJECT NO. 92-0189 SAMPLE NO. 64317 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: J HATCHER **
** SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA **
** STATION ID: SS-05 COLLECTION START: 12/18/91 0900 STOP: 00/00/00 **
** CASE.NO.: 17582 SAS NO.: D. NO.: CE90 MD NO: CE90 **
** **

*** ***

ANALYTICAL RESULTS UG/KG

90JN	HEXADECANOIC ACID
1000J	3 UNIDENTIFIEDCCOMPOUNDS

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64317 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-05
CASE NUMBER: 17582 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/18/91 0900 STOP: 00/00/00
D. NUMBER: CE90

UG/KG	ANALYTICAL RESULTS
2.2U	ALPHA-BHC
2.2U	BETA-BHC
2.2U	DELTA-BHC
2.2U	GAMMA-BHC (LINDANE)
2.2U	HEPTACHLOR
2.2U	ALDRIN
2.2U	HEPTACHLOR EPOXIDE
2.2U	ENDOSULFAN I (ALPHA)
4.2U	DIELDRIN
4.2U	4,4'-DDE (P,P'-DDE)
4.2U	ENDRIN
4.2U	ENDOSULFAN II (BETA)
4.2U	4,4'-DDD (P,P'-DDD)
4.2U	ENDOSULFAN SULFATE
4.2U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
22U	METHOXYCHLOR
4.2U	ENDRIN KETONE
4.2U	ENDRIN ALDEHYDE
	CHLORDANE (TECH. MIXTURE) /1
2.2U	GAMMA-CHLORDANE /2
2.2U	ALPHA-CHLORDANE /2
220U	TOXAPHENE
42U	PCB-1016 (AROCLOR 1016)
86UR	PCB-1221 (AROCLOR 1221)
42U	PCB-1232 (AROCLOR 1232)
42U	PCB-1242 (AROCLOR 1242)
42U	PCB-1248 (AROCLOR 1248)
42U	PCB-1254 (AROCLOR 1254)
42U	PCB-1260 (AROCLOR 1260)
22	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64316 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-06

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1600 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE92

UG/KG	ANALYTICAL RESULTS
13U	CHLOROMETHANE
13U	BROMOMETHANE
13U	VINYL CHLORIDE
13U	CHLOROETHANE
80U	METHYLENE CHLORIDE
40U	ACETONE
13U	CARBON DISULFIDE
13U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
13U	1,1-DICHLOROETHANE
13U	1,2-DICHLOROETHENE (TOTAL)
13U	CHLOROFORM
13U	1,2-DICHLOROETHANE
13U	METHYL ETHYL KETONE
13U	1,1,1-TRICHLOROETHANE
13U	CARBON TETRACHLORIDE
13U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
13U	1,2-DICHLOROPROPANE
13U	CIS-1,3-DICHLOROPROPENE
13U	TRICHLOROETHENE(TRICHLOROETHYLENE)
13U	DIBROMOCHLOROMETHANE
13U	1,1,2-TRICHLOROETHANE
13U	BENZENE
13U	TRANS-1,3-DICHLOROPROPENE
13U	BROMOFORM
13U	METHYL ISOBUTYL KETONE
13U	METHYL BUTYL KETONE
13U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
13U	1,1,2,2-TETRACHLOROETHANE
13U	TOLUENE
13U	CHLOROBENZENE
13U	ETHYL BENZENE
13U	STYRENE
13U	TOTAL XYLENES
24	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64316 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-06

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1600 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE92

UG/KG	ANALYTICAL RESULTS
430U	PHENOL
430U	BIS(2-CHLOROETHYL) ETHER
430U	2-CHLOROPHENOL
430U	1,3-DICHLOROBENZENE
430U	1,4-DICHLOROBENZENE
430U	1,2-DICHLOROBENZENE
430U	2-METHYLPHENOL
430U	2,2'-CHLOROISOPROPYLETHER
430UJ	(3-AND/OR 4-)METHYLPHENOL
430U	N-NITROSODI-N-PROPYLAMINE
430U	HEXACHLOROETHANE
430U	NITROBENZENE
430U	ISOPHORONE
430U	2-NITROPHENOL
430U	2,4-DIMETHYLPHENOL
430U	BIS(2-CHLOROETHOXY) METHANE
430U	2,4-DICHLOROPHENOL
430U	1,2,4-TRICHLOROBENZENE
430U	NAPHTHALENE
430U	4-CHLOROANILINE
430U	HEXACHLOROBUTADIENE
430U	4-CHLORO-3-METHYLPHENOL
430U	2-METHYLNAPHTHALENE
430U	HEXACHLOROCYCLOPENTADIENE (HCCP)
430UJ	2,4,6-TRICHLOROPHENOL
1000U	2,4,5-TRICHLOROPHENOL
430U	2-CHLORONAPHTHALENE
1000U	2-NITROANILINE
430U	DIMETHYL PHTHALATE
430UR	ACENAPHTHYLENE
430U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
1000U	3-NITROANILINE
430U	ACENAPHTHENE
1000U	2,4-DINITROPHENOL
1000U	4-NITROPHENOL
430U	DIBENZOFURAN
430U	2,4-DINITROTOLUENE
430U	DIETHYL PHTHALATE
430U	4-CHLOROPHENYL PHENYL ETHER
430U	FLUORENE
1000U	4-NITROANILINE
1000U	2-METHYL-4,6-DINITROPHENOL
430U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
430U	4-BROMOPHENYL PHENYL ETHER
430U	HEXACHLOROBENZENE (HCB)
1000U	PENTACHLOROPHENOL
430U	PHENANTHRENE
430U	ANTHRACENE
430U	CARBAZOLE
430U	DI-N-BUTYLPHTHALATE
430U	FLUORANTHENE
430U	PYRENE
430U	BENZYL BUTYL PHTHALATE
430U	3,3'-DICHLOROBENZIDINE
430U	BENZO(A)ANTHRACENE
430U	CHRYSENE
430U	BIS(2-ETHYLHEXYL) PHTHALATE
430U	DI-N-OCTYLPHTHALATE
430U	BENZO(B AND/OR K)FLUORANTHENE
430U	BENZO-A-PYRENE
430U	INDENO (1,2,3-CD) PYRENE
430U	DIBENZO(A,H)ANTHRACENE
430UJ	BENZO(GHI)PERYLENE
24	PERCENT MOISTURE

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

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**   PROJECT NO. 92-0189   SAMPLE NO. 64316  SAMPLE TYPE: SOIL        PROG ELEM: NSF   COLLECTED BY: J HATCHER            **
**   SOURCE: CBS RECORDS                                              CITY: CARROLLTON          ST: GA                     **
**   STATION ID: SS-06                                                COLLECTION START: 12/17/91  1600   STOP: 00/00/00    **
**   CASE.NO.: 17582          SAS NO.:                                D. NO.: CE92              MD NO: CE92                **
**                                                                                                                         **
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ANALYTICAL RESULTS UG/KG

3000J   5 UNIDENTIFIED COMPOUNDS

FOOTNOTES
*A-AVERAGE VALUE   *NA-NOT ANALYZED   *NAI-INTERFERENCES   *J-ESTIMATED VALUE   *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.
02/18/92

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 92-0189   SAMPLE NO. 64316   SAMPLE TYPE: SOIL
PROG ELEM: NSF   COLLECTED BY: J HATCHER
SOURCE: CBS RECORDS
CITY: CARROLLTON   ST: GA
STATION ID: SS-06
COLLECTION START: 12/17/91 1600   STOP: 00/00/00
CASE NUMBER: 17582   SAS NUMBER:
D. NUMBER: CE92

UG/KG	ANALYTICAL RESULTS
2.2U	ALPHA-BHC
2.2U	BETA-BHC
2.2U	DELTA-BHC
2.2U	GAMMA-BHC (LINDANE)
2.2U	HEPTACHLOR
2.2U	ALDRIN
2.2U	HEPTACHLOR EPOXIDE
2.2U	ENDOSULFAN I (ALPHA)
4.3U	DIELDRIN
4.3U	4,4'-DDE (P,P'-DDE)
4.3U	ENDRIN
4.3U	ENDOSULFAN II (BETA)
4.3U	4,4'-DDD (P,P'-DDD)
4.3U	ENDOSULFAN SULFATE
4.3U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
22U	METHOXYCHLOR
4.3U	ENDRIN KETONE
4.3U	ENDRIN ALDEHYDE
	CHLORDANE (TECH. MIXTURE) /1
2.2U	GAMMA-CHLORDANE /2
2.2U	ALPHA-CHLORDANE /2
220U	TOXAPHENE
43U	PCB-1016 (AROCLOR 1016)
88UR	PCB-1221 (AROCLOR 1221)
43U	PCB-1232 (AROCLOR 1232)
43U	PCB-1242 (AROCLOR 1242)
43U	PCB-1248 (AROCLOR 1248)
43U	PCB-1254 (AROCLOR 1254)
43U	PCB-1260 (AROCLOR 1260)
24	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
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*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
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*C-CONFIRMED BY GCMS
1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64319 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-07

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/18/91 0935 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE93

UG/KG	ANALYTICAL RESULTS
13U	CHLOROMETHANE
13U	BROMOMETHANE
13U	VINYL CHLORIDE
13U	CHLOROETHANE
70U	METHYLENE CHLORIDE
40U	ACETONE
13U	CARBON DISULFIDE
13U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
13U	1,1-DICHLOROETHANE
13U	1,2-DICHLOROETHENE (TOTAL)
13U	CHLOROFORM
13U	1,2-DICHLOROETHANE
13U	METHYL ETHYL KETONE
13U	1,1,1-TRICHLOROETHANE
13U	CARBON TETRACHLORIDE
13U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
13U	1,2-DICHLOROPROPANE
13U	CIS-1,3-DICHLOROPROPENE
13U	TRICHLOROETHENE(TRICHLOROETHYLENE)
13U	DIBROMOCHLOROMETHANE
13U	1,1,2-TRICHLOROETHANE
13U	BENZENE
13U	TRANS-1,3-DICHLOROPROPENE
13U	BROMOFORM
13U	METHYL ISOBUTYL KETONE
13U	METHYL BUTYL KETONE
13U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
13U	1,1,2,2-TETRACHLOROETHANE
13U	TOLUENE
13U	CHLOROBENZENE
13U	ETHYL BENZENE
13U	STYRENE
13U	TOTAL XYLENES
24	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64319 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-07

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/18/91 0935 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE93

UG/KG	ANALYTICAL RESULTS
430U	PHENOL
430U	BIS(2-CHLOROETHYL) ETHER
430U	2-CHLOROPHENOL
430U	1,3-DICHLOROBENZENE
430U	1,4-DICHLOROBENZENE
430U	1,2-DICHLOROBENZENE
430U	2-METHYLPHENOL
430U	2,2'-CHLOROISOPROPYLETHER
430UJ	(3-AND/OR 4-)METHYLPHENOL
430U	N-NITROSODI-N-PROPYLAMINE
430U	HEXACHLOROETHANE
430U	NITROBENZENE
430U	ISOPHORONE
430U	2-NITROPHENOL
430U	2,4-DIMETHYLPHENOL
430U	BIS(2-CHLOROETHOXY) METHANE
430U	2,4-DICHLOROPHENOL
430U	1,2,4-TRICHLOROBENZENE
430U	NAPHTHALENE
430U	4-CHLOROANILINE
430U	HEXACHLOROBUTADIENE
430U	4-CHLORO-3-METHYLPHENOL
430U	2-METHYLNAPHTHALENE
430U	HEXACHLOROCYCLOPENTADIENE (HCCP)
430UJ	2,4,6-TRICHLOROPHENOL
1000U	2,4,5-TRICHLOROPHENOL
430U	2-CHLORONAPHTHALENE
1000U	2-NITROANILINE
430U	DIMETHYL PHTHALATE
430UR	ACENAPHTHYLENE
430U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
1000U	3-NITROANILINE
430U	ACENAPHTHENE
1000U	2,4-DINITROPHENOL
1000U	4-NITROPHENOL
430U	DIBENZOFURAN
430U	2,4-DINITROTOLUENE
430U	DIETHYL PHTHALATE
430U	4-CHLOROPHENYL PHENYL ETHER
430U	FLUORENE
1000U	4-NITROANILINE
1000U	2-METHYL-4,6-DINITROPHENOL
430U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
430U	4-BROMOPHENYL PHENYL ETHER
430U	HEXACHLOROBENZENE (HCB)
1000U	PENTACHLOROPHENOL
430U	PHENANTHRENE
430U	ANTHRACENE
430U	CARBAZOLE
430U	DI-N-BUTYLPHTHALATE
430U	FLUORANTHENE
430U	PYRENE
430U	BENZYL BUTYL PHTHALATE
430U	3,3'-DICHLOROBENZIDINE
430U	BENZO(A)ANTHRACENE
430U	CHRYSENE
430U	BIS(2-ETHYLHEXYL) PHTHALATE
430U	DI-N-OCTYLPHTHALATE
430U	BENZO(B AND/OR K)FLUORANTHENE
430U	BENZO-A-PYRENE
430U	INDENO (1,2,3-CD) PYRENE
430U	DIBENZO(A,H)ANTHRACENE
430UJ	BENZO(GHI)PERYLENE
24	PERCENT MOISTURE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.   02/18/92

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

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**   PROJECT NO. 92-0189   SAMPLE NO. 64319  SAMPLE TYPE: SOIL       PROG ELEM: NSF   COLLECTED BY: J HATCHER          **
**   SOURCE: CBS RECORDS                                             CITY: CARROLLTON           ST: GA                 **
**   STATION ID: SS-07                                               COLLECTION START: 12/18/91  0935   STOP: 00/00/00 **
**   CASE.NO.: 17582          SAS NO.:                               D. NO.: CE93               MD NO: CE93            **
**                                                                                                                      **
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ANALYTICAL RESULTS UG/KG

900J   1 UNIDENTIFIED COMPOUND

FOOTNOTES
*A-AVERAGE VALUE   *NA-NOT ANALYZED   *NAI-INTERFERENCES   *J-ESTIMATED VALUE   *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN   *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64319 SAMPLE TYPE: SOIL
PROG ELEM: NSF COLLECTED BY: J HATCHER
SOURCE: CBS RECORDS
CITY: CARROLLTON ST: GA
STATION ID: SS-07
COLLECTION START: 12/18/91 0935 STOP: 00/00/00
CASE NUMBER: 17582 SAS NUMBER:
D. NUMBER: CE93

UG/KG	ANALYTICAL RESULTS	UG/KG	ANALYTICAL RESULTS
2.2U	ALPHA-BHC	22U	METHOXYCHLOR
2.2U	BETA-BHC	4.3U	ENDRIN KETONE
2.2U	DELTA-BHC	4.3U	ENDRIN ALDEHYDE
2.2U	GAMMA-BHC (LINDANE)		CHLORDANE (TECH. MIXTURE) /1
2.2U	HEPTACHLOR	2.2U	GAMMA-CHLORDANE /2
2.2U	ALDRIN	2.2U	ALPHA-CHLORDANE /2
2.2U	HEPTACHLOR EPOXIDE	220U	TOXAPHENE
2.2U	ENDOSULFAN I (ALPHA)	43U	PCB-1016 (AROCLOR 1016)
4.3U	DIELDRIN	88UR	PCB-1221 (AROCLOR 1221)
4.3U	4,4'-DDE (P,P'-DDE)	43U	PCB-1232 (AROCLOR 1232)
4.3U	ENDRIN	43U	PCB-1242 (AROCLOR 1242)
4.3U	ENDOSULFAN II (BETA)	43U	PCB-1248 (AROCLOR 1248)
4.3U	4,4'-DDD (P,P'-DDD)	43U	PCB-1254 (AROCLOR 1254)
4.3U	ENDOSULFAN SULFATE	43U	PCB-1260 (AROCLOR 1260)
4.3U	4,4'-DDT (P,P'-DDT)	24	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64305 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SB-01

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/16/91 1600 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE79

UG/KG	ANALYTICAL RESULTS
12U	CHLOROMETHANE
12U	BROMOMETHANE
12U	VINYL CHLORIDE
12U	CHLOROETHANE
30U	METHYLENE CHLORIDE
60U	ACETONE
12U	CARBON DISULFIDE
12U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
12U	1,1-DICHLOROETHANE
12U	1,2-DICHLOROETHENE (TOTAL)
12U	CHLOROFORM
12U	1,2-DICHLOROETHANE
12U	METHYL ETHYL KETONE
12U	1,1,1-TRICHLOROETHANE
12U	CARBON TETRACHLORIDE
12U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
12U	1,2-DICHLOROPROPANE
12U	CIS-1,3-DICHLOROPROPENE
12U	TRICHLOROETHENE(TRICHLOROETHYLENE)
12U	DIBROMOCHLOROMETHANE
12U	1,1,2-TRICHLOROETHANE
12U	BENZENE
12U	TRANS-1,3-DICHLOROPROPENE
12U	BROMOFORM
12U	METHYL ISOBUTYL KETONE
12U	METHYL BUTYL KETONE
12U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
12U	1,1,2,2-TETRACHLOROETHANE
12U	TOLUENE
12U	CHLOROBENZENE
12U	ETHYL BENZENE
12U	STYRENE
12U	TOTAL XYLENES
16	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

EXTRACTABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64305 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SB-01

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/16/91 1600 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE79

UG/KG	ANALYTICAL RESULTS
390U	PHENOL
390U	BIS(2-CHLOROETHYL) ETHER
390U	2-CHLOROPHENOL
390U	1,3-DICHLOROBENZENE
390U	1,4-DICHLOROBENZENE
390U	1,2-DICHLOROBENZENE
390U	2-METHYLPHENOL
390U	2,2'-CHLOROISOPROPYLETHER
390UJ	(3-AND/OR 4-)METHYLPHENOL
390U	N-NITROSODI-N-PROPYLAMINE
390U	HEXACHLOROETHANE
390U	NITROBENZENE
390U	ISOPHORONE
390U	2-NITROPHENOL
390U	2,4-DIMETHYLPHENOL
390U	BIS(2-CHLOROETHOXY) METHANE
390U	2,4-DICHLOROPHENOL
390U	1,2,4-TRICHLOROBENZENE
390U	NAPHTHALENE
390U	4-CHLOROANILINE
390U	HEXACHLOROBUTADIENE
390U	4-CHLORO-3-METHYLPHENOL
390U	2-METHYLNAPHTHALENE
390U	HEXACHLOROCYCLOPENTADIENE (HCCP)
390UJ	2,4,6-TRICHLOROPHENOL
940U	2,4,5-TRICHLOROPHENOL
390U	2-CHLORONAPHTHALENE
940U	2-NITROANILINE
390U	DIMETHYL PHTHALATE
390UR	ACENAPHTHYLENE
390U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
940U	3-NITROANILINE
390U	ACENAPHTHENE
940U	2,4-DINITROPHENOL
940U	4-NITROPHENOL
390U	DIBENZOFURAN
390U	2,4-DINITROTOLUENE
390U	DIETHYL PHTHALATE
390U	4-CHLOROPHENYL PHENYL ETHER
390U	FLUORENE
940U	4-NITROANILINE
940U	2-METHYL-4,6-DINITROPHENOL
390U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
390U	4-BROMOPHENYL PHENYL ETHER
390U	HEXACHLOROBENZENE (HCB)
940U	PENTACHLOROPHENOL
390U	PHENANTHRENE
390U	ANTHRACENE
390U	CARBAZOLE
390U	DI-N-BUTYLPHTHALATE
390U	FLUORANTHENE
390U	PYRENE
390U	BENZYL BUTYL PHTHALATE
390U	3,3'-DICHLOROBENZIDINE
390U	BENZO(A)ANTHRACENE
390U	CHRYSENE
390U	BIS(2-ETHYLHEXYL) PHTHALATE
390U	DI-N-OCTYLPHTHALATE
390U	BENZO(B AND/OR K)FLUORANTHENE
390U	BENZO-A-PYRENE
390U	INDENO (1,2,3-CD) PYRENE
390U	DIBENZO(A,H)ANTHRACENE
390UJ	BENZO(GHI)PERYLENE
16	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.　　　　02/18/92

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 92-0189　SAMPLE NO. 64305　SAMPLE TYPE: SOIL　PROG ELEM: NSF　COLLECTED BY: J HATCHER
SOURCE: CBS RECORDS　CITY: CARROLLTON　ST: GA
STATION ID: SB-01　COLLECTION START: 12/16/91 1600　STOP: 00/00/00
CASE NUMBER: 17582　SAS NUMBER:　D. NUMBER: CE79

UG/KG	ANALYTICAL RESULTS	UG/KG	ANALYTICAL RESULTS
2.0U	ALPHA-BHC	20U	METHOXYCHLOR
2.0U	BETA-BHC	3.9U	ENDRIN KETONE
2.0U	DELTA-BHC	3.9U	ENDRIN ALDEHYDE
2.0U	GAMMA-BHC (LINDANE)		CHLORDANE (TECH. MIXTURE) /1
2.0U	HEPTACHLOR	2.0U	GAMMA-CHLORDANE /2
2.0U	ALDRIN	2.0U	ALPHA-CHLORDANE /2
2.0U	HEPTACHLOR EPOXIDE	200U	TOXAPHENE
2.0U	ENDOSULFAN I (ALPHA)	39U	PCB-1016 (AROCLOR 1016)
3.9U	DIELDRIN	80UR	PCB-1221 (AROCLOR 1221)
3.9U	4,4'-DDE (P,P'-DDE)	39U	PCB-1232 (AROCLOR 1232)
3.9U	ENDRIN	39U	PCB-1242 (AROCLOR 1242)
3.9U	ENDOSULFAN II (BETA)	39U	PCB-1248 (AROCLOR 1248)
3.9U	4,4'-DDD (P,P'-DDD)	39U	PCB-1254 (AROCLOR 1254)
3.9U	ENDOSULFAN SULFATE	39U	PCB-1260 (AROCLOR 1260)
3.9U	4,4'-DDT (P,P'-DDT)	16	PERCENT MOISTURE

REMARKS　　***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE　*NA-NOT ANALYZED　*NAI-INTERFERENCES　*J-ESTIMATED VALUE　*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN　*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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*C-CONFIRMED BY GCMS　1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64314 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SB-03

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1500 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE88

UG/KG	ANALYTICAL RESULTS
14U	CHLOROMETHANE
14U	BROMOMETHANE
14U	VINYL CHLORIDE
14U	CHLOROETHANE
100U	METHYLENE CHLORIDE
50U	ACETONE
14U	CARBON DISULFIDE
14U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
14U	1,1-DICHLOROETHANE
14U	1,2-DICHLOROETHENE (TOTAL)
14U	CHLOROFORM
14U	1,2-DICHLOROETHANE
14U	METHYL ETHYL KETONE
14U	1,1,1-TRICHLOROETHANE
14U	CARBON TETRACHLORIDE
14U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
14U	1,2-DICHLOROPROPANE
14U	CIS-1,3-DICHLOROPROPENE
14U	TRICHLOROETHENE(TRICHLOROETHYLENE)
14U	DIBROMOCHLOROMETHANE
14U	1,1,2-TRICHLOROETHANE
14U	BENZENE
14U	TRANS-1,3-DICHLOROPROPENE
14U	BROMOFORM
14U	METHYL ISOBUTYL KETONE
14U	METHYL BUTYL KETONE
14U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
14U	1,1,2,2-TETRACHLOROETHANE
14U	TOLUENE
14U	CHLOROBENZENE
14U	ETHYL BENZENE
14U	STYRENE
14U	TOTAL XYLENES
26	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64314 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SB-03

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1500 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE88

UG/KG	ANALYTICAL RESULTS
440U	PHENOL
440U	BIS(2-CHLOROETHYL) ETHER
440U	2-CHLOROPHENOL
440U	1,3-DICHLOROBENZENE
440U	1,4-DICHLOROBENZENE
440U	1,2-DICHLOROBENZENE
440U	2-METHYLPHENOL
440U	2,2'-CHLOROISOPROPYLETHER
440UJ	(3-AND/OR 4-)METHYLPHENOL
440U	N-NITROSODI-N-PROPYLAMINE
440U	HEXACHLOROETHANE
440U	NITROBENZENE
440U	ISOPHORONE
440U	2-NITROPHENOL
440U	2,4-DIMETHYLPHENOL
440U	BIS(2-CHLOROETHOXY) METHANE
440U	2,4-DICHLOROPHENOL
440U	1,2,4-TRICHLOROBENZENE
440U	NAPHTHALENE
440U	4-CHLOROANILINE
440U	HEXACHLOROBUTADIENE
440U	4-CHLORO-3-METHYLPHENOL
440U	2-METHYLNAPHTHALENE
440U	HEXACHLOROCYCLOPENTADIENE (HCCP)
440UJ	2,4,6-TRICHLOROPHENOL
1100U	2,4,5-TRICHLOROPHENOL
440U	2-CHLORONAPHTHALENE
1100U	2-NITROANILINE
440U	DIMETHYL PHTHALATE
440UR	ACENAPHTHYLENE
440U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
1100U	3-NITROANILINE
440U	ACENAPHTHENE
1100U	2,4-DINITROPHENOL
1100U	4-NITROPHENOL
440U	DIBENZOFURAN
440U	2,4-DINITROTOLUENE
440U	DIETHYL PHTHALATE
440U	4-CHLOROPHENYL PHENYL ETHER
440U	FLUORENE
1100U	4-NITROANILINE
1100U	2-METHYL-4,6-DINITROPHENOL
440U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
440U	4-BROMOPHENYL PHENYL ETHER
440U	HEXACHLOROBENZENE (HCB)
1100U	PENTACHLOROPHENOL
440U	PHENANTHRENE
440U	ANTHRACENE
440U	CARBAZOLE
440U	DI-N-BUTYLPHTHALATE
440U	FLUORANTHENE
440U	PYRENE
440U	BENZYL BUTYL PHTHALATE
440U	3,3'-DICHLOROBENZIDINE
440U	BENZO(A)ANTHRACENE
440U	CHRYSENE
440U	BIS(2-ETHYLHEXYL) PHTHALATE
440U	DI-N-OCTYLPHTHALATE
440U	BENZO(B AND/OR K)FLUORANTHENE
440U	BENZO-A-PYRENE
440U	INDENO (1,2,3-CD) PYRENE
440U	DIBENZO(A,H)ANTHRACENE
440UJ	BENZO(GHI)PERYLENE
26	PERCENT MOISTURE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

*** ***
** PROJECT NO. 92-0189 SAMPLE NO. 64314 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: J HATCHER **
** SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA **
** STATION ID: SB-03 COLLECTION START: 12/17/91 1500 STOP: 00/00/00 **
** CASE.NO.: 17582 SAS NO.: D. NO.: CE88 MD NO: CE88 **
** **
*** ***

ANALYTICAL RESULTS UG/KG

700J 1 UNIDENTIFIED COMPOUND

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64314 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SB-03
CASE NUMBER: 17582 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1500 STOP: 00/00/00
D. NUMBER: CE88

UG/KG	ANALYTICAL RESULTS
2.3U	ALPHA-BHC
2.3U	BETA-BHC
2.3U	DELTA-BHC
2.3U	GAMMA-BHC (LINDANE)
2.3U	HEPTACHLOR
2.3U	ALDRIN
2.3U	HEPTACHLOR EPOXIDE
2.3U	ENDOSULFAN I (ALPHA)
4.5U	DIELDRIN
4.5U	4,4'-DDE (P,P'-DDE)
4.5U	ENDRIN
4.5U	ENDOSULFAN II (BETA)
4.5U	4,4'-DDD (P,P'-DDD)
4.5U	ENDOSULFAN SULFATE
4.5U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
23U	METHOXYCHLOR
4.5U	ENDRIN KETONE
4.5U	ENDRIN ALDEHYDE
	CHLORDANE (TECH. MIXTURE) /1
2.3U	GAMMA-CHLORDANE /2
2.3U	ALPHA-CHLORDANE /2
230U	TOXAPHENE
45U	PCB-1016 (AROCLOR 1016)
91UR	PCB-1221 (AROCLOR 1221)
45U	PCB-1232 (AROCLOR 1232)
45U	PCB-1242 (AROCLOR 1242)
45U	PCB-1248 (AROCLOR 1248)
45U	PCB-1254 (AROCLOR 1254)
45U	PCB-1260 (AROCLOR 1260)
26	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64318 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SB-05

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/18/91 0915 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE91

UG/KG	ANALYTICAL RESULTS
14U	CHLOROMETHANE
14U	BROMOMETHANE
14U	VINYL CHLORIDE
14U	CHLOROETHANE
70U	METHYLENE CHLORIDE
60U	ACETONE
14U	CARBON DISULFIDE
14U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
14U	1,1-DICHLOROETHANE
14U	1,2-DICHLOROETHENE (TOTAL)
14U	CHLOROFORM
14U	1,2-DICHLOROETHANE
14U	METHYL ETHYL KETONE
14U	1,1,1-TRICHLOROETHANE
14U	CARBON TETRACHLORIDE
14U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
14U	1,2-DICHLOROPROPANE
14U	CIS-1,3-DICHLOROPROPENE
14U	TRICHLOROETHENE(TRICHLOROETHYLENE)
14U	DIBROMOCHLOROMETHANE
14U	1,1,2-TRICHLOROETHANE
14U	BENZENE
14U	TRANS-1,3-DICHLOROPROPENE
14U	BROMOFORM
14U	METHYL ISOBUTYL KETONE
14U	METHYL BUTYL KETONE
14U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
14U	1,1,2,2-TETRACHLOROETHANE
14U	TOLUENE
14U	CHLOROBENZENE
14U	ETHYL BENZENE
14U	STYRENE
14U	TOTAL XYLENES
31	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64318 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SB-05

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/18/91 0915 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE91

UG/KG	ANALYTICAL RESULTS
470U	PHENOL
470U	BIS(2-CHLOROETHYL) ETHER
470U	2-CHLOROPHENOL
470U	1,3-DICHLOROBENZENE
470U	1,4-DICHLOROBENZENE
470U	1,2-DICHLOROBENZENE
470U	2-METHYLPHENOL
470U	2,2'-CHLOROISOPROPYLETHER
470UJ	(3-AND/OR 4-)METHYLPHENOL
470U	N-NITROSODI-N-PROPYLAMINE
470U	HEXACHLOROETHANE
470U	NITROBENZENE
470U	ISOPHORONE
470U	2-NITROPHENOL
470U	2,4-DIMETHYLPHENOL
470U	BIS(2-CHLOROETHOXY) METHANE
470U	2,4-DICHLOROPHENOL
470U	1,2,4-TRICHLOROBENZENE
470U	NAPHTHALENE
470U	4-CHLOROANILINE
470U	HEXACHLOROBUTADIENE
470U	4-CHLORO-3-METHYLPHENOL
470U	2-METHYLNAPHTHALENE
470U	HEXACHLOROCYCLOPENTADIENE (HCCP)
470UJ	2,4,6-TRICHLOROPHENOL
1200U	2,4,5-TRICHLOROPHENOL
470U	2-CHLORONAPHTHALENE
1200U	2-NITROANILINE
470U	DIMETHYL PHTHALATE
470UR	ACENAPHTHYLENE
470U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
1200U	3-NITROANILINE
470U	ACENAPHTHENE
1200U	2,4-DINITROPHENOL
1200U	4-NITROPHENOL
470U	DIBENZOFURAN
470U	2,4-DINITROTOLUENE
470U	DIETHYL PHTHALATE
470U	4-CHLOROPHENYL PHENYL ETHER
470U	FLUORENE
1200U	4-NITROANILINE
1200U	2-METHYL-4,6-DINITROPHENOL
470U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
470U	4-BROMOPHENYL PHENYL ETHER
470U	HEXACHLOROBENZENE (HCB)
1200U	PENTACHLOROPHENOL
470U	PHENANTHRENE
470U	ANTHRACENE
470U	CARBAZOLE
470U	DI-N-BUTYLPHTHALATE
470U	FLUORANTHENE
470U	PYRENE
470U	BENZYL BUTYL PHTHALATE
470U	3,3'-DICHLOROBENZIDINE
470U	BENZO(A)ANTHRACENE
470U	CHRYSENE
470U	BIS(2-ETHYLHEXYL) PHTHALATE
470U	DI-N-OCTYLPHTHALATE
470U	BENZO(B AND/OR K)FLUORANTHENE
470U	BENZO-A-PYRENE
470U	INDENO (1,2,3-CD) PYRENE
470U	DIBENZO(A,H)ANTHRACENE
470UJ	BENZO(GHI)PERYLENE
31	PERCENT MOISTURE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64318 SAMPLE TYPE: SOIL	PROG ELEM: NSF COLLECTED BY: J HATCHER
SOURCE: CBS RECORDS	CITY: CARROLLTON ST: GA
STATION ID: SB-05	COLLECTION START: 12/18/91 0915 STOP: 00/00/00
CASE.NO.: 17582 SAS NO.:	D. NO.: CE91 MD NO: CE91

ANALYTICAL RESULTS UG/KG

200JN DODECANOIC ACID

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64318 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SB-05
CASE NUMBER: 17582 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/18/91 0915 STOP: 00/00/00
D. NUMBER: CE91

UG/KG	ANALYTICAL RESULTS
2.5U	ALPHA-BHC
2.5U	BETA-BHC
2.5U	DELTA-BHC
2.5U	GAMMA-BHC (LINDANE)
2.5U	HEPTACHLOR
2.5U	ALDRIN
2.5U	HEPTACHLOR EPOXIDE
2.5U	ENDOSULFAN I (ALPHA)
4.8U	DIELDRIN
4.8U	4,4'-DDE (P,P'-DDE)
4.8U	ENDRIN
4.8U	ENDOSULFAN II (BETA)
4.8U	4,4'-DDD (P,P'-DDD)
4.8U	ENDOSULFAN SULFATE
4.8U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
25U	METHOXYCHLOR
4.8U	ENDRIN KETONE
4.8U	ENDRIN ALDEHYDE
	CHLORDANE (TECH. MIXTURE) /1
2.5U	GAMMA-CHLORDANE /2
2.5U	ALPHA-CHLORDANE /2
250U	TOXAPHENE
48U	PCB-1016 (AROCLOR 1016)
97UR	PCB-1221 (AROCLOR 1221)
48U	PCB-1232 (AROCLOR 1232)
48U	PCB-1242 (AROCLOR 1242)
48U	PCB-1248 (AROCLOR 1248)
48U	PCB-1254 (AROCLOR 1254)
48U	PCB-1260 (AROCLOR 1260)
31	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64320 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SB-07

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/18/91 0950 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE94

UG/KG	ANALYTICAL RESULTS
14U	CHLOROMETHANE
14U	BROMOMETHANE
14U	VINYL CHLORIDE
14U	CHLOROETHANE
160U	METHYLENE CHLORIDE
50U	ACETONE
14U	CARBON DISULFIDE
14U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
14U	1,1-DICHLOROETHANE
14U	1,2-DICHLOROETHENE (TOTAL)
14U	CHLOROFORM
14U	1,2-DICHLOROETHANE
14U	METHYL ETHYL KETONE
14U	1,1,1-TRICHLOROETHANE
14U	CARBON TETRACHLORIDE
14U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
14U	1,2-DICHLOROPROPANE
14U	CIS-1,3-DICHLOROPROPENE
14U	TRICHLOROETHENE(TRICHLOROETHYLENE)
14U	DIBROMOCHLOROMETHANE
14U	1,1,2-TRICHLOROETHANE
14U	BENZENE
14U	TRANS-1,3-DICHLOROPROPENE
14U	BROMOFORM
14U	METHYL ISOBUTYL KETONE
14U	METHYL BUTYL KETONE
14U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
14U	1,1,2,2-TETRACHLOROETHANE
14U	TOLUENE
14U	CHLOROBENZENE
14U	ETHYL BENZENE
14U	STYRENE
14U	TOTAL XYLENES
29	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64320 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SB-07

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/18/91 0950 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE94

UG/KG	ANALYTICAL RESULTS
460U	PHENOL
460U	BIS(2-CHLOROETHYL) ETHER
460U	2-CHLOROPHENOL
460U	1,3-DICHLOROBENZENE
460U	1,4-DICHLOROBENZENE
460U	1,2-DICHLOROBENZENE
460U	2-METHYLPHENOL
460U	2,2'-CHLOROISOPROPYLETHER
460UJ	(3-AND/OR 4-)METHYLPHENOL
460U	N-NITROSODI-N-PROPYLAMINE
460U	HEXACHLOROETHANE
460U	NITROBENZENE
460U	ISOPHORONE
460U	2-NITROPHENOL
460U	2,4-DIMETHYLPHENOL
460U	BIS(2-CHLOROETHOXY) METHANE
460U	2,4-DICHLOROPHENOL
460U	1,2,4-TRICHLOROBENZENE
460U	NAPHTHALENE
460U	4-CHLOROANILINE
460U	HEXACHLOROBUTADIENE
460U	4-CHLORO-3-METHYLPHENOL
460U	2-METHYLNAPHTHALENE
460U	HEXACHLOROCYCLOPENTADIENE (HCCP)
460UJ	2,4,6-TRICHLOROPHENOL
1100U	2,4,5-TRICHLOROPHENOL
460U	2-CHLORONAPHTHALENE
1100U	2-NITROANILINE
460U	DIMETHYL PHTHALATE
460UR	ACENAPHTHYLENE
460U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
1100U	3-NITROANILINE
460U	ACENAPHTHENE
1100U	2,4-DINITROPHENOL
1100U	4-NITROPHENOL
460U	DIBENZOFURAN
460U	2,4-DINITROTOLUENE
460U	DIETHYL PHTHALATE
460U	4-CHLOROPHENYL PHENYL ETHER
460U	FLUORENE
1100U	4-NITROANILINE
1100U	2-METHYL-4,6-DINITROPHENOL
460U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
460U	4-BROMOPHENYL PHENYL ETHER
460U	HEXACHLOROBENZENE (HCB)
1100U	PENTACHLOROPHENOL
460U	PHENANTHRENE
460U	ANTHRACENE
460U	CARBAZOLE
460U	DI-N-BUTYLPHTHALATE
460U	FLUORANTHENE
460U	PYRENE
460U	BENZYL BUTYL PHTHALATE
460U	3,3'-DICHLOROBENZIDINE
460U	BENZO(A)ANTHRACENE
460U	CHRYSENE
460U	BIS(2-ETHYLHEXYL) PHTHALATE
460U	DI-N-OCTYLPHTHALATE
460U	BENZO(B AND/OR K)FLUORANTHENE
460U	BENZO-A-PYRENE
460U	INDENO (1,2,3-CD) PYRENE
460U	DIBENZO(A,H)ANTHRACENE
460UJ	BENZO(GHI)PERYLENE
29	PERCENT MOISTURE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

*** ***
** PROJECT NO. 92-0189 SAMPLE NO. 64320 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: J HATCHER **
** SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA **
** STATION ID: SB-07 COLLECTION START: 12/18/91 0950 STOP: 00/00/00 **
** CASE NO.: 17582 SAS NO.: D. NO.: CE94 MD NO: CE94 **
** **
*** ***

ANALYTICAL RESULTS UG/KG

1000J 1 UNIDENTIFIED COMPOUND

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64320 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SB-07
CASE NUMBER: 17582 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/18/91 0950 STOP: 00/00/00
D. NUMBER: CE94

UG/KG	ANALYTICAL RESULTS
2.4U	ALPHA-BHC
2.4U	BETA-BHC
2.4U	DELTA-BHC
2.4U	GAMMA-BHC (LINDANE)
2.4U	HEPTACHLOR
2.4U	ALDRIN
2.4U	HEPTACHLOR EPOXIDE
2.4U	ENDOSULFAN I (ALPHA)
4.6U	DIELDRIN
4.6U	4,4'-DDE (P,P'-DDE)
4.6U	ENDRIN
4.6U	ENDOSULFAN II (BETA)
4.6U	4,4'-DDD (P,P'-DDD)
4.6U	ENDOSULFAN SULFATE
4.6U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
24U	METHOXYCHLOR
4.6U	ENDRIN KETONE
4.6U	ENDRIN ALDEHYDE
	CHLORDANE (TECH. MIXTURE) /1
2.4U	GAMMA-CHLORDANE /2
2.4U	ALPHA-CHLORDANE /2
240U	TOXAPHENE
46U	PCB-1016 (AROCLOR 1016)
94UR	PCB-1221 (AROCLOR 1221)
46U	PCB-1232 (AROCLOR 1232)
46U	PCB-1242 (AROCLOR 1242)
46U	PCB-1248 (AROCLOR 1248)
46U	PCB-1254 (AROCLOR 1254)
46U	PCB-1260 (AROCLOR 1260)
29	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

01/31/92

METALS DATA REPORT

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** PROJECT NO. 92-0189 SAMPLE NO. 64303 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: J HATCHER **
** SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA **
** STATION ID: PB-01 COLLECTION START: 12/16/91 1030 STOP: 00/00/00 **
** CASE NUMBER: 17582 SAS NUMBER: MD NUMBER: CE77 **

*** ***

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
66UJ	ALUMINUM	1U	MANGANESE
31U	ANTIMONY	0.20U	MERCURY
2U	ARSENIC	4U	NICKEL
1U	BARIUM	76U	POTASSIUM
1U	BERYLLIUM	4UR	SELENIUM
1U	CADMIUM	5U	SILVER
92U	CALCIUM	34U	SODIUM
2U	CHROMIUM	3UR	THALLIUM
3U	COBALT	NA	TIN
3U	COPPER	3U	VANADIUM
35U	IRON	11U	ZINC
2UJ	LEAD		
68U	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

01/31/92

SPECIFIED ANALYSIS DATA REPORT

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**   PROJECT NO. 92-0189   SAMPLE NO. 64303  SAMPLE TYPE: GROUNDWA    PROG ELEM: NSF   COLLECTED BY: J HATCHER            **
**   SOURCE: CBS RECORDS                                              CITY: CARROLLTON           ST: GA                   **
**   STATION ID: PB-01                                                COLLECTION START: 12/16/91  1030   STOP: 00/00/00   **
**   CASE.NO.: 17582          SAS NO.:                                D. NO.:                    MD NO: CE77              **
**                                                                                                                        **
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
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RESULTS	UNITS	PARAMETER
10UJ	UG/L	CYANIDE

REMARKS
HOLDING TIME EXCEEDED-CN

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

01/31/92

METALS DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64308 SAMPLE TYPE: GROUNDA PROG ELEM: NSF COLLECTED BY: J HATCHER
SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA
STATION ID: MW-01 COLLECTION START: 12/17/91 1005 STOP: 00/00/00
CASE NUMBER: 17582 SAS NUMBER: MD NUMBER: CE82

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
960J	ALUMINUM	26	MANGANESE
31U	ANTIMONY	0.20U	MERCURY
2U	ARSENIC	4U	NICKEL
30U	BARIUM	740U	POTASSIUM
1U	BERYLLIUM	4UR	SELENIUM
1U	CADMIUM	5U	SILVER
630U	CALCIUM	1700U	SODIUM
3J	CHROMIUM	3UR	THALLIUM
3U	COBALT	NA	TIN
3U	COPPER	3U	VANADIUM
660	IRON	30U	ZINC
3UJ	LEAD		
640U	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

01/31/92

SPECIFIED ANALYSIS DATA REPORT

*** ***
** PROJECT NO. 92-0189 SAMPLE NO. 64308 SAMPLE TYPE: GROUNDA PROG ELEM: NSF COLLECTED BY: J HATCHER **
** SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA **
** STATION ID: MW-01 COLLECTION START: 12/17/91 1005 STOP: 00/00/00 **
** CASE.NO.: 17582 SAS NO.: D. NO.: CE82 MD NO: CE82 **
** **
*** ***

RESULTS	UNITS	PARAMETER
10UJ	UG/L	CYANIDE

REMARKS
HOLDING TIME EXCEEDED-CN

REMARKS

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 01/31/92

PROJECT NO. 92-0189 SAMPLE NO. 64309 SAMPLE TYPE: GROUNDA
SOURCE: CBS RECORDS
STATION ID: MW-02
CASE NUMBER: 17582 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1110 STOP: 00/00/00
MD NUMBER: CE83

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
31000J	ALUMINUM	1600	MANGANESE
31U	ANTIMONY	0.95	MERCURY
3U	ARSENIC	12	NICKEL
62	BARIUM	1300U	POTASSIUM
1U	BERYLLIUM	20UR	SELENIUM
1U	CADMIUM	5U	SILVER
3100	CALCIUM	2300U	SODIUM
69	CHROMIUM	3UR	THALLIUM
19	COBALT	NA	TIN
27	COPPER	170	VANADIUM
55000	IRON	40U	ZINC
29J	LEAD		
2200	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

01/31/92

SPECIFIED ANALYSIS DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64309 SAMPLE TYPE: GROUNDA PROG ELEM: NSF COLLECTED BY: J HATCHER
SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA
STATION ID: MW-02 COLLECTION START: 12/17/91 1110 STOP: 00/00/00
CASE.NO.: 17582 SAS NO.: D. NO.: CE83 MD NO: CE83

RESULTS	UNITS	PARAMETER
10UJ	UG/L	CYANIDE

REMARKS
HOLDING TIME EXCEEDED-CN

REMARKS

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.   02/18/92

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 92-0189   SAMPLE NO. 64311   SAMPLE TYPE: SOIL   PROG ELEM: NSF   COLLECTED BY: J HATCHER
SOURCE: CBS RECORDS   CITY: CARROLLTON   ST: GA
STATION ID: SD-02   COLLECTION START: 12/17/91 1340   STOP: 00/00/00
CASE NUMBER: 17582   SAS NUMBER: D. NUMBER: CE85

UG/KG	ANALYTICAL RESULTS	UG/KG	ANALYTICAL RESULTS
2.5U	ALPHA-BHC	25U	METHOXYCHLOR
2.5U	BETA-BHC	4.9U	ENDRIN KETONE
2.5U	DELTA-BHC	4.9U	ENDRIN ALDEHYDE
2.5U	GAMMA-BHC (LINDANE)		CHLORDANE (TECH. MIXTURE) /1
2.5U	HEPTACHLOR	2.5U	GAMMA-CHLORDANE /2
2.5U	ALDRIN	2.5U	ALPHA-CHLORDANE /2
2.5U	HEPTACHLOR EPOXIDE	250U	TOXAPHENE
2.5U	ENDOSULFAN I (ALPHA)	49U	PCB-1016 (AROCLOR 1016)
4.9U	DIELDRIN	99UR	PCB-1221 (AROCLOR 1221)
4.9U	4,4'-DDE (P,P'-DDE)	49U	PCB-1232 (AROCLOR 1232)
4.9U	ENDRIN	49U	PCB-1242 (AROCLOR 1242)
4.9U	ENDOSULFAN II (BETA)	49U	PCB-1248 (AROCLOR 1248)
4.9U	4,4'-DDD (P,P'-DDD)	49U	PCB-1254 (AROCLOR 1254)
4.9U	ENDOSULFAN SULFATE	49U	PCB-1260 (AROCLOR 1260)
4.9U	4,4'-DDT (P,P'-DDT)	32	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64312 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SD-03

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1405 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE86

UG/KG	ANALYTICAL RESULTS
16U	CHLOROMETHANE
16U	BROMOMETHANE
16U	VINYL CHLORIDE
16U	CHLOROETHANE
90U	METHYLENE CHLORIDE
80U	ACETONE
16U	CARBON DISULFIDE
16U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
16U	1,1-DICHLOROETHANE
16U	1,2-DICHLOROETHENE (TOTAL)
16U	CHLOROFORM
16U	1,2-DICHLOROETHANE
16U	METHYL ETHYL KETONE
16U	1,1,1-TRICHLOROETHANE
16U	CARBON TETRACHLORIDE
16U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
16U	1,2-DICHLOROPROPANE
16U	CIS-1,3-DICHLOROPROPENE
16U	TRICHLOROETHENE(TRICHLOROETHYLENE)
16U	DIBROMOCHLOROMETHANE
16U	1,1,2-TRICHLOROETHANE
16U	BENZENE
16U	TRANS-1,3-DICHLOROPROPENE
16U	BROMOFORM
16U	METHYL ISOBUTYL KETONE
16U	METHYL BUTYL KETONE
16U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
16U	1,1,2,2-TETRACHLOROETHANE
16U	TOLUENE
16U	CHLOROBENZENE
16U	ETHYL BENZENE
16U	STYRENE
16U	TOTAL XYLENES
37	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

MISCELLANEOUS PURGEABLE ORGANICS - DATA REPORT

*** ***
** PROJECT NO. 92-0189 SAMPLE NO. 64312 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: J HATCHER **
** SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA **
** STATION ID: SD-03 COLLECTION START: 12/17/91 1405 STOP: 00/00/00 **
** CASE.NO.: 17582 SAS NO.: D. NO.: CE86 MD NO: CE86 **
** **
*** ***

ANALYTICAL RESULTS UG/KG

80JN PENTYNOL

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

EXTRACTABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64312 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SD-03

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1405 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE86

UG/KG	ANALYTICAL RESULTS
510U	PHENOL
510U	BIS(2-CHLOROETHYL) ETHER
510U	2-CHLOROPHENOL
510U	1,3-DICHLOROBENZENE
510U	1,4-DICHLOROBENZENE
510U	1,2-DICHLOROBENZENE
510U	2-METHYLPHENOL
510U	2,2'-CHLOROISOPROPYLETHER
510UJ	(3-AND/OR 4-)METHYLPHENOL
510U	N-NITROSODI-N-PROPYLAMINE
510U	HEXACHLOROETHANE
510U	NITROBENZENE
510U	ISOPHORONE
510U	2-NITROPHENOL
510U	2,4-DIMETHYLPHENOL
510U	BIS(2-CHLOROETHOXY) METHANE
510U	2,4-DICHLOROPHENOL
510U	1,2,4-TRICHLOROBENZENE
510U	NAPHTHALENE
510U	4-CHLOROANILINE
510U	HEXACHLOROBUTADIENE
510U	4-CHLORO-3-METHYLPHENOL
510U	2-METHYLNAPHTHALENE
510U	HEXACHLOROCYCLOPENTADIENE (HCCP)
510UJ	2,4,6-TRICHLOROPHENOL
1200U	2,4,5-TRICHLOROPHENOL
510U	2-CHLORONAPHTHALENE
1200U	2-NITROANILINE
510U	DIMETHYL PHTHALATE
510UR	ACENAPHTHYLENE
510U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
1200U	3-NITROANILINE
510U	ACENAPHTHENE
1200U	2,4-DINITROPHENOL
1200U	4-NITROPHENOL
510U	DIBENZOFURAN
510U	2,4-DINITROTOLUENE
510U	DIETHYL PHTHALATE
510U	4-CHLOROPHENYL PHENYL ETHER
510U	FLUORENE
1200U	4-NITROANILINE
1200U	2-METHYL-4,6-DINITROPHENOL
510U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
510U	4-BROMOPHENYL PHENYL ETHER
510U	HEXACHLOROBENZENE (HCB)
1200U	PENTACHLOROPHENOL
510U	PHENANTHRENE
510U	ANTHRACENE
510U	CARBAZOLE
510U	DI-N-BUTYLPHTHALATE
510U	FLUORANTHENE
510U	PYRENE
510U	BENZYL BUTYL PHTHALATE
510U	3,3'-DICHLOROBENZIDINE
510U	BENZO(A)ANTHRACENE
510U	CHRYSENE
510U	BIS(2-ETHYLHEXYL) PHTHALATE
510U	DI-N-OCTYLPHTHALATE
510U	BENZO(B AND/OR K)FLUORANTHENE
510U	BENZO-A-PYRENE
510U	INDENO (1,2,3-CD) PYRENE
510U	DIBENZO(A,H)ANTHRACENE
510UJ	BENZO(GHI)PERYLENE
37	PERCENT MOISTURE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

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**   PROJECT NO. 92-0189  SAMPLE NO. 64312  SAMPLE TYPE: SOIL      PROG ELEM: NSF   COLLECTED BY: J HATCHER              **
**   SOURCE: CBS RECORDS                                           CITY: CARROLLTON          ST: GA                      **
**   STATION ID: SD-03                                             COLLECTION START: 12/17/91  1405  STOP: 00/00/00      **
**   CASE.NO.: 17582         SAS NO.:                              D. NO.: CE86              MD NO: CE86                 **
**                                                                                                                       **
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ANALYTICAL RESULTS UG/KG

5000J	7 UNIDENTIFIED COMPOUNDS
700JN	TETRAMETHYLPHENANTHRENE

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64312 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SD-03
CASE NUMBER: 17582 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1405 STOP: 00/00/00
D. NUMBER: CE86

UG/KG	ANALYTICAL RESULTS	UG/KG	ANALYTICAL RESULTS
2.4U	ALPHA-BHC	24U	METHOXYCHLOR
2.4U	BETA-BHC	4.6U	ENDRIN KETONE
2.4U	DELTA-BHC	4.6U	ENDRIN ALDEHYDE
2.4U	GAMMA-BHC (LINDANE)		CHLORDANE (TECH. MIXTURE) /1
2.4U	HEPTACHLOR	2.4U	GAMMA-CHLORDANE /2
2.4U	ALDRIN	2.4U	ALPHA-CHLORDANE /2
2.4U	HEPTACHLOR EPOXIDE	240U	TOXAPHENE
2.4U	ENDOSULFAN I (ALPHA)	46U	PCB-1016 (AROCLOR 1016)
4.6U	DIELDRIN	93UR	PCB-1221 (AROCLOR 1221)
4.6U	4,4'-DDE (P,P'-DDE)	46U	PCB-1232 (AROCLOR 1232)
4.6U	ENDRIN	46U	PCB-1242 (AROCLOR 1242)
4.6U	ENDOSULFAN II (BETA)	46U	PCB-1248 (AROCLOR 1248)
4.6U	4,4'-DDD (P,P'-DDD)	46U	PCB-1254 (AROCLOR 1254)
4.6U	ENDOSULFAN SULFATE	46U	PCB-1260 (AROCLOR 1260)
4.6U	4,4'-DDT (P,P'-DDT)	28	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

01/31/92

METALS DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64310 SAMPLE TYPE: GROUNDA PROG ELEM: NSF COLLECTED BY: J HATCHER
SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA
STATION ID: MW-03 COLLECTION START: 12/17/91 1210 STOP: 00/00/00
CASE NUMBER: 17582 SAS NUMBER: MD NUMBER: CE84

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
160000J	ALUMINUM	4000	MANGANESE
51J	ANTIMONY	0.20U	MERCURY
2U	ARSENIC	100	NICKEL
470	BARIUM	6500	POTASSIUM
2U	BERYLLIUM	20UR	SELENIUM
1U	CADMIUM	5U	SILVER
8400	CALCIUM	3500	SODIUM
480	CHROMIUM	3UR	THALLIUM
120	COBALT	NA	TIN
130	COPPER	860	VANADIUM
290000	IRON	260	ZINC
3UJ	LEAD		
12000	MAGNESIUM		

REMARKS
HOLDING TIME EXCEEDED-CN

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

01/31/92

SPECIFIED ANALYSIS DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64310 SAMPLE TYPE: GROUNDA	PROG ELEM: NSF COLLECTED BY: J HATCHER
SOURCE: CBS RECORDS	CITY: CARROLLTON ST: GA
STATION ID: MW-03	COLLECTION START: 12/17/91 1210 STOP: 00/00/00
CASE.NO.: 17582 SAS NO.:	D. NO.: CE84 MD NO: CE84

RESULTS	UNITS	PARAMETER
10UJ	UG/L	CYANIDE

REMARKS
HOLDING TIME EXCEEDED-CN

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 01/31/92

PROJECT NO. 92-0189 SAMPLE NO. 64307 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SD-01
CASE NUMBER: 17582 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 0915 STOP: 00/00/00
MD NUMBER: CE81

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
13000	ALUMINUM	650	MANGANESE
2.1UR	ANTIMONY	0.14U	MERCURY
1UJ	ARSENIC	74	NICKEL
56	BARIUM	2400	POTASSIUM
0.27U	BERYLLIUM	1UR	SELENIUM
0.27U	CADMIUM	0.53UJ	SILVER
2300	CALCIUM	90U	SODIUM
210	CHROMIUM	0.52U	THALLIUM
33	COBALT	NA	TIN
22	COPPER	61	VANADIUM
33000	IRON	36	ZINC
2.3	LEAD	30	PERCENT MOISTURE
8600	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.   01/31/92

SPECIFIED ANALYSIS DATA REPORT

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**   PROJECT NO. 92-0189   SAMPLE NO. 64307  SAMPLE TYPE: SOIL        PROG ELEM: NSF   COLLECTED BY: J HATCHER              **
**   SOURCE: CBS RECORDS                                              CITY: CARROLLTON            ST: GA                      **
**   STATION ID: SD-01                                                COLLECTION START: 12/17/91  0915   STOP: 00/00/00      **
**   CASE.NO.: 17582           SAS NO.:                               D. NO.: CE81                MD NO: CE81                 **
**                                                                                                                             **
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
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RESULTS	UNITS	PARAMETER
6.8UR	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE   *NA-NOT ANALYZED   *NAI-INTERFERENCES   *J-ESTIMATED VALUE   *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN   *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.
01/31/92

METALS DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64311 SAMPLE TYPE: SOIL
PROG ELEM: NSF COLLECTED BY: J HATCHER
SOURCE: CBS RECORDS
CITY: CARROLLTON ST: GA
STATION ID: SD-02
COLLECTION START: 12/17/91 1340 STOP: 00/00/00
CASE NUMBER: 17582 SAS NUMBER:
MD NUMBER: CE85

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
16000	ALUMINUM	1100	MANGANESE
2.1UR	ANTIMONY	0.14U	MERCURY
1UJ	ARSENIC	16	NICKEL
45	BARIUM	300U	POTASSIUM
0.26U	BERYLLIUM	1.1UR	SELENIUM
0.26U	CADMIUM	0.52UJ	SILVER
570	CALCIUM	50U	SODIUM
270	CHROMIUM	0.54U	THALLIUM
17	COBALT	NA	TIN
23	COPPER	160	VANADIUM
48000	IRON	28	ZINC
8.1	LEAD	27	PERCENT MOISTURE
510	MAGNESIUM		

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

01/31/92

SPECIFIED ANALYSIS DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64311 SAMPLE TYPE: SOIL	PROG ELEM: NSF COLLECTED BY: J HATCHER	
SOURCE: CBS RECORDS	CITY: CARROLLTON	ST: GA
STATION ID: SD-02	COLLECTION START: 12/17/91 1340 STOP: 00/00/00	
CASE.NO.: 17582 SAS NO.:	D. NO.: CE85	MD NO: CE85

RESULTS	UNITS	PARAMETER
6.4UR	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 01/31/92

PROJECT NO. 92-0189 SAMPLE NO. 64312 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SD-03
CASE NUMBER: 17582 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1405 STOP: 00/00/00
MD NUMBER: CE86

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
14000	ALUMINUM	520	MANGANESE
2.3UR	ANTIMONY	0.12U	MERCURY
1UJ	ARSENIC	10	NICKEL
75	BARIUM	830	POTASSIUM
0.50J	BERYLLIUM	1.1UR	SELENIUM
0.28U	CADMIUM	0.57UJ	SILVER
470	CALCIUM	50U	SODIUM
100	CHROMIUM	0.57U	THALLIUM
14	COBALT	NA	TIN
21	COPPER	130	VANADIUM
29000	IRON	30	ZINC
6.6	LEAD	33	PERCENT MOISTURE
1300	MAGNESIUM		

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

01/31/92

SPECIFIED ANALYSIS DATA REPORT

*** ***
** PROJECT NO. 92-0189 SAMPLE NO. 64312 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: J HATCHER **
** SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA **
** STATION ID: SD-03 COLLECTION START: 12/17/91 1405 STOP: 00/00/00 **
** CASE.NO.: 17582 SAS NO.: D. NO.: CE86 MD NO: CE86 **
** **
*** ***

RESULTS	UNITS	PARAMETER
7.3UR	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

01/31/92

METALS DATA REPORT

** PROJECT NO. 92-0189 SAMPLE NO. 64304 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: J HATCHER **
** SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA **
** STATION ID: SS-01 COLLECTION START: 12/16/91 1545 STOP: 00/00/00 **
** CASE NUMBER: 17582 SAS NUMBER: MD NUMBER: CE78 **

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
5800	ALUMINUM	340	MANGANESE
1.8UR	ANTIMONY	0.11U	MERCURY
2.3J	ARSENIC	4.1J	NICKEL
32	BARIUM	280U	POTASSIUM
0.23U	BERYLLIUM	0.87UR	SELENIUM
0.23U	CADMIUM	0.46U	SILVER
490	CALCIUM	30U	SODIUM
43	CHROMIUM	0.43U	THALLIUM
6.8	COBALT	NA	TIN
6.3	COPPER	41	VANADIUM
12000	IRON	8U	ZINC
9.1	LEAD	14	PERCENT MOISTURE
370	MAGNESIUM		

REMARKS

REMARKS

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

01/31/92

SPECIFIED ANALYSIS DATA REPORT

*** ***
** PROJECT NO. 92-0189 SAMPLE NO. 64304 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: J HATCHER **
** SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA **
** STATION ID: SS-01 COLLECTION START: 12/16/91 1545 STOP: 00/00/00 **
** CASE.NO.: 17582 SAS NO.: D. NO.: CE78 MD NO: CE78 **
** **
*** ***

RESULTS	UNITS	PARAMETER
5.7UR	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 01/31/92

PROJECT NO. 92-0189 SAMPLE NO. 64306 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-02
CASE NUMBER: 17582 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/16/91 1635 STOP: 00/00/00
MD NUMBER: CE80

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
13000	ALUMINUM	840	MANGANESE
1.8UR	ANTIMONY	0.11U	MERCURY
2UJ	ARSENIC	3.6	NICKEL
53	BARIUM	360U	POTASSIUM
0.55J	BERYLLIUM	4.7UR	SELENIUM
0.23U	CADMIUM	0.46UJ	SILVER
940	CALCIUM	40U	SODIUM
43	CHROMIUM	0.47U	THALLIUM
13	COBALT	NA	TIN
14	COPPER	89	VANADIUM
26000	IRON	17	ZINC
13	LEAD	16	PERCENT MOISTURE
420	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

01/31/92

SPECIFIED ANALYSIS DATA REPORT

PROJECT NO. 92-0189	SAMPLE NO. 64306 SAMPLE TYPE: SOIL	PROG ELEM: NSF COLLECTED BY: J HATCHER
SOURCE: CBS RECORDS		CITY: CARROLLTON ST: GA
STATION ID: SS-02		COLLECTION START: 12/16/91 1635 STOP: 00/00/00
CASE.NO.: 17582	SAS NO.:	D. NO.: CE80 MD NO: CE80

RESULTS	UNITS	PARAMETER
5.9UR	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 01/31/92

PROJECT NO. 92-0189 SAMPLE NO. 64313 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: J HATCHER
SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA
STATION ID: SS-03 COLLECTION START: 12/17/91 1435 STOP: 00/00/00
CASE NUMBER: 17582 SAS NUMBER: MD NUMBER: CE87

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
21000	ALUMINUM	770	MANGANESE
2.1UR	ANTIMONY	0.11U	MERCURY
1UJ	ARSENIC	13	NICKEL
70	BARIUM	1300	POTASSIUM
0.27U	BERYLLIUM	5.3UR	SELENIUM
0.27U	CADMIUM	0.53UJ	SILVER
1100	CALCIUM	70U	SODIUM
77	CHROMIUM	0.53U	THALLIUM
36	COBALT	NA	TIN
24	COPPER	160	VANADIUM
49000	IRON	31	ZINC
11	LEAD	26	PERCENT MOISTURE
1600	MAGNESIUM		

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.   01/31/92

SPECIFIED ANALYSIS DATA REPORT

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**   PROJECT NO. 92-0189   SAMPLE NO. 64313  SAMPLE TYPE: SOIL       PROG ELEM: NSF   COLLECTED BY: J HATCHER           **
**   SOURCE: CBS RECORDS                                             CITY: CARROLLTON             ST: GA                **
**   STATION ID: SS-03                                               COLLECTION START: 12/17/91  1435   STOP: 00/00/00  **
**   CASE.NO.: 17582          SAS NO.:                               D. NO.: CE87                MD NO: CE87            **
**                                                                                                                      **
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
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RESULTS	UNITS	PARAMETER
6.7UR	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE   *NA-NOT ANALYZED   *NAI-INTERFERENCES   *J-ESTIMATED VALUE   *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN   *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 01/31/92

PROJECT NO. 92-0189 SAMPLE NO. 64315 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-04
CASE NUMBER: 17582 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1525 STOP: 00/00/00
MD NUMBER: CE89

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
16000	ALUMINUM	770	MANGANESE
1.9UR	ANTIMONY	0.12U	MERCURY
1UJ	ARSENIC	15	NICKEL
44	BARIUM	500	POTASSIUM
0.24U	BERYLLIUM	5UR	SELENIUM
0.24U	CADMIUM	0.48UJ	SILVER
1000	CALCIUM	50U	SODIUM
69	CHROMIUM	0.50U	THALLIUM
17	COBALT	NA	TIN
20	COPPER	130	VANADIUM
37000	IRON	22	ZINC
11	LEAD	21	PERCENT MOISTURE
540	MAGNESIUM		

FOOTNOTES
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*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

01/31/92

SPECIFIED ANALYSIS DATA REPORT

*** ***
** PROJECT NO. 92-0189 SAMPLE NO. 64315 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: J HATCHER **
** SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA **
** STATION ID: SS-04 COLLECTION START: 12/17/91 1525 STOP: 00/00/00 **
** CASE.NO.: 17582 SAS NO.: D. NO.: CE89 MD NO: CE89 **
** **
*** ***

RESULTS	UNITS	PARAMETER
5.9UR	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 01/31/92

PROJECT NO. 92-0189 SAMPLE NO. 64317 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-05
CASE NUMBER: 17582 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/18/91 0900 STOP: 00/00/00
MD NUMBER: CE90

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
19000	ALUMINUM	770	MANGANESE
2UR	ANTIMONY	0.11U	MERCURY
2UJ	ARSENIC	14	NICKEL
58	BARIUM	1000	POTASSIUM
0.25U	BERYLLIUM	4.8UR	SELENIUM
0.25U	CADMIUM	0.51UJ	SILVER
2300	CALCIUM	60U	SODIUM
70	CHROMIUM	0.48U	THALLIUM
21	COBALT	NA	TIN
29	COPPER	150	VANADIUM
45000	IRON	29	ZINC
11	LEAD	22	PERCENT MOISTURE
1800	MAGNESIUM		

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

01/31/92

SPECIFIED ANALYSIS DATA REPORT

*** ***
** PROJECT NO. 92-0189 SAMPLE NO. 64317 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: J HATCHER **
** SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA **
** STATION ID: SS-05 COLLECTION START: 12/18/91 0900 STOP: 00/00/00 **
** CASE.NO.: 17582 SAS NO.: D. NO.: CE90 MD NO: CE90 **
** **
*** ***

RESULTS	UNITS	PARAMETER
6.2UR	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 01/31/92

PROJECT NO. 92-0189 SAMPLE NO. 64316 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: J HATCHER
SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA
STATION ID: SS-06 COLLECTION START: 12/17/91 1600 STOP: 00/00/00
CASE NUMBER: 17582 SAS NUMBER: MD NUMBER: CE92

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
18000	ALUMINUM	1000	MANGANESE
2UR	ANTIMONY	0.13U	MERCURY
1UJ	ARSENIC	5.6	NICKEL
44	BARIUM	640	POTASSIUM
0.26U	BERYLLIUM	5.2UR	SELENIUM
0.26U	CADMIUM	0.51UJ	SILVER
180	CALCIUM	50U	SODIUM
43	CHROMIUM	0.52U	THALLIUM
17	COBALT	NA	TIN
32	COPPER	130	VANADIUM
40000	IRON	37	ZINC
11	LEAD	24	PERCENT MOISTURE
840	MAGNESIUM		

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

01/31/92

SPECIFIED ANALYSIS DATA REPORT

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**   PROJECT NO. 92-0189   SAMPLE NO. 64316   SAMPLE TYPE: SOIL        PROG ELEM: NSF   COLLECTED BY: J HATCHER                         **
**   SOURCE: CBS RECORDS                                               CITY: CARROLLTON            ST: GA                              **
**   STATION ID: SS-06                                                 COLLECTION START: 12/17/91  1600  STOP: 00/00/00                **
**   CASE.NO.: 17582          SAS NO.:                                 D. NO.: CE92                MD NO: CE92                         **
**                                                                                                                                     **
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
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RESULTS	UNITS	PARAMETER
6.5UR	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 01/31/92

PROJECT NO. 92-0189 SAMPLE NO. 64319 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-07
CASE NUMBER: 17582 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/18/91 0935 STOP: 00/00/00
MD NUMBER: CE93

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
22000	ALUMINUM	680	MANGANESE
2UR	ANTIMONY	0.10U	MERCURY
0.51UJ	ARSENIC	11	NICKEL
54	BARIUM	880	POTASSIUM
0.25U	BERYLLIUM	1UR	SELENIUM
0.25U	CADMIUM	0.50UJ	SILVER
200	CALCIUM	50U	SODIUM
62	CHROMIUM	0.51U	THALLIUM
20	COBALT	NA	TIN
23	COPPER	150	VANADIUM
46000	IRON	45	ZINC
11	LEAD	23	PERCENT MOISTURE
1000	MAGNESIUM		

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

01/31/92

SPECIFIED ANALYSIS DATA REPORT

*** ***
** PROJECT NO. 92-0189 SAMPLE NO. 64319 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: J HATCHER **
** SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA **
** STATION ID: SS-07 COLLECTION START: 12/18/91 0935 STOP: 00/00/00 **
** CASE.NO.: 17582 SAS NO.: D. NO.: CE93 MD NO: CE93 **
** **
*** ***

RESULTS	UNITS	PARAMETER
6.5UR	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 01/31/92

** PROJECT NO. 92-0189 SAMPLE NO. 64305 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: J HATCHER **
** SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA **
** STATION ID: SB-01 COLLECTION START: 12/16/91 1600 STOP: 00/00/00 **
** CASE NUMBER: 17582 SAS NUMBER: MD NUMBER: CE79 **

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
13000	ALUMINUM	330	MANGANESE
1.8UR	ANTIMONY	0.11U	MERCURY
0.49UJ	ARSENIC	10	NICKEL
25	BARIUM	130U	POTASSIUM
0.23U	BERYLLIUM	4.9UR	SELENIUM
0.23U	CADMIUM	0.45UJ	SILVER
590	CALCIUM	40U	SODIUM
160	CHROMIUM	0.49U	THALLIUM
9	COBALT	NA	TIN
15	COPPER	99	VANADIUM
33000	IRON	9U	ZINC
15	LEAD	19	PERCENT MOISTURE
270	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

01/31/92

SPECIFIED ANALYSIS DATA REPORT

*** ***
** PROJECT NO. 92-0189 SAMPLE NO. 64305 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: J HATCHER **
** SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA **
** STATION ID: SB-01 COLLECTION START: 12/16/91 1600 STOP: 00/00/00 **
** CASE.NO.: 17582 SAS NO.: D. NO.: CE79 MD NO: CE79 **
** **
*** ***

RESULTS	UNITS	PARAMETER
5.7UR	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 01/31/92

PROJECT NO. 92-0189 SAMPLE NO. 64314 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SB-03
CASE NUMBER: 17582 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1500 STOP: 00/00/00
MD NUMBER: CE88

ANALYTICAL RESULTS

MG/KG		MG/KG	
24000	ALUMINUM	1000	MANGANESE
2.1UR	ANTIMONY	0.12U	MERCURY
0.52UJ	ARSENIC	32	NICKEL
110	BARIUM	2800	POTASSIUM
0.26U	BERYLLIUM	5.2UR	SELENIUM
0.26U	CADMIUM	0.52UJ	SILVER
120	CALCIUM	60U	SODIUM
77	CHROMIUM	0.52U	THALLIUM
54	COBALT	NA	TIN
33	COPPER	140	VANADIUM
41000	IRON	41	ZINC
8	LEAD	26	PERCENT MOISTURE
3400	MAGNESIUM		

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

01/31/92

SPECIFIED ANALYSIS DATA REPORT

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**   PROJECT NO. 92-0189   SAMPLE NO. 64314  SAMPLE TYPE: SOIL        PROG ELEM: NSF   COLLECTED BY: J HATCHER            **
**   SOURCE: CBS RECORDS                                              CITY: CARROLLTON            ST: GA                    **
**   STATION ID: SB-03                                                COLLECTION START: 12/17/91  1500   STOP: 00/00/00     **
**   CASE.NO.: 17582          SAS NO.:                                D. NO.: CE88                MD NO: CE88               **
**                                                                                                                          **
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
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RESULTS	UNITS	PARAMETER
6.6UR	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 01/31/92

PROJECT NO. 92-0189 SAMPLE NO. 64318 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: J HATCHER
SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA
STATION ID: SB-05 COLLECTION START: 12/18/91 0915 STOP: 00/00/00
CASE NUMBER: 17582 SAS NUMBER: MD NUMBER: CE91

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
24000	ALUMINUM	1000	MANGANESE
2.3UR	ANTIMONY	0.12U	MERCURY
0.57UJ	ARSENIC	18	NICKEL
110	BARIUM	2200	POTASSIUM
0.28U	BERYLLIUM	5.7UR	SELENIUM
0.28U	CADMIUM	0.57UJ	SILVER
170	CALCIUM	70U	SODIUM
73	CHROMIUM	0.57U	THALLIUM
47	COBALT	NA	TIN
27	COPPER	150	VANADIUM
45000	IRON	43	ZINC
12	LEAD	32	PERCENT MOISTURE
3100	MAGNESIUM		

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.
01/31/92

SPECIFIED ANALYSIS DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64318 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: J HATCHER
SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA
STATION ID: SB-05 COLLECTION START: 12/18/91 0915 STOP: 00/00/00
CASE.NO.: 17582 SAS NO.: D. NO.: CE91 MD NO: CE91

RESULTS	UNITS	PARAMETER
7.3UR	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 01/31/92

** PROJECT NO. 92-0189 SAMPLE NO. 64320 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: J HATCHER **
** SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA **
** STATION ID: SB-07 COLLECTION START: 12/18/91 0950 STOP: 00/00/00 **
** CASE NUMBER: 17582 SAS NUMBER: MD NUMBER: CE94 **

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
23000	ALUMINUM	670	MANGANESE
2.1UR	ANTIMONY	0.12U	MERCURY
2UJ	ARSENIC	10	NICKEL
48	BARIUM	660	POTASSIUM
0.26U	BERYLLIUM	5.1UR	SELENIUM
0.26U	CADMIUM	0.53UJ	SILVER
170	CALCIUM	50U	SODIUM
54	CHROMIUM	0.51U	THALLIUM
17	COBALT	NA	TIN
22	COPPER	140	VANADIUM
43000	IRON	32	ZINC
10	LEAD	27	PERCENT MOISTURE
820	MAGNESIUM		

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SPECIFIED ANALYSIS DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64320 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: J HATCHER
SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA
STATION ID: SB-07 COLLECTION START: 12/18/91 0950 STOP: 00/00/00
CASE.NO.: 17582 SAS NO.: D. NO.: CE94 MD NO: CE94

RESULTS	UNITS	PARAMETER
6.8UR	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.

APPENDIX C

PHOTODOCUMENTATION LOG

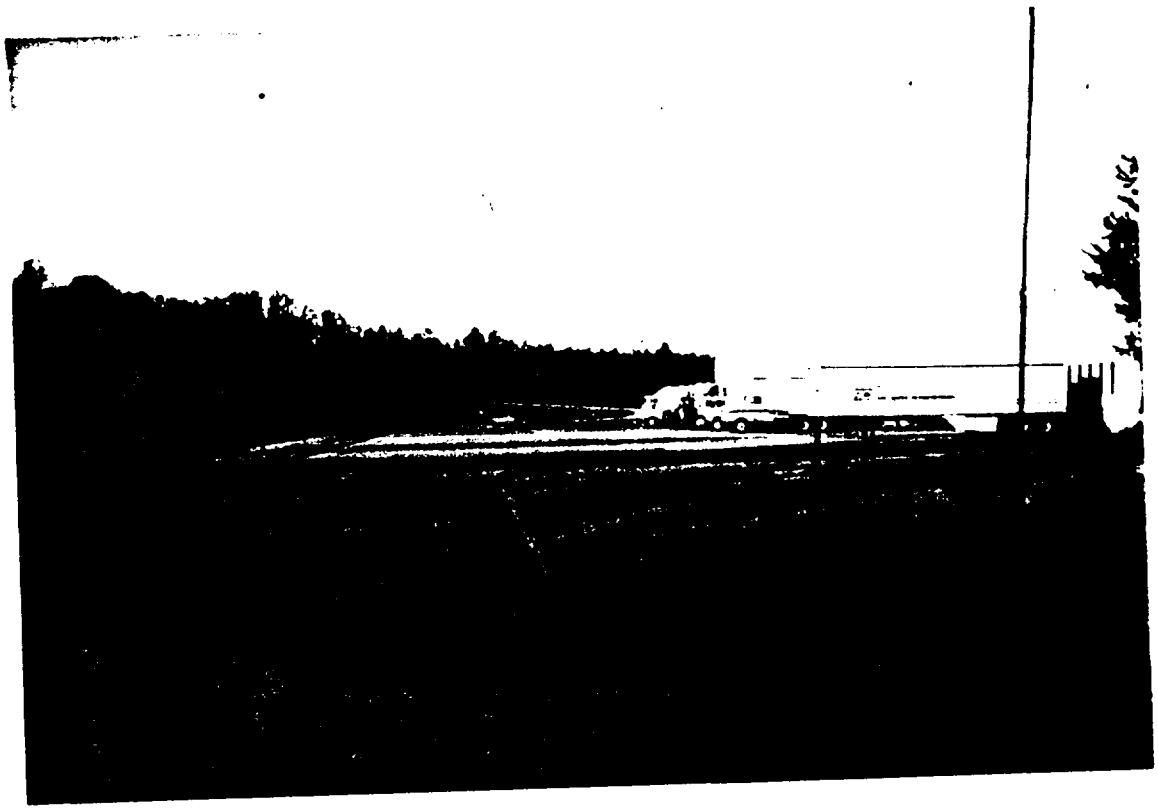

Photo 1 - Shipping area of CBS Records

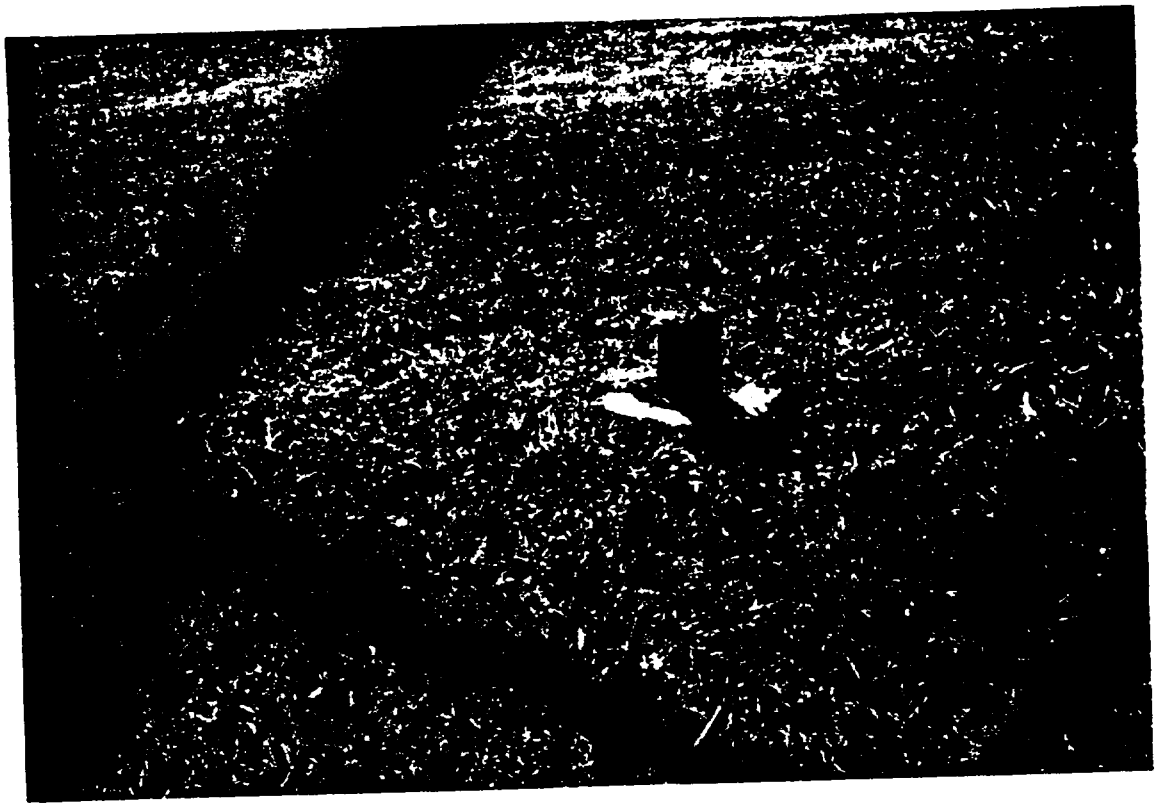

Photo 2 - Typical Monitoring well construction in the surface impoundment

Photo 3 - View of surface impoundment, cooling towers, and drum shed

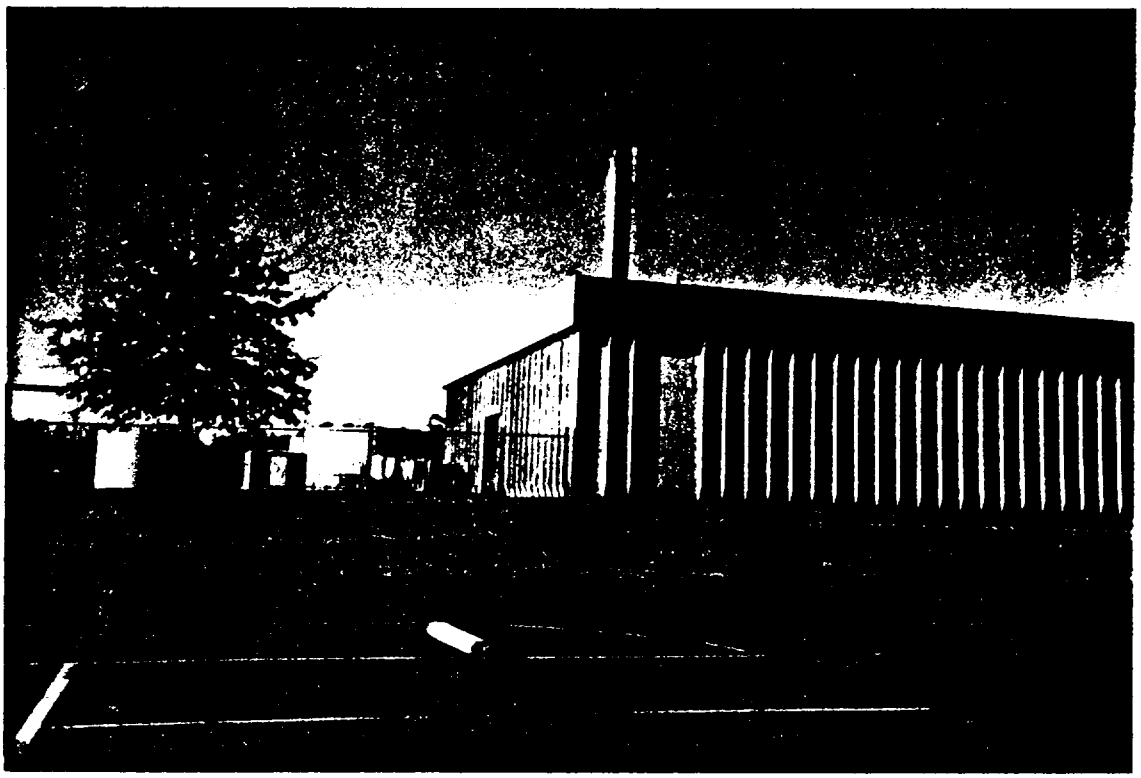

Photo 4 - View of storage tanks and power house

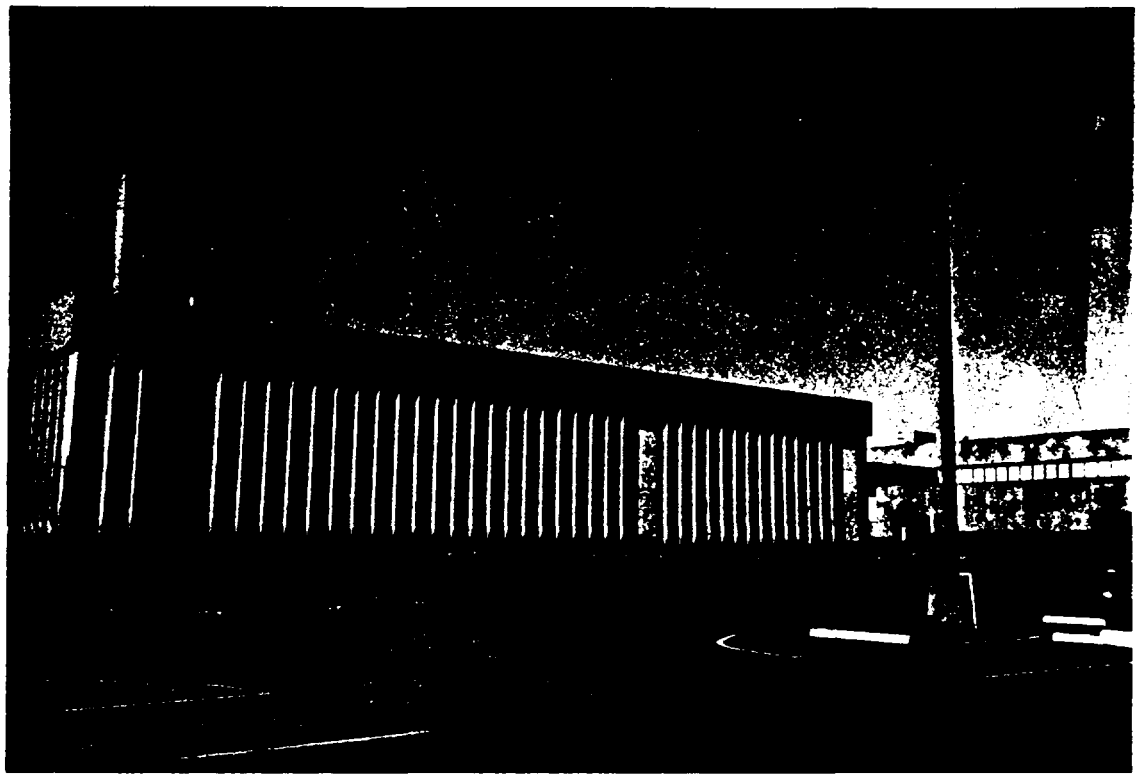

Photo 5 - View of power house and corner of manufacturing building with adjacent parking lot

LAW ENVIRONMENTAL, INC.

112 TOWNPARK DRIVE
KENNESAW, GEORGIA 30144-5599
404-421-3400

April 10, 1992

CBS Records
GAD980515241

US EPA, Region IV
345 Courtland Street, NE
Atlanta, Georgia 30365

Attention: Mr. John McKeown
Environmental Scientist

Subject: CBS Records Sony Music Entertainment
Carrollton Site, MW-3 Sampling
Law Environmental Project Number 41-1622

Dear Mr. McKeown:

Confirming our telephone conversation with Mr. Mario Villamarzo of your office, Law Environmental has been asked by CBS Inc., the former site owner, to redevelop and resample monitoring well MW-3 (B-8) to determine if the levels of chromium detected during the December 16, 1991 sampling event performed by Black & Veatch can be traced to the well being sampled without development. This is thought to have lead to high levels of suspended solids in the sample that may have given erroneous results when analyzed.

Our schedule is to develop this well early in the week of April 13, followed by taking samples within one or two days. Someone from your office or your representative from Black & Veatch is asked to be present to witness the sampling. Please call Mr. James Lawrence here at 421-3542 to set a specific date and time.

Sincerely yours,

James O. Lawrence, P. E.
Senior Engineer

Kenneth J. Seefried, P. E.
Principal

cc: Mr. Joseph Horowitz
CBS Inc., Director, Environmental Engineering

Mr. Joseph Castellano, Esq.

Mr. Jeffery Bates, Esq.
Goodwin, Proctor, and Hoar

B & V WASTE SCIENCE & TECHNOLOGY, CORP. TEL. (404) 392-9227

1117 PERIMETER CENTER WEST
SUITE W-212
ATLANTA, GEORGIA 30338
FAX: (404) 392-9289

WPB/SAS
JUN 17 1992
EPA - REGION IV

USEPA
Site Inspection
Work Assignment No. 11

BVWST Project 52011.010
June 15, 1992

Mr. A.R. Hanke
Chief, Site Assessment Section
U.S. Environmental Protection Agency
345 Courtland St., NE
Atlanta, GA 30365

Subject: Draft Site Inspection
CBS Records
Carrollton, Carroll County, Georgia
EPA ID No. GAD 980515241

Dear Mr. Hanke:

Enclosed please find one (1) copy of the Draft Site Inspection, references, and HRS Prescore package for the CBS Records site, located in Carrollton, Carroll County, Georgia.

Please feel free to contact me if you have any questions or comments.

Very truly yours,

B&V WASTE SCIENCE AND TECHNOLOGY CORP.

Jancie S. Hatcher

Jancie S. Hatcher
Project Scientist

Enclosures

cc: Charles Swan, Project Officer, w/ enclosures
Keith Mills, Contracting Specialist, w/ enclosures
Hubert Wieland, BVWST, w/o enclosures

DRAFT

SITE INSPECTION

WPB/SAS
RECEIVED
JUN 17 1992
EPA - REGION IV
ATLANTA, GA

CBS Records
Carrollton, Carroll County, Georgia
EPA ID No. GAD980515241

EPA Work Assignment No. 11
EPA Contract No. 68-W9-0055

Prepared for
U.S. Environmental Protection Agency
Region IV
by
B&V Waste Science and Technology Corp.

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Prepared by	Reviewed by	Approved by
Jancie S. Hatcher	Ronald A. Wilde	Hubert L. Wieland
Site Manager	Technical Reviewer	Project Manager

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EXECUTIVE SUMMARY

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CBS Records is a 145-acre property located 1.5 miles northwest of Carrollton, Carroll County, Georgia. The facility includes a large manufacturing building, a powerhouse, a solvent recovery system, cooling towers, and fuel storage tanks. Located on the western portion of the facility is a former surface impoundment. The property is currently owned by Sony Corp. of New York.

The CBS Records facility manufactures, packages, and duplicates cassette tapes and phonograph records. Wastes associated with the facility's operations include chromium and nickel-contaminated wastewater, chromium hydroxide sludge, nickel hydroxide sludge, and various solvents. The plant was at one time permitted under RCRA as a TSD facility, although the RCRA permit was withdrawn in January 1987. The surface impoundment, formerly used for the chromium and nickel wastewater, was clean closed in 1985. This wastewater is now diverted to an above-ground storage tank.

Seventeen environmental samples were collected during the field investigation associated with this study. The field investigation and sampling indicated the presence of inorganics on the CBS Records site, both in the area of the surface impoundment and other surface soils onsite. The downgradient monitoring wells were also found to contain elevated levels of various metals. Very few organics were detected on the property.

The facility is located in the Piedmont Physiographic Province. The rock underlying the site is of the Dog River Formation, which is part of the Sandy Springs Group. Groundwater is obtained from an unconfined residual soil/crystalline rock aquifer system. Depth to groundwater at the facility is approximately 30 feet.

The primary pathway of concern at CBS Records is soil exposure. A large number of onsite workers could potentially be exposed to contaminated surface soil. Although onsite groundwater wells have elevated levels of metals attributable to CBS Records' operations, there are few groundwater targets in the area.

Based upon the analysis of possible migration pathways, the results of the sampling investigation, and information obtained from the references, it is recommended that CBS Records receive no further action at this time.

1.0 INTRODUCTION

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B&V Waste Science and Technology was tasked by the U.S. Environmental Protection Agency (EPA), Waste Management Division to conduct a Site Inspection (SI) at the CBS Records facility in Carrollton, Carroll County, Georgia. The inspection was performed under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986 (SARA). The field investigation was conducted during the week of December 16, 1991.

1.1 OBJECTIVES

The objectives of this inspection were to determine the nature of contaminants present at the site and to determine if a release of these substances has occurred or may occur. Further, this inspection sought to determine the possible pathways by which contamination could migrate from the site and the populations and environments it would potentially affect. Through these objectives, a recommendation was made regarding future activities at the site.

1.2 SCOPE OF WORK

The objectives were achieved through the completion of a number of specific tasks. These activities were to :

- Obtain and review relevant background materials
- Obtain information on local water systems.
- Determine location and distance to nearest well.
- Evaluate potentially affected populations and environments associated with the groundwater, surface water, air and soil exposure pathways.
- Develop a site sketch, to scale.
- Collect environmental samples.

2.0 SITE CHARACTERIZATION

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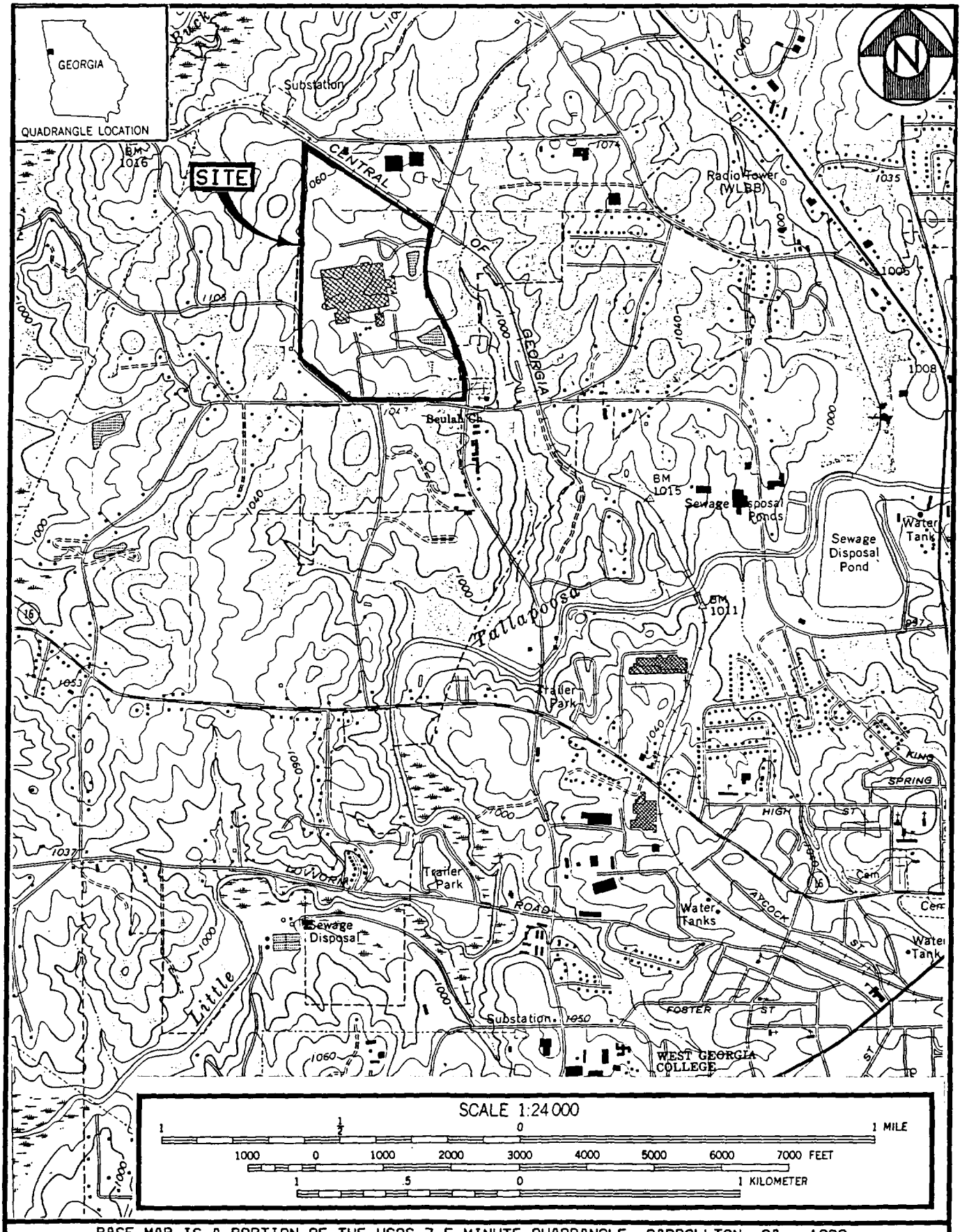
2.1 SITE LOCATION AND DESCRIPTION

CBS Records is located at 5152 Columbia Drive, approximately 1.5 miles northwest of the City of Carrollton, in Carroll County, Georgia. The site is more specifically located at 33° 36' 18" N latitude and 85° 06' 30" W longitude (Appendix A). The property encompasses approximately 145 acres, and contains a large building used for warehousing and manufacturing, a powerhouse, and a solvent recovery system with associated tanks. Other structures located onsite include two cooling towers, various fuel storage tanks, a heptane recovery system, and several small storage sheds. Two retention ponds are located in the eastern and southeastern portions of the property, and a surface impoundment was formerly located near the powerhouse. Access to the property is limited by fencing and camera surveillance. The property is currently owned by Sony Music. The surrounding area is primarily used for residential purposes (Refs. 1, 2). The site location and site layout maps are shown as Figures 1 and 2.

2.2 SITE HISTORY AND WASTE CHARACTERISTICS

The CBS Records plant was built in 1978, and actual production in the facility began in 1981. The company manufactures, duplicates, and packages cassette tapes and phonograph records. Cassettes are coated with chromium dioxide or iron oxide (Ref. 2). Later correspondence indicates that CBS Records discontinued chromium coating in the Carrollton plant at some point (Ref. 3). Wastes associated with the facility's operations include chromium and nickel-contaminated wastewater, chromium hydroxide sludge, nickel hydroxide sludge, methylene chloride, toluene/tetrahydrofuran mixture, tetrachloroethylene, spent xylene and toluene, silver, and ignitable spent petroleum and heptane (Refs. 2, 4).

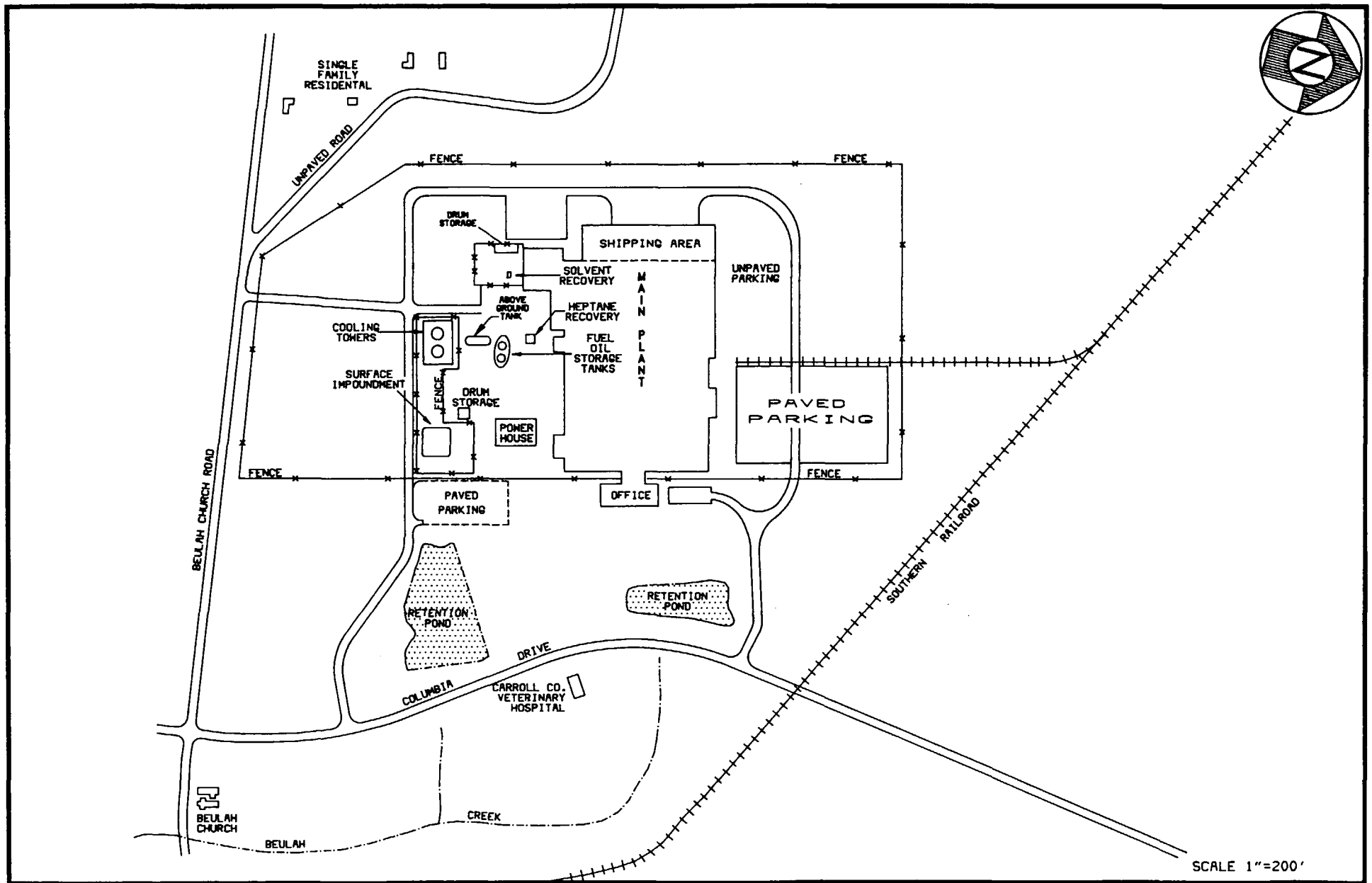
In April 1981, CBS Records filed a RCRA Part A Application as a TSD facility and as a generator. Permitted storage at this time included 140,000 gallons in containers and 880,000 gallons in the surface impoundment (Ref. 5). The Part B RCRA permit was filed on July 25, 1983 (Ref. 3). Beginning in 1985, the Georgia Department of Environmental Protection (GDEP) has observed numerous environmental violations at CBS Records. A Notice of Violation was served by the State on January 18, 1985,



BASE MAP IS A PORTION OF THE USGS 7.5 MINUTE QUADRANGLE, CARROLLTON, GA., 1982.

SITE LOCATION MAP
CBS RECORDS
CARROLLTON, CARROLL COUNTY, GEORGIA

FIGURE 1



BASE SCIENCE AND TECHNOLOGY CORP.

SITE LAYOUT MAP
CBS RECORDS
CARROLLTON, CARROLL COUNTY, GEORGIA

FIGURE 2

concerning the need for a formal groundwater assessment, and installation of additional downgradient monitoring wells (Ref. 6). After five months elapsed, the GDEP performed an onsite inspection, which found that some violations of state law had not yet been corrected (Ref. 7). Administrative Order No. EPD-HW-222 was subsequently issued to CBS Records as a response to this inspection (Ref. 8). CBS Records later appealed the Administrative Order and in August 1985 provided information to the State of Georgia to enable resolution of the order (Ref. 9, 10).

At the beginning of production, wastewater contaminated with chromium and nickel was discharged into the plastic-lined surface impoundment prior to treatment (Ref. 2). In August 1989, GPED determined that CBS Records planned to close the surface impoundment and divert wastewater to a 400,000 gallon above-ground tank (Ref. 11). The surface impoundment was clean closed, and closure was approved by GPED (Ref. 12). In November 1986, CBS Records formally withdrew their RCRA permit and requested a status change to that of generator only. This action was approved by the GPED in January 1987 (Refs. 13, 14).

Other concerns about the site include a small tetrahydrofuran/toluene spill, a spill of nickel-contaminated wastewater, and numerous requests for extension of the 90-day hazardous waste storage limit (Refs. 15, 16). The THF/toluene spill area was sampled, and later remediated (Ref. 12). The nickel spill occurred during excavation of an underground storage tank, and remedial action was taken by CBS Records immediately (Ref. 17).

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3.0 FIELD INVESTIGATION

3.1 SAMPLE COLLECTION

During the field investigation, conducted the week of December 16, 1991, B&V Waste Science and Technology attempted to identify and characterize contaminants which may be present in the environment as a result of activities that were conducted at the CBS Records facility. To accomplish this, BVWST collected environmental sediment, surface soil, subsurface soil, and groundwater samples from a number of strategic locations.

These locations were selected based on historical information, hydrogeological data for the region and site area, and direct observation at the site.

3.1.1 Sample Collection Methodology

All sample collection, sample preservation, and chain-of-custody procedures used during this inspection were in accordance with the standard operating procedures as specified in "Sections 3 and 4 of the Environmental Compliance Branch's Standard Operating Procedures and Quality Assurance Manual; United States Environmental Protection Agency, Region IV, Environmental Services Division, February 1, 1991, and with the Field Study Plan prepared by BVWST on November 14, 1991. Deviations from the study plan include the following: (1) no temporary wells were sited; (2) a private well near the site could not be located; (3) several of the subsurface soil samples were not collected; (4) some of the samples were moved based on observed field conditions at the time of sampling.

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3.1.2 Duplicate Samples

Duplicate samples (with the exception of subsurface soils) were offered to and accepted by Cynthia Draper of Law Environmental, designated environmental consultant for CBS Records. Receipt for sample forms are on file at BVWST.

3.1.3 Description of Samples and Sample Locations

During the sampling investigation, a total of 17 environmental samples were collected. All sample locations are shown in Figure 3. Samples were collected in soil and from monitoring wells onsite, and in sediment ~~in~~ at offsite locations. Sample codes, descriptions, locations, depth of collection, and rationale are contained in Table 1.

3.1.4 Field Measurements

Field measurements were performed on the groundwater samples (Table 2). Parameters measured included temperature, pH, and specific conductivity of the water sample at the time of collection. No field measurements were performed on the soil samples during

TABLE 1
Sample Locations and Rationale
CBS Records
Carrollton, Carroll County, Georgia

SAMPLE CODE	SAMPLE TYPE	LOCATION	RATIONALE
CR-SS-01	Surface Soil	Just northwest of facility	Background
CR-SS-02	Surface Soil	Near Shipping area	To establish presence or absence of contaminants
CR-SS-03	Surface Soil	Just outside fenced Drum Storage area	To establish presence or absence of contaminants
CR-SS-04	Surface Soil	Near receiving area	To establish presence or absence of contaminants
CR-SS-05	Surface Soil	Near Drum Storage Shed	To establish presence or absence of contaminants
CR-SS-06	Surface Soil	Northern portion of Surface Impoundment	To establish presence or absence of contaminants
CR-SS-07	Surface Soil	Central portion of Surface Impoundment	To establish presence or absence of contaminants
CR-SB-01	Subsurface Soil	Just northwest of facility	Background
CR-SB-03	Subsurface Soil	Just outside fenced Drum Storage area	To establish presence or absence of contaminants
CR-SB-05	Subsurface Soil	Near Drum Storage Shed	To establish presence or absence of contaminants
CR-SB-07	Subsurface Soil	Central portion of Surface Impoundment	To establish presence or absence of contaminants
CR-SD-01	Sediment	Northwest of facility in ditch	Background
CR-SD-02	Sediment	East of North Retention Pond	To establish presence or absence of contaminants
CR-SD-03	Sediment	East of South Retention Pond	To establish presence or absence of contaminants
CR-MW-01	Groundwater	West of the Cooling Towers	Background
CR-MW-02	Groundwater	North of the Surface Impoundment	To establish presence or absence of contaminants
CR-MW-03	Groundwater	East of the Surface Impoundment	To establish presence or absence of contaminants

CR CBS Records
SS Surface Soil
SB Subsurface Soil
SD Sediment
SW Surface Water
MW Monitoring Well

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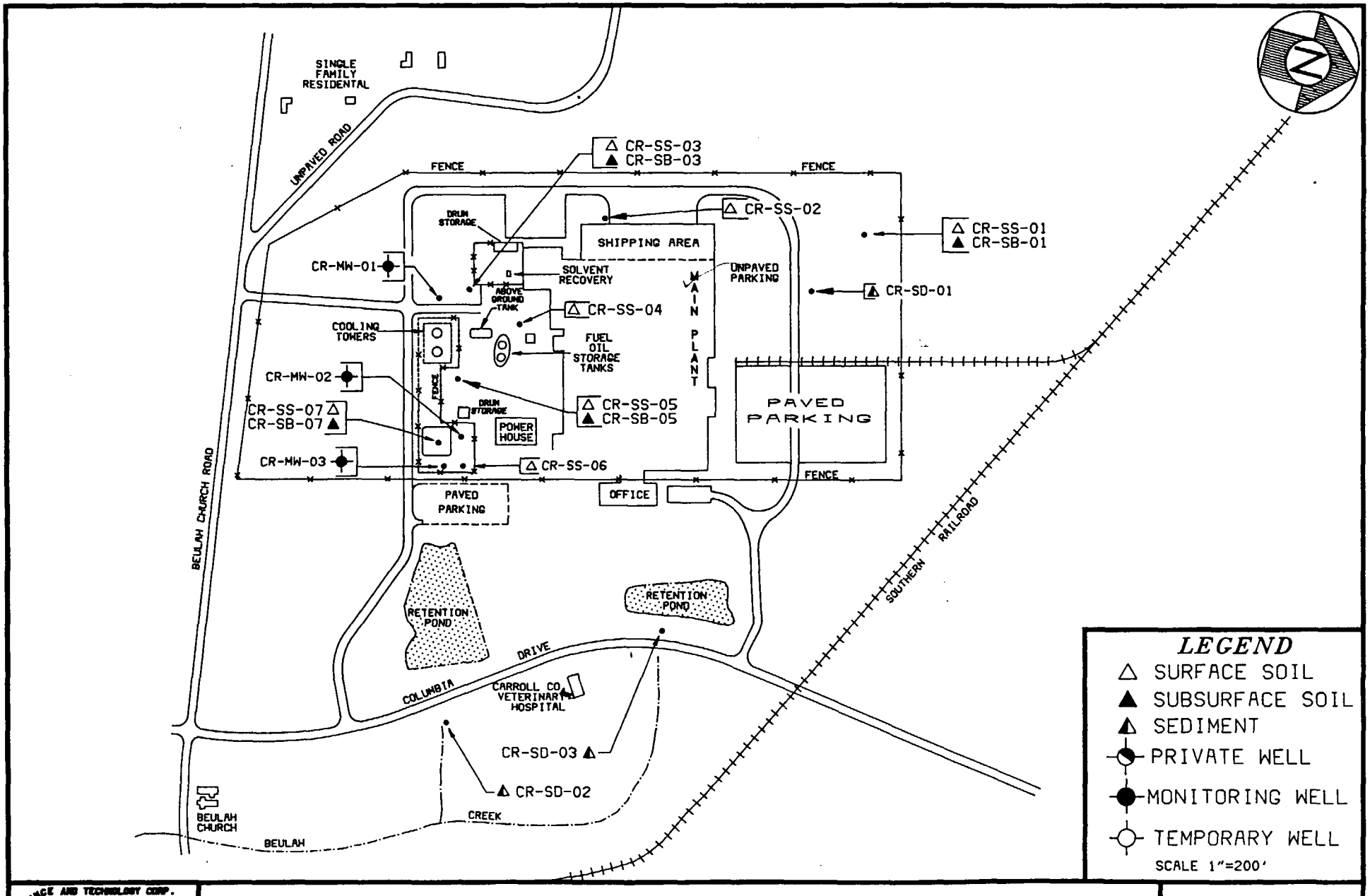

BATTELLE SCIENCE AND TECHNOLOGY CORP.

SAMPLE LOCATION MAP
CBS RECORDS
CARROLLTON, CARROLL COUNTY, GEORGIA

FIGURE 3

TABLE 2

FIELD MEASUREMENTS
CBS RECORDS
CARROLLTON, CARROLL COUNTY, GEORGIA

SAMPLE CODE	pH	Temperature o C	Conductivity umhos/cm
CR-MW-01	7.90	18	42.8
CR-MW-02	8.31	17	59.2
CR-MW-03	8.56	19	100.2

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this inspection. The BVWST pH measurements were disputed by Sony Corp. and its consultant (Ref. 1).

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3.2 SAMPLE ANALYSIS

3.2.1 Analytical Support and Methodology

All samples collected were analyzed under the Contract Laboratory Program (CLP) and analyzed for all parameters listed in the Target Compound List (TCL) and the Target Analyte List (TAL). Organic analysis of soil and water samples was performed by Compuchem Labs of Research Triangle Park, North Carolina. Inorganic analysis of soil and water samples was performed by Skinner & Sherman of Waltham, Massachusetts. All laboratory analyses and laboratory quality assurance procedures used during the investigation were in accordance with standard procedures and protocols as specified in the Laboratory Operations and Quality Control Manual, United States Environmental Protection Agency, Region IV, Environmental Services Division, issued October 24, 1990; or as specified by the existing United States Environmental Protection Agency standard procedures and protocols for the Contract Laboratory Program (CLP) Statement of Work (SOW), as applicable.

3.2.2 Analytical Data Quality and Data Qualifiers

All analytical data were subjected to a quality assurance review as described in the EPA Environmental Services Division laboratory data evaluation guidelines. In the tables, some of the concentrations of the organic and inorganic parameters have been qualified with a "J". This indicates that the qualitative analysis was acceptable, but the quantitative value has been estimated. A few other compounds are qualified with an "N, indicating that they were detected based only on the presumptive evidence of their presence. This means that the compound was tentatively identified, and its detection cannot be used as a positive indication of its presence. Results for some background samples are reported with a "U" qualifier. This qualifier means that the material was analyzed for but not detected. The reported number is the laboratory-derived minimum quantitation limit (MQL) for the compound or element in that sample. At times, miscellaneous organic compounds that do not appear on the target compound list are reported with the data set. These compounds are qualified as "JN", indicating that they are tentatively identified

at estimated quantities. Because these compounds are not routinely analyzed for or reported, background levels or MQL levels are not generally available for comparison. In these samples, irregularities in the data were that the water trip blank contained an estimated 20 ug/l of 2 unidentified extractable compounds. The complete analytical data sheets are presented in Appendix B.

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3.3 PRESENTATION OF ANALYTICAL RESULTS

This section presents a discussion and interpretation of the analytical results form the environmental samples collected during the investigation at CBS Records. Results of organic and inorganic samples are presented in Tables 3 through 10. Background samples have been designated for all media. Values for background sample results are presented either as a measured value or as the minimum quantitation limit (MQL). Samples containing concentrations of contaminants greater than three times the background level, or equal to or greater than the MQL of these contaminants are considered to be elevated. These samples are noted in the text.

3.3.1 Organic Sampling Results

Unidentified extractable organics were detected in all the surface soil samples except CR-SS-03. Hexadecanoic acid was also found in several of the surface soil samples (Table 3). Unidentified extractables were found in samples CR-SB-03 and CR-SB-07. Sample CR-SB-05 contained only dodecanoic acid (Table 4).

All sediment samples contained unidentified extractables. Several miscellaneous organics were found in the sediment samples, and one miscellaneous purgeable was detected in CR-SD-03 (Table 5).

Carbon disulfide was detected at 43 ug/l in the background monitoring well (CR-MW-01). Unidentified extractables were also found in the trip blank, as well as in all three groundwater samples (Table 6).

3.3.2 Inorganic Surface Soil Sampling Results

Sample CR-SS-02 contained 0.55 mg/kg of beryllium (greater than MQL). Sample CR-SS-03 contained aluminum (4 times background), cobalt (5 times background), copper (3 times background), iron (4 times background), magnesium (4 times background),

TABLE 3
SUMMARY OF ORGANIC ANALYTICAL RESULTS
SURFACE SOIL SAMPLES
CBS RECORDS
CARROLLTON, CARROLL COUNTY, GEORGIA

	Background	Onsite Samples					
PARAMETERS (UG/KG)	CR-SS-01	CR-SS-02	CR-SS-03	CR-SS-04	CR-SS-05	CR-SS-06	CR-SS-07
EXTRACTABLE ORGANICS							
FLUORANTHENE	380U	42J	–	48J	–	–	–
BENZO(B AND/OR K) FLUORANTHENE	380U	57J	–	–	–	–	–
MISCELLANEOUS EXTRACTABLES							
HEXADECANOIC ACID	200JN	400JN		400JN	90JN		
UNIDENTIFIED COMPOUNDS/NO.	500J/1	5,000J/9		3,000J/5	1,000J/3	3,000J/5	900J/1
PESTICIDES							
DIELDRIN	3.9U	1.5J	–	–	–	–	–

– Material analyzed for but not detected above minimum quantitation limit.
U Material analyzed for but not detected above minimum quantitation limit. The value is the minimum quantitation limit for the sample.
J Estimated value
N Presumptive Evidence of material

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TABLE 4
SUMMARY OF ORGANIC ANALYTICAL RESULTS
SUBSURFACE SOIL SAMPLES
CBS RECORDS
CARROLLTON, CARROLL COUNTY, GEORGIA

PARAMETERS (UG/KG)	Background	ONSITE		
	CR-SB-01	CR-SB-03	CR-SB-05	CR-SB-07
MISCELLANEOUS EXTRACTABLES				
DODECANOIC ACID			200JN	
UNIDENTIFIED COMPOUNDS/NO.		700J/1		1,000J/1

– Material analyzed for but not detected above minimum quantitation limit.
J Estimated value
N Presumptive Evidence of material

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TABLE 5
SUMMARY OF ORGANIC ANALYTICAL RESULTS
SEDIMENT SAMPLES
CBS RECORDS
CARROLLTON, CARROLL COUNTY, GEORGIA

PARAMETERS (UG/KG)	Background	Downstream Samples	
	CR-SD-01	CR-SD-02	CR-SD-03
MISCELLANEOUS PURGEABLES			
PENTYNOL			80JN
MISCELLANEOUS EXTRACTABLES			
HEXADECANOIC ACID	300JN		
TETRAMETHYLPHENANTHRENE		600JN	700JN
OCTAHYDRODIMETHYL (METHYLETHYL) –			
PHENANTHRENE CARBOXALDEHYDE		1,000JN	
UNIDENTIFIED COMPOUNDS/NO.	3,000J/3	5,000J/4	5,000J/7

– Material analyzed for but not detected above minimum quantitation limit.
J Estimated value
N Presumptive Evidence of material

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TABLE 6
SUMMARY OF ORGANIC ANALYTICAL RESULTS
GROUNDWATER SAMPLES
CBS RECORDS
CARROLLTON, CARROLL COUNTY, GEORGIA

PARAMETERS (UG/L)	Trip Blank	Background	Down gradient	
	CR-TB-01	CR-MW-01	CR-MW-02	CR-MW-03
PURGEABLE ORGANICS				
CARBON DISULFIDE	–	43	–	–
TETRACHLOROETHENE	–	10U	2J	3J
MISCELLANEOUS EXTRACTABLES				
UNIDENTIFIED COMPOUNDS/NO.	20J/2	200J/4	100J/3	300J/5

– Material analyzed for but not detected above minimum quantitation limit.
U Material analyzed for but not detected above minimum quantitation limit. The value is the minimum quantitation limit for the sample.
J Estimated value

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nickel (3 times background), potassium (5 times MQL), vanadium (4 times background), and zinc (4 times MQL). Detected in sample CR-SS-04 at elevated levels were copper (3 times background), iron (3 times background), nickel (3 times background), potassium (above MQL), and vanadium (3 times background). Sample CR-SS-05 contained aluminum (3 times background), calcium (5 times background), cobalt (3 times background), copper (5 times background), iron (4 times background), magnesium (5 times background), nickel (3 times background), potassium (4 times MQL), vanadium (4 times background), and zinc (4 times MQL). Sample CR-SS-06 contained the following metals at elevated levels: copper (5 times background), aluminum (3 times background), iron (3 times background), potassium (greater than MQL), vanadium (4 times background), and zinc (5 times MQL). Aluminum (4 times background), copper (4 times background), iron (4 times background), vanadium (4 times background), potassium (3 times MQL), and zinc (6 times MQL) were found in CR-SS-07 (Table 7).

Most surface soil samples collected onsite at CBS Records contained a variety of metals at concentrations slightly elevated above background levels.

3.3.3 Inorganic Subsurface Soil Sampling Results

Sample CR-SB-03 contained barium (4 times background), cobalt (6 times background), magnesium (13 times background), manganese (3 times background), nickel (3 times background), potassium (22 times MQL), and zinc (5 times MQL). Barium (4 times background), cobalt (5 times background), magnesium (12 times background), manganese (3 times background), potassium (17 times MQL), and zinc (5 time MQL) were detected in CR-SB-05. Sample CR-SB-07 (taken in the surface impoundment) contained magnesium (3 times background), potassium (5 times MQL), and zinc (4 times MQL) (Table 8).

3.3.4 Inorganic Sediment Sampling Results

Very few inorganics were found at elevated levels in sediment samples. Sample CR-SD-02 contained lead (8.1 mg/kg, 3.5 times background). Beryllium was found in CR-SD-03 at an estimated concentration of 0.5 mg/kg (greater than MQL). A notable concentration of chromium was observed in all the sediment samples (range of 100-270 mg/kg) (Table 9).

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TABLE 7

SUMMARY OF INORGANIC ANALYTICAL RESULTS
SURFACE SOIL SAMPLES
CBS RECORDS
CARROLLTON, CARROLL COUNTY, GEORGIA

	Background	Onsite Samples					
Parameters (mg/kg)	CR-SS-01	CR-SS-02	CR-SS-03	CR-SS-04	CR-SS-05	CR-SS-06	CR-SS-07
ALUMINUM	5,800	13,000	21,000	16,000	19,000	18,000	22,000
ARSENIC	2.3J	–	–	–	–	–	–
BARIUM	32	53	70	44	58	44	54
BERYLLIUM	0.23U	0.55J	–	–	–	–	–
CALCIUM	490	940	1,100	1,000	2,300	180	200
CHROMIUM	43	43	77	69	70	43	62
COBALT	6.8	13	36	17	21	17	20
COPPER	6.3	14	24	20	29	32	23
IRON	12,000	26,000	49,000	37,000	45,000	40,000	46,000
LEAD	9.1	13	11	11	11	11	11
MAGNESIUM	370	420	1,600	540	1,800	840	1,000
MANGANESE	340	840	770	770	770	1,000	680
NICKEL	4.1J	3.6	13	15	14	5.6	11
POTASSIUM	280U	–	1,300	500	1,000	640	880
VANADIUM	41	89	160	130	150	130	150
ZINC	8U	17	31	22	29	37	45

– Material analyzed for but not detected above minimum quantitation limit.
U Material analyzed for but not detected above minimum quantitation limit. The value is the minimum quantitation limit for the sample.
J Estimated value

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TABLE 8

SUMMARY OF INORGANIC ANALYTICAL RESULTS
SUBSURFACE SAMPLES
CBS RECORDS
CARROLLTON, CARROLL COUNTY, GEORGIA

Parameters (mg/kg)	Background	Onsite		
	CR-SB-01	CR-SB-03	CR-SB-05	CR-SB-07
ALUMINUM	13,000	24,000	24,000	23,000
BARIUM	25	110	110	48
CALCIUM	590	120	170	170
CHROMIUM	160	77	73	54
COBALT	9	54	47	17
COPPER	15	33	27	22
IRON	33,000	41,000	45,000	43,000
LEAD	15	8	12	10
MAGNESIUM	270	3,400	3,100	820
MANGANESE	330	1,000	1,000	670
NICKEL	10	32	18	10
POTASSIUM	130U	2,800	2,200	660
VANADIUM	99	140	150	140
ZINC	9U	41	43	32

– Material analyzed for but not detected above minimum quantitation limit.
U Material analyzed for but not detected above minimum quantitation limit. The value is the minimum quantitation limit for the sample.

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TABLE 9

SUMMARY OF INORGANIC ANALYTICAL RESULTS
SEDIMENT SAMPLES
CBS RECORDS
CARROLLTON, CARROLL COUNTY, GEORGIA

Parameters (mg/kg)	Background	Downstream Samples	
	CR-SD-01	CR-SD-02	CR-SD-03
ALUMINUM	13,000	16,000	14,000
BARIUM	56	45	75
BERYLLIUM	0.27U	–	0.50J
CALCIUM	2,300	570	470
CHROMIUM	210	270	100
COBALT	33	17	14
COPPER	22	23	21
IRON	33,000	48,000	29,000
LEAD	2.3	8.1	6.6
MAGNESIUM	8,600	510	1,300
MANGANESE	650	1,100	520
NICKEL	74	16	10
POTASSIUM	2,400	–	830
VANADIUM	61	160	130
ZINC	36	28	30

– Material analyzed for but not detected above minimum quantitation limit.
U Material analyzed for but not detected above minimum quantitation limit. The value is the minimum quantitation limit for the sample.
J Estimated value

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3.3.5 Inorganic Groundwater Sampling Results

Sample CR-MW-02 contained an estimated 31,000 ug/l of aluminum (32 times background), barium (62 ug/l, greater than MQL), calcium (3,100 ug/l, 5 times MQL), chromium (69 ug/l, 23 times background), cobalt (19 ug/l, 6 times MQL), and copper (27 ug/l, 9 times MQL). Other metals detected in this sample include iron (55,000 ug/l, 83 times background), lead (estimated 29 ug/l, 10 times MQL), magnesium (34 times MQL), manganese (62 times background), mercury (0.95 ug/l, 5 times MQL), nickel (12 ug/l, 3 time MQL), and vanadium (170 ug/l, 57 times MQL).

CR-MW-03 (the most downgradient well sampled) contained the following: estimated 160,000 ug/l of aluminum (167 times background), estimated 51 ug/l of antimony (greater than MQL), calcium (8400 ug/l, 13 times MQL), barium (470 ug/l, 16 times MQL), chromium (480 ug/l, 160 times background), cobalt (40 times MQL), and copper (43 times MQL). Other inorganics found in this sample include iron at 290,000 ug/l (439 times background), magnesium (12,000 ug/l, 19 times MQL), manganese (4000 ug/l, 154 times background), nickel (100 ug/l, 25 times MQL), potassium (6500 ug/l, 9 times MQL), sodium (3500 ug/l, greater than MQL), vanadium (860 ug/l, 287 times MQL), and zinc (260 ug/l, 9 times MQL) (Table 10).

Monitoring wells in and downgradient of the former surface impoundment contain a variety of metals, some at rather elevated levels. Those metals that can be directly attributed to CBS Records' operations include chromium, nickel, iron, sodium, and potassium.

3.4 SUMMARY OF ANALYTICAL RESULTS

In general, organics were found at the CBS Records facility in very low quantities, and do not appear to be a significant problem at the site. The surface soils near and within the former surface impoundment are somewhat contaminated with metals, including some metals which can be directly attributed to CBS Records' operations. However, very few of these metals were detected in elevated concentrations in the subsurface samples, indicating that contamination seems to be only in surficial soils. In fact, some of these inorganics may be present in concentrations somewhat near expected naturally-occurring values for the west Georgia area. The downgradient monitoring wells sampled both

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TABLE 10

SUMMARY OF INORGANIC ANALYTICAL RESULTS
GROUNDWATER SAMPLES
CBS RECORDS
CARROLLTON, CARROLL COUNTY, GEORGIA

Parameters (ug/l)	Pres. Blank	Background	Down gradient	
	CR-PB-01	CR-MW-01	CR-MW-02	CR-MW-03
ALUMINUM	–	960J	31,000J	160,000J
ANTIMONY	–	31U	–	51J
BARIUM	–	30U	62	470
CALCIUM	–	630U	3,100	8,400
CHROMIUM	–	3J	69	480
COBALT	–	3U	19	120
COPPER	–	3U	27	130
IRON	–	660	55,000	290,000
LEAD	–	3UJ	29J	–
MAGNESIUM	–	640U	2,200	12,000
MANGANESE	–	26	1,600	4,000
MERCURY	–	0.20U	0.95	–
NICKEL	–	4U	12	100
POTASSIUM	–	740U	–	6,500
SODIUM	–	1,700U	–	3,500
VANADIUM	–	3U	170	860
ZINC	–	30U	–	260

– Material analyzed for but not detected above minimum quantitation limit.
U Material analyzed for but not detected above minimum quantitation limit. The value is the minimum quantitation limit for the sample.
J Estimated value

contained elevated amounts of a variety of metals, indicating that some groundwater contamination may have occurred at the facility.

4.0 GROUNDWATER PATHWAY

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4.1 HYDROGEOLOGY

CBS Records is located approximately 0.75 mile north of the southwestern-flowing Little Tallapoosa River, within the Piedmont Physiographic Province and hydrogeologic setting (Refs. 18, 19). The topography of the area consists of low, well-rounded hills, with elevations ranging from 1010 to 1075 feet above mean sea level (amsl) at the facility (Appendix A). The physiographic district in which CBS Records lies is the Central Uplands district in the Southern Piedmont Province. The Central Uplands area contains stream valleys that tend to be narrow, exhibit a rectangular drainage pattern and lie only 100 to 150 feet below the surrounding area (Ref. 20).

The soil beneath CBS Records is of the Davidson-Musella association which has been generally described as being well-drained and with a dark-red clay loam or clay subsoil (Ref. 21, Plate 1). More specifically, the dominant soil type beneath the facility is the Davidson gravelly clay loam (Ref. 21, Sheet 61). Characteristics of this soil type include: occurrance on broad ridges and their side slopes, poor tilth, slow infiltration, 6 to 10 percent slopes, and high erodeability (Ref. 21, p. 13). The Davidson soil series is generally well-drained, extends 6 to 7 feet, and is formed in materials weathered chiefly from diorite and hornblende gneiss (Ref. 21, p. 12).

Beneath the soil, the Piedmont region is characterized by a clay-rich, unconsolidated material which originates from "in-situ weathering" of the underlying bedrock, collectively called saprolite (Ref. 19, p. 252). Typical bedrock materials in the area are granites and gneisses. The saproite material exhibits an average thickness of 32.8 to 65.6 feet except on ridges where saprolite can reach thicknesses of up to 328 feet (Ref. 19, p. 252). Also, it should be noted that often saprolite deposits are generally thicker in valleys of the Piedmont due to extensive weathering. Dr. Crawford, Professor of Geology at West Georgia College, has estimated saprolite thickness in the area to be 40 to 50 feet thick (Ref. 22). CBS Records lies between two valleys, one associated with the Buck Creek

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drainage basin, and the other corresponding to the Little Tallapoosa River (Appendix A). The underlying bedrock is composed mainly of metasedimentary and metavolcanic rocks, regionally metamorphosed and deformed into northeast trending folds (Ref. 23, p. 56). Specifically, the rocks of the Sandy Springs Group underlie the facility. The Sandy Springs Group is composed of the formations: Bill Arp, Andy Mountain, and Dog River (Ref. 23, Figure 11, Table 4). These formations typically consists of undifferentiated muscovite, biotite, quartz, feldspar gneiss, garnet, mica schist, muscovite schist, and amphibolite. The Sandy Springs Group is of Proterozoic to Lower Paleozoic age (Ref. 23, pp 38-39). The rocks are fractured and displaced by numerous faults and zones of shearing within the region, some of which are many miles in length (Ref. 24, pp. 14-15). The Brevard fault zone lies aproximately 12 miles southeast of CBS Records and trends northeast to southwest (Ref. 23, Figure 42). This fault zone is a continuous belt of cataclastic rocks approximately 2.6 to 9.7 miles wide, paralleling the southeastern boundary of the Blue Ridge province. The dominant bedrock beneath the facility's saprolite is the Garnet Mica Schist (Ref. 25).

These fractured and faulted rocks, combined with the overlying saprolite and residual soil, make up the unconfined saprolite-residual soil/crystalline rock aquifer system (Ref. 23). The fractured crystalline rocks and overlying saprolite are hydraulically connected. The approximate range of hydraulic conductivity for the saprolite underlying CBS Records is 1.0×10^{-5} to 1.0×10^{-3} cm/sec (Ref. 26, p. 29).

Groundwater in the Piedmont Province occupies joints, fractures, and other secondary openings in bedrock and pore spaces in the overlying saprolite. Water recharges the underground openings by seepage of precipitation through this material or by flowing directly into openings in exposed rock (Ref. 27, pp. 6-9). The depth to groundwater in the area surrounding CBS Records is estimated to be approximately 35 to 55 feet, based on topographic analysis of area streams (Appendix A). Depth to water in the three monitoring wells sampled ranged from 14 to 22 feet (Ref. 1). Local groundwater flow in the regolith/saprolite, if present, is anticipated to be to the east (Ref. 2).

The quality of groundwater available varies greatly with the location, rock type, topographic setting, and geologic structure. Localized increases in permeability may enhance well yields. This occurs mainly in association with stratigraphic features, such as contact zones within multilayered rock units, fault zones, stress relief fractures, shear

zones, and contact zones between rock units of contrasting character (Ref. 24, p. 10). Well yields in the rock types that underlie CBS Records range from 20 to 150 gallons per minute (gpm), averaging 47 gpm (Ref. 24, Plate 1).

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4.2 GROUNDWATER TARGETS

The nearest private well to the CBS Records facility is located approximately 1.0 mile to the west (Appendix A). Scattered areas of private wells may exist in Carroll County, but most areas, including those very near the CBS site, have access to municipal water. Twenty-six houses utilizing private wells are located within 1-2 miles of the CBS Records site, corresponding to 71 persons. Within 2-3 miles of the facility, there are 15 houses (41 persons), and within 3-4 miles are 50 houses (136 persons) using private wells for potable water. No municipal systems utilize groundwater wells within 4 miles of the site (Ref. 28, Appendix A).

4.3 GROUNDWATER CONCLUSIONS

Although a variety of attributable inorganics were detected in the onsite downgradient monitoring wells, there is not a large number of persons utilizing groundwater wells for potable water. Therefore, this pathway is not considered to be of concern.

5.0 SURFACE WATER PATHWAY

5.1 HYDROLOGIC SETTING

5.1.1 Climatology

Carroll County and its surrounding area is characterized by a humid, temperate climate (Ref. 21, p. 1). Total annual precipitation averages 50 inches with annual evaporation of 41 inches, resulting in a net precipitation of 9 inches (Ref. 29). The 2-year, 24-hour rainfall total is 3.8 inches (Ref. 30).

5.1.2 Overland Drainage

Surface water for the entire CBS Records property is collected in a series of diversion ditches and routed into two retention ponds at the eastern end of the facility (Ref. 2). These retention ponds discharge to Beulah Creek, which flows approximately 1.0 mile south and enters the Little Tallapoosa River. The 15-mile, surface water pathway ends in this river, which flows to the southwest (Appendix A). Before construction of the plant, the portion of Beulah Creek which drained the northeast portion of the property was located in a 100-year floodplain. However, construction has diverted this drainage, and none of the waste management areas onsite are located in a floodplain (Ref. 2).

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5.2 SURFACE WATER TARGETS

Beulah Creek and the Little Tallapoosa River may be affected by any contaminants carried by surface water runoff from the CBS Records retention ponds. The City of Carrollton intakes potable water from several surface water sources. These include Lake Carroll, Lake Buckhorn, the Little Tallapoosa River, and Sharpe Creek (at some times of the year). Water from these intakes is blended before distribution, and withdrawal is approximately equal for the three main intakes. The intake on the Little Tallapoosa River is located approximately 1.5 miles upstream of the confluence of Beulah Creek with the river, and therefore is not on the surface water pathway. The other three intakes are to the east and northeast of the site, and are not located along the 15-mile, surface water pathway (Ref. 1, Appendix A). The Carroll County Water District purchases all its water from the City of Carrollton or the City of Bowdon, which is located to the southwest of the facility (Ref. 31). Recreational fishing occurs at many locations along the Little Tallapoosa River (Ref. 32). There are no listed endangered aquatic species in Carroll County (Ref. 33). There are several areas of wetlands located along the 15-mile, surface water pathway. One area of approximately 1.3 miles frontage is located approximately 2 miles downstream from the site. Another area of approximately 2.1 miles frontage is located approximately 3.5 miles downstream (Appendix A).

5.3 SURFACE WATER CONCLUSIONS

Surface water runoff from the CBS Records facility is somewhat controlled by the runoff system, although some release of runoff stormwater does occur to the intermittent stream Beulah Creek. Few significant targets exist in the surface water pathway, although there are several areas of wetlands downstream of the site.

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6.0 AIR AND SOIL EXPOSURE PATHWAYS

6.1 PHYSICAL CONDITIONS

The CBS Records facility is well-maintained, with either asphalt or grass covering the emajority of the property. The former surface impoundment is covered with grass, and no stressed vegetation was noted during sampling in this area. Access to the property is limited by fencing and camera surveillance (Ref. 1).

6.2 AIR AND SOIL TARGETS

6.2.1 Demography

The area surrounding CBS Records is mostly used for residential purposes, although there are several small businesses located along Columbia Drive. The City of Carrollton, a more densely populated area, is located within 1.5 miles southeast of the facility. The nearest occupied residence is located approximately 200 feet from the CBS Records western property boundary, and the nearest school is West Georgia College, located approximately 1.75 miles south (Ref. 1, Appendix A). Approximately 2,300 persons work at the CBS Records facility (Ref. 2). Population within 1 mile of the site is 640 persons, and within a 4-mile radius is 18,670 persons (Appendix A, Refs. 28, 34).

6.2.2 Land Use

Land in the immediate area of the CBS facility is primarily used for single-family residences. No areas of wetlands are located within 1 mile of the CBS Records facility (Appendix A). The Monkey-Face plant (*Platanthera integrilabia*) is currently under review for federal status as an endangered species (Ref. 33). There are no nearby recreational areas (Appendix A).

6.3 AIR AND SOIL EXPOSURE CONCLUSIONS

The area surrounding the CBS facility is sparsely populated, and the primary targets for the soil exposure and air pathways are the approximately 2,300 persons employed at the plant. No schools or daycare facilities are located near the site.

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7.0 SUMMARY AND CONCLUSIONS

CBS Records is an approximately 145 acre manufacturing facility, engaged in processing and duplication of cassette tapes and phonograph records. The property is located in a sparsely populated area north of Carrollton, Georgia. The facility has numerous wastes associated with their manufacture, including wastewater which was formerly stored in an onsite surface impoundment. Analysis of contaminant migration pathways and sampling data shows the following: (1) onsite groundwater wells are contaminated with various metals, but there are very few groundwater targets; (2) some surface water targets do exist, but the surface water intake which serves the majority of the 4-mile radius is not located on the surface water pathway; (3) a large number of workers could be exposed to the surface soils onsite; (4) the air pathway is not particularly significant due to the sparse population of the area.

Based on the results of this field investigation, it is recommended that no further action be planned for the CBS Records site.

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3. Robert Myers, Vice-President, CBS Records, letter to Georgia EPD and U.S. EPA Region IV, August 11, 1989. Subject: Revised EPA Form 8700-12.

4. Georgia Department of Natural Resources, Trip Report, September 10, 1990. Filed by Betty Burns, Environmental Specialist.

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6. Jennifer R. Kaduck, Program Manager, Georgia Environmental Protection Division, certified letter to Harry Kealey, CBS Records, January 18, 1985. Subject: Notice of Violation.

7. Bill Mundy, Unit Coordinator, Georgia Environmental Protection Division, letter to Harry Kealey, CBS Records, July 22, 1985. Subject: Notice of Violation.

8. State of Georgia Environmental Protection Division Administrative Order No. EPD-HW-222: Georgia EPD vs. CBS Records (June 28, 1985).

9. Bradford S. Gentry, Goodwin, Proctor, & Hoar, letter and attachments to The Honorable Mark A. Dickerson, Law Judge, Department of Natural Resources, August 1, 1985. Subject: Administrative Order No. EPD-HW-222.

10. Bradford S. Gentry, Goodwin, Proctor, & Hoar, letter and attachments to Bert Langley, Georgia Environmental Protection Division, August 8, 1985. Subject: Administrative Order No. EPD-HW-222.

11. Trip Report for CBS Records, filed by Bert Langley, Georgia Environmental Protection Division, August 26, 1985.

12. Trip Report for CBS Records, filed by Bert Langley, Georgia Environmental Protection Division, January 2, 1986.

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14. Jennifer Kaduck, Program Manager, Georgia Environmental Protection Division, letter to Bob Flagg, CBS Records, January 9, 1987. Subject: Withdrawal of RCRA status.

15. Robert B. Flagg, Environmental Engineer, letter to Jan Simmons, Georgia Environmental Protection Division, September 4, 1987. Subject: Request for 30 day extension of storage time.

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23. Keith I. McConnell and Charlotte E. Abrams, Geology of the Greater Atlanta Region, Georgia Geologic Survey Bulletin No. 96 (Atlanta, Georgia, 1984).

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28. U.S. Department of Commerce, Proof Copy of table generated for 1990, CPH-1: Summary Population and Housing Characteristics for Carroll County, Georgia, issued by Bureau of Census (April 1991).

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31. Jim Baxley, Manager, Carroll County Water Authority, telephone conversation with A.D. Douglas, NUS Corporation, February 8, 1991. Subject: Carroll County water system.

32. Frank Ellis, Georgia DNR, telephone conversation with Stephany Fine, NUS Corporation, March 7, 1991. Subject: Fishing on the Little Tallapoosa River.

33. Charles V. Rabolli, Georgia Department of Natural Resources, letter to Ronald A. Wilde, B&V Waste Science and Technology Corp., March 24, 1992. Subject: Endangered species in Carroll County.

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NPL Characteristics Data Collection Form
CBS Records - 04/02/92

Record Information

1. Site Name: CBS Records
   (as entered in CERCLIS)

2. Site CERCLIS Number: GAD980515241

3. Site Reviewer: Jancie S. Hatcher

4. Date: April 2, 1992

5. Site Location: Carrollton, Carroll County, Georgia
   (City/County,State)

6. Congressional District:

7. Site Coordinates: Single

   Latitude: 33 36'18.0" Longitude: 085 06'30.0"

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Site Description

1. Setting: Rural

2. Current Owner: Private - Industrial

3. Current Site Status: Active

4. Years of Operation: Active Site , from and to dates: 1978 -present

5. How Initially Identified: State/Local Program

6. Entity Responsible for Waste Generation:

   - Manufacturing
     - Other Manufacturing

7. Site Activities/Waste Deposition:

   - Surface Impoundment
   - Drum/Container Storage
   - Tanks - Above Ground
   - Tanks - Below Ground
   - Airborne Release/Incineration

Waste Description

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8. Wastes Deposited or Detected Onsite:

   - Organic Chemicals
   - Metals

Response Actions

9. Response/Removal Actions:

RCRA Information

10. For All Active Facilities, RCRA Site Status:

    - -90 Day Accumulator

Demographic Information

11. Workers Present Onsite: Yes

12. Distance to Nearest Non-Worker Individual: > 10 Feet - 1/4 Mile

13. Residential Population Within 1 Mile: 0.0

14. Residential Population Within 4 Miles: 0.0

Water Use Information

15. Local Drinking Water Supply Source:

    - Ground Water (within 4 mile distance limit)

16. Total Population Served by Local Drinking Water Supply Source: 0.0

17. Drinking Water Supply System Type for Local Drinking Water Supply Sources:

    - Private

18. Surface Water Adjacent to/Draining Site:

- Stream

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HRS DOCUMENTATION RECORD
CBS Records - 05/28/92

1. Site Name: CBS Records
   (as entered in CERCLIS)

2. Site CERCLIS Number: GAD980515241

3. Site Reviewer: Jancie S. Hatcher

4. Date: April 2, 1992

5. Site Location: Carrollton, Carroll County, Georgia
   (City/County,State)

6. Congressional District:

7. Site Coordinates: Single

   Latitude: 33 36'18.0" Longitude: 085 06'30.0"

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	Score
Ground Water Migration Pathway Score (Sgw)	2.56
Surface Water Migration Pathway Score (Ssw)	1.07
Soil Exposure Pathway Score (Ss)	7.80
Air Migration Pathway Score (Sa)	1.34

Site Score	4.19

NOTE

EPA uses the terms "facility," "site," and "release" interchangeably. The term "facility" is broadly defined in CERCLA to include any area where hazardous substances have "come to be located" (CERCLA Section 109(9)), and the listing process is not intended to define or reflect boundaries of such facilities or releases. Site names, and references to specific parcels or properties, are provided for general identification purposes only. Knowledge regarding the extent of sites will be refined as more information is developed during the RI/FS and even during implementation of the remedy.

1. WASTESTREAM QUANTITY SUMMARY TABLE, SOURCE: surface impoundment

a. Wastestream ID	
b. Hazardous Constituent Quantity (C) (lbs.)	0.00
c. Data Complete?	NO
d. Hazardous Wastestream Quantity (W) (lbs.)	0.00
e. Data Complete?	NO
f. Wastestream Quantity Value (W/5,000)	0.00E+00

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2. SOURCE HAZARDOUS WASTE QUANTITY FACTOR TABLE

a. Source ID	surface impoundment
b. Source Type	Surface Impoundment
c. Secondary Source Type	N.A.
d. Source Volume (yd3) | Source Area (ft2)	4357.00 | 0.00
e. Source Volume/Area Value	1.74E+03
f. Source Hazardous Constituent Quantity (HCQ) Value (sum of 1b)	0.00E+00
g. Data Complete?	NO
h. Source Hazardous Wastestream Quantity (WSQ) Value (sum of 1f)	0.00E+00
i. Data Complete?	NO
k. Source Hazardous Waste Quantity (HWQ) Value (2e, 2f, or 2h)	1.74E+03

Source Hazardous Substances	Depth (feet)	Liquid	Concent.	Units
Aluminum	< 2	NO	2.2E+04	ppm
Copper	< 2	NO	3.2E+01	ppm
Iron	< 2	NO	4.6E+04	ppm
Zinc	< 2	NO	4.5E+01	ppm

Documentation for Source Type:

Source was used as a surface impoundment to contain wastewater from CBS processing.

Reference: 2

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Documentation for Source Hazardous Substances:

Surface soil samples taken in the source include CR-SS-06 and SS-07.
Background concentrations in SS-01 include:
Aluminum - 5800 mg/kg
copper - 6.3 mg/kg
iron - 12000 mg/kg
zinc - 8U mg/kg

Reference: Appendix B

Documentation for Source Volume:

880,000 gallon surface impoundment converts to 4357 cubic yards.

Reference: 5

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1. WASTESTREAM QUANTITY SUMMARY TABLE, SOURCE: contaminated soil

a. Wastestream ID	
b. Hazardous Constituent Quantity (C) (lbs.)	0.00
c. Data Complete?	NO
d. Hazardous Wastestream Quantity (W) (lbs.)	0.00
e. Data Complete?	NO
f. Wastestream Quantity Value (W/5,000)	0.00E+00

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2. SOURCE HAZARDOUS WASTE QUANTITY FACTOR TABLE

a. Source ID	contaminated soil
b. Source Type	Contaminated Soil
c. Secondary Source Type	N.A.
d. Source Volume (yd3) | Source Area (ft2)	0.00 | 6000.00
e. Source Volume/Area Value	1.76E-01
f. Source Hazardous Constituent Quantity (HCQ) Value (sum of 1b)	0.00E+00
g. Data Complete?	NO
h. Source Hazardous Wastestream Quantity (WSQ) Value (sum of 1f)	0.00E+00
i. Data Complete?	NO
k. Source Hazardous Waste Quantity (HWQ) Value (2e, 2f, or 2h)	1.76E-01

Source Hazardous Substances	Depth (feet)	Liquid	Concent.	Units
Aluminum	< 2	NO	2.1E+04	ppm
Cobalt	< 2	NO	3.6E+01	ppm
Copper	< 2	NO	2.9E+01	ppm
Iron	< 2	NO	4.9E+04	ppm
Nickel	< 2	NO	1.5E+01	ppm
Zinc	< 2	NO	3.1E+01	ppm

Documentation for Source Type:

Soil was found to be contaminated in the surface soil samples, and no other source applies.

Reference: Appendix B, Figure 3

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Documentation for Source Hazardous Substances:

Samples used to determine contaminated soil were SS-03, SS-04, SS-05. Background concentrations for the inorganics observed at elevated levels from SS-01 are as follows:
Aluminum - SS - 5800 mg/kg
cobalt - SS - 6.8 mg/kg
iron - SS - 12000 mg/kg
nickel - SS - 4.1J mg/kg
zinc - SS - 8U mg/kg
copper - SS - 6.3 mg/kg

Reference: Appendix B

Documentation for Source Area:

Source area was estimated from the map in figure 3 (to scale drawing) by extrapolating a triangle from the three surface soil samples that showed contamination.

Reference: Appendix B, Figure 3

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3. SITE HAZARDOUS WASTE QUANTITY SUMMARY

No.	Source ID	Migration Pathways	Vol. or Area Value (2e)	Constituent or Wastestream Value (2f,2h)	Hazardous Waste Qty. Value (2k)
1	surface impoundment	GW-SW-SE-A	1.74E+03	0.00E+00	1.74E+03
2	contaminated soil	GW-SW-SE-A	1.76E-01	0.00E+00	1.76E-01

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4. PATHWAY HAZARDOUS WASTE QUANTITY AND WASTE CHARACTERISTICS SUMMARY TABLE

Migration Pathway	Contaminant Values		HWQVs*	WCVs**
Ground Water	Toxicity/Mobility	1.00E+04	100	32
SW: Overland Flow, DW	Tox./Persistence	1.00E+04	100	32
SW: Overland Flow, HFC	Tox./Persis./Bioacc.	5.00E+06	100	100
SW: Overland Flow, Env	Etox./Persis./Bioacc.	5.00E+06	100	100
SW: GW to SW, DW	Tox./Persistence	1.00E+04	100	32
SW: GW to SW, HFC	Tox./Persis./Bioacc.	5.00E+06	100	100
SW: GW to SW, Env	Etox./Persis./Bioacc.	5.00E+06	100	100
Soil Exposure:Resident	Toxicity	1.00E+04	10	18
Soil Exposure: Nearby	Toxicity	1.00E+04	10	18
Air	Toxicity/Mobility	8.00E-01	100	2

* Hazardous Waste Quantity Factor Values
** Waste Characteristics Factor Category Values

Note: SW = Surface Water
GW = Ground Water
DW = Drinking Water Threat
HFC = Human Food Chain Threat
Env = Environmental Threat

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GROUND WATER MIGRATION PATHWAY SCORESHEET
CBS Records - 05/28/92

GROUND WATER MIGRATION PATHWAY Factor Categories & Factors	Maximum Value	Value Assigned
Likelihood of Release to an Aquifer Aquifer: Crystalline rock aqu		
1. Observed Release	550	550
2. Potential to Release		
2a. Containment	10	10
2b. Net Precipitation	10	0
2c. Depth to Aquifer	5	5
2d. Travel Time	35	35
2e. Potential to Release [lines 2a(2b+2c+2d)]	500	400
3. Likelihood of Release	550	550
Waste Characteristics		
4. Toxicity/Mobility	*	1.00E+04
5. Hazardous Waste Quantity	*	100
6. Waste Characteristics	100	32
Targets		
7. Nearest Well	50	9.00E+00
8. Population		
8a. Level I Concentrations	**	0.00E+00
8b. Level II Concentrations	**	0.00E+00
8c. Potential Contamination	**	3.00E+00
8d. Population (lines 8a+8b+8c)	**	3.00E+00
9. Resources	5	0.00E+00
10. Wellhead Protection Area	20	0.00E+00
11. Targets (lines 7+8d+9+10)	**	1.20E+01
12. Targets (including overlaying aquifers)	**	1.20E+01
13. Aquifer Score	100	2.56
GROUND WATER MIGRATION PATHWAY SCORE (Sgw)	100	2.56

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

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GROUND WATER PATHWAY AQUIFER SUMMARY
CBS Records - 05/28/92

No.	Aquifer ID	Type	Overlaying No.	Inter-Connected with	Likelihood of Release	Targets
1	Crystalline rock aqu	Non K	0	0	550	1.20E+01

Containment

No.	Source ID	HWQ Value	Containment Value
1	surface impoundment	1.74E+03	10
2	contaminated soil	1.76E-01	10
	Containment Factor		10

Documentation for Ground Water Containment, Source surface impoundment:

Evidence of groundwater contamination is present in the monitoring wells.

Reference: Appendix B

Documentation for Ground Water Containment, Source contaminated soil:

There is no containment between the contaminated soil and the groundwater.

Reference: 1

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Net Precipitation

Net Precipitation (inches) 0.00

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Aquifer: Crystalline rock aqu.

Type of Aquifer: Non Karst

Overlaying Aquifer: 0

Interconnected with: 0

Documentation for Crystalline rock aqu. Aquifer:

The fractured and faulted rocks of the Dog River Formation, combined with the overlying residual soil material, make up the unconfined residual soil\crystalline rock aquifer system.

Reference: 23

OBSERVED RELEASE

No.	Well ID	Well Type	Distance (miles)	Level of Contamination
1	MW-02	Monitoring Well	0.000	Level I
2	MW-03	Monitoring Well	0.000	Level I

Well No.	Hazardous Substance	Concent.	MCL	Cancer	RFD	Units
1	Aluminum	3.1E+04	0.0E+00	0.0E+00	0.0E+00	ppb
1	Chromium	6.9E+01	5.0E+01	0.0E+00	1.8E+02	ppb
1	Cobalt	1.9E+01	0.0E+00	0.0E+00	0.0E+00	ppb
1	Copper	2.7E+01	0.0E+00	0.0E+00	1.3E+03	ppb
1	Iron	5.5E+04	0.0E+00	0.0E+00	0.0E+00	ppb
1	Nickel	1.2E+01	0.0E+00	0.0E+00	7.0E+02	ppb
2	Aluminum	1.6E+05	0.0E+00	0.0E+00	0.0E+00	ppb
2	Chromium	4.8E+02	5.0E+01	0.0E+00	1.8E+02	ppb
2	Cobalt	1.2E+02	0.0E+00	0.0E+00	0.0E+00	ppb
2	Copper	1.3E+02	0.0E+00	0.0E+00	1.3E+03	ppb
2	Iron	2.9E+05	0.0E+00	0.0E+00	0.0E+00	ppb
2	Nickel	1.0E+02	0.0E+00	0.0E+00	7.0E+02	ppb
2	Zinc	2.6E+02	0.0E+00	0.0E+00	7.0E+03	ppb

Observed Release Factor 550

Documentation for Well MW-02:

MW-02 is located at the northern side of the surface impoundment.

Reference: Figure 3

Documentation for Well MW-03:

MW-03 is located at the eastern border of the surface impoundment, in the most downgradient location sampled.

Reference: Figure 3, Appendix A

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POTENTIAL TO RELEASE

Containment

Containment Factor	10	

Net Precipitation

Net Precipitation Factor	0	

Depth to Aquifer

A. Depth of Hazardous Substances	0.00	feet
B. Depth to Aquifer from Surface	0.00	feet
C. Depth to Aquifer (B - A)	0.00	feet
Depth to Aquifer Factor	5	

Travel Time

Are All Layers Karst?	NO	
Thickness of Layer(s) with Lowest Conductivity	0.00	feet
Hydraulic Conductivity (cm/sec)	0.0E-00	
Travel Time Factor	35	

==========

Potential to Release Factor 400

Source: 1 surface impoundment

Source Hazardous Waste Quantity Value: 1742.80

Hazardous Substance	Toxicity Value	Mobility Value	Toxicity/ Mobility Value
Aluminum	100	2.00E-05	2.00E-03
Copper	100	1.00E-02	1.00E+00
Iron	100	1.00E-02	1.00E+00
Zinc	10	2.00E-03	2.00E-02

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Source: 2 contaminated soil

Source Hazardous Waste Quantity Value: 0.18

Hazardous Substance	Toxicity Value	Mobility Value	Toxicity/ Mobility Value
Aluminum	100	2.00E-05	2.00E-03
Cobalt	100	1.00E-02	1.00E+00
Copper	100	1.00E-02	1.00E+00
Iron	100	1.00E-02	1.00E+00
Nickel	10000	2.00E-05	2.00E-01
Zinc	10	2.00E-03	2.00E-02

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Hazardous Substances Found in an Observed Release

Well No.	Observed Release Hazardous Substance	Toxicity Value	Mobility Value	Toxicity/ Mobility Value
1	Aluminum	100	1.00E+00	1.00E+02
1	Chromium	10000	1.00E+00	1.00E+04
1	Cobalt	100	1.00E+00	1.00E+02
1	Copper	100	1.00E+00	1.00E+02
1	Iron	100	1.00E+00	1.00E+02
1	Nickel	10000	1.00E+00	1.00E+04
2	Aluminum	100	1.00E+00	1.00E+02
2	Chromium	10000	1.00E+00	1.00E+04
2	Cobalt	100	1.00E+00	1.00E+02
2	Copper	100	1.00E+00	1.00E+02
2	Iron	100	1.00E+00	1.00E+02
2	Nickel	10000	1.00E+00	1.00E+04
2	Zinc	10	1.00E+00	1.00E+01

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Toxicity/Mobility Value from Source Hazardous Substances:	1.00E+00
Toxicity/Mobility Value from Observed Release Hazardous Substances:	1.00E+04
Toxicity/Mobility Factor:	1.00E+04
Sum of Source Hazardous Waste Quantity Values:	1.74E+03
Hazardous Waste Quantity Factor:	100
Waste Characteristics Factor Category:	32

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Population by Well

No.	Well ID	Sample Type	Distance (miles)	Level of Contamination	Population

- N/A and/or data not specified

Level I Population Factor: 0.00

Level II Population Factor: 0.00

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Potential Contamination by Distance Category

Distance Category (miles)	Population	Value
> 0 to 1/4	0.0	0.00E+00
> 1/4 to 1/2	0.0	0.00E+00
> 1/2 to 1	0.0	0.00E+00
> 1 to 2	71.0	1.00E+00
> 2 to 3	41.0	7.00E-01
> 3 to 4	136.0	1.30E+00

Potential Contamination Factor: 3.000

Documentation for Target Population > 1 to 2 miles Distance Category:

26 households x 2.71 persons per household = 71 persons.

Reference: Appendix A, Ref. 28

Documentation for Target Population > 2 to 3 miles Distance Category:

15 houses x 2.71 persons per household = 41 persons.

Reference: Appendix A, Ref. 28

Documentation for Target Population > 3 to 4 miles Distance Category:

50 houses x 2.71 persons per household = 136 persons.

Reference: Appendix A, Ref. 28

Nearest Well

Level of Contamination: Potential
Distance in miles: 1.00

Nearest Well Factor: 9.00E+00

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Documentation for Nearest Well:

The nearest private well was estimated by analysis of a topographic map that contained all the municipal water lines, and assuming that those not served are utilizing private wells for potable water.

Reference: Appendix A, 1, 30

Resources

Resource Use: NO

Resource Factor: 0.00E+00

Documentation for Resources:

No resources identified for groundwater.

Reference:

Wellhead Protection Area

No wellhead protection area

Wellhead Protection Area Factor: 0.00E+00

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET
CBS Records - 05/28/92

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT Factor Categories & Factors DRINKING WATER THREAT	Maximum Value	Value Assigned
Likelihood of Release		
1. Observed Release	550	0
2. Potential to Release by Overland Flow		
2a. Containment	10	9
2b. Runoff	25	1
2c. Distance to Surface Water	25	6
2d. Potential to Release by Overland Flow [lines 2a(2b+2c)]	500	63
3. Potential to Release by Flood		
3a. Containment (Flood)	10	0
3b. Flood Frequency	50	0
3c. Potential to Release by Flood (lines 3a x 3b)	500	0
4. Potential to Release (lines 2d+3c)	500	63
5. Likelihood of Release	550	63
Waste Characteristics		
6. Toxicity/Persistence	*	1.00E+04
7. Hazardous Waste Quantity	*	100
8. Waste Characteristics	100	32
Targets		
9. Nearest Intake	50	0.00E+00
10. Population		
10a. Level I Concentrations	**	0.00E+00
10b. Level II Concentrations	**	0.00E+00
10c. Potential Contamination	**	0.00E+00
10d. Population (lines 10a+10b+10c)	**	0.00E+00
11. Resources	5	5.00E+00
12. Targets (lines 9+10d+11)	**	5.00E+00
13. DRINKING WATER THREAT SCORE	100	0.12

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

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SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET
CBS Records - 05/28/92

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT Factor Categories & Factors HUMAN FOOD CHAIN THREAT	Maximum Value	Value Assigned
Likelihood of Release		
14. Likelihood of Release (same as line 5)	550	63
Waste Characteristics		
15. Toxicity/Persistence/Bioaccumulation	*	5.00E+06
16. Hazardous Waste Quantity	*	100
17. Waste Characteristics	1000	100
Targets		
18. Food Chain Individual	50	2.00E+00
19. Population		
19a. Level I Concentrations	**	0.00E+00
19b. Level II Concentrations	**	0.00E+00
19c. Pot. Human Food Chain Contamination	**	3.00E-04
19d. Population (lines 19a+19b+19c)	**	3.00E-04
20. Targets (lines 18+19d)	**	2.00E+00
21. HUMAN FOOD CHAIN THREAT SCORE	100	0.15

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

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SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET
CBS Records - 05/28/92

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT Factor Categories & Factors ENVIRONMENTAL THREAT	Maximum Value	Value Assigned
Likelihood of Release		
22. Likelihood of Release (same as line 5)	550	63
Waste Characteristics		
23. Ecosystem Toxicity/Persistence/Bioacc.	*	5.00E+06
24. Hazardous Waste Quantity	*	100
25. Waste Characteristics	1000	100
Targets		
26. Sensitive Environments	**	0.00E+00
26a. Level I Concentrations	**	0.00E+00
26b. Level II Concentrations	**	1.00E+00
26c. Potential Contamination	**	1.00E+00
26d. Sensitive Environments (lines 26a+26b+26c)	**	1.00E+00
27. Targets (line 26d)	60	0.08
28. ENVIRONMENTAL THREAT SCORE	100	0.35
29. WATERSHED SCORE	100	0.35
30. SW: OVERLAND/FLOOD COMPONENT SCORE (Sof)		

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

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SURFACE WATER PATHWAY SEGMENT SUMMARY
CBS Records - 05/28/92

No.	Segment ID	Segment Type	Water Type	Start Point (mi)	End Point (mi)	Average Flow (cfs)
1	Little Tallapoosa	River	Fresh	0.00	15.01	100

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SURFACE WATER PATHWAY OVERLAND FLOW/FLOOD COMPONENT LIKELIHOOD OF RELEASE
CBS Records - 05/28/92

OBSERVED RELEASE

No.	Sample ID	Sample Type	Distance (miles)	Level of Contamination DW	HFC	Env

- N/A and/or data not specified

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SURFACE WATER PATHWAY OVERLAND FLOW/FLOOD COMPONENT LIKELIHOOD OF RELEASE
CBS Records - 05/28/92

POTENTIAL TO RELEASE

Potential to Release by Overland Flow

Containment

No.	Source ID	HWQ Value	Containment Value

Containment Factor: 1
Containment Factor: 2

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Distance to Surface Water

Documentation for Overland Flow Containment, Source surface impoundment:

No free liquids are present, as the surface impoundment was closed. A runoff system is present to collect surface water runoff from the entire CBS Records facility.

Reference: 2

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Documentation for Overland Flow Containment, Source contaminated soil:

Some control for runoff is provided through channeling of onsite runoff through ditches into the retention ponds on the eastern portion of the site.

Reference: 2

Distance to Surface Water Factor: 0

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Runoff

Documentation for Distance to Surface Water:

Estimated distance along Beulah Creek (intermittent stream) to the Little Tallapoosa River. Distance is approximately 1 mile to perennial surface water.

Reference: Appendix A, 2

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Documentation for Drainage Area:

Approximately 1/3 of the total area of the CBS facility could potentially be drained by runoff that would contact source areas.

Reference: Figure 3, 1, 2

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Documentation for Rainfall:

Rainfall Frequency Atlas of the United States was used. Rainfall in the area is approximately 3.2 inches.

Reference: 30

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Documentation for Soil Group:

The land surface in the area is underlain by a clay-rich, residual material called saprolite. The fractured and faulted rocks of the Dog River Formation, along with this residual material, make up an unconfined crystalline rock aquifer system in which saturation rarely extends below 300 feet bls.

Reference: 20, 24, 25

==========

Potential to Release by Overland Flow Factor: 1

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Potential to Release by Flood

No.	Source ID	HWQ Value	Flood Containment Value	Flood Frequency Value	Potential to Release by Flood
63	- / y	6.01E-154	5888	13087	3906

- N/A and/or data not specified

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Documentation for Flood Containment, Source surface impoundment:

The surface impoundment is not located in a floodplain. No containment measures are present, however, except the runoff control system.

Reference: 2

Documentation for Flood Frequency, Source surface impoundment:

None of the waste management areas on the facility are in a floodplain.

Reference: 2

Documentation for Flood Containment, Source contaminated soil:

Source is on a high topographic location and is somewhat contained from flood by the runoff control system.

Reference: Appendix A, 2

Documentation for Flood Frequency, Source contaminated soil:

None of the soil is located in a floodplain.

Reference: 2

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CBS Records - 05/28/92

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CBS Records - 05/28/92

Source: 1 surface impoundment

Source Hazardous Waste Quantity Value: 1742.80

Hazardous Substance	Toxicity Value	Persistence Value	Toxicity/ Persistence Value
Aluminum	0	1.00E+00	0.00E+00
Copper	100	1.00E+00	1.00E+02
Iron	0	1.00E+00	0.00E+00
Zinc	10	1.00E+00	1.00E+01

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CBS Records - 05/28/92

Source: 2 contaminated soil

Source Hazardous Waste Quantity Value: 0.18

Hazardous Substance	Toxicity Value	Persistence Value	Toxicity/ Persistence Value
Aluminum	0	1.00E+00	0.00E+00
Cobalt	100	1.00E+00	1.00E+02
Copper	100	1.00E+00	1.00E+02
Iron	0	1.00E+00	0.00E+00
Nickel	10000	1.00E+00	1.00E+04
Zinc	10	1.00E+00	1.00E+01

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CBS Records - 05/28/92

Hazardous Substances Found in an Observed Release

Sample No.	Observed Release Hazardous Substance	Toxicity Value	Persistence Value	Toxicity/ Persistence Value

- N/A and/or data not specified

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CBS Records - 05/28/92

Toxicity/Persistence Value from Source Hazardous Substances:	1.00E+04
Toxicity/Persistence Value from Observed Release Hazardous Substances:	0.00E+00
Toxicity/Persistence Factor:	1.00E+04
Sum of Source Hazardous Waste Quantity Values:	1.74E+03
Hazardous Waste Quantity Factor:	100
Waste Characteristics Factor Category:	32

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Level I Concentrations

- N/A and/or data not specified

Level II Concentrations

- N/A and/or data not specified

Most Distant Level I Sample

- N/A and/or data not specified

Most Distant Level II Sample

- N/A and/or data not specified

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SW PATHWAY: OVERLAND FLOW/FLOOD COMPONENT DRINKING WATER THREAT TARGETS
CBS Records - 05/28/92

Level I Concentrations

Intake	Distance Along the In-water Segment from the Probable Point of Entry (miles)	Population

- N/A and/or data not specified

==========

Population Served by Level I Intakes: 0.0

Level I Population Factor: 0.00E+00

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Level II Concentrations

Intake	Distance Along the In-water Segment from the Probable Point of Entry (miles)	Population
- N/A and/or data not specified		

==========

Population Served by Level II Intakes: 0.0

Level II Population Factor: 0.00E+00

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Potential Contamination

Intake ID	Average Annual Flow (cfs)	Population Served
- N/A and/or data not specified		

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Documentation for Intake :

There are no surface water intakes located along the surface water pathway.

Reference: 1, 31, Appendix A

Type of Surface Water Body	Total Population	Dilution-Weighted Population
- N/A and/or data not specified		

Dilution-Weighted Population Served by Potentially Contaminated Intakes: 0.0

Potential Contamination Factor: 0.0

Nearest Intake

Location of Nearest Drinking Water Intake: N.A.

Nearest Intake Factor: 0.00

Resources

Resource Use: YES

Resource Value: 5.00E+00

Documentation for Resources:

Surface water upstream and downstream is suitable for drinking.

Reference: 1

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SW PATHWAY: OVERLAND/FLOOD HUMAN FOOD CHAIN THREAT WASTE CHARACTERISTICS
CBS Records - 05/28/92

Source: 1 surface impoundment

Source Hazardous Waste Quantity Value: 1742.80

Hazardous Substance	Toxicity Value	Persistence Value	Bio-accum. Value	Toxicity/ Persistence/ Bioaccum. Value
Aluminum	0	1.00E+00	5.00E-01	0.00E+00
Chromium	10000	1.00E+00	5.00E+02	5.00E+06
Cobalt	100	1.00E+00	5.00E+03	5.00E+05
Copper	100	1.00E+00	5.00E+04	5.00E+06
Iron	0	1.00E+00	5.00E-01	0.00E+00
Nickel	10000	1.00E+00	5.00E+02	5.00E+06
Zinc	10	1.00E+00	5.00E+04	5.00E+05

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SW PATHWAY: OVERLAND/FLOOD HUMAN FOOD CHAIN THREAT WASTE CHARACTERISTICS
CBS Records - 05/28/92

Source: 2 contaminated soil

Source Hazardous Waste Quantity Value: 0.18

Hazardous Substance	Toxicity Value	Persistence Value	Bio-accum. Value	Toxicity/ Persistence/ Bioaccum. Value
Aluminum	0	1.00E+00	5.00E-01	0.00E+00
Cobalt	100	1.00E+00	5.00E+03	5.00E+05
Copper	100	1.00E+00	5.00E+04	5.00E+06
Iron	0	1.00E+00	5.00E-01	0.00E+00
Nickel	10000	1.00E+00	5.00E+02	5.00E+06
Zinc	10	1.00E+00	5.00E+04	5.00E+05

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Hazardous Substances Found in an Observed Release

Sample No.	Observed Release Hazardous Substance	Toxicity Value	Persistence Value	Bio-accum. Value	Toxicity/ Persistence/ Bioaccum. Value

- N/A and/or data not specified

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SW PATHWAY: OVERLAND/FLOOD HUMAN FOOD CHAIN THREAT WASTE CHARACTERISTICS
CBS Records - 05/28/92

Toxicity/Persistence/Bioaccumulation Value from Source Hazardous Substances:	5.00E+06
Toxicity/Persistence/Bioaccumulation Value from Observed Release Hazardous Substances:	0.00E+00
Toxicity/Persistence/Bioaccumulation Factor:	5.00E+06
Sum of Source Hazardous Waste Quantity Values:	1.74E+03
Hazardous Waste Quantity Factor:	100
Waste Characteristics Factor Category:	100

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Level I Concentrations

- N/A and/or data not specified

Level II Concentrations

- N/A and/or data not specified

Most Distant Level I Sample

- N/A and/or data not specified

Most Distant Level II Sample

- N/A and/or data not specified

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SW PATHWAY: OVERLAND FLOW/FLOOD COMPONENT HUMAN FOOD CHAIN THREAT TARGETS
CBS Records - 05/28/92

Level I Concentrations

Fishery	Annual Production (pounds)	Human Food Chain Population Value
- N/A and/or data not specified		

Sum of Human Food Chain Population Values: 0.00E+00

Level I Concentrations Factor: 0.00E+00

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SW PATHWAY: OVERLAND FLOW/FLOOD COMPONENT HUMAN FOOD CHAIN THREAT TARGETS
CBS Records - 05/28/92

Level II Concentrations

Fishery	Annual Production (pounds)	Human Food Chain Population Value
- N/A and/or data not specified		

Sum of Human Food Chain Population Values: 0.00E+00

Level II Concentrations Factor: 0.00E+00

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Potential Contamination

Fishery	Annnual Production (pounds)	Type of Surface Water Body	Average Annual Flow (cfs)	Pop. Value (Pi)	Dilution Weight (Di)	Pi*Di

- N/A and/or data not specified

Sum of (Pi*Di): 0.00E+00

Potential Human Food Chain Contamination Factor: 3.00E-04

Documentation for Little Tallapoosa Fishery:

Fishery production is estimated to give the most conservative score for the river as a fishery.

Reference:

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Food Chain Individual

Location of Nearest Fishery: Little Tallapoosa
Distance from the Probable Point of Entry: 0.00 miles
Type of Surface Water Body: River
Dilution Weight: 0.1000000
Level of Contamination: Potential

Food Chain Individual Factor: 2.00

Documentation for Little Tallapoosa:

The entire perennial surface water pathway is in the Little Tallapoosa River. Flow rate is estimated based on the topographic map and visual observation of the river.

Reference: Appendix A

SW PATHWAY: OVERLAND FLOW/FLOOD ENVIRONMENTAL THREAT WASTE CHARACTERISTICS
CBS Records - 05/28/92

Source: 1 surface impoundment

Source Hazardous Waste Quantity Value: 1742.80

Hazardous Substance	Eco-toxicity Value	Persistence Value	Bio-accum. Value	Ecotoxicity/ Persistence/ Bioaccum. Value
Aluminum	0	1.00E+00	5.00E-01	0.00E+00
Chromium	10	1.00E+00	5.00E+02	5.00E+03
Cobalt	0	1.00E+00	5.00E+03	0.00E+00
Copper	1000	1.00E+00	5.00E+04	5.00E+07
Iron	10	1.00E+00	5.00E-01	5.00E+00
Nickel	1000	1.00E+00	5.00E+02	5.00E+05
Zinc	100	1.00E+00	5.00E+04	5.00E+06

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SW PATHWAY: OVERLAND FLOW/FLOOD ENVIRONMENTAL THREAT WASTE CHARACTERISTICS
CBS Records - 05/28/92

Source: 2 contaminated soil

Source Hazardous Waste Quantity Value: 0.18

Hazardous Substance	Eco-toxicity Value	Persistence Value	Bio-accum. Value	Ecotoxicity/ Persistence/ Bioaccum. Value
Aluminum	0	1.00E+00	5.00E-01	0.00E+00
Cobalt	0	1.00E+00	5.00E+03	0.00E+00
Copper	1000	1.00E+00	5.00E+04	5.00E+07
Iron	10	1.00E+00	5.00E-01	5.00E+00
Nickel	1000	1.00E+00	5.00E+02	5.00E+05
Zinc	100	1.00E+00	5.00E+04	5.00E+06

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Hazardous Substances Found in an Observed Release

Sample No.	Observed Release Hazardous Substance	Eco-toxicity Value	Persistence Value	Bio-accum. Value	Ecotoxicity/ Persistence/ Bioaccum. Value

- N/A and/or data not specified

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Ecotoxicity/Persistence/Bioaccummulation Value from Source Hazardous Substances:	5.00E+06
Ecotoxicity/Persistence/Bioaccummulation Value from Observed Release Hazardous Substances:	0.00E+00
Ecotoxicity/Persistence/Bioaccummulation Factor:	5.00E+06
Sum of Source Hazardous Waste Quantity Values:	1.74E+03
Hazardous Waste Quantity Factor:	100
Waste Characteristics Factor Category:	100

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Level I Concentrations

- N/A and/or data not specified

Level II Concentrations

- N/A and/or data not specified

Most Distant Level I Sample

- N/A and/or data not specified

Most Distant Level II Sample

- N/A and/or data not specified

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SW PATHWAY: OVERLAND FLOW/FLOOD COMPONENT ENVIRONMENTAL THREAT TARGETS
CBS Records - 05/28/92

Level I Concentrations

Sensitive Environment	Distance from Probable Point of Entry to Sensitive Env. (miles)	Sensitive Environment Value
- N/A and/or data not specified		

Sum of Sensitive Environments Values: 0

Wetlands

Wetland	Distance from Probable Point of Entry to Wetland (miles)	Wetlands Frontage (miles)
- N/A and/or data not specified		

Total Wetlands Frontage: 0.00 Miles Total Wetlands Value: 0

Sum of Sensitive Environments Value + Wetlands Value: 0.00E+00

Level I Concentrations Factor: 0.00E+00

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SW PATHWAY: OVERLAND FLOW/FLOOD COMPONENT ENVIRONMENTAL THREAT TARGETS
CBS Records - 05/28/92

Level II Concentrations

Sensitive Environment	Distance from Probable Point of Entry to Sensitive Env. (miles)	Sensitive Environment Value
- N/A and/or data not specified		

Sum of Sensitive Environments Values: 0

Wetlands

Wetland	Distance from Probable Point of Entry to Wetland (miles)	Wetlands Frontage (miles)
- N/A and/or data not specified		

Total Wetlands Frontage: 0.00 Miles Total Wetlands Value: 0

Sum of Sensitive Environments Value + Wetlands Value: 0.00E+00

Level II Concentrations Factor: 0.00E+00

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Potential Contamination

Sensitive Environments

Type of Surface Water Body	Sensitive Environment	Sensitive Environment Value

Wetlands

Type of Surface Water Body	Sensitive Environment	Wetlands Frontage	Wetlands Value
River	I Wetlands	3.40	100

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SW PATHWAY: OVERLAND FLOW/FLOOD COMPONENT ENVIRONMENTAL THREAT TARGETS
CBS Records - 05/28/92

Type of Surface Water Body	Sum of Sens. Environment Values(Sj)	Sum of Wetland Frontage Values(Wj)	Dilution Weight (Dj)	Dj(Wj+Sj)
Small to Moderate Stream	0	100	1.00E-01	1.00E+01

Sum of Dj(Wj+Sj): 1.00E+01
Sum of Dj(Wj+Sj)/10: 1.00E+00

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Potential Contamination Sensitive Environment Factor: 1.00E+00

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SOIL EXPOSURE PATHWAY SCORESHEET
CBS Records - 05/28/92

SOIL EXPOSURE PATHWAY Factor Categories & Factors RESIDENT POPULATION THREAT	Maximum Value	Value Assigned
Likelihood of Exposure		
1. Likelihood of Exposure	550	550
Waste Characteristics		
2. Toxicity	*	1.00E+04
3. Hazardous Waste Quantity	*	10
4. Waste Characteristics	100	18
Targets		
5. Resident Individual	50	0.00E+00
6. Resident Population		
6a. Level I Concentrations	**	0.00E+00
6b. Level II Concentrations	**	0.00E+00
6c. Resident Population (lines 6a+6b)	**	0.00E+00
7. Workers	15	1.50E+01
8. Resources	5	0.00E+00
9. Terrestrial Sensitive Environments	***	5.00E+01
10. Targets (lines 5+6c+7+8+9)	**	6.50E+01
11. RESIDENT POPULATION THREAT SCORE	**	6.44E+05

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.
*** No specific maximum value applies, see HRS for details.

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SOIL EXPOSURE PATHWAY SCORESHEET
CBS Records - 05/28/92

SOIL EXPOSURE PATHWAY Factor Categories & Factors NEARBY POPULATION THREAT	Maximum Value	Value Assigned
Likelihood of Exposure		
12. Attractiveness/Accessibility	100	5.00E+00
13. Area of Contamination	100	2.00E+01
14. Likelihood of Exposure	500	5.00E+00
Waste Characteristics		
15. Toxicity	*	1.00E+04
16. Hazardous Waste Quantity	*	10
17. Waste Characteristics	100	18
Targets		
18. Nearby Individual	1	1.00E+00
19. Population Within 1 Mile	**	5.40E-01
20. Targets (lines 18+19)	**	1.54E+00
21. NEARBY POPULATION THREAT SCORE	**	1.39E+02
SOIL EXPOSURE PATHWAY SCORE (Ss)	100	7.80

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

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Likelihood of Exposure

No.	Source ID	Level of Contamination
1	surface impoundment	Level II
2	contaminated soil	Level II

Likelihood of Exposure Factor: 550

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Documentation for Area of Contamination, Source surface impoundment:

Surface impoundment area was extrapolated from the square shape of the area as measured off Figure 3, a scale map of the site.

Reference: Appendix B, Figure 3

Documentation for Area of Contamination, Source contaminated soil:

Estimated area of contaminated soil by extrapolating a triangle between surface soil sampling points on the to scale Figure 3.

Reference: Appendix B, Figure 3

Source No.	Hazardous Substance	Depth (ft.)	Concent.	Cancer	RFD	Units
1	Aluminum	< 2	2.2E+04	0.0E+00	0.0E+00	ppm
1	Copper	< 2	3.2E+01	0.0E+00	2.2E+04	ppm
1	Iron	< 2	4.6E+04	0.0E+00	0.0E+00	ppm
1	Zinc	< 2	4.5E+01	0.0E+00	1.2E+05	ppm
2	Aluminum	< 2	2.1E+04	0.0E+00	0.0E+00	ppm
2	Cobalt	< 2	3.6E+01	0.0E+00	0.0E+00	ppm
2	Copper	< 2	2.9E+01	0.0E+00	2.2E+04	ppm
2	Iron	< 2	4.9E+04	0.0E+00	0.0E+00	ppm
2	Nickel	< 2	1.5E+01	0.0E+00	1.2E+04	ppm
2	Zinc	< 2	3.1E+01	0.0E+00	1.2E+05	ppm

Documentation for Source surface impoundment, Contaminants:

Surface soil samples taken in the source include CR-SS-06 and SS-07. Background concentrations in SS-01 include:
Aluminum - 5800 mg/kg
copper - 6.3 mg/kg
iron - 12000 mg/kg
zinc - 8U mg/kg

Reference: Appendix B

Documentation for Source contaminated soil, Contaminants:

Samples used to determine contaminated soil were SS-03, SS-04, SS-05. Background concentrations for the inorganics observed at elevated levels from SS-01 are as follows:
Aluminum - SS - 5800 mg/kg
cobalt - SS - 6.8 mg/kg
iron - SS - 12000 mg/kg
nickel - SS - 4.1J mg/kg
zinc - SS - 8U mg/kg
copper - SS - 6.3 mg/kg

Reference: Appendix B

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SOIL EXPOSURE PATHWAY RESIDENT POPULATION THREAT WASTE CHARACTERISTICS
CBS Records - 05/28/92

Source: 1 surface impoundment

Source Hazardous Waste Quantity Value: 0.00

Hazardous Substance	Toxicity Value
Aluminum	0
Copper	100
Iron	0
Zinc	10

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Source: 2 contaminated soil

Source Hazardous Waste Quantity Value: 0.18

Hazardous Substance	Toxicity Value
Aluminum	0
Cobalt	100
Copper	100
Iron	0
Nickel	10000
Zinc	10

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SOIL EXPOSURE PATHWAY RESIDENT POPULATION THREAT WASTE CHARACTERISTICS
CBS Records - 05/28/92

Toxicity Factor:	1.00E+04
Sum of Source Hazardous Waste Quantity Values:	1.76E-01
Hazardous Waste Quantity Factor:	10
Waste Characteristics Factor Category:	18

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Targets

Level I Population:	0.0	Value:	0.00
Level II Population:	0.0	Value:	0.00
Workers:	2300.0	Value:	15.00

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Documentation for Workers:

Approximately 2300 persons work in several shifts at the CBS Records facility.

Reference: 2

Resident Individual:	Potentia	Value:	0.00
Resources:	NO	Value:	0.00

Terrestial Sensitive Environment	Value
Monkey-face plant	50

Terrestrial Sensitive Environments Factor: 50.00

Documentation for Terrestrial Environment Monkey-face plant:

The Monkey-face plant (Platanthera integrilabia) is a plant species currently under review as to its federal status.

Reference: 33

Likelihood of Exposure

No.	Source ID	Level of Contamination	Attractiveness/ Accessibility	Area of Contam. (sq. feet)
1	surface impoundment	Level II	5	6400
2	contaminated soil	Level II	5	6000

Highest Attractiveness/Accessibility Value: 5
Sum of Eligible Areas Of Contamination (sq. feet): 12400
Area of Contamination Value: 20

Likelihood of Exposure Factor Category: 5

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Documentation for Attractiveness/Accessibility, Source surface impoundment:

The contaminated soil and the former surface impoundment are both located within a fenced area.

Reference: 1

Documentation for Attractiveness/Accessibility, Source contaminated soil:

Source is completely surrounded by a well-maintained fence, and is not accessible to public.

Reference: 1

Source No.	Hazardous Substance	Depth (ft.)	Concent.	Cancer	RFD	Units
1	Aluminum	< 2	2.2E+04	0.0E+00	0.0E+00	ppm
1	Copper	< 2	3.2E+01	0.0E+00	2.2E+04	ppm
1	Iron	< 2	4.6E+04	0.0E+00	0.0E+00	ppm
1	Zinc	< 2	4.5E+01	0.0E+00	1.2E+05	ppm
2	Aluminum	< 2	2.1E+04	0.0E+00	0.0E+00	ppm
2	Cobalt	< 2	3.6E+01	0.0E+00	0.0E+00	ppm
2	Copper	< 2	2.9E+01	0.0E+00	2.2E+04	ppm
2	Iron	< 2	4.9E+04	0.0E+00	0.0E+00	ppm

2	Nickel	< 2	1.5E+01	0.0E+00	1.2E+04	ppm
2	Zinc	< 2	3.1E+01	0.0E+00	1.2E+05	ppm

Documentation for Source surface impoundment, Contaminants:

Surface soil samples taken in the source include CR-SS-06 and SS-07.
Background concentrations in SS-01 include:
Aluminum - 5800 mg/kg
copper - 6.3 mg/kg
iron - 12000 mg/kg
zinc - 8U mg/kg

Reference: Appendix B

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Documentation for Source contaminated soil, Contaminants:

Samples used to determine contaminated soil were SS-03, SS-04, SS-05. Background concentrations for the inorganics observed at elevated levels from SS-01 are as follows:
Aluminum - SS - 5800 mg/kg
cobalt - SS - 6.8 mg/kg
iron - SS - 12000 mg/kg
nickel - SS - 4.1J mg/kg
zinc - SS - 8U mg/kg
copper - SS - 6.3 mg/kg

Reference: Appendix B

SOIL EXPOSURE PATHWAY NEARBY POPULATION THREAT WASTE CHARACTERISTICS
CBS Records - 05/28/92

Source: 1 surface impoundment

Source Hazardous Waste Quantity Value: 0.00

Hazardous Substance	Toxicity Value
Aluminum	0
Copper	100
Iron	0
Zinc	10

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SOIL EXPOSURE PATHWAY NEARBY POPULATION THREAT WASTE CHARACTERISTICS
CBS Records - 05/28/92

Source: 2 contaminated soil

Source Hazardous Waste Quantity Value: 0.18

Hazardous Substance	Toxicity Value
Aluminum	0
Cobalt	100
Copper	100
Iron	0
Nickel	10000
Zinc	10

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Toxicity Factor:	1.00E+04
Sum of Source Hazardous Waste Quantity Values:	1.76E-01
Hazardous Waste Quantity Factor:	10
Waste Characteristics Factor Category:	18

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Nearby Individual

Population within 1/4 mile: 27.0

Nearby Individual Value: 1.0

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Population Within 1 Mile

Travel Distance Category	Number of People	Value
> 0 to 1/4 mile	27.0	0.0
> 1/4 to 1/2 mile	141.0	0.2
> 1/2 to 1 mile	472.0	0.3
	Population Within 1 Mile Factor:	0.5

Documentation for Population > 0 to 1/4 mile Distance Category:

Obtained from house count - 10 houses x 2.71 persons per household = 27 persons.

Reference: Appendix A, 28

Documentation for Population > 1/4 to 1/2 mile Distance Category:

Obtained from house count - 52 houses x 2.71 persons per household = 141 persons

Reference: Appendix A, 28

Documentation for Population > 1/2 to 1 mile Distance Category:

Obtained from house count - 174 houses x 2.71 persons per household = 472 persons.

Reference: Appendix A, 28

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AIR PATHWAY SCORESHEET
CBS Records - 05/28/92

AIR MIGRATION PATHWAY Factor Categories & Factors	Maximum Value	Value Assigned
Likelihood of Release		
1. Observed Release	550	0
2. Potential to Release		
2a. Gas Potential to Release	500	0
2b. Particulate Potential to Release	500	280
2c. Potential to Release	500	280
3. Likelihood of Release	550	280
Waste Characteristics		
4. Toxicity/Mobility	*	8.00E-01
5. Hazardous Waste Quantity	*	100
6. Waste Characteristics	100	2
Targets		
7. Nearest Individual	50	2.00E+01
8. Population		
8a. Level I Concentrations	**	0.00E+00
8b. Level II Concentrations	**	0.00E+00
8c. Potential Contamination	**	1.70E+02
8d. Population (lines 8a+8b+8c)	**	1.70E+02
9. Resources	5	0.00E+00
10. Sensitive Environments		
10a. Actual Contamination	***	0.00E+00
10b. Potential Contamination	***	7.00E+00
10c. Sens. Environments(lines 10a+10b)	***	7.00E+00
11. Targets (lines 7+8d+9+10c)	**	1.97E+02
AIR MIGRATION PATHWAY SCORE (Sa)	100	1.34E+00

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.
*** No specific maximum value applies, see HRS for details.

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OBSERVED RELEASE

No.	Sample ID	Distance (miles)	Level of Contamination
- N/A and/or data not specified			

Observed Release Factor: 0

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Gas Migration Potential

GAS POTENTIAL TO RELEASE

Source ID	Source Type	Gas Contain. Value (A)	Gas Source Type Value (B)	Gas Migrtn. Potent. Value (C)	Sum (B+C)	Gas Potential to Rel. Value A(B+C)
- N/A and/or data not specified						

Gas Potential to Release Factor: 0

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Documentation for Gas Containment, Source surface impoundment:

The soil cover has been shown to be contaminated.

Reference: Appendix B

Documentation for Source Type, Source surface impoundment:

Source was used as a surface impoundment to contain wastewater from CBS processing.

Reference: 2

Documentation for Gas Containment, Source contaminated soil:

No containment is present for the contaminated soil.

Reference: 1

Documentation for Source Type, Source contaminated soil:

Soil was found to be contaminated in the surface soil samples, and no other source applies.

Reference: Appendix B, Figure 3

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AIR PATHWAY LIKELIHOOD OF RELEASE
CBS Records - 05/28/92

Source: surface impoundment

Gaseous Hazardous Substance	Hazardous Substance Gas Migration Potential Value

Average of Gas Migration Potential Value for 3 Hazardous Substances: 0.000

Gas Migration Potential Value From Table 6-7: 0

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Source: contaminated soil

Gaseous Hazardous Substance	Hazardous Substance Gas Migration Potential Value

Average of Gas Migration Potential Value for 3 Hazardous Substances: 0.000

Gas Migration Potential Value From Table 6-7: 0

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Particulate Migration Potential

PARTICULATE POTENTIAL TO RELEASE

Source ID	Source Type	Partic. Contain. Value (A)	Partic. Source Type Value (B)	Partic. Migrtn. Potent. Value (C)	Sum (B+C)	Partic. Potential to Rel. Value A(B+C)
surface impoundment	Surface Impoundment	10	22	6	28	280
contaminated soil	Contaminated Soil	10	0	6	6	60

Particulate Potential to Release Factor: 280

Documentation for Particulate Containment, Source surface impoundment:

Sources are covered with soil that has shown inorganic contamination. Some vegetation is present.

Reference: Appendix B, 1

Documentation for Source Type, Source surface impoundment:

Source was used as a surface impoundment to contain wastewater from CBS processing.

Reference: 2

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Documentation for Particulate Containment, Source contaminated soil:

No containment is present for the contaminated soil.

Reference: 1

Documentation for Source Type, Source contaminated soil:

Soil was found to be contaminated in the surface soil samples, and no other source applies.

Reference: Appendix B, Figure 3

Documentation for Particulate Migration Potential:

Obtained From Figure 6-2 in the HRS Final Rule.

Reference: Final Rule

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Source: surface impoundment

Particulate Hazardous Substance
Aluminum
Copper
Iron
Zinc

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Source: contaminated soil

Particulate Hazardous Substance
Aluminum
Cobalt
Copper
Iron
Nickel
Zinc

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AIR PATHWAY WASTE CHARACTERISTICS
CBS Records - 05/28/92

Source: 1 surface impoundment

Source Hazardous Waste Quantity Value: 1742.80

Hazardous Substance	Toxicity Value	Gas Mobility Value	Particulate Mobility Value	Toxicity/ Mobility Value
Aluminum	100	NA	8.00E-05	8.00E-03
Copper	100	NA	8.00E-05	8.00E-03
Iron	100	NA	8.00E-05	8.00E-03
Zinc	10	NA	8.00E-05	8.00E-04

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Source: 2 contaminated soil

Source Hazardous Waste Quantity Value: 0.18

Hazardous Substance	Toxicity Value	Gas Mobility Value	Particulate Mobility Value	Toxicity/ Mobility Value
Aluminum	100	NA	8.00E-05	8.00E-03
Cobalt	100	NA	8.00E-05	8.00E-03
Copper	100	NA	8.00E-05	8.00E-03
Iron	100	NA	8.00E-05	8.00E-03
Nickel	10000	NA	8.00E-05	8.00E-01
Zinc	10	NA	8.00E-05	8.00E-04

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Hazardous Substances Found in an Observed Release

Sample ID	Observed Release Hazardous Substance	Particulate Toxicity/ Mobility Value	Gas Toxicity/ Mobility Value

- N/A and/or data not specified

Documentation for Particulate Mobility:

Obtained from the HRS Figure 6-3 in the Final Rule.

Reference: Final Rule

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Toxicity/Mobility Value from Source Hazardous Substances:	8.00E-01
Toxicity/Mobility Value from Observed Release Hazardous Substances:	0.00E+00
Toxicity/Mobility Factor:	8.00E-01
Sum of Source Hazardous Waste Quantity Values:	1.74E+03
Hazardous Waste Quantity Factor:	100
Waste Characteristics Factor Category:	2

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Actual Contamination

No.	Sample ID	Distance (miles)	Level of Contamination

- N/A and/or data not specified

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Potential Contamination

Distance Categories Subject to Potential Contamination	Population	Value
Onsite	2300.0	163.3000
> 0 to 1/4 mile	27.0	0.4000
> 1/4 to 1/2 mile	141.0	0.9000
> 1/2 to 1 mile	472.0	0.8000
> 1 to 2 miles	4088.0	2.7000
> 2 to 3 miles	7854.0	1.2000
> 3 to 4 miles	6088.0	0.7000
	Potential Contaminantion Factor:	170.0000

Documentation for Population Onsite Distance Category:

Approximately 2300 workers onsite.

Reference: 2

Documentation for Population > 0 to 1/4 mile Distance Category:

10 houses in 1/4 mile radius x 2.71 persons per household = 27 persons.

Reference: Appendix A, 28

Documentation for Population > 1/4 to 1/2 mile Distance Category:

House count within 1/4-1/2 mile radius was 52 houses x 2.71 persons per household = 141 persons.

Reference: Appendix A, 28

Documentation for Population > 1/2 to 1 mile Distance Category:

House count in 1/2 -1 mile radius equals 174 houses x 2.71 persons per household = 472 persons.

Reference: Appendix A, 28

Documentation for Population > 1 to 2 miles Distance Category:

Obtained from GEMS database.

Reference: 34

Documentation for Population > 2 to 3 miles Distance Category:

Obtained from GEMS database.

Reference: 34

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Documentation for Population > 3 to 4 miles Distance Category:

Obtained from GEMS database.

Reference: 34

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Nearest Individual Factor

Level of Contamination: Potential
Distance in miles: 0 to 1/8

Nearest Individual Value: 20

Documentation for Nearest Individual:

Nearest individuals are workers.

Reference: 1, 2

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Resources

Resource Use: NO

Resource Value: 0

Documentation for Resources:

No resources identified for the air pathway.

Reference:

Actual Contamination, Sensitive Environments

Sensitive Environment	Distance (miles)	Sensitive Environment Value
- N/A and/or data not specified		

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Actual Contamination, Wetlands

Distance Category	Wetland Acreage	Wetland Acreage Value
- N/A and/or data not specified		

==========

Sensitive Environments Actual Contamination Factor: 0.000
(Sum of Sensitive Environments + Wetlands Values)

Potential Contamination, Sensitive Environments

Sensitive Environment	Distance (miles)	Sensitive Environment Value	Distance Weight	Weighted Value/10
Species under revie	0.000	50	1.0000	5.000
Sum of Sensitive Environments Weighted Values/10:				5.000

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Potential Contamination, Wetlands

Distance Category	Wetland Acreage	Wetland Acreage Value	Distance Weight	Weighted Value/10
> 1/4 to 1/2 mile	475.0	450.0	0.0540	2.430
Total Wetland Acreage:	475.0			

Sum of Wetland Weighted Acreage Values/10: 2.430

==========

Sensitive Environment Potential Contamination Factor: 7.000

Documentation for Sensitive Environment wetlands:

Approximately 475 acres of wetlands are delineated on the topographic map.

Reference: Appendix A

APPENDIX A

TOPOGRAPHIC MAP

OVERSIZED

DOCUMENT

APPENDIX B

ANALYTICAL DATA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV
Environmental Services Division
College Station Road, Athens, Ga. 30613

*****MEMORANDUM******

DATE: 02/01/92

SUBJECT: Results of Specified Analysis;
92-0189 CBS RECORDS
CARROLLTON GA
CASE NO: 17582

FROM: Robert W. Knight Gary Demetro/for
Chief, Laboratory Evaluation/Quality Assurance Section

TO: JOE SLYKERMAN

Attached are the results of analysis of samples collected as part of the subject project.

As a result of the Quality Assurance Review, certain data qualifiers may have been placed on the data. Attached is a DATA QUALIFIER REPORT which explains the reasons that these qualifiers were required.

If you have any questions please contact me.

ATTACHMENT

INORGANIC DATA QUALIFIERS REPORT

Case Number: 17582
Project Number: 92-0189
Site: CBS Records, Carrollton, GA

Element	Flag	Samples Affected	Reason
A. Water			
Cd, Cu, Mn, Ag, V	U	All positives >IDL but <CRDL	Baseline instability
Al, Ba, Ca, Fe, Mg, K, Na, Zn	U	All positives >IDL but <10X contaminant level	Positives in Blanks
Ag	JN	All positives in with Fe concentrations in solution > 56,000 ug/L	Suspected positive interference as noted in the contractor ICS
Pb	J	All	Matrix spike recovery = 31.2% Matrix duplicate RPD = 152.1%
Se	J R	All positives All negatives	Matrix spike recovery = 0%
Tl	J R	All positives All negatives	Matrix spike recovery = 0%
Al	J	All	Matrix duplicate RPD = 23.9%
CN	J	All positives	Matrix spike recovery = 948.3%
CN	J	All	Technical holding time exceeded
Sb	J	MDCE84	% RSD > 20% for ICP multiple exposures
Be	J	MDCE84	% RSD > 20% for ICP multiple exposures
Cr	J	MDCE82	% RSD > 20% for ICP multiple exposures
B. Soil			
Cd, Cu, Mn, Ag, V	U	All positives >IDL but <CRDL	Baseline instability
Al, Ca, Fe, Mg, K, Ma, Zn	U	All positives >IDL but <10X contaminant level	Positives in Blanks
Ag	J	All with Fe concentrations in solution > 95,000 ug/L	Suspected over correction as noted in the contractor ICS
Sb	J R	All positives All negatives	Matrix spike recovery = 24.9%
As	J	All	Matrix spike recovery = 49.1%
Se	J R	All positives All negatives	Matrix spike recovery = 0%
CN	J R	All positives All negatives	Matrix spike recovery = 0%

INORGANIC DATA QUALIFIERS REPORT (continued)

Case Number: 17582
Project Number: 92-0189
Site: CBS Records, Carrollton, GA

Element	Flag	Samples Affected	Reason
Be	J	MDCE80 and 86	% RSD > 20% for ICP multiple exposures
Ni	J	MDCE78	% RSD > 20% for ICP multiple exposures

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV
Environmental Services Division
College Station Road, Athens, Ga. 30613

*****MEMORANDUM******

DATE: 02/01/92

SUBJECT: Results of Metals Analysis;
92-0189 CBS RECORDS
CARROLLTON GA
CASE NO: 17582

FROM: Robert W. Knight
Chief, Laboratory Evaluation/Quality Assurance Section

TO: JOE SLYKERMAN

Attached are the results of analysis of samples collected as part of the subject project.

As a result of the Quality Assurance Review, certain data qualifiers may have been placed on the data. Attached is a DATA QUALIFIER REPORT which explains the reasons that these qualifiers were required.

If you have any questions please contact me.

ATTACHMENT

INORGANIC DATA QUALIFIERS REPORT

Case Number: 17582
Project Number: 92-0189
Site: CBS Records, Carrollton, GA

Element	Flag	Samples Affected	Reason
A. Water			
Cd, Cu, Mn, Ag, V	U	All positives >IDL but <CRDL	Baseline instability
Al, Ba, Ca, Fe, Mg, K, Na, Zn	U	All positives >IDL but <10X contaminant level	Positives in Blanks
Ag	JN	All positives in with Fe concentrations in solution > 56,000 ug/L	Suspected positive interference as noted in the contractor ICS
Pb	J	All	Matrix spike recovery = 31.2% Matrix duplicate RPD = 152.1%
Se	J R	All positives All negatives	Matrix spike recovery = 0%
Tl	J R	All positives All negatives	Matrix spike recovery = 0%
Al	J	All	Matrix duplicate RPD = 23.9%
CN	J	All positives	Matrix spike recovery = 948.3%
CN	J	All	Technical holding time exceeded
Sb	J	MDCE84	% RSD > 20% for ICP multiple exposures
Be	J	MDCE84	% RSD > 20% for ICP multiple exposures
Cr	J	MDCE82	% RSD > 20% for ICP multiple exposures
B. Soil			
Cd, Cu, Mn, Ag, V	U	All positives >IDL but <CRDL	Baseline instability
Al, Ca, Fe, Mg, K, Ma, Zn	U	All positives >IDL but <10X contaminant level	Positives in Blanks
Ag	J	All with Fe concentrations in solution > 95,000 ug/L	Suspected over correction as noted in the contractor ICS
Sb	J R	All positives All negatives	Matrix spike recovery = 24.9%
As	J	All	Matrix spike recovery = 49.1%
Se	J R	All positives All negatives	Matrix spike recovery = 0%
CN	J R	All positives All negatives	Matrix spike recovery = 0%

INORGANIC DATA QUALIFIERS REPORT (continued)

Case Number: 17582
Project Number: 92-0189
Site: CBS Records, Carrollton, GA

Element	Flag	Samples Affected	Reason
Be	J	MDCE80 and 86	% RSD > 20% for ICP multiple exposures
Ni	J	MDCE78	% RSD > 20% for ICP multiple exposures

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV
Environmental Services Division
College Station Road, Athens, Ga. 30613

*****MEMORANDUM******

DATE: 02/19/92

SUBJECT: Results of Purgeable Organic Analysis;
92-0189 CBS RECORDS
CARROLLTON GA
CASE NO: 17582

FROM: Robert W. Knight
Chief, Laboratory Evaluation/Quality Assurance Section

TO: JOE SLYKERMAN

Attached are the results of analysis of samples collected as part of the subject project.

As a result of the Quality Assurance Review, certain data qualifiers may have been placed on the data. Attached is a DATA QUALIFIER REPORT which explains the reasons that these qualifiers were required.

If you have any questions please contact me.

ATTACHMENT

ORGANIC DATA QUALIFIER REPORT

Case Number 17582 Project Number 92-0189 SAS Number
Site ID. CBS Records, Carrollton, GA.

Affected Samples	Compound or Fraction	Flag Used	Reason
Volatiles			
64309,64310	tetrachloroethene	J	<quantitation limit
Extractables			
all soil samples	acenaphthylene	R	unacceptable blind spike recovery
64311,64315	all other extractables	J	excessive holding time
all soil samples	4-methylphenol	J	low blind spike recovery
	2,4,6-trichlorophenol	J	low blind spike recovery
	benzo(g,h,i)perylene	J	low blind spike recovery
all water samples	pentachlorophenol	R	unacceptable blind spike recovery
	chrysene	R	unacceptable blind spike recovery
	benzo(g,h,i)perylene	R	unacceptable blind spike recovery
64306	all positives	J	<quantitation limit
Pesticides			
all soil samples	aroclor 1221	R	unacceptable standards
all water samples	aroclors 1221,1232	R	unacceptable standards
64306	dieldrin	J	<quantitation limit

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV
Environmental Services Division
College Station Road, Athens, Ga. 30613

*****MEMORANDUM******

DATE: 02/19/92

SUBJECT: Results of Extractable Organic Analysis;
92-0189 CBS RECORDS
CARROLLTON GA
CASE NO: 17582

FROM: Robert W. Knight
Chief, Laboratory Evaluation/Quality Assurance Section

TO: JOE SLYKERMAN

Attached are the results of analysis of samples collected as part of the subject project.

As a result of the Quality Assurance Review, certain data qualifiers may have been placed on the data. Attached is a DATA QUALIFIER REPORT which explains the reasons that these qualifiers were required.

If you have any questions please contact me.

ATTACHMENT

ORGANIC DATA QUALIFIER REPORT

Case Number 17582 Project Number 92-0189 SAS Number
Site ID. CBS Records, Carrollton, GA.

Affected Samples	Compound or Fraction	Flag Used	Reason
Volatiles			
64309,64310	tetrachloroethene	J	<quantitation limit
Extractables			
all soil samples	acenaphthylene	R	unacceptable blind spike recovery
64311,64315	all other extractables	J	excessive holding time
all soil samples	4-methylphenol	J	low blind spike recovery
	2,4,6-trichlorophenol	J	low blind spike recovery
	benzo(g,h,i)perylene	J	low blind spike recovery
all water samples	pentachlorophenol	R	unacceptable blind spike recovery
	chrysene	R	unacceptable blind spike recovery
	benzo(g,h,i)perylene	R	unacceptable blind spike recovery
64306	all positives	J	<quantitation limit
Pesticides			
all soil samples	aroclor 1221	R	unacceptable standards
all water samples	aroclors 1221,1232	R	unacceptable standards
64306	dieldrin	J	<quantitation limit

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV
Environmental Services Division
College Station Road, Athens, Ga. 30613

*****MEMORANDUM******

DATE: 02/19/92

SUBJECT: Results of Pesticide/PCB Analysis;
92-0189 CBS RECORDS
CARROLLTON GA
CASE NO: 17582

FROM: Robert W. Knight
Chief, Laboratory Evaluation/Quality Assurance Section

TO: JOE SLYKERMAN

Attached are the results of analysis of samples collected as part of the subject project.

As a result of the Quality Assurance Review, certain data qualifiers may have been placed on the data. Attached is a DATA QUALIFIER REPORT which explains the reasons that these qualifiers were required.

If you have any questions please contact me.

ATTACHMENT

ORGANIC DATA QUALIFIER REPORT

Case Number 17582 Project Number 92-0189 SAS Number
Site ID. CBS Records, Carrollton, GA.

Affected Samples	Compound or Fraction	Flag Used	Reason
Volatiles			
64309,64310	tetrachloroethene	J	<quantitation limit
Extractables			
all soil samples	acenaphthylene	R	unacceptable blind spike recovery
64311,64315	all other extractables	J	excessive holding time
all soil samples	4-methylphenol	J	low blind spike recovery
	2,4,6-trichlorophenol	J	low blind spike recovery
	benzo(g,h,i)perylene	J	low blind spike recovery
all water samples	pentachlorophenol	R	unacceptable blind spike recovery
	chrysene	R	unacceptable blind spike recovery
	benzo(g,h,i)perylene	R	unacceptable blind spike recovery
64306	all positives	J	<quantitation limit
Pesticides			
all soil samples	aroclor 1221	R	unacceptable standards
all water samples	aroclors 1221,1232	R	unacceptable standards
64306	dieldrin	J	<quantitation limit

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64325 SAMPLE TYPE: GROUNDWA
SOURCE: CBS RECORDS
STATION ID: TB-01

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/16/91 1030 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE77

UG/L	ANALYTICAL RESULTS
10U	CHLOROMETHANE
10U	BROMOMETHANE
10U	VINYL CHLORIDE
10U	CHLOROETHANE
30U	METHYLENE CHLORIDE
10U	ACETONE
10U	CARBON DISULFIDE
10U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
10U	1,1-DICHLOROETHANE
10U	1,2-DICHLOROETHENE (TOTAL)
10U	CHLOROFORM
10U	1,2-DICHLOROETHANE
10U	METHYL ETHYL KETONE
10U	1,1,1-TRICHLOROETHANE
10U	CARBON TETRACHLORIDE
10U	BROMODICHLOROMETHANE

UG/L	ANALYTICAL RESULTS
10U	1,2-DICHLOROPROPANE
10U	CIS-1,3-DICHLOROPROPENE
10U	TRICHLOROETHENE(TRICHLOROETHYLENE)
10U	DIBROMOCHLOROMETHANE
10U	1,1,2-TRICHLOROETHANE
10U	BENZENE
10U	TRANS-1,3-DICHLOROPROPENE
10U	BROMOFORM
10U	METHYL ISOBUTYL KETONE
10U	METHYL BUTYL KETONE
10U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
10U	1,1,2,2-TETRACHLOROETHANE
10U	TOLUENE
10U	CHLOROBENZENE
10U	ETHYL BENZENE
10U	STYRENE
10U	TOTAL XYLENES

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

EXTRACTABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64325 SAMPLE TYPE: GROUNDWA
SOURCE: CBS RECORDS
STATION ID: TB-01

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/16/91 1030 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE77

UG/L	ANALYTICAL RESULTS
10U	PHENOL
10U	BIS(2-CHLOROETHYL) ETHER
10U	2-CHLOROPHENOL
10U	1,3-DICHLOROBENZENE
10U	1,4-DICHLOROBENZENE
10U	1,2-DICHLOROBENZENE
10U	2-METHYLPHENOL
10U	2,2'-CHLOROISOPROPYLETHER
10U	(3-AND/OR 4-)METHYLPHENOL
10U	N-NITROSODI-N-PROPYLAMINE
10U	HEXACHLOROETHANE
10U	NITROBENZENE
10U	ISOPHORONE
10U	2-NITROPHENOL
10U	2,4-DIMETHYLPHENOL
10U	BIS(2-CHLOROETHOXY) METHANE
10U	2,4-DICHLOROPHENOL
10U	1,2,4-TRICHLOROBENZENE
10U	NAPHTHALENE
10U	4-CHLOROANILINE
10U	HEXACHLOROBUTADIENE
10U	4-CHLORO-3-METHYLPHENOL
10U	2-METHYLNAPHTHALENE
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)
10U	2,4,6-TRICHLOROPHENOL
25U	2,4,5-TRICHLOROPHENOL
10U	2-CHLORONAPHTHALENE
25U	2-NITROANILINE
10U	DIMETHYL PHTHALATE
10U	ACENAPHTHYLENE
10U	2,6-DINITROTOLUENE

UG/L	ANALYTICAL RESULTS
25U	3-NITROANILINE
10U	ACENAPHTHENE
25U	2,4-DINITROPHENOL
25U	4-NITROPHENOL
10U	DIBENZOFURAN
10U	2,4-DINITROTOLUENE
10U	DIETHYL PHTHALATE
10U	4-CHLOROPHENYL PHENYL ETHER
10U	FLUORENE
25U	4-NITROANILINE
25U	2-METHYL-4,6-DINITROPHENOL
10U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10U	4-BROMOPHENYL PHENYL ETHER
10U	HEXACHLOROBENZENE (HCB)
25UR	PENTACHLOROPHENOL
10U	PHENANTHRENE
10U	ANTHRACENE
10U	CARBAZOLE
10U	DI-N-BUTYLPHTHALATE
10U	FLUORANTHENE
10U	PYRENE
10U	BENZYL BUTYL PHTHALATE
10U	3,3'-DICHLOROBENZIDINE
10U	BENZO(A)ANTHRACENE
10UR	CHRYSENE
10U	BIS(2-ETHYLHEXYL) PHTHALATE
10U	DI-N-OCTYLPHTHALATE
10U	BENZO(B AND/OR K)FLUORANTHENE
10U	BENZO-A-PYRENE
10U	INDENO (1,2,3-CD) PYRENE
10U	DIBENZO(A,H)ANTHRACENE
10UR	BENZO(GHI)PERYLENE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

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**   PROJECT NO. 92-0189   SAMPLE NO. 64325   SAMPLE TYPE: GROUNDWA     PROG ELEM: NSF    COLLECTED BY: J HATCHER          **
**   SOURCE: CBS RECORDS                                                CITY: CARROLLTON             ST: GA                   **
**   STATION ID: TB-01                                                  COLLECTION START: 12/16/91  1030   STOP: 00/00/00     **
**   CASE.NO.: 17582            SAS NO.:                                D. NO.: CE77                 MD NO:                   **
**                                                                                                                            **
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ANALYTICAL RESULTS UG/L

[redacted]DS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64325 SAMPLE TYPE: GROUNDWA
SOURCE: CBS RECORDS
STATION ID: TB-01
CASE NUMBER: 17582 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/16/91 1030 STOP: 00/00/00
D. NUMBER: CE77

UG/L	ANALYTICAL RESULTS
0.050U	ALPHA-BHC
0.050U	BETA-BHC
0.050U	DELTA-BHC
0.050U	GAMMA-BHC (LINDANE)
0.050U	HEPTACHLOR
0.050U	ALDRIN
0.050U	HEPTACHLOR EPOXIDE
0.050U	ENDOSULFAN I (ALPHA)
0.10U	DIELDRIN
0.10U	4,4'-DDE (P,P'-DDE)
0.10U	ENDRIN
0.10U	ENDOSULFAN II (BETA)
0.10U	4,4'-DDD (P,P'-DDD)
0.10U	ENDOSULFAN SULFATE
0.10U	4,4'-DDT (P,P'-DDT)

UG/L	ANALYTICAL RESULTS
0.50U	METHOXYCHLOR
0.10U	ENDRIN KETONE
0.10U	ENDRIN ALDEHYDE
	CHLORDANE (TECH. MIXTURE) /1
0.050U	GAMMA-CHLORDANE /2
0.050U	ALPHA-CHLORDANE /2
5.0U	TOXAPHENE
1.0U	PCB-1016 (AROCLOR 1016)
2.0UR	PCB-1221 (AROCLOR 1221)
1.0UR	PCB-1232 (AROCLOR 1232)
1.0U	PCB-1242 (AROCLOR 1242)
1.0U	PCB-1248 (AROCLOR 1248)
1.0U	PCB-1254 (AROCLOR 1254)
1.0U	PCB-1260 (AROCLOR 1260)

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64308 SAMPLE TYPE: GROUNDA
SOURCE: CBS RECORDS
STATION ID: MW-01

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1005 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE82

UG/L	ANALYTICAL RESULTS
10U	CHLOROMETHANE
10U	BROMOMETHANE
10U	VINYL CHLORIDE
10U	CHLOROETHANE
20U	METHYLENE CHLORIDE
10U	ACETONE
[redacted]	
10U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
10U	1,1-DICHLOROETHANE
10U	1,2-DICHLOROETHENE (TOTAL)
10U	CHLOROFORM
10U	1,2-DICHLOROETHANE
10U	METHYL ETHYL KETONE
10U	1,1,1-TRICHLOROETHANE
10U	CARBON TETRACHLORIDE
10U	BROMODICHLOROMETHANE

UG/L	ANALYTICAL RESULTS
10U	1,2-DICHLOROPROPANE
10U	CIS-1,3-DICHLOROPROPENE
10U	TRICHLOROETHENE(TRICHLOROETHYLENE)
10U	DIBROMOCHLOROMETHANE
10U	1,1,2-TRICHLOROETHANE
10U	BENZENE
10U	TRANS-1,3-DICHLOROPROPENE
10U	BROMOFORM
10U	METHYL ISOBUTYL KETONE
10U	METHYL BUTYL KETONE
10U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
10U	1,1,2,2-TETRACHLOROETHANE
10U	TOLUENE
10U	CHLOROBENZENE
10U	ETHYL BENZENE
10U	STYRENE
10U	TOTAL XYLENES

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64308 SAMPLE TYPE: GROUNDA
SOURCE: CBS RECORDS
STATION ID: MW-01

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1005 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE82

UG/L	ANALYTICAL RESULTS
10U	PHENOL
10U	BIS(2-CHLOROETHYL) ETHER
10U	2-CHLOROPHENOL
10U	1,3-DICHLOROBENZENE
10U	1,4-DICHLOROBENZENE
10U	1,2-DICHLOROBENZENE
10U	2-METHYLPHENOL
10U	2,2'-CHLOROISOPROPYLETHER
10U	(3-AND/OR 4-)METHYLPHENOL
10U	N-NITROSODI-N-PROPYLAMINE
10U	HEXACHLOROETHANE
10U	NITROBENZENE
10U	ISOPHORONE
10U	2-NITROPHENOL
10U	2,4-DIMETHYLPHENOL
10U	BIS(2-CHLOROETHOXY) METHANE
10U	2,4-DICHLOROPHENOL
10U	1,2,4-TRICHLOROBENZENE
10U	NAPHTHALENE
10U	4-CHLOROANILINE
10U	HEXACHLOROBUTADIENE
10U	4-CHLORO-3-METHYLPHENOL
10U	2-METHYLNAPHTHALENE
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)
10U	2,4,6-TRICHLOROPHENOL
25U	2,4,5-TRICHLOROPHENOL
10U	2-CHLORONAPHTHALENE
25U	2-NITROANILINE
10U	DIMETHYL PHTHALATE
10U	ACENAPHTHYLENE
10U	2,6-DINITROTOLUENE

UG/L	ANALYTICAL RESULTS
25U	3-NITROANILINE
10U	ACENAPHTHENE
25U	2,4-DINITROPHENOL
25U	4-NITROPHENOL
10U	DIBENZOFURAN
10U	2,4-DINITROTOLUENE
10U	DIETHYL PHTHALATE
10U	4-CHLOROPHENYL PHENYL ETHER
10U	FLUORENE
25U	4-NITROANILINE
25U	2-METHYL-4,6-DINITROPHENOL
10U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10U	4-BROMOPHENYL PHENYL ETHER
10U	HEXACHLOROBENZENE (HCB)
25UR	PENTACHLOROPHENOL
10U	PHENANTHRENE
10U	ANTHRACENE
10U	CARBAZOLE
10U	DI-N-BUTYLPHTHALATE
10U	FLUORANTHENE
10U	PYRENE
10U	BENZYL BUTYL PHTHALATE
10U	3,3'-DICHLOROBENZIDINE
10U	BENZO(A)ANTHRACENE
10UR	CHRYSENE
10U	BIS(2-ETHYLHEXYL) PHTHALATE
10U	DI-N-OCTYLPHTHALATE
10U	BENZO(B AND/OR K)FLUORANTHENE
10U	BENZO-A-PYRENE
10U	INDENO (1,2,3-CD) PYRENE
10U	DIBENZO(A,H)ANTHRACENE
10UR	BENZO(GHI)PERYLENE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

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**   PROJECT NO. 92-0189   SAMPLE NO. 64308   SAMPLE TYPE: GROUNDA     PROG ELEM: NSF   COLLECTED BY: J HATCHER       **
**   SOURCE: CBS RECORDS                                               CITY: CARROLLTON             ST: GA             **
**   STATION ID: MW-01                                                 COLLECTION START: 12/17/91  1005   STOP: 00/00/00  **
**   CASE.NO.: 17582          SAS NO.:                                 D. NO.: CE82                 MD NO: CE82        **
**                                                                                                                     **
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ANALYTICAL RESULTS UG/L

[redacted]

FOOTNOTES
*A-AVERAGE VALUE   *NA-NOT ANALYZED   *NAI-INTERFERENCES   *J-ESTIMATED VALUE   *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64308 SAMPLE TYPE: GROUNDA
SOURCE: CBS RECORDS
STATION ID: MW-01
CASE NUMBER: 17582 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1005 STOP: 00/00/00
D. NUMBER: CE82

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
0.050U	ALPHA-BHC	0.50U	METHOXYCHLOR
0.050U	BETA-BHC	0.10U	ENDRIN KETONE
0.050U	DELTA-BHC	0.10U	ENDRIN ALDEHYDE
0.050U	GAMMA-BHC (LINDANE)		CHLORDANE (TECH. MIXTURE) /1
0.050U	HEPTACHLOR	0.050U	GAMMA-CHLORDANE /2
0.050U	ALDRIN	0.050U	ALPHA-CHLORDANE /2
0.050U	HEPTACHLOR EPOXIDE	5.0U	TOXAPHENE
0.050U	ENDOSULFAN I (ALPHA)	1.0U	PCB-1016 (AROCLOR 1016)
0.10U	DIELDRIN	2.0UR	PCB-1221 (AROCLOR 1221)
0.10U	4,4'-DDE (P,P'-DDE)	1.0UR	PCB-1232 (AROCLOR 1232)
0.10U	ENDRIN	1.0U	PCB-1242 (AROCLOR 1242)
0.10U	ENDOSULFAN II (BETA)	1.0U	PCB-1248 (AROCLOR 1248)
0.10U	4,4'-DDD (P,P'-DDD)	1.0U	PCB-1254 (AROCLOR 1254)
0.10U	ENDOSULFAN SULFATE	1.0U	PCB-1260 (AROCLOR 1260)
0.10U	4,4'-DDT (P,P'-DDT)		

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64309 SAMPLE TYPE: GROUNDA
SOURCE: CBS RECORDS
STATION ID: MW-02

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1110 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE83

UG/L	ANALYTICAL RESULTS
10U	CHLOROMETHANE
10U	BROMOMETHANE
10U	VINYL CHLORIDE
10U	CHLOROETHANE
20U	METHYLENE CHLORIDE
10U	ACETONE
10U	CARBON DISULFIDE
10U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
10U	1,1-DICHLOROETHANE
10U	1,2-DICHLOROETHENE (TOTAL)
10U	CHLOROFORM
10U	1,2-DICHLOROETHANE
10U	METHYL ETHYL KETONE
10U	1,1,1-TRICHLOROETHANE
10U	CARBON TETRACHLORIDE
10U	BROMODICHLOROMETHANE

UG/L	ANALYTICAL RESULTS
10U	1,2-DICHLOROPROPANE
10U	CIS-1,3-DICHLOROPROPENE
10U	TRICHLOROETHENE(TRICHLOROETHYLENE)
10U	DIBROMOCHLOROMETHANE
10U	1,1,2-TRICHLOROETHANE
10U	BENZENE
10U	TRANS-1,3-DICHLOROPROPENE
10U	BROMOFORM
10U	METHYL ISOBUTYL KETONE
10U	METHYL BUTYL KETONE
[redacted]NE)	
10U	1,1,2,2-TETRACHLOROETHANE
10U	TOLUENE
10U	CHLOROBENZENE
10U	ETHYL BENZENE
10U	STYRENE
10U	TOTAL XYLENES

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

EXTRACTABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64309 SAMPLE TYPE: GROUNDA
SOURCE: CBS RECORDS
STATION ID: MW-02

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1110 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE83

UG/L	ANALYTICAL RESULTS
10U	PHENOL
10U	BIS(2-CHLOROETHYL) ETHER
10U	2-CHLOROPHENOL
10U	1,3-DICHLOROBENZENE
10U	1,4-DICHLOROBENZENE
10U	1,2-DICHLOROBENZENE
10U	2-METHYLPHENOL
10U	2,2'-CHLOROISOPROPYLETHER
10U	(3-AND/OR 4-)METHYLPHENOL
10U	N-NITROSODI-N-PROPYLAMINE
10U	HEXACHLOROETHANE
10U	NITROBENZENE
10U	ISOPHORONE
10U	2-NITROPHENOL
10U	2,4-DIMETHYLPHENOL
10U	BIS(2-CHLOROETHOXY) METHANE
10U	2,4-DICHLOROPHENOL
10U	1,2,4-TRICHLOROBENZENE
10U	NAPHTHALENE
10U	4-CHLOROANILINE
10U	HEXACHLOROBUTADIENE
10U	4-CHLORO-3-METHYLPHENOL
10U	2-METHYLNAPHTHALENE
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)
10U	2,4,6-TRICHLOROPHENOL
25U	2,4,5-TRICHLOROPHENOL
10U	2-CHLORONAPHTHALENE
25U	2-NITROANILINE
10U	DIMETHYL PHTHALATE
10U	ACENAPHTHYLENE
10U	2,6-DINITROTOLUENE

UG/L	ANALYTICAL RESULTS
25U	3-NITROANILINE
10U	ACENAPHTHENE
25U	2,4-DINITROPHENOL
25U	4-NITROPHENOL
10U	DIBENZOFURAN
10U	2,4-DINITROTOLUENE
10U	DIETHYL PHTHALATE
10U	4-CHLOROPHENYL PHENYL ETHER
10U	FLUORENE
25U	4-NITROANILINE
25U	2-METHYL-4,6-DINITROPHENOL
10U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10U	4-BROMOPHENYL PHENYL ETHER
10U	HEXACHLOROBENZENE (HCB)
25UR	PENTACHLOROPHENOL
10U	PHENANTHRENE
10U	ANTHRACENE
10U	CARBAZOLE
10U	DI-N-BUTYLPHTHALATE
10U	FLUORANTHENE
10U	PYRENE
10U	BENZYL BUTYL PHTHALATE
10U	3,3'-DICHLOROBENZIDINE
10U	BENZO(A)ANTHRACENE
10UR	CHRYSENE
10U	BIS(2-ETHYLHEXYL) PHTHALATE
10U	DI-N-OCTYLPHTHALATE
10U	BENZO(B AND/OR K)FLUORANTHENE
10U	BENZO-A-PYRENE
10U	INDENO (1,2,3-CD) PYRENE
10U	DIBENZO(A,H)ANTHRACENE
10UR	BENZO(GHI)PERYLENE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

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**   PROJECT NO. 92-0189   SAMPLE NO. 64309  SAMPLE TYPE: GROUNDA     PROG ELEM: NSF   COLLECTED BY: J HATCHER                                **
**   SOURCE: CBS RECORDS                                             CITY: CARROLLTON            ST: GA                                     **
**   STATION ID: MW-02                                               COLLECTION START: 12/17/91  1110   STOP: 00/00/00                      **
**   CASE.NO.: 17582          SAS NO.:                               D. NO.: CE83               MD NO: CE83                                 **
**                                                                                                                                           **
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ANALYTICAL RESULTS UG/L

[redacted]

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64309 SAMPLE TYPE: GROUNDA
SOURCE: CBS RECORDS
STATION ID: MW-02
CASE NUMBER: 17582 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1110 STOP: 00/00/00
D. NUMBER: CE83

UG/L	ANALYTICAL RESULTS
0.050U	ALPHA-BHC
0.050U	BETA-BHC
0.050U	DELTA-BHC
0.050U	GAMMA-BHC (LINDANE)
0.050U	HEPTACHLOR
0.050U	ALDRIN
0.050U	HEPTACHLOR EPOXIDE
0.050U	ENDOSULFAN I (ALPHA)
0.10U	DIELDRIN
0.10U	4,4'-DDE (P,P'-DDE)
0.10U	ENDRIN
0.10U	ENDOSULFAN II (BETA)
0.10U	4,4'-DDD (P,P'-DDD)
0.10U	ENDOSULFAN SULFATE
0.10U	4,4'-DDT (P,P'-DDT)

UG/L	ANALYTICAL RESULTS
0.50U	METHOXYCHLOR
0.10U	ENDRIN KETONE
0.10U	ENDRIN ALDEHYDE
	CHLORDANE (TECH. MIXTURE) /1
0.050U	GAMMA-CHLORDANE /2
0.050U	ALPHA-CHLORDANE /2
5.0U	TOXAPHENE
1.0U	PCB-1016 (AROCLOR 1016)
2.0UR	PCB-1221 (AROCLOR 1221)
1.0UR	PCB-1232 (AROCLOR 1232)
1.0U	PCB-1242 (AROCLOR 1242)
1.0U	PCB-1248 (AROCLOR 1248)
1.0U	PCB-1254 (AROCLOR 1254)
1.0U	PCB-1260 (AROCLOR 1260)

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64310 SAMPLE TYPE: GROUNDA
SOURCE: CBS RECORDS
STATION ID: MW-03

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1210 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE84

UG/L	ANALYTICAL RESULTS
10U	CHLOROMETHANE
10U	BROMOMETHANE
10U	VINYL CHLORIDE
10U	CHLOROETHANE
20U	METHYLENE CHLORIDE
10U	ACETONE
10U	CARBON DISULFIDE
10U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
10U	1,1-DICHLOROETHANE
10U	1,2-DICHLOROETHENE (TOTAL)
10U	CHLOROFORM
10U	1,2-DICHLOROETHANE
10U	METHYL ETHYL KETONE
10U	1,1,1-TRICHLOROETHANE
10U	CARBON TETRACHLORIDE
10U	BROMODICHLOROMETHANE

UG/L	ANALYTICAL RESULTS
10U	1,2-DICHLOROPROPANE
10U	CIS-1,3-DICHLOROPROPENE
10U	TRICHLOROETHENE(TRICHLOROETHYLENE)
10U	DIBROMOCHLOROMETHANE
10U	1,1,2-TRICHLOROETHANE
10U	BENZENE
10U	TRANS-1,3-DICHLOROPROPENE
10U	BROMOFORM
10U	METHYL ISOBUTYL KETONE
10U	METHYL BUTYL KETONE
[redacted]	[redacted]NE)
10U	1,1,2,2-TETRACHLOROETHANE
10U	TOLUENE
10U	CHLOROBENZENE
10U	ETHYL BENZENE
10U	STYRENE
10U	TOTAL XYLENES

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

EXTRACTABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64310 SAMPLE TYPE: GROUNDA
SOURCE: CBS RECORDS
STATION ID: MW-03

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1210 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE84

UG/L	ANALYTICAL RESULTS
10U	PHENOL
10U	BIS(2-CHLOROETHYL) ETHER
10U	2-CHLOROPHENOL
10U	1,3-DICHLOROBENZENE
10U	1,4-DICHLOROBENZENE
10U	1,2-DICHLOROBENZENE
10U	2-METHYLPHENOL
10U	2,2'-CHLOROISOPROPYLETHER
10U	(3-AND/OR 4-)METHYLPHENOL
10U	N-NITROSODI-N-PROPYLAMINE
10U	HEXACHLOROETHANE
10U	NITROBENZENE
10U	ISOPHORONE
10U	2-NITROPHENOL
10U	2,4-DIMETHYLPHENOL
10U	BIS(2-CHLOROETHOXY) METHANE
10U	2,4-DICHLOROPHENOL
10U	1,2,4-TRICHLOROBENZENE
10U	NAPHTHALENE
10U	4-CHLOROANILINE
10U	HEXACHLOROBUTADIENE
10U	4-CHLORO-3-METHYLPHENOL
10U	2-METHYLNAPHTHALENE
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)
10U	2,4,6-TRICHLOROPHENOL
25U	2,4,5-TRICHLOROPHENOL
10U	2-CHLORONAPHTHALENE
25U	2-NITROANILINE
10U	DIMETHYL PHTHALATE
10U	ACENAPHTHYLENE
10U	2,6-DINITROTOLUENE

UG/L	ANALYTICAL RESULTS
25U	3-NITROANILINE
10U	ACENAPHTHENE
25U	2,4-DINITROPHENOL
25U	4-NITROPHENOL
10U	DIBENZOFURAN
10U	2,4-DINITROTOLUENE
10U	DIETHYL PHTHALATE
10U	4-CHLOROPHENYL PHENYL ETHER
10U	FLUORENE
25U	4-NITROANILINE
25U	2-METHYL-4,6-DINITROPHENOL
10U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10U	4-BROMOPHENYL PHENYL ETHER
10U	HEXACHLOROBENZENE (HCB)
25UR	PENTACHLOROPHENOL
10U	PHENANTHRENE
10U	ANTHRACENE
10U	CARBAZOLE
10U	DI-N-BUTYLPHTHALATE
10U	FLUORANTHENE
10U	PYRENE
10U	BENZYL BUTYL PHTHALATE
10U	3,3'-DICHLOROBENZIDINE
10U	BENZO(A)ANTHRACENE
10UR	CHRYSENE
10U	BIS(2-ETHYLHEXYL) PHTHALATE
10U	DI-N-OCTYLPHTHALATE
10U	BENZO(B AND/OR K)FLUORANTHENE
10U	BENZO-A-PYRENE
10U	INDENO (1,2,3-CD) PYRENE
10U	DIBENZO(A,H)ANTHRACENE
10UR	BENZO(GHI)PERYLENE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

*** ***
** PROJECT NO. 92-0189 SAMPLE NO. 64310 SAMPLE TYPE: GROUNDA PROG ELEM: NSF COLLECTED BY: J HATCHER **
** SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA **
** STATION ID: MW-03 COLLECTION START: 12/17/91 1210 STOP: 00/00/00 **
** CASE.NO.: 17582 SAS NO.: D. NO.: CE84 MD NO: CE84 **
**   **
*** ***

ANALYTICAL RESULTS UG/L

[redacted]MPOUNDS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64310 SAMPLE TYPE: GROUNDA
SOURCE: CBS RECORDS
STATION ID: MW-03
CASE NUMBER: 17582 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1210 STOP: 00/00/00
D. NUMBER: CE84

UG/L	ANALYTICAL RESULTS
0.050U	ALPHA-BHC
0.050U	BETA-BHC
0.050U	DELTA-BHC
0.050U	GAMMA-BHC (LINDANE)
0.050U	HEPTACHLOR
0.050U	ALDRIN
0.050U	HEPTACHLOR EPOXIDE
0.050U	ENDOSULFAN I (ALPHA)
0.10U	DIELDRIN
0.10U	4,4'-DDE (P,P'-DDE)
0.10U	ENDRIN
0.10U	ENDOSULFAN II (BETA)
0.10U	4,4'-DDD (P,P'-DDD)
0.10U	ENDOSULFAN SULFATE
0.10U	4,4'-DDT (P,P'-DDT)

UG/L	ANALYTICAL RESULTS
0.50U	METHOXYCHLOR
0.10U	ENDRIN KETONE
0.10U	ENDRIN ALDEHYDE
	CHLORDANE (TECH. MIXTURE) /1
0.050U	GAMMA-CHLORDANE /2
0.050U	ALPHA-CHLORDANE /2
5.0U	TOXAPHENE
1.0U	PCB-1016 (AROCLOR 1016)
2.0UR	PCB-1221 (AROCLOR 1221)
1.0UR	PCB-1232 (AROCLOR 1232)
1.0U	PCB-1242 (AROCLOR 1242)
1.0U	PCB-1248 (AROCLOR 1248)
1.0U	PCB-1254 (AROCLOR 1254)
1.0U	PCB-1260 (AROCLOR 1260)

REMARKS

REMARKS

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64307 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SD-01

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 0915 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE81

UG/KG	ANALYTICAL RESULTS
16U	CHLOROMETHANE
16U	BROMOMETHANE
16U	VINYL CHLORIDE
16U	CHLOROETHANE
40U	METHYLENE CHLORIDE
30U	ACETONE
16U	CARBON DISULFIDE
16U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
16U	1,1-DICHLOROETHANE
16U	1,2-DICHLOROETHENE (TOTAL)
16U	CHLOROFORM
16U	1,2-DICHLOROETHANE
16U	METHYL ETHYL KETONE
16U	1,1,1-TRICHLOROETHANE
16U	CARBON TETRACHLORIDE
16U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
16U	1,2-DICHLOROPROPANE
16U	CIS-1,3-DICHLOROPROPENE
16U	TRICHLOROETHENE(TRICHLOROETHYLENE)
16U	DIBROMOCHLOROMETHANE
16U	1,1,2-TRICHLOROETHANE
16U	BENZENE
16U	TRANS-1,3-DICHLOROPROPENE
16U	BROMOFORM
16U	METHYL ISOBUTYL KETONE
16U	METHYL BUTYL KETONE
16U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
16U	1,1,2,2-TETRACHLOROETHANE
16U	TOLUENE
16U	CHLOROBENZENE
16U	ETHYL BENZENE
16U	STYRENE
16U	TOTAL XYLENES
36	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

EXTRACTABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64307 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SD-01

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 0915 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE81

UG/KG	ANALYTICAL RESULTS
510U	PHENOL
510U	BIS(2-CHLOROETHYL) ETHER
510U	2-CHLOROPHENOL
510U	1,3-DICHLOROBENZENE
510U	1,4-DICHLOROBENZENE
510U	1,2-DICHLOROBENZENE
510U	2-METHYLPHENOL
510U	2,2'-CHLOROISOPROPYLETHER
510UJ	(3-AND/OR 4-)METHYLPHENOL
510U	N-NITROSODI-N-PROPYLAMINE
510U	HEXACHLOROETHANE
510U	NITROBENZENE
510U	ISOPHORONE
510U	2-NITROPHENOL
510U	2,4-DIMETHYLPHENOL
510U	BIS(2-CHLOROETHOXY) METHANE
510U	2,4-DICHLOROPHENOL
510U	1,2,4-TRICHLOROBENZENE
510U	NAPHTHALENE
510U	4-CHLOROANILINE
510U	HEXACHLOROBUTADIENE
510U	4-CHLORO-3-METHYLPHENOL
510U	2-METHYLNAPHTHALENE
510U	HEXACHLOROCYCLOPENTADIENE (HCCP)
510UJ	2,4,6-TRICHLOROPHENOL
1200U	2,4,5-TRICHLOROPHENOL
510U	2-CHLORONAPHTHALENE
1200U	2-NITROANILINE
510U	DIMETHYL PHTHALATE
510UR	ACENAPHTHYLENE
510U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
1200U	3-NITROANILINE
510U	ACENAPHTHENE
1200U	2,4-DINITROPHENOL
1200U	4-NITROPHENOL
510U	DIBENZOFURAN
510U	2,4-DINITROTOLUENE
510U	DIETHYL PHTHALATE
510U	4-CHLOROPHENYL PHENYL ETHER
510U	FLUORENE
1200U	4-NITROANILINE
1200U	2-METHYL-4,6-DINITROPHENOL
510U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
510U	4-BROMOPHENYL PHENYL ETHER
510U	HEXACHLOROBENZENE (HCB)
1200U	PENTACHLOROPHENOL
510U	PHENANTHRENE
510U	ANTHRACENE
510U	CARBAZOLE
510U	DI-N-BUTYLPHTHALATE
510U	FLUORANTHENE
510U	PYRENE
510U	BENZYL BUTYL PHTHALATE
510U	3,3'-DICHLOROBENZIDINE
510U	BENZO(A)ANTHRACENE
510U	CHRYSENE
510U	BIS(2-ETHYLHEXYL) PHTHALATE
510U	DI-N-OCTYLPHTHALATE
510U	BENZO(B AND/OR K)FLUORANTHENE
510U	BENZO-A-PYRENE
510U	INDENO (1,2,3-CD) PYRENE
510U	DIBENZO(A,H)ANTHRACENE
510UJ	BENZO(GHI)PERYLENE
36	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64307 SAMPLE TYPE: SOIL	PROG ELEM: NSF COLLECTED BY: J HATCHER
SOURCE: CBS RECORDS	CITY: CARROLLTON ST: GA
STATION ID: SD-01	COLLECTION START: 12/17/91 0915 STOP: 00/00/00
CASE.NO.: 17582 SAS NO.:	D. NO.: CE81 MD NO: CE81

ANALYTICAL RESULTS UG/KG

[redacted]

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64307 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SD-01
CASE NUMBER: 17582 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 0915 STOP: 00/00/00
D. NUMBER: CE81

UG/KG	ANALYTICAL RESULTS
2.2U	ALPHA-BHC
2.2U	BETA-BHC
2.2U	DELTA-BHC
2.2U	GAMMA-BHC (LINDANE)
2.2U	HEPTACHLOR
2.2U	ALDRIN
2.2U	HEPTACHLOR EPOXIDE
2.2U	ENDOSULFAN I (ALPHA)
4.2U	DIELDRIN
4.2U	4,4'-DDE (P,P'-DDE)
4.2U	ENDRIN
4.2U	ENDOSULFAN II (BETA)
4.2U	4,4'-DDD (P,P'-DDD)
4.2U	ENDOSULFAN SULFATE
4.2U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
22U	METHOXYCHLOR
4.2U	ENDRIN KETONE
4.2U	ENDRIN ALDEHYDE
	CHLORDANE (TECH. MIXTURE) /1
2.2U	GAMMA-CHLORDANE /2
2.2U	ALPHA-CHLORDANE /2
220U	TOXAPHENE
42U	PCB-1016 (AROCLOR 1016)
85UR	PCB-1221 (AROCLOR 1221)
42U	PCB-1232 (AROCLOR 1232)
42U	PCB-1242 (AROCLOR 1242)
42U	PCB-1248 (AROCLOR 1248)
42U	PCB-1254 (AROCLOR 1254)
42U	PCB-1260 (AROCLOR 1260)
21	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64311 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SD-02

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1340 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE85

UG/KG	ANALYTICAL RESULTS
15U	CHLOROMETHANE
15U	BROMOMETHANE
15U	VINYL CHLORIDE
15U	CHLOROETHANE
90U	METHYLENE CHLORIDE
180U	ACETONE
15U	CARBON DISULFIDE
15U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
15U	1,1-DICHLOROETHANE
15U	1,2-DICHLOROETHENE (TOTAL)
15U	CHLOROFORM
15U	1,2-DICHLOROETHANE
15U	METHYL ETHYL KETONE
15U	1,1,1-TRICHLOROETHANE
15U	CARBON TETRACHLORIDE
15U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
15U	1,2-DICHLOROPROPANE
15U	CIS-1,3-DICHLOROPROPENE
15U	TRICHLOROETHENE(TRICHLOROETHYLENE)
15U	DIBROMOCHLOROMETHANE
15U	1,1,2-TRICHLOROETHANE
15U	BENZENE
15U	TRANS-1,3-DICHLOROPROPENE
15U	BROMOFORM
15U	METHYL ISOBUTYL KETONE
15U	METHYL BUTYL KETONE
15U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
15U	1,1,2,2-TETRACHLOROETHANE
15U	TOLUENE
15U	CHLOROBENZENE
15U	ETHYL BENZENE
15U	STYRENE
15U	TOTAL XYLENES
34	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64311 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SD-02

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1340 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE85

UG/KG	ANALYTICAL RESULTS
500UJ	PHENOL
500UJ	BIS(2-CHLOROETHYL) ETHER
500UJ	2-CHLOROPHENOL
500UJ	1,3-DICHLOROBENZENE
500UJ	1,4-DICHLOROBENZENE
500UJ	1,2-DICHLOROBENZENE
500UJ	2-METHYLPHENOL
500UJ	2,2'-CHLOROISOPROPYLETHER
500UJ	(3-AND/OR 4-)METHYLPHENOL
500UJ	N-NITROSODI-N-PROPYLAMINE
500UJ	HEXACHLOROETHANE
500UJ	NITROBENZENE
500UJ	ISOPHORONE
500UJ	2-NITROPHENOL
500UJ	2,4-DIMETHYLPHENOL
500UJ	BIS(2-CHLOROETHOXY) METHANE
500UJ	2,4-DICHLOROPHENOL
500UJ	1,2,4-TRICHLOROBENZENE
500UJ	NAPHTHALENE
500UJ	4-CHLOROANILINE
500UJ	HEXACHLOROBUTADIENE
500UJ	4-CHLORO-3-METHYLPHENOL
500UJ	2-METHYLNAPHTHALENE
500UJ	HEXACHLOROCYCLOPENTADIENE (HCCP)
500UJ	2,4,6-TRICHLOROPHENOL
1200UJ	2,4,5-TRICHLOROPHENOL
500UJ	2-CHLORONAPHTHALENE
1200UJ	2-NITROANILINE
500UJ	DIMETHYL PHTHALATE
500UR	ACENAPHTHYLENE
500UJ	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
1200UJ	3-NITROANILINE
500UJ	ACENAPHTHENE
1200UJ	2,4-DINITROPHENOL
1200UJ	4-NITROPHENOL
500UJ	DIBENZOFURAN
500UJ	2,4-DINITROTOLUENE
500UJ	DIETHYL PHTHALATE
500UJ	4-CHLOROPHENYL PHENYL ETHER
500UJ	FLUORENE
1200UJ	4-NITROANILINE
1200UJ	2-METHYL-4,6-DINITROPHENOL
500UJ	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
500UJ	4-BROMOPHENYL PHENYL ETHER
500UJ	HEXACHLOROBENZENE (HCB)
1200UJ	PENTACHLOROPHENOL
500UJ	PHENANTHRENE
500UJ	ANTHRACENE
500UJ	CARBAZOLE
500UJ	DI-N-BUTYLPHTHALATE
500UJ	FLUORANTHENE
500UJ	PYRENE
500UJ	BENZYL BUTYL PHTHALATE
500UJ	3,3'-DICHLOROBENZIDINE
500UJ	BENZO(A)ANTHRACENE
500UJ	CHRYSENE
500UJ	BIS(2-ETHYLHEXYL) PHTHALATE
500UJ	DI-N-OCTYLPHTHALATE
500UJ	BENZO(B AND/OR K)FLUORANTHENE
500UJ	BENZO-A-PYRENE
500UJ	INDENO (1,2,3-CD) PYRENE
500UJ	DIBENZO(A,H)ANTHRACENE
500UJ	BENZO(GHI)PERYLENE
34	PERCENT MOISTURE

REMARKS
EXCESSIVE HOLDING TIME

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64311 SAMPLE TYPE: SOIL	PROG ELEM: NSF COLLECTED BY: J HATCHER
SOURCE: CBS RECORDS	CITY: CARROLLTON ST: GA
STATION ID: SD-02	COLLECTION START: 12/17/91 1340 STOP: 00/00/00
CASE.NO.: 17582 SAS NO.:	D. NO.: CE85 MD NO: CE85

ANALYTICAL RESULTS UG/KG

* OCTAHYDRODIMETHYL(METHYLETHYL)PHENANTHRENE-
[redacted]

REMARKS
[redacted]E HOLDING TIME

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64304 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-01

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/16/91 1545 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE78

UG/KG	ANALYTICAL RESULTS
12U	CHLOROMETHANE
12U	BROMOMETHANE
12U	VINYL CHLORIDE
12U	CHLOROETHANE
60U	METHYLENE CHLORIDE
30U	ACETONE
12U	CARBON DISULFIDE
12U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
12U	1,1-DICHLOROETHANE
12U	1,2-DICHLOROETHENE (TOTAL)
12U	CHLOROFORM
12U	1,2-DICHLOROETHANE
12U	METHYL ETHYL KETONE
12U	1,1,1-TRICHLOROETHANE
12U	CARBON TETRACHLORIDE
12U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
12U	1,2-DICHLOROPROPANE
12U	CIS-1,3-DICHLOROPROPENE
12U	TRICHLOROETHENE(TRICHLOROETHYLENE)
12U	DIBROMOCHLOROMETHANE
12U	1,1,2-TRICHLOROETHANE
12U	BENZENE
12U	TRANS-1,3-DICHLOROPROPENE
12U	BROMOFORM
12U	METHYL ISOBUTYL KETONE
12U	METHYL BUTYL KETONE
12U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
12U	1,1,2,2-TETRACHLOROETHANE
12U	TOLUENE
12U	CHLOROBENZENE
12U	ETHYL BENZENE
12U	STYRENE
12U	TOTAL XYLENES
14	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

EXTRACTABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64304 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-01

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/16/91 1545 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE78

UG/KG	ANALYTICAL RESULTS
380U	PHENOL
380U	BIS(2-CHLOROETHYL) ETHER
380U	2-CHLOROPHENOL
380U	1,3-DICHLOROBENZENE
380U	1,4-DICHLOROBENZENE
380U	1,2-DICHLOROBENZENE
380U	2-METHYLPHENOL
380U	2,2'-CHLOROISOPROPYLETHER
380UJ	(3-AND/OR 4-)METHYLPHENOL
380U	N-NITROSODI-N-PROPYLAMINE
380U	HEXACHLOROETHANE
380U	NITROBENZENE
380U	ISOPHORONE
380U	2-NITROPHENOL
380U	2,4-DIMETHYLPHENOL
380U	BIS(2-CHLOROETHOXY) METHANE
380U	2,4-DICHLOROPHENOL
380U	1,2,4-TRICHLOROBENZENE
380U	NAPHTHALENE
380U	4-CHLOROANILINE
380U	HEXACHLOROBUTADIENE
380U	4-CHLORO-3-METHYLPHENOL
380U	2-METHYLNAPHTHALENE
380U	HEXACHLOROCYCLOPENTADIENE (HCCP)
380UJ	2,4,6-TRICHLOROPHENOL
920U	2,4,5-TRICHLOROPHENOL
380U	2-CHLORONAPHTHALENE
920U	2-NITROANILINE
380U	DIMETHYL PHTHALATE
380UR	ACENAPHTHYLENE
380U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
920U	3-NITROANILINE
380U	ACENAPHTHENE
920U	2,4-DINITROPHENOL
920U	4-NITROPHENOL
380U	DIBENZOFURAN
380U	2,4-DINITROTOLUENE
380U	DIETHYL PHTHALATE
380U	4-CHLOROPHENYL PHENYL ETHER
380U	FLUORENE
920U	4-NITROANILINE
920U	2-METHYL-4,6-DINITROPHENOL
380U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
380U	4-BROMOPHENYL PHENYL ETHER
380U	HEXACHLOROBENZENE (HCB)
920U	PENTACHLOROPHENOL
380U	PHENANTHRENE
380U	ANTHRACENE
380U	CARBAZOLE
380U	DI-N-BUTYLPHTHALATE
380U	FLUORANTHENE
380U	PYRENE
380U	BENZYL BUTYL PHTHALATE
380U	3,3'-DICHLOROBENZIDINE
380U	BENZO(A)ANTHRACENE
380U	CHRYSENE
380U	BIS(2-ETHYLHEXYL) PHTHALATE
380U	DI-N-OCTYLPHTHALATE
380U	BENZO(B AND/OR K)FLUORANTHENE
380U	BENZO-A-PYRENE
380U	INDENO (1,2,3-CD) PYRENE
380U	DIBENZO(A,H)ANTHRACENE
380UJ	BENZO(GHI)PERYLENE
14	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

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**   PROJECT NO. 92-0189   SAMPLE NO. 64304  SAMPLE TYPE: SOIL        PROG ELEM: NSF   COLLECTED BY: J HATCHER                     **
**   SOURCE: CBS RECORDS                                              CITY: CARROLLTON             ST: GA                          **
**   STATION ID: SS-01                                                COLLECTION START: 12/16/91  1545   STOP: 00/00/00            **
**   CASE.NO.: 17582         SAS NO.:                                 D. NO.: CE78                 MD NO: CE78                     **
**                                                                                                                                 **
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ANALYTICAL RESULTS UG/KG

[redacted]

FOOTNOTES
*A-AVERAGE VALUE   *NA-NOT ANALYZED   *NAI-INTERFERENCES   *J-ESTIMATED VALUE   *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64304 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: J HATCHER
SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA
STATION ID: SS-01 COLLECTION START: 12/16/91 1545 STOP: 00/00/00
CASE NUMBER: 17582 SAS NUMBER: D. NUMBER: CE78

UG/KG	ANALYTICAL RESULTS	UG/KG	ANALYTICAL RESULTS
2.0U	ALPHA-BHC	20U	METHOXYCHLOR
2.0U	BETA-BHC	3.9U	ENDRIN KETONE
2.0U	DELTA-BHC	3.9U	ENDRIN ALDEHYDE
2.0U	GAMMA-BHC (LINDANE)		CHLORDANE (TECH. MIXTURE) /1
2.0U	HEPTACHLOR	2.0U	GAMMA-CHLORDANE /2
2.0U	ALDRIN	2.0U	ALPHA-CHLORDANE /2
2.0U	HEPTACHLOR EPOXIDE	200U	TOXAPHENE
2.0U	ENDOSULFAN I (ALPHA)	39U	PCB-1016 (AROCLOR 1016)
3.9U	DIELDRIN	79UR	PCB-1221 (AROCLOR 1221)
3.9U	4,4'-DDE (P,P'-DDE)	39U	PCB-1232 (AROCLOR 1232)
3.9U	ENDRIN	39U	PCB-1242 (AROCLOR 1242)
3.9U	ENDOSULFAN II (BETA)	39U	PCB-1248 (AROCLOR 1248)
3.9U	4,4'-DDD (P,P'-DDD)	39U	PCB-1254 (AROCLOR 1254)
3.9U	ENDOSULFAN SULFATE	39U	PCB-1260 (AROCLOR 1260)
3.9U	4,4'-DDT (P,P'-DDT)	15	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64306 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-02

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/16/91 1635 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE80

UG/KG	ANALYTICAL RESULTS
12U	CHLOROMETHANE
12U	BROMOMETHANE
12U	VINYL CHLORIDE
12U	CHLOROETHANE
40U	METHYLENE CHLORIDE
40U	ACETONE
12U	CARBON DISULFIDE
12U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
12U	1,1-DICHLOROETHANE
12U	1,2-DICHLOROETHENE (TOTAL)
12U	CHLOROFORM
12U	1,2-DICHLOROETHANE
12U	METHYL ETHYL KETONE
12U	1,1,1-TRICHLOROETHANE
12U	CARBON TETRACHLORIDE
12U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
12U	1,2-DICHLOROPROPANE
12U	CIS-1,3-DICHLOROPROPENE
12U	TRICHLOROETHENE(TRICHLOROETHYLENE)
12U	DIBROMOCHLOROMETHANE
12U	1,1,2-TRICHLOROETHANE
12U	BENZENE
12U	TRANS-1,3-DICHLOROPROPENE
12U	BROMOFORM
12U	METHYL ISOBUTYL KETONE
12U	METHYL BUTYL KETONE
12U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
12U	1,1,2,2-TETRACHLOROETHANE
12U	TOLUENE
12U	CHLOROBENZENE
12U	ETHYL BENZENE
12U	STYRENE
12U	TOTAL XYLENES
17	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

EXTRACTABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64306 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-02

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/16/91 1635 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE80

UG/KG	ANALYTICAL RESULTS
390U	PHENOL
390U	BIS(2-CHLOROETHYL) ETHER
390U	2-CHLOROPHENOL
390U	1,3-DICHLOROBENZENE
390U	1,4-DICHLOROBENZENE
390U	1,2-DICHLOROBENZENE
390U	2-METHYLPHENOL
390U	2,2'-CHLOROISOPROPYLETHER
390UJ	(3-AND/OR 4-)METHYLPHENOL
390U	N-NITROSODI-N-PROPYLAMINE
390U	HEXACHLOROETHANE
390U	NITROBENZENE
390U	ISOPHORONE
390U	2-NITROPHENOL
390U	2,4-DIMETHYLPHENOL
390U	BIS(2-CHLOROETHOXY) METHANE
390U	2,4-DICHLOROPHENOL
390U	1,2,4-TRICHLOROBENZENE
390U	NAPHTHALENE
390U	4-CHLOROANILINE
390U	HEXACHLOROBUTADIENE
390U	4-CHLORO-3-METHYLPHENOL
390U	2-METHYLNAPHTHALENE
390U	HEXACHLOROCYCLOPENTADIENE (HCCP)
390UJ	2,4,6-TRICHLOROPHENOL
950U	2,4,5-TRICHLOROPHENOL
390U	2-CHLORONAPHTHALENE
950U	2-NITROANILINE
390U	DIMETHYL PHTHALATE
390UR	ACENAPHTHYLENE
390U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
950U	3-NITROANILINE
390U	ACENAPHTHENE
950U	2,4-DINITROPHENOL
950U	4-NITROPHENOL
390U	DIBENZOFURAN
390U	2,4-DINITROTOLUENE
390U	DIETHYL PHTHALATE
390U	4-CHLOROPHENYL PHENYL ETHER
390U	FLUORENE
950U	4-NITROANILINE
950U	2-METHYL-4,6-DINITROPHENOL
390U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
390U	4-BROMOPHENYL PHENYL ETHER
390U	HEXACHLOROBENZENE (HCB)
950U	PENTACHLOROPHENOL
390U	PHENANTHRENE
390U	ANTHRACENE
390U	CARBAZOLE
390U	DI-N-BUTYLPHTHALATE
[redacted]	
390U	PYRENE
390U	BENZYL BUTYL PHTHALATE
390U	3,3'-DICHLOROBENZIDINE
390U	BENZO(A)ANTHRACENE
390U	CHRYSENE
390U	BIS(2-ETHYLHEXYL) PHTHALATE
390U	DI-N-OCTYLPHTHALATE
[redacted]	
390U	BENZO-A-PYRENE
390U	INDENO (1,2,3-CD) PYRENE
390U	DIBENZO(A,H)ANTHRACENE
390UJ	BENZO(GHI)PERYLENE
17	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

*** ***
** PROJECT NO. 92-0189 SAMPLE NO. 64306 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: J HATCHER **
** SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA **
** STATION ID: SS-02 COLLECTION START: 12/16/91 1635 STOP: 00/00/00 **
** CASE.NO.: 17582 SAS NO.: D. NO.: CE80 MD NO: CE80 **
**   **
*** ***

ANALYTICAL RESULTS UG/KG

[redacted]

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64306 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-02
CASE NUMBER: 17582 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/16/91 1635 STOP: 00/00/00
D. NUMBER: CE80

UG/KG	ANALYTICAL RESULTS
2.0U	ALPHA-BHC
2.0U	BETA-BHC
2.0U	DELTA-BHC
2.0U	GAMMA-BHC (LINDANE)
2.0U	HEPTACHLOR
2.0U	ALDRIN
2.0U	HEPTACHLOR EPOXIDE
2.0U	ENDOSULFAN I (ALPHA)
[redacted]	[redacted]
4.0U	4,4'-DDE (P,P'-DDE)
4.0U	ENDRIN
4.0U	ENDOSULFAN II (BETA)
4.0U	4,4'-DDD (P,P'-DDD)
4.0U	ENDOSULFAN SULFATE
4.0U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
20U	METHOXYCHLOR
4.0U	ENDRIN KETONE
4.0U	ENDRIN ALDEHYDE
	CHLORDANE (TECH. MIXTURE) /1
2.0U	GAMMA-CHLORDANE /2
2.0U	ALPHA-CHLORDANE /2
200U	TOXAPHENE
40U	PCB-1016 (AROCLOR 1016)
81UR	PCB-1221 (AROCLOR 1221)
40U	PCB-1232 (AROCLOR 1232)
40U	PCB-1242 (AROCLOR 1242)
40U	PCB-1248 (AROCLOR 1248)
40U	PCB-1254 (AROCLOR 1254)
40U	PCB-1260 (AROCLOR 1260)
17	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64313 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-03

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1435 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE87

UG/KG	ANALYTICAL RESULTS
14U	CHLOROMETHANE
14U	BROMOMETHANE
14U	VINYL CHLORIDE
14U	CHLOROETHANE
70U	METHYLENE CHLORIDE
60U	ACETONE
14U	CARBON DISULFIDE
14U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
14U	1,1-DICHLOROETHANE
14U	1,2-DICHLOROETHENE (TOTAL)
14U	CHLOROFORM
14U	1,2-DICHLOROETHANE
14U	METHYL ETHYL KETONE
14U	1,1,1-TRICHLOROETHANE
14U	CARBON TETRACHLORIDE
14U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
14U	1,2-DICHLOROPROPANE
14U	CIS-1,3-DICHLOROPROPENE
14U	TRICHLOROETHENE(TRICHLOROETHYLENE)
14U	DIBROMOCHLOROMETHANE
14U	1,1,2-TRICHLOROETHANE
14U	BENZENE
14U	TRANS-1,3-DICHLOROPROPENE
14U	BROMOFORM
14U	METHYL ISOBUTYL KETONE
14U	METHYL BUTYL KETONE
14U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
14U	1,1,2,2-TETRACHLOROETHANE
14U	TOLUENE
14U	CHLOROBENZENE
14U	ETHYL BENZENE
14U	STYRENE
14U	TOTAL XYLENES
26	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64313 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-03

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1435 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE87

UG/KG	ANALYTICAL RESULTS
440U	PHENOL
440U	BIS(2-CHLOROETHYL) ETHER
440U	2-CHLOROPHENOL
440U	1,3-DICHLOROBENZENE
440U	1,4-DICHLOROBENZENE
440U	1,2-DICHLOROBENZENE
440U	2-METHYLPHENOL
440U	2,2'-CHLOROISOPROPYLETHER
440UJ	(3-AND/OR 4-)METHYLPHENOL
440U	N-NITROSODI-N-PROPYLAMINE
440U	HEXACHLOROETHANE
440U	NITROBENZENE
440U	ISOPHORONE
440U	2-NITROPHENOL
440U	2,4-DIMETHYLPHENOL
440U	BIS(2-CHLOROETHOXY) METHANE
440U	2,4-DICHLOROPHENOL
440U	1,2,4-TRICHLOROBENZENE
440U	NAPHTHALENE
440U	4-CHLOROANILINE
440U	HEXACHLOROBUTADIENE
440U	4-CHLORO-3-METHYLPHENOL
440U	2-METHYLNAPHTHALENE
440U	HEXACHLOROCYCLOPENTADIENE (HCCP)
440UJ	2,4,6-TRICHLOROPHENOL
1100U	2,4,5-TRICHLOROPHENOL
440U	2-CHLORONAPHTHALENE
1100U	2-NITROANILINE
440U	DIMETHYL PHTHALATE
440UR	ACENAPHTHYLENE
440U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
1100U	3-NITROANILINE
440U	ACENAPHTHENE
1100U	2,4-DINITROPHENOL
1100U	4-NITROPHENOL
440U	DIBENZOFURAN
440U	2,4-DINITROTOLUENE
440U	DIETHYL PHTHALATE
440U	4-CHLOROPHENYL PHENYL ETHER
440U	FLUORENE
1100U	4-NITROANILINE
1100U	2-METHYL-4,6-DINITROPHENOL
440U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
440U	4-BROMOPHENYL PHENYL ETHER
440U	HEXACHLOROBENZENE (HCB)
1100U	PENTACHLOROPHENOL
440U	PHENANTHRENE
440U	ANTHRACENE
440U	CARBAZOLE
440U	DI-N-BUTYLPHTHALATE
440U	FLUORANTHENE
440U	PYRENE
440U	BENZYL BUTYL PHTHALATE
440U	3,3'-DICHLOROBENZIDINE
440U	BENZO(A)ANTHRACENE
440U	CHRYSENE
440U	BIS(2-ETHYLHEXYL) PHTHALATE
440U	DI-N-OCTYLPHTHALATE
440U	BENZO(B AND/OR K)FLUORANTHENE
440U	BENZO-A-PYRENE
440U	INDENO (1,2,3-CD) PYRENE
440U	DIBENZO(A,H)ANTHRACENE
440UJ	BENZO(GHI)PERYLENE
26	PERCENT MOISTURE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64313 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-03
CASE NUMBER: 17582 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1435 STOP: 00/00/00
D. NUMBER: CE87

UG/KG	ANALYTICAL RESULTS
2.3U	ALPHA-BHC
2.3U	BETA-BHC
2.3U	DELTA-BHC
2.3U	GAMMA-BHC (LINDANE)
2.3U	HEPTACHLOR
2.3U	ALDRIN
2.3U	HEPTACHLOR EPOXIDE
2.3U	ENDOSULFAN I (ALPHA)
4.5U	DIELDRIN
4.5U	4,4'-DDE (P,P'-DDE)
4.5U	ENDRIN
4.5U	ENDOSULFAN II (BETA)
4.5U	4,4'-DDD (P,P'-DDD)
4.5U	ENDOSULFAN SULFATE
4.5U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
23U	METHOXYCHLOR
4.5U	ENDRIN KETONE
4.5U	ENDRIN ALDEHYDE
	CHLORDANE (TECH. MIXTURE) /1
2.3U	GAMMA-CHLORDANE /2
2.3U	ALPHA-CHLORDANE /2
230U	TOXAPHENE
45U	PCB-1016 (AROCLOR 1016)
91UR	PCB-1221 (AROCLOR 1221)
45U	PCB-1232 (AROCLOR 1232)
45U	PCB-1242 (AROCLOR 1242)
45U	PCB-1248 (AROCLOR 1248)
45U	PCB-1254 (AROCLOR 1254)
45U	PCB-1260 (AROCLOR 1260)
26	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64315 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-04

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1525 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE89

UG/KG	ANALYTICAL RESULTS
12U	CHLOROMETHANE
12U	BROMOMETHANE
12U	VINYL CHLORIDE
12U	CHLOROETHANE
60U	METHYLENE CHLORIDE
30U	ACETONE
12U	CARBON DISULFIDE
12U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
12U	1,1-DICHLOROETHANE
12U	1,2-DICHLOROETHENE (TOTAL)
12U	CHLOROFORM
12U	1,2-DICHLOROETHANE
12U	METHYL ETHYL KETONE
12U	1,1,1-TRICHLOROETHANE
12U	CARBON TETRACHLORIDE
12U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
12U	1,2-DICHLOROPROPANE
12U	CIS-1,3-DICHLOROPROPENE
12U	TRICHLOROETHENE(TRICHLOROETHYLENE)
12U	DIBROMOCHLOROMETHANE
12U	1,1,2-TRICHLOROETHANE
12U	BENZENE
12U	TRANS-1,3-DICHLOROPROPENE
12U	BROMOFORM
12U	METHYL ISOBUTYL KETONE
12U	METHYL BUTYL KETONE
12U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
12U	1,1,2,2-TETRACHLOROETHANE
12U	TOLUENE
12U	CHLOROBENZENE
12U	ETHYL BENZENE
12U	STYRENE
12U	TOTAL XYLENES
20	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64315 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-04

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1525 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE89

UG/KG	ANALYTICAL RESULTS
410UJ	PHENOL
410UJ	BIS(2-CHLOROETHYL) ETHER
410UJ	2-CHLOROPHENOL
410UJ	1,3-DICHLOROBENZENE
410UJ	1,4-DICHLOROBENZENE
410UJ	1,2-DICHLOROBENZENE
410UJ	2-METHYLPHENOL
410UJ	2,2'-CHLOROISOPROPYLETHER
410UJ	(3-AND/OR 4-)METHYLPHENOL
410UJ	N-NITROSODI-N-PROPYLAMINE
410UJ	HEXACHLOROETHANE
410UJ	NITROBENZENE
410UJ	ISOPHORONE
410UJ	2-NITROPHENOL
410UJ	2,4-DIMETHYLPHENOL
410UJ	BIS(2-CHLOROETHOXY) METHANE
410UJ	2,4-DICHLOROPHENOL
410UJ	1,2,4-TRICHLOROBENZENE
410UJ	NAPHTHALENE
410UJ	4-CHLOROANILINE
410UJ	HEXACHLOROBUTADIENE
410UJ	4-CHLORO-3-METHYLPHENOL
410UJ	2-METHYLNAPHTHALENE
410UJ	HEXACHLOROCYCLOPENTADIENE (HCCP)
410UJ	2,4,6-TRICHLOROPHENOL
1000UJ	2,4,5-TRICHLOROPHENOL
410UJ	2-CHLORONAPHTHALENE
1000UJ	2-NITROANILINE
410UJ	DIMETHYL PHTHALATE
410UR	ACENAPHTHYLENE
410UJ	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
1000UJ	3-NITROANILINE
410UJ	ACENAPHTHENE
1000UJ	2,4-DINITROPHENOL
1000UJ	4-NITROPHENOL
410UJ	DIBENZOFURAN
410UJ	2,4-DINITROTOLUENE
410UJ	DIETHYL PHTHALATE
410UJ	4-CHLOROPHENYL PHENYL ETHER
410UJ	FLUORENE
1000UJ	4-NITROANILINE
1000UJ	2-METHYL-4,6-DINITROPHENOL
410UJ	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
410UJ	4-BROMOPHENYL PHENYL ETHER
410UJ	HEXACHLOROBENZENE (HCB)
1000UJ	PENTACHLOROPHENOL
410UJ	PHENANTHRENE
410UJ	ANTHRACENE
410UJ	CARBAZOLE
410UJ	DI-N-BUTYL[redacted]THALATE
[redacted]	[redacted]
410UJ	PYRENE
410UJ	BENZYL BUTYL PHTHALATE
410UJ	3,3'-DICHLOROBENZIDINE
410UJ	BENZO(A)ANTHRACENE
410UJ	CHRYSENE
410UJ	BIS(2-ETHYLHEXYL) PHTHALATE
410UJ	DI-N-OCTYLPHTHALATE
410UJ	BENZO(B AND/OR K)FLUORANTHENE
410UJ	BENZO-A-PYRENE
410UJ	INDENO (1,2,3-CD) PYRENE
410UJ	DIBENZO(A,H)ANTHRACENE
410UJ	BENZO(GHI)PERYLENE
20	PERCENT MOISTURE

REMARKS
[redacted] HOLDING TIME

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

*** ***
** PROJECT NO. 92-0189 SAMPLE NO. 64315 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: J HATCHER **
** SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA **
** STATION ID: SS-04 COLLECTION START: 12/17/91 1525 STOP: 00/00/00 **
** CASE.NO.: 17582 SAS NO.: D. NO.: CE89 MD NO: CE89 **
**
*** ***

ANALYTICAL RESULTS UG/KG

[redacted]

REMARKS
EXCESSIVE HOLDING TIME

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64315 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-04
CASE NUMBER: 17582 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1525 STOP: 00/00/00
D. NUMBER: CE89

UG/KG	ANALYTICAL RESULTS
2.1U	ALPHA-BHC
2.1U	BETA-BHC
2.1U	DELTA-BHC
2.1U	GAMMA-BHC (LINDANE)
2.1U	HEPTACHLOR
2.1U	ALDRIN
2.1U	HEPTACHLOR EPOXIDE
2.1U	ENDOSULFAN I (ALPHA)
4.1U	DIELDRIN
4.1U	4,4'-DDE (P,P'-DDE)
4.1U	ENDRIN
4.1U	ENDOSULFAN II (BETA)
4.1U	4,4'-DDD (P,P'-DDD)
4.1U	ENDOSULFAN SULFATE
4.1U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
21U	METHOXYCHLOR
4.1U	ENDRIN KETONE
4.1U	ENDRIN ALDEHYDE
	CHLORDANE (TECH. MIXTURE) /1
2.1U	GAMMA-CHLORDANE /2
2.1U	ALPHA-CHLORDANE /2
210U	TOXAPHENE
41U	PCB-1016 (AROCLOR 1016)
84UR	PCB-1221 (AROCLOR 1221)
41U	PCB-1232 (AROCLOR 1232)
41U	PCB-1242 (AROCLOR 1242)
41U	PCB-1248 (AROCLOR 1248)
41U	PCB-1254 (AROCLOR 1254)
41U	PCB-1260 (AROCLOR 1260)
20	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64317 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-05

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/18/91 0900 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE90

UG/KG	ANALYTICAL RESULTS
13U	CHLOROMETHANE
13U	BROMOMETHANE
13U	VINYL CHLORIDE
13U	CHLOROETHANE
60U	METHYLENE CHLORIDE
20U	ACETONE
13U	CARBON DISULFIDE
13U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
13U	1,1-DICHLOROETHANE
13U	1,2-DICHLOROETHENE (TOTAL)
13U	CHLOROFORM
13U	1,2-DICHLOROETHANE
13U	METHYL ETHYL KETONE
13U	1,1,1-TRICHLOROETHANE
13U	CARBON TETRACHLORIDE
13U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
13U	1,2-DICHLOROPROPANE
13U	CIS-1,3-DICHLOROPROPENE
13U	TRICHLOROETHENE(TRICHLOROETHYLENE)
13U	DIBROMOCHLOROMETHANE
13U	1,1,2-TRICHLOROETHANE
13U	BENZENE
13U	TRANS-1,3-DICHLOROPROPENE
13U	BROMOFORM
13U	METHYL ISOBUTYL KETONE
13U	METHYL BUTYL KETONE
13U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
13U	1,1,2,2-TETRACHLOROETHANE
13U	TOLUENE
13U	CHLOROBENZENE
13U	ETHYL BENZENE
13U	STYRENE
13U	TOTAL XYLENES
22	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64317 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-05

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/18/91 0900 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE90

UG/KG	ANALYTICAL RESULTS
420U	PHENOL
420U	BIS(2-CHLOROETHYL) ETHER
420U	2-CHLOROPHENOL
420U	1,3-DICHLOROBENZENE
420U	1,4-DICHLOROBENZENE
420U	1,2-DICHLOROBENZENE
420U	2-METHYLPHENOL
420U	2,2'-CHLOROISOPROPYLETHER
420UJ	(3-AND/OR 4-)METHYLPHENOL
420U	N-NITROSODI-N-PROPYLAMINE
420U	HEXACHLOROETHANE
420U	NITROBENZENE
420U	ISOPHORONE
420U	2-NITROPHENOL
420U	2,4-DIMETHYLPHENOL
420U	BIS(2-CHLOROETHOXY) METHANE
420U	2,4-DICHLOROPHENOL
420U	1,2,4-TRICHLOROBENZENE
420U	NAPHTHALENE
420U	4-CHLOROANILINE
420U	HEXACHLOROBUTADIENE
420U	4-CHLORO-3-METHYLPHENOL
420U	2-METHYLNAPHTHALENE
420U	HEXACHLOROCYCLOPENTADIENE (HCCP)
420UJ	2,4,6-TRICHLOROPHENOL
1000U	2,4,5-TRICHLOROPHENOL
420U	2-CHLORONAPHTHALENE
1000U	2-NITROANILINE
420U	DIMETHYL PHTHALATE
420UR	ACENAPHTHYLENE
420U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
1000U	3-NITROANILINE
420U	ACENAPHTHENE
1000U	2,4-DINITROPHENOL
1000U	4-NITROPHENOL
420U	DIBENZOFURAN
420U	2,4-DINITROTOLUENE
420U	DIETHYL PHTHALATE
420U	4-CHLOROPHENYL PHENYL ETHER
420U	FLUORENE
1000U	4-NITROANILINE
1000U	2-METHYL-4,6-DINITROPHENOL
420U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
420U	4-BROMOPHENYL PHENYL ETHER
420U	HEXACHLOROBENZENE (HCB)
1000U	PENTACHLOROPHENOL
420U	PHENANTHRENE
420U	ANTHRACENE
420U	CARBAZOLE
420U	DI-N-BUTYLPHTHALATE
420U	FLUORANTHENE
420U	PYRENE
420U	BENZYL BUTYL PHTHALATE
420U	3,3'-DICHLOROBENZIDINE
420U	BENZO(A)ANTHRACENE
420U	CHRYSENE
420U	BIS(2-ETHYLHEXYL) PHTHALATE
420U	DI-N-OCTYLPHTHALATE
420U	BENZO(B AND/OR K)FLUORANTHENE
420U	BENZO-A-PYRENE
420U	INDENO (1,2,3-CD) PYRENE
420U	DIBENZO(A,H)ANTHRACENE
420UJ	BENZO(GHI)PERYLENE
22	PERCENT MOISTURE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64317 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: J HATCHER
SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA
STATION ID: SS-05 COLLECTION START: 12/18/91 0900 STOP: 00/00/00
CASE.NO.: 17582 SAS NO.: D. NO.: CE90 MD NO: CE90

ANALYTICAL RESULTS UG/KG

[redacted]

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64317 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-05
CASE NUMBER: 17582 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/18/91 0900 STOP: 00/00/00
D. NUMBER: CE90

UG/KG	ANALYTICAL RESULTS
2.2U	ALPHA-BHC
2.2U	BETA-BHC
2.2U	DELTA-BHC
2.2U	GAMMA-BHC (LINDANE)
2.2U	HEPTACHLOR
2.2U	ALDRIN
2.2U	HEPTACHLOR EPOXIDE
2.2U	ENDOSULFAN I (ALPHA)
4.2U	DIELDRIN
4.2U	4,4'-DDE (P,P'-DDE)
4.2U	ENDRIN
4.2U	ENDOSULFAN II (BETA)
4.2U	4,4'-DDD (P,P'-DDD)
4.2U	ENDOSULFAN SULFATE
4.2U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
22U	METHOXYCHLOR
4.2U	ENDRIN KETONE
4.2U	ENDRIN ALDEHYDE
	CHLORDANE (TECH. MIXTURE) /1
2.2U	GAMMA-CHLORDANE /2
2.2U	ALPHA-CHLORDANE /2
220U	TOXAPHENE
42U	PCB-1016 (AROCLOR 1016)
86UR	PCB-1221 (AROCLOR 1221)
42U	PCB-1232 (AROCLOR 1232)
42U	PCB-1242 (AROCLOR 1242)
42U	PCB-1248 (AROCLOR 1248)
42U	PCB-1254 (AROCLOR 1254)
42U	PCB-1260 (AROCLOR 1260)
22	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64316 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-06

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1600 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE92

UG/KG	ANALYTICAL RESULTS
13U	CHLOROMETHANE
13U	BROMOMETHANE
13U	VINYL CHLORIDE
13U	CHLOROETHANE
80U	METHYLENE CHLORIDE
40U	ACETONE
13U	CARBON DISULFIDE
13U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
13U	1,1-DICHLOROETHANE
13U	1,2-DICHLOROETHENE (TOTAL)
13U	CHLOROFORM
13U	1,2-DICHLOROETHANE
13U	METHYL ETHYL KETONE
13U	1,1,1-TRICHLOROETHANE
13U	CARBON TETRACHLORIDE
13U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
13U	1,2-DICHLOROPROPANE
13U	CIS-1,3-DICHLOROPROPENE
13U	TRICHLOROETHENE(TRICHLOROETHYLENE)
13U	DIBROMOCHLOROMETHANE
13U	1,1,2-TRICHLOROETHANE
13U	BENZENE
13U	TRANS-1,3-DICHLOROPROPENE
13U	BROMOFORM
13U	METHYL ISOBUTYL KETONE
13U	METHYL BUTYL KETONE
13U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
13U	1,1,2,2-TETRACHLOROETHANE
13U	TOLUENE
13U	CHLOROBENZENE
13U	ETHYL BENZENE
13U	STYRENE
13U	TOTAL XYLENES
24	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

EXTRACTABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64316 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-06

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1600 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE92

UG/KG	ANALYTICAL RESULTS
430U	PHENOL
430U	BIS(2-CHLOROETHYL) ETHER
430U	2-CHLOROPHENOL
430U	1,3-DICHLOROBENZENE
430U	1,4-DICHLOROBENZENE
430U	1,2-DICHLOROBENZENE
430U	2-METHYLPHENOL
430U	2,2'-CHLOROISOPROPYLETHER
430UJ	(3-AND/OR 4-)METHYLPHENOL
430U	N-NITROSODI-N-PROPYLAMINE
430U	HEXACHLOROETHANE
430U	NITROBENZENE
430U	ISOPHORONE
430U	2-NITROPHENOL
430U	2,4-DIMETHYLPHENOL
430U	BIS(2-CHLOROETHOXY) METHANE
430U	2,4-DICHLOROPHENOL
430U	1,2,4-TRICHLOROBENZENE
430U	NAPHTHALENE
430U	4-CHLOROANILINE
430U	HEXACHLOROBUTADIENE
430U	4-CHLORO-3-METHYLPHENOL
430U	2-METHYLNAPHTHALENE
430U	HEXACHLOROCYCLOPENTADIENE (HCCP)
430UJ	2,4,6-TRICHLOROPHENOL
1000U	2,4,5-TRICHLOROPHENOL
430U	2-CHLORONAPHTHALENE
1000U	2-NITROANILINE
430U	DIMETHYL PHTHALATE
430UR	ACENAPHTHYLENE
430U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
1000U	3-NITROANILINE
430U	ACENAPHTHENE
1000U	2,4-DINITROPHENOL
1000U	4-NITROPHENOL
430U	DIBENZOFURAN
430U	2,4-DINITROTOLUENE
430U	DIETHYL PHTHALATE
430U	4-CHLOROPHENYL PHENYL ETHER
430U	FLUORENE
1000U	4-NITROANILINE
1000U	2-METHYL-4,6-DINITROPHENOL
430U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
430U	4-BROMOPHENYL PHENYL ETHER
430U	HEXACHLOROBENZENE (HCB)
1000U	PENTACHLOROPHENOL
430U	PHENANTHRENE
430U	ANTHRACENE
430U	CARBAZOLE
430U	DI-N-BUTYLPHTHALATE
430U	FLUORANTHENE
430U	PYRENE
430U	BENZYL BUTYL PHTHALATE
430U	3,3'-DICHLOROBENZIDINE
430U	BENZO(A)ANTHRACENE
430U	CHRYSENE
430U	BIS(2-ETHYLHEXYL) PHTHALATE
430U	DI-N-OCTYLPHTHALATE
430U	BENZO(B AND/OR K)FLUORANTHENE
430U	BENZO-A-PYRENE
430U	INDENO (1,2,3-CD) PYRENE
430U	DIBENZO(A,H)ANTHRACENE
430UJ	BENZO(GHI)PERYLENE
24	PERCENT MOISTURE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

PROJECT NO. 92-0189	SAMPLE NO. 64316	SAMPLE TYPE: SOIL	PROG ELEM: NSF COLLECTED BY: J HATCHER
SOURCE: CBS RECORDS			CITY: CARROLLTON ST: GA
STATION ID: SS-06			COLLECTION START: 12/17/91 1600 STOP: 00/00/00
CASE.NO.: 17582	SAS NO.:		D. NO.: CE92 MD NO: CE92

ANALYTICAL RESULTS UG/KG

[redacted]

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64316 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-06
CASE NUMBER: 17582 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1600 STOP: 00/00/00
D. NUMBER: CE92

UG/KG	ANALYTICAL RESULTS
2.2U	ALPHA-BHC
2.2U	BETA-BHC
2.2U	DELTA-BHC
2.2U	GAMMA-BHC (LINDANE)
2.2U	HEPTACHLOR
2.2U	ALDRIN
2.2U	HEPTACHLOR EPOXIDE
2.2U	ENDOSULFAN I (ALPHA)
4.3U	DIELDRIN
4.3U	4,4'-DDE (P,P'-DDE)
4.3U	ENDRIN
4.3U	ENDOSULFAN II (BETA)
4.3U	4,4'-DDD (P,P'-DDD)
4.3U	ENDOSULFAN SULFATE
4.3U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
22U	METHOXYCHLOR
4.3U	ENDRIN KETONE
4.3U	ENDRIN ALDEHYDE
	CHLORDANE (TECH. MIXTURE) /1
2.2U	GAMMA-CHLORDANE /2
2.2U	ALPHA-CHLORDANE /2
220U	TOXAPHENE
43U	PCB-1016 (AROCLOR 1016)
88UR	PCB-1221 (AROCLOR 1221)
43U	PCB-1232 (AROCLOR 1232)
43U	PCB-1242 (AROCLOR 1242)
43U	PCB-1248 (AROCLOR 1248)
43U	PCB-1254 (AROCLOR 1254)
43U	PCB-1260 (AROCLOR 1260)
24	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64319 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-07

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/18/91 0935 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE93

UG/KG	ANALYTICAL RESULTS
13U	CHLOROMETHANE
13U	BROMOMETHANE
13U	VINYL CHLORIDE
13U	CHLOROETHANE
70U	METHYLENE CHLORIDE
40U	ACETONE
13U	CARBON DISULFIDE
13U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
13U	1,1-DICHLOROETHANE
13U	1,2-DICHLOROETHENE (TOTAL)
13U	CHLOROFORM
13U	1,2-DICHLOROETHANE
13U	METHYL ETHYL KETONE
13U	1,1,1-TRICHLOROETHANE
13U	CARBON TETRACHLORIDE
13U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
13U	1,2-DICHLOROPROPANE
13U	CIS-1,3-DICHLOROPROPENE
13U	TRICHLOROETHENE(TRICHLOROETHYLENE)
13U	DIBROMOCHLOROMETHANE
13U	1,1,2-TRICHLOROETHANE
13U	BENZENE
13U	TRANS-1,3-DICHLOROPROPENE
13U	BROMOFORM
13U	METHYL ISOBUTYL KETONE
13U	METHYL BUTYL KETONE
13U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
13U	1,1,2,2-TETRACHLOROETHANE
13U	TOLUENE
13U	CHLOROBENZENE
13U	ETHYL BENZENE
13U	STYRENE
13U	TOTAL XYLENES
24	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64319 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-07

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/18/91 0935 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE93

UG/KG	ANALYTICAL RESULTS
430U	PHENOL
430U	BIS(2-CHLOROETHYL) ETHER
430U	2-CHLOROPHENOL
430U	1,3-DICHLOROBENZENE
430U	1,4-DICHLOROBENZENE
430U	1,2-DICHLOROBENZENE
430U	2-METHYLPHENOL
430U	2,2'-CHLOROISOPROPYLETHER
430UJ	(3-AND/OR 4-)METHYLPHENOL
430U	N-NITROSODI-N-PROPYLAMINE
430U	HEXACHLOROETHANE
430U	NITROBENZENE
430U	ISOPHORONE
430U	2-NITROPHENOL
430U	2,4-DIMETHYLPHENOL
430U	BIS(2-CHLOROETHOXY) METHANE
430U	2,4-DICHLOROPHENOL
430U	1,2,4-TRICHLOROBENZENE
430U	NAPHTHALENE
430U	4-CHLOROANILINE
430U	HEXACHLOROBUTADIENE
430U	4-CHLORO-3-METHYLPHENOL
430U	2-METHYLNAPHTHALENE
430U	HEXACHLOROCYCLOPENTADIENE (HCCP)
430UJ	2,4,6-TRICHLOROPHENOL
1000U	2,4,5-TRICHLOROPHENOL
430U	2-CHLORONAPHTHALENE
1000U	2-NITROANILINE
430U	DIMETHYL PHTHALATE
430UR	ACENAPHTHYLENE
430U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
1000U	3-NITROANILINE
430U	ACENAPHTHENE
1000U	2,4-DINITROPHENOL
1000U	4-NITROPHENOL
430U	DIBENZOFURAN
430U	2,4-DINITROTOLUENE
430U	DIETHYL PHTHALATE
430U	4-CHLOROPHENYL PHENYL ETHER
430U	FLUORENE
1000U	4-NITROANILINE
1000U	2-METHYL-4,6-DINITROPHENOL
430U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
430U	4-BROMOPHENYL PHENYL ETHER
430U	HEXACHLOROBENZENE (HCB)
1000U	PENTACHLOROPHENOL
430U	PHENANTHRENE
430U	ANTHRACENE
430U	CARBAZOLE
430U	DI-N-BUTYLPHTHALATE
430U	FLUORANTHENE
430U	PYRENE
430U	BENZYL BUTYL PHTHALATE
430U	3,3'-DICHLOROBENZIDINE
430U	BENZO(A)ANTHRACENE
430U	CHRYSENE
430U	BIS(2-ETHYLHEXYL) PHTHALATE
430U	DI-N-OCTYLPHTHALATE
430U	BENZO(B AND/OR K)FLUORANTHENE
430U	BENZO-A-PYRENE
430U	INDENO (1,2,3-CD) PYRENE
430U	DIBENZO(A,H)ANTHRACENE
430UJ	BENZO(GHI)PERYLENE
24	PERCENT MOISTURE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64319 SAMPLE TYPE: SOIL	PROG ELEM: NSF COLLECTED BY: J HATCHER
SOURCE: CBS RECORDS	CITY: CARROLLTON ST: GA
STATION ID: SS-07	COLLECTION START: 12/18/91 0935 STOP: 00/00/00
CASE.NO.: 17582 SAS NO.:	D. NO.: CE93 MD NO: CE93

ANALYTICAL RESULTS UG/KG

[redacted]UND

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64319 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-07
CASE NUMBER: 17582 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/18/91 0935 STOP: 00/00/00
D. NUMBER: CE93

UG/KG	ANALYTICAL RESULTS
2.2U	ALPHA-BHC
2.2U	BETA-BHC
2.2U	DELTA-BHC
2.2U	GAMMA-BHC (LINDANE)
2.2U	HEPTACHLOR
2.2U	ALDRIN
2.2U	HEPTACHLOR EPOXIDE
2.2U	ENDOSULFAN I (ALPHA)
4.3U	DIELDRIN
4.3U	4,4'-DDE (P,P'-DDE)
4.3U	ENDRIN
4.3U	ENDOSULFAN II (BETA)
4.3U	4,4'-DDD (P,P'-DDD)
4.3U	ENDOSULFAN SULFATE
4.3U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
22U	METHOXYCHLOR
4.3U	ENDRIN KETONE
4.3U	ENDRIN ALDEHYDE
	CHLORDANE (TECH. MIXTURE) /1
2.2U	GAMMA-CHLORDANE /2
2.2U	ALPHA-CHLORDANE /2
220U	TOXAPHENE
43U	PCB-1016 (AROCLOR 1016)
88UR	PCB-1221 (AROCLOR 1221)
43U	PCB-1232 (AROCLOR 1232)
43U	PCB-1242 (AROCLOR 1242)
43U	PCB-1248 (AROCLOR 1248)
43U	PCB-1254 (AROCLOR 1254)
43U	PCB-1260 (AROCLOR 1260)
24	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64305 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SB-01

CASE NO.: 17582 SAS NO.:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/16/91 1600 STOP: 00/00/00

D. NO.: CE79

UG/KG	ANALYTICAL RESULTS
12U	CHLOROMETHANE
12U	BROMOMETHANE
12U	VINYL CHLORIDE
12U	CHLOROETHANE
30U	METHYLENE CHLORIDE
60U	ACETONE
12U	CARBON DISULFIDE
12U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
12U	1,1-DICHLOROETHANE
12U	1,2-DICHLOROETHENE (TOTAL)
12U	CHLOROFORM
12U	1,2-DICHLOROETHANE
12U	METHYL ETHYL KETONE
12U	1,1,1-TRICHLOROETHANE
12U	CARBON TETRACHLORIDE
12U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
12U	1,2-DICHLOROPROPANE
12U	CIS-1,3-DICHLOROPROPENE
12U	TRICHLOROETHENE(TRICHLOROETHYLENE)
12U	DIBROMOCHLOROMETHANE
12U	1,1,2-TRICHLOROETHANE
12U	BENZENE
12U	TRANS-1,3-DICHLOROPROPENE
12U	BROMOFORM
12U	METHYL ISOBUTYL KETONE
12U	METHYL BUTYL KETONE
12U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
12U	1,1,2,2-TETRACHLOROETHANE
12U	TOLUENE
12U	CHLOROBENZENE
12U	ETHYL BENZENE
12U	STYRENE
12U	TOTAL XYLENES
16	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

EXTRACTABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64305 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SB-01

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/16/91 1600 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE79

UG/KG	ANALYTICAL RESULTS
390U	PHENOL
390U	BIS(2-CHLOROETHYL) ETHER
390U	2-CHLOROPHENOL
390U	1,3-DICHLOROBENZENE
390U	1,4-DICHLOROBENZENE
390U	1,2-DICHLOROBENZENE
390U	2-METHYLPHENOL
390U	2,2'-CHLOROISOPROPYLETHER
390UJ	(3-AND/OR 4-)METHYLPHENOL
390U	N-NITROSODI-N-PROPYLAMINE
390U	HEXACHLOROETHANE
390U	NITROBENZENE
390U	ISOPHORONE
390U	2-NITROPHENOL
390U	2,4-DIMETHYLPHENOL
390U	BIS(2-CHLOROETHOXY) METHANE
390U	2,4-DICHLOROPHENOL
390U	1,2,4-TRICHLOROBENZENE
390U	NAPHTHALENE
390U	4-CHLOROANILINE
390U	HEXACHLOROBUTADIENE
390U	4-CHLORO-3-METHYLPHENOL
390U	2-METHYLNAPHTHALENE
390U	HEXACHLOROCYCLOPENTADIENE (HCCP)
390UJ	2,4,6-TRICHLOROPHENOL
940U	2,4,5-TRICHLOROPHENOL
390U	2-CHLORONAPHTHALENE
940U	2-NITROANILINE
390U	DIMETHYL PHTHALATE
390UR	ACENAPHTHYLENE
390U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
940U	3-NITROANILINE
390U	ACENAPHTHENE
940U	2,4-DINITROPHENOL
940U	4-NITROPHENOL
390U	DIBENZOFURAN
390U	2,4-DINITROTOLUENE
390U	DIETHYL PHTHALATE
390U	4-CHLOROPHENYL PHENYL ETHER
390U	FLUORENE
940U	4-NITROANILINE
940U	2-METHYL-4,6-DINITROPHENOL
390U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
390U	4-BROMOPHENYL PHENYL ETHER
390U	HEXACHLOROBENZENE (HCB)
940U	PENTACHLOROPHENOL
390U	PHENANTHRENE
390U	ANTHRACENE
390U	CARBAZOLE
390U	DI-N-BUTYLPHTHALATE
390U	FLUORANTHENE
390U	PYRENE
390U	BENZYL BUTYL PHTHALATE
390U	3,3'-DICHLOROBENZIDINE
390U	BENZO(A)ANTHRACENE
390U	CHRYSENE
390U	BIS(2-ETHYLHEXYL) PHTHALATE
390U	DI-N-OCTYLPHTHALATE
390U	BENZO(B AND/OR K)FLUORANTHENE
390U	BENZO-A-PYRENE
390U	INDENO (1,2,3-CD) PYRENE
390U	DIBENZO(A,H)ANTHRACENE
390UJ	BENZO(GHI)PERYLENE
16	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64305 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SB-01
CASE NUMBER: 17582 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/16/91 1600 STOP: 00/00/00
D. NUMBER: CE79

UG/KG	ANALYTICAL RESULTS
2.0U	ALPHA-BHC
2.0U	BETA-BHC
2.0U	DELTA-BHC
2.0U	GAMMA-BHC (LINDANE)
2.0U	HEPTACHLOR
2.0U	ALDRIN
2.0U	HEPTACHLOR EPOXIDE
2.0U	ENDOSULFAN I (ALPHA)
3.9U	DIELDRIN
3.9U	4,4'-DDE (P,P'-DDE)
3.9U	ENDRIN
3.9U	ENDOSULFAN II (BETA)
3.9U	4,4'-DDD (P,P'-DDD)
3.9U	ENDOSULFAN SULFATE
3.9U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
20U	METHOXYCHLOR
3.9U	ENDRIN KETONE
3.9U	ENDRIN ALDEHYDE
	CHLORDANE (TECH. MIXTURE) /1
2.0U	GAMMA-CHLORDANE /2
2.0U	ALPHA-CHLORDANE /2
200U	TOXAPHENE
39U	PCB-1016 (AROCLOR 1016)
80UR	PCB-1221 (AROCLOR 1221)
39U	PCB-1232 (AROCLOR 1232)
39U	PCB-1242 (AROCLOR 1242)
39U	PCB-1248 (AROCLOR 1248)
39U	PCB-1254 (AROCLOR 1254)
39U	PCB-1260 (AROCLOR 1260)
16	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64314 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SB-03

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1500 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE88

UG/KG	ANALYTICAL RESULTS
14U	CHLOROMETHANE
14U	BROMOMETHANE
14U	VINYL CHLORIDE
14U	CHLOROETHANE
100U	METHYLENE CHLORIDE
50U	ACETONE
14U	CARBON DISULFIDE
14U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
14U	1,1-DICHLOROETHANE
14U	1,2-DICHLOROETHENE (TOTAL)
14U	CHLOROFORM
14U	1,2-DICHLOROETHANE
14U	METHYL ETHYL KETONE
14U	1,1,1-TRICHLOROETHANE
14U	CARBON TETRACHLORIDE
14U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
14U	1,2-DICHLOROPROPANE
14U	CIS-1,3-DICHLOROPROPENE
14U	TRICHLOROETHENE(TRICHLOROETHYLENE)
14U	DIBROMOCHLOROMETHANE
14U	1,1,2-TRICHLOROETHANE
14U	BENZENE
14U	TRANS-1,3-DICHLOROPROPENE
14U	BROMOFORM
14U	METHYL ISOBUTYL KETONE
14U	METHYL BUTYL KETONE
14U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
14U	1,1,2,2-TETRACHLOROETHANE
14U	TOLUENE
14U	CHLOROBENZENE
14U	ETHYL BENZENE
14U	STYRENE
14U	TOTAL XYLENES
26	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

EXTRACTABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64314 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SB-03

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1500 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE88

UG/KG	ANALYTICAL RESULTS
440U	PHENOL
440U	BIS(2-CHLOROETHYL) ETHER
440U	2-CHLOROPHENOL
440U	1,3-DICHLOROBENZENE
440U	1,4-DICHLOROBENZENE
440U	1,2-DICHLOROBENZENE
440U	2-METHYLPHENOL
440U	2,2'-CHLOROISOPROPYLETHER
440UJ	(3-AND/OR 4-)METHYLPHENOL
440U	N-NITROSODI-N-PROPYLAMINE
440U	HEXACHLOROETHANE
440U	NITROBENZENE
440U	ISOPHORONE
440U	2-NITROPHENOL
440U	2,4-DIMETHYLPHENOL
440U	BIS(2-CHLOROETHOXY) METHANE
440U	2,4-DICHLOROPHENOL
440U	1,2,4-TRICHLOROBENZENE
440U	NAPHTHALENE
440U	4-CHLOROANILINE
440U	HEXACHLOROBUTADIENE
440U	4-CHLORO-3-METHYLPHENOL
440U	2-METHYLNAPHTHALENE
440U	HEXACHLOROCYCLOPENTADIENE (HCCP)
440UJ	2,4,6-TRICHLOROPHENOL
1100U	2,4,5-TRICHLOROPHENOL
440U	2-CHLORONAPHTHALENE
1100U	2-NITROANILINE
440U	DIMETHYL PHTHALATE
440UR	ACENAPHTHYLENE
440U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
1100U	3-NITROANILINE
440U	ACENAPHTHENE
1100U	2,4-DINITROPHENOL
1100U	4-NITROPHENOL
440U	DIBENZOFURAN
440U	2,4-DINITROTOLUENE
440U	DIETHYL PHTHALATE
440U	4-CHLOROPHENYL PHENYL ETHER
440U	FLUORENE
1100U	4-NITROANILINE
1100U	2-METHYL-4,6-DINITROPHENOL
440U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
440U	4-BROMOPHENYL PHENYL ETHER
440U	HEXACHLOROBENZENE (HCB)
1100U	PENTACHLOROPHENOL
440U	PHENANTHRENE
440U	ANTHRACENE
440U	CARBAZOLE
440U	DI-N-BUTYLPHTHALATE
440U	FLUORANTHENE
440U	PYRENE
440U	BENZYL BUTYL PHTHALATE
440U	3,3'-DICHLOROBENZIDINE
440U	BENZO(A)ANTHRACENE
440U	CHRYSENE
440U	BIS(2-ETHYLHEXYL) PHTHALATE
440U	DI-N-OCTYLPHTHALATE
440U	BENZO(B AND/OR K)FLUORANTHENE
440U	BENZO-A-PYRENE
440U	INDENO (1,2,3-CD) PYRENE
440U	DIBENZO(A,H)ANTHRACENE
440UJ	BENZO(GHI)PERYLENE
26	PERCENT MOISTURE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64314 SAMPLE TYPE: SOIL	PROG ELEM: NSF COLLECTED BY: J HATCHER
SOURCE: CBS RECORDS	CITY: CARROLLTON ST: GA
STATION ID: SB-03	COLLECTION START: 12/17/91 1500 STOP: 00/00/00
CASE.NO.: 17582 SAS NO.:	D. NO.: CE88 MD NO: CE88

ANALYTICAL RESULTS UG/KG

[redacted]

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64314 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SB-03
CASE NUMBER: 17582 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1500 STOP: 00/00/00
D. NUMBER: CE88

UG/KG	ANALYTICAL RESULTS
2.3U	ALPHA-BHC
2.3U	BETA-BHC
2.3U	DELTA-BHC
2.3U	GAMMA-BHC (LINDANE)
2.3U	HEPTACHLOR
2.3U	ALDRIN
2.3U	HEPTACHLOR EPOXIDE
2.3U	ENDOSULFAN I (ALPHA)
4.5U	DIELDRIN
4.5U	4,4'-DDE (P,P'-DDE)
4.5U	ENDRIN
4.5U	ENDOSULFAN II (BETA)
4.5U	4,4'-DDD (P,P'-DDD)
4.5U	ENDOSULFAN SULFATE
4.5U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
23U	METHOXYCHLOR
4.5U	ENDRIN KETONE
4.5U	ENDRIN ALDEHYDE
	CHLORDANE (TECH. MIXTURE) /1
2.3U	GAMMA-CHLORDANE /2
2.3U	ALPHA-CHLORDANE /2
230U	TOXAPHENE
45U	PCB-1016 (AROCLOR 1016)
91UR	PCB-1221 (AROCLOR 1221)
45U	PCB-1232 (AROCLOR 1232)
45U	PCB-1242 (AROCLOR 1242)
45U	PCB-1248 (AROCLOR 1248)
45U	PCB-1254 (AROCLOR 1254)
45U	PCB-1260 (AROCLOR 1260)
26	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64318 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SB-05

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/18/91 0915 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE91

UG/KG	ANALYTICAL RESULTS
14U	CHLOROMETHANE
14U	BROMOMETHANE
14U	VINYL CHLORIDE
14U	CHLOROETHANE
70U	METHYLENE CHLORIDE
60U	ACETONE
14U	CARBON DISULFIDE
14U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
14U	1,1-DICHLOROETHANE
14U	1,2-DICHLOROETHENE (TOTAL)
14U	CHLOROFORM
14U	1,2-DICHLOROETHANE
14U	METHYL ETHYL KETONE
14U	1,1,1-TRICHLOROETHANE
14U	CARBON TETRACHLORIDE
14U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
14U	1,2-DICHLOROPROPANE
14U	CIS-1,3-DICHLOROPROPENE
14U	TRICHLOROETHENE(TRICHLOROETHYLENE)
14U	DIBROMOCHLOROMETHANE
14U	1,1,2-TRICHLOROETHANE
14U	BENZENE
14U	TRANS-1,3-DICHLOROPROPENE
14U	BROMOFORM
14U	METHYL ISOBUTYL KETONE
14U	METHYL BUTYL KETONE
14U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
14U	1,1,2,2-TETRACHLOROETHANE
14U	TOLUENE
14U	CHLOROBENZENE
14U	ETHYL BENZENE
14U	STYRENE
14U	TOTAL XYLENES
31	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

EXTRACTABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64318 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SB-05

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/18/91 0915 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE91

UG/KG	ANALYTICAL RESULTS
470U	PHENOL
470U	BIS(2-CHLOROETHYL) ETHER
470U	2-CHLOROPHENOL
470U	1,3-DICHLOROBENZENE
470U	1,4-DICHLOROBENZENE
470U	1,2-DICHLOROBENZENE
470U	2-METHYLPHENOL
470U	2,2'-CHLOROISOPROPYLETHER
470UJ	(3-AND/OR 4-)METHYLPHENOL
470U	N-NITROSODI-N-PROPYLAMINE
470U	HEXACHLOROETHANE
470U	NITROBENZENE
470U	ISOPHORONE
470U	2-NITROPHENOL
470U	2,4-DIMETHYLPHENOL
470U	BIS(2-CHLOROETHOXY) METHANE
470U	2,4-DICHLOROPHENOL
470U	1,2,4-TRICHLOROBENZENE
470U	NAPHTHALENE
470U	4-CHLOROANILINE
470U	HEXACHLOROBUTADIENE
470U	4-CHLORO-3-METHYLPHENOL
470U	2-METHYLNAPHTHALENE
470U	HEXACHLOROCYCLOPENTADIENE (HCCP)
470UJ	2,4,6-TRICHLOROPHENOL
1200U	2,4,5-TRICHLOROPHENOL
470U	2-CHLORONAPHTHALENE
1200U	2-NITROANILINE
470U	DIMETHYL PHTHALATE
470UR	ACENAPHTHYLENE
470U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
1200U	3-NITROANILINE
470U	ACENAPHTHENE
1200U	2,4-DINITROPHENOL
1200U	4-NITROPHENOL
470U	DIBENZOFURAN
470U	2,4-DINITROTOLUENE
470U	DIETHYL PHTHALATE
470U	4-CHLOROPHENYL PHENYL ETHER
470U	FLUORENE
1200U	4-NITROANILINE
1200U	2-METHYL-4,6-DINITROPHENOL
470U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
470U	4-BROMOPHENYL PHENYL ETHER
470U	HEXACHLOROBENZENE (HCB)
1200U	PENTACHLOROPHENOL
470U	PHENANTHRENE
470U	ANTHRACENE
470U	CARBAZOLE
470U	DI-N-BUTYLPHTHALATE
470U	FLUORANTHENE
470U	PYRENE
470U	BENZYL BUTYL PHTHALATE
470U	3,3'-DICHLOROBENZIDINE
470U	BENZO(A)ANTHRACENE
470U	CHRYSENE
470U	BIS(2-ETHYLHEXYL) PHTHALATE
470U	DI-N-OCTYLPHTHALATE
470U	BENZO(B AND/OR K)FLUORANTHENE
470U	BENZO-A-PYRENE
470U	INDENO (1,2,3-CD) PYRENE
470U	DIBENZO(A,H)ANTHRACENE
470UJ	BENZO(GHI)PERYLENE
31	PERCENT MOISTURE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

*** ***
** PROJECT NO. 92-0189 SAMPLE NO. 64318 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: J HATCHER **
** SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA **
** STATION ID: SB-05 COLLECTION START: 12/18/91 0915 STOP: 00/00/00 **
** CASE.NO.: 17582 SAS NO.: D. NO.: CE91 MD NO: CE91 **
** **
*** ***

ANALYTICAL RESULTS UG/KG

[redacted]D

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64318 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SB-05
CASE NUMBER: 17582 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/18/91 0915 STOP: 00/00/00
D. NUMBER: CE91

UG/KG	ANALYTICAL RESULTS
2.5U	ALPHA-BHC
2.5U	BETA-BHC
2.5U	DELTA-BHC
2.5U	GAMMA-BHC (LINDANE)
2.5U	HEPTACHLOR
2.5U	ALDRIN
2.5U	HEPTACHLOR EPOXIDE
2.5U	ENDOSULFAN I (ALPHA)
4.8U	DIELDRIN
4.8U	4,4'-DDE (P,P'-DDE)
4.8U	ENDRIN
4.8U	ENDOSULFAN II (BETA)
4.8U	4,4'-DDD (P,P'-DDD)
4.8U	ENDOSULFAN SULFATE
4.8U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
25U	METHOXYCHLOR
4.8U	ENDRIN KETONE
4.8U	ENDRIN ALDEHYDE
	CHLORDANE (TECH. MIXTURE) /1
2.5U	GAMMA-CHLORDANE /2
2.5U	ALPHA-CHLORDANE /2
250U	TOXAPHENE
48U	PCB-1016 (AROCLOR 1016)
97UR	PCB-1221 (AROCLOR 1221)
48U	PCB-1232 (AROCLOR 1232)
48U	PCB-1242 (AROCLOR 1242)
48U	PCB-1248 (AROCLOR 1248)
48U	PCB-1254 (AROCLOR 1254)
48U	PCB-1260 (AROCLOR 1260)
31	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64320 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SB-07

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/18/91 0950 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE94

UG/KG	ANALYTICAL RESULTS
14U	CHLOROMETHANE
14U	BROMOMETHANE
14U	VINYL CHLORIDE
14U	CHLOROETHANE
160U	METHYLENE CHLORIDE
50U	ACETONE
14U	CARBON DISULFIDE
14U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
14U	1,1-DICHLOROETHANE
14U	1,2-DICHLOROETHENE (TOTAL)
14U	CHLOROFORM
14U	1,2-DICHLOROETHANE
14U	METHYL ETHYL KETONE
14U	1,1,1-TRICHLOROETHANE
14U	CARBON TETRACHLORIDE
14U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
14U	1,2-DICHLOROPROPANE
14U	CIS-1,3-DICHLOROPROPENE
14U	TRICHLOROETHENE(TRICHLOROETHYLENE)
14U	DIBROMOCHLOROMETHANE
14U	1,1,2-TRICHLOROETHANE
14U	BENZENE
14U	TRANS-1,3-DICHLOROPROPENE
14U	BROMOFORM
14U	METHYL ISOBUTYL KETONE
14U	METHYL BUTYL KETONE
14U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
14U	1,1,2,2-TETRACHLOROETHANE
14U	TOLUENE
14U	CHLOROBENZENE
14U	ETHYL BENZENE
14U	STYRENE
14U	TOTAL XYLENES
29	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

EXTRACTABLE ORGANICS DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64320 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SB-07

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/18/91 0950 STOP: 00/00/00

CASE NO.: 17582 SAS NO.: D. NO.: CE94

UG/KG	ANALYTICAL RESULTS
460U	PHENOL
460U	BIS(2-CHLOROETHYL) ETHER
460U	2-CHLOROPHENOL
460U	1,3-DICHLOROBENZENE
460U	1,4-DICHLOROBENZENE
460U	1,2-DICHLOROBENZENE
460U	2-METHYLPHENOL
460U	2,2'-CHLOROISOPROPYLETHER
460UJ	(3-AND/OR 4-)METHYLPHENOL
460U	N-NITROSODI-N-PROPYLAMINE
460U	HEXACHLOROETHANE
460U	NITROBENZENE
460U	ISOPHORONE
460U	2-NITROPHENOL
460U	2,4-DIMETHYLPHENOL
460U	BIS(2-CHLOROETHOXY) METHANE
460U	2,4-DICHLOROPHENOL
460U	1,2,4-TRICHLOROBENZENE
460U	NAPHTHALENE
460U	4-CHLOROANILINE
460U	HEXACHLOROBUTADIENE
460U	4-CHLORO-3-METHYLPHENOL
460U	2-METHYLNAPHTHALENE
460U	HEXACHLOROCYCLOPENTADIENE (HCCP)
460UJ	2,4,6-TRICHLOROPHENOL
1100U	2,4,5-TRICHLOROPHENOL
460U	2-CHLORONAPHTHALENE
1100U	2-NITROANILINE
460U	DIMETHYL PHTHALATE
460UR	ACENAPHTHYLENE
460U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
1100U	3-NITROANILINE
460U	ACENAPHTHENE
1100U	2,4-DINITROPHENOL
1100U	4-NITROPHENOL
460U	DIBENZOFURAN
460U	2,4-DINITROTOLUENE
460U	DIETHYL PHTHALATE
460U	4-CHLOROPHENYL PHENYL ETHER
460U	FLUORENE
1100U	4-NITROANILINE
1100U	2-METHYL-4,6-DINITROPHENOL
460U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
460U	4-BROMOPHENYL PHENYL ETHER
460U	HEXACHLOROBENZENE (HCB)
1100U	PENTACHLOROPHENOL
460U	PHENANTHRENE
460U	ANTHRACENE
460U	CARBAZOLE
460U	DI-N-BUTYLPHTHALATE
460U	FLUORANTHENE
460U	PYRENE
460U	BENZYL BUTYL PHTHALATE
460U	3,3'-DICHLOROBENZIDINE
460U	BENZO(A)ANTHRACENE
460U	CHRYSENE
460U	BIS(2-ETHYLHEXYL) PHTHALATE
460U	DI-N-OCTYLPHTHALATE
460U	BENZO(B AND/OR K)FLUORANTHENE
460U	BENZO-A-PYRENE
460U	INDENO (1,2,3-CD) PYRENE
460U	DIBENZO(A,H)ANTHRACENE
460UJ	BENZO(GHI)PERYLENE
29	PERCENT MOISTURE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

02/18/92

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

*** ***
** PROJECT NO. 92-0189 SAMPLE NO. 64320 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: J HATCHER **
** SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA **
** STATION ID: SB-07 COLLECTION START: 12/18/91 0950 STOP: 00/00/00 **
** CASE.NO.: 17582 SAS NO.: D. NO.: CE94 MD NO: CE94 **
** **
*** ***

ANALYTICAL RESULTS UG/KG

[redacted]OUND

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 02/18/92

PROJECT NO. 92-0189 SAMPLE NO. 64320 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SB-07
CASE NUMBER: 17582 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/18/91 0950 STOP: 00/00/00
D. NUMBER: CE94

UG/KG	ANALYTICAL RESULTS
2.4U	ALPHA-BHC
2.4U	BETA-BHC
2.4U	DELTA-BHC
2.4U	GAMMA-BHC (LINDANE)
2.4U	HEPTACHLOR
2.4U	ALDRIN
2.4U	HEPTACHLOR EPOXIDE
2.4U	ENDOSULFAN I (ALPHA)
4.6U	DIELDRIN
4.6U	4,4'-DDE (P,P'-DDE)
4.6U	ENDRIN
4.6U	ENDOSULFAN II (BETA)
4.6U	4,4'-DDD (P,P'-DDD)
4.6U	ENDOSULFAN SULFATE
4.6U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
24U	METHOXYCHLOR
4.6U	ENDRIN KETONE
4.6U	ENDRIN ALDEHYDE
	CHLORDANE (TECH. MIXTURE) /1
2.4U	GAMMA-CHLORDANE /2
2.4U	ALPHA-CHLORDANE /2
240U	TOXAPHENE
46U	PCB-1016 (AROCLOR 1016)
94UR	PCB-1221 (AROCLOR 1221)
46U	PCB-1232 (AROCLOR 1232)
46U	PCB-1242 (AROCLOR 1242)
46U	PCB-1248 (AROCLOR 1248)
46U	PCB-1254 (AROCLOR 1254)
46U	PCB-1260 (AROCLOR 1260)
29	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

01/31/92

METALS DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64303 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: J HATCHER
SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA
STATION ID: PB-01 COLLECTION START: 12/16/91 1030 STOP: 00/00/00
CASE NUMBER: 17582 SAS NUMBER: MD NUMBER: CE77

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
66UJ	ALUMINUM	1U	MANGANESE
31U	ANTIMONY	0.20U	MERCURY
2U	ARSENIC	4U	NICKEL
1U	BARIUM	76U	POTASSIUM
1U	BERYLLIUM	4UR	SELENIUM
1U	CADMIUM	5U	SILVER
92U	CALCIUM	34U	SODIUM
2U	CHROMIUM	3UR	THALLIUM
3U	COBALT	NA	TIN
3U	COPPER	3U	VANADIUM
35U	IRON	11U	ZINC
2UJ	LEAD		
68U	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

01/31/92

SPECIFIED ANALYSIS DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64303 SAMPLE TYPE: GROUNDWA
SOURCE: CBS RECORDS
STATION ID: PB-01
CASE.NO.: 17582 SAS NO.:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/16/91 1030 STOP: 00/00/00
D. NO.: MD NO: CE77

RESULTS	UNITS	PARAMETER
10UJ	UG/L	CYANIDE

REMARKS
HOLDING TIME EXCEEDED-CN

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

01/31/92

METALS DATA REPORT

** PROJECT NO. 92-0189 SAMPLE NO. 64308 SAMPLE TYPE: GROUNDA PROG ELEM: NSF COLLECTED BY: J HATCHER **
** SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA **
** STATION ID: MW-01 COLLECTION START: 12/17/91 1005 STOP: 00/00/00 **
** CASE NUMBER: 17582 SAS NUMBER: MD NUMBER: CE82 **

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
[redacted]		[redacted]	
31U	ANTIMONY	0.20U	MERCURY
2U	ARSENIC	4U	NICKEL
30U	BARIUM	740U	POTASSIUM
1U	BERYLLIUM	4UR	SELENIUM
1U	CADMIUM	5U	SILVER
630U	CALCI[redacted]	1700U	SODIUM
[redacted]		3UR	THALLIUM
3U	COBALT	NA	TIN
3U	COPPER	3U	VANADIUM
[redacted]		30U	ZINC
3UJ	LEAD		
640U	MAGNESIUM		

REMARKS

REMARKS

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

01/31/92

SPECIFIED ANALYSIS DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64308 SAMPLE TYPE: GROUNDA PROG ELEM: NSF COLLECTED BY: J HATCHER
SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA
STATION ID: MW-01 COLLECTION START: 12/17/91 1005 STOP: 00/00/00
CASE.NO.: 17582 SAS NO.: D. NO.: CE82 MD NO: CE82

RESULTS	UNITS	PARAMETER
10UJ	UG/L	CYANIDE

REMARKS
HOLDING TIME EXCEEDED-CN

REMARKS

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

01/31/92

METALS DATA REPORT

PROJECT NO. 92-0189	SAMPLE NO. 64309	SAMPLE TYPE: GROUNDA	PROG ELEM: NSF COLLECTED BY: J HATCHER
SOURCE: CBS RECORDS			CITY: CARROLLTON ST: GA
STATION ID: MW-02			COLLECTION START: 12/17/91 1110 STOP: 00/00/00
CASE NUMBER: 17582	SAS NUMBER:		MD NUMBER: CE83

UG/L	ANALYTICAL RESULTS
[redacted]	
31U	ANTIMONY
3U	ARSENIC
[redacted]	
1U	BERYLLIUM
1U	CADMIUM
[redacted]	

UG/L	ANALYTICAL RESULTS
[redacted]	
1300U	POTASSIUM
20UR	SELENIUM
5U	SILVER
2300U	SODIUM
3UR	THALLIUM
NA	TIN
[redacted]	IUM
400	ZINC

REMARKS

REMARKS

FOOTNOTES
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SPECIFIED ANALYSIS DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64309 SAMPLE TYPE: GROUNDA PROG ELEM: NSF COLLECTED BY: J HATCHER
SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA
STATION ID: MW-02 COLLECTION START: 12/17/91 1110 STOP: 00/00/00
CASE.NO.: 17582 SAS NO.: D. NO.: CE83 MD NO: CE83

RESULTS	UNITS	PARAMETER
10UJ	UG/L	CYANIDE

REMARKS
HOLDING TIME EXCEEDED-CN

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA. 01/31/92

METALS DATA REPORT

** PROJECT NO. 92-0189 SAMPLE NO. 64310 SAMPLE TYPE: GROUNDA PROG ELEM: NSF COLLECTED BY: J HATCHER **
** SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA **
** STATION ID: MW-03 COLLECTION START: 12/17/91 1210 STOP: 00/00/00 **
** CASE NUMBER: 17582 SAS NUMBER: MD NUMBER: CE84 **

UG/L	ANALYTICAL RESULTS
[redacted]	
2U	ARSENIC
[redacted]	
2U	BERYLLIUM
1U	CADMIUM
[redacted]	
3UJ	LEAD
[redacted]	

UG/L	ANALYTICAL RESULTS
[redacted]	
0.20U	MERCURY
[redacted]	
20UR	SELENIUM
5U	SILVER
[redacted]	
3UR	THALLIUM
NA	TIN
[redacted]	

REMARKS
HOLDING TIME EXCEEDED-CN

REMARKS

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

01/31/92

SPECIFIED ANALYSIS DATA REPORT

*** ***
** PROJECT NO. 92-0189 SAMPLE NO. 64310 SAMPLE TYPE: GROUNDA PROG ELEM: NSF COLLECTED BY: J HATCHER **
** SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA **
** STATION ID: MW-03 COLLECTION START: 12/17/91 1210 STOP: 00/00/00 **
** CASE.NO.: 17582 SAS NO.: D. NO.: CE84 MD NO: CE84 **
** **
*** ***

RESULTS	UNITS	PARAMETER
10UJ	UG/L	CYANIDE

REMARKS
HOLDING TIME EXCEEDED-CN

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 01/31/92

PROJECT NO. 92-0189 SAMPLE NO. 64307 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SD-01
CASE NUMBER: 17582 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 0915 STOP: 00/00/00
MD NUMBER: CE81

MG/KG	ANALYTICAL RESULTS
[redacted]	
2.1UR	ANTIMONY
1UJ	ARSENIC
[redacted]	
0.27U	BERYLLIUM
0.27U	CADMIUM
[redacted]	
[redacted]	
[redacted]	
[redacted]	
[redacted]	
[redacted]	

MG/KG	ANALYTICAL RESULTS
[redacted]	
0.14U	MERCURY
[redacted]	
[redacted]	
1UR	SELENIUM
0.53UJ	SILVER
90U	SODIUM
0.52U	THALLIUM
NA	TIN
[redacted]	
[redacted]	
30	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

01/31/92

SPECIFIED ANALYSIS DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64307 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: J HATCHER
SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA
STATION ID: SD-01 COLLECTION START: 12/17/91 0915 STOP: 00/00/00
CASE.NO.: 17582 SAS NO.: D. NO.: CE81 MD NO: CE81

RESULTS	UNITS	PARAMETER
6.8UR	MG/KG	CYANIDE

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 01/31/92

PROJECT NO. 92-0189 SAMPLE NO. 64311 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: J HATCHER
SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA
STATION ID: SD-02 COLLECTION START: 12/17/91 1340 STOP: 00/00/00
CASE NUMBER: 17582 SAS NUMBER: MD NUMBER: CE85

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
[redacted]		[redacted]	
2.1UR	ANTIMONY	0.14U	MERCURY
1UJ	ARSENIC	[redacted]	
[redacted]		300U	POTASSIUM
0.26U	BERYLLIUM	1.1UR	SELENIUM
0.26U	CADMIUM	0.52UJ	SILVER
[redacted]		50U	SODIUM
		0.54U	THALLIUM
		NA	TIN
		[redacted]	
		27	PERCENT MOISTURE

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

01/31/92

SPECIFIED ANALYSIS DATA REPORT

*** ***
** PROJECT NO. 92-0189 SAMPLE NO. 64311 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: J HATCHER **
** SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA **
** STATION ID: SD-02 COLLECTION START: 12/17/91 1340 STOP: 00/00/00 **
** CASE.NO.: 17582 SAS NO.: D. NO.: CE85 MD NO: CE85 **
** **
*** ***

RESULTS	UNITS	PARAMETER
6.4UR	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 01/31/92

PROJECT NO. 92-0189 SAMPLE NO. 64312 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: J HATCHER
SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA
STATION ID: SD-03 COLLECTION START: 12/17/91 1405 STOP: 00/00/00
CASE NUMBER: 17582 SAS NUMBER: MD NUMBER: CE86

MG/KG	ANALYTICAL RESULTS
[redacted]	[redacted]
2.3UR	ANTIMONY
1UJ	ARSENIC
[redacted]	[redacted]
[redacted]	[redacted]
0.28U	CADMIUM
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]

MG/KG	ANALYTICAL RESULTS
[redacted]	[redacted]
0.12U	MERCURY
[redacted]	[redacted]
[redacted]	[redacted]
1.10R	SELENIUM
0.57UJ	SILVER
50U	SODIUM
0.57U	THALLIUM
NA	TIN
[redacted]	[redacted]
[redacted]	[redacted]
33	PERCENT MOISTURE

5

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

01/31/92

SPECIFIED ANALYSIS DATA REPORT

*** ***
** PROJECT NO. 92-0189 SAMPLE NO. 64312 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: J HATCHER **
** SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA **
** STATION ID: SD-03 COLLECTION START: 12/17/91 1405 STOP: 00/00/00 **
** CASE.NO.: 17582 SAS NO.: D. NO.: CE86 MD NO: CE86 **
** **
*** ***

RESULTS	UNITS	PARAMETER
7.3UR	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 01/31/92

PROJECT NO. 92-0189 SAMPLE NO. 64304 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-01
CASE NUMBER: 17582 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/16/91 1545 STOP: 00/00/00
MD NUMBER: CE78

MG/KG	ANALYTICAL RESULTS
[redacted]	
1.8UR	ANTIMONY
[redacted]	
[redacted]	
0.23U	BERYLLIUM *
0.23U	CADMIUM
[redacted]	
[redacted]	
[redacted]	
[redacted]	
[redacted]	
[redacted]	
[redacted]	

MG/KG	ANALYTICAL RESULTS
[redacted]	
0.11U	MERCURY
[redacted]	
280U	POTASSIUM
0.87UR	SELENIUM
0.46U	SILVER
30U	SODIUM
0.43U	THALLIUM
NA	TIN
[redacted]	
8U	ZINC
14	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

01/31/92

SPECIFIED ANALYSIS DATA REPORT

*** ***
** PROJECT NO. 92-0189 SAMPLE NO. 64304 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: J HATCHER **
** SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA **
** STATION ID: SS-01 COLLECTION START: 12/16/91 1545 STOP: 00/00/00 **
** CASE.NO.: 17582 SAS NO.: D. NO.: CE78 MD NO: CE78 **
** **
*** ***

RESULTS	UNITS	PARAMETER
5.7UR	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 01/31/92

PROJECT NO. 92-0189 SAMPLE NO. 64306 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-02
CASE NUMBER: 17582 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/16/91 1635 STOP: 00/00/00
MD NUMBER: CE80

MG/KG	ANALYTICAL RESULTS
[redacted]	[redacted]
1.8UR	ANTIMONY
2UJ	ARSENIC
[redacted]	[redacted]
[redacted]	[redacted]
0.23U	CADMIUM
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
426	MAGNESIUM

MG/KG	ANALYTICAL RESULTS
[redacted]	[redacted]
0.11U	MERCURY
[redacted]	[redacted]
360U	POTASSIUM
4.7UR	SELENIUM
0.46UJ	SILVER
40U	SODIUM
0.47U	THALLIUM
NA	TIN
[redacted]	[redacted]
[redacted]	[redacted]
16	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

01/31/92

SPECIFIED ANALYSIS DATA REPORT

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**   PROJECT NO. 92-0189   SAMPLE NO. 64306   SAMPLE TYPE: SOIL        PROG ELEM: NSF   COLLECTED BY: J HATCHER                **
**   SOURCE: CBS RECORDS                                               CITY: CARROLLTON             ST: GA                      **
**   STATION ID: SS-02                                                 COLLECTION START: 12/16/91  1635  STOP: 00/00/00         **
**   CASE.NO.: 17582            SAS NO.:                               D. NO.: CE80                 MD NO: CE80                 **
**                                                                                                                               **
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
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RESULTS	UNITS	PARAMETER
5.9UR	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE   *NA-NOT ANALYZED   *NAI-INTERFERENCES   *J-ESTIMATED VALUE   *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 01/31/92

PROJECT NO. 92-0189 SAMPLE NO. 64313 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-03
CASE NUMBER: 17582 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1435 STOP: 00/00/00
MD NUMBER: CE87

MG/KG	ANALYTICAL RESULTS
[redacted]	
2.1UR	ANTIMONY
1UJ	ARSENIC
[redacted]	
0.27U	BERYLLIUM
0.27U	CADMIUM
[redacted]	
[redacted]	
[redacted]	
[redacted]	
[redacted]	
[redacted]	
16[redacted]	

MG/KG	ANALYTICAL RESULTS
[redacted]	
0.11U	MERCURY
[redacted]	
[redacted]	
5.3UR	SELENIUM
0.53UJ	SILVER
70U	SODIUM
0.53U	THALLIUM
NA	TIN
[redacted]	
[redacted]	
26	PERCENT MOISTURE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

01/31/92

SPECIFIED ANALYSIS DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64313 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: J HATCHER
SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA
STATION ID: SS-03 COLLECTION START: 12/17/91 1435 STOP: 00/00/00
CASE NO.: 17582 SAS NO.: D. NO.: CE87 MD NO: CE87

RESULTS	UNITS	PARAMETER
6.7UR	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 01/31/92

PROJECT NO. 92-0189 SAMPLE NO. 64315 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-04
CASE NUMBER: 17582 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1525 STOP: 00/00/00
MD NUMBER: CE89

MG/KG	ANALYTICAL RESULTS
[redacted]	
1.9UR	ANTIMONY
1UJ	ARSENIC
[redacted]	
0.24U	BERYLLIUM
0.24U	CADMIUM
[redacted]	
6[redacted]	
1[redacted]	
2[redacted]	
3[redacted]	
1[redacted]	
5[redacted]	

MG/KG	ANALYTICAL RESULTS
[redacted]	
0.12U	MERCURY
1[redacted]	
[redacted]	
5UR	SELENIUM
0.48UJ	SILVER
50U	SODIUM
0.50U	THALLIUM
NA	TIN
[redacted]	
[redacted]	
21	PERCENT MOISTURE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

01/31/92

SPECIFIED ANALYSIS DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64315 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: J HATCHER
SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA
STATION ID: SS-04 COLLECTION START: 12/17/91 1525 STOP: 00/00/00
CASE NO.: 17582 SAS NO.: D. NO.: CE89 MD NO: CE89

RESULTS	UNITS	PARAMETER
5.9UR	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

01/31/92

METALS DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64317 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-05
CASE NUMBER: 17582 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/18/91 0900 STOP: 00/00/00
MD NUMBER: CE90

MG/KG	ANALYTICAL RESULTS
[redacted]	
2UR	ANTIMONY
2UJ	ARSENIC
[redacted]	
0.25U	BERYLLIUM
0.25U	CADMIUM
[redacted]	
[redacted]	
[redacted]	
[redacted]	
[redacted]	
14[redacted]	LEAD
1[redacted]	[redacted]

MG/KG	ANALYTICAL RESULTS
[redacted]GE	
0.11U	MERCURY
[redacted]L	
[redacted]	
4.8UR	SELENIUM
0.51UJ	SILVER
60U	SODIUM
0.48U	THALLIUM
NA	TIN
[redacted]	
[redacted]C	
22	PERCENT MOISTURE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

01/31/92

SPECIFIED ANALYSIS DATA REPORT

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**   PROJECT NO. 92-0189   SAMPLE NO. 64317  SAMPLE TYPE: SOIL       PROG ELEM: NSF    COLLECTED BY: J HATCHER             **
**   SOURCE: CBS RECORDS                                             CITY: CARROLLTON              ST: GA                    **
**   STATION ID: SS-05                                               COLLECTION START: 12/18/91  0900   STOP: 00/00/00       **
**   CASE.NO.: 17582          SAS NO.:                               D. NO.: CE90                MD NO: CE90                 **
**                                                                                                                           **
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
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RESULTS	UNITS	PARAMETER
6.2UR	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE   *NA-NOT ANALYZED   *NAI-INTERFERENCES   *J-ESTIMATED VALUE   *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 01/31/92

PROJECT NO. 92-0189 SAMPLE NO. 64316 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SS-06
CASE NUMBER: 17582 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/17/91 1600 STOP: 00/00/00
MD NUMBER: CE92

MG/KG	ANALYTICAL RESULTS
[redacted]	
2UR	ANTIMONY
1UJ	ARSENIC
[redacted]	
0.26U	BERYLLIUM
0.26U	CADMIUM
[redacted]	
[redacted]	
[redacted]	
[redacted]	
[redacted]	
[redacted]	
[redacted]	
[redacted]	

MG/KG	ANALYTICAL RESULTS
[redacted]	
0.13U	MERCURY
[redacted]	
[redacted]	
5.2UR	SELENIUM
0.51UJ	SILVER
50U	SODIUM
0.52U	THALLIUM
NA	TIN
[redacted]	
[redacted]	
24	PERCENT MOISTURE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

01/31/92

SPECIFIED ANALYSIS DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64316 SAMPLE TYPE: SOIL	PROG ELEM: NSF COLLECTED BY: J HATCHER
SOURCE: CBS RECORDS	CITY: CARROLLTON ST: GA
STATION ID: SS-06	COLLECTION START: 12/17/91 1600 STOP: 00/00/00
CASE.NO.: 17582 SAS NO.:	D. NO.: CE92 MD NO: CE92

RESULTS	UNITS	PARAMETER
6.5UR	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

01/31/92

METALS DATA REPORT

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**   PROJECT NO. 92-0189   SAMPLE NO. 64319   SAMPLE TYPE: SOIL        PROG ELEM: NSF    COLLECTED BY: J HATCHER      **
**   SOURCE: CBS RECORDS                                               CITY: CARROLLTON            ST: GA             **
**   STATION ID: SS-07                                                 COLLECTION START: 12/18/91  0935   STOP: 00/00/00   **
**   CASE NUMBER: 17582           SAS NUMBER:                           MD NUMBER: CE93                               **
**                                                                                                                    **
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
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MG/KG	ANALYTICAL RESULTS
[redacted]	
2UR	ANTIMONY
0.51UJ	ARSENIC
[redacted]	
0.25U	BERYLLIUM
0.25U	CADMIUM
[redacted]	

MG/KG	ANALYTICAL RESULTS
[redacted]	
0.10U	MERCURY
[redacted]	
1UR	SELENIUM
0.50UJ	SILVER
50U	SODIUM
0.51U	THALLIUM
NA	TIN
[redacted]	
23	PERCENT MOISTURE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

01/31/92

SPECIFIED ANALYSIS DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64319 SAMPLE TYPE: SOIL	PROG ELEM: NSF COLLECTED BY: J HATCHER
SOURCE: CBS RECORDS	CITY: CARROLLTON ST: GA
STATION ID: SS-07	COLLECTION START: 12/18/91 0935 STOP: 00/00/00
CASE.NO.: 17582 SAS NO.:	D. NO.: CE93 MD NO: CE93

RESULTS	UNITS	PARAMETER
6.5UR	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

01/31/92

METALS DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64305 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SB-01
CASE NUMBER: 17582 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/16/91 1600 STOP: 00/00/00
MD NUMBER: CE79

MG/KG	ANALYTICAL RESULTS
[redacted]	[redacted]
1.8UR	ANTIMONY
0.49UJ	ARSENIC
[redacted]	[redacted]
0.23U	BERYLLIUM
0.23U	CADMIUM
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]

MG/KG	ANALYTICAL RESULTS
[redacted]	[redacted]
0.11U	MERCURY
[redacted]	[redacted]
130U	POTASSIUM
4.9UR	SELENIUM
0.45UJ	SILVER
40U	SODIUM
0.49U	THALLIUM
NA	TIN
[redacted]	[redacted]
9U	ZINC
19	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

01/31/92

SPECIFIED ANALYSIS DATA REPORT

```
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
**   PROJECT NO. 92-0189   SAMPLE NO. 64305   SAMPLE TYPE: SOIL        PROG ELEM: NSF   COLLECTED BY: J HATCHER                **
**   SOURCE: CBS RECORDS                                               CITY: CARROLLTON              ST: GA                     **
**   STATION ID: SB-01                                                 COLLECTION START: 12/16/91  1600   STOP: 00/00/00        **
**   CASE.NO.: 17582          SAS NO.:                                 D. NO.: CE79                 MD NO: CE79                 **
**                                                                                                                              **
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
```

RESULTS	UNITS	PARAMETER
5.7UR	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE   *NA-NOT ANALYZED   *NAI-INTERFERENCES   *J-ESTIMATED VALUE   *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

01/31/92

METALS DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64314 SAMPLE TYPE: SOIL	PROG ELEM: NSF COLLECTED BY: J HATCHER
SOURCE: CBS RECORDS	CITY: CARROLLTON ST: GA
STATION ID: SB-03	COLLECTION START: 12/17/91 1500 STOP: 00/00/00
CASE NUMBER: 17582 SAS NUMBER:	MD NUMBER: CE88

MG/KG	ANALYTICAL RESULTS
[redacted]	
2.1UR	ANTIMONY
0.52UJ	ARSENIC
[redacted]	
0.26U	BERYLLIUM
0.26U	CADMIUM
[redacted]	

MG/KG	ANALYTICAL RESULTS
[redacted]	
0.12U	MERCURY
[redacted]	
5.20R	SELENIUM
0.52UJ	SILVER
60U	SODIUM
0.52U	THALLIUM
NA	TIN
[redacted]	
26	PERCENT MOISTURE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

01/31/92

SPECIFIED ANALYSIS DATA REPORT

*** ***
** PROJECT NO. 92-0189 SAMPLE NO. 64314 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: J HATCHER **
** SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA **
** STATION ID: SB-03 COLLECTION START: 12/17/91 1500 STOP: 00/00/00 **
** CASE.NO.: 17582 SAS NO.: D. NO.: CE88 MD NO: CE88 **
** **
*** ***

RESULTS	UNITS	PARAMETER
6.6UR	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

01/31/92

METALS DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64318 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SB-05
CASE NUMBER: 17582 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/18/91 0915 STOP: 00/00/00
MD NUMBER: CE91

MG/KG		ANALYTICAL RESULTS
[redacted]		
2.3UR	ANTIMONY	
0.57UJ	ARSENIC	
[redacted]		
0.28U	BERYLLIUM	
0.28U	CADMIUM	
[redacted]		
[redacted]		
[redacted]		
[redacted]		
[redacted]		
[redacted]		
3100	[redacted]IUM	

MG/KG		ANALYTICAL RESULTS
[redacted]		
0.12U	MERCURY	
[redacted]		
5.7UR	SELENIUM	
0.57UJ	SILVER	
70U	SODIUM	
0.57U	THALLIUM	
NA	TIN	
[redacted]UM		
[redacted]NC		
32	PERCENT MOISTURE	

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

01/31/92

SPECIFIED ANALYSIS DATA REPORT

PROJECT NO. 92-0189 SAMPLE NO. 64318 SAMPLE TYPE: SOIL	PROG ELEM: NSF COLLECTED BY: J HATCHER
SOURCE: CBS RECORDS	CITY: CARROLLTON ST: GA
STATION ID: SB-05	COLLECTION START: 12/18/91 0915 STOP: 00/00/00
CASE.NO.: 17582 SAS NO.:	D. NO.: CE91 MD NO: CE91

RESULTS	UNITS	PARAMETER
7.3UR	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 01/31/92

PROJECT NO. 92-0189 SAMPLE NO. 64320 SAMPLE TYPE: SOIL
SOURCE: CBS RECORDS
STATION ID: SB-07
CASE NUMBER: 17582 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: J HATCHER
CITY: CARROLLTON ST: GA
COLLECTION START: 12/18/91 0950 STOP: 00/00/00
MD NUMBER: CE94

MG/KG	ANALYTICAL RESULTS
[redacted]	[redacted]
2.1UR	ANTIMONY
2UJ	ARSENIC
[redacted]	[redacted]
0.26U	BERYLLIUM
0.26U	CADMIUM
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]

MG/KG	ANALYTICAL RESULTS
[redacted]	[redacted]
0.12U	MERCURY
[redacted]	[redacted]
[redacted]	[redacted]
5.1UR	SELENIUM
0.53UJ	SILVER
50U	SODIUM
0.51U	THALLIUM
NA	TIN
[redacted]	[redacted]
[redacted]	[redacted]
27	PERCENT MOISTURE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

01/31/92

SPECIFIED ANALYSIS DATA REPORT

*** ***
** PROJECT NO. 92-0189 SAMPLE NO. 64320 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: J HATCHER **
** SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA **
** STATION ID: SB-07 COLLECTION START: 12/18/91 0950 STOP: 00/00/00 **
** CASE.NO.: 17582 SAS NO.: D. NO.: CE94 MD NO: CE94 **
** **
*** ***

RESULTS	UNITS	PARAMETER
6.8UR	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*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 QUANTITATION LIMIT.

APPENDIX C

PHOTODOCUMENTATION LOG

Photo 1 - Shipping area of CBS Records

Photo 2 - Typical Monitoring well construction in the surface impoundment

Photo 3 - View of surface impoundment, cooling towers, and drum shed

Photo 4 - View of storage tanks and power house

Photo 5 - View of power house and corner of manufacturing building with adjacent parking lot

[redacted] STATE GA [redacted]

PROJECT # 92-0189 SHIPWEEK 12/16/91

SOILVOA BOOKED	17	DATA RECEIVED	02/25/92	FOR	14	SAMPLES
H2OVOA BOOKED	6	DATA RECEIVED	02/25/92	FOR	4	SAMPLES
SOILEXT BOOKED	17	DATA RECEIVED	02/25/92	FOR	14	SAMPLES
H2OEXT BOOKED	6	DATA RECEIVED	02/25/92	FOR	4	SAMPLES
SOILPEST BOOKED	17	DATA RECEIVED	02/25/92	FOR	14	SAMPLES
H2OPEST BOOKED	6	DATA RECEIVED	02/25/92	FOR	4	SAMPLES
SOILMET BOOKED	17	DATA RECEIVED	02/06/92	FOR	14	SAMPLES
H2OMET BOOKED	6	DATA RECEIVED	02/06/92	FOR	4	SAMPLES
SOILCN BOOKED	17	DATA RECEIVED	02/06/92	FOR	14	SAMPLES
H2OCN BOOKED	6	DATA RECEIVED	02/06/92	FOR	4	SAMPLES
SOILOTH1 BOOKED	0	DATA RECEIVED	/ /	FOR		SAMPLES
SOILOTH2 BOOKED	0	DATA RECEIVED	/ /	FOR		SAMPLES
H2OOTH1 BOOKED	0	DATA RECEIVED	/ /	FOR		SAMPLES
H2OOTH2 BOOKED	0	DATA RECEIVED	/ /	FOR		SAMPLES
OTHER1 BOOKED	0	DATA RECEIVED	/ /	FOR		SAMPLES
OTHER2 BOOKED	0	DATA RECEIVED	/ /	FOR		SAMPLES

LAB(CLP/ESD) CLP

REMARKS

SITE CBS RECORD [illegible]I) STATE [illegible] MANAGER JOE [illegible]
PROJECT # 92-0189 SHIPWEEK 1[illegible]

RECEIVED
FEB 0[illegible] 1992
EPA REGION IV
ATLANTA, GA

SOILVOA BOOKED	17	DATA RECEIVED	/ /	FOR		SAMPLES
H2OVOA BOOKED	6	DATA RECEIVED	/ /	FOR		SAMPLES
SOILEXT BOOKED	17	DATA RECEIVED	/ /	FOR		SAMPLES
H2OEXT BOOKED	6	DATA RECEIVED	/ /	FOR		SAMPLES
SOILPEST BOOKED	17	DATA RECEIVED	/ /	FOR		SAMPLES
H2OPEST BOOKED	6	DATA RECEIVED	/ /	FOR		SAMPLES
SOILMET BOOKED	17	DATA RECEIVED	02/06/92	FOR	14	SAMPLES
H2OMET BOOKED	6	DATA RECEIVED	02/06/92	FOR	4	SAMPLES
SOILCN BOOKED	17	DATA RECEIVED	02/06/92	FOR	14	SAMPLES
H2OCN BOOKED	6	DATA RECEIVED	02/06/92	FOR	4	SAMPLES
SOILOTH1 BOOKED	0	DATA RECEIVED	/ /	FOR		SAMPLES
SOILOTH2 BOOKED	0	DATA RECEIVED	/ /	FOR		SAMPLES
H2OOTH1 BOOKED	0	DATA RECEIVED	/ /	FOR		SAMPLES
H2OOTH2 BOOKED	0	DATA RECEIVED	/ /	FOR		SAMPLES
OTHER1 BOOKED	0	DATA RECEIVED	/ /	FOR		SAMPLES
OTHER2 BOOKED	0	DATA RECEIVED	/ /	FOR		SAMPLES

LAB(CLP/ESD) CLP

REMARKS

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV
Environmental Services Division
College Station Road, Athens, Ga. 30605

WPB/SAS
FEB 06 1992
REGION IV
ATLANTA GA

*****MEMORANDUM******

DATE: 02/01/92

SUBJECT: Results of Metals Analysis;
92-0189 CBS RECORDS
CARROLLTON GA
CASE NO: 17582

FROM: Robert W. Knight
Chief, Laboratory Evaluation/Quality Assurance Section

TO: JOE SLYKERMAN

Attached are the results of analysis of samples collected as part of the subject project.

As a result of the Quality Assurance Review, certain data qualifiers may have been placed on the data. Attached is a DATA QUALIFIER REPORT which explains the reasons that these qualifiers were required.

If you have any questions please contact me.

ATTACHMENT

INORGANIC DATA QUALIFIERS REPORT

Case Number: 17582
Project Number: 92-0189
Site: CBS Records, Carrollton, GA

Element	Flag	Samples Affected	Reason
A. Water			
Cd, Cu, Mn, Ag, V	U	All positives >IDL but <CRDL	Baseline instability
Al, Ba, Ca, Fe, Mg, K, Na, Zn	U	All positives >IDL but <10X contaminant level	Positives in Blanks
Ag	JN	All positives in with Fe concentrations in solution > 56,000 ug/L	Suspected positive interference as noted in the contractor ICS
Pb	J	All	Matrix spike recovery = 31.2% Matrix duplicate RPD = 152.1%
Se	J R	All positives All negatives	Matrix spike recovery = 0%
Tl	J R	All positives All negatives	Matrix spike recovery = 0%
Al	J	All	Matrix duplicate RPD = 23.9%
CN	J	All positives	Matrix spike recovery = 948.3%
CN	J	All	Technical holding time exceeded
Sb	J	MDCE84	% RSD > 20% for ICP multiple exposures
Be	J	MDCE84	% RSD > 20% for ICP multiple exposures
Cr	J	MDCE82	% RSD > 20% for ICP multiple exposures
B. Soil			
Cd, Cu, Mn, Ag, V	U	All positives >IDL but <CRDL	Baseline instability
Al, Ca, Fe, Mg, K, Ma, Zn	U	All positives >IDL but <10X contaminant level	Positives in Blanks
Ag	J	All with Fe concentrations in solution > 95,000 ug/L	Suspected over correction as noted in the contractor ICS
Sb	J R	All positives All negatives	Matrix spike recovery = 24.9%
As	J	All	Matrix spike recovery = 49.1%
Se	J R	All positives All negatives	Matrix spike recovery = 0%
CN	J R	All positives All negatives	Matrix spike recovery = 0%

INORGANIC DATA QUALIFIERS REPORT (continued)

Case Number: 17582
Project Number: 92-0189
Site: CBS Records, Carrollton, GA

Element	Flag	Samples Affected	Reason
Be	J	MDCE80 and 86	% RSD > 20% for ICP multiple exposures
Ni	J	MDCE78	% RSD > 20% for ICP multiple exposures

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

01/31/92

METALS DATA REPORT

*** ***

** PROJECT NO. 92-0189 SAMPLE NO. 64303 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: J HATCHER **
** SOURCE: CBS RECORDS CITY: CARROLLTON ST: GA **
** STATION ID: PB-01 COLLECTION START: 12/16/91 1030 STOP: 00/00/00 **
** CASE NUMBER: 17582 SAS NUMBER: MD NUMBER: CE77 **
** **

*** ***

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
66UJ	ALUMINUM	1U	MANGANESE
31U	ANTIMONY	0.20U	MERCURY
2U	ARSENIC	4U	NICKEL
1U	BARIUM	76U	POTASSIUM
1U	BERYLLIUM	4UR	SELENIUM
1U	CADMIUM	5U	SILVER
92U	CALCIUM	34U	SODIUM
2U	CHROMIUM	3UR	THALLIUM
3U	COBALT	NA	TIN
3U	COPPER	3U	VANADIUM
35U	IRON	11U	ZINC
2UJ	LEAD		
68U	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

FIELD STUDY PLAN
SITE INSPECTION

CBS Records
Carrollton, Carroll County, Georgia

EPA ID № GAD980515241

Prepared Under
CONTRACT № 68-W9-0055

For the
US ENVIRONMENTAL PROTECTION AGENCY

November 14, 1991

Prepared by
Jancie S. Hatcher

B&V WASTE SCIENCE AND TECHNOLOGY CORP

FIELD STUDY PLAN
SITE INSPECTION

CBS Records
Carrollton, Carroll County, Georgia

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STUDY PLAN
SCREENING SITE INSPECTION
CBS Records

Carrollton, Carroll County, Georgia

EPA ID № GAD980515241

1.0 INTRODUCTION

Black & Veatch Waste Science & Technology has been tasked by the U.S. Environmental Protection Agency (EPA) to conduct a Site Inspection (SI) at the CBS Records facility in Carrollton, Carroll County, Georgia. The inspection will be performed under the authority of the Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986 (SARA).

1.1 Objectives

The objectives of this site inspection will be to determine the nature of contaminants present at the site and to determine if a release of these substances has occurred or may occur. Further, this inspection will seek to determine the possible pathways by which contamination could migrate from the site and the populations and environments it would potentially affect. Through these objectives, a recommendation will be made regarding future activities at the site.

Specific elements are:

- Obtain information to prepare a site-specific preliminary HRS
- Provide EPA the necessary information to make decisions on any other actions warranted at the site.

1.2 Scope of Work

The scope of this investigation will include the following activities:

- Obtain and review background materials relevant to HRS scoring of site

- Obtain and review background materials relevant to HRS scoring of site
- Obtain aerial photographs and maps of site, if possible
- Obtain information on local water systems
- Evaluate target populations associated with the groundwater, surface water, air and onsite exposure pathways
- Conduct a survey of private wells
- Determine location and distance to nearest potable well
- Develop a site sketch
- Collect environmental samples

1.3 Schedule

Week of December 16, 1991.

1.4 Personnel

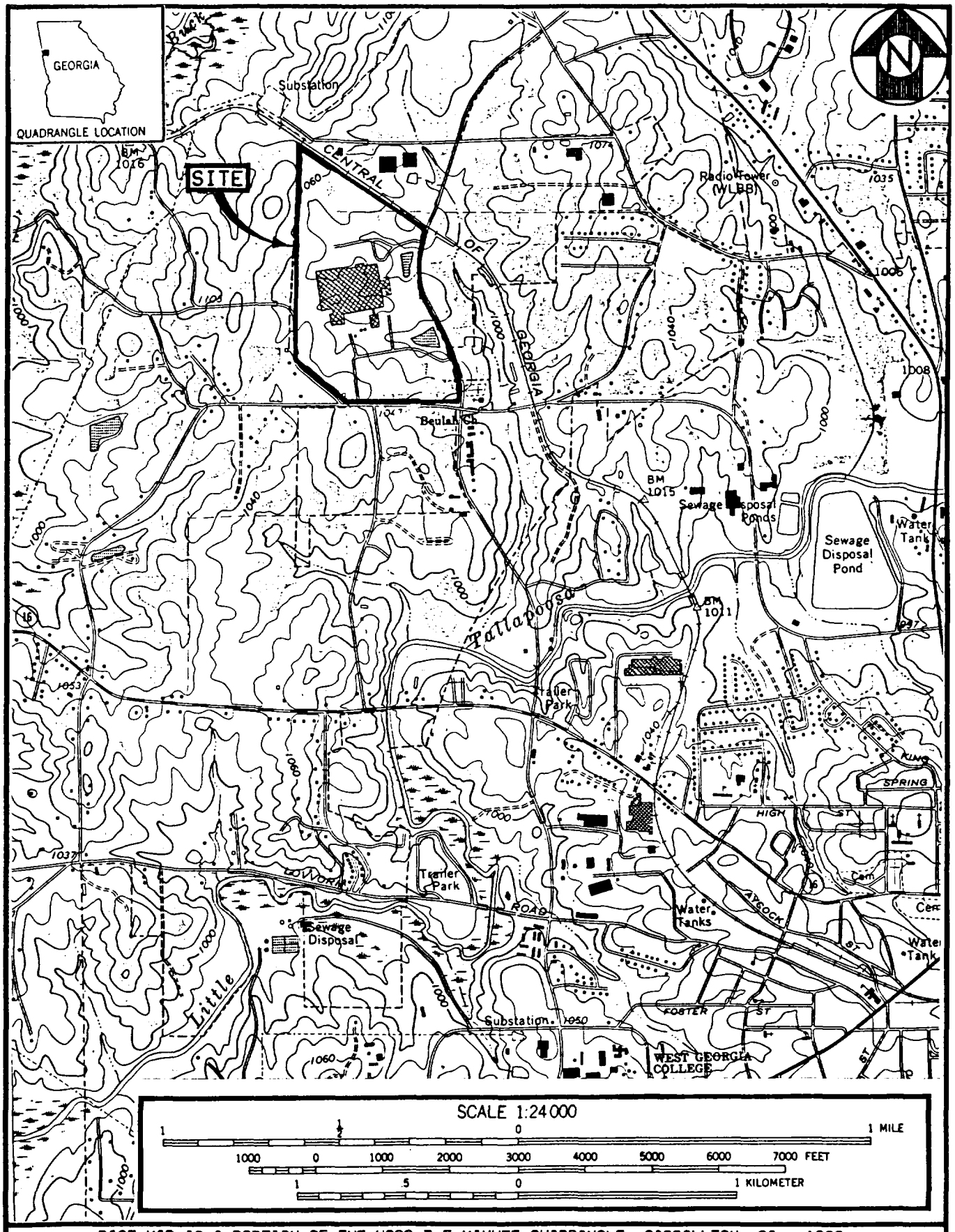
Site Manager: Jancie Hatcher
Site Safety Coordinator, Sample Custodian, Sampler as assigned.

1.5 Permits and Authorization Requirements

EPA is responsible for obtaining access to the site and permission to take photographs of site. In addition, EPA is responsible for all permits which may be required to accomplish this task.

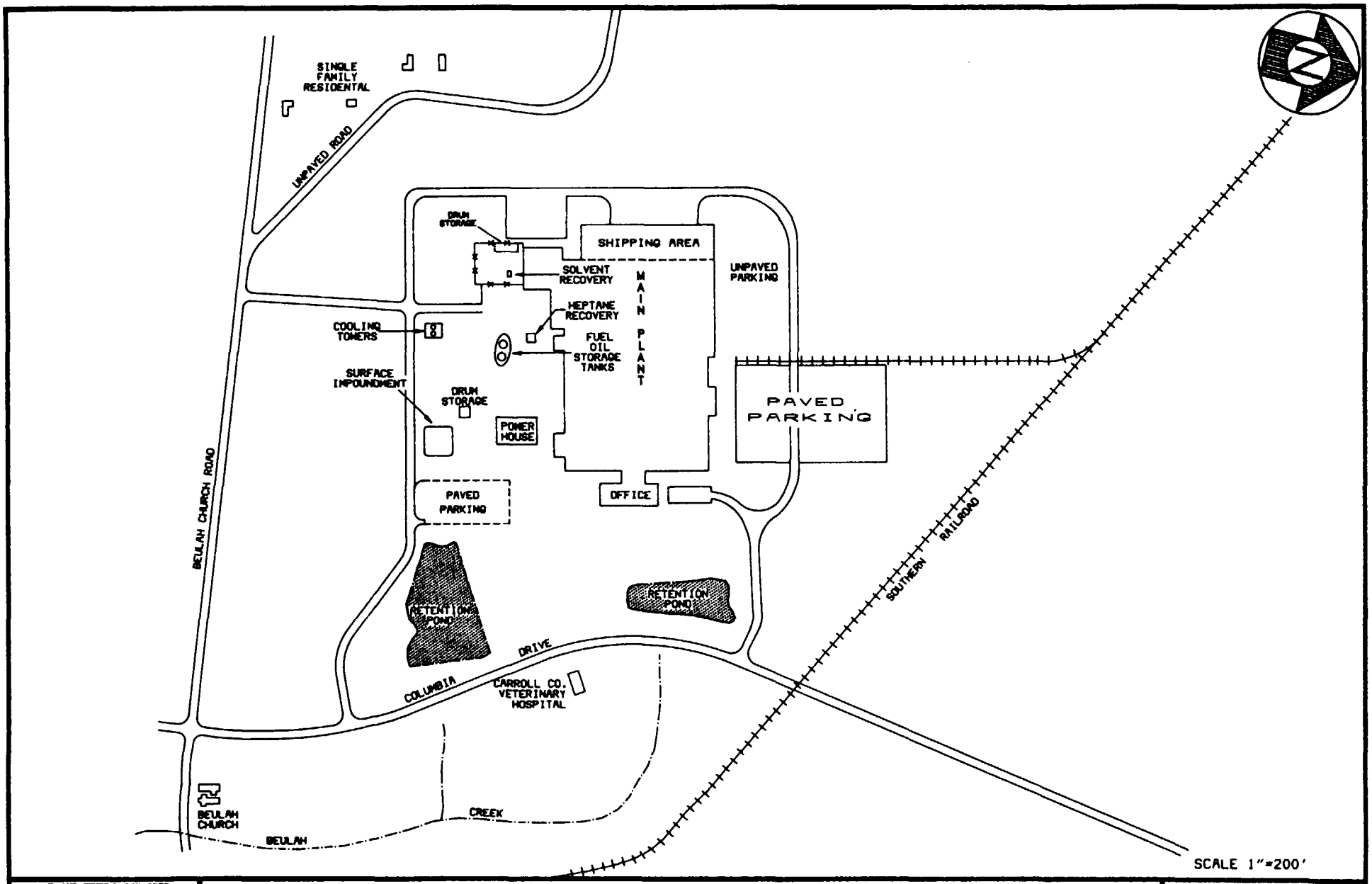
1.6 Site History and Description

CBS Records is located at 5152 Columbia Drive, approximately 1.5 miles northwest of Carrollton, in Carroll County, Georgia. The property encompasses 145 acres, and contains a large building used for warehousing and manufacturing, a powerhouse, and a solvent recovery system with associated tanks. Other structures located onsite include two cooling towers, fuel storage tanks, a heptane recovery system, and several small storage sheds. Two retention ponds are located in the eastern and southeastern portions of the property, and a surface impoundment was formerly located near the powerhouse. The property is fenced, and is currently owned by Sony Entertainment of New York City (Refs. 1,2,3). The site location and site layout maps are shown as Figures 1 and 2.



BASE MAP IS A PORTION OF THE USGS 7.5 MINUTE QUADRANGLE, CARROLLTON, GA., 1982.

	SITE LOCATION MAP CBS RECORDS CARROLLTON, CARROLL COUNTY, GEORGIA	FIGURE 1



SITE SERVICE AND TECHNOLOGY CORP.

SITE LAYOUT MAP
CBS RECORDS
CARROLLTON, CARROLL COUNTY, GEORGIA

FIGURE 2

The CBS Records plant was built in 1978, and production began in 1981. The company manufactures and duplicates phonograph records and cassette tapes. Wastes associated with these products include chromium hydroxide, nickel hydroxide, spent freon, spent heptane, perchloroethylene distillation bottoms, and acetone. Other wastes are cyanide (which is treated onsite), a toluene/tetrahydrofuran mixture, methylene chloride, chromium dioxide, and silver (Ref. 2). In April 1981, CBS Records filed a RCRA Part A Application as a TSD facility and as a generator (Ref. 4). Beginning in 1985, the Georgia Department of Environmental Protection (GDEP) has observed numerous environmental violations at CBS Records. A Notice of Violation was sent by the State on January 18, 1985, concerning the need for additional down-gradient monitoring wells, and a formal groundwater assessment of the site (Ref. 5). After five months elapsed, the GDEP perfomed an onsite inspection, which found that some violations of state law had not yet been corrected (Ref. 6). Administrative Order No. EPD-HW-222 was issued to CBS Records on June 28, 1985, and required action within 15 days (Ref. 7). CBS Records later appealed the Administrative Order, and in August 1985 provided information to the State of Georgia to enable resolution of the order (Refs. 8,9). Later in August the site was inspected by GPED, at which time it was determined that CBS Records planned to close the surface impoundment and divert wastewater to a 400,000 gallon above-ground tank (Ref. 10). Another inspection by GPED in January 1986 found that closure of the impoundment appeared adequate, and CBS Records informally requested that their RCRA status be changed to that of generator only (Ref. 11). In November 1986, CBS Records formally withdrew their RCRA permit and requested a status change to generator only. This action was approved by Georgia EPD in January 1987 (Refs. 12, 13).

Another concern of the State of Georgia in 1985 was a report of tetrahydrofuran (THF) and toluene spills on soil. Several areas were sampled, and results showed the presence of THF and toluene at low levels (Ref. 14). Later, remedial efforts by CBS Records in the spill areas were judged complete by the State (Ref. 11). Other problems noted by the State include an unexplained fish kill in the retention ponds, a spill of nickel-contaminated wastewater during removal of an underground storage tank, and numerous requests for extension of the 90-day hazardous waste storage limit (Refs. 15, 16, 17, 18).

1.7 Regional Hydrogeology

CBS Records is located approximately 0.75 mile north of the southwestern-flowing Little Tallapoosa River, within the Piedmont Physiographic Province and hydrogeologic setting (Refs. 19, 20). The topography of the area consists of low, well-rounded hills, with elevations ranging from 1010 to 1075 feet above mean sea level (amsl) at the facility (Ref. 1). The major soil types in the area are often sandy or gravelly loam (Ref. 21).

The land surface in the Piedmont is underlain by a clay-rich, residual material called saprolite, derived from the in-place chemical weathering of the bedrock. This soil averages about 30 to 60 feet in thickness. In many valleys the saprolite has been removed through erosion, and the bedrock is exposed or only thinly covered by fluvial deposits (Ref. 20). The underlying bedrock is composed mainly of metasedimentary and metavolcanic rocks, regionally metamorphosed and deformed into northeast trending folds (Ref. 22). Specifically, the rocks of the Dog River Formation underlie the facility. The Dog River Formation is composed of undifferentiated muscovite, biotite, quartz, feldspar gneiss, garnet, mica schist, muscovite schist, and amphibolite. This formation is part of the Sandy Springs Group, and is of Proterozoic to Lower Paleozoic age (Ref. 22). The rocks are fractured and displaced by numerous faults and zones of shearing, some of which are many miles in length (Ref. 23).

These fractured and faulted rocks, combined with the overlying residual soil material, make up the unconfined residual soil/crystalline rock aquifer syster (Ref. 24). The fractured crystalline rocks and overlying saprolite and alluvium are hydraulically interconnected. Saturation in the crystalline rock aquifer rarely exceeds 300 feet below land surface (bls) (Ref. 24, 25). The approximate range of hydraulic conductivity for the residual soil underlying CBS Records is 1.0×10^{-5} to 1.0×10^{-3} cm/sec (Ref. 26).

Groundwater in the Piedmont Province occupies joints, fractures, and other secondary openings in bedrock and pore spaces in the overlying residuum. Water recharges the underground openings by seepage of precipitation through this material or by flowing directly into openings in exposed rock (Ref. 23). The water table in the Piedmont approximately conforms with the surface topography (Ref. 25). The depth to

groundwater in the area surrounding CBS Records is approximately 25 to 30 feet, based on analysis of a topographic map of the area. Local groundwater flow in the residuum, if present, is to the east (Ref. 2).

The quality of groundwater available varies greatly with the location, rock type, topographic setting, and geologic structure. Localized increases in permeability may enhance well yields. This occurs mainly in association with stratigraphic features, such as contact zones within multilayered rock units, fault zones, stress relief fractures, shear zones, and contact zones between rock units of contrasting character (Ref. 23). Well yields in the rock types present at CBS Records range from 20 to 150 gallons per minute (gpm), averaging 47 gpm (Ref. 23, Plate 1).

2.0 SAMPLING INVESTIGATION

The sampling investigation will include the collection of surface soil, subsurface soil, sediment, and groundwater samples. Samples will be analyzed for extractable and purgeable organic compounds, PCBs, cyanide, and metals. Analyses will be performed under the contract Laboratory Program (CLP). Sample codes, locations and descriptions are found in Table 1, and shown in Figure 3.

2.1 Surface Soil and Subsurface Soil Sampling

Six surface soil samples will be collected from the following areas at CBS Records: the shipping area, the drum storage area, the heptane recovery, near the fuel storage tanks, and in and near the surface impoundment. Subsurface soil samples will be collected from the same locations as surface soils. Background surface soil and subsurface soil samples will be taken just northwest of the facility. Samples are placed to assess the presence or absence of contaminants in soil.

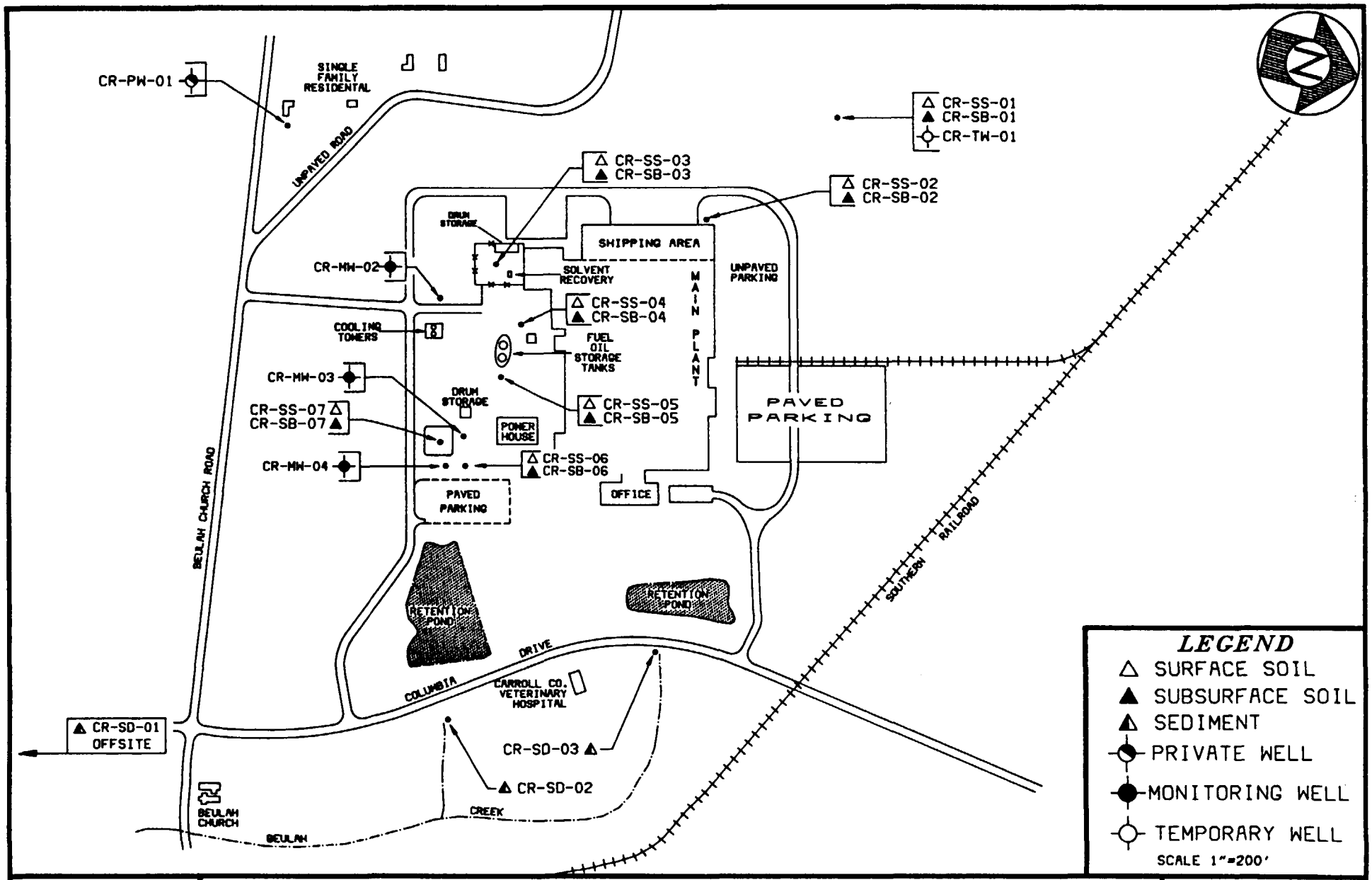
2.2 Sediment Sampling

Two sediment samples will be collected from Beulah Creek, just east of the outflow of retention ponds, which receive all runoff from the CBS Records property via a series of diversion ditches. A background sediment sample will be collected upstream

TABLE 1 SAMPLE LOCATIONS AND RATIONALE
CBS Records
Carrollton, Carroll County, Georgia

Sample Code	Sample Type	Location	Rationale
CR-SS-01	Surface Soil	Just northwest of facility	Background
CR-SS-02	Surface Soil	near Shipping area	To establish presence or absence of contaminants
CR-SS-03	Surface Soil	fenced Drum Storage area	To establish presence or absence of contaminants
CR-SS-04	Surface Soil	near Heptane Recovery unit	To establish presence or absence of contaminants
CR-SS-05	Surface Soil	near Fuel Oil Storage Tanks	To establish presence or absence of contaminants
CR-SS-06	Surface Soil	Surface Impoundment	To establish presence or absence of contaminants
CR-SS-07	Surface Soil	Surface Impoundment	To establish presence or absence of contaminants
CR-SB-01	Subsurface Soil	Just northwest of facility	Background
LS-SB-02	Subsurface Soil	near Shipping area	To establish presence or absence of contaminants
CR-SB-03	Subsurface Soil	in fenced Drum Storage area	To establish presence or absence of contaminants
CR-SB-04	Subsurface Soil	near Heptane Recovery unit	To establish presence or absence of contaminants
CR-SB-05	Subsurface Soil	near Fuel Oil Storage Tanks	To establish presence or absence of contaminants
CR-SB-06	Subsurface Soil	Surface Impoundment	To establish presence or absence of contaminants
CR-SB-07	Subsurface Soil	Surface Impoundment	To establish presence or absence of contaminants
LS-SD-01	Sediment	Little Tallapoosa River near Highway 1	Background
LS-SD-02	Sediment	East of North Retention Pond	To establish presence or absence of contaminants
LS-SD-03	Sediment	East of South Retention Pond	To establish presence or absence of contaminants
CR-TW-01	Groundwater	Northwest of facility	To establish presence or absence of contaminants
CR-MW-02	Groundwater	West of the Cooling Towers	Background
CR-MW-03	Groundwater	North of the Surface Impoundment	To establish presence or absence of contaminants
CR-MW-04	Groundwater	East of the Surface Impoundment	To establish presence or absence of contaminants
CR-PW-01	Groundwater	Nearest potable well offsite	To establish presence or absence of contaminants

CR	CBS Records
SS	Surface Soil
SB	Subsurface Soil
SD	Sediment
SW	Surface Water
TW	Temporary Well
PW	Private Well



SAMPLE LOCATION MAP
CBS RECORDS
CARROLLTON, CARROLL COUNTY, GEORGIA

FIGURE 3

of the facility in the Little Tallapoosa River near State Highway 1. Samples are placed to assess whether contamination has exited the facility through runoff.

2.3 Ground Water Sampling

Three permanent monitoring wells placed downgradient of source areas at the facility will be sampled, with a temporary well to the northwest of the facility used as the background ground water sample. A private well sample will be taken offsite to the west. Samples are placed to determine the presence or absence of contaminants in ground water.

2.4 Analytical and Container Requirements

Sample containers used will be in accordance with the requirements specified in the Environmental Compliance Branch Standard Operating Procedures and Quality Assurance Manual; US Environmental Protection Agency, Region IV, Environmental Services Division, February 1, 1991. The following is a description of the analysis and types of containers required.

Analyses	Container	Preservatives**
Ext. Organics, Water	1 gal., amber glass*	None
Volatile Organics, Water	3-40 ml., glass vial*	4 drops conc. HCL to pH <2
Metals, Water	1 liter, plastic	50% HNO_3 to pH <2
Cyanide, Water	1 liter, plastic	NaOH to pH >12
Ext. Organics Soil/Sediment	8 oz., glass*	None
Volatile Organics Soil/Sediment	2 oz. (60 ml VOA Vial)	None
Inorganics Soil/Sediment	8 oz., glass*	None

* Sample container lids are lined with teflon
** All samples will be iced to 4°C upon collection

2.5 Methodology

All sample collection, sample preservation, and chain-of-custody procedures used during this investigation will be in accordance with the standard operating procedures as specified in Section 3 and 4 of the Environmental Compliance Branch Standard Operating Procedures and Quality Assurance Manual; US Environmental Protection Agency, Region IV, Environmental Services Division, February 1, 1991.

Surface soil and sediment samples will be collected using a stainless steel spoon and a 2-quart glass bowl. The portion of the sample being analyzed for volatile organic compounds (VOC) will be collected first, directly into the appropriate container. The remainder of the sample will be collected into the glass bowl, thoroughly mixed, and then distributed to the proper containers. Surface soil samples will be collected from a depth of 4-6 inches below land surface (bls), and sediment samples will be collected from the runoff ditches.

Subsurface soil samples will be collected from boreholes advanced using either a hydraulic auger or a hand auger, depending on soil conditions. A clean auger bucket will be used to collect the actual sample after reaching the desired depth, and the VOC containers will be filled first. The rest of the sample is then collected into the glass bowl, mixed thoroughly, and put into the appropriate containers. Subsurface soil samples will be collected at a depth of 3 to 5 feet bls.

Monitoring wells will be cleared of standing water by purging 3 to 5 volumes of the well casing using a bailer. Alternately, the well can be sampled after it purges dry if this occurs at less than 3 volumes of water. Water samples will be collected from the bailer, beginning with VOC samples. The private well sample will be collected directly from an outside spigot (if possible). The water will be purged until pH, temperature, and conductance stabilize. VOC samples will be collected first.

The temporary well will be developed in the same borehole as the subsurface sample SB-01. A well casing will be placed in the borehole. The sample will be collected using a peristaltic pump fitted with teflon tubing, and purged until a reasonably sediment-free water sample can be obtained. VOC samples will be collected directly from the teflon tubing in the well, and the remainder of the sample will be gathered in the 1 gallon glass jug, and evenly distributed into the other containers.

All laboratory analyses and laboratory quality assurance procedures used during this investigation will be in accordance with standard procedures and protocols as specified in the Analytical Support Branch's Laboratory Operations and Quality Control Manual; US Environmental Protection Agency, Region IV, Environmental Services Division; revised October 1990 or as specified by the existing US

Environmental Protection Agency standard procedures and protocols for the contract analytical laboratory program.

2.6 Investigation Derived Waste

Investigation derived wastes in the form of soils and sludges will be returned to the boreholes from which they were collected. Aqueous wastes such as purged waters from temporary wells will be dispersed at a distance of 5 to 15 feet downgradient of the collection point. Potentially contaminated personal protective clothing will be collected and removed from the site for disposal at a later date. Decontamination rinse and wash water will be drummed and removed for disposal at a later date if conditions warrant.

REFERENCES

1. US Geological Survey, 7.5 Minute Series Topographic Quadrangle maps of Georgia: Carrollton 1973 (Photorevised 1982), Bowdon East 1973 (PR 1982), Bremen 1973 (PR 1982), Temple 1973 (PR 1982), scale 1:24,000.

2. RCRA Facility Assessment for CBS Records, Carrollton, Georgia, December 1986. Obtained from Georgia Environmental Protection Division files.

3. Jancie Hatcher, B&V Waste Science and Technology; memorandum to file for CBS Records, October 7, 1991. Subject: CBS Records' change of name.

4. EPA Hazardous Waste Permit Application (EPA Form 3510-1) for CBS Records, Carrollton, Georgia. Filed by John F. Ryan, Vice-President, April 9, 1981.

5. Jennifer R. Kaduck, Program Manager, Georgia Environmental Protection Division, certified letter to Harry Kealey, CBS Records, January 18, 1985. Subject: Notice of Violation.

6. Bill Mundy, Unit Coordinator, Georgia Environmental Protection Division, letter to Harry Kealey, CBS Records, July 22, 1985. Subject: Notice of Violation.

7. State of Georgia Enviromnental Protection Division Administrative Order No. EPD-HW-222: Georgia EPD vs. CBS Records (June 28, 1985).

8. Bradford S. Gentry, Goodwin, Proctor, & Hoar, letter and attachments to The Honorable Mark A. Dickerson, Law Judge, Department of Natural Resources;, August 1, 1985. Subject: Administrative Order No. EPD-HW-222.

9. Bradford S. Gentry, Goodwin, Proctor, & Hoar, letter and attachments to Bert Langley, Georgia Environmental Protection Division, August 8, 1985. Subject: Administrative Order No. EPD-HW-222.

10. Trip Report for CBS Records, filed by Bert Langley, Georgia Environmental Protection Division, August 26, 1985.

11. Trip Report for CBS Records, filed by Bert Langley, Georgia Environmental Protection Division, January 2, 1986.

12. Mark Danas, Environmental Engineer, CBS Records, letter to Bert Langley, Georgia Environmental Protection Division, November 5, 1986. Subject: Request for change of RCRA status.

13. Jennifer Kaduck, Program Manager, Georgia Environmental Protection Division, letter to Bob Flagg, CBS Records, January 9, 1987. Subject: Withdrawal of RCRA status.

14. ERM Southeast Report for CBS Records, obtained from Georgia Environmental Protection Division files, date unknown. Subject: THF/toluene spill on soil.

15. Robert B. Flagg, Environmental Engineer, letter to Bert Langley, Georgia Environmental Protection Division, April 21, 1987. Subject: Fish kill in retention ponds.

16. Mark S. Danas, Environmental Engineer, letter to Thomas Hopkins, Georgia Environmental Protection Division, September 17, 1986. Subject: Nickel wastewater spill.

17. Robert B. Flagg, Environmental Engineer, letter to Jan Simmons, Georgia Environmental Protection Division, September 4, 1987. Subject: Request for 30 day extension of Storage time.

18. Robert B. Flagg, Environmental Engineer, letter to Jennifer Kaduck, Georgia Environmental Protection Division, August 30, 1988. Subject: Request for 30 day extension of Storage time.

19. O.E. Meinzer, The Occurrence of Ground Water in the United States, U.S. Geological Survey Water-Supply Paper No. 489 (Washington, D.C.: GPO, 1923), plate 28.

20. Linda Aller, et. al., DRASTIC: A Standardized System For Evaluating Ground Water Pollution Potential Using Hydrologic Settings, EPA-600/2-87-035 (Ada, Oklahoma: EPA, April 1987), pp. 251,252.

21. U.S. Department of Agriculture, Soil Conservation Service, Soil Survey of Carroll and Haralson Counties, Georgia (Washington, D.C.: GPO, March 1971).

22. Keith I. McConnell and Charlotte E. Abrams, Geology of the Greater Atlanta Region, Georgia Geologic Survey Bulletin No. 96 (Atlanta, Georgia, 1984).

23. C.W. Cressler, C.J. Thurmond, and W.G. Hester, Ground Water in the Greater Atlanta Region, Georgia Geologic Survey Information Circular No. 63 (Atlanta, Georgia, 1983).

24. U.S. Geological Survey, National Water Summary 1984: Hydrologic Events, Selected Water Quality Trends, and Ground-Water Resources;, Water Supply Paper 2275 (1984).

25. Harry E. LeGrand, Ground Water of the Piedmont and Blue Ridge Provinces in the Southeastern States, U.S. Geological Survey Circular 538 (Washington, D.C.: GPO, 1967.

26. R. Allan Freeze and John A. Cherry, Groundwater (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1979).

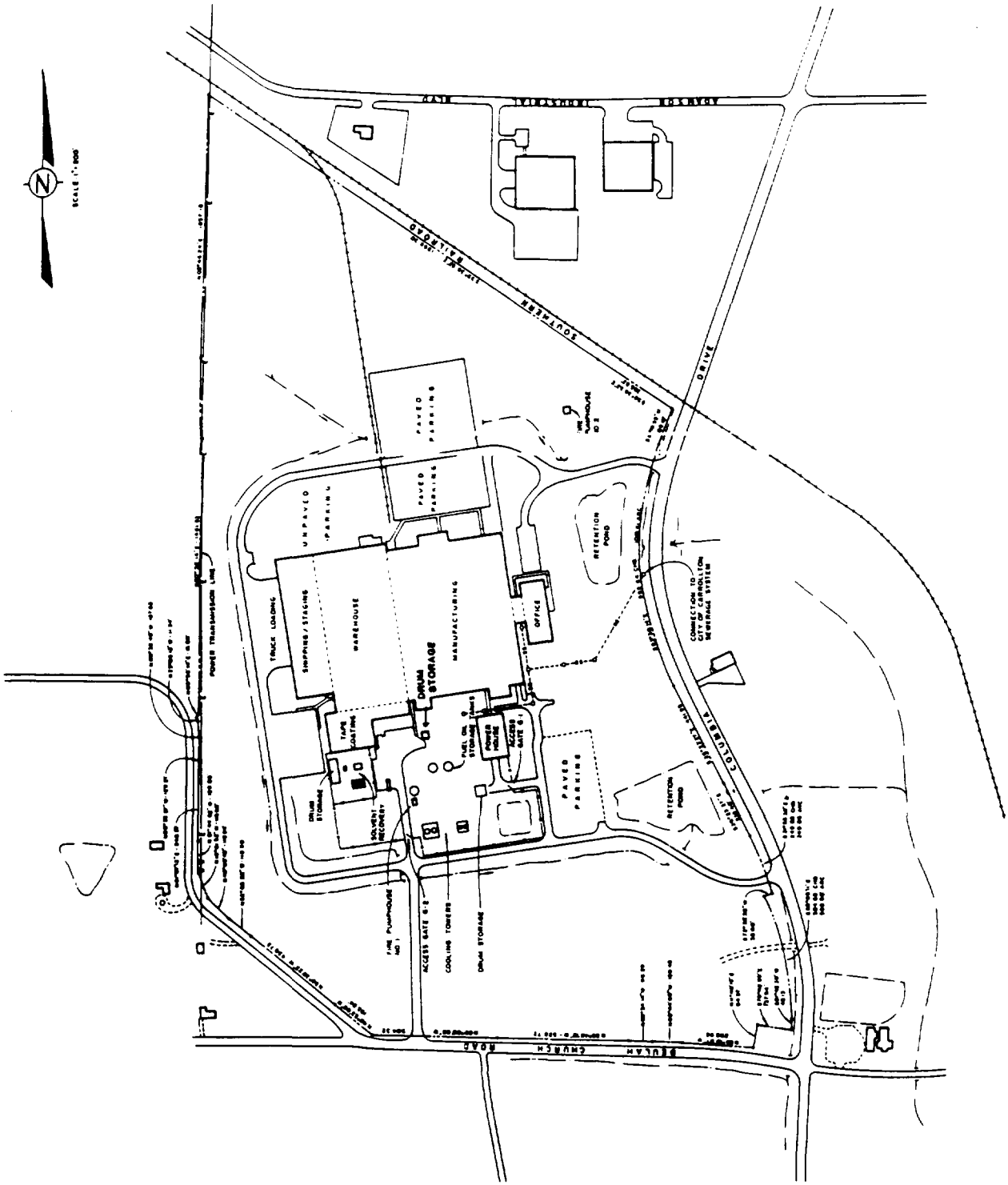


Figure 2 - Layout of the CBS Records facility

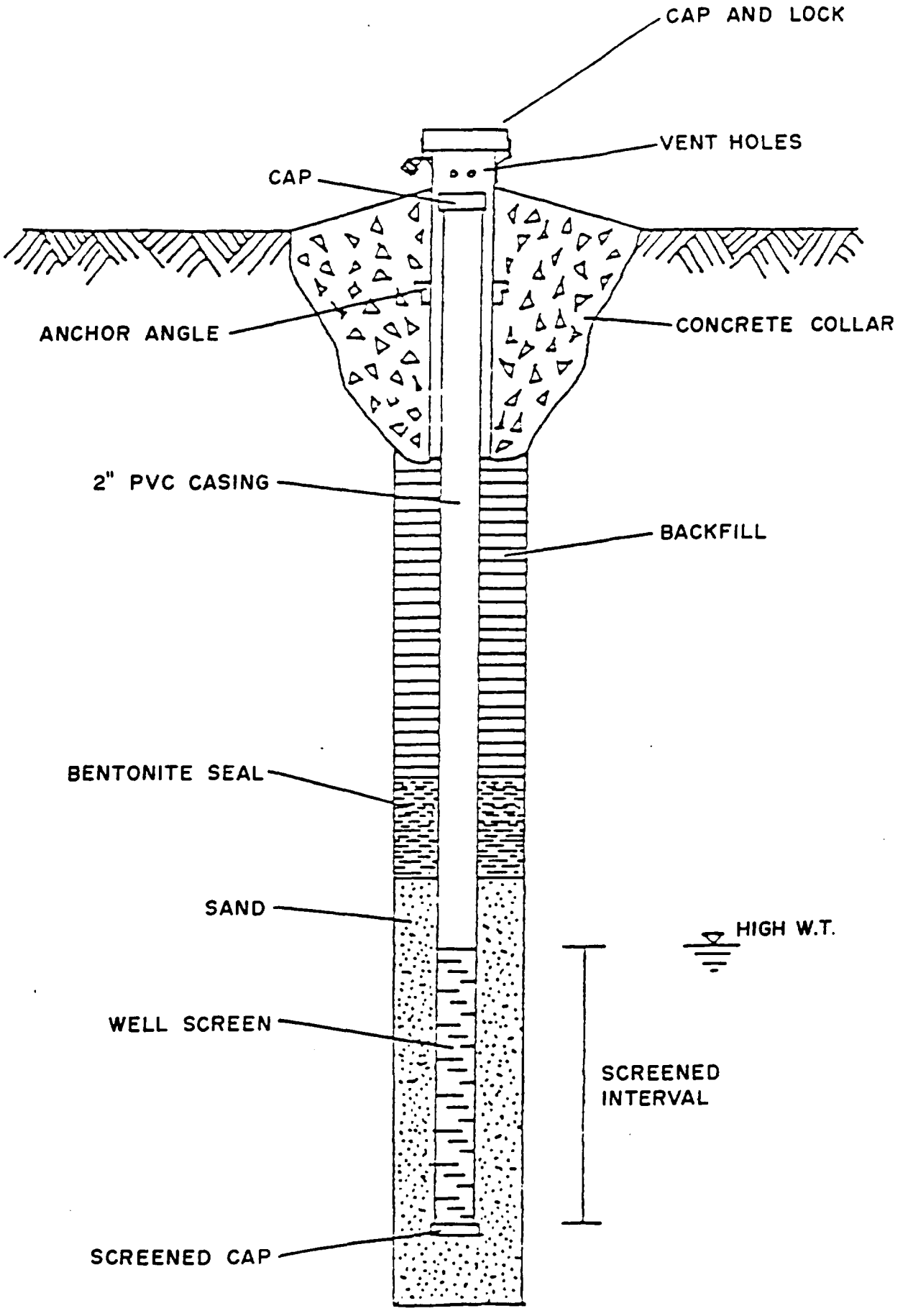


FIGURE 5
(PART B FIGURE E-4)

TYPICAL MONITORING WELL INSTALLATION

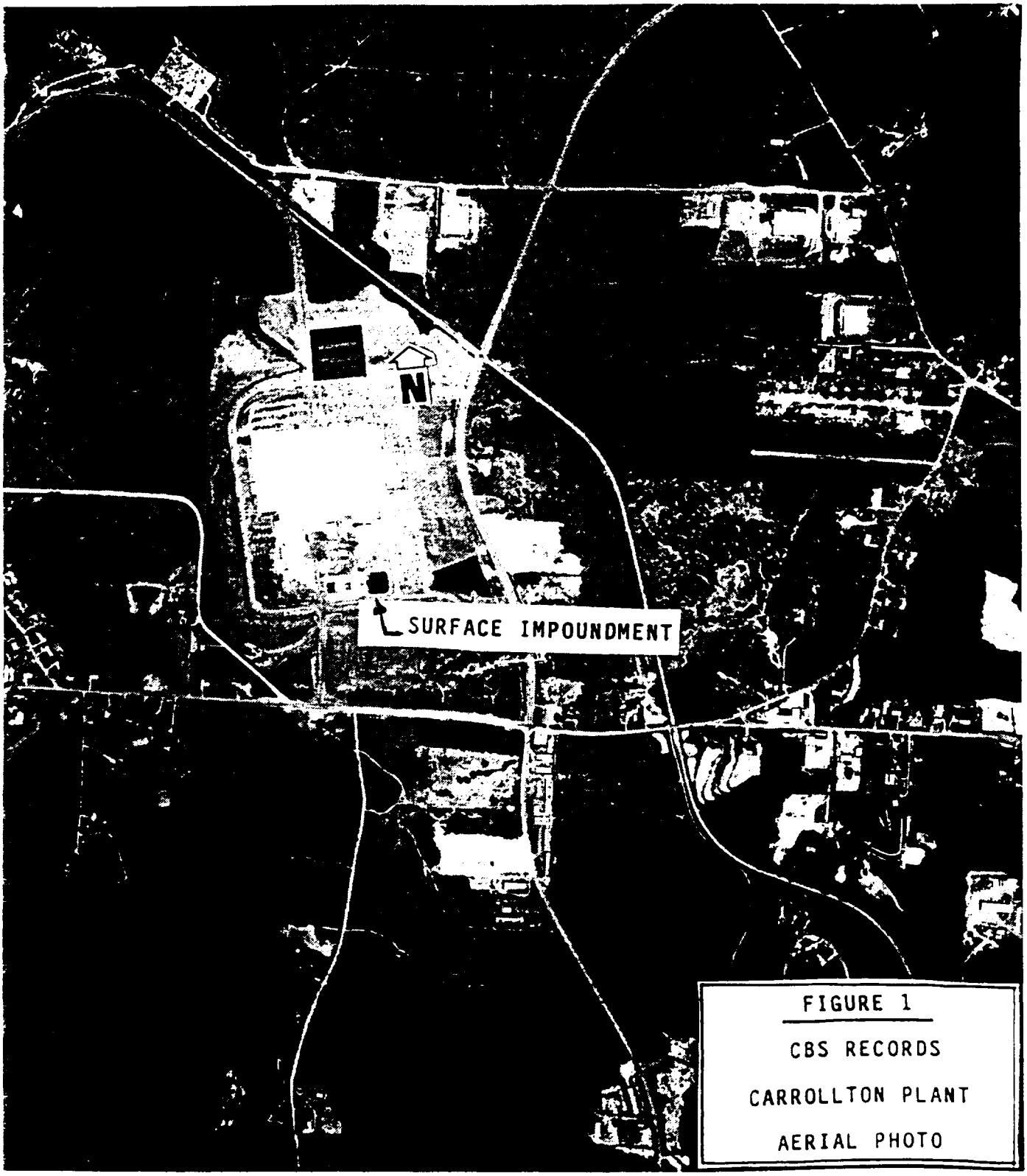


FIGURE 1

CBS RECORDS

CARROLLTON PLANT

AERIAL PHOTO

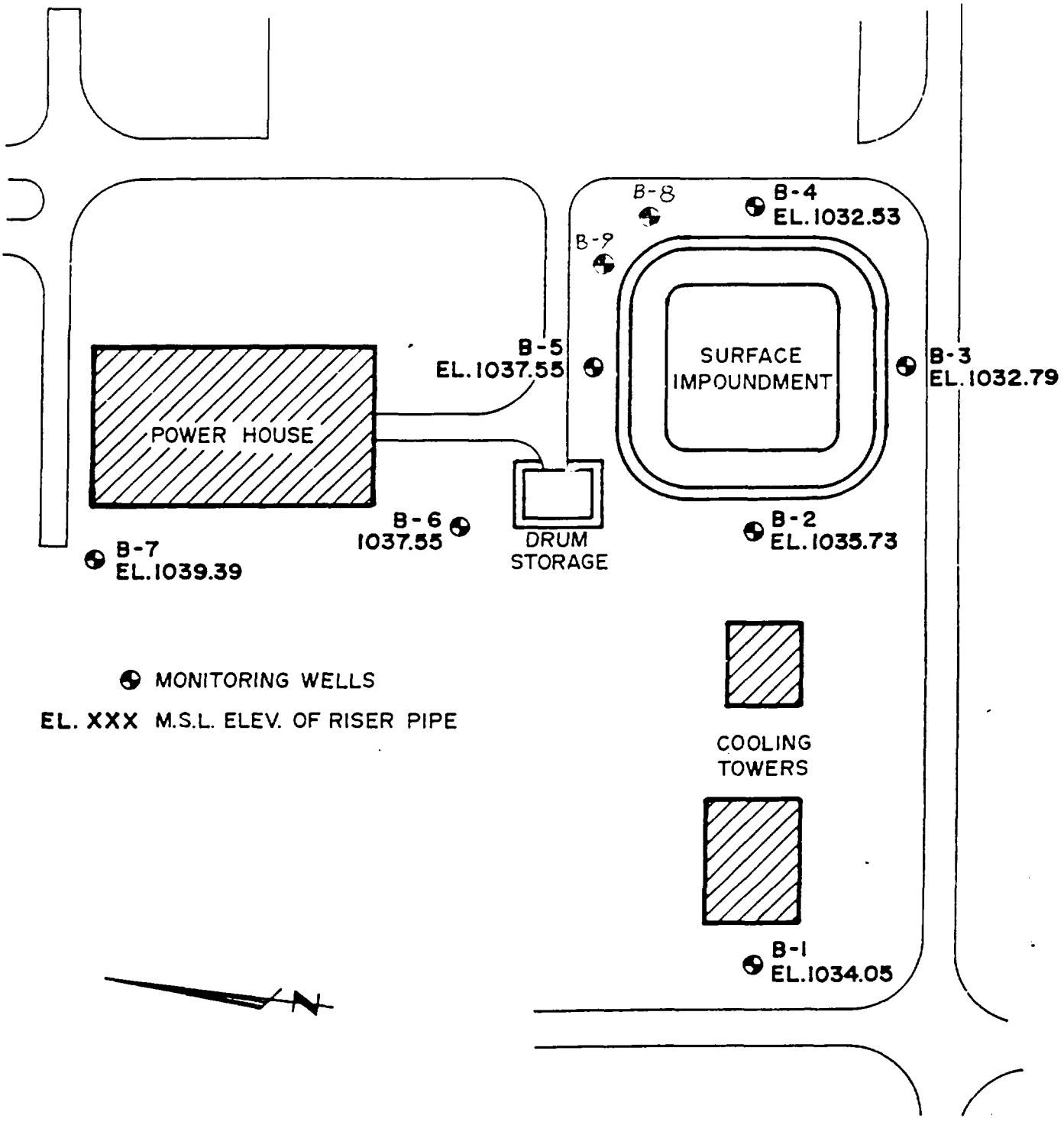


FIGURE 4
(PART B FIGURE E-2)

GROUNDWATER MONITORING WELLS

SURFACE
IMPOUNDMENT
OFFICIALLY
CLOSED SEPT. 1986

M.2 - SITE MAINTENANCE FORM

EPA ID : GAD980515241

SITE NAME: CBS RECORDS SOURCE: H

STREET : 5152 COLUMBIA DR CONG DIST: 06

CITY : CARROLLTON ZIP: 30117

CNTY NAME: CARROLL CNTY CODE : 045

LATITUDE : 33/36/02.0 LONGITUDE : 085/06/03.0

LL-SOURCE: R LL-ACCURACY:

SMSA : HYDRO UNIT: 03150108

INVENTORY IND: Y REMEDIAL IND: Y REMOVAL IND: N FED FAC IND: N

NPL IND: N NPL LISTING DATE: NPL DELISTING DATE:

SITE/SPILL IDS:

RPM NAME: RAY WILKERSON RPM PHONE: 404-347-2234

SITE CLASSIFICATION: SITE APPROACH:

DIOXIN TIER: REG FLD1: REG FLD2: 8

RESP TERM: PENDING ( ) NO FURTHER ACTION ( )

ENF DISP: NO VIABLE RESP PARTY ( ) VOLUNTARY RESPONSE ( )
ENFORCED RESPONSE ( ) COST RECOVERY ( )

SITE DESCRIPTION:

ACTION: _

PENDING (_) NO FURTHER ACTION (_)

M.2 - PROGRAM MAINTENANCE FORM

ACTION: _

SITE: CBS RECORDS

EPA ID: GAD980515241 PROGRAM CODE: H01 PROGRAM TYPE: _

PROGRAM QUALIFIER: ALIAS LINK :

PROGRAM NAME: SITE EVALUATION

DESCRIPTION:

M.2 - EVENT MAINTENANCE FORM

* ACTION: _ *

SITE: CBS RECORDS
PROGRAM: SITE EVALUATION

EPA ID: GAD980515241 PROGRAM CODE: H01 EVENT TYPE: DS1

FMS CODE: EVENT QUALIFIER : EVENT LEAD: E * _ ___ _ *

EVENT NAME: DISCOVERY STATUS: * _____ _ *

DESCRIPTION:

* _____ *
* _____ *
* _____ *
* _____ *

ORIGINAL	CURRENT	ACTUAL			
START:	START:	START:	__/__/__	__/__/__	__/__/__
COMP :	COMP :	COMP : 03/01/81	__/__/__	__/__/__	__/__/__

HQ COMMENT:

* _____ *

RG COMMENT:

* _____ *

COOP AGR #	AMENDMENT #	STATUS	STATE %				
			0	_____	_____	__	___

M.2 - EVENT MAINTENANCE FORM

* ACTION: _ *

SITE: CBS RECORDS
PROGRAM: SITE EVALUATION

EPA ID: GAD980515241 PROGRAM CODE: H01 EVENT TYPE: PA1

FMS CODE: EVENT QUALIFIER : EVENT LEAD: S * _ __ _ *

EVENT NAME: PRELIMINARY ASSESSMENT STATUS: * _____ _ *

DESCRIPTION:

* _____ *
* _____ *
* _____ *
* _____ *

ORIGINAL	CURRENT	ACTUAL			
START:	START:	START: 09/17/85	__/__/__	__/__/__	__/__/__
COMP :	COMP :	COMP : 09/17/85	__/__/__	__/__/__	__/__/__

HQ COMMENT:

* _____ *

RG COMMENT:

* _____ *

COOP AGR #	AMENDMENT #	STATUS	STATE %				
			0	_____	_____	__	__

M.2 - COMMENT MAINTENANCE FORM

SITE: CBS RECORDS

EPA ID: GAD980515241

COM NO	COMMENT	ACTION
001	PART A- ON FILE	* - _____ *
		* _____ *

M.2 - SITE MAINTENANCE FORM

* ACTION: _ *

EPA ID : GAD980515241

SITE NAME: CBS RECORDS SOURCE: H * _____ _ *

STREET : 5152 COLUMBIA DR CONG DIST: 06 * _____ __ *

CITY : CARROLLTON ZIP: 30117 * _____ _____-____ *

CNTY NAME: CARROLL CNTY CODE : 045 * _____ ___ *

LATITUDE : 33/36/02.0 LONGITUDE : 085/06/03.0 * __/__/__._ ___/__/__._ *

LL-SOURCE: R LL-ACCURACY: * _ _ *

SMSA : HYDRO UNIT: 03150108 * ____ _____ *

INVENTORY IND: Y REMEDIAL IND: Y REMOVAL IND: N FED FAC IND: N * _ _ _ _ *

NPL IND: N NPL LISTING DATE: NPL DELISTING DATE: * _ __/__ __/__ *

SITE/SPILL IDS: * __ __ __ __ __ *

RPM NAME: RAY WILKERSON RPM PHONE: 404-347-2234 * _____ ___-___-____ *

SITE CLASSIFICATION: SITE APPROACH: * __ ___ *

DIOXIN TIER: REG FLD1: REG FLD2: 8 * ____ _____ _ *

RESP TERM: PENDING ( ) NO FURTHER ACTION ( ) * PENDING (_) NO FURTHER ACTION (_) *

ENF DISP: NO VIABLE RESP PARTY ( ) VOLUNTARY RESPONSE ( ) * _ _ *
ENFORCED RESPONSE ( ) COST RECOVERY ( ) * _ _ *

SITE DESCRIPTION:

* _____ *
* _____ *
* _____ *
* _____ *

M.2 - PROGRAM MAINTENANCE FORM

ACTION: _

SITE: CBS RECORDS

EPA ID: GAD980515241 PROGRAM CODE: H01 PROGRAM TYPE: _

PROGRAM QUALIFIER: ALIAS LINK :

PROGRAM NAME: SITE EVALUATION

DESCRIPTION:

M.2 - EVENT MAINTENANCE FORM

* ACTION: _ *

SITE: CBS RECORDS
PROGRAM: SITE EVALUATION

EPA ID: GAD980515241 PROGRAM CODE: H01 EVENT TYPE: DS1

FMS CODE: EVENT QUALIFIER : EVENT LEAD: E * _ ___ _ *

EVENT NAME: DISCOVERY STATUS: * _____ _ *

DESCRIPTION:

* _____ *
* _____ *
* _____ *
* _____ *

ORIGINAL	CURRENT	ACTUAL			
START:	START:	START:	__/__/__	__/__/__	__/__/__
COMP :	COMP :	COMP : 03/01/81	__/__/__	__/__/__	__/__/__

HQ COMMENT:

* _____ *

RG COMMENT:

* _____ *

COOP AGR #	AMENDMENT #	STATUS	STATE %				
			0	_____	_____	__	___

M.2 - EVENT MAINTENANCE FORM

* ACTION: _ *

SITE: CBS RECORDS
PROGRAM: SITE EVALUATION

EPA ID: GAD980515241 PROGRAM CODE: H01 EVENT TYPE: PA1

FMS CODE: EVENT QUALIFIER : EVENT LEAD: S * _ ___ _ *

EVENT NAME: PRELIMINARY ASSESSMENT STATUS: * _____ _ *

DESCRIPTION:

* _____ *
* _____ *
* _____ *
* _____ *

ORIGINAL	CURRENT	ACTUAL			
START:	START:	START: 09/17/85	__/__/__	__/__/__	__/__/__
COMP :	COMP :	COMP : 09/17/85	__/__/__	__/__/__	__/__/__

HQ COMMENT:

* _____ *

RG COMMENT:

* _____ *

COOP AGR #	AMENDMENT #	STATUS	STATE %				
			0	_____	_____	__	___

M.2 - COMMENT MAINTENANCE FORM

SITE: CBS RECORDS

EPA ID: GAD980515241

COM NO	COMMENT	ACTION
001	PART A- ON FILE	* _ _____ *
		* _____ *

CBS RECORDS
GAD980515241
PRELIMINARY ASSESSMENT COVER SHEET

This facility is a Treatment/Storage/Disposal (TSD) facility that is regulated by the Georgia Environmental Protection Division under the authority of the Georgia Hazardous Waste Management Act (GHWMA). This facility presently has either Interim Status (Part A on file) or has a Hazardous Waste Facility Permit (Part B is complete). Any releases of hazardous wastes at this facility are regulated as a "prior release" under GHWMA and all corrective actions will be negotiated through the Part B Permit review process. This site is therefore assessed a "NONE" priority for a Site Inspection. No further investigations are recommended with respect to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

PMA/mcw008

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
GA	D980515241

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
CBS Records	5152 Columbia Drive				
03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Carrolton	GA	30117	Carroll	45	6
09 COORDINATES LATITUDE	LONGITUDE				
33° 36' 02.0"	085° 06' 03.0"				

10 DIRECTIONS TO SITE (Starting from nearest public road)

Turn onto Columbia Drive off Hwy. 27.

III. RESPONSIBLE PARTIES

01 OWNER (If known)	02 STREET (Business, mailing, residential)		
CBS, Inc.	51 West 52nd Street		
03 CITY	04 STATE	05 ZIP CODE	06 TELEPHONE NUMBER
New York	NY	20019	( )
07 OPERATOR (If known and different from owner)	08 STREET (Business, mailing, residential)		
Same			
09 CITY	10 STATE	11 ZIP CODE	12 TELEPHONE NUMBER
			( )

13 TYPE OF OWNERSHIP (Check one)

☒ A. PRIVATE ☐ B. FEDERAL: _____ (Agency name) ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL

☐ F. OTHER: _____ (Specify) ☐ G. UNKNOWN

14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)

☒ A. RCRA 3001 DATE RECEIVED: 07/ 25/ 83 (MONTH DAY YEAR) ☐ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: / / (MONTH DAY YEAR) ☐ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION

☒ YES DATE 06 25 85 (MONTH DAY YEAR)
☐ NO

BY (Check all that apply)

☐ A. EPA ☐ B. EPA CONTRACTOR ☐ C. STATE ☐ D. OTHER CONTRACTOR
☐ E. LOCAL HEALTH OFFICIAL ☐ F. OTHER: _____ (Specify)

CONTRACTOR NAME(S): _____

02 SITE STATUS (Check one)

☒ A. ACTIVE ☐ B. INACTIVE ☐ C. UNKNOWN

03 YEARS OF OPERATION

_____ BEGINNING YEAR | _____ ENDING YEAR ☒ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED

solvents, chrome

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION

Low - by groundwater contamination only. Facility is regulated under Georgia Hazardous Waste Act.

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents)

☐ A. HIGH (Inspection required promptly) ☐ B. MEDIUM (Inspection required) ☐ C. LOW (Inspect on time available basis) ☒ D. NONE (No further action needed, complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)			03 TELEPHONE NUMBER
Bert Langley	GA EPD			(404) 656-7802
04 PERSON RESPONSIBLE FOR ASSESSMENT	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NUMBER	08 DATE
Bert Langley	DNR	EPD-FCU	(404) 656-7802	07/ 03/ 85 (MONTH DAY YEAR)

EPA FORM 2070-12 (7-81)

J. Sunovic

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
GA	D980515241

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

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

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

TONS 86

CUBIC YARDS _____

NO OF DRUMS _____

03 WASTE CHARACTERISTICS (Check all that apply)

- ☒ 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	350	P	
OLW	OILY WASTE			
SOL	SOLVENTS	85	T	
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
SLU	chrome sludge	999	surface impoundment	Cr 10	ppm
SOL	various solvents	108-88-3	container	100	2

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)

GA EPD State Files.

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
GA	D980515241

II. HAZARDOUS CONDITIONS AND INCIDENTS

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

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

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

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

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

01 ☐ F. CONTAMINATION OF SOIL
03 AREA POTENTIALLY AFFECTED: _____ (Acres)
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

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

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

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

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
GA	D908515241

II. HAZARDOUS CONDITIONS AND INCIDENTS *(Continued)*

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

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

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

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES *(Spills/runoff standing liquids/leaking drums)* — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

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

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

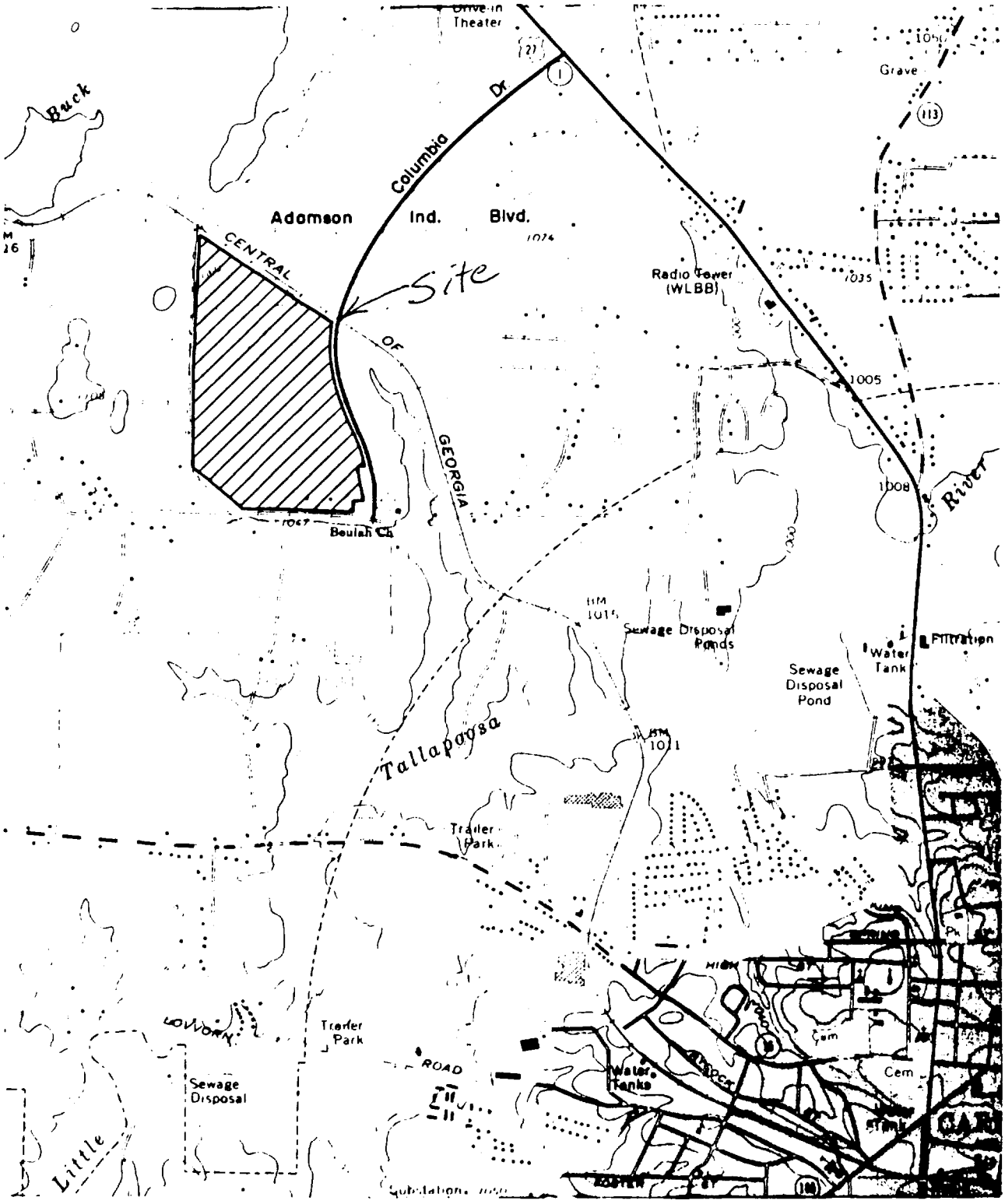
01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

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

III. TOTAL POPULATION POTENTIALLY AFFECTED: _____

IV. COMMENTS

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



CBS RECORDS - CARROLLTON, GA.

SCALE: 1" = 2000'

SIC 3652

LOCKWOOD GREENE

December 21, 1981

81129.01

RECEIVED

DEC 28 1981

ENVIRONMENTAL PROTECTION DIVISION
LAND PROTECTION BRANCH

Mr. Joseph T. Surowiec
Unit Coordinator
Georgia Department of Natural Resources
Environmental Protection Division
270 Washington Street, S.W.
Atlanta, Georgia 30334

Re: Groundwater Monitoring Well Installation at CBS Records

Dear Mr. Surowiec:

Representing CBS Records in Carrollton, Georgia, we are submitting to you a copy of the groundwater monitoring well installation specification and location of these wells for your review and approval.

We are also submitting a groundwater contour map that was developed in 1978 prior to the construction of the plant. At that time, there was a general groundwater flow from west to east. We still believe this condition to be prevalent. We also believe the present contour lines are considerably straighter than those developed in 1978 due to the removal of alluvium from two east-flowing streams and backfill of these areas with appropriate structural bearing soils.

Please contact us at your convenience if you have any questions or need additional information.

Very truly yours,

LOCKWOOD GREENE ENGINEERS, INC.

Douglas Langmack

for Randy Redding

Attachments

RR/rb

cc: B. Sanders, CBS-Carrollton, Georgia
D. Billiar, CBS-Milford, Conn.
B. Hall, LGE
D. Langmack, LGE

ATTACHMENTS:	LOCKWOOD GREENE ARCHITECTS · ENGINEERS ATLANTA 1776 PEACHTREE STREET, N.W. ATLANTA, GEORGIA 30309	SPEC. NO.
Figure 1.		SHEET 1 OF 2
Figure 2.		PROJECT NO. 81129.01
	UNIT SPECIFICATION FOR	CLIENT CBS Records, Inc.
	Groundwater Monitoring	BY R. Redding
	Well Installation	DATE 12-7-81
		EQUIP. NO.

1. Install groundwater monitoring wells at the locations shown in Figure 1.

2. Install monitoring well using a power auger with auger flytes having a diameter at least 8 inches to a depth of at least fifteen (15) feet below the highest expected water table as shown in Figure 1.

3. The well shall be constructed of a 4 inch diameter PVC casing and well screen as shown in Figure 2, typical monitoring well installation details.

4. The well screen shall be commercially made and have a length of 15 feet. No contractor fabricated well screens are acceptable.

5. The well screen shall be positioned such that the upper end of the screen is at the highest expected water table elevation.

6. The well screen shall be capped at the bottom with a PVC screen cap.

7. The PVC casing shall extend 6 inches above the ground surface.

8. PVC pipe shall be joined using mechanical joining devices. Solvents or glues shall not be used in the well construction.

9. Well graded sand shall be placed in the well below and around the well screen to a height 3 feet above the well screen. The sand shall be tamped to insure that there are no air pockets.

10. A seal consisting of a 1 foot layer of bentonite pellets shall be placed on top of the sand layer.

11. Grout backfill shall be placed on top of the bentonite seal to within 3 feet of the ground surface.

12. A submersible well pump with a capacity of 5 gpm at a head equivalent to the static head shall be installed at the bottom of each monitoring well. The pump shall be clean and free from oils and dirt before placement in the well.

13. The pump discharge pipe shall be PVC pipe and shall extend 16 inches above the ground surface and through the protective outer steel casing.

14. The PVC casing shall be protected at the ground level by a 6 inch diameter steel casing extending 3 feet below and 18 inches above the ground surface.

ISSUE	DATE	RELEASED FOR	LG APPROVAL	CLIENT APPROVAL

ATTACHMENTS:	LOCKWOOD GREENE ARCHITECTS · ENGINEERS ATLANTA 1776 PEACHTREE STREET, N.W. ATLANTA, GEORGIA 30309	SPEC. NO.
Figure 1.		SHEET 2 OF 2
Figure 2.		PROJECT NO. 81129.01
	UNIT SPECIFICATION FOR	CLIENT CBS Records, Inc.
	Groundwater Monitoring	BY R. Redding
	Well Installation	DATE 12-7-81
		EQUIP. NO.

15. The steel casing shall be provided with a discharge opening 16 inches above the ground surface. The pump discharge pipe shall be routed through the opening to slightly beyond the outside of the steel casing.

16. The steel casing shall be capped with a 4 inch cap and locking device that shall extend down over the pump discharge opening.

17. Four vent holes shall be provided in the steel casing slightly above the bottom of the capping device.

18. Angle iron anchors shall be welded to the steel casing 18 inches below the ground surface.

19. A concrete collar at least 3 feet in diameter at the top, extending 3 feet below the surface shall be placed around the steel casing.

20. The concrete collar shall be sufficiently sloped downward away from the well casing to prevent ponding of surface water around the well.

21. The Contractor shall maintain boring logs and well construction details for submittal to the Owner.

22. No lubricants other than water shall be used during drillings.

23. Electrical conduit shall be routed at least 30 inches below the ground surface to each monitoring well and shall be routed upward, entering the steel casing 8 inches above the ground surface on the opposite side as the pump discharge opening. The electrical conduit shall be water tight at all joints.

24. The Contractor shall measure the elevation of the top of each well after installation from a reference benchmark and shall permanently engrave the well's elevation on the outside of the steel casing.

ISSUE	DATE	RELEASED FOR	LG APPROVAL	CLIENT APPROVAL

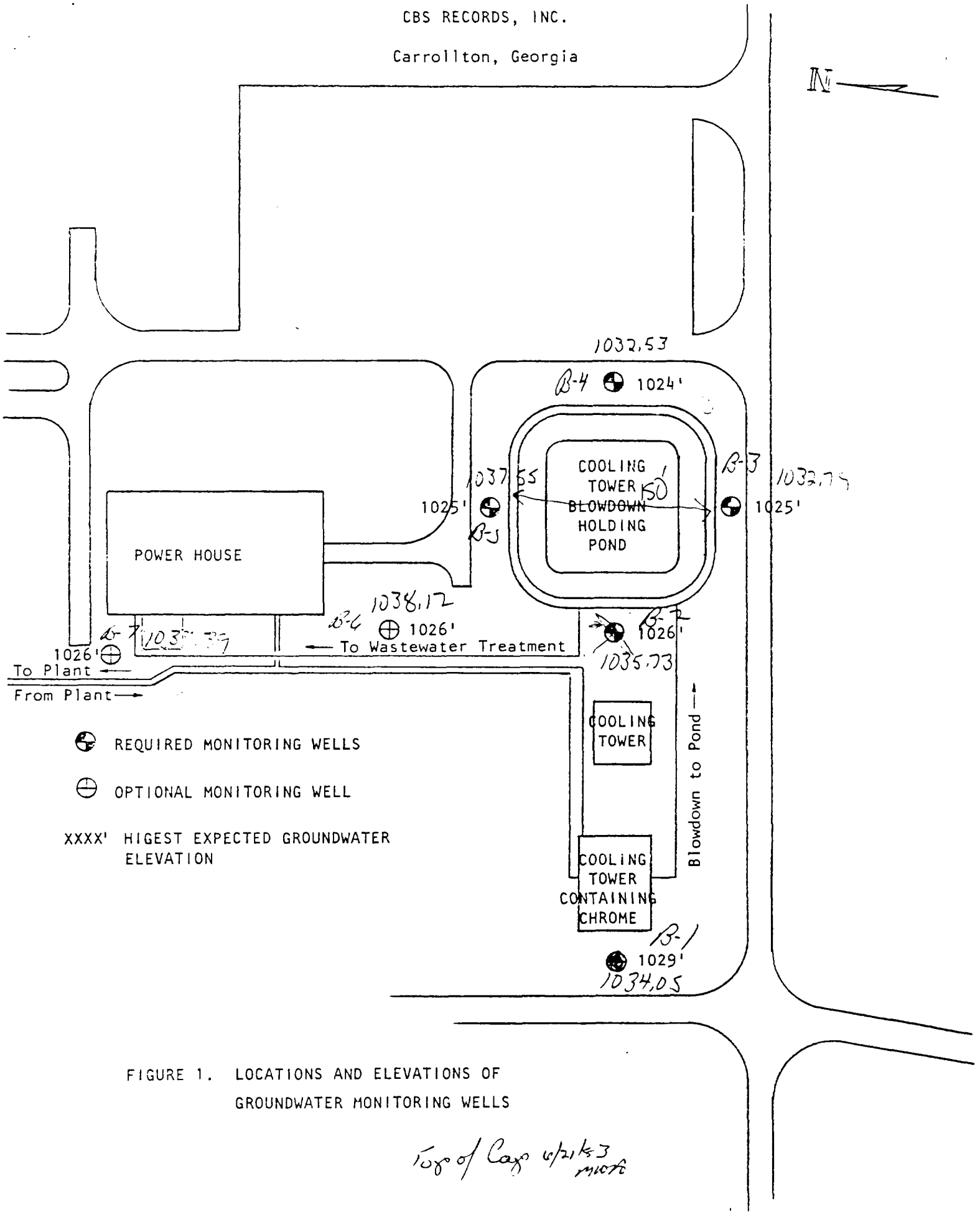


FIGURE 1. LOCATIONS AND ELEVATIONS OF GROUNDWATER MONITORING WELLS

Top of Cap 6/21/93 MWH

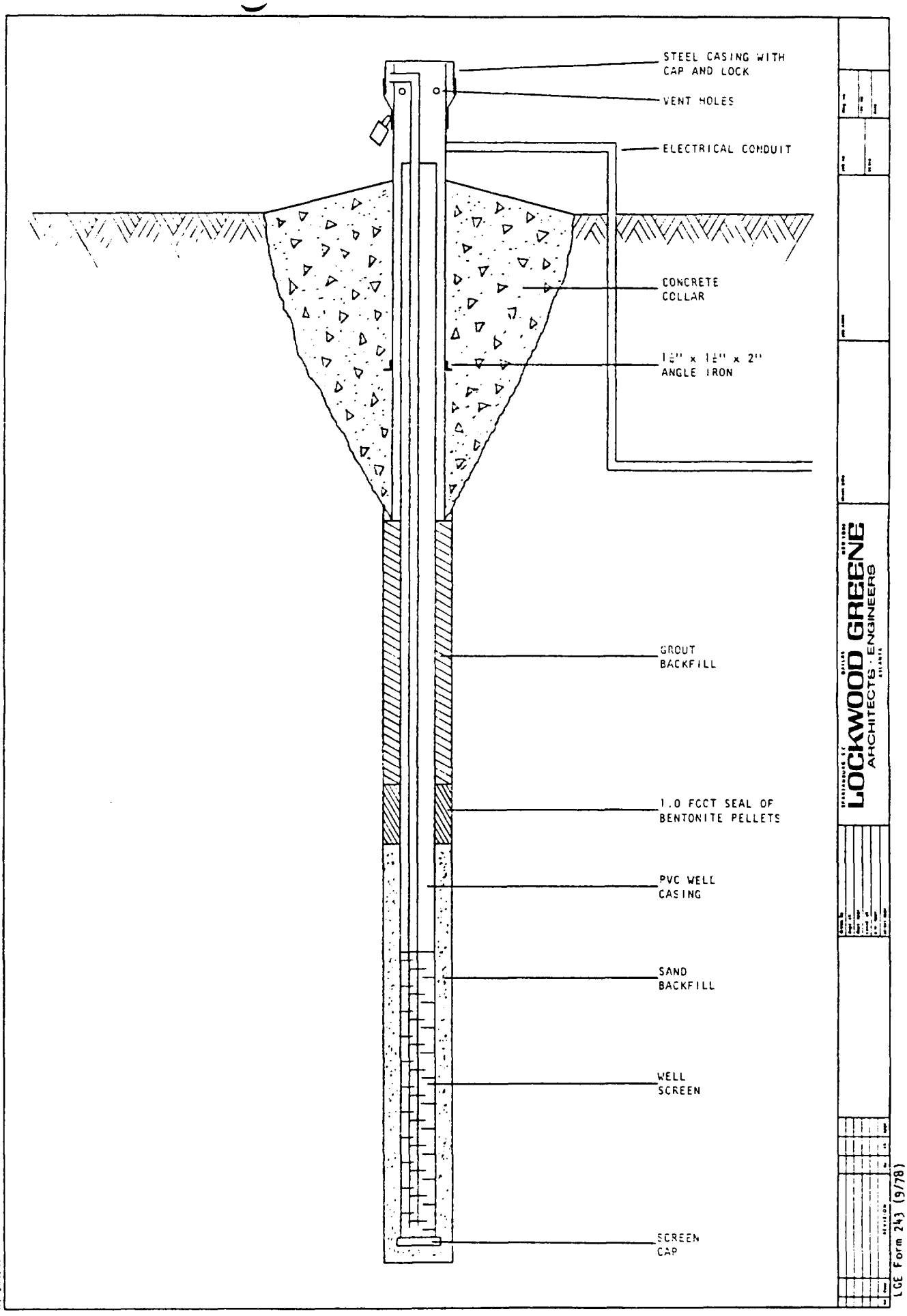
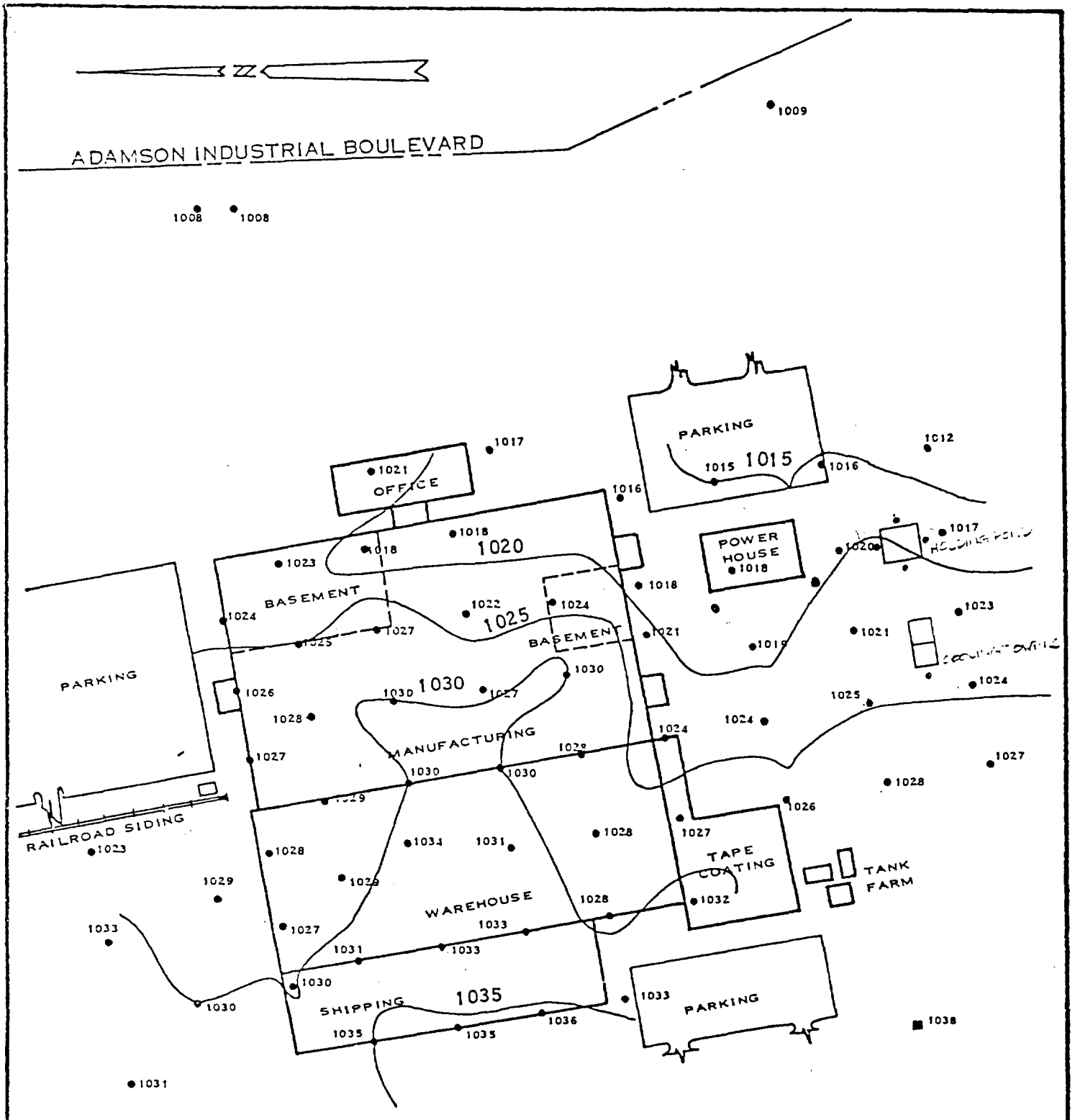


FIGURE 2. TYPICAL GROUNDWATER MONITORING WELL INSTALLATION DETAILS



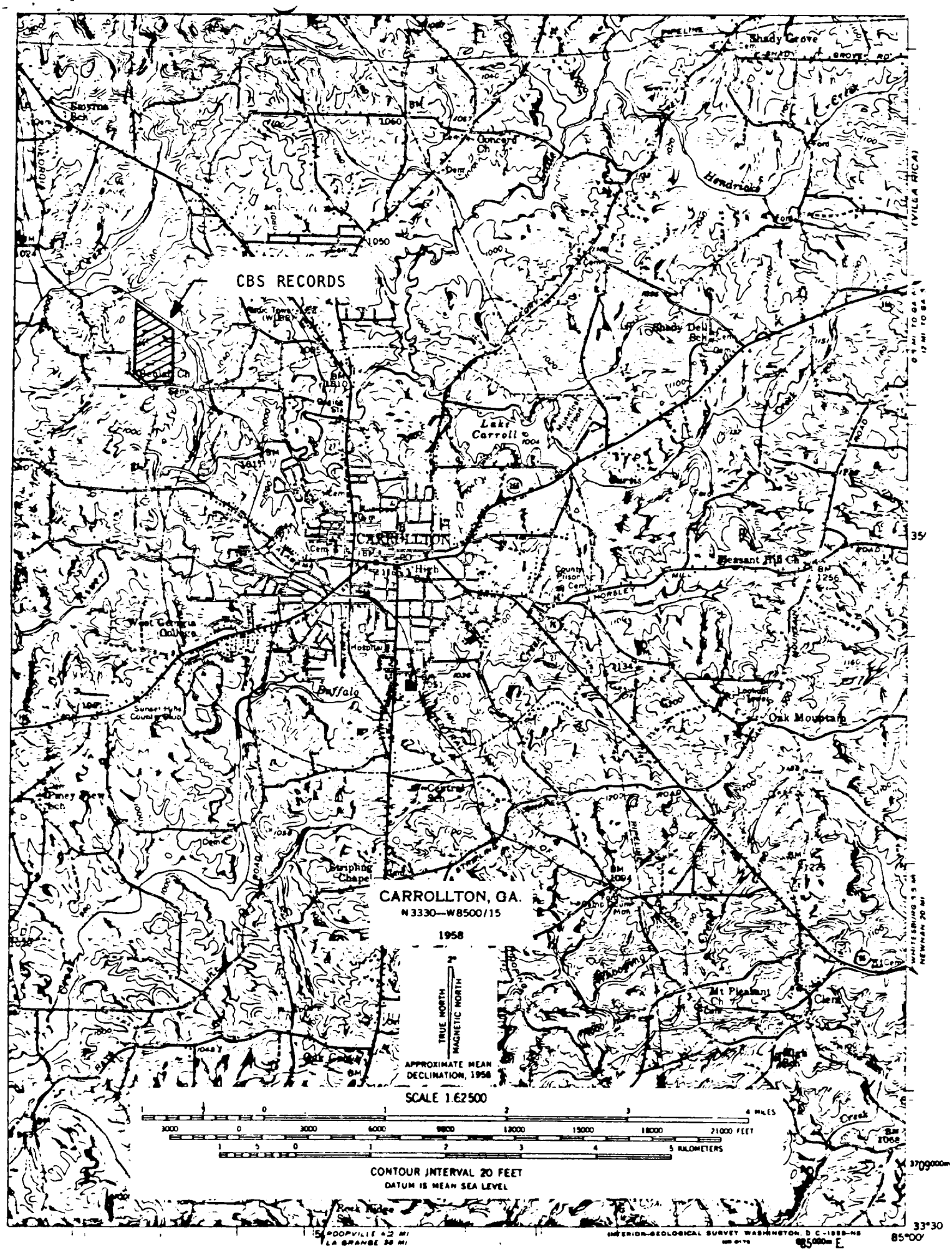
NOTE THESE CONTOURS ARE BASED ON THE DATA POINTS SHOWN, FOR THE TIME OF THE INVESTIGATION. THEY SHOULD BE CONSIDERED TO REPRESENT A TREND, BUT NOT NECESSARILY PRECISE CONDITIONS. VARIATIONS MAY OCCUR WITH TIME.

Law Engineering Testing Company
Geotechnical and Materials Engineers

GROUNDWATER CONTOURS – FIGURE 5
PROPOSED CBS FACILITY
CARROLLTON, GEORGIA

Job Number 8525

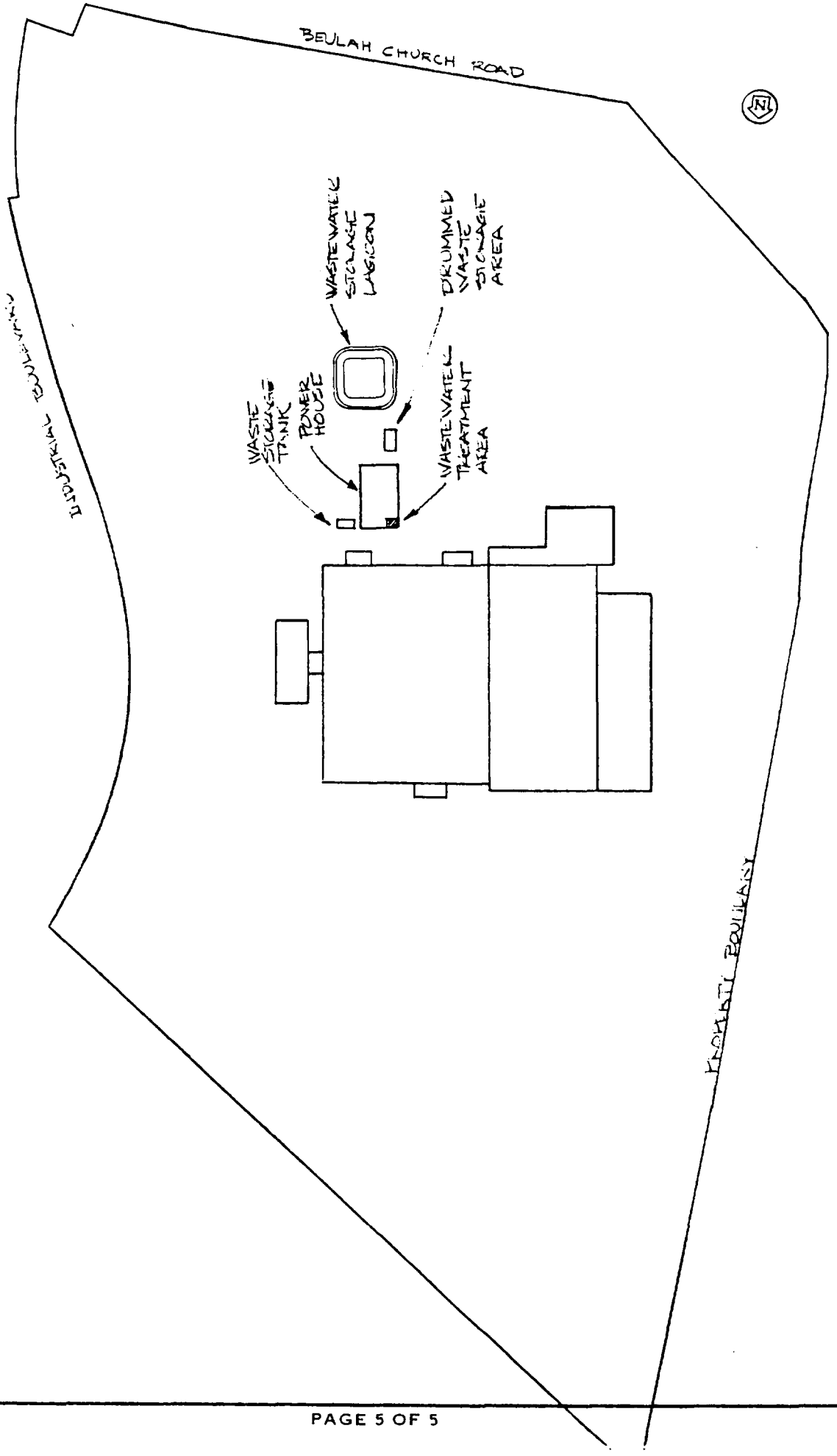
Scale 0 100 200


CBS RECORDS
CARROLLTON
Lake Carroll
Shady Grove
Hendricks
Concord Ch
Shady Dell Sch
Pleasant Hill Ch
West Georgia College
Buffalo
Oak Mountain
Mt Pleasant Ch
Striping Chapel
Central Sch
Piney View Sch
Sunset Hills Country Club
Smyrna Sch
CARROLLTON, GA.
N3330—W8500/15
1958
TRUE NORTH
MAGNETIC NORTH
APPROXIMATE MEAN DECLINATION, 1958
SCALE 1:62500
4 MILES
21000 FEET
5 KILOMETERS
CONTOUR INTERVAL 20 FEET
DATUM IS MEAN SEA LEVEL
(VILLA RICA)
WHITESBURG 5.5 MI
NEWNAN 20 MI
33°30
85°00'
INTERIOR—GEOLOGICAL SURVEY WASHINGTON, D.C.

Continued from page 4.

Form Approved OMB No. 158-S80004

V. FACILITY DRAWING *(see page 4)*



Please print or type with ELITE type (12 characters/inch) in the unshaded areas only.

Form Approved OMB No. 158-S79016
GSA No. 0246-EPA-OT

EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY

NOTIFICATION OF HAZARDOUS WASTE ACTIVITY

INSTALLATION'S EPA I.D. NO.

I. NAME OF INSTALLATION

II. INSTALLATION MAILING ADDRESS

III. LOCATION OF INSTALLATION

0001

CBS RECORDS
5152 COLUMBIA DRIVE
CARROLLTON, GEORGIA 30117

CARROLL COUNTY

RECEIVED EPA/REGION

INSTRUCTIONS: If you received a preprinted label, affix it in the space at left. If any of the information on the label is incorrect, draw a line through it and supply the correct information in the appropriate section below. If the label is complete and correct, leave Items I, II, and III below blank. If you did not receive a preprinted label, complete all items. "Installation" means a single site where hazardous waste is generated, treated, stored and/or disposed of, or a transporter's principal place of business. Please refer to the INSTRUCTIONS FOR FILING NOTIFICATION before completing this form. The information requested herein is required by law *(Section 3010 of the Resource Conservation and Recovery Act).*

DETACH

FOR OFFICIAL USE ONLY

COMMENTS: C

INSTALLATION'S EPA I.D. NUMBER	APPROVED	DATE RECEIVED (yr., mo., & day)
F GAD980515241 T/A 21		810313

I. NAME OF INSTALLATION

CBS RECORDS

II. INSTALLATION MAILING ADDRESS

STREET OR P.O. BOX: 3 5152 COLUMBIA DRIVE

CITY OR TOWN	ST.	ZIP CODE
4 CARROLLTON	GA	30117

III. LOCATION OF INSTALLATION

STREET OR ROUTE NUMBER: 5 5152 COLUMBIA DRIVE

CITY OR TOWN	ST.	ZIP CODE
6 CARROLLTON	GA	30117

IV. INSTALLATION CONTACT

NAME AND TITLE (last, first, & job title)	PHONE NO. (area code & no.)
2 KROLL, JOE - VICE PRES. MFG.	404-832-0681

V. OWNERSHIP

A. NAME OF INSTALLATION'S LEGAL OWNER: 8 CBS INC.

DETACH

B. TYPE OF OWNERSHIP (enter the appropriate letter into box)

F = FEDERAL
M = NON-FEDERAL

M

VI. TYPE OF HAZARDOUS WASTE ACTIVITY (enter "X" in the appropriate box(es))

- [X] A. GENERATION
- [ ] B. TRANSPORTATION (complete item VII)
- [X] C. TREAT/STORE/DISPOSE
- [ ] D. UNDERGROUND INJECTION

VII. MODE OF TRANSPORTATION (transporters only – enter "X" in the appropriate box(es))

- [ ] A. AIR
- [ ] B. RAIL
- [ ] C. HIGHWAY
- [ ] D. WATER
- [ ] E. OTHER (specify):

VIII. FIRST OR SUBSEQUENT NOTIFICATION

Mark "X" in the appropriate box to indicate whether this is your installation's first notification of hazardous waste activity or a subsequent notification. If this is not your first notification, enter your Installation's EPA I.D. Number in the space provided below.

- [X] A. FIRST NOTIFICATION
- [ ] B. SUBSEQUENT NOTIFICATION (complete item C)

C. INSTALLATION'S EPA I.D. NO.

IX. DESCRIPTION OF HAZARDOUS WASTES

Please go to the reverse of this form and provide the requested information.

I.D. – FOR OFFICIAL USE ONLY			
S		T/A	C
W			1

IX. DESCRIPTION OF HAZARDOUS WASTES *(continued from front)*

A. HAZARDOUS WASTES FROM NON–SPECIFIC SOURCES. Enter the four–digit number from 40 CFR Part 261.31 for each listed hazardous waste from non–specific sources your installation handles. Use additional sheets if necessary.

1	2	3	4	5	6
F001	F003	F005	F006	F007	F008
7	**8**	**9**	**10**	**11**	**12**
F009					

B. HAZARDOUS WASTES FROM SPECIFIC SOURCES. Enter the four–digit number from 40 CFR Part 261.32 for each listed hazardous waste from specific industrial sources your installation handles. Use additional sheets if necessary.

13	14	15	16	17	18
19	**20**	**21**	**22**	**23**	**24**
25	**26**	**27**	**28**	**29**	**30**

C. COMMERCIAL CHEMICAL PRODUCT HAZARDOUS WASTES. Enter the four–digit number from 40 CFR Part 261.33 for each chemical substance your installation handles which may be a hazardous waste. Use additional sheets if necessary.

31	32	33	34	35	36
U002	U031	U057	U140	U154	U210
37	**38**	**39**	**40**	**41**	**42**
U220					
43	**44**	**45**	**46**	**47**	**48**

D. LISTED INFECTIOUS WASTES. Enter the four–digit number from 40 CFR Part 261.34 for each listed hazardous waste from hospitals, veterinary hospitals, medical and research laboratories your installation handles. Use additional sheets if necessary.

49	50	51	52	53	54

E. CHARACTERISTICS OF NON–LISTED HAZARDOUS WASTES. Mark "X" in the boxes corresponding to the characteristics of non–listed hazardous wastes your installation handles. *(See 40 CFR Parts 261.21 – 261.24.)*

- [X] 1. IGNITABLE (D001)
- [ ] 2. CORROSIVE (D002)
- [ ] 3. REACTIVE (D003)
- [ ] 4. TOXIC (D000)

X. CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

SIGNATURE	NAME & OFFICIAL TITLE *(type or print)*	DATE SIGNED
[signature]	John F. Ryan, Vice President Manufacturing Administration	March 12, 1981

EPA Form 8700-12 (6-80) REVERSE

Do not make entries in shaded areas

ENVIRONMENTAL PROTECTION AGENCY

GENERATOR ANNUAL HAZARDOUS WASTE REPORT

This report is for the calendar year ending December 31, 1981.

AFFIX LABEL HERE

GENERAL INSTRUCTIONS: If you received a preprinted label attached to the mailing envelope in which this form was enclosed, affix it in the space provided. If any of the information on the label is incorrect, draw a line through it and provide the correct information in the appropriate section below. If the information is correct and complete, leave Sections I, II, and III below blank. If you did not receive a preprinted label, complete all sections. REFER TO THE SPECIFIC INSTRUCTIONS CONTAINED IN THIS BOOKLET BEFORE COMPLETING THIS FORM. The information requested in this report is required by law (Section 3002 of the Resource Conservation Recovery Act).

RECEIVED
FEB 25 1983
ENVIRONMENTAL PROTECTION DIVISION
LAND PROTECTION BRANCH

Please print/type with elite type (12 characters per inch)

I. GENERATOR'S EPA I.D. NUMBER

T/A C

F GAD980515241 1 1

1 2 13 14 15

II. NAME OF INSTALLATION

CBS RECORDS

30 69

III. INSTALLATION MAILING ADDRESS

3 5152 COLUMBIA DRIVE

15 16 45

Street or P.O. Box

4 CARROLLTON GA 30117

15 16 41 42 47 51

City or Town State Zip Code

IV. LOCATION OF INSTALLATION (if different than section III above)

5

15 16 45

Street or Route number

6

15 16 41 42 47 51

City or Town State Zip Code

V. INSTALLATION CONTACT

2 KEALEY HARRY R

15 16 45

Name (last and first)

404-836-2325

46 55

Phone No. (area code & no.)

SIC CODE 3652
3679

VI. CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

HARRY R. KEALEY	DIRECTOR, ENG. SERVICES	Harry Kealey	2/22/83
Print/Type Name	Title	Signature of Authorized Representative	Date Signed

EPA Form 8700-13A(5-80) (Revised 10-82)

Tear out here

Do not make entries in shaded areas

ENVIRONMENTAL PROTECTION AGENCY

Generator Annual Hazardous Waste Report (cont.)

This report is for the calendar year ending December 31, 1981.

Date rec'd: _____ Rec'd by: _____

VII. GENERATOR'S EPA I.D. NO.

T/A C

G | G | A | D | 9 | 8 | 0 | 5 | 1 | 5 | 2 | 4 | 1 | 3 | 1

1 2 13 14 15

VIII. FACILITY NAME (specify facility to which all wastes on this page were shipped)

IX. FACILITY'S EPA I.D. NO.

F

16 28

X. FACILITY ADDRESS

XI. TRANSPORTATION SERVICES USED (List the name and EPA identification numbers of all transporters whose services were used during 1981. This section to be completed only once. Do not repeat on supplemental sheets.)

XII. WASTE IDENTIFICATION

Sequence # (1–32)	Line #	A. Description of Waste	B. DOT Hazard code (33–34)	C. EPA Hazardous Waste No. (see instructions) (35–38)	(39–42)	D. Amount of Waste (43–46)	(47–50)	(51–59)	E. Unit of Measure (60)
	1								
	2								
	3								
	4								
	5								
	6								
	7								
	8								
	9								
	10								
	11								
	12								

Tear out here

XIII. COMMENTS (enter information by section number—see instructions)

No hazardous waste was generated during 1981 calendar year.

Do not make entries in shaded areas

OMB#: 2050-0005 Expires: 1-31-83

ENVIRONMENTAL PROTECTION AGENCY

FACILITY ANNUAL HAZARDOUS WASTE REPORT

This report is for the calendar year ending December 31, 1981.

AFFIX LABEL HERE

GENERAL INSTRUCTIONS: If you received a preprinted label attached to the mailing envelope in which this form was enclosed, affix it in the space provided. If any of the information on the label is incorrect, draw a line through it and provide the correct information in the appropriate section below. If the information is correct and complete, leave Sections II and III below blank. If you did not receive a preprinted label, complete all sections. REFER TO THE SPECIFIC INSTRUCTIONS CONTAINED IN THIS BOOKLET BEFORE COMPLETING THIS FORM. The information requested in this report is required by law (Section 3004 of the Resource Conservation Recovery Act).

RECEIVED
FEB 25 1983
ENVIRONMENTAL PROTECTION DIVISION
LAND PROTECTION BRANCH

Please print/type with elite type (12 characters per inch)

I. FACILITY EPA I.D. NUMBER

T/A C

FGAD980515241 1

II. NAME OF FACILITY

CBS RECORDS

III. FACILITY MAILING ADDRESS

3515 2 COLUMBIA DRIVE

Street or P.O. Box

4 CARROLLTON GA 30117

City or Town State Zip Code

IV. LOCATION OF FACILITY (if different than section III above)

5

Street or Route number

6

City or Town State Zip Code

V. FACILITY CONTACT

2 KEALEY HARRY R

Name (last and first)

404-836-2325

Phone No. (area code & no.)

VI. COST ESTIMATES FOR FACILITIES

$ 30,750

Cost Estimate for Facility Closure

$

Cost Estimate for Post Closure Monitoring and Maintenance (disposal facilities only)

VII. CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Harry R. Kealey, Director, Eng. Servies — Harry Kealey — 2/22/83

Print/Type Name — Title — Signature of Authorized Representative — Date Signed

EPA Form 8700-13B(5-80) (Revised 10-82)

Tear out here

Do not make entries in shaded areas

ENVIRONMENTAL PROTECTION AGENCY

Facility Annual Hazardous Waste Report (cont.)

This report is for the calendar year ending December 31, 1981.

VIII. FACILITY'S EPA I.D. NO.

T/A C

F G A D 9 8 0 5 1 5 2 4 1 1

1 2 13 14 15

Date received: _____

Received by: _____

IX. GENERATOR'S EPA I.D. NO.

G

16 28

X. GENERATOR NAME (specify generator from whom all wastes on this page were received)

XI. GENERATOR ADDRESS

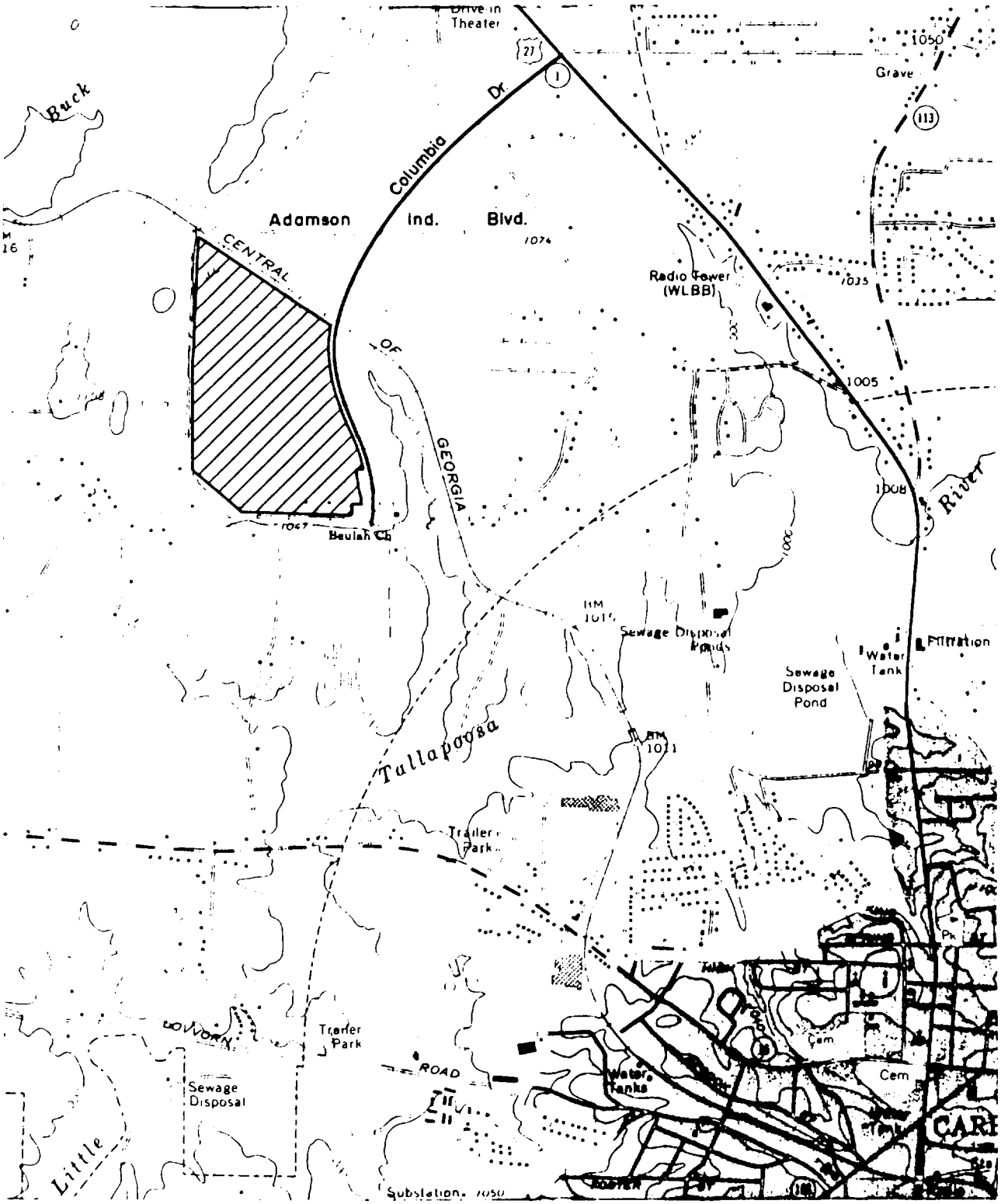
XII. WASTE IDENTIFICATION

Sequence # (29–32)	Line #	A. Description of Waste	B. EPA Hazardous Waste No. (see instructions) (33–36, 37–40, 41–44, 45–48)	C. Handling Method (49–51)	D. Amount of Waste (52–60)	E. Unit of Measure (61)
	1					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10					
	11					
	12					

Tear out here

XIII. COMMENTS (enter information by section number—see instructions)

No hazardous waste was generated, treated, or stored during 1981 calendar year.



CBS RECORDS - CARROLLTON, GA.

SCALE: 1" = 2000'

Continued from page 4

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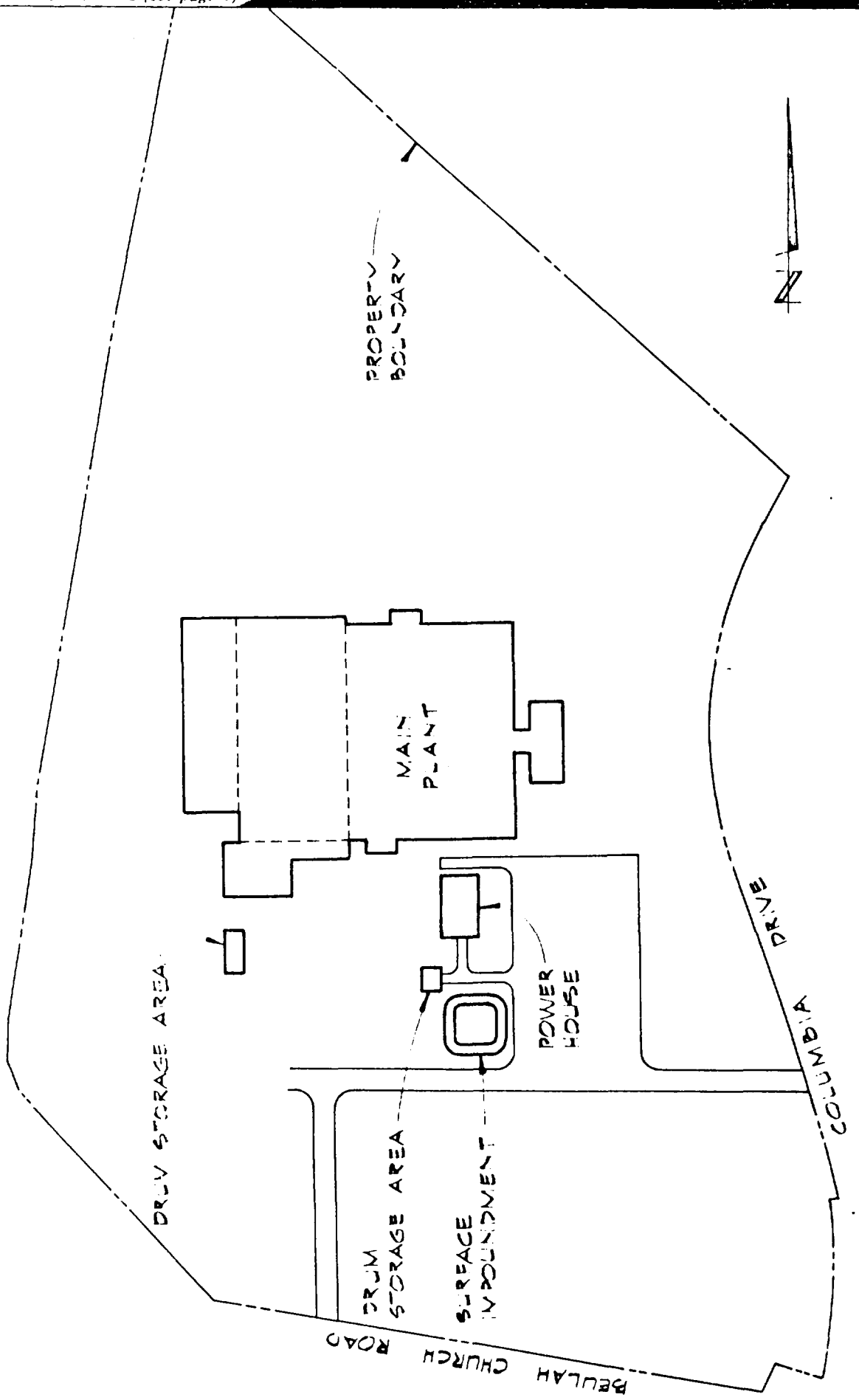
V. FACILITY DRAWING *(see page 4)*



CBS RECORDS · CARROLLTON, GA.

SCALE: 1" = 400'

CBS RECORDS

A Division of CBS Inc.

5152 COLUMBIA DR., P.O. BOX 1528, CARROLLTON, GA. 30117 (404) 836-2000

JOSEPH F. KROLL
Vice President, Manufacturing

April 9, 1981

Ms. Rita D. Ford
Acting RCRA Project Officer
Region IV
UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY
345 Courtland Street
Atlanta, Georgia 30365

CBS
RECORDS

Dear Ms. Ford:

Your letter to me of March 18th of this year indicated certain deficiencies in Part A of the Hazardous Waste Permit application forwarded to you on March 12th of this year.

Attached hereto is the fully executed application which we believe covers the deficiencies noted in your letter of March 18th.

If any further questions arise on this application, please give me a call at (404) 836-2100.

Very truly yours,

Joseph F. Kroll

Attachments

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 characters/inch).

Form Approved OMB No. 158-R0175

FORM 1 GENERAL

EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY

GENERAL INFORMATION

Consolidated Permits Program

(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER

F GAD980515241 3 D

LABEL ITEMS

I. EPA I.D. NUMBER

III. FACILITY NAME

IV. FACILITY MAILING ADDRESS

VI. FACILITY LOCATION

000387

RECEIVED
EPA REGION IV

APR 15 9 28 AM '81

ENFORCEMENT

PLEASE PLACE LABEL IN THIS SPACE

GENERAL INSTRUCTIONS

If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent *(the area to the left of the label space lists the information that should appear)*, please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete Items I, III, V, and VI *(except VI-B which must be completed regardless)*. Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of bold-faced terms.

SPECIFIC QUESTIONS	MARK 'X' YES	NO	FORM ATTACHED
A. Is this facility a publicly owned treatment works which results in a discharge to waters of the U.S.? (FORM 2A)		X	
B. Does or will this facility *(either existing or proposed)* include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters of the U.S.? (FORM 2B)		X	
C. Is this a facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C)		X	
D. Is this a proposed facility *(other than those described in A or B above)* which will result in a discharge to waters of the U.S.? (FORM 2D)		X	
E. Does or will this facility treat, store, or dispose of hazardous wastes? (FORM 3)	X		
F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X	
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		X	
H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)		X	
I. Is this facility a proposed stationary source which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	
J. Is this facility a proposed stationary source which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	

III. NAME OF FACILITY

1 SKIP CBS RECORDS

IV. FACILITY CONTACT

A. NAME & TITLE *(last, first, & title)*	B. PHONE *(area code & no.)*		
2 KROLL JOE - VICE PRES. MFG.	404	836	2000

V. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX	B. CITY OR TOWN	C. STATE	D. ZIP CODE
3 5152 COLUMBIA DRIVE	4 CARROLLTON	GA	30117

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER	B. COUNTY NAME
5 5152 COLUMBIA DRIVE	CARROLL

C. CITY OR TOWN	D. STATE	E. ZIP CODE	F. COUNTY CODE *(if known)*
6 CARROLLTON	GA	30117	

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

VII. SIC CODES *(4-digit, in order of priority)*

A. FIRST	B. SECOND
3652 (specify) PHONOGRAPH RECORDS	3679 (specify) MAGNETIC RECORDING TAPES
C. THIRD	**D. FOURTH**
(specify)	(specify)

VIII. OPERATOR INFORMATION

A. NAME: CBS, INC.

B. Is the name listed in Item VIII-A also the owner? [X] YES [ ] NO

C. STATUS OF OPERATOR *(Enter the appropriate letter into the answer box; if "Other", specify.)*
F = FEDERAL
S = STATE
P = PRIVATE
M = PUBLIC *(other than federal or state)*
O = OTHER *(specify)*

P (specify)

D. PHONE *(area code & no.)*: 212 975 4321

E. STREET OR P.O. BOX: 51 WEST 52ND STREET

F. CITY OR TOWN	G. STATE	H. ZIP CODE
NEW YORK	NY	10019

IX. INDIAN LAND

Is the facility located on Indian lands? [ ] YES [X] NO

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES *(Discharges to Surface Water)*	N	
B. UIC *(Underground Injection of Fluids)*	U	
C. RCRA *(Hazardous Wastes)*	R	
D. PSD *(Air Emissions from Proposed Sources)*	P	3652-022-7783-C (Tapes) Construction Permit--Operations Permit Application Pending
E. OTHER *(specify)*		3552-022-7167-C (specify) (Air Emissions Process)
E. OTHER *(specify)*		3552-022-6875-C (specify) (Air Emissions Process)

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property bounderies. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS *(provide a brief description)*

MANUFACTURE MAGNETIC RECORDING TAPE, 12" L.P. RECORDS, AND 7" 45 RPM RECORDS.

XIII. CERTIFICATION *(see instructions)*

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE *(type or print)*	B. SIGNATURE	C. DATE SIGNED
V.P.- Manufacturing Administration John F. Ryan	John F. Ryan	April 9, 1981

COMMENTS FOR OFFICIAL USE ONLY

C

Please print or type in the unshaded areas only
(fill–in areas are spaced for elite type, i.e., 12 characters/inch).

CBS Records

Form Approved OMB No. 158-S80004

FORM 3 RCRA

EPA

U. ENVIRONMENTAL PROTECTION AGENCY

HAZARDOUS WASTE PERMIT APPLICATION

Consolidated Permits Program

(This information is required under Section 3005 of RCRA.)

I. EPA I.D. NUMBER

S														T/A	C
F	G	A	D	9	8	0	5	1	5	2	4	1		3	1

1 2 12 13 14 15

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (yr., mo., & day)	COMMENTS
23	24 - 29	

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below *(mark one box only)* to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA I.D. Number, or if this is a revised application, enter your facility's EPA I.D. Number in Item I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)* Contract Date Oct. 13, 1978 Grounds Broken

[X] 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

FOR EXISTING FACILITIES, PROVIDE THE DATE *(yr., mo., & day)* OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*

C	YR.	MO.	DAY
8	7 8	1 0	1 7

[ ] 2. NEW FACILITY *(Complete item below.)*

FOR NEW FACILITIES, PROVIDE THE DATE *(yr., mo., & day)* OPERATION BEGAN OR IS EXPECTED TO BEGIN

YR.	MO.	DAY

B. REVISED APPLICATION *(place an "X" below and complete Item I above)*

[ ] 1. FACILITY HAS INTERIM STATUS

[ ] 2. FACILITY HAS A RCRA PERMIT

III. PROCESSES – CODES AND DESIGN CAPACITIES

A. PROCESS CODE – Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the form *(Item III-C)*.

B. PROCESS DESIGN CAPACITY – For each code entered in column A enter the capacity of the process.

1. AMOUNT – Enter the amount.
2. UNIT OF MEASURE – For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER *(barrel, drum, etc.)*	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D79	GALLONS OR LITERS
LANDFILL	D80	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D81	ACRES OR HECTARES
OCEAN DISPOSAL	D82	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D83	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER *(Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Item III-C.)*	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	V
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

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EXAMPLE FOR COMPLETING ITEM III *(shown in line numbers X-1 and X-2 below)*: A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons. The facility also has an incinerator that can burn up to 20 gallons per hour.

S														T/A	C
C	–	D	U	P											1

1 2 12 13 14 15

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	B. 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE (from list above)	B. 1. AMOUNT	B. 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY
X-1	S 0 2	600	G		5				
X-2	T 0 3	20	E		6				
1	S 0 1	140,000	G		7				
2	S 0 4	880,000	G		8				
3	T 0 1	1,700	U		9				
4					10				

Continued from the front.

III. PROCESSES *(continued)*

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESSES *(code "T04")*. FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

IV. DESCRIPTION OF HAZARDOUS WASTES

A. **EPA HAZARDOUS WASTE NUMBER** – Enter the four–digit number from 40 CFR, Subpart D for each listed hazardous waste you will handle. If you handle hazardous wastes which are not listed in 40 CFR, Subpart D, enter the four–digit number*(s)* from 40 CFR, Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.

B. **ESTIMATED ANNUAL QUANTITY** – For each **listed waste** entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each **characteristic** or **toxic contaminant** entered in column A estimate the total annual quantity of all the non–listed waste*(s)* that will be handled which possess that characteristic or contaminant.

C. **UNIT OF MEASURE** – For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. **PROCESSES**

1. PROCESS CODES:
   For listed hazardous waste: For each **listed** hazardous waste entered in column A select the code*(s)* from the list of process codes contained in Item III to indicate how the waste will be stored, treated, and/or disposed of at the facility.
   For non–listed hazardous wastes: For each characteristic or toxic contaminant entered in column A, select the code*(s)* from the list of process codes contained in Item III to indicate **all** the processes that will be used to store, treat, and/or dispose of all the non–listed hazardous wastes that possess that characteristic or toxic contaminant.
   Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code*(s)*.

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER – Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

1. Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B,C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other EPA Hazardous Waste Number that can be used to describe the hazardous waste.

EXAMPLE FOR COMPLETING ITEM IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* – A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non–listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. EPA HAZARD. WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2				*included with above*

 CONTINUE ON PAGE 3

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

Form Approved OMB No. 158-S80004

EPA I.D. NUMBER (enter from page 1)	FOR OFFICIAL USE ONLY
W G A D 3 1	W DUP 2 DUP

IV. DESCRIPTION OF HAZARDOUS WASTES (continued)

LINE NO.	A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)				D. PROCESSES 2. PROCESS DESCRIPTION (if a code is not entered in D(1))
1	F001	425	T	S01	Projected figures by 12/82			NOT IN OPERATION Apr 82 Brand new facility Solvent recovery
2	F003	2	T	S01				
3	F005	15	T	S01				
4	F006	2600	T	S01				
5	F007	30	T	S04	T01	S01		Ni + Chrome Sludges HW Sites alternate
6	F008	3	T	S01				
7	F009	540	T	T01	S01			
8	D001	18	T	S01				
9	U002	1300	P	S01				2 filter presses 2 evaporators 2 chrome reduction 1 neutralization
10	U031	1100	P	S01				
11	U057	2400	P	S01				
12	U140	1000	P	S01				
13	U154	1600	P	S01				
14	U210	3900	P	S01				Flow Equalization Chromate reduction 5-55 drums analysis
15	U220	1500	P	S01				
16								
17								no groundwater wells yet
18								
19								
20								
21								
22								
23								
24								
25								
26								

Figures prepared by Engineering firm

EPA Form 3510-3 (6-80)

CONTINUE ON REVERSE

Continued from the front.

IV. DESCRIPTION OF HAZARDOUS WASTES *(continued)*

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM ITEM D(1) ON PAGE 3.

EPA I.D. NO. *(enter from page 1)*

F G A D 3 6

V. FACILITY DRAWING

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail).*

VI. PHOTOGRAPHS

All existing facilities must include photographs *(aerial or ground—level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail).*

VII. FACILITY GEOGRAPHIC LOCATION

~~LATITUDE~~ *(degrees, minutes, & seconds)*	~~LONGITUDE~~ *(degrees, minutes, & seconds)*
LONGITUDE - 085 06 030	LATITUDE - 33 36 020

VIII. FACILITY OWNER

[X] A. If the facility owner is also the facility operator as listed in Section VIII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VIII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. *(area code & no.)*
E	

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE
F	G		

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME *(print or type)*	B. SIGNATURE	C. DATE SIGNED
John F. Ryan	John F. Ryan	April 9, 1981

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME *(print or type)*	B. SIGNATURE	C. DATE SIGNED

CONTINUE ON PAGE 5