35246

U. S. ENVIRONMENTAL PROTECTION AGENCY
REGION IV, ATHENS, GEORGIA

MEMORANDUM

DATE: JUL 25 1989

SUBJECT: Westinghouse Screening Site Inspection Final Report
ESD Project No. 89-300

FROM: Dan Thoman
Hazardous Waste Section
Environmental Compliance Branch
Environmental Services Division

TO: Brian Hollaway
Site Assessment Section
Site Investigation and Support Branch
Waste Management Division

THRU: M. D. Lair, Chief
Hazardous Waste Section
Environmental Compliance Branch
Environmental Services Division

Attached is the final report for the above mentioned site. If you have any questions, please call me at FTS 250-3171.

Attachment

cc: Finger/Patton
Lair/Bokey
Knight

FIELD INVESTIGATION
WESTINGHOUSE COMMERCIAL NUCLEAR FUEL DIVISION FACILITY
RICHLAND COUNTY
COLUMBIA, SOUTH CAROLINA

INTRODUCTION

During the week of February 27, 1989, a screening site inspection (SSI) was conducted at the Westinghouse Commercial Nuclear Fuel Division, Richland County, Columbia, South Carolina. The investigation was conducted by William Bokey (field project manager), Roger Carlton, Dan Thoman and Christina Cunningham of the United States Environmental Protection Agency (US-EPA), Region IV, Environmental Services Division, Environmental Compliance Branch, Hazardous Waste Section.

SUMMARY

A total of 29 samples were collected during the screening site investigation including 9 ground water samples, 1 spring sample, 7 surface water samples, 2 blank water samples, 8 sediment samples and 2 soil samples. The samples were analyzed for purgeable organic compounds, extractable organic compounds, pesticides, PCB's, metals, cyanide, fluoride, ammonia, nitrate-nitrite nitrogen and total Kjeldahl nitrogen.

Purgeable organic compounds were identified in 7 of the ground water samples and the spring sample. Tetrachloroethylene was detected most frequently. Vinyl chloride and trichloroethylene were detected at concentrations above the National Primary Drinking Water Regulations Maximum Contaminant Level (MCL).
Extractable organic compounds were detected at low concentrations in 7 of the ground water samples. A variety of metals including barium, chromium, copper, lead, zinc and manganese were detected in the ground water and spring samples. The MCL's for barium, chromium, lead and manganese were exceeded in some or all of the samples.

Purgeable organic compounds were identified in three of the surface water samples. Two extractable organic compounds were detected in the surface water samples. Several metals were detected in the samples including barium, zinc, aluminum, manganese and sodium.

Purgeable organic compounds were detected in 6 of the 8 sediment samples. Extractable organic compounds were detected in 3 sediment samples and 1 soil sample. Sediment Sample WH-022 contained benzo-a-pyrene and benzo-a-anthracene, both at concentrations of 280J ug/kg. Sample WH-010 contained benzo-a-pyrene and benzo-a-anthracene and indeno(1,2,3-cd)pyrene at concentrations of 18,000 ug/kg, 13,000 ug/kg and 26,000 ug/kg, respectively. In most cases the metals concentrations detected in the sediment samples were consistent with the concentrations detected in the background sample. Sample WH-010 contained a high concentration of lead and of special concern were samples WH-010 and WH-013 both of which contained 0.06 mg/kg of mercury. Cyanide was detected in sediment sample WH-013 at a concentration of 0.34 mg/kg.

SITE DESCRIPTION AND BACKGROUND (1) (2)

The original plant was constructed in 1969 and is located on South Carolina Highway 48 (Bluff Road) in Richland County, approximately 8 miles southeast of Columbia, South Carolina (see Figure 1). The Westinghouse plant fabricates nuclear fuel assemblies containing low-enriched (less than or equal to five percent uranium 235) uranium oxide fuel for use in commercial light-water nuclear-powered reactors.

The fabrication process involves the chemical conversion of uranium hexafluoride (UF6) to uranium dioxide (UO2) using the ammonium diuranate process. The ammonium diuranate process generates both liquid and solid wastes. Prior to chemical waste treatment, the aqueous waste stream contains one to three percent of ammonium fluoride and three to ten percent of free ammonia. The ammonia is removed using steam distillation and recycled. Fluoride is removed by precipitation with calcium hydroxide and stored in holding lagoons. The supernatant discharge from the lagoons is combined with the effluent from the sanitary wastewater treatment plant and is discharged to Sunset Lake. The effluent is regulated via a NPDES permit issued by South Carolina Department of Health and Environmental Control (SC-DHEC).

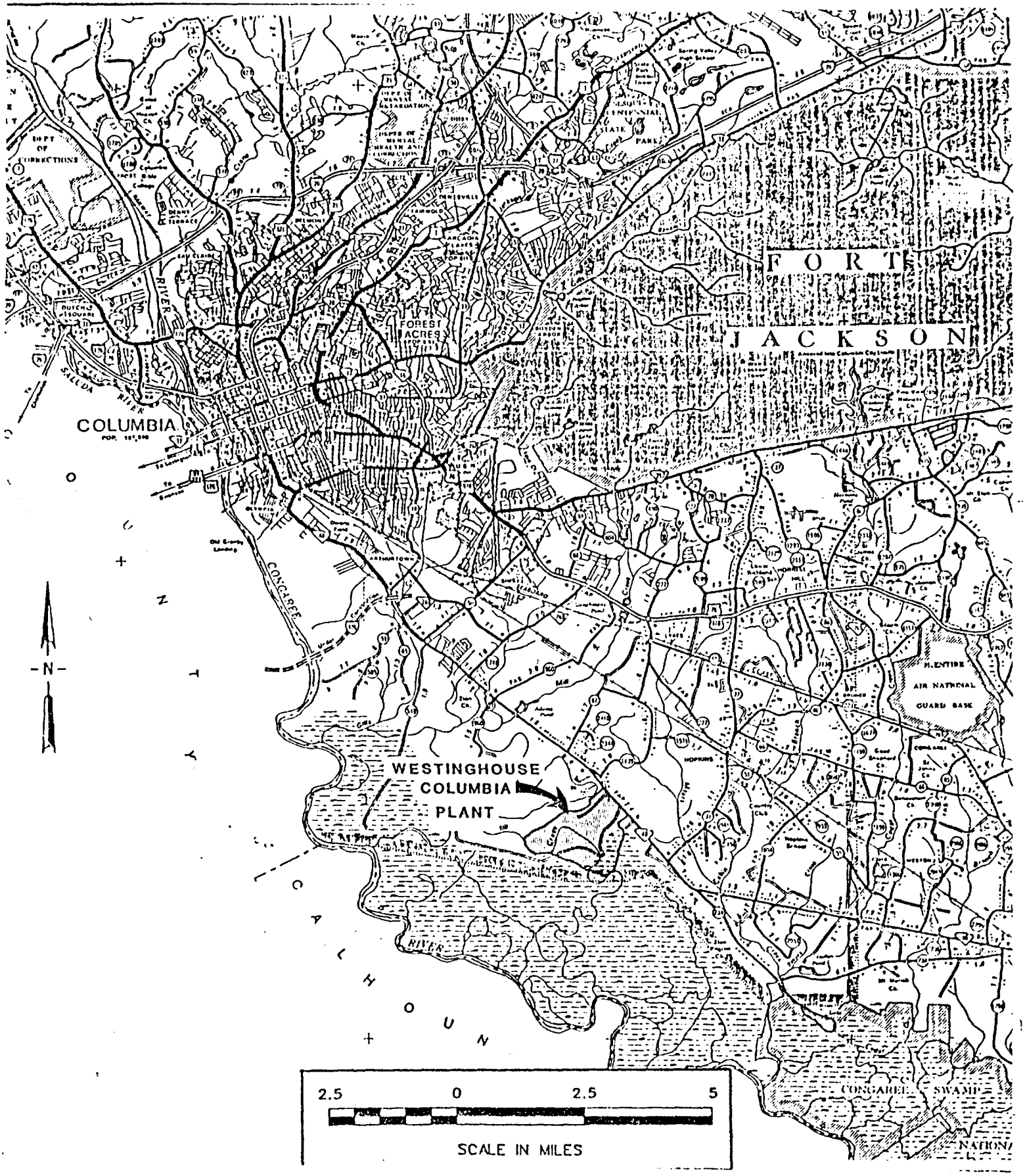
In April 1980, ground water contamination was suspected when elevated concentrations of fluoride and ammonia nitrogen were detected in a pond and spring on the plant property. Subsequent ground water investigations indicated that the source of the contamination detected in the pond and spring was the plant wastewater treatment area where process wastewater containing fluoride and ammonia were received and the ammonia nitrogen storage area.

Another possible source of the fluoride contamination may have been a pit located south of the facility where calcium fluoride sludge was placed temporarily. However, the sludge was only stored there a short time because SC-DHEC requested that it be removed from the pit.

SITE GEOLOGY AND HYDROGEOLOGY (1) (2)

The upper most formation at the site is composed of a stratified, but poorly sorted, mixture of sand, clay, silt and gravel and includes sediments of the Okefenokee Formation, which underlies the Okefenokee Terrace. These shallow sediments generally occur to a depth of 20 to 40 feet at the plant site, depending on topography. The Black Mingo Formation occurs below the shallow sediments and consists of an upper clay unit and a basal sand unit. The thickness of the Black Mingo Formation beneath the plant site is estimated to be 75 feet. The Tuscaloosa Formation occurs below the Black Mingo Formation and overlies bedrock at a depth of approximately 240 feet to 290 feet below land surface. The Tuscaloosa Formation generally consists of multi-colored clay interbedded with fine-to coarse grained sand. The bedrock beneath the Tuscaloosa Formation is typically composed of igneous and metamorphic rock.
Four hydrogeologic units were identified during previous studies at the site. The units identified were: a shallow surficial aquifer beneath the site (unit 1); the upper 35 to 60 feet of the Black Mingo Formation which is composed of dry clay and brittle shale (unit 2); the basal sand portion of the Black Mingo Formation which is often referred to as the Lower Black Mingo Unit of the Black Mingo Aquifer System and is an artisan sand aquifer (unit 3); and the Tuscaloosa

FIGURE 1
PLANT LOCATION MAP
WESTINGHOUSE NFD
COLUMBIA, SOUTH CAROLINA



Aquifer System which consists of the sands and clays of the Tuscaloosa Formation (unit 4). It appears that the ground water flow in unit 1, near the wastewater treatment plant, is in a south-southwesterly direction.

RESULTS AND DISCUSSION

A total of 29 samples were collected during the screening site inspection including 9 ground water samples, 1 spring sample, 7 surface water samples, 2 blank water samples, 8 sediment samples and 2 soil samples (see Figure 2). The samples were analyzed for purgeable organic compounds, extractable organic compounds, pesticides, PCB's, metals, cyanide, fluoride, ammonia, nitrate-nitrite nitrogen and total Kjeldahl nitrogen. Table 1 describes the sample types and collection locations. The analytical data collected during this investigation are summarized in Tables 2, 5 and 7. Complete analytical data, including the applicable detection limits, are presented in Appendix A. Abbreviations used in this report when discussing the concentrations of individual compounds include:

J - estimated value
N - presumptive evidence of the presence of the material

Ground Water

A total of 10 samples were collected including 1 spring sample, 7 permanent monitor well samples and 2 temporary sand point well samples. Table 2 summarizes the analytical data from these samples. Table 3 presents data on the wells including depth to water from the top of casing, total depth from the top of casing, the construction material and pertinent comments concerning the purge water. Table 4 presents the lithologic profiles for the two temporary sand point wells installed for this investigation.

Purgeable organic compounds were identified in 7 of the ground water samples and the spring sample. Tetrachloroethylene was detected most frequently, in 7 samples, and at concentrations ranging from 0.56J micrograms per liter (ug/l) in sample WH-005 to 370 ug/l in sample WH-012. Vinyl chloride was identified in a single sample, WH-028, at a concentration of 30J ug/l. The National Primary Drinking Water Regulations Maximum Contaminant Level (MCL) for vinyl chloride is 2 ug/l. Five samples contained detectable concentrations of trichloroethylene ranging from 0.82J ug/l to 130 ug/l. Sample WH-011 contained 130 ug/l and sample WH-028 contained 5.5J ug/l both of which are in excess of the trichloroethylene MCL of 5 ug/l. Other compounds with specified MCL's which were detected in the samples at concentrations less than the MCL included 1,1-dichloroethylene, 1,2-dichloroethane and 1,1,1-trichloroethane.

Extractable organic compounds were detected at low concentrations in 7 of the ground water samples. Di-N-butylphthalate was detected in samples WH-007, WH-025 and WH-028 at concentrations of 21 ug/l, 16J ug/l and 30 ug/l, respectively. Samples WH-007 and WH-028 contained bis(2-ethylhexyl)phthalate at concentrations of 57 ug/l and 33J ug/l. Phenol was detected in sample WH-005 at 2.2J ug/l and sample WH-006 at 1.7J ug/l. Sample WH-028 contained 4.6J ug/l of naphthalene.

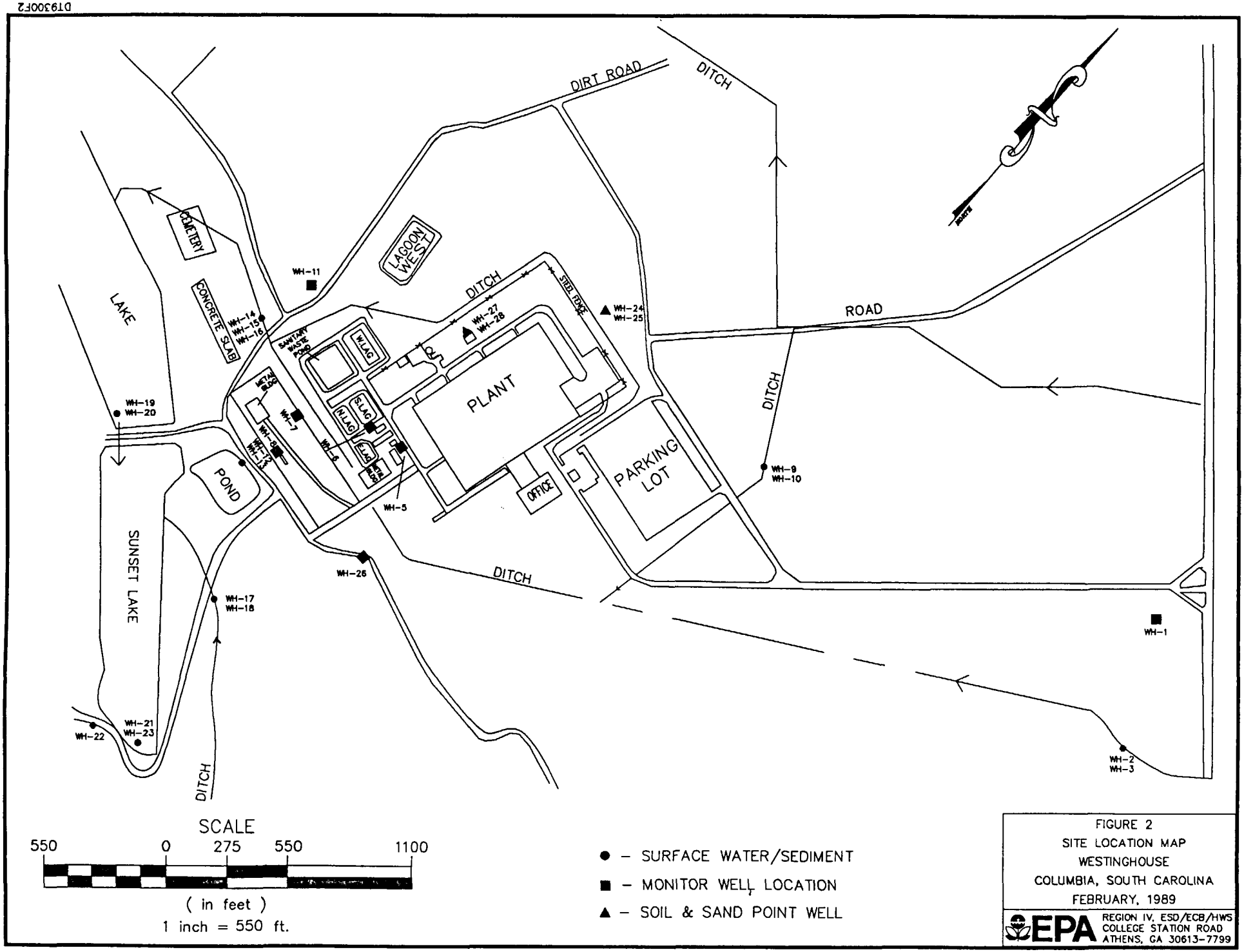


FIGURE 2
SITE LOCATION MAP
WESTINGHOUSE
COLUMBIA, SOUTH CAROLINA
FEBRUARY, 1989

EPA REGION IV, ESD/ECB/HWS
COLLEGE STATION ROAD
ATHENS, GA 30613-7799

DT93OOF2

TABLE 1
DESCRIPTION OF SAMPLES
WESTINGHOUSE
COLUMBIA, SOUTH CAROLINA

SAMPLE NUMBER	SAMPLE TYPE	DESCRIPTION
WH-001	Ground Water	Sample collected from well 24. The well is located upgradient of the facility adjacent to Bluff road.
WH-002	Surface Water	Background surface water sample collected from the northeast ditch.
WH-003	Sediment	Background sediment sample collected from the norhteast ditch.
WH-004	Water	Trip blank.
WH-005	Ground Water	Sample collected from well 28 which is located next to boiler building # 1.
WH-006	Ground Water	Sample collected from well 30 located between the CaFl lagoon and the storage tanks.
WH-007	Ground Water	Sample collected from well 7.
WH-008	Ground Water	Sample collected from well 32.
WH-009	Surface Water	Upgradient sample collected from the ditch north of the parking area before it entered the culvert under the parking area.
WH-010	Sediment	Sample collected from the same location as sample WH-009.
WH-011	Ground Water	Sample collected from well 33.
WH-012	Spring Water	Sample collected from the area between the spring and the pond where the steps are located.
WH-013	Sediment	Sample collected from the same location as sample WH-012.
WH-014	Surface Water	Sample collected from the drainage ditch discharge located south west of the plant.
WH-015	Sediment	Sample collected from the same location as sample WH-014.
WH-016	Sediment	Duplicate of sample WH-015.

TABLE 1 (con't)
DESCRIPTION OF SAMPLES
WESTINGHOUSE
COLUMBIA, SOUTH CAROLINA

SAMPLE NUMBER	SAMPLE TYPE	DESCRIPTION
WH-017	Surface Water	Sample collected near the culvert from the drainage ditch south of the plant.
WH-018	Sediment	Sample collected from the same location as WH-017.
WH-019	Surface Water	Sample collected from Sunset Lake on the south side near the culvert.
WH-020	Sediment	Sample collected from the same location as sample WH-019.
WH-021	Surface Water	Sample collected from lower Sunset Lake.
WH-022	Sediment	Sample collected from discharge ditch of Sunset Lake.
WH-023	Surface Water	Duplicate of sample WH-021.
WH-024	Soil	Subsurface soil sample collected north of the drum storage area outside the fence. Sample collected from the vadose zone at a depth of 10 feet to 12.4 feet below land surface (BLS).
WH-025	Ground Water	Sample collected from temporary well point installed in borehole from sample WH-024.
WH-026	Ground Water	Sample collected from well 14 located south of the CaFl pit area.
WH-027	Soil	Subsurface soil sample collected from behind the oil recovery area. Sample collected from the vadose zone at a depth of 12 feet to 13.5 feet BLS.
WH-028	Ground Water	Sample collected from temporary well point installed in borehole from sample WH-027.
WH-029	Water	Inorganic field blank.

TABLE 2
GROUND WATER DATA SUMMARY
WESTINGHOUSE
COLUMBIA, SOUTH CAROLINA

EXTRACTABLE ORGANIC COMPOUNDS	WH-001 WELL 24 UG/L	WH-005 WELL 28 UG/L	WH-006 WELL 30 UG/L	WH-007 WELL 7 UG/L	WH-008 WELL 32 UG/L	WH-011 WELL 33 UG/L	WH-012 WELL 24 UG/L	WH-025 UG/L	WH-026 WELL 14 UG/L	WH-028 UG/L
NAPHTHALENE	--	--	--	--	NA	--	--	--	--	4.6J
DI-N-BUTYLPHTHALATE	--	--	--	21	NA	--	--	16J	--	30
BIS(2-ETHYLHEXYL) PHTHALATE	--	--	--	57	NA	--	--	--	--	33J
PHENOL	--	2.2J	1.7J	--	NA	--	--	--	--	--
OCTANOIC ACID	--	--	--	4JN	NA	--	--	--	--	--
DECANOIC ACID	--	--	--	2JN	NA	--	--	--	--	--
TRIMETHYLPENTYL ESTER	--	--	--	2JN	NA	--	--	--	--	--
BIS(DIMETHYLETHYL)METHYLPHENOL	--	--	--	2JN	NA	--	--	--	--	--
DODECANOIC ACID	--	--	--	10JN	NA	--	--	--	--	--
DIHYDROINDOLONE	--	--	--	--	NA	3JN	--	--	--	--
1 UNIDENTIFIED COMPOUND	--	30J	--	--	NA	--	--	70J	80J	--
ACETYLOXYOCTADECENOIC ACID, METHYL ESTER	--	--	--	--	NA	--	--	1JN	2JN	--
DIETHYLBENZENE (2 ISOMERS)	--	--	--	--	NA	--	--	--	--	4JN
ETHENYLETHYLBENZENE	--	--	--	--	NA	--	--	--	--	1JN
ETHYLDIMETHYLBENZENE (2 ISOMERS)	--	--	--	--	NA	--	--	--	--	7JN
CHLOROISOCYANATOBENZENE	--	--	1JN	2JN	NA	--	--	--	--	2JN
TRIMETHYLCYCLOHEXANEMETHANOL	--	--	--	--	NA	--	--	--	--	9JN
METHYLDIHYDROINDENE	--	--	--	--	NA	--	--	--	--	2JN
TETRAHYDRONAPHTHALENE	--	--	--	--	NA	--	--	--	--	2JN
BIS(DIMETHYLETHYL)CYCLOHEXADIENEDIONE	--	--	--	--	NA	--	--	--	--	8JN
3 UNIDENTIFIED COMPOUNDS	--	--	--	200J	NA	--	--	--	--	100J
PETROLEUM PRODUCT	--	--	--	N	NA	--	--	--	N	N
PHOSPHORIC ACID, TRIBUTYL ESTER	--	--	--	--	NA	--	--	--	--	30JN
BENZOTHIAZOLONE	--	--	--	--	NA	--	--	--	--	2JN
HEXANEDIOIC ACID, DIOCTYL ESTER	--	--	--	20JN	NA	--	--	2JN	--	2JN
PURGEABLE ORGANIC COMPOUNDS	**UG/L**	**UG/L**	**UG/L**	**UG/L**	**UG/L**	**UG/L**	**UG/L**	**UG/L**	**UG/L**	**UG/L**
VINYL CHLORIDE	--	--	--	--	--	--	--	--	--	30J
1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)	--	--	--	0.91J	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	--	--	--	--	--	2.6J	--	--	--	32
CHLOROFORM	--	--	--	0.81J	--	--	--	--	--	--
1,2-DICHLOROETHANE	--	--	--	--	0.84J	2.7J	--	--	--	--
1,1,1-TRICHLOROETHANE	--	0.60J	--	1.1J	--	--	--	--	--	--
TRICHLOROETHENE(TRICHLOROETHYLENE)	--	0.82J	--	1.6J	0.94J	130	--	--	--	5.5J
TETRACHLOROETHENE(TETRACHLOROETHYLENE)	--	0.56J	6.1	1.0J	--	240	370	320	--	49
TOLUENE	--	--	--	--	2.5J	--	--	--	--	--

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FOOTNOTES
NA - NOT ANALYZED
J - ESTIMATED VALUE
N - PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
-- - MATERIAL WAS ANALYZED FOR BUT NOT DETECTED

TABLE 2
GROUND WATER DATA SUMMARY
WESTINGHOUSE
COLUMBIA, SOUTH CAROLINA

	WH-001 WELL 24	WH-005 WELL 28	WH-006 WELL 30	WH-007 WELL 7	WH-008 WELL 32	WH-011 WELL 33	WH-012 SPRING	WH-025	WH-026 WELL 14	WH-028
INORGANIC ELEMENTS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
BARIUM	170	260	800	170	NA	230	120	220	180	2100
BERYLLIUM	--	17	12	--	NA	--	--	--	--	63
COBALT	--	--	26	16	NA	--	--	--	--	260
CHROMIUM	22	35	100	70	NA	31	--	43	26	510
COPPER	18	13	40	37	NA	--	--	--	15	210
MOLYBDENUM	--	--	--	15	NA	--	--	--	--	--
NICKEL	--	22	190	48	NA	--	--	25	--	770
LEAD	--	--	91	22	NA	--	--	--	12	400
TIN	--	--	--	73	NA	--	--	--	--	--
STRONTIUM	67	830	970	130	NA	170	180	70	120	690
TITANIUM	480	710	1200	2000	NA	500	12	360	340	10000
VANADIUM	29	44	100	180	NA	54	--	25	42	2000
YTTRIUM	--	12	28	18	NA	23	--	14	10	400
ZINC	80	32	200	83	NA	25	--	33	48	820
ALUMINUM	63000	87000	190000	120000	NA	39000	2000	36000	42000	1500000
MANGANESE	43	160	3700	190	NA	140	440	77	94	3400
	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
CALCIUM	6.3	90	140	5.4	NA	8.0	14	2.2	6.4	52
MAGNESIUM	3.1	17	18	2.5	NA	4.0	5.8	1.4	2.7	31
IRON	11	13	28	20	NA	15	0.078	8.0	12	860
SODIUM	1.4	31	380	140	NA	17	43	11	8.9	--
POTASSIUM	--	8.7	8.9	9.0	NA	2.3	10	--	--	--
GENERAL INORGANIC PARAMETERS	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
AMMONIA	--	.99	25	200	NA	--	120	--	--	1.4
FLUORIDE	0.23	29	29	65	NA	.33	34	.30	.52	0.37
NITRATE-NITRITE NITROGEN	0.60	46	270	88	NA	8.3	74	.86	2.0	1.6
TOTAL KJELDAHL NITROGEN	--	1.6	25	200	NA	.66	120	.29	.30	15

TABLE 3
WELL DATA
WESTINGHOUSE
COLUMBIA, SOUTH CAROLINA

SAMPLE NUMBER	WELL NUMBER	DEPTH TO WATER (FT)	TOTAL DEPTH (FT)	CONSTRUCTION MATERIAL/COMMENTS
WH-001	24	12.05	17.2	2 inch glued PVC. Water was light brown.
WH-005	28	13.00	17.05	2 inch glued PVC. Water was cloudy with pieces of grass floating in it.
WH-006	30	13.1	16.7	2 inch glued PVC. Ammonia smell in sampling area.
WH-007	7	10.65	18.8	2 inch glued PVC. Well was sanded up. Water contained grass and insect pieces. High pH likely due to grout contamination.
WH-008	32	24.1	30.2	2 inch glued PVC. Very silty water with grass debris throughout. Well purged to dryness. Recovery was extremly slow.
WH-011	33	15.75	20.5	2 inch glued PVC. Water was light brown.
WH-025	temporary sand point		12.4	2 inch stainless steel. Less than 1 foot of water in the well, recharged slowly. Water was turbid.
WH-026	14	17.4	31.35	2 inch glued PVC. Water was clear and free of debris.
WH-028	temporary sand point		12.5	2 inch stainless steel. Approximately 2 feet of water in the well. Water was turbid.

TABLE 4
LITHOLOGIC PROFILES OF TEMPORARY WELL BOREHOLES
WESTINGHOUSE
COLUMBIA, SOUTH CAROLINA

Ground water sample location WH-025

Depth (ft)	Description
0 - 1	Orange clay
1 - 2	Fine white sand
2 - 7	Coarse clayey sand
7 - 8.5	Light brown coarse sand
8.5 - 10	Light brown sand
10 - 12.4	Light brown sand, saturated at 10 feet below land surface

Ground water sample location WH-028

Depth (ft)	Description
0 - 0.3	Gravel
0.3 - 7	Coarse brown sand
7 - 8	Coarse brown sand mixed small amount of fine white sand
8 - 10.5	Gray clayey sand
10.5 - 12	Green "olive drab" sand
12 - 13.5	Coarse brown sand, saturated at 12 feet below land surface

TABLE 5
SURFACE WATER DATA SUMMARY
WESTINGHOUSE
COLUMBIA, SOUTH CAROLINA

	WH-002	WH-004	WH-009	WH-014	WH-017	WH-019	WH-021	WH-023
INORGANIC ELEMENTS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
BARIUM	91	NA	96	83	89	32	34	36
STRONTIUM	38	NA	68	67	160	26	28	29
TITANIUM	24	NA	40	45	45	18	14	19
ZINC	23	NA	24	32	--	--	--	--
ALUMINUM	3500	NA	8000	6500	3500	940	620	820
MANGANESE	420	NA	160	92	540	160	96	140
	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
CALCIUM	3.6	NA	5.8	7.0	18	2.7	2.9	3.1
MAGNESIUM	1.4	NA	1.2	2.1	10	0.97	1.1	1.2
IRON	3.3	NA	4.5	4.4	2.3	3.8	3.1	4.0
SODIUM	3.2	NA	3.8	6.0	16	4.7	4.7	4.8
POTASSIUM	--	NA	--	--	3.3	--	--	--
GENERAL INORGANIC PARAMETERS	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
AMMONIA	--	NA	.09	.41	4.3	.12	--	--
FLUORIDE	.21	NA	.20	0.59	5.1	.41	.29	.30
NITRATE-NITRITE NITROGEN	.07	NA	.93	.76	1.4	.25	.15	.15
TOTAL KJELDAHL NITROGEN	1.3	NA	2.0	1.8	6.4	.76	.94	.97
EXTRACTABLE ORGANIC COMPOUNDS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
BIS(2-ETHYLHEXYL) PHTHALATE	--	--	--	20	--	--	--	--
PHENOL	--	--	--	1.2J	--	--	--	--
SILOXANES (6 ISOMERS)	300JN	--	--	--	--	--	--	--
2 UNIDENTIFIED COMPOUNDS	50J	--	--	--	--	--	--	--
1 UNIDENTIFIED COMPOUND	--	--	10J	--	--	--	--	--
HEXADECENOIC ACID	--	--	--	--	--	--	4JN	--
PROMETON	--	--	--	--	--	--	1JN	1JN
ACETYLOXYOCTADECENOIC ACID, METHYL ESTER	--	--	--	1JN	1JN	1JN	21JN	1JN
PURGEABLE ORGANIC COMPOUNDS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
CIS-1,2-DICHLOROETHENE	--	--	--	0.91J	--	--	--	--
TRICHLOROETHENE(TRICHLOROETHYLENE)	--	--	--	2.8J	1.1J	--	--	--
TETRACHLOROETHENE(TETRACHLOROETHYLENE)	--	--	--	13	5.2	0.81J	--	--

****

FOOTNOTES
NA - NOT ANALYZED
J - ESTIMATED VALUE
N - PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
-- - MATERIAL WAS ANALYZED FOR BUT NOT DETECTED

Other compounds were identified or presumptively identified at concentrations at concentrations less than 30 ug/l.

Polychlorinated biphenyls (PCB's) and pesticides were not detected in any of the ground water or spring samples.

A variety of metals including barium, chromium, copper, lead, zinc and manganese were detected in the spring and ground water samples. Barium was detected in all the samples analyzed ranging in concentration from 120 ug/l in sample WH-012 to 2100 ug/l in sample WH-028. Sample WH-028 exceeded the MCL for barium of 1000 ug/l. Chromium was detected in 7 samples at concentrations ranging from 22 ug/l to 510 ug/l. Sample WH-006, WH-007 and WH-028 contained 100 ug/l, 70 ug/l and 510 ug/l of chromium, respectively. The MCL for chromium is 50 ug/l. Lead was detected in 4 samples at concentrations ranging from 12 ug/l to 400 ug/l. The MCL for lead is 50 ug/l and was exceeded in sample WH-006 which contained 91 ug/l and sample WH-028 which contained 400 ug/l. Manganese was detected in all the samples analyzed ranging in concentration from 43 ug/l to 3700 ug/l. The secondary MCL for manganese is 50 ug/l. This level was exceeded in all the samples except sample WH-001 which contained 43 ug/l.

Cyanide was not detected in any of the spring or ground water samples.

Four samples contained measurable amounts of ammonia and ranged in concentration from 0.99 milligrams per liter (mg/l) to 200 mg/l. Fluoride was detected in all the samples analyzed at concentrations ranging from 0.23 mg/l to 65 mg/l. The secondary MCL for fluoride is 2 mg/l. This level was exceeded in samples WH-005, WH-006, WH-007 and WH-012 which contained 29 mg/l, 29 mg/l, 65 mg/l and 34 mg/l, respectively.

Nitrite-nitrate nitrogen ranged between 0.6 mg/l and 270 mg/l. Total kjeldahl nitrogen ranged between not detected and 200 mg/l.

Surface Water

A total of 8 surface water samples were collected including one trip blank and one duplicate sample. The trip blank, sample WH-004 contained no detectable contaminants. Samples WH-021 and WH-023 are the duplicate samples. The analytical data summary for the surface water samples is presented in Table 5.

Purgeable organic compounds were identified in three of the surface water samples. Samples WH-014, WH-017 and WH-019 contained tetrachloroethylene at concentrations of 13 ug/l, 5.2 ug/l and 0.81J ug/l, respectively. Samples WH-014 and WH-017 contained 2.8J ug/l and 1.1J ug/l of trichloroethylene, and sample WH-014 contained 0.91J ug/l of cis-1,2-dichloroethene.

Several extractable organic compounds were detected in the surface water samples. Sample WH-014 contained 20 ug/l of bis(2-ethylhexyl)phthalate and 1.2J ug/l of phenol. There was presumptive evidence of several other compounds and several unidentified compounds detected in all the samples and concentrations ranged from 1JN ug/l to 300JN ug/l.

Polychlorinated biphenyls (PCB's) and pesticides were not detected in any of the surface water samples.

Several metals were detected in the samples including barium, zinc, aluminum, manganese and sodium. The concentration of barium ranged from 32 ug/l to 96 ug/l. Sample WH-002 the background sample contained 91 ug/l of barium. Zinc was detected at concentrations ranging between not detected and 32 ug/l. Sample WH-002 contained 23 ug/l of zinc. The concentration of all the other metals detected in the samples were also reasonably close to the concentrations detected in the background sample.

Cyanide was not detected in any of the surface water samples.

Ammonia was detected in four of the samples and ranged in concentration from 0.09 mg/l in sample WH-009 to 4.3 mg/l in sample WH-017. Fluoride was detected in all the samples ranging in concentration from 0.20 mg/l in sample WH-004 to 5.1 mg/l in sample WH-017. Nitrate-nitrite nitrogen was detected in all the samples and ranged between 0.07 mg/l in sample WH-002 to 1.4 mg/l in sample WH-017. The total Kjeldahl nitrogen ranged between 0.76 mg/l and 6.4 mg/l.

Field Parameters

Table 6 presents the pH, specific conductance and temperature measurements obtained while in the field. The pH of the samples ranged from slightly acidic, 5.3 SU in sample WH-025, to basic, 9.4 SU, in sample WH-007. Only two samples WH-007 collected from monitor well 7 and sample WH-012, collected from the spring, had pH values greater than 7.0 SU. The high pH measured in well 7 was possibly due to grout contamination. The conductivity ranged from a low of less than 20 umhos/cm in several of the surface water samples to a high of 1500 umhos/cm in sample WH-006 collected from monitor well 30 located near the CaFl lagoon. The temperature ranged from a low of 8.6 degrees centigrade in sample WH-017 collected from a drainage ditch to a high of 20.9 in sample WH-005 collected from well 28 which is located next to the boiler building.

Sediment and Soil Samples

A total of 8 sediment samples, including 1 duplicate, and 2 soil samples were collected. Samples WH-015 and WH-016 are duplicate sediment samples, sample WH-003 is the background sediment sample and samples WH-024 and WH-027 are soil samples. Table 7 summarizes the analytical data from these samples.

Purgeable organic compounds were detected in 6 of the 8 sediment samples. The soil samples and the sediment samples WH-018 and WH-020 contained no detectable purgeable organic compounds. Sample WH-003, the background sample, contained 330J micrograms per kilogram (ug/kg) of acetone and sample WH-015 contained 400J ug/kg of acetone. Samples WH-013, WH-015 and WH-016 contained 480J ug/kg, 10J ug/kg and 5.5J ug/kg of tetrachloroethylene, respectively. Toluene was detected in sample WH-010 at a concentration of 2,600J ug/kg while sample WH-016 contained 30J ug/kg of trichloroethylene and sample WH-022 contained 40 JN ug/kg of thiobismethane.

Extractable organic compounds were detected in sediment samples WH-003, WH-010, WH-022 and soil sample WH-027. Samples WH-018 and WH-020 contained the presumptive evidence of petroleum product. The background sediment sample, WH-003, contained a single compound, bis(2-ethylhexyl)phthalate at a concentration

TABLE 6
FIELD PARAMETERS
WESTINGHOUSE
COLUMBIA, SOUTH CAROLINA

SAMPLE NUMBER	pH (SU)	CONDUCTIVITY (umhos/cm @ 25 C)	TEMPERATURE (C)
WH-001	5.8	<20	15.9
WH-002	6.2	50	11
WH-005	6.0	750	20.9
WH-006	6.1	1500	16.4
WH-007	9.4	1200	15.6
WH-008	6.0	100	18.2
WH-009	6.0	80	12
WH-011	5.4	<20	16.8
WH-012	7.5	1190	14.7
WH-014	6.1	90	8.8
WH-017	6.7	270	8.6
WH-019	6.0	30	8.9
WH-021	6.0	<20	9.4
WH-023	6.0	<20	9.4
WH-025	5.3	60	13
WH-026	5.9	110	17.4
WH-028	5.8	<20	14.8

TABLE 7
SEDIMENT DATA SUMMARY
WESTINGHOUSE
COLUMBIA, SOUTH CAROLINA

EXTRACTABLE ORGANIC COMPOUNDS	WH-003 SED UG/KG	WH-010 SED UG/KG	WH-013 SED UG/KG	WH-015 SED UG/KG	WH-016 SED UG/KG	WH-018 SED UG/KG	WH-020 SED UG/KG	WH-022 SED UG/KG	WH-024 SOIL UG/KG	WH-027 SOIL UG/KG
4-CHLOROANILINE	--	--	--	--	--	--	--	--	--	200J
PHENANTHRENE	--	12000	--	--	--	--	--	--	--	--
FLUORANTHENE	--	62000	--	--	--	--	--	--	--	--
PYRENE	--	48000	--	--	--	--	--	330J	--	--
BIS(2-ETHYLHEXYL) PHTHALATE	14000	--	--	--	--	--	--	--	--	--
BENZO(A)ANTHRACENE	--	13000	--	--	--	--	--	280J	--	--
CHRYSENE	--	23000	--	--	--	--	--	420J	--	--
BENZO(B AND/OR K)FLUORANTHENE	--	50000	--	--	--	--	--	1100J	--	--
BENZO-A-PYRENE	--	18000	--	--	--	--	--	280J	--	--
INDENO (1,2,3-CD) PYRENE	--	26000	--	--	--	--	--	--	--	--
ACRIDINE	--	1000JN	--	--	--	--	--	--	--	--
CARBAZOLE	--	2000JN	--	--	--	--	--	--	--	--
METHYLPHENANTHRENE	--	2000JN	--	--	--	--	--	--	--	--
CYCLOPENTAPHENANTHRENE	--	2000JN	--	--	--	--	--	--	--	--
PHENANTHRENEDIONE	--	10000JN	--	--	--	--	--	--	--	--
NAPHTHALENEDICARBOXYLIC ACID	--	2000JN	--	--	--	--	--	--	--	--
BENZONAPHTHOFURAN (2 ISOMERS)	--	4000JN	--	--	--	--	--	--	--	--
BENZOFLUORENE (2 ISOMERS)	--	4000JN	--	--	--	--	--	--	--	--
METHYLFLUORANTHENE (3 ISOMERS)	--	10000JN	--	--	--	--	--	--	--	--
PHENANTHRENECARBONITRILE	--	2000JN	--	--	--	--	--	--	--	--
BENZOPHENANTHRENONE (4 ISOMERS)	--	10000JN	--	--	--	--	--	--	--	--
HEXANEDIOIC ACID, DIOCTYL ESTER	--	20000JN	--	--	--	--	--	--	--	--
BENZONAPHTHOTHIOPHENE	--	3000JN	--	--	--	--	--	--	--	--
BENZOPHENANTHRENE	--	5000JN	--	--	--	--	--	--	--	--
METHYLBENZANTHRACENE	--	1000JN	--	--	--	--	--	--	--	--
BENZOFLUORANTHENE (NOT B OR K)	--	4000J	--	--	--	--	--	--	--	--
PETROLEUM PRODUCT	--	--	--	--	--	N	N	--	--	--
PURGEABLE ORGANIC COMPOUNDS	**UG/KG**	**UG/KG**	**UG/KG**	**UG/KG**	**UG/KG**	**UG/KG**	**UG/KG**	**UG/KG**	**UG/KG**	**UG/KG**
ACETONE	330J	--	--	400J	--	--	--	--	--	--
TRICHLOROETHENE(TRICHLOROETHYLENE)	--	--	--	--	30J	--	--	--	--	--
TETRACHLOROETHENE(TETRACHLOROETHYLENE)	--	--	480J	10J	5.5J	--	--	--	--	--
TOLUENE	--	2600J	--	--	--	--	--	--	--	--
THIOBISMETHANE	--	--	--	--	--	--	--	40JN	--	--

****

FOOTNOTES

NA - NOT ANALYZED
J - ESTIMATED VALUE
N - PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
-- - MATERIAL WAS ANALYZED FOR BUT NOT DETECTED

TABLE 7
SEDIMENT DATA SUMMARY
WESTINGHOUSE
COLUMBIA, SOUTH CAROLINA

INORGANIC ELEMENTS	WH-003 SEDIMENT MG/KG	WH-010 SEDIMENT MG/KG	WH-013 SEDIMENT MG/KG	WH-015 SEDIMENT MG/KG	WH-016 SEDIMENT MG/KG	WH-018 SEDIMENT MG/KG	WH-020 SEDIMENT MG/KG	WH-022 SEDIMENT MG/KG	WH-024 SOIL MG/KG	WH-027 SOIL MG/KG
BARIUM	92	55	52	12	23	24	150	23	45	10
BERYLLIUM	--	--	0.78	--	--	--	1.8	--	--	--
COBALT	2.1	1.4	7.2	--	1.4	1.5	13	2.4	2.8	2.0
CHROMIUM	11	51	11	3.8	3.5	5.5	37	2.6	8.3	2.0
COPPER	2.8	7.0	9.5	--	--	2.8	20	1.9	1.2	--
NICKEL	--	3.6	5.5	--	--	--	18	--	2.7	4.2
LEAD	14	240	11	1.8	4.4	4.8	16	3.6	3.5	1.8
STRONTIUM	11	7.2	14	1.9	2.7	4.3	20	2.7	6.1	1.7
TITANIUM	160	130	290	71	100	190	1700	110	420	110
VANADIUM	24	14	26	4.7	7.1	10	73	4.9	15	7.9
YTTRIUM	4.2	2.9	6.8	1.2	2.1	2.6	17	1.3	5.1	1.8
ZINC	6.7	47	16	5.5	6.2	8.1	68	6.8	7.4	3.0
MERCURY	--	0.06	0.06	--	--	--	--	--	--	--
ALUMINUM	13000	5800	12000	1700	2400	5200	33000	2300	8100	3500
MANGANESE	72	110	130	78	250	70	470	300	48	12
CALCIUM	400	800	1400	290	160	420	1100	240	210	73
MAGNESIUM	260	320	460	120	93	360	4400	190	340	87
IRON	5700	6300	5300	1700	2100	4100	28000	2800	2600	3100
POTASSIUM	--	210	590	--	--	240	2500	--	300	--
GENERAL INORGANIC PARAMETERS	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
AMMONIA	66	60	160	17	7.1	12	54	23	4.5	3.3
CYANIDE	--	--	.34	--	--	--	--	--	--	--
FLUORIDE	61	47	570	28	33	59	120	39	32	20
NITRATE-NITRITE NITROGEN	--	--	--	200	--	--	--	--	--	--
TOTAL KJELDAHL NITROGEN	480	890	640	60	56	110	320	480	14	9.0

of 14,000 ug/kg. Sample WH-022 contained 5 individual compounds at concentrations ranging between 280J ug/kg to 1100 ug/kg including benzo-a-pyrene and benzo-a-anthracene, both at concentrations of 280J ug/kg. Sample WH-010 was the most contaminated sample containing 9 individual compounds ranging in concentration from 4,000 ug/kg to 62,000 ug/kg. The sample also contained the presumptive evidence of another 15 individual compounds. Benzo-a-pyrene and benzo-a-anthracene and indeno(1,2,3-cd)pyrene were detected in this sample at concentrations of 18,000 ug/kg, 13,000 ug/kg and 26,000 ug/kg, respectively.

Polychlorinated biphenyls (PCB's) and pesticides were not detected in any of the sediment or soil samples.

A variety of metals were detected in the samples including barium, chromium, copper, nickel, lead, zinc, manganese, magnesium and mercury. In most cases the metals concentrations detected in the samples were consistent with the concentrations detected in the background sample WH-003. Exceptions to this were chromium in sample WH-010 at 51 milligrams per kilogram (mg/kg) and WH-020 at 37 mg/kg while the background sample WH-003 contained 11 mg/kg. Sample WH-020 contained 20 mg/kg of copper, 470 mg/kg of manganese and 4,400 mg/kg of magnesium while sample WH-003 contained 2.8 mg/kg, 72 mg/kg and 260 mg/kg, respectively. Sample WH-010 contained 240 mg/kg of lead while the background sample contained 14 mg/kg. Samples WH-016 and WH-022 contained 250 mg/kg and 300 mg/kg of manganese while sample WH-003 contained 72 mg/kg. Of special concern were samples WH-010 and WH-013 both of which contained 0.06 mg/kg of mercury.

Cyanide was detected in sediment sample WH-013 at a concentration of 0.34 mg/kg.

Ammonia was measured in all the sediment and soil samples at concentrations ranging between 3.3 mg/kg in soil sample WH-027 and 160 mg/kg in sediment sample WH-013. Fluoride was also detected in all the samples at concentrations ranging between 20 mg/kg in soil sample WH-027 and 570 mg/kg in sample WH-013.

Nitrite-nitrate nitrogen was detected in a single sample, WH-015, at a concentration of 200 mg/kg. Total Kjeldahl nitrogen ranged between 9 mg/kg in soil sample WH-027 and 890 mg/kg in sediment sample WH-010.

METHODOLOGY

All sampling activities were conducted in accordance with the Engineering Support Branch Standard Operating Procedures and Quality Assurance Manual, April 1, 1986. Sample analyses were conducted in accordance with the Analytical Support Branch Operation and Quality Control Manual, June 1985.

REFERENCES

1. Groundwater Hydrology, Westinghouse Electric Corporation, Columbia, South Carolina, March 1982, Davis and Floyd, Inc., Consulting Engineers, Greenwood, South Carolina.

2. Update for Environmental Impact Appraisal, Westinghouse Electric Corporation, NFD Plant, Columbia, South Carolina, Docket No. 70-1151, April 1983.

3. Groundwater Mixing Zone Request, Westinghouse Columbia Plant, Richland County, South Carolina, June 2, 1988, S&ME, Inc., 11 Technology Circle, Columbia, South Carolina

4. Updated Preliminary Assessment, Westinghouse Electric-Nuclear Fuel Division, Richland County, June 13, 1988, South Carolina Department of Health and Environmental Control, Mr. Gerald Stewart

APPENDIX A

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 03/15/89

** PROJECT NO. 89-300 SAMPLE NO. 33592 SAMPLE TYPE: MONWL PROG ELEM: NSF COLLECTED BY: B BOKEY **
** SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC **
** STATION ID: WH-001 WELL 24 COLLECTION START: 02/28/89 1037 STOP: 00/00/00 **

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
5.0U	CHLOROMETHANE	5.0U	CIS-1,3-DICHLOROPROPENE
5.0U	VINYL CHLORIDE	50U	METHYL ISOBUTYL KETONE
5.0U	BROMOMETHANE	5.0U	TOLUENE
5.0U	CHLOROETHANE	5.0U	TRANS-1,3-DICHLOROPROPENE
5.0U	TRICHLOROFLUOROMETHANE	5.0U	1,1,2-TRICHLOROETHANE
5.0U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)	5.0U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
50U	ACETONE	5.0U	1,3-DICHLOROPROPANE
50U	CARBON DISULFIDE	50U	METHYL BUTYL KETONE
5.0U	METHYLENE CHLORIDE	5.0U	DIBROMOCHLOROMETHANE
5.0U	TRANS-1,2-DICHLOROETHENE	5.0U	CHLOROBENZENE
5.0U	1,1-DICHLOROETHANE	10U	1,1,1,2-TETRACHLOROETHANE
50U	VINYL ACETATE	5.0U	ETHYL BENZENE
5.0U	CIS-1,2-DICHLOROETHENE	5.0U	(M- AND/OR P-)XYLENE
5.0U	2,2-DICHLOROPROPANE	5.0U	O-XYLENE
50U	METHYL ETHYL KETONE	10U	STYRENE
5.0U	BROMOCHLOROMETHANE	5.0U	BROMOFORM
5.0U	CHLOROFORM	10U	BROMOBENZENE
5.0U	1,1,1-TRICHLOROETHANE	5.0U	1,1,2,2-TETRACHLOROETHANE
5.0U	1,1-DICHLOROPROPENE	10U	1,2,3-TRICHLOROPROPANE
5.0U	CARBON TETRACHLORIDE	10U	O-CHLOROTOLUENE
5.0U	1,2-DICHLOROETHANE	10U	P-CHLOROTOLUENE
5.0U	BENZENE	10U	1,3-DICHLOROBENZENE
5.0U	TRICHLOROETHENE(TRICHLOROETHYLENE)	10U	1,4-DICHLOROBENZENE
5.0U	1,2-DICHLOROPROPANE	10U	1,2-DICHLOROBENZENE
5.0U	DIBROMOMETHANE		
5.0U	BROMODICHLOROMETHANE		

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.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

03/14/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 89-300 SAMPLE NO. 33596 SAMPLE TYPE: MONWL
SOURCE: WESTINGHOUSE
STATION ID: WH-005 WELL 28

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 02/28/89 1300 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
5.0U	CHLOROMETHANE	5.0U	CIS-1,3-DICHLOROPROPENE
5.0U	VINYL CHLORIDE	50U	METHYL ISOBUTYL KETONE
5.0U	BROMOMETHANE	5.0U	TOLUENE
5.0U	CHLOROETHANE	5.0U	TRANS-1,3-DICHLOROPROPENE
5.0U	TRICHLOROFLUOROMETHANE	5.0U	1,1,2-TRICHLOROETHANE
5.0U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)	0.56J	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
50U	ACETONE	5.0U	1,3-DICHLOROPROPANE
50U	CARBON DISULFIDE	50U	METHYL BUTYL KETONE
5.0U	METHYLENE CHLORIDE	5.0U	DIBROMOCHLOROMETHANE
5.0U	TRANS-1,2-DICHLOROETHENE	5.0U	CHLOROBENZENE
5.0U	1,1-DICHLOROETHANE	10U	1,1,1,2-TETRACHLOROETHANE
50U	VINYL ACETATE	5.0U	ETHYL BENZENE
5.0U	CIS-1,2-DICHLOROETHENE	5.0U	(M- AND/OR P-)XYLENE
5.0U	2,2-DICHLOROPROPANE	5.0U	O-XYLENE
50U	METHYL ETHYL KETONE	10U	STYRENE
5.0U	BROMOCHLOROMETHANE	5.0U	BROMOFORM
5.0U	CHLOROFORM	10U	BROMOBENZENE
0.60J	1,1,1-TRICHLOROETHANE	5.0U	1,1,2,2-TETRACHLOROETHANE
5.0U	1,1-DICHLOROPROPENE	10U	1,2,3-TRICHLOROPROPANE
5.0U	CARBON TETRACHLORIDE	10U	O-CHLOROTOLUENE
5.0U	1,2-DICHLOROETHANE	10U	P-CHLOROTOLUENE
5.0U	BENZENE	10U	1,3-DICHLOROBENZENE
0.82J	TRICHLOROETHENE(TRICHLOROETHYLENE)	10U	1,4-DICHLOROBENZENE
5.0U	1,2-DICHLOROPROPANE	10U	1,2-DICHLOROBENZENE
5.0U	DIBROMOMETHANE		
5.0U	BROMODICHLOROMETHANE		

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.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 03/14/89

PROJECT NO. 89-300 SAMPLE NO. 33597 SAMPLE TYPE: MONWL
SOURCE: WESTINGHOUSE
STATION ID: WH-006 WELL 30

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 02/28/89 1320 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
5.0U	CHLOROMETHANE
5.0U	VINYL CHLORIDE
5.0U	BROMOMETHANE
5.0U	CHLOROETHANE
5.0U	TRICHLOROFLUOROMETHANE
5.0U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
50U	ACETONE
50U	CARBON DISULFIDE
5.0U	METHYLENE CHLORIDE
5.0U	TRANS-1,2-DICHLOROETHENE
5.0U	1,1-DICHLOROETHANE
50U	VINYL ACETATE
5.0U	CIS-1,2-DICHLOROETHENE
5.0U	2,2-DICHLOROPROPANE
50U	METHYL ETHYL KETONE
5.0U	BROMOCHLOROMETHANE
5.0U	CHLOROFORM
5.0U	1,1,1-TRICHLOROETHANE
5.0U	1,1-DICHLOROPROPENE
5.0U	CARBON TETRACHLORIDE
5.0U	1,2-DICHLOROETHANE
5.0U	BENZENE
5.0U	TRICHLOROETHENE(TRICHLOROETHYLENE)
5.0U	1,2-DICHLOROPROPANE
5.0U	DIBROMOMETHANE
5.0U	BROMODICHLOROMETHANE

UG/L	ANALYTICAL RESULTS
5.0U	CIS-1,3-DICHLOROPROPENE
50U	METHYL ISOBUTYL KETONE
5.0U	TOLUENE
5.0U	TRANS-1,3-DICHLOROPROPENE
5.0U	1,1,2-TRICHLOROETHANE
6.1	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
5.0U	1,3-DICHLOROPROPANE
50U	METHYL BUTYL KETONE
5.0U	DIBROMOCHLOROMETHANE
5.0U	CHLOROBENZENE
10U	1,1,1,2-TETRACHLOROETHANE
5.0U	ETHYL BENZENE
5.0U	(M- AND/OR P-)XYLENE
5.0U	O-XYLENE
10U	STYRENE
5.0U	BROMOFORM
10U	BROMOBENZENE
5.0U	1,1,2,2-TETRACHLOROETHANE
10U	1,2,3-TRICHLOROPROPANE
10U	O-CHLOROTOLUENE
10U	P-CHLOROTOLUENE
10U	1,3-DICHLOROBENZENE
10U	1,4-DICHLOROBENZENE
10U	1,2-DICHLOROBENZENE

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.

PURGEABLE ORGANICS DATA REPORT 03/15/89

PROJECT NO. 89-300 SAMPLE NO. 33598 SAMPLE TYPE: MONWL
SOURCE: WESTINGHOUSE
STATION ID: WH-007 WELL 7

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 02/28/89 1440 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
5.0U	CHLOROMETHANE
5.0U	VINYL CHLORIDE
5.0U	BROMOMETHANE
5.0U	CHLOROETHANE
5.0U	TRICHLOROFLUOROMETHANE
0.91J	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
50U	ACETONE
50U	CARBON DISULFIDE
5.0U	METHYLENE CHLORIDE
5.0U	TRANS-1,2-DICHLOROETHENE
5.0U	1,1-DICHLOROETHANE
50U	VINYL ACETATE
5.0U	CIS-1,2-DICHLOROETHENE
5.0U	2,2-DICHLOROPROPANE
50U	METHYL ETHYL KETONE
5.0U	BROMOCHLOROMETHANE
0.81J	CHLOROFORM
1.1J	1,1,1-TRICHLOROETHANE
5.0U	1,1-DICHLOROPROPENE
5.0U	CARBON TETRACHLORIDE
5.0U	1,2-DICHLOROETHANE
5.0U	BENZENE
1.6J	TRICHLOROETHENE(TRICHLOROETHYLENE)
5.0U	1,2-DICHLOROPROPANE
5.0U	DIBROMOMETHANE
5.0U	BROMODICHLOROMETHANE

UG/L	ANALYTICAL RESULTS
5.0U	CIS-1,3-DICHLOROPROPENE
50U	METHYL ISOBUTYL KETONE
5.0U	TOLUENE
5.0U	TRANS-1,3-DICHLOROPROPENE
5.0U	1,1,2-TRICHLOROETHANE
1.0J	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
5.0U	1,3-DICHLOROPROPANE
50U	METHYL BUTYL KETONE
5.0U	DIBROMOCHLOROMETHANE
5.0U	CHLOROBENZENE
10U	1,1,1,2-TETRACHLOROETHANE
5.0U	ETHYL BENZENE
5.0U	(M- AND/OR P-)XYLENE
5.0U	O-XYLENE
10U	STYRENE
5.0U	BROMOFORM
10U	BROMOBENZENE
5.0U	1,1,2,2-TETRACHLOROETHANE
10U	1,2,3-TRICHLOROPROPANE
10U	O-CHLOROTOLUENE
10U	P-CHLOROTOLUENE
10U	1,3-DICHLOROBENZENE
10U	1,4-DICHLOROBENZENE
10U	1,2-DICHLOROBENZENE

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.

PURGEABLE ORGANICS DATA REPORT 03/14/89

PROJECT NO. 89-300 SAMPLE NO. 33599 SAMPLE TYPE: MONWL
SOURCE: WESTINGHOUSE
STATION ID: WH-008 WELL 32

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 02/28/89 1445 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
5.0U	CHLOROMETHANE
5.0U	VINYL CHLORIDE
5.0U	BROMOMETHANE
5.0U	CHLOROETHANE
5.0U	TRICHLOROFLUOROMETHANE
5.0U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
50U	ACETONE
50U	CARBON DISULFIDE
5.0U	METHYLENE CHLORIDE
5.0U	TRANS-1,2-DICHLOROETHENE
5.0U	1,1-DICHLOROETHANE
50U	VINYL ACETATE
5.0U	CIS-1,2-DICHLOROETHENE
5.0U	2,2-DICHLOROPROPANE
50U	METHYL ETHYL KETONE
5.0U	BROMOCHLOROMETHANE
5.0U	CHLOROFORM
5.0U	1,1,1-TRICHLOROETHANE
5.0U	1,1-DICHLOROPROPENE
5.0U	CARBON TETRACHLORIDE
0.84J	1,2-DICHLOROETHANE
5.0U	BENZENE
0.94J	TRICHLOROETHENE(TRICHLOROETHYLENE)
5.0U	1,2-DICHLOROPROPANE
5.0U	DIBROMOMETHANE
5.0U	BROMODICHLOROMETHANE

UG/L	ANALYTICAL RESULTS
5.0U	CIS-1,3-DICHLOROPROPENE
50U	METHYL ISOBUTYL KETONE
2.5J	TOLUENE
5.0U	TRANS-1,3-DICHLOROPROPENE
5.0U	1,1,2-TRICHLOROETHANE
5.0U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
5.0U	1,3-DICHLOROPROPANE
50U	METHYL BUTYL KETONE
5.0U	DIBROMOCHLOROMETHANE
5.0U	CHLOROBENZENE
10U	1,1,1,2-TETRACHLOROETHANE
5.0U	ETHYL BENZENE
5.0U	(M- AND/OR P-)XYLENE
5.0U	O-XYLENE
10U	STYRENE
5.0U	BROMOFORM
10U	BROMOBENZENE
5.0U	1,1,2,2-TETRACHLOROETHANE
10U	1,2,3-TRICHLOROPROPANE
10U	O-CHLOROTOLUENE
10U	P-CHLOROTOLUENE
10U	1,3-DICHLOROBENZENE
10U	1,4-DICHLOROBENZENE
10U	1,2-DICHLOROBENZENE

REMARKS

REMARKS

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 03/14/89

PROJECT NO. 89-300 SAMPLE NO. 33602 SAMPLE TYPE: MONWL
SOURCE: WESTINGHOUSE
STATION ID: WH-011 WELL 33

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 02/28/89 1645 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
10U	CHLOROMETHANE
10U	VINYL CHLORIDE
10U	BROMOMETHANE
10U	CHLOROETHANE
10U	TRICHLOROFLUOROMETHANE
10U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
100U	ACETONE
100U	CARBON DISULFIDE
10U	METHYLENE CHLORIDE
10U	TRANS-1,2-DICHLOROETHENE
10U	1,1-DICHLOROETHANE
100U	VINYL ACETATE
2.6J	CIS-1,2-DICHLOROETHENE
10U	2,2-DICHLOROPROPANE
100U	METHYL ETHYL KETONE
10U	BROMOCHLOROMETHANE
10U	CHLOROFORM
10U	1,1,1-TRICHLOROETHANE
10U	1,1-DICHLOROPROPENE
10U	CARBON TETRACHLORIDE
2.7J	1,2-DICHLOROETHANE
10U	BENZENE
130	TRICHLOROETHENE(TRICHLOROETHYLENE)
10U	1,2-DICHLOROPROPANE
10U	DIBROMOMETHANE
10U	BROMODICHLOROMETHANE

UG/L	ANALYTICAL RESULTS
10U	CIS-1,3-DICHLOROPROPENE
100U	METHYL ISOBUTYL KETONE
10U	TOLUENE
10U	TRANS-1,3-DICHLOROPROPENE
10U	1,1,2-TRICHLOROETHANE
240	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
10U	1,3-DICHLOROPROPANE
100U	METHYL BUTYL KETONE
10U	DIBROMOCHLOROMETHANE
10U	CHLOROBENZENE
20U	1,1,1,2-TETRACHLOROETHANE
10U	ETHYL BENZENE
10U	(M- AND/OR P-)XYLENE
10U	O-XYLENE
20U	STYRENE
10U	BROMOFORM
20U	BROMOBENZENE
10U	1,1,2,2-TETRACHLOROETHANE
20U	1,2,3-TRICHLOROPROPANE
20U	O-CHLOROTOLUENE
20U	P-CHLOROTOLUENE
20U	1,3-DICHLOROBENZENE
20U	1,4-DICHLOROBENZENE
20U	1,2-DICHLOROBENZENE

REMARKS

REMARKS

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

03/14/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 89-300   SAMPLE NO. 33603   SAMPLE TYPE: SPRINGWA   PROG ELEM: NSF   COLLECTED BY: B BOKEY
SOURCE: WESTINGHOUSE   CITY: COLUMBIA   ST: SC
STATION ID: WH-012 SPRING   COLLECTION START: 03/01/89 0850   STOP: 00/00/00

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
100U	CHLOROMETHANE	100U	CIS-1,3-DICHLOROPROPENE
100U	VINYL CHLORIDE	1000U	METHYL ISOBUTYL KETONE
100U	BROMOMETHANE	100U	TOLUENE
100U	CHLOROETHANE	100U	TRANS-1,3-DICHLOROPROPENE
100U	TRICHLOROFLUOROMETHANE	100U	1,1,2-TRICHLOROETHANE
100U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)	370	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
1000U	ACETONE	100U	1,3-DICHLOROPROPANE
1000U	CARBON DISULFIDE	1000U	METHYL BUTYL KETONE
100U	METHYLENE CHLORIDE	100U	DIBROMOCHLOROMETHANE
100U	TRANS-1,2-DICHLOROETHENE	100U	CHLOROBENZENE
100U	1,1-DICHLOROETHANE	200U	1,1,1,2-TETRACHLOROETHANE
1000U	VINYL ACETATE	100U	ETHYL BENZENE
100U	CIS-1,2-DICHLOROETHENE	100U	(M- AND/OR P-)XYLENE
100U	2,2-DICHLOROPROPANE	100U	O-XYLENE
1000U	METHYL ETHYL KETONE	200U	STYRENE
100U	BROMOCHLOROMETHANE	100U	BROMOFORM
100U	CHLOROFORM	200U	BROMOBENZENE
100U	1,1,1-TRICHLOROETHANE	100U	1,1,2,2-TETRACHLOROETHANE
100U	1,1-DICHLOROPROPENE	200U	1,2,3-TRICHLOROPROPANE
100U	CARBON TETRACHLORIDE	200U	O-CHLOROTOLUENE
100U	1,2-DICHLOROETHANE	200U	P-CHLOROTOLUENE
100U	BENZENE	200U	1,3-DICHLOROBENZENE
100U	TRICHLOROETHENE(TRICHLOROETHYLENE)	200U	1,4-DICHLOROBENZENE
100U	1,2-DICHLOROPROPANE	200U	1,2-DICHLOROBENZENE
100U	DIBROMOMETHANE		
100U	BROMODICHLOROMETHANE		

REMARKS

REMARKS

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 03/14/89

PROJECT NO. 89-300 SAMPLE NO. 33616 SAMPLE TYPE: MONWL
SOURCE: WESTINGHOUSE
STATION ID: WH-025 N. OF DRUM STORAGE AREA

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 03/01/89 1435 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
100U	CHLOROMETHANE
100U	VINYL CHLORIDE
100U	BROMOMETHANE
100U	CHLOROETHANE
100U	TRICHLOROFLUOROMETHANE
100U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
10000U	ACETONE
10000U	CARBON DISULFIDE
100U	METHYLENE CHLORIDE
100U	TRANS-1,2-DICHLOROETHENE
100U	1,1-DICHLOROETHANE
10000U	VINYL ACETATE
100U	CIS-1,2-DICHLOROETHENE
100U	2,2-DICHLOROPROPANE
10000U	METHYL ETHYL KETONE
100U	BROMOCHLOROMETHANE
100U	CHLOROFORM
100U	1,1,1-TRICHLOROETHANE
100U	1,1-DICHLOROPROPENE
100U	CARBON TETRACHLORIDE
100U	1,2-DICHLOROETHANE
100U	BENZENE
100U	TRICHLOROETHENE(TRICHLOROETHYLENE)
100U	1,2-DICHLOROPROPANE
100U	DIBROMOMETHANE
100U	BROMODICHLOROMETHANE

UG/L	ANALYTICAL RESULTS
100U	CIS-1,3-DICHLOROPROPENE
1000U	METHYL ISOBUTYL KETONE
100U	TOLUENE
100U	TRANS-1,3-DICHLOROPROPENE
100U	1,1,2-TRICHLOROETHANE
320	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
100U	1,3-DICHLOROPROPANE
1000U	METHYL BUTYL KETONE
100U	DIBROMOCHLOROMETHANE
100U	CHLOROBENZENE
200U	1,1,1,2-TETRACHLOROETHANE
100U	ETHYL BENZENE
100U	(M- AND/OR P-)XYLENE
100U	O-XYLENE
200U	STYRENE
100U	BROMOFORM
200U	BROMOBENZENE
100U	1,1,2,2-TETRACHLOROETHANE
200U	1,2,3-TRICHLOROPROPANE
200U	O-CHLOROTOLUENE
200U	P-CHLOROTOLUENE
200U	1,3-DICHLOROBENZENE
200U	1,4-DICHLOROBENZENE
200U	1,2-DICHLOROBENZENE

REMARKS

REMARKS

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 03/16/89

PROJECT NO. 89-300 SAMPLE NO. 33617 SAMPLE TYPE: MONWL
SOURCE: WESTINGHOUSE
STATION ID: WH-026 WELL 14

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 03/01/89 1620 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
5.0U	CHLOROMETHANE
5.0U	VINYL CHLORIDE
5.0U	BROMOMETHANE
5.0U	CHLOROETHANE
5.0U	TRICHLOROFLUOROMETHANE
5.0U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
50U	ACETONE
50U	CARBON DISULFIDE
5.0U	METHYLENE CHLORIDE
5.0U	TRANS-1,2-DICHLOROETHENE
5.0U	1,1-DICHLOROETHANE
50U	VINYL ACETATE
5.0U	CIS-1,2-DICHLOROETHENE
5.0U	2,2-DICHLOROPROPANE
50U	METHYL ETHYL KETONE
5.0U	BROMOCHLOROMETHANE
5.0U	CHLOROFORM
5.0U	1,1,1-TRICHLOROETHANE
5.0U	1,1-DICHLOROPROPENE
5.0U	CARBON TETRACHLORIDE
5.0U	1,2-DICHLOROETHANE
5.0U	BENZENE
5.0U	TRICHLOROETHENE(TRICHLOROETHYLENE)
5.0U	1,2-DICHLOROPROPANE
5.0U	DIBROMOMETHANE
5.0U	BROMODICHLOROMETHANE

UG/L	ANALYTICAL RESULTS
5.0U	CIS-1,3-DICHLOROPROPENE
50U	METHYL ISOBUTYL KETONE
5.0U	TOLUENE
5.0U	TRANS-1,3-DICHLOROPROPENE
5.0U	1,1,2-TRICHLOROETHANE
5.0U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
5.0U	1,3-DICHLOROPROPANE
50U	METHYL BUTYL KETONE
5.0U	DIBROMOCHLOROMETHANE
5.0U	CHLOROBENZENE
10U	1,1,1,2-TETRACHLOROETHANE
5.0U	ETHYL BENZENE
5.0U	(M- AND/OR P-)XYLENE
5.0U	O-XYLENE
10U	STYRENE
5.0U	BROMOFORM
10U	BROMOBENZENE
5.0U	1,1,2,2-TETRACHLOROETHANE
10U	1,2,3-TRICHLOROPROPANE
10U	O-CHLOROTOLUENE
10U	P-CHLOROTOLUENE
10U	1,3-DICHLOROBENZENE
10U	1,4-DICHLOROBENZENE
10U	1,2-DICHLOROBENZENE

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 03/17/89

PROJECT NO. 89-300 SAMPLE NO. 33619 SAMPLE TYPE: WATER
SOURCE: WESTINGHOUSE
STATION ID: WH-028 OIL RECOVERY AREA

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 03/02/89 0937 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
20U	CHLOROMETHANE
30J	VINYL CHLORIDE
20U	BROMOMETHANE
20U	CHLOROETHANE
20U	TRICHLOROFLUOROMETHANE
20U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
200U	ACETONE
200U	CARBON DISULFIDE
20U	METHYLENE CHLORIDE
20U	TRANS-1,2-DICHLOROETHENE
20U	1,1-DICHLOROETHANE
200U	VINYL ACETATE
32	CIS-1,2-DICHLOROETHENE
20U	2,2-DICHLOROPROPANE
200U	METHYL ETHYL KETONE
20U	BROMOCHLOROMETHANE
20U	CHLOROFORM
20U	1,1,1-TRICHLOROETHANE
20U	1,1-DICHLOROPROPENE
20U	CARBON TETRACHLORIDE
20U	1,2-DICHLOROETHANE
20U	BENZENE
5.5J	TRICHLOROETHENE(TRICHLOROETHYLENE)
20U	1,2-DICHLOROPROPANE
20U	DIBROMOMETHANE
20U	BROMODICHLOROMETHANE

UG/L	ANALYTICAL RESULTS
20U	CIS-1,3-DICHLOROPROPENE
200U	METHYL ISOBUTYL KETONE
20U	TOLUENE
20U	TRANS-1,3-DICHLOROPROPENE
20U	1,1,2-TRICHLOROETHANE
49	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
20U	1,3-DICHLOROPROPANE
200U	METHYL BUTYL KETONE
20U	DIBROMOCHLOROMETHANE
20U	CHLOROBENZENE
40U	1,1,1,2-TETRACHLOROETHANE
20U	ETHYL BENZENE
20U	(M- AND/OR P-)XYLENE
20U	O-XYLENE
40U	STYRENE
20U	BROMOFORM
40U	BROMOBENZENE
20U	1,1,2,2-TETRACHLOROETHANE
40U	1,2,3-TRICHLOROPROPANE
40U	O-CHLOROTOLUENE
40U	P-CHLOROTOLUENE
40U	1,3-DICHLOROBENZENE
40U	1,4-DICHLOROBENZENE
40U	1,2-DICHLOROBENZENE

REMARKS

REMARKS

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

04/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 89-300 SAMPLE NO. 33592 SAMPLE TYPE: MONWL PROG ELEM: NSF COLLECTED BY: B BOKEY
SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC
STATION ID: WH-001 WELL 24 COLLECTION START: 02/28/89 1037 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
13U	BIS(2-CHLOROETHYL) ETHER
13U	BIS(2-CHLOROISOPROPYL) ETHER
13U	N-NITROSODI-N-PROPYLAMINE
13U	HEXACHLOROETHANE
13U	NITROBENZENE
13U	ISOPHORONE
13U	BIS(2-CHLOROETHOXY) METHANE
13U	1,2,4-TRICHLOROBENZENE
13U	NAPHTHALENE
13U	4-CHLOROANILINE
13U	HEXACHLOROBUTADIENE
13U	2-METHYLNAPHTHALENE
13U	HEXACHLOROCYCLOPENTADIENE (HCCP)
13U	2-CHLORONAPHTHALENE
13U	2-NITROANILINE
13U	DIMETHYL PHTHALATE
13U	ACENAPHTHYLENE
13U	2,6-DINITROTOLUENE
13U	3-NITROANILINE
13U	ACENAPHTHENE
13U	DIBENZOFURAN
13U	2,4-DINITROTOLUENE
13U	DIETHYL PHTHALATE
13U	FLUORENE
13U	4-CHLOROPHENYL PHENYL ETHER
13U	4-NITROANILINE
13U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
13U	4-BROMOPHENYL PHENYL ETHER
13U	HEXACHLOROBENZENE (HCB)
13U	PHENANTHRENE
13U	ANTHRACENE
13U	DI-N-BUTYLPHTHALATE

UG/L	ANALYTICAL RESULTS
13U	FLUORANTHENE
13U	PYRENE
13U	BENZYL BUTYL PHTHALATE
13U	3,3'-DICHLOROBENZIDINE
13U	BENZO(A)ANTHRACENE
13U	CHRYSENE
13U	BIS(2-ETHYLHEXYL) PHTHALATE
13U	DI-N-OCTYLPHTHALATE
13U	BENZO(B AND/OR K)FLUORANTHENE
13U	BENZO-A-PYRENE
13U	INDENO (1,2,3-CD) PYRENE
13U	DIBENZO(A,H)ANTHRACENE
13U	BENZO(GHI)PERYLENE
13U	PHENOL
13U	2-CHLOROPHENOL
25U	BENZYL ALCOHOL
13U	2-METHYLPHENOL
13U	(3-AND/OR 4-)METHYLPHENOL
13U	2-NITROPHENOL
13U	2,4-DIMETHYLPHENOL
25U	BENZOIC ACID
13U	2,4-DICHLOROPHENOL
13U	4-CHLORO-3-METHYLPHENOL
13U	2,4,6-TRICHLOROPHENOL
13U	2,4,5-TRICHLOROPHENOL
25U	2,4-DINITROPHENOL
25U	4-NITROPHENOL
13U	2,3,4,6-TETRACHLOROPHENOL
25U	2-METHYL-4,6-DINITROPHENOL
25U	PENTACHLOROPHENOL

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.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

EXTRACTABLE ORGANICS DATA REPORT 04/07/89

PROJECT NO. 89-300 SAMPLE NO. 33596 SAMPLE TYPE: MONWL
SOURCE: WESTINGHOUSE
STATION ID: WH-005 WELL 28

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 02/28/89 1300 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
10U	BIS(2-CHLOROETHYL) ETHER
10U	BIS(2-CHLOROISOPROPYL) ETHER
10U	N-NITROSODI-N-PROPYLAMINE
10U	HEXACHLOROETHANE
10U	NITROBENZENE
10U	ISOPHORONE
10U	BIS(2-CHLOROETHOXY) METHANE
10U	1,2,4-TRICHLOROBENZENE
10U	NAPHTHALENE
10U	4-CHLOROANILINE
10U	HEXACHLOROBUTADIENE
10U	2-METHYLNAPHTHALENE
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)
10U	2-CHLORONAPHTHALENE
10U	2-NITROANILINE
10U	DIMETHYL PHTHALATE
10U	ACENAPHTHYLENE
10U	2,6-DINITROTOLUENE
10U	3-NITROANILINE
10U	ACENAPHTHENE
10U	DIBENZOFURAN
10U	2,4-DINITROTOLUENE
10U	DIETHYL PHTHALATE
10U	FLUORENE
10U	4-CHLOROPHENYL PHENYL ETHER
10U	4-NITROANILINE
10U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10U	4-BROMOPHENYL PHENYL ETHER
10U	HEXACHLOROBENZENE (HCB)
10U	PHENANTHRENE
10U	ANTHRACENE
10U	DI-N-BUTYLPHTHALATE

UG/L	ANALYTICAL RESULTS
10U	FLUORANTHENE
10U	PYRENE
10U	BENZYL BUTYL PHTHALATE
10U	3,3'-DICHLOROBENZIDINE
10U	BENZO(A)ANTHRACENE
10U	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
10U	BENZO(GHI)PERYLENE
2.2J	PHENOL
10U	2-CHLOROPHENOL
20U	BENZYL ALCOHOL
10U	2-METHYLPHENOL
10U	(3-AND/OR 4-)METHYLPHENOL
10U	2-NITROPHENOL
10U	2,4-DIMETHYLPHENOL
20U	BENZOIC ACID
10U	2,4-DICHLOROPHENOL
10U	4-CHLORO-3-METHYLPHENOL
10U	2,4,6-TRICHLOROPHENOL
10U	2,4,5-TRICHLOROPHENOL
20U	2,4-DINITROPHENOL
20U	4-NITROPHENOL
10U	2,3,4,6-TETRACHLOROPHENOL
20U	2-METHYL-4,6-DINITROPHENOL
20U	PENTACHLOROPHENOL

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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MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

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**   PROJECT NO. 89-300   SAMPLE NO. 33596  SAMPLE TYPE: MONWL      PROG ELEM: NSF   COLLECTED BY: B BOKEY                    **
**   SOURCE: WESTINGHOUSE                                           CITY: COLUMBIA             ST: SC                         **
**   STATION ID: WH-005 WELL 28                                     COLLECTION START: 02/28/89  1300   STOP: 00/00/00         **
**                                                                                                                            **
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
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ANALYTICAL RESULTS UG/L

30J 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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*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.

04/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 89-300 SAMPLE NO. 33597 SAMPLE TYPE: MONWL
SOURCE: WESTINGHOUSE
STATION ID: WH-006 WELL 30

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 02/28/89 1320 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
10U	BIS(2-CHLOROETHYL) ETHER
10U	BIS(2-CHLOROISOPROPYL) ETHER
10U	N-NITROSODI-N-PROPYLAMINE
10U	HEXACHLOROETHANE
10U	NITROBENZENE
10U	ISOPHORONE
10U	BIS(2-CHLOROETHOXY) METHANE
10U	1,2,4-TRICHLOROBENZENE
10U	NAPHTHALENE
10U	4-CHLOROANILINE
10U	HEXACHLOROBUTADIENE
10U	2-METHYLNAPHTHALENE
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)
10U	2-CHLORONAPHTHALENE
10U	2-NITROANILINE
10U	DIMETHYL PHTHALATE
10U	ACENAPHTHYLENE
10U	2,6-DINITROTOLUENE
10U	3-NITROANILINE
10U	ACENAPHTHENE
10U	DIBENZOFURAN
10U	2,4-DINITROTOLUENE
10U	DIETHYL PHTHALATE
10U	FLUORENE
10U	4-CHLOROPHENYL PHENYL ETHER
10U	4-NITROANILINE
10U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10U	4-BROMOPHENYL PHENYL ETHER
10U	HEXACHLOROBENZENE (HCB)
10U	PHENANTHRENE
10U	ANTHRACENE
10U	DI-N-BUTYLPHTHALATE

UG/L	ANALYTICAL RESULTS
10U	FLUORANTHENE
10U	PYRENE
10U	BENZYL BUTYL PHTHALATE
10U	3,3'-DICHLOROBENZIDINE
10U	BENZO(A)ANTHRACENE
10U	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
10U	BENZO(GHI)PERYLENE
1.7J	PHENOL
10U	2-CHLOROPHENOL
20U	BENZYL ALCOHOL
10U	2-METHYLPHENOL
10U	(3-AND/OR 4-)METHYLPHENOL
10U	2-NITROPHENOL
10U	2,4-DIMETHYLPHENOL
20U	BENZOIC ACID
10U	2,4-DICHLOROPHENOL
10U	4-CHLORO-3-METHYLPHENOL
10U	2,4,6-TRICHLOROPHENOL
10U	2,4,5-TRICHLOROPHENOL
20U	2,4-DINITROPHENOL
20U	4-NITROPHENOL
10U	2,3,4,6-TETRACHLOROPHENOL
20U	2-METHYL-4,6-DINITROPHENOL
20U	PENTACHLOROPHENOL

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.

04/07/89

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

*** ***
** PROJECT NO. 89-300 SAMPLE NO. 33597 SAMPLE TYPE: MONWL PROG ELEM: NSF COLLECTED BY: B BOKEY **
** SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC **
** STATION ID: WH-006 WELL 30 COLLECTION START: 02/28/89 1320 STOP: 00/00/00 **
** **
*** ***

ANALYTICAL RESULTS UG/L

1JN	CHLOROISOCYANATOBENZENE

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 04/07/89

PROJECT NO. 89-300 SAMPLE NO. 33598 SAMPLE TYPE: MONWL
SOURCE: WESTINGHOUSE
STATION ID: WH-007 WELL 7

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 02/28/89 1440 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
10U	BIS(2-CHLOROETHYL) ETHER
10U	BIS(2-CHLOROISOPROPYL) ETHER
10U	N-NITROSODI-N-PROPYLAMINE
10U	HEXACHLOROETHANE
10U	NITROBENZENE
10U	ISOPHORONE
10U	BIS(2-CHLOROETHOXY) METHANE
10U	1,2,4-TRICHLOROBENZENE
10U	NAPHTHALENE
10U	4-CHLOROANILINE
10U	HEXACHLOROBUTADIENE
10U	2-METHYLNAPHTHALENE
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)
10U	2-CHLORONAPHTHALENE
10U	2-NITROANILINE
10U	DIMETHYL PHTHALATE
10U	ACENAPHTHYLENE
10U	2,6-DINITROTOLUENE
10U	3-NITROANILINE
10U	ACENAPHTHENE
10U	DIBENZOFURAN
10U	2,4-DINITROTOLUENE
10U	DIETHYL PHTHALATE
10U	FLUORENE
10U	4-CHLOROPHENYL PHENYL ETHER
10U	4-NITROANILINE
10U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10U	4-BROMOPHENYL PHENYL ETHER
10U	HEXACHLOROBENZENE (HCB)
10U	PHENANTHRENE
10U	ANTHRACENE
21	DI-N-BUTYLPHTHALATE

UG/L	ANALYTICAL RESULTS
10U	FLUORANTHENE
10U	PYRENE
10U	BENZYL BUTYL PHTHALATE
10U	3,3'-DICHLOROBENZIDINE
10U	BENZO(A)ANTHRACENE
10U	CHRYSENE
57	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
10U	BENZO(GHI)PERYLENE
10U	PHENOL
10U	2-CHLOROPHENOL
20U	BENZYL ALCOHOL
10U	2-METHYLPHENOL
10U	(3-AND/OR 4-)METHYLPHENOL
10U	2-NITROPHENOL
10U	2,4-DIMETHYLPHENOL
20U	BENZOIC ACID
10U	2,4-DICHLOROPHENOL
10U	4-CHLORO-3-METHYLPHENOL
10U	2,4,6-TRICHLOROPHENOL
10U	2,4,5-TRICHLOROPHENOL
20U	2,4-DINITROPHENOL
20U	4-NITROPHENOL
10U	2,3,4,6-TETRACHLOROPHENOL
20U	2-METHYL-4,6-DINITROPHENOL
20U	PENTACHLOROPHENOL

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.

04/07/89

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

*** ***
** PROJECT NO. 89-300 SAMPLE NO. 33598 SAMPLE TYPE: MONWL PROG ELEM: NSF COLLECTED BY: B BOKEY **
** SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC **
** STATION ID: WH-007 WELL 7 COLLECTION START: 02/28/89 1440 STOP: 00/00/00 **
** **
*** ***

ANALYTICAL RESULTS UG/L	
2JN	CHLOROISOCYANATOBENZENE
4JN	OCTANOIC ACID
2JN	DECANOIC ACID
2JN	METHYLHYDROXYPROPANOIC ACID,- TRIMETHYLPENTYL ESTER
2JN	BIS(DIMETHYLETHYL)METHYLPHENOL
10JN	DODECANOIC ACID
200J	3 UNIDENTIFIED COMPOUNDS
N	PETROLEUM PRODUCT
20JN	HEXANEDIOIC ACID, DIOCTYL ESTER

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 04/07/89

PROJECT NO. 89-300 SAMPLE NO. 33602 SAMPLE TYPE: MONWL
SOURCE: WESTINGHOUSE
STATION ID: WH-011 WELL 33

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 02/28/89 1645 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
10U	BIS(2-CHLOROETHYL) ETHER
10U	BIS(2-CHLOROISOPROPYL) ETHER
10U	N-NITROSODI-N-PROPYLAMINE
10U	HEXACHLOROETHANE
10U	NITROBENZENE
10U	ISOPHORONE
10U	BIS(2-CHLOROETHOXY) METHANE
10U	1,2,4-TRICHLOROBENZENE
10U	NAPHTHALENE
10U	4-CHLOROANILINE
10U	HEXACHLOROBUTADIENE
10U	2-METHYLNAPHTHALENE
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)
10U	2-CHLORONAPHTHALENE
10U	2-NITROANILINE
10U	DIMETHYL PHTHALATE
10U	ACENAPHTHYLENE
10U	2,6-DINITROTOLUENE
10U	3-NITROANILINE
10U	ACENAPHTHENE
10U	DIBENZOFURAN
10U	2,4-DINITROTOLUENE
10U	DIETHYL PHTHALATE
10U	FLUORENE
10U	4-CHLOROPHENYL PHENYL ETHER
10U	4-NITROANILINE
10U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10U	4-BROMOPHENYL PHENYL ETHER
10U	HEXACHLOROBENZENE (HCB)
10U	PHENANTHRENE
10U	ANTHRACENE
10U	DI-N-BUTYLPHTHALATE

UG/L	ANALYTICAL RESULTS
10U	FLUORANTHENE
10U	PYRENE
10U	BENZYL BUTYL PHTHALATE
10U	3,3'-DICHLOROBENZIDINE
10U	BENZO(A)ANTHRACENE
10U	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
10U	BENZO(GHI)PERYLENE
10U	PHENOL
10U	2-CHLOROPHENOL
20U	BENZYL ALCOHOL
10U	2-METHYLPHENOL
10U	(3-AND/OR 4-)METHYLPHENOL
10U	2-NITROPHENOL
10U	2,4-DIMETHYLPHENOL
20U	BENZOIC ACID
10U	2,4-DICHLOROPHENOL
10U	4-CHLORO-3-METHYLPHENOL
10U	2,4,6-TRICHLOROPHENOL
10U	2,4,5-TRICHLOROPHENOL
20U	2,4-DINITROPHENOL
20U	4-NITROPHENOL
10U	2,3,4,6-TETRACHLOROPHENOL
20U	2-METHYL-4,6-DINITROPHENOL
20U	PENTACHLOROPHENOL

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.

04/07/89

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

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**   PROJECT NO. 89-300   SAMPLE NO. 33602  SAMPLE TYPE: MONWL        PROG ELEM: NSF   COLLECTED BY: B BOKEY                 **
**   SOURCE: WESTINGHOUSE                                             CITY: COLUMBIA              ST: SC                    **
**   STATION ID: WH-011 WELL 33                                       COLLECTION START: 02/28/89  1645   STOP: 00/00/00     **
**                                                                                                                          **
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
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ANALYTICAL RESULTS UG/L

3JN   DIHYDROINDOLONE

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 04/07/89

PROJECT NO. 89-300 SAMPLE NO. 33603 SAMPLE TYPE: SPRINGWA PROG ELEM: NSF COLLECTED BY: B BOKEY
SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC
STATION ID: WH-012 SPRING COLLECTION START: 03/01/89 0850 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
10U	BIS(2-CHLOROETHYL) ETHER
10U	BIS(2-CHLOROISOPROPYL) ETHER
10U	N-NITROSODI-N-PROPYLAMINE
10U	HEXACHLOROETHANE
10U	NITROBENZENE
10U	ISOPHORONE
10U	BIS(2-CHLOROETHOXY) METHANE
10U	1,2,4-TRICHLOROBENZENE
10U	NAPHTHALENE
10U	4-CHLOROANILINE
10U	HEXACHLOROBUTADIENE
10U	2-METHYLNAPHTHALENE
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)
10U	2-CHLORONAPHTHALENE
10U	2-NITROANILINE
10U	DIMETHYL PHTHALATE
10U	ACENAPHTHYLENE
10U	2,6-DINITROTOLUENE
10U	3-NITROANILINE
10U	ACENAPHTHENE
10U	DIBENZOFURAN
10U	2,4-DINITROTOLUENE
10U	DIETHYL PHTHALATE
10U	FLUORENE
10U	4-CHLOROPHENYL PHENYL ETHER
10U	4-NITROANILINE
10U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10U	4-BROMOPHENYL PHENYL ETHER
10U	HEXACHLOROBENZENE (HCB)
10U	PHENANTHRENE
10U	ANTHRACENE
10U	DI-N-BUTYLPHTHALATE

UG/L	ANALYTICAL RESULTS
10U	FLUORANTHENE
10U	PYRENE
10U	BENZYL BUTYL PHTHALATE
10U	3,3'-DICHLOROBENZIDINE
10U	BENZO(A)ANTHRACENE
10U	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
10U	BENZO(GHI)PERYLENE
10U	PHENOL
10U	2-CHLOROPHENOL
20U	BENZYL ALCOHOL
10U	2-METHYLPHENOL
10U	(3-AND/OR 4-)METHYLPHENOL
10U	2-NITROPHENOL
10U	2,4-DIMETHYLPHENOL
20U	BENZOIC ACID
10U	2,4-DICHLOROPHENOL
10U	4-CHLORO-3-METHYLPHENOL
10U	2,4,6-TRICHLOROPHENOL
10U	2,4,5-TRICHLOROPHENOL
20U	2,4-DINITROPHENOL
20U	4-NITROPHENOL
10U	2,3,4,6-TETRACHLOROPHENOL
20U	2-METHYL-4,6-DINITROPHENOL
20U	PENTACHLOROPHENOL

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.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

EXTRACTABLE ORGANICS DATA REPORT 04/06/89

PROJECT NO. 89-300 SAMPLE NO. 33616 SAMPLE TYPE: MONWL
SOURCE: WESTINGHOUSE
STATION ID: WH-025 N. OF DRUM STORAGE AREA

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 03/01/89 1435 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
10UJ	BIS(2-CHLOROETHYL) ETHER
10UJ	BIS(2-CHLOROISOPROPYL) ETHER
10UJ	N-NITROSODI-N-PROPYLAMINE
10UJ	HEXACHLOROETHANE
10UJ	NITROBENZENE
10UJ	ISOPHORONE
10UJ	BIS(2-CHLOROETHOXY) METHANE
10UJ	1,2,4-TRICHLOROBENZENE
10UJ	NAPHTHALENE
10UJ	4-CHLOROANILINE
10UJ	HEXACHLOROBUTADIENE
10UJ	2-METHYLNAPHTHALENE
10UJ	HEXACHLOROCYCLOPENTADIENE (HCCP)
10UJ	2-CHLORONAPHTHALENE
10UJ	2-NITROANILINE
10UJ	DIMETHYL PHTHALATE
10UJ	ACENAPHTHYLENE
10UJ	2,6-DINITROTOLUENE
10UJ	3-NITROANILINE
10UJ	ACENAPHTHENE
10UJ	DIBENZOFURAN
10UJ	2,4-DINITROTOLUENE
10UJ	DIETHYL PHTHALATE
10UJ	FLUORENE
10UJ	4-CHLOROPHENYL PHENYL ETHER
10UJ	4-NITROANILINE
10UJ	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10UJ	4-BROMOPHENYL PHENYL ETHER
10UJ	HEXACHLOROBENZENE (HCB)
10UJ	PHENANTHRENE
10UJ	ANTHRACENE
16J	DI-N-BUTYLPHTHALATE

UG/L	ANALYTICAL RESULTS
10UJ	FLUORANTHENE
10UJ	PYRENE
10UJ	BENZYL BUTYL PHTHALATE
10UJ	3,3'-DICHLOROBENZIDINE
10UJ	BENZO(A)ANTHRACENE
10UJ	CHRYSENE
10UJ	BIS(2-ETHYLHEXYL) PHTHALATE
10UJ	DI-N-OCTYLPHTHALATE
10UJ	BENZO(B AND/OR K)FLUORANTHENE
10UJ	BENZO-A-PYRENE
10UJ	INDENO (1,2,3-CD) PYRENE
10UJ	DIBENZO(A,H)ANTHRACENE
10UJ	BENZO(GHI)PERYLENE
10U	PHENOL
10U	2-CHLOROPHENOL
20U	BENZYL ALCOHOL
10U	2-METHYLPHENOL
10U	(3-AND/OR 4-)METHYLPHENOL
10U	2-NITROPHENOL
10U	2,4-DIMETHYLPHENOL
20U	BENZOIC ACID
10U	2,4-DICHLOROPHENOL
10U	4-CHLORO-3-METHYLPHENOL
10U	2,4,6-TRICHLOROPHENOL
10U	2,4,5-TRICHLOROPHENOL
20U	2,4-DINITROPHENOL
20U	4-NITROPHENOL
10U	2,3,4,6-TETRACHLOROPHENOL
20U	2-METHYL-4,6-DINITROPHENOL
20U	PENTACHLOROPHENOL

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.

04/06/89

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

PROJECT NO. 89-300 SAMPLE NO. 33616 SAMPLE TYPE: MONWL PROG ELEM: NSF COLLECTED BY: B BOKEY
SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC
STATION ID: WH-025 N. OF DRUM STORAGE AREA COLLECTION START: 03/01/89 1435 STOP: 00/00/00

ANALYTICAL RESULTS UG/L

70J	1 UNIDENTIFIED COMPOUND
1JN	ACETYLOXYOCTADECENOIC ACID, METHYL ESTER
2JN	HEXANEDIOIC ACID, DIOCTYL ESTER

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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*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.

04/06/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 89-300 SAMPLE NO. 33617 SAMPLE TYPE: MONWL PROG ELEM: NSF COLLECTED BY: B BOKEY
SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC
STATION ID: WH-026 WELL 14 COLLECTION START: 03/01/89 1620 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
10U	BIS(2-CHLOROETHYL) ETHER	10U	FLUORANTHENE
10U	BIS(2-CHLOROISOPROPYL) ETHER	10U	PYRENE
10U	N-NITROSODI-N-PROPYLAMINE	10U	BENZYL BUTYL PHTHALATE
10U	HEXACHLOROETHANE	10U	3,3'-DICHLOROBENZIDINE
10U	NITROBENZENE	10U	BENZO(A)ANTHRACENE
10U	ISOPHORONE	10U	CHRYSENE
10U	BIS(2-CHLOROETHOXY) METHANE	10U	BIS(2-ETHYLHEXYL) PHTHALATE
10U	1,2,4-TRICHLOROBENZENE	10U	DI-N-OCTYLPHTHALATE
10U	NAPHTHALENE	10U	BENZO(B AND/OR K)FLUORANTHENE
10U	4-CHLOROANILINE	10U	BENZO-A-PYRENE
10U	HEXACHLOROBUTADIENE	10U	INDENO (1,2,3-CD) PYRENE
10U	2-METHYLNAPHTHALENE	10U	DIBENZO(A,H)ANTHRACENE
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)	10U	BENZO(GHI)PERYLENE
10U	2-CHLORONAPHTHALENE	10U	PHENOL
10U	2-NITROANILINE	10U	2-CHLOROPHENOL
10U	DIMETHYL PHTHALATE	20U	BENZYL ALCOHOL
10U	ACENAPHTHYLENE	10U	2-METHYLPHENOL
10U	2,6-DINITROTOLUENE	10U	(3-AND/OR 4-)METHYLPHENOL
10U	3-NITROANILINE	10U	2-NITROPHENOL
10U	ACENAPHTHENE	10U	2,4-DIMETHYLPHENOL
10U	DIBENZOFURAN	20U	BENZOIC ACID
10U	2,4-DINITROTOLUENE	10U	2,4-DICHLOROPHENOL
10U	DIETHYL PHTHALATE	10U	4-CHLORO-3-METHYLPHENOL
10U	FLUORENE	10U	2,4,6-TRICHLOROPHENOL
10U	4-CHLOROPHENYL PHENYL ETHER	10U	2,4,5-TRICHLOROPHENOL
10U	4-NITROANILINE	20U	2,4-DINITROPHENOL
10U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE	20U	4-NITROPHENOL
10U	4-BROMOPHENYL PHENYL ETHER	10U	2,3,4,6-TETRACHLOROPHENOL
10U	HEXACHLOROBENZENE (HCB)	20U	2-METHYL-4,6-DINITROPHENOL
10U	PHENANTHRENE	20U	PENTACHLOROPHENOL
10U	ANTHRACENE		
10U	DI-N-BUTYLPHTHALATE		

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.

04/06/89

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

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**   PROJECT NO. 89-300   SAMPLE NO. 33617  SAMPLE TYPE: MONWL     PROG ELEM: NSF   COLLECTED BY: B BOKEY                    **
**   SOURCE: WESTINGHOUSE                                         CITY: COLUMBIA                  ST: SC                     **
**   STATION ID: WH-026 WELL 14                                   COLLECTION START: 03/01/89  1620   STOP: 00/00/00          **
**                                                                                                                           **
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
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ANALYTICAL RESULTS UG/L

80J	1 UNIDENTIFIED COMPOUND
N	PETROLEUM PRODUCT
2JN	ACETYLOXYOCTADECENOIC ACID, METHYL ESTER

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 04/06/89

PROJECT NO. 89-300 SAMPLE NO. 33619 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: B BOKEY
SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC
STATION ID: WH-028 OIL RECOVERY AREA COLLECTION START: 03/02/89 0937 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
10U	BIS(2-CHLOROETHYL) ETHER
10U	BIS(2-CHLOROISOPROPYL) ETHER
10U	N-NITROSODI-N-PROPYLAMINE
10U	HEXACHLOROETHANE
10U	NITROBENZENE
10U	ISOPHORONE
10U	BIS(2-CHLOROETHOXY) METHANE
10U	1,2,4-TRICHLOROBENZENE
4.6J	NAPHTHALENE
10U	4-CHLOROANILINE
10U	HEXACHLOROBUTADIENE
10U	2-METHYLNAPHTHALENE
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)
10U	2-CHLORONAPHTHALENE
10U	2-NITROANILINE
10U	DIMETHYL PHTHALATE
10U	ACENAPHTHYLENE
10U	2,6-DINITROTOLUENE
10U	3-NITROANILINE
10U	ACENAPHTHENE
10U	DIBENZOFURAN
10U	2,4-DINITROTOLUENE
10U	DIETHYL PHTHALATE
10U	FLUORENE
10U	4-CHLOROPHENYL PHENYL ETHER
10U	4-NITROANILINE
10U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10U	4-BROMOPHENYL PHENYL ETHER
10U	HEXACHLOROBENZENE (HCB)
10U	PHENANTHRENE
10U	ANTHRACENE
30	DI-N-BUTYLPHTHALATE

UG/L	ANALYTICAL RESULTS
10U	FLUORANTHENE
10U	PYRENE
10U	BENZYL BUTYL PHTHALATE
10U	3,3'-DICHLOROBENZIDINE
10U	BENZO(A)ANTHRACENE
10U	CHRYSENE
33J	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
10U	BENZO(GHI)PERYLENE
10U	PHENOL
10U	2-CHLOROPHENOL
20U	BENZYL ALCOHOL
10U	2-METHYLPHENOL
10U	(3-AND/OR 4-)METHYLPHENOL
10U	2-NITROPHENOL
10U	2,4-DIMETHYLPHENOL
20U	BENZOIC ACID
10U	2,4-DICHLOROPHENOL
10U	4-CHLORO-3-METHYLPHENOL
10U	2,4,6-TRICHLOROPHENOL
10U	2,4,5-TRICHLOROPHENOL
20U	2,4-DINITROPHENOL
20U	4-NITROPHENOL
10U	2,3,4,6-TETRACHLOROPHENOL
20U	2-METHYL-4,6-DINITROPHENOL
20U	PENTACHLOROPHENOL

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.

04/06/89

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

*** ***
** PROJECT NO. 89-300 SAMPLE NO. 33619 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: B BOKEY **
** SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC **
** STATION ID: WH-028 OIL RECOVERY AREA COLLECTION START: 03/02/89 0937 STOP: 00/00/00 **
** **
*** ***

ANALYTICAL RESULTS UG/L

4JN	DIETHYLBENZENE (2 ISOMERS)
1JN	ETHENYLETHYLBENZENE
7JN	ETHYLDIMETHYLBENZENE (2 ISOMERS)
2JN	CHLOROISOCYANATOBENZENE
9JN	TRIMETHYLCYCLOHEXANEMETHANOL
2JN	METHYLDIHYDROINDENE
2JN	TETRAHYDRONAPHTHALENE
8JN	BIS(DIMETHYLETHYL)CYCLOHEXADIENEDIONE
100J	3 UNIDENTIFIED COMPOUNDS
N	PETROLEUM PRODUCT
30JN	PHOSPHORIC ACID, TRIBUTYL ESTER
2JN	BENZOTHIAZOLONE
2JN	HEXANEDIOIC ACID, DIOCTYL ESTER

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 04/25/89

** PROJECT NO. 89-300 SAMPLE NO. 33592 SAMPLE TYPE: MONWL
** SOURCE: WESTINGHOUSE
** STATION ID: WH-001 WELL 24

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 02/28/89 1037 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
0.020U	ALDRIN
0.020U	HEPTACHLOR
0.020U	HEPTACHLOR EPOXIDE
0.015U	ALPHA-BHC
0.033U	BETA-BHC
0.020U	GAMMA BHC (LINDANE)
0.015U	DELTA-BHC
0.020U	ENDOSULFAN I (ALPHA)
0.029U	DIELDRIN
0.044U	4,4'-DDT (P,P'-DDT)
0.029U	4,4'-DDE (P,P'-DDE)
0.044U	4,4'-DDD (P,P'-DDD)
0.029U	ENDRIN
0.029U	ENDOSULFAN II (BETA)
0.037U	ENDOSULFAN SULFATE
0.16U	CHLORDANE (TECH. MIXTURE) /1
0.38U	PCB-1242 (AROCLOR 1242)
0.38U	PCB-1254 (AROCLOR 1254)
0.38U	PCB-1221 (AROCLOR 1221)

UG/L	ANALYTICAL RESULTS
0.38U	PCB-1232 (AROCLOR 1232)
0.38U	PCB-1248 (AROCLOR 1248)
0.38U	PCB-1260 (AROCLOR 1260)
0.38U	PCB-1016 (AROCLOR 1016)
2.1U	TOXAPHENE
--	CHLORDENE /2
--	ALPHA-CHLORDENE /2
--	BETA CHLORDENE /2
--	GAMMA-CHLORDENE /2
--	1-HYDROXYCHLORDENE /2
--	GAMMA-CHLORDANE /2
--	TRANS-NONACHLOR /2
--	ALPHA-CHLORDANE /2
--	CIS-NONACHLOR /2
--	OXYCHLORDANE (OCTACHLOREPOXIDE) /2
0.091U	METHOXYCHLOR
0.058U	ENDRIN KETONE

REMARKS

REMARKS

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
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT. C-CONFIRMED BY GC/MS
1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS. 2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

04/25/89

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 89-300 SAMPLE NO. 33596 SAMPLE TYPE: MONWL PROG ELEM: NSF COLLECTED BY: B BOKEY
SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC
STATION ID: WH-005 WELL 28 COLLECTION START: 02/28/89 1300 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
0.11U	ALDRIN	0.29U	PCB-1232 (AROCLOR 1232)
0.018U	HEPTACHLOR	0.29U	PCB-1248 (AROCLOR 1248)
0.026U	HEPTACHLOR EPOXIDE	0.60U	PCB-1260 (AROCLOR 1260)
0.029U	ALPHA-BHC	0.29U	PCB-1016 (AROCLOR 1016)
0.044U	BETA-BHC	2.6U	TOXAPHENE
0.015U	GAMMA-BHC (LINDANE)	--	CHLORDENE /2
0.22U	DELTA-BHC	--	ALPHA-CHLORDENE /2
0.048U	ENDOSULFAN I (ALPHA)	--	BETA CHLORDENE /2
0.042U	DIELDRIN	--	GAMMA-CHLORDENE /2
0.049U	4,4'-DDT (P,P'-DDT)	--	1-HYDROXYCHLORDENE /2
0.045U	4,4'-DDE (P,P'-DDE)	--	GAMMA-CHLORDANE /2
0.088U	4,4'-DDD (P,P'-DDD)	--	TRANS-NONACHLOR /2
0.039U	ENDRIN	--	ALPHA-CHLORDANE /2
0.052U	ENDOSULFAN II (BETA)	--	CIS-NONACHLOR /2
0.054U	ENDOSULFAN SULFATE	--	OXYCHLORDANE (OCTACHLOREPOXIDE) /2
0.22U	CHLORDANE (TECH. MIXTURE) /1	0.093U	METHOXYCHLOR
0.29U	PCB-1242 (AROCLOR 1242)	0.064U	ENDRIN KETONE
0.60U	PCB-1254 (AROCLOR 1254)		
0.29U	PCB-1221 (AROCLOR 1221)		

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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1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS. 2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 04/25/89

** PROJECT NO. 89-300 SAMPLE NO. 33597 SAMPLE TYPE: MONWL
** SOURCE: WESTINGHOUSE
** STATION ID: WH-006 WELL 30

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 02/28/89 1320 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
0.10U	ALDRIN
0.016U	HEPTACHLOR
0.016U	HEPTACHLOR EPOXIDE
0.018U	ALPHA-BHC
0.040U	BETA-BHC
0.018U	GAMMA-BHC (LINDANE)
0.074U	DELTA-BHC
0.020U	ENDOSULFAN I (ALPHA)
0.025U	DIELDRIN
0.075U	4,4'-DDT (P,P'-DDT)
0.027U	4,4'-DDE (P,P'-DDE)
0.059U	4,4'-DDD (P,P'-DDD)
0.029U	ENDRIN
0.035U	ENDOSULFAN II (BETA)
0.086U	ENDOSULFAN SULFATE
0.20U	CHLORDANE (TECH. MIXTURE) /1
0.37U	PCB-1242 (AROCLOR 1242)
0.37U	PCB-1254 (AROCLOR 1254)
0.37U	PCB-1221 (AROCLOR 1221)

UG/L	ANALYTICAL RESULTS
0.37U	PCB-1232 (AROCLOR 1232)
0.37U	PCB-1248 (AROCLOR 1248)
0.37U	PCB-1260 (AROCLOR 1260)
0.37U	PCB-1016 (AROCLOR 1016)
2.8U	TOXAPHENE
--	CHLORDENE /2
--	ALPHA-CHLORDENE /2
--	BETA CHLORDENE /2
--	GAMMA-CHLORDENE /2
--	1-HYDROXYCHLORDENE /2
--	GAMMA-CHLORDANE /2
--	TRANS-NONACHLOR /2
--	ALPHA-CHLORDANE /2
--	CIS-NONACHLOR /2
--	OXYCHLORDANE (OCTACHLOREPOXIDE) /2
0.076U	METHOXYCHLOR
0.048U	ENDRIN KETONE

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 04/25/89

PROJECT NO. 89-300 SAMPLE NO. 33598 SAMPLE TYPE: MONWI
SOURCE: WESTINGHOUSE
STATION ID: WH-007 WELL 7

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 02/28/89 1440 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
0.000U	ALDRIN
0.055U	HEPTACHLOR
0.024U	HEPTACHLOR EPOXIDE
0.023U	ALPHA-BHC
0.050U	BETA-BHC
0.026U	GAMMA-BHC (LINDANE)
0.89U	DELTA-BHC
0.020U	ENDOSULFAN I (ALPHA)
0.025U	DIELDRIN
0.066U	4,4'-DDT (P,P'-DDT)
0.032U	4,4'-DDE (P,P'-DDE)
0.055U	4,4'-DDD (P,P'-DDD)
0.041U	ENDRIN
0.033U	ENDOSULFAN II (BETA)
0.18U	ENDOSULFAN SULFATE
0.20U	CHLORDANE (TECH. MIXTURE) /1
0.98U	PCB-1242 (AROCLOR 1242)
0.98U	PCB-1254 (AROCLOR 1254)
0.98U	PCB-1221 (AROCLOR 1221)

UG/L	ANALYTICAL RESULTS
0.98U	PCB-1232 (AROCLOR 1232)
0.98U	PCB-1248 (AROCLOR 1248)
0.98U	PCB-1260 (AROCLOR 1260)
0.98U	PCB-1016 (AROCLOR 1016)
2.6U	TOXAPHENE
--	CHLORDENE /2
--	ALPHA-CHLORDENE /2
--	BETA CHLORDENE /2
--	GAMMA-CHLORDENE /2
--	1-HYDROXYCHLORDENE /2
--	GAMMA-CHLORDANE /2
--	TRANS-NONACHLOR /2
--	ALPHA-CHLORDANE /2
--	CIS-NONACHLOR /2
--	OXYCHLORDANE (OCTACHLOREPOXIDE) /2
0.15U	METHOXYCHLOR
0.096U	ENDRIN KETONE

REMARKS

REMARKS

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 04/25/89

PROJECT NO. 89-300 SAMPLE NO. 33602 SAMPLE TYPE: MONWI
SOURCE: WESTINGHOUSE
STATION ID: WH-011 WELL 33
REMARKS: UNDISTILLED FLUORIDE

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 02/28/89 1645 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
0.021U	ALDRIN
0.016U	HEPTACHLOR
0.022U	HEPTACHLOR EPOXIDE
0.022U	ALPHA-BHC
0.040U	BETA-BHC
0.019U	GAMMA BHC (LINDANE)
0.094U	DELTA-BHC
0.024U	ENDOSULFAN I (ALPHA)
0.030U	DIELDRIN
0.053U	4,4'-DDT (P,P'-DDT)
0.027U	4,4'-DDE (P,P'-DDE)
0.053U	4,4'-DDD (P,P'-DDD)
0.030U	ENDRIN
0.030U	ENDOSULFAN II (BETA)
0.048U	ENDOSULFAN SULFATE
0.24U	CHLORDANE (TECH. MIXTURE) /1
0.41U	PCB-1242 (AROCLOR 1242)
0.41U	PCB-1254 (AROCLOR 1254)
0.41U	PCB-1221 (AROCLOR 1221)

UG/L	ANALYTICAL RESULTS
0.41U	PCB-1232 (AROCLOR 1232)
0.41U	PCB-1248 (AROCLOR 1248)
0.41U	PCB-1260 (AROCLOR 1260)
0.41U	PCB-1016 (AROCLOR 1016)
2.4U	TOXAPHENE
--	CHLORDENE /2
--	ALPHA-CHLORDENE /2
--	BETA CHLORDENE /2
--	GAMMA-CHLORDENE /2
--	1-HYDROXYCHLORDENE /2
--	GAMMA-CHLORDANE /2
--	TRANS-NONACHLOR /2
--	ALPHA-CHLORDANE /2
--	CIS-NONACHLOR /2
--	OXYCHLORDANE (OCTACHLOREPOXIDE) /2
0.091U	METHOXYCHLOR
0.058U	ENDRIN KETONE

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.

04/25/89

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 89-300 SAMPLE NO. 33603 SAMPLE TYPE: SPRINGWA PROG ELEM: NSF COLLECTED BY: B BOKEY
SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC
STATION ID: WH-012 SPRING COLLECTION START: 03/01/89 0850 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
0.021U	ALDRIN
0.016U	HEPTACHLOR
0.022U	HEPTACHLOR EPOXIDE
0.022U	ALPHA-BHC
0.040U	BETA-BHC
0.019U	GAMMA-BHC (LINDANE)
0.063U	DELTA-BHC
0.024U	ENDOSULFAN I (ALPHA)
0.030U	DIELDRIN
0.053U	4,4'-DDT (P,P'-DDT)
0.027U	4,4'-DDE (P,P'-DDE)
0.053U	4,4'-DDD (P,P'-DDD)
0.030U	ENDRIN
0.030U	ENDOSULFAN II (BETA)
0.056U	ENDOSULFAN SULFATE
0.24U	CHLORDANE (TECH. MIXTURE) /1
0.41U	PCB-1242 (AROCLOR 1242)
0.41U	PCB-1254 (AROCLOR 1254)
0.41U	PCB-1221 (AROCLOR 1221)

UG/L	ANALYTICAL RESULTS
0.41U	PCB-1232 (AROCLOR 1232)
0.41U	PCB-1248 (AROCLOR 1248)
0.41U	PCB-1260 (AROCLOR 1260)
0.41U	PCB-1016 (AROCLOR 1016)
2.4U	TOXAPHENE
--	CHLORDENE /2
--	ALPHA-CHLORDENE /2
--	BETA CHLORDENE /2
--	GAMMA-CHLORDENE /2
--	1-HYDROXYCHLORDENE /2
--	GAMMA-CHLORDANE /2
--	TRANS-NONACHLOR /2
--	ALPHA-CHLORDANE /2
--	CIS-NONACHLOR /2
--	OXYCHLORDANE (OCTACHLOREPOXIDE) /2
0.091U	METHOXYCHLOR
0.058U	ENDRIN KETONE

REMARKS

REMARKS

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

04/25/89

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 89-300 SAMPLE NO. 33616 SAMPLE TYPE: MONWL PROG ELEM: NSF COLLECTED BY: B BOKEY
SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC
STATION ID: WH-025 N. OF DRUM STORAGE AREA COLLECTION START: 03/01/89 1435 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
0.11U	ALDRIN	0.38U	PCB-1232 (AROCLOR 1232)
0.020U	HEPTACHLOR	0.38U	PCB-1248 (AROCLOR 1248)
0.020U	HEPTACHLOR EPOXIDE	0.38U	PCB-1260 (AROCLOR 1260)
0.015U	ALPHA-BHC	0.38U	PCB-1016 (AROCLOR 1016)
0.033U	BETA-BHC	2.1U	TOXAPHENE
0.020U	GAMMA-BHC (LINDANE)	--	CHLORDENE /2
0.60U	DELTA-BHC	--	ALPHA-CHLORDENE /2
0.020U	ENDOSULFAN I (ALPHA)	--	BETA CHLORDENE /2
0.029U	DIELDRIN	--	GAMMA-CHLORDENE /2
0.044U	4,4'-DDT (P,P'-DDT)	--	1-HYDROXYCHLORDENE /2
0.029U	4,4'-DDE (P,P'-DDE)	--	GAMMA-CHLORDANE /2
0.044U	4,4'-DDD (P,P'-DDD)	--	TRANS-NONACHLOR /2
0.029U	ENDRIN	--	ALPHA-CHLORDANE /2
0.029U	ENDOSULFAN II (BETA)	--	CIS-NONACHLOR /2
0.075U	ENDOSULFAN SULFATE	--	OXYCHLORDANE (OCTACHLOREPOXIDE) /2
0.16U	CHLORDANE (TECH. MIXTURE) /1	0.091U	METHOXYCHLOR
0.38U	PCB-1242 (AROCLOR 1242)	0.058U	ENDRIN KETONE
0.38U	PCB-1254 (AROCLOR 1254)		
0.38U	PCB-1221 (AROCLOR 1221)		

REMARKS

REMARKS

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 04/25/89

** PROJECT NO. 89-300 SAMPLE NO. 33617 SAMPLE TYPE: MONWL
** SOURCE: WESTINGHOUSE
** STATION ID: WH-026 WELL 14

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 03/01/89 1620 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
0.090U	ALDRIN
0.020U	HEPTACHLOR
0.020U	HEPTACHLOR EPOXIDE
0.015U	ALPHA-BHC
0.033U	BETA-BHC
0.020U	GAMMA BHC (LINDANE)
0.24U	DELTA-BHC
0.020U	ENDOSULFAN I (ALPHA)
0.029U	DIELDRIN
0.044U	4,4'-DDT (P,P'-DDT)
0.029U	4,4'-DDE (P,P'-DDE)
0.044U	4,4'-DDD (P,P'-DDD)
0.029U	ENDRIN
0.029U	ENDOSULFAN II (BETA)
0.16U	ENDOSULFAN SULFATE
0.16U	CHLORDANE (TECH. MIXTURE) /1
0.38U	PCB-1242 (AROCLOR 1242)
0.38U	PCB-1254 (AROCLOR 1254)
0.38U	PCB-1221 (AROCLOR 1221)

UG/L	ANALYTICAL RESULTS
0.38U	PCB-1232 (AROCLOR 1232)
0.38U	PCB-1248 (AROCLOR 1248)
0.38U	PCB-1260 (AROCLOR 1260)
0.38U	PCB-1016 (AROCLOR 1016)
2.1U	TOXAPHENE
--	CHLORDENE /2
--	ALPHA-CHLORDENE /2
--	BETA CHLORDENE /2
--	GAMMA-CHLORDENE /2
--	1-HYDROXYCHLORDENE /2
--	GAMMA-CHLORDANE /2
--	TRANS-NONACHLOR /2
--	ALPHA-CHLORDANE /2
--	CIS-NONACHLOR /2
--	OXYCHLORDANE (OCTACHLOREPOXIDE) /2
0.091U	METHOXYCHLOR
0.058U	ENDRIN KETONE

REMARKS

REMARKS

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

04/25/89

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 89-300 SAMPLE NO. 33619 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: B BOKEY
SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC
STATION ID: WH-028 OIL RECOVERY AREA COLLECTION START: 03/02/89 0937 STOP: 00/00/00
REMARKS: UNDISTILLED FLUORIDE

UG/L	ANALYTICAL RESULTS
0.57U	ALDRIN
0.16U	HEPTACHLOR
0.22U	HEPTACHLOR EPOXIDE
0.15U	ALPHA-BHC
0.47U	BETA-BHC
0.17U	GAMMA BHC (LINDANE)
0.81U	DELTA-BHC
0.20U	ENDOSULFAN I (ALPHA)
0.27U	DIELDRIN
0.50U	4,4'-DDT (P,P'-DDT)
0.27U	4,4'-DDE (P,P'-DDE)
0.50U	4,4'-DDD (P,P'-DDD)
0.27U	ENDRIN
0.27U	ENDOSULFAN II (BETA)
0.12U	ENDOSULFAN SULFATE
1.6U	CHLORDANE (TECH. MIXTURE) /1
3.8U	PCB-1242 (AROCLOR 1242)
3.8U	PCB-1254 (AROCLOR 1254)
3.8U	PCB-1221 (AROCLOR 1221)

UG/L	ANALYTICAL RESULTS
3.8U	PCB-1232 (AROCLOR 1232)
3.8U	PCB-1248 (AROCLOR 1248)
3.8U	PCB-1260 (AROCLOR 1260)
3.8U	PCB-1016 (AROCLOR 1016)
2.6U	TOXAPHENE
--	CHLORDENE /2
--	ALPHA-CHLORDENE /2
--	BETA CHLORDENE /2
--	GAMMA-CHLORDENE /2
--	1-HYDROXYCHLORDENE /2
--	GAMMA-CHLORDANE /2
--	TRANS-NONACHLOR /2
--	ALPHA-CHLORDANE /2
--	CIS-NONACHLOR /2
--	OXYCHLORDANE (OCTACHLOREPOXIDE) /2
0.19U	METHOXYCHLOR
0.058U	ENDRIN KETONE

REMARKS

REMARKS

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 04/17/89

PROJECT NO. 89-300 SAMPLE NO. 33592 SAMPLE TYPE: MONWL
SOURCE: WESTINGHOUSE
STATION ID: WH-001 WELL 24

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 02/28/89 1037 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
10U	SILVER
30U	ARSENIC
NA	BORON
170	BARIUM
5.0U	BERYLLIUM
5.0U	CADMIUM
10U	COBALT
22	CHROMIUM
18	COPPER
10U	MOLYBDENUM
20U	NICKEL
40U	LEAD
30U	ANTIMONY
40U	SELENIUM
25U	TIN
67	STRONTIUM
50U	TELLURIUM
480	TITANIUM
100U	THALLIUM
29	VANADIUM
10U	YTTRIUM
80	ZINC
NA	ZIRCONIUM
0.2U	MERCURY
63000	ALUMINUM
43	MANGANESE

MG/L	ANALYTICAL RESULTS
6.3	CALCIUM
3.1	MAGNESIUM
11	IRON
1.4	SODIUM
2.0U	POTASSIUM

REMARKS

REMARKS

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 04/17/89

** PROJECT NO. 89-300 SAMPLE NO. 33596 SAMPLE TYPE: MONWL PROG ELEM: NSF COLLECTED BY: B BOKEY **
** SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC **
** STATION ID: WH-005 WELL 28 COLLECTION START: 02/28/89 1300 STOP: 00/00/00 **

UG/L	ANALYTICAL RESULTS
10U	SILVER
30U	ARSENIC
NA	BORON
260	BARIUM
17	BERYLLIUM
5.0U	CADMIUM
10U	COBALT
35	CHROMIUM
13	COPPER
10U	MOLYBDENUM
22	NICKEL
40U	LEAD
30U	ANTIMONY
40U	SELENIUM
25U	TIN
830	STRONTIUM
50U	TELLURIUM
710	TITANIUM
100U	THALLIUM
44	VANADIUM
12	YTTRIUM
32	ZINC
NA	ZIRCONIUM
0.2U	MERCURY
87000	ALUMINUM
160	MANGANESE

MG/L	ANALYTICAL RESULTS
90	CALCIUM
17	MAGNESIUM
13	IRON
31	SODIUM
8.7	POTASSIUM

REMARKS

REMARKS

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 04/17/89

PROJECT NO. 89-300 SAMPLE NO. 33597 SAMPLE TYPE: MONWL
SOURCE: WESTINGHOUSE
STATION ID: WH-006 WELL 30

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 02/28/89 1320 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
20U	SILVER
60U	ARSENIC
NA	BORON
800	BARIUM
12	BERYLLIUM
10U	CADMIUM
26	COBALT
100	CHROMIUM
40	COPPER
20U	MOLYBDENUM
190	NICKEL
91	LEAD
60U	ANTIMONY
80U	SELENIUM
50U	TIN
970	STRONTIUM
100U	TELLURIUM
1200	TITANIUM
200U	THALLIUM
100	VANADIUM
28	YTTRIUM
200	ZINC
NA	ZIRCONIUM
0.2U	MERCURY
190000	ALUMINUM
3700	MANGANESE

MG/L	ANALYTICAL RESULTS
140	CALCIUM
18	MAGNESIUM
28	IRON
380	SODIUM
8.9	POTASSIUM

REMARKS

REMARKS

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 04/17/89

PROJECT NO. 89-300 SAMPLE NO. 33598 SAMPLE TYPE: MONWL
SOURCE: WESTINGHOUSE
STATION ID: WH-007 WELL 7

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 02/28/89 1440 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
10U	SILVER
30U	ARSENIC
NA	BORON
170	BARIUM
5.0U	BERYLLIUM
5.0U	CADMIUM
16	COBALT
70	CHROMIUM
37	COPPER
15	MOLYBDENUM
48	NICKEL
22	LEAD
30U	ANTIMONY
40U	SELENIUM
73	TIN
130	STRONTIUM
50U	TELLURIUM
2000	TITANIUM
100U	THALLIUM
180	VANADIUM
18	YTTRIUM
83	ZINC
NA	ZIRCONIUM
0.2U	MERCURY
120000	ALUMINUM
190	MANGANESE

MG/L	ANALYTICAL RESULTS
5.4	CALCIUM
2.5	MAGNESIUM
20	IRON
140	SODIUM
9.0	POTASSIUM

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.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 04/17/89

PROJECT NO. 89-300 SAMPLE NO. 33602 SAMPLE TYPE: MONWL
SOURCE: WESTINGHOUSE
STATION ID: WH-011 WELL 33

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 02/28/89 1645 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
10U	SILVER
30U	ARSENIC
NA	BORON
230	BARIUM
5.0U	BERYLLIUM
5.0U	CADMIUM
10U	COBALT
31	CHROMIUM
10U	COPPER
10U	MOLYBDENUM
20U	NICKEL
40U	LEAD
30U	ANTIMONY
40U	SELENIUM
25U	TIN
170	STRONTIUM
50U	TELLURIUM
500	TITANIUM
100U	THALLIUM
54	VANADIUM
23	YTTRIUM
25	ZINC
NA	ZIRCONIUM
0.2U	MERCURY
39000	ALUMINUM
140	MANGANESE

MG/L	ANALYTICAL RESULTS
8.0	CALCIUM
4.0	MAGNESIUM
15	IRON
17	SODIUM
2.3	POTASSIUM

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.

METALS DATA REPORT 04/17/89

PROJECT NO. 89-300 SAMPLE NO. 33603 SAMPLE TYPE: SPRINGWA PROG ELEM: NSF COLLECTED BY: B BOKEY
SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC
STATION ID: WH-012 SPRING COLLECTION START: 03/01/89 0850 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
10U	SILVER
30U	ARSENIC
NA	BORON
120	BARIUM
5.0U	BERYLLIUM
5.0U	CADMIUM
10U	COBALT
10U	CHROMIUM
10U	COPPER
10U	MOLYBDENUM
20U	NICKEL
40U	LEAD
30U	ANTIMONY
40U	SELENIUM
25U	TIN
180	STRONTIUM
50U	TELLURIUM
12	TITANIUM
100U	THALLIUM
10U	VANADIUM
10U	YTTRIUM
10U	ZINC
NA	ZIRCONIUM
0.2U	MERCURY
2000	ALUMINUM
440	MANGANESE

MG/L	ANALYTICAL RESULTS
14	CALCIUM
5.8	MAGNESIUM
0.078	IRON
43	SODIUM
10	POTASSIUM

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.

METALS DATA REPORT 04/17/89

PROJECT NO. 89-300 SAMPLE NO. 33616 SAMPLE TYPE: MONWL
SOURCE: WESTINGHOUSE
STATION ID: WH-025 N. OF DRUM STORAGE AREA

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 03/01/89 1435 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
10U	SILVER
30U	ARSENIC
NA	BORON
220	BARIUM
5.0U	BERYLLIUM
5.0U	CADMIUM
10U	COBALT
43	CHROMIUM
10U	COPPER
10U	MOLYBDENUM
25	NICKEL
40U	LEAD
30U	ANTIMONY
40U	SELENIUM
25U	TIN
70	STRONTIUM
50U	TELLURIUM
360	TITANIUM
100U	THALLIUM
25	VANADIUM
14	YTTRIUM
33	ZINC
NA	ZIRCONIUM
0.2U	MERCURY
36000	ALUMINUM
77	MANGANESE

MG/L	ANALYTICAL RESULTS
2.2	CALCIUM
1.4	MAGNESIUM
8.0	IRON
11	SODIUM
2.0U	POTASSIUM

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.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 04/17/89

PROJECT NO. 89-300 SAMPLE NO. 33617 SAMPLE TYPE: MONWL
SOURCE: WESTINGHOUSE
STATION ID: WH-026 WELL 14

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 03/01/89 1620 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
10U	SILVER
30U	ARSENIC
NA	BORON
180	BARIUM
5.0U	BERYLLIUM
5.0U	CADMIUM
10U	COBALT
26	CHROMIUM
15	COPPER
10U	MOLYBDENUM
20U	NICKEL
12	LEAD
30U	ANTIMONY
40U	SELENIUM
25U	TIN
120	STRONTIUM
50U	TELLURIUM
340	TITANIUM
100U	THALLIUM
42	VANADIUM
10	YTTRIUM
48	ZINC
NA	ZIRCONIUM
0.2U	MERCURY
42000	ALUMINUM
94	MANGANESE

MG/L	ANALYTICAL RESULTS
6.4	CALCIUM
2.7	MAGNESIUM
12	IRON
8.9	SODIUM
2.0U	POTASSIUM

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.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 04/17/89

PROJECT NO. 89-300 SAMPLE NO. 33619 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: B BOKEY
SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC
STATION ID: WH-028 OIL RECOVERY AREA COLLECTION START: 03/02/89 0937 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
200U	SILVER
600U	ARSENIC
NA	BORON
2100	BARIUM
63	BERYLLIUM
100U	CADMIUM
260	COBALT
510	CHROMIUM
210	COPPER
200U	MOLYBDENUM
770	NICKEL
400	LEAD
600U	ANTIMONY
800U	SELENIUM
500U	TIN
690	STRONTIUM
1000U	TELLURIUM
10000	TITANIUM
2000U	THALLIUM
2000	VANADIUM
400	YTTRIUM
820	ZINC
NA	ZIRCONIUM
0.2U	MERCURY
1500000	ALUMINUM
3400	MANGANESE

MG/L	ANALYTICAL RESULTS
52	CALCIUM
31	MAGNESIUM
860	IRON
20U	SODIUM
40U	POTASSIUM

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.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

04/18/89

SPECIFIED ANALYSIS DATA REPORT

PROJECT NO. 89-300 SAMPLE NO. 33592 SAMPLE TYPE: MONWL PROG ELEM: NSF COLLECTED BY: B BOKEY
SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC
STATION ID: WH-001 WELL 24 COLLECTION START: 02/28/89 1037 STOP: 00/00/00

RESULTS	UNITS	PARAMETER
0.05U	MG/L	AMMONIA
0.60	MG/L	NITRATE-NITRITE NITROGEN
0.1U	MG/L	TOTAL KJELDAHL NITROGEN
0.23	MG/L	FLUORIDE
.004U	MG/L	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.

04/18/89

SPECIFIED ANALYSIS DATA REPORT

*** ***
** PROJECT NO. 89-300 SAMPLE NO. 33596 SAMPLE TYPE: MONWL PROG ELEM: NSF COLLECTED BY: B BOKEY **
** SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC **
** STATION ID: WH-005 WELL 28 COLLECTION START: 02/28/89 1300 STOP: 00/00/00 **
** **
*** ***

RESULTS	UNITS	PARAMETER
.99	MG/L	AMMONIA
46	MG/L	NITRATE-NITRITE NITROGEN
1.6	MG/L	TOTAL KJELDAHL NITROGEN
29	MG/L	FLUORIDE
.004U	MG/L	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.

SPECIFIED ANALYSIS DATA REPORT

PROJECT NO. 89-300 SAMPLE NO. 33597 SAMPLE TYPE: MONWL PROG ELEM: NSF COLLECTED BY: B BOKEY
SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC
STATION ID: WH-006 WELL 30 COLLECTION START: 02/28/89 1320 STOP: 00/00/00

RESULTS	UNITS	PARAMETER
25	MG/L	AMMONIA
270	MG/L	NITRATE-NITRITE NITROGEN
25	MG/L	TOTAL KJELDAHL NITROGEN
29	MG/L	FLUORIDE
.004U	MG/L	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.

04/18/89

SPECIFIED ANALYSIS DATA REPORT

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**   PROJECT NO. 89-300   SAMPLE NO. 33598  SAMPLE TYPE: MONWL      PROG ELEM: NSF   COLLECTED BY: B BOKEY             **
**   SOURCE: WESTINGHOUSE                                           CITY: COLUMBIA              ST: SC                 **
**   STATION ID: WH-007 WELL 7                                      COLLECTION START: 02/28/89  1440   STOP: 00/00/00  **
**                                                                                                                     **
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RESULTS	UNITS	PARAMETER
200	MG/L	AMMONIA
88	MG/L	NITRATE-NITRITE NITROGEN
200	MG/L	TOTAL KJELDAHL NITROGEN
65	MG/L	FLUORIDE
.004U	MG/L	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.

SPECIFIED ANALYSIS DATA REPORT

PROJECT NO. 89-300 SAMPLE NO. 33602 SAMPLE TYPE: MONWL PROG ELEM: NSF COLLECTED BY: B BOKEY
SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC
STATION ID: WH-011 WELL 33 COLLECTION START: 02/28/89 1645 STOP: 00/00/00
REMARKS: UNDISTILLED FLUORIDE

RESULTS	UNITS	PARAMETER
.05U	MG/L	AMMONIA
8.3	MG/L	NITRATE-NITRITE NITROGEN
.66	MG/L	TOTAL KJELDAHL NITROGEN
.33	MG/L	FLUORIDE
.004U	MG/L	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.

04/18/89

SPECIFIED ANALYSIS DATA REPORT

*** ***
** PROJECT NO. 89-300 SAMPLE NO. 33603 SAMPLE TYPE: SPRINGWA PROG ELEM: NSF COLLECTED BY: B BOKEY **
** SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC **
** STATION ID: WH-012 SPRING COLLECTION START: 03/01/89 0850 STOP: 00/00/00 **
** **
*** ***

RESULTS	UNITS	PARAMETER
120	MG/L	AMMONIA
74	MG/L	NITRATE-NITRITE NITROGEN
120	MG/L	TOTAL KJELDAHL NITROGEN
34	MG/L	FLUORIDE
.004U	MG/L	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.

04/18/89

SPECIFIED ANALYSIS DATA REPORT

*** ***
** PROJECT NO. 89-300 SAMPLE NO. 33616 SAMPLE TYPE: MONWL PROG ELEM: NSF COLLECTED BY: B BOKEY **
** SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC **
** STATION ID: WH-025 N. OF DRUM STORAGE AREA COLLECTION START: 03/01/89 1435 STOP: 00/00/00 **
** **
*** ***

RESULTS	UNITS	PARAMETER
.05U	MG/L	AMMONIA
.86	MG/L	NITRATE-NITRITE NITROGEN
.29	MG/L	TOTAL KJELDAHL NITROGEN
.30	MG/L	FLUORIDE
.004U	MG/L	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.

04/18/89

SPECIFIED ANALYSIS DATA REPORT

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**   PROJECT NO. 89-300    SAMPLE NO. 33617  SAMPLE TYPE: MONWL       PROG ELEM: NSF   COLLECTED BY: B BOKEY                **
**   SOURCE: WESTINGHOUSE                                            CITY: COLUMBIA              ST: SC                   **
**   STATION ID: WH-026 WELL 14                                      COLLECTION START: 03/01/89  1620   STOP: 00/00/00        **
**                                                                                                                          **
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RESULTS	UNITS	PARAMETER
.05U	MG/L	AMMONIA
2.0	MG/L	NITRATE-NITRITE NITROGEN
.30	MG/L	TOTAL KJELDAHL NITROGEN
.52	MG/L	FLUORIDE
.004U	MG/L	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.

04/18/89

SPECIFIED ANALYSIS DATA REPORT

*** ***
** PROJECT NO. 89-300 SAMPLE NO. 33619 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: B BOKEY **
** SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC **
** STATION ID: WH-028 OIL RECOVERY AREA COLLECTION START: 03/02/89 0937 STOP: 00/00/00 **
** REMARKS: UNDISTILLED FLUORIDE **
*** ***

RESULTS	UNITS	PARAMETER
1.4	MG/L	AMMONIA
1.6	MG/L	NITRATE-NITRITE NITROGEN
15	MG/L	TOTAL KJELDAHL NITROGEN
0.37	MG/L	FLUORIDE
.004U	MG/L	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.

PURGEABLE ORGANICS DATA REPORT 03/16/89

PROJECT NO. 89-300 SAMPLE NO. 33593 SAMPLE TYPE: DITCHWA PROG ELEM: NSF COLLECTED BY: B BOKEY
SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC
STATION ID: WH-002 N.E. BACKGROUND DITCH COLLECTION START: 02/28/89 1003 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
5.0U	CHLOROMETHANE	5.0U	CIS-1,3-DICHLOROPROPENE
5.0U	VINYL CHLORIDE	50U	METHYL ISOBUTYL KETONE
5.0U	BROMOMETHANE	5.0U	TOLUENE
5.0U	CHLOROETHANE	5.0U	TRANS-1,3-DICHLOROPROPENE
5.0U	TRICHLOROFLUOROMETHANE	5.0U	1,1,2-TRICHLOROETHANE
5.0U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)	5.0U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
50U	ACETONE	5.0U	1,3-DICHLOROPROPANE
50U	CARBON DISULFIDE	50U	METHYL BUTYL KETONE
5.0U	METHYLENE CHLORIDE	5.0U	DIBROMOCHLOROMETHANE
5.0U	TRANS-1,2-DICHLOROETHENE	5.0U	CHLOROBENZENE
5.0U	1,1-DICHLOROETHANE	10U	1,1,1,2-TETRACHLOROETHANE
50U	VINYL ACETATE	5.0U	ETHYL BENZENE
5.0U	CIS-1,2-DICHLOROETHENE	5.0U	(M- AND/OR P-)XYLENE
5.0U	2,2-DICHLOROPROPANE	5.0U	O-XYLENE
50U	METHYL ETHYL KETONE	10U	STYRENE
5.0U	BROMOCHLOROMETHANE	5.0U	BROMOFORM
5.0U	CHLOROFORM	10U	BROMOBENZENE
5.0U	1,1,1-TRICHLOROETHANE	5.0U	1,1,2,2-TETRACHLOROETHANE
5.0U	1,1-DICHLOROPROPENE	10U	1,2,3-TRICHLOROPROPANE
5.0U	CARBON TETRACHLORIDE	10U	O-CHLOROTOLUENE
5.0U	1,2-DICHLOROETHANE	10U	P-CHLOROTOLUENE
5.0U	BENZENE	10U	1,3-DICHLOROBENZENE
5.0U	TRICHLOROETHENE(TRICHLOROETHYLENE)	10U	1,4-DICHLOROBENZENE
5.0U	1,2-DICHLOROPROPANE	10U	1,2-DICHLOROBENZENE
5.0U	DIBROMOMETHANE		
5.0U	BROMODICHLOROMETHANE		

REMARKS
RECOMMENDED HOLDING TIME EXCEEDED-PURGEABLE ORGANICS

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.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 03/14/89

PROJECT NO. 89-300 SAMPLE NO. 33595 SAMPLE TYPE: BLKWA
SOURCE: WESTINGHOUSE
STATION ID: WH-004 TRIP BLANK

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 02/28/89 1000 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
5.0U	CHLOROMETHANE
5.0U	VINYL CHLORIDE
5.0U	BROMOMETHANE
5.0U	CHLOROETHANE
5.0U	TRICHLOROFLUOROMETHANE
5.0U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
50U	ACETONE
50U	CARBON DISULFIDE
5.0U	METHYLENE CHLORIDE
5.0U	TRANS-1,2-DICHLOROETHENE
5.0U	1,1-DICHLOROETHANE
50U	VINYL ACETATE
5.0U	CIS-1,2-DICHLOROETHENE
5.0U	2,2-DICHLOROPROPANE
50U	METHYL ETHYL KETONE
5.0U	BROMOCHLOROMETHANE
5.0U	CHLOROFORM
5.0U	1,1,1-TRICHLOROETHANE
5.0U	1,1-DICHLOROPROPENE
5.0U	CARBON TETRACHLORIDE
5.0U	1,2-DICHLOROETHANE
5.0U	BENZENE
5.0U	TRICHLOROETHENE(TRICHLOROETHYLENE)
5.0U	1,2-DICHLOROPROPANE
5.0U	DIBROMOMETHANE
5.0U	BROMODICHLOROMETHANE

UG/L	ANALYTICAL RESULTS
5.0U	CIS-1,3-DICHLOROPROPENE
50U	METHYL ISOBUTYL KETONE
5.0U	TOLUENE
5.0U	TRANS-1,3-DICHLOROPROPENE
5.0U	1,1,2-TRICHLOROETHANE
5.0U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
5.0U	1,3-DICHLOROPROPANE
50U	METHYL BUTYL KETONE
5.0U	DIBROMOCHLOROMETHANE
5.0U	CHLOROBENZENE
10U	1,1,1,2-TETRACHLOROETHANE
5.0U	ETHYL BENZENE
5.0U	(M- AND/OR P-)XYLENE
5.0U	O-XYLENE
10U	STYRENE
5.0U	BROMOFORM
10U	BROMOBENZENE
5.0U	1,1,2,2-TETRACHLOROETHANE
10U	1,2,3-TRICHLOROPROPANE
10U	O-CHLOROTOLUENE
10U	P-CHLOROTOLUENE
10U	1,3-DICHLOROBENZENE
10U	1,4-DICHLOROBENZENE
10U	1,2-DICHLOROBENZENE

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.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

03/14/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 89-300   SAMPLE NO. 33600   SAMPLE TYPE: DITCHWA   PROG ELEM: NSF   COLLECTED BY: B BOKEY
SOURCE: WESTINGHOUSE   CITY: COLUMBIA   ST: SC
STATION ID: WH-009 DITCH N. OF PARKING AREA   COLLECTION START: 02/28/89 1605   STOP: 00/00/00

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
5.0U	CHLOROMETHANE	5.0U	CIS-1,3-DICHLOROPROPENE
5.0U	VINYL CHLORIDE	50U	METHYL ISOBUTYL KETONE
5.0U	BROMOMETHANE	5.0U	TOLUENE
5.0U	CHLOROETHANE	5.0U	TRANS-1,3-DICHLOROPROPENE
5.0U	TRICHLOROFLUOROMETHANE	5.0U	1,1,2-TRICHLOROETHANE
5.0U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)	5.0U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
50U	ACETONE	5.0U	1,3-DICHLOROPROPANE
50U	CARBON DISULFIDE	50U	METHYL BUTYL KETONE
5.0U	METHYLENE CHLORIDE	5.0U	DIBROMOCHLOROMETHANE
5.0U	TRANS-1,2-DICHLOROETHENE	5.0U	CHLOROBENZENE
5.0U	1,1-DICHLOROETHANE	10U	1,1,1,2-TETRACHLOROETHANE
50U	VINYL ACETATE	5.0U	ETHYL BENZENE
5.0U	CIS-1,2-DICHLOROETHENE	5.0U	(M- AND/OR P-)XYLENE
5.0U	2,2-DICHLOROPROPANE	5.0U	O-XYLENE
50U	METHYL ETHYL KETONE	10U	STYRENE
5.0U	BROMOCHLOROMETHANE	5.0U	BROMOFORM
5.0U	CHLOROFORM	10U	BROMOBENZENE
5.0U	1,1,1-TRICHLOROETHANE	5.0U	1,1,2,2-TETRACHLOROETHANE
5.0U	1,1-DICHLOROPROPENE	10U	1,2,3-TRICHLOROPROPANE
5.0U	CARBON TETRACHLORIDE	10U	O-CHLOROTOLUENE
5.0U	1,2-DICHLOROETHANE	10U	P-CHLOROTOLUENE
5.0U	BENZENE	10U	1,3-DICHLOROBENZENE
5.0U	TRICHLOROETHENE(TRICHLOROETHYLENE)	10U	1,4-DICHLOROBENZENE
5.0U	1,2-DICHLOROPROPANE	10U	1,2-DICHLOROBENZENE
5.0U	DIBROMOMETHANE		
5.0U	BROMODICHLOROMETHANE		

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.

03/14/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 89-300 SAMPLE NO. 33605 SAMPLE TYPE: DITCHWA
SOURCE: WESTINGHOUSE
STATION ID: WH-014 DITCH DISCHARGE

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 03/01/89 0915 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
5.0U	CHLOROMETHANE
5.0U	VINYL CHLORIDE
5.0U	BROMOMETHANE
5.0U	CHLOROETHANE
5.0U	TRICHLOROFLUOROMETHANE
5.0U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
50U	ACETONE
50U	CARBON DISULFIDE
5.0U	METHYLENE CHLORIDE
5.0U	TRANS-1,2-DICHLOROETHENE
5.0U	1,1-DICHLOROETHANE
50U	VINYL ACETATE
0.91J	CIS-1,2-DICHLOROETHENE
5.0U	2,2-DICHLOROPROPANE
50U	METHYL ETHYL KETONE
5.0U	BROMOCHLOROMETHANE
5.0U	CHLOROFORM
5.0U	1,1,1-TRICHLOROETHANE
5.0U	1,1-DICHLOROPROPENE
5.0U	CARBON TETRACHLORIDE
5.0U	1,2-DICHLOROETHANE
5.0U	BENZENE
2.8J	TRICHLOROETHENE(TRICHLOROETHYLENE)
5.0U	1,2-DICHLOROPROPANE
5.0U	DIBROMOMETHANE
5.0U	BROMODICHLOROMETHANE

UG/L	ANALYTICAL RESULTS
5.0U	CIS-1,3-DICHLOROPROPENE
50U	METHYL ISOBUTYL KETONE
5.0U	TOLUENE
5.0U	TRANS-1,3-DICHLOROPROPENE
5.0U	1,1,2-TRICHLOROETHANE
13	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
5.0U	1,3-DICHLOROPROPANE
50U	METHYL BUTYL KETONE
5.0U	DIBROMOCHLOROMETHANE
5.0U	CHLOROBENZENE
10U	1,1,1,2-TETRACHLOROETHANE
5.0U	ETHYL BENZENE
5.0U	(M- AND/OR P-)XYLENE
5.0U	O-XYLENE
10U	STYRENE
5.0U	BROMOFORM
10U	BROMOBENZENE
5.0U	1,1,2,2-TETRACHLOROETHANE
10U	1,2,3-TRICHLOROPROPANE
10U	O-CHLOROTOLUENE
10U	P-CHLOROTOLUENE
10U	1,3-DICHLOROBENZENE
10U	1,4-DICHLOROBENZENE
10U	1,2-DICHLOROBENZENE

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 03/14/89

PROJECT NO. 89-300 SAMPLE NO. 33608 SAMPLE TYPE: DITCHWA PROG ELEM: NSF COLLECTED BY: B BOKEY
SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC
STATION ID: WH-017 S.W. DITCH COLLECTION START: 03/01/89 0955 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
5.0U	CHLOROMETHANE
5.0U	VINYL CHLORIDE
5.0U	BROMOMETHANE
5.0U	CHLOROETHANE
5.0U	TRICHLOROFLUOROMETHANE
5.0U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
50U	ACETONE
50U	CARBON DISULFIDE
5.0U	METHYLENE CHLORIDE
5.0U	TRANS-1,2-DICHLOROETHENE
5.0U	1,1-DICHLOROETHANE
50U	VINYL ACETATE
5.0U	CIS-1,2-DICHLOROETHENE
5.0U	2,2-DICHLOROPROPANE
50U	METHYL ETHYL KETONE
5.0U	BROMOCHLOROMETHANE
5.0U	CHLOROFORM
5.0U	1,1,1-TRICHLOROETHANE
5.0U	1,1-DICHLOROPROPENE
5.0U	CARBON TETRACHLORIDE
5.0U	1,2-DICHLOROETHANE
5.0U	BENZENE
1.1J	TRICHLOROETHENE(TRICHLOROETHYLENE)
5.0U	1,2-DICHLOROPROPANE
5.0U	DIBROMOMETHANE
5.0U	BROMODICHLOROMETHANE

UG/L	ANALYTICAL RESULTS
5.0U	CIS-1,3-DICHLOROPROPENE
50U	METHYL ISOBUTYL KETONE
5.0U	TOLUENE
5.0U	TRANS-1,3-DICHLOROPROPENE
5.0U	1,1,2-TRICHLOROETHANE
5.2	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
5.0U	1,3-DICHLOROPROPANE
50U	METHYL BUTYL KETONE
5.0U	DIBROMOCHLOROMETHANE
5.0U	CHLOROBENZENE
10U	1,1,1,2-TETRACHLOROETHANE
5.0U	ETHYL BENZENE
5.0U	(M- AND/OR P-)XYLENE
5.0U	O-XYLENE
10U	STYRENE
5.0U	BROMOFORM
10U	BROMOBENZENE
5.0U	1,1,2,2-TETRACHLOROETHANE
10U	1,2,3-TRICHLOROPROPANE
10U	O-CHLOROTOLUENE
10U	P-CHLOROTOLUENE
10U	1,3-DICHLOROBENZENE
10U	1,4-DICHLOROBENZENE
10U	1,2-DICHLOROBENZENE

REMARKS

REMARKS

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 03/14/89

PROJECT NO. 89-300 SAMPLE NO. 33610 SAMPLE TYPE: AMBWA
SOURCE: WESTINGHOUSE
STATION ID: WH-019 UPPER SUNSET LAKE

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 03/01/89 1015 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
5.0U	CHLOROMETHANE
5.0U	VINYL CHLORIDE
5.0U	BROMOMETHANE
5.0U	CHLOROETHANE
5.0U	TRICHLOROFLUOROMETHANE
5.0U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
50U	ACETONE
50U	CARBON DISULFIDE
5.0U	METHYLENE CHLORIDE
5.0U	TRANS-1,2-DICHLOROETHENE
5.0U	1,1-DICHLOROETHANE
50U	VINYL ACETATE
5.0U	CIS-1,2-DICHLOROETHENE
5.0U	2,2-DICHLOROPROPANE
50U	METHYL ETHYL KETONE
5.0U	BROMOCHLOROMETHANE
5.0U	CHLOROFORM
5.0U	1,1,1-TRICHLOROETHANE
5.0U	1,1-DICHLOROPROPENE
5.0U	CARBON TETRACHLORIDE
5.0U	1,2-DICHLOROETHANE
5.0U	BENZENE
5.0U	TRICHLOROETHENE(TRICHLOROETHYLENE)
5.0U	1,2-DICHLOROPROPANE
5.0U	DIBROMOMETHANE
5.0U	BROMODICHLOROMETHANE

UG/L	ANALYTICAL RESULTS
5.0U	CIS-1,3-DICHLOROPROPENE
50U	METHYL ISOBUTYL KETONE
5.0U	TOLUENE
5.0U	TRANS-1,3-DICHLOROPROPENE
5.0U	1,1,2-TRICHLOROETHANE
0.81J	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
5.0U	1,3-DICHLOROPROPANE
50U	METHYL BUTYL KETONE
5.0U	DIBROMOCHLOROMETHANE
5.0U	CHLOROBENZENE
10U	1,1,1,2-TETRACHLOROETHANE
5.0U	ETHYL BENZENE
5.0U	(M- AND/OR P-)XYLENE
5.0U	O-XYLENE
10U	STYRENE
5.0U	BROMOFORM
10U	BROMOBENZENE
5.0U	1,1,2,2-TETRACHLOROETHANE
10U	1,2,3-TRICHLOROPROPANE
10U	O-CHLOROTOLUENE
10U	P-CHLOROTOLUENE
10U	1,3-DICHLOROBENZENE
10U	1,4-DICHLOROBENZENE
10U	1,2-DICHLOROBENZENE

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 03/15/89

PROJECT NO. 89-300 SAMPLE NO. 33612 SAMPLE TYPE: AMBWA
SOURCE: WESTINGHOUSE
STATION ID: WH-021 LOWER SUNSET LAKE

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 03/01/89 1130 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
5.0U	CHLOROMETHANE
5.0U	VINYL CHLORIDE
5.0U	BROMOMETHANE
5.0U	CHLOROETHANE
5.0U	TRICHLOROFLUOROMETHANE
5.0U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
50U	ACETONE
50U	CARBON DISULFIDE
5.0U	METHYLENE CHLORIDE
5.0U	TRANS-1,2-DICHLOROETHENE
5.0U	1,1-DICHLOROETHANE
50U	VINYL ACETATE
5.0U	CIS-1,2-DICHLOROETHENE
5.0U	2,2-DICHLOROPROPANE
50U	METHYL ETHYL KETONE
5.0U	BROMOCHLOROMETHANE
5.0U	CHLOROFORM
5.0U	1,1,1-TRICHLOROETHANE
5.0U	1,1-DICHLOROPROPENE
5.0U	CARBON TETRACHLORIDE
5.0U	1,2-DICHLOROETHANE
5.0U	BENZENE
5.0U	TRICHLOROETHENE(TRICHLOROETHYLENE)
5.0U	1,2-DICHLOROPROPANE
5.0U	DIBROMOMETHANE
5.0U	BROMODICHLOROMETHANE

UG/L	ANALYTICAL RESULTS
5.0U	CIS-1,3-DICHLOROPROPENE
50U	METHYL ISOBUTYL KETONE
5.0U	TOLUENE
5.0U	TRANS-1,3-DICHLOROPROPENE
5.0U	1,1,2-TRICHLOROETHANE
5.0U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
5.0U	1,3-DICHLOROPROPANE
50U	METHYL BUTYL KETONE
5.0U	DIBROMOCHLOROMETHANE
5.0U	CHLOROBENZENE
10U	1,1,1,2-TETRACHLOROETHANE
5.0U	ETHYL BENZENE
5.0U	(M- AND/OR P-)XYLENE
5.0U	O-XYLENE
10U	STYRENE
5.0U	BROMOFORM
10U	BROMOBENZENE
5.0U	1,1,2,2-TETRACHLOROETHANE
10U	1,2,3-TRICHLOROPROPANE
10U	O-CHLOROTOLUENE
10U	P-CHLOROTOLUENE
10U	1,3-DICHLOROBENZENE
10U	1,4-DICHLOROBENZENE
10U	1,2-DICHLOROBENZENE

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 03/15/89

PROJECT NO. 89-300 SAMPLE NO. 33614 SAMPLE TYPE: AMBWA
SOURCE: WESTINGHOUSE
STATION ID: WH-023 LOWER SUNSET LAKE DUPLICATE

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 03/01/89 1130 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
5.0U	CHLOROMETHANE
5.0U	VINYL CHLORIDE
5.0U	BROMOMETHANE
5.0U	CHLOROETHANE
5.0U	TRICHLOROFLUOROMETHANE
5.0U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
50U	ACETONE
50U	CARBON DISULFIDE
5.0U	METHYLENE CHLORIDE
5.0U	TRANS-1,2-DICHLOROETHENE
5.0U	1,1-DICHLOROETHANE
50U	VINYL ACETATE
5.0U	CIS-1,2-DICHLOROETHENE
5.0U	2,2-DICHLOROPROPANE
50U	METHYL ETHYL KETONE
5.0U	BROMOCHLOROMETHANE
5.0U	CHLOROFORM
5.0U	1,1,1-TRICHLOROETHANE
5.0U	1,1-DICHLOROPROPENE
5.0U	CARBON TETRACHLORIDE
5.0U	1,2-DICHLOROETHANE
5.0U	BENZENE
5.0U	TRICHLOROETHENE(TRICHLOROETHYLENE)
5.0U	1,2-DICHLOROPROPANE
5.0U	DIBROMOMETHANE
5.0U	BROMODICHLOROMETHANE

UG/L	ANALYTICAL RESULTS
5.0U	CIS-1,3-DICHLOROPROPENE
50U	METHYL ISOBUTYL KETONE
5.0U	TOLUENE
5.0U	TRANS-1,3-DICHLOROPROPENE
5.0U	1,1,2-TRICHLOROETHANE
5.0U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
5.0U	1,3-DICHLOROPROPANE
50U	METHYL BUTYL KETONE
5.0U	DIBROMOCHLOROMETHANE
5.0U	CHLOROBENZENE
10U	1,1,1,2-TETRACHLOROETHANE
5.0U	ETHYL BENZENE
5.0U	(M- AND/OR P-)XYLENE
5.0U	O-XYLENE
10U	STYRENE
5.0U	BROMOFORM
10U	BROMOBENZENE
5.0U	1,1,2,2-TETRACHLOROETHANE
10U	1,2,3-TRICHLOROPROPANE
10U	O-CHLOROTOLUENE
10U	P-CHLOROTOLUENE
10U	1,3-DICHLOROBENZENE
10U	1,4-DICHLOROBENZENE
10U	1,2-DICHLOROBENZENE

REMARKS

REMARKS

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

04/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 89-300 SAMPLE NO. 33593 SAMPLE TYPE: DITCHWA
SOURCE: WESTINGHOUSE
STATION ID: WH-002 N.E. BACKGROUND DITCH

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 02/28/89 1003 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
10U	BIS(2-CHLOROETHYL) ETHER	10U	FLUORANTHENE
10U	BIS(2-CHLOROISOPROPYL) ETHER	10U	PYRENE
10U	N-NITROSODI-N-PROPYLAMINE	10U	BENZYL BUTYL PHTHALATE
10U	HEXACHLOROETHANE	10U	3,3'-DICHLOROBENZIDINE
10U	NITROBENZENE	10U	BENZO(A)ANTHRACENE
10U	ISOPHORONE	10U	CHRYSENE
10U	BIS(2-CHLOROETHOXY) METHANE	10U	BIS(2-ETHYLHEXYL) PHTHALATE
10U	1,2,4-TRICHLOROBENZENE	10U	DI-N-OCTYLPHTHALATE
10U	NAPHTHALENE	10U	BENZO(B AND/OR K)FLUORANTHENE
10U	4-CHLOROANILINE	10U	BENZO-A-PYRENE
10U	HEXACHLOROBUTADIENE	10U	INDENO (1,2,3-CD) PYRENE
10U	2-METHYLNAPHTHALENE	10U	DIBENZO(A,H)ANTHRACENE
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)	10U	BENZO(GHI)PERYLENE
10U	2-CHLORONAPHTHALENE	10U	PHENOL
10U	2-NITROANILINE	10U	2-CHLOROPHENOL
10U	DIMETHYL PHTHALATE	20U	BENZYL ALCOHOL
10U	ACENAPHTHYLENE	10U	2-METHYLPHENOL
10U	2,6-DINITROTOLUENE	10U	(3-AND/OR 4-)METHYLPHENOL
10U	3-NITROANILINE	10U	2-NITROPHENOL
10U	ACENAPHTHENE	10U	2,4-DIMETHYLPHENOL
10U	DIBENZOFURAN	20U	BENZOIC ACID
10U	2,4-DINITROTOLUENE	10U	2,4-DICHLOROPHENOL
10U	DIETHYL PHTHALATE	10U	4-CHLORO-3-METHYLPHENOL
10U	FLUORENE	10U	2,4,6-TRICHLOROPHENOL
10U	4-CHLOROPHENYL PHENYL ETHER	10U	2,4,5-TRICHLOROPHENOL
10U	4-NITROANILINE	20U	2,4-DINITROPHENOL
10U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE	20U	4-NITROPHENOL
10U	4-BROMOPHENYL PHENYL ETHER	10U	2,3,4,6-TETRACHLOROPHENOL
10U	HEXACHLOROBENZENE (HCB)	20U	2-METHYL-4,6-DINITROPHENOL
10U	PHENANTHRENE	20U	PENTACHLOROPHENOL
10U	ANTHRACENE		
10U	DI-N-BUTYLPHTHALATE		

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.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

04/07/89

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

PROJECT NO. 89-300 SAMPLE NO. 33593 SAMPLE TYPE: DITCHWA PROG ELEM: NSF COLLECTED BY: B BOKEY
SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC
STATION ID: WH-002 N.E. BACKGROUND DITCH COLLECTION START: 02/28/89 1003 STOP: 00/00/00

ANALYTICAL RESULTS UG/L

300JN	SILOXANES (6 ISOMERS)
50J	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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*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 04/07/89

PROJECT NO. 89-300 SAMPLE NO. 33600 SAMPLE TYPE: DITCHWA PROG ELEM: NSF COLLECTED BY: B BOKEY
SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC
STATION ID: WH-009 DITCH N. OF PARKING AREA COLLECTION START: 02/28/89 1605 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
10U	BIS(2-CHLOROETHYL) ETHER
10U	BIS(2-CHLOROISOPROPYL) ETHER
10U	N-NITROSODI-N-PROPYLAMINE
10U	HEXACHLOROETHANE
10U	NITROBENZENE
10U	ISOPHORONE
10U	BIS(2-CHLOROETHOXY) METHANE
10U	1,2,4-TRICHLOROBENZENE
10U	NAPHTHALENE
10U	4-CHLOROANILINE
10U	HEXACHLOROBUTADIENE
10U	2-METHYLNAPHTHALENE
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)
10U	2-CHLORONAPHTHALENE
10U	2-NITROANILINE
10U	DIMETHYL PHTHALATE
10U	ACENAPHTHYLENE
10U	2,6-DINITROTOLUENE
10U	3-NITROANILINE
10U	ACENAPHTHENE
10U	DIBENZOFURAN
10U	2,4-DINITROTOLUENE
10U	DIETHYL PHTHALATE
10U	FLUORENE
10U	4-CHLOROPHENYL PHENYL ETHER
10U	4-NITROANILINE
10U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10U	4-BROMOPHENYL PHENYL ETHER
10U	HEXACHLOROBENZENE (HCB)
10U	PHENANTHRENE
10U	ANTHRACENE
10U	DI-N-BUTYLPHTHALATE

UG/L	ANALYTICAL RESULTS
10U	FLUORANTHENE
10U	PYRENE
10U	BENZYL BUTYL PHTHALATE
10U	3,3'-DICHLOROBENZIDINE
10U	BENZO(A)ANTHRACENE
10U	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
10U	BENZO(GHI)PERYLENE
10U	PHENOL
10U	2-CHLOROPHENOL
20U	BENZYL ALCOHOL
10U	2-METHYLPHENOL
10U	(3-AND/OR 4-)METHYLPHENOL
10U	2-NITROPHENOL
10U	2,4-DIMETHYLPHENOL
20U	BENZOIC ACID
10U	2,4-DICHLOROPHENOL
10U	4-CHLORO-3-METHYLPHENOL
10U	2,4,6-TRICHLOROPHENOL
10U	2,4,5-TRICHLOROPHENOL
20U	2,4-DINITROPHENOL
20U	4-NITROPHENOL
10U	2,3,4,6-TETRACHLOROPHENOL
20U	2-METHYL-4,6-DINITROPHENOL
20U	PENTACHLOROPHENOL

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 04/06/89

PROJECT NO. 89-300 SAMPLE NO. 33605 SAMPLE TYPE: DITCHWA
SOURCE: WESTINGHOUSE
STATION ID: WH-014 DITCH DISCHARGE

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 03/01/89 0915 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
10U	BIS(2-CHLOROETHYL) ETHER
10U	BIS(2-CHLOROISOPROPYL) ETHER
10U	N-NITROSODI-N-PROPYLAMINE
10U	HEXACHLOROETHANE
10U	NITROBENZENE
10U	ISOPHORONE
10U	BIS(2-CHLOROETHOXY) METHANE
10U	1,2,4-TRICHLOROBENZENE
10U	NAPHTHALENE
10U	4-CHLOROANILINE
10U	HEXACHLOROBUTADIENE
10U	2-METHYLNAPHTHALENE
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)
10U	2-CHLORONAPHTHALENE
10U	2-NITROANILINE
10U	DIMETHYL PHTHALATE
10U	ACENAPHTHYLENE
10U	2,6-DINITROTOLUENE
10U	3-NITROANILINE
10U	ACENAPHTHENE
10U	DIBENZOFURAN
10U	2,4-DINITROTOLUENE
10U	DIETHYL PHTHALATE
10U	FLUORENE
10U	4-CHLOROPHENYL PHENYL ETHER
10U	4-NITROANILINE
10U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10U	4-BROMOPHENYL PHENYL ETHER
10U	HEXACHLOROBENZENE (HCB)
10U	PHENANTHRENE
10U	ANTHRACENE
10U	DI-N-BUTYLPHTHALATE

UG/L	ANALYTICAL RESULTS
10U	FLUORANTHENE
10U	PYRENE
10U	BENZYL BUTYL PHTHALATE
10U	3,3'-DICHLOROBENZIDINE
10U	BENZO(A)ANTHRACENE
10U	CHRYSENE
20	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
10U	BENZO(GHI)PERYLENE
1.2J	PHENOL
10U	2-CHLOROPHENOL
20U	BENZYL ALCOHOL
10U	2-METHYLPHENOL
10U	(3-AND/OR 4-)METHYLPHENOL
10U	2-NITROPHENOL
10U	2,4-DIMETHYLPHENOL
20U	BENZOIC ACID
10U	2,4-DICHLOROPHENOL
10U	4-CHLORO-3-METHYLPHENOL
10U	2,4,6-TRICHLOROPHENOL
10U	2,4,5-TRICHLOROPHENOL
20U	2,4-DINITROPHENOL
20U	4-NITROPHENOL
10U	2,3,4,6-TETRACHLOROPHENOL
20U	2-METHYL-4,6-DINITROPHENOL
20U	PENTACHLOROPHENOL

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.

04/06/89

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

*** ***
** PROJECT NO. 89-300 SAMPLE NO. 33605 SAMPLE TYPE: DITCHWA PROG ELEM: NSF COLLECTED BY: B BOKEY **
** SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC **
** STATION ID: WH-014 DITCH DISCHARGE COLLECTION START: 03/01/89 0915 STOP: 00/00/00 **
** **
*** ***

ANALYTICAL RESULTS UG/L

1JN ACETYLOXYOCTADECENOIC ACID, METHYL ESTER

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 04/06/89

PROJECT NO. 89-300 SAMPLE NO. 33608 SAMPLE TYPE: DITCHWA PROG ELEM: NSF COLLECTED BY: B BOKEY
SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC
STATION ID: WH-017 S.W. DITCH COLLECTION START: 03/01/89 0955 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
10U	BIS(2-CHLOROETHYL) ETHER
10U	BIS(2-CHLOROISOPROPYL) ETHER
10U	N-NITROSODI-N-PROPYLAMINE
10U	HEXACHLOROETHANE
10U	NITROBENZENE
10U	ISOPHORONE
10U	BIS(2-CHLOROETHOXY) METHANE
10U	1,2,4-TRICHLOROBENZENE
10U	NAPHTHALENE
10U	4-CHLOROANILINE
10U	HEXACHLOROBUTADIENE
10U	2-METHYLNAPHTHALENE
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)
10U	2-CHLORONAPHTHALENE
10U	2-NITROANILINE
10U	DIMETHYL PHTHALATE
10U	ACENAPHTHYLENE
10U	2,6-DINITROTOLUENE
10U	3-NITROANILINE
10U	ACENAPHTHENE
10U	DIBENZOFURAN
10U	2,4-DINITROTOLUENE
10U	DIETHYL PHTHALATE
10U	FLUORENE
10U	4-CHLOROPHENYL PHENYL ETHER
10U	4-NITROANILINE
10U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10U	4-BROMOPHENYL PHENYL ETHER
10U	HEXACHLOROBENZENE (HCB)
10U	PHENANTHRENE
10U	ANTHRACENE
10U	DI-N-BUTYLPHTHALATE

UG/L	ANALYTICAL RESULTS
10U	FLUORANTHENE
10U	PYRENE
10U	BENZYL BUTYL PHTHALATE
10U	3,3'-DICHLOROBENZIDINE
10U	BENZO(A)ANTHRACENE
10U	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
10U	BENZO(GHI)PERYLENE
10U	PHENOL
10U	2-CHLOROPHENOL
20U	BENZYL ALCOHOL
10U	2-METHYLPHENOL
10U	(3-AND/OR 4-)METHYLPHENOL
10U	2-NITROPHENOL
10U	2,4-DIMETHYLPHENOL
20U	BENZOIC ACID
10U	2,4-DICHLOROPHENOL
10U	4-CHLORO-3-METHYLPHENOL
10U	2,4,6-TRICHLOROPHENOL
10U	2,4,5-TRICHLOROPHENOL
20U	2,4-DINITROPHENOL
20U	4-NITROPHENOL
10U	2,3,4,6-TETRACHLOROPHENOL
20U	2-METHYL-4,6-DINITROPHENOL
20U	PENTACHLOROPHENOL

REMARKS

REMARKS

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

04/06/89

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

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**   PROJECT NO. 89-300    SAMPLE NO. 33608  SAMPLE TYPE: DITCHWA      PROG ELEM: NSF   COLLECTED BY: B BOKEY                **
**   SOURCE: WESTINGHOUSE                                              CITY: COLUMBIA                ST: SC                  **
**   STATION ID: WH-017 S.W. DITCH                                     COLLECTION START: 03/01/89  0955   STOP: 00/00/00     **
**                                                                                                                             **
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ANALYTICAL RESULTS UG/L

1JN ACETYLOXYOCTADECENOIC ACID, METHYL ESTER

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 04/06/89

** PROJECT NO. 89-300 SAMPLE NO. 33610 SAMPLE TYPE: AMBWA PROG ELEM: NSF COLLECTED BY: B BOKEY **
** SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC **
** STATION ID: WH-019 UPPER SUNSET LAKE COLLECTION START: 03/01/89 1015 STOP: 00/00/00 **

UG/L	ANALYTICAL RESULTS
10U	BIS(2-CHLOROETHYL) ETHER
10U	BIS(2-CHLOROISOPROPYL) ETHER
10U	N-NITROSODI-N-PROPYLAMINE
10U	HEXACHLOROETHANE
10U	NITROBENZENE
10U	ISOPHORONE
10U	BIS(2-CHLOROETHOXY) METHANE
10U	1,2,4-TRICHLOROBENZENE
10U	NAPHTHALENE
10U	4-CHLOROANILINE
10U	HEXACHLOROBUTADIENE
10U	2-METHYLNAPHTHALENE
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)
10U	2-CHLORONAPHTHALENE
10U	2-NITROANILINE
10U	DIMETHYL PHTHALATE
10U	ACENAPHTHYLENE
10U	2,6-DINITROTOLUENE
10U	3-NITROANILINE
10U	ACENAPHTHENE
10U	DIBENZOFURAN
10U	2,4-DINITROTOLUENE
10U	DIETHYL PHTHALATE
10U	FLUORENE
10U	4-CHLOROPHENYL PHENYL ETHER
10U	4-NITROANILINE
10U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10U	4-BROMOPHENYL PHENYL ETHER
10U	HEXACHLOROBENZENE (HCB)
10U	PHENANTHRENE
10U	ANTHRACENE
10U	DI-N-BUTYLPHTHALATE

UG/L	ANALYTICAL RESULTS
10U	FLUORANTHENE
10U	PYRENE
10U	BENZYL BUTYL PHTHALATE
10U	3,3'-DICHLOROBENZIDINE
10U	BENZO(A)ANTHRACENE
10U	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
10U	BENZO(GHI)PERYLENE
10U	PHENOL
10U	2-CHLOROPHENOL
20U	BENZYL ALCOHOL
10U	2-METHYLPHENOL
10U	(3-AND/OR 4-)METHYLPHENOL
10U	2-NITROPHENOL
10U	2,4-DIMETHYLPHENOL
20U	BENZOIC ACID
10U	2,4-DICHLOROPHENOL
10U	4-CHLORO-3-METHYLPHENOL
10U	2,4,6-TRICHLOROPHENOL
10U	2,4,5-TRICHLOROPHENOL
20U	2,4-DINITROPHENOL
20U	4-NITROPHENOL
10U	2,3,4,6-TETRACHLOROPHENOL
20U	2-METHYL-4,6-DINITROPHENOL
20U	PENTACHLOROPHENOL

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.

04/06/89

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

*** ***
** PROJECT NO. 89-300 SAMPLE NO. 33610 SAMPLE TYPE: AMBWA PROG ELEM: NSF COLLECTED BY: B BOKEY **
** SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC **
** STATION ID: WH-019 UPPER SUNSET LAKE COLLECTION START: 03/01/89 1015 STOP: 00/00/00 **
** **
*** ***

ANALYTICAL RESULTS UG/L

1JN ACETYLOXYOCTADECENOIC ACID, METHYL ESTER

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 04/06/89

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** PROJECT NO. 89-300    SAMPLE NO. 33612  SAMPLE TYPE: AMBWA      PROG ELEM: NSF   COLLECTED BY: B BOKEY          **
** SOURCE: WESTINGHOUSE                                           CITY: COLUMBIA              ST: SC                **
** STATION ID: WH-021 LOWER SUNSET LAKE                           COLLECTION START: 03/01/89  1130   STOP: 00/00/00 **
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UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
13U	BIS(2-CHLOROETHYL) ETHER	13U	FLUORANTHENE
13U	BIS(2-CHLOROISOPROPYL) ETHER	13U	PYRENE
13U	N-NITROSODI-N-PROPYLAMINE	13U	BENZYL BUTYL PHTHALATE
13U	HEXACHLOROETHANE	13U	3,3'-DICHLOROBENZIDINE
13U	NITROBENZENE	13U	BENZO(A)ANTHRACENE
13U	ISOPHORONE	13U	CHRYSENE
13U	BIS(2-CHLOROETHOXY) METHANE	13U	BIS(2-ETHYLHEXYL) PHTHALATE
13U	1,2,4-TRICHLOROBENZENE	13U	DI-N-OCTYLPHTHALATE
13U	NAPHTHALENE	13U	BENZO(B AND/OR K)FLUORANTHENE
13U	4-CHLOROANILINE	13U	BENZO-A-PYRENE
13U	HEXACHLOROBUTADIENE	13U	INDENO (1,2,3-CD) PYRENE
13U	2-METHYLNAPHTHALENE	13U	DIBENZO(A,H)ANTHRACENE
13U	HEXACHLOROCYCLOPENTADIENE (HCCP)	13U	BENZO(GHI)PERYLENE
13U	2-CHLORONAPHTHALENE	13U	PHENOL
13U	2-NITROANILINE	13U	2-CHLOROPHENOL
13U	DIMETHYL PHTHALATE	25U	BENZYL ALCOHOL
13U	ACENAPHTHYLENE	13U	2-METHYLPHENOL
13U	2,6-DINITROTOLUENE	13U	(3-AND/OR 4-)METHYLPHENOL
13U	3-NITROANILINE	13U	2-NITROPHENOL
13U	ACENAPHTHENE	13U	2,4-DIMETHYLPHENOL
13U	DIBENZOFURAN	25U	BENZOIC ACID
13U	2,4-DINITROTOLUENE	13U	2,4-DICHLOROPHENOL
13U	DIETHYL PHTHALATE	13U	4-CHLORO-3-METHYLPHENOL
13U	FLUORENE	13U	2,4,6-TRICHLOROPHENOL
13U	4-CHLOROPHENYL PHENYL ETHER	13U	2,4,5-TRICHLOROPHENOL
13U	4-NITROANILINE	25U	2,4-DINITROPHENOL
13U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE	25U	4-NITROPHENOL
13U	4-BROMOPHENYL PHENYL ETHER	13U	2,3,4,6-TETRACHLOROPHENOL
13U	HEXACHLOROBENZENE (HCB)	25U	2-METHYL-4,6-DINITROPHENOL
13U	PHENANTHRENE	25U	PENTACHLOROPHENOL
13U	ANTHRACENE		
13U	DI-N-BUTYLPHTHALATE		

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.

04/06/89

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

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**   PROJECT NO. 89-300    SAMPLE NO. 33612  SAMPLE TYPE: AMBWA       PROG ELEM: NSF    COLLECTED BY: B BOKEY                    **
**   SOURCE: WESTINGHOUSE                                             CITY: COLUMBIA                 ST: SC                      **
**   STATION ID: WH-021 LOWER SUNSET LAKE                             COLLECTION START: 03/01/89  1130   STOP: 00/00/00          **
**                                                                                                                               **
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ANALYTICAL RESULTS UG/L

1JN	PROMETON
2JN	ACETYLOXYOCTADECENOIC, METHYL ESTER
4JN	HEXADECENOIC ACID

FOOTNOTES
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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.

04/06/89

EXTRACTABLE ORGANICS DATA REPORT

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** PROJECT NO. 89-300 SAMPLE NO. 33614 SAMPLE TYPE: AMBWA PROG ELEM: NSF COLLECTED BY: B BOKEY **
** SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC **
** STATION ID: WH-023 LOWER SUNSET LAKE DUPLICATE COLLECTION START: 03/01/89 1130 STOP: 00/00/00 **
** **

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UG/L	ANALYTICAL RESULTS
10U	BIS(2-CHLOROETHYL) ETHER
10U	BIS(2-CHLOROISOPROPYL) ETHER
10U	N-NITROSODI-N-PROPYLAMINE
10U	HEXACHLOROETHANE
10U	NITROBENZENE
10U	ISOPHORONE
10U	BIS(2-CHLOROETHOXY) METHANE
10U	1,2,4-TRICHLOROBENZENE
10U	NAPHTHALENE
10U	4-CHLOROANILINE
10U	HEXACHLOROBUTADIENE
10U	2-METHYLNAPHTHALENE
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)
10U	2-CHLORONAPHTHALENE
10U	2-NITROANILINE
10U	DIMETHYL PHTHALATE
10U	ACENAPHTHYLENE
10U	2,6-DINITROTOLUENE
10U	3-NITROANILINE
10U	ACENAPHTHENE
10U	DIBENZOFURAN
10U	2,4-DINITROTOLUENE
10U	DIETHYL PHTHALATE
10U	FLUORENE
10U	4-CHLOROPHENYL PHENYL ETHER
10U	4-NITROANILINE
10U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10U	4-BROMOPHENYL PHENYL ETHER
10U	HEXACHLOROBENZENE (HCB)
10U	PHENANTHRENE
10U	ANTHRACENE
10U	DI-N-BUTYLPHTHALATE

UG/L	ANALYTICAL RESULTS
10U	FLUORANTHENE
10U	PYRENE
10U	BENZYL BUTYL PHTHALATE
10U	3,3'-DICHLOROBENZIDINE
10U	BENZO(A)ANTHRACENE
10U	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
10U	BENZO(GHI)PERYLENE
10U	PHENOL
10U	2-CHLOROPHENOL
20U	BENZYL ALCOHOL
10U	2-METHYLPHENOL
10U	(3-AND/OR 4-)METHYLPHENOL
10U	2-NITROPHENOL
10U	2,4-DIMETHYLPHENOL
20U	BENZOIC ACID
10U	2,4-DICHLOROPHENOL
10U	4-CHLORO-3-METHYLPHENOL
10U	2,4,6-TRICHLOROPHENOL
10U	2,4,5-TRICHLOROPHENOL
20U	2,4-DINITROPHENOL
20U	4-NITROPHENOL
10U	2,3,4,6-TETRACHLOROPHENOL
20U	2-METHYL-4,6-DINITROPHENOL
20U	PENTACHLOROPHENOL

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.

04/06/89

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

PROJECT NO. 89-300 SAMPLE NO. 33614 SAMPLE TYPE: AMBWA PROG ELEM: NSF COLLECTED BY: B BOKEY
SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC
STATION ID: WH-023 LOWER SUNSET LAKE DUPLICATE COLLECTION START: 03/01/89 1130 STOP: 00/00/00

ANALYTICAL RESULTS UG/L

1JN	PROMETON
1JN	ACETYLOXYOCTADECENOIC ACID, METHYL ESTER

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 04/25/89

** PROJECT NO. 89-300 SAMPLE NO. 33593 SAMPLE TYPE: DITCHWA
** SOURCE: WESTINGHOUSE
** STATION ID: WH-002 N.E. BACKGROUND DITCH

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 02/28/89 1003 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
0.021U	ALDRIN
0.016U	HEPTACHLOR
0.022U	HEPTACHLOR EPOXIDE
0.022U	ALPHA-BHC
0.040U	BETA-BHC
0.019U	GAMMA-BHC (LINDANE)
0.022U	DELTA-BHC
0.024U	ENDOSULFAN I (ALPHA)
0.030U	DIELDRIN
0.053U	4,4'-DDT (P,P'-DDT)
0.027U	4,4'-DDE (P,P'-DDE)
0.053U	4,4'-DDD (P,P'-DDD)
0.030U	ENDRIN
0.030U	ENDOSULFAN II (BETA)
0.048U	ENDOSULFAN SULFATE
0.24U	CHLORDANE (TECH. MIXTURE) /1
0.41U	PCB-1242 (AROCLOR 1242)
0.41U	PCB-1254 (AROCLOR 1254)
0.41U	PCB-1221 (AROCLOR 1221)

UG/L	ANALYTICAL RESULTS
0.41U	PCB-1232 (AROCLOR 1232)
0.41U	PCB-1248 (AROCLOR 1248)
0.41U	PCB-1260 (AROCLOR 1260)
0.41U	PCB-1016 (AROCLOR 1016)
2.4U	TOXAPHENE
--	CHLORDENE /2
--	ALPHA-CHLORDENE /2
--	BETA CHLORDENE /2
--	GAMMA-CHLORDENE /2
--	1-HYDROXYCHLORDENE /2
--	GAMMA-CHLORDANE /2
--	TRANS-NONACHLOR /2
--	ALPHA-CHLORDANE /2
--	CIS-NONACHLOR /2
--	OXYCHLORDANE (OCTACHLOREPOXIDE) /2
0.091U	METHOXYCHLOR
0.058U	ENDRIN KETONE

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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1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS. 2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 04/25/89

PROJECT NO. 89-300 SAMPLE NO. 33595 SAMPLE TYPE: BLKWA
SOURCE: WESTINGHOUSE
STATION ID: WH-004 TRIP BLANK

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 02/28/89 1000 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
0.020U	ALDRIN
0.020U	HEPTACHLOR
0.020U	HEPTACHLOR EPOXIDE
0.015U	ALPHA-BHC
0.033U	BETA-BHC
0.020U	GAMMA BHC (LINDANE)
0.015U	DELTA-BHC
0.020U	ENDOSULFAN I (ALPHA)
0.029U	DIELDRIN
0.044U	4,4'-DDT (P,P'-DDT)
0.029U	4,4'-DDE (P,P'-DDE)
0.044U	4,4'-DDD (P,P'-DDD)
0.029U	ENDRIN
0.029U	ENDOSULFAN II (BETA)
0.063U	ENDOSULFAN SULFATE
0.16U	CHLORDANE (TECH. MIXTURE) /1
0.38U	PCB-1242 (AROCLOR 1242)
0.38U	PCB-1254 (AROCLOR 1254)
0.38U	PCB-1221 (AROCLOR 1221)

UG/L	ANALYTICAL RESULTS
0.38U	PCB-1232 (AROCLOR 1232)
0.38U	PCB-1248 (AROCLOR 1248)
0.38U	PCB-1260 (AROCLOR 1260)
0.38U	PCB-1016 (AROCLOR 1016)
2.1U	TOXAPHENE
--	CHLORDENE /2
--	ALPHA-CHLORDENE /2
--	BETA CHLORDENE /2
--	GAMMA-CHLORDENE /2
--	1-HYDROXYCHLORDENE /2
--	GAMMA-CHLORDANE /2
--	TRANS-NONACHLOR /2
--	ALPHA-CHLORDANE /2
--	CIS-NONACHLOR /2
--	OXYCHLORDANE (OCTACHLOREPOXIDE) /2
0.091U	METHOXYCHLOR
0.058U	ENDRIN KETONE

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.

04/25/89

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 89-300 SAMPLE NO. 33600 SAMPLE TYPE: DITCHWA PROG ELEM: NSF COLLECTED BY: B BOKEY
SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC
STATION ID: WH-009 DITCH N. OF PARKING AREA COLLECTION START: 02/28/89 1605 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
0.021U	ALDRIN
0.016U	HEPTACHLOR
0.022U	HEPTACHLOR EPOXIDE
0.022U	ALPHA-BHC
0.040U	BETA-BHC
0.054U	GAMMA-BHC (LINDANE)
0.022U	DELTA-BHC
0.024U	ENDOSULFAN I (ALPHA)
0.030U	DIELDRIN
0.053U	4,4'-DDT (P,P'-DDT)
0.027U	4,4'-DDE (P,P'-DDE)
0.053U	4,4'-DDD (P,P'-DDD)
0.030U	ENDRIN
0.030U	ENDOSULFAN II (BETA)
0.048U	ENDOSULFAN SULFATE
0.24U	CHLORDANE (TECH. MIXTURE) /1
0.41U	PCB-1242 (AROCLOR 1242)
0.41U	PCB-1254 (AROCLOR 1254)
0.41U	PCB-1221 (AROCLOR 1221)

UG/L	ANALYTICAL RESULTS
0.41U	PCB-1232 (AROCLOR 1232)
0.41U	PCB-1248 (AROCLOR 1248)
0.41U	PCB-1260 (AROCLOR 1260)
0.41U	PCB-1016 (AROCLOR 1016)
2.4U	TOXAPHENE
--	CHLORDENE /2
--	ALPHA-CHLORDENE /2
--	BETA CHLORDENE /2
--	GAMMA-CHLORDENE /2
--	1-HYDROXYCHLORDENE /2
--	GAMMA-CHLORDANE /2
--	TRANS-NONACHLOR /2
--	ALPHA-CHLORDANE /2
--	CIS-NONACHLOR /2
--	OXYCHLORDANE (OCTACHLOREPOXIDE) /2
0.091U	METHOXYCHLOR
0.058U	ENDRIN KETONE

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.

04/25/89

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 89-300 SAMPLE NO. 33605 SAMPLE TYPE: DITCHWA
SOURCE: WESTINGHOUSE
STATION ID: WH-014 DITCH DISCHARGE

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 03/01/89 0915 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
0.14U	ALDRIN
0.14U	HEPTACHLOR
0.14U	HEPTACHLOR EPOXIDE
0.15U	ALPHA-BHC
0.33U	BETA-BHC
0.14U	GAMMA BHC (LINDANE)
0.15U	DELTA-BHC
0.20U	ENDOSULFAN I (ALPHA)
0.25U	DIELDRIN
0.66U	4,4'-DDT (P,P'-DDT)
0.27U	4,4'-DDE (P,P'-DDE)
0.40U	4,4'-DDD (P,P'-DDD)
0.25U	ENDRIN
0.35U	ENDOSULFAN II (BETA)
0.37U	ENDOSULFAN SULFATE
0.52U	CHLORDANE (TECH. MIXTURE) /1
3.8U	PCB-1242 (AROCLOR 1242)
3.8U	PCB-1254 (AROCLOR 1254)
3.8U	PCB-1221 (AROCLOR 1221)

UG/L	ANALYTICAL RESULTS
3.8U	PCB-1232 (AROCLOR 1232)
3.8U	PCB-1248 (AROCLOR 1248)
3.8U	PCB-1260 (AROCLOR 1260)
3.8U	PCB-1016 (AROCLOR 1016)
23U	TOXAPHENE
--	CHLORDENE /2
--	ALPHA-CHLORDENE /2
--	BETA CHLORDENE /2
--	GAMMA-CHLORDENE /2
--	1-HYDROXYCHLORDENE /2
--	GAMMA-CHLORDANE /2
--	TRANS-NONACHLOR /2
--	ALPHA-CHLORDANE /2
--	CIS-NONACHLOR /2
--	OXYCHLORDANE (OCTACHLOREPOXIDE) /2
1.1U	METHOXYCHLOR
0.48U	ENDRIN KETONE

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.

PESTICIDES/PCB'S DATA REPORT 04/25/89

PROJECT NO. 89-300 SAMPLE NO. 33608 SAMPLE TYPE: DITCHWA
SOURCE: WESTINGHOUSE
STATION ID: WH-017 S.W. DITCH

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 03/01/89 0955 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
0.14U	ALDRIN
0.14U	HEPTACHLOR
0.14U	HEPTACHLOR EPOXIDE
0.15U	ALPHA-BHC
0.33U	BETA-BHC
0.14U	GAMMA BHC (LINDANE)
0.15U	DELTA-BHC
0.20U	ENDOSULFAN I (ALPHA)
0.25U	DIELDRIN
0.44U	4,4'-DDT (P,P'-DDT)
0.27U	4,4'-DDE (P,P'-DDE)
0.40U	4,4'-DDD (P,P'-DDD)
0.25U	ENDRIN
0.24U	ENDOSULFAN II (BETA)
0.37U	ENDOSULFAN SULFATE
0.52U	CHLORDANE (TECH. MIXTURE) /1
3.8U	PCB-1242 (AROCLOR 1242)
3.8U	PCB-1254 (AROCLOR 1254)
3.8U	PCB-1221 (AROCLOR 1221)

UG/L	ANALYTICAL RESULTS
3.8U	PCB-1232 (AROCLOR 1232)
3.8U	PCB-1248 (AROCLOR 1248)
3.8U	PCB-1260 (AROCLOR 1260)
3.8U	PCB-1016 (AROCLOR 1016)
23U	TOXAPHENE
--	CHLORDENE /2
--	ALPHA-CHLORDENE /2
--	BETA CHLORDENE /2
--	GAMMA-CHLORDENE /2
--	1-HYDROXYCHLORDENE /2
--	GAMMA-CHLORDANE /2
--	TRANS-NONACHLOR /2
--	ALPHA-CHLORDANE /2
--	CIS-NONACHLOR /2
--	OXYCHLORDANE (OCTACHLOREPOXIDE) /2
0.83U	METHOXYCHLOR
0.48U	ENDRIN KETONE

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.

PESTICIDES/PCB'S DATA REPORT 04/25/89

PROJECT NO. 89-300 SAMPLE NO. 33610 SAMPLE TYPE: AMBWA
SOURCE: WESTINGHOUSE
STATION ID: WH-019 UPPER SUNSET LAKE

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 03/01/89 1015 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
0.14U	ALDRIN
0.14U	HEPTACHLOR
0.14U	HEPTACHLOR EPOXIDE
0.15U	ALPHA-BHC
0.33U	BETA-BHC
0.14U	GAMMA BHC (LINDANE)
0.15U	DELTA-BHC
0.20U	ENDOSULFAN I (ALPHA)
0.25U	DIELDRIN
0.44U	4,4'-DDT (P,P'-DDT)
0.27U	4,4'-DDE (P,P'-DDE)
0.40U	4,4'-DDD (P,P'-DDD)
0.25U	ENDRIN
0.24U	ENDOSULFAN II (BETA)
0.37U	ENDOSULFAN SULFATE
0.52U	CHLORDANE (TECH. MIXTURE) /1
3.8U	PCB-1242 (AROCLOR 1242)
3.8U	PCB-1254 (AROCLOR 1254)
3.8U	PCB-1221 (AROCLOR 1221)

UG/L	ANALYTICAL RESULTS
3.8U	PCB-1232 (AROCLOR 1232)
3.8U	PCB-1248 (AROCLOR 1248)
3.8U	PCB-1260 (AROCLOR 1260)
3.8U	PCB-1016 (AROCLOR 1016)
23U	TOXAPHENE
--	CHLORDENE /2
--	ALPHA-CHLORDENE /2
--	BETA CHLORDENE /2
--	GAMMA-CHLORDENE /2
--	1-HYDROXYCHLORDENE /2
--	GAMMA-CHLORDANE /2
--	TRANS-NONACHLOR /2
--	ALPHA-CHLORDANE /2
--	CIS-NONACHLOR /2
--	OXYCHLORDANE (OCTACHLOREPOXIDE) /2
0.83U	METHOXYCHLOR
0.48U	ENDRIN KETONE

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. C-CONFIRMED BY GC/MS
1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS. 2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

04/25/89

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 89-300 SAMPLE NO. 33612 SAMPLE TYPE: AMBWA
SOURCE: WESTINGHOUSE
STATION ID: WH-021 LOWER SUNSET LAKE

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 03/01/89 1130 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
0.14U	ALDRIN	3.8U	PCB-1232 (AROCLOR 1232)
0.14U	HEPTACHLOR	3.8U	PCB-1248 (AROCLOR 1248)
0.14U	HEPTACHLOR EPOXIDE	3.8U	PCB-1260 (AROCLOR 1260)
0.15U	ALPHA-BHC	3.8U	PCB-1016 (AROCLOR 1016)
0.33U	BETA-BHC	23U	TOXAPHENE
0.14U	GAMMA BHC (LINDANE)	--	CHLORDENE /2
0.15U	DELTA-BHC	--	ALPHA-CHLORDENE /2
0.20U	ENDOSULFAN I (ALPHA)	--	BETA CHLORDENE /2
0.25U	DIELDRIN	--	GAMMA-CHLORDENE /2
0.44U	4,4'-DDT (P,P'-DDT)	--	1-HYDROXYCHLORDENE /2
0.27U	4,4'-DDE (P,P'-DDE)	--	GAMMA-CHLORDANE /2
0.40U	4,4'-DDD (P,P'-DDD)	--	TRANS-NONACHLOR /2
0.25U	ENDRIN	--	ALPHA-CHLORDANE /2
0.24U	ENDOSULFAN II (BETA)	--	CIS-NONACHLOR /2
0.37U	ENDOSULFAN SULFATE	--	OXYCHLORDANE (OCTACHLOREPOXIDE) /2
0.52U	CHLORDANE (TECH. MIXTURE) /1	0.83U	METHOXYCHLOR
3.8U	PCB-1242 (AROCLOR 1242)	0.48U	ENDRIN KETONE
3.8U	PCB-1254 (AROCLOR 1254)		
3.8U	PCB-1221 (AROCLOR 1221)		

REMARKS

REMARKS

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 04/25/89

PROJECT NO. 89-300 SAMPLE NO. 33614 SAMPLE TYPE: AMBWA
SOURCE: WESTINGHOUSE
STATION ID: WH-023 LOWER SUNSET LAKE DUPLICATE

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 03/01/89 1130 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
0.14U	ALDRIN
0.14U	HEPTACHLOR
0.14U	HEPTACHLOR EPOXIDE
0.15U	ALPHA-BHC
0.33U	BETA-BHC
0.14U	GAMMA-BHC (LINDANE)
0.15U	DELTA-BHC
0.20U	ENDOSULFAN I (ALPHA)
0.25U	DIELDRIN
0.44U	4,4'-DDT (P,P'-DDT)
0.27U	4,4'-DDE (P,P'-DDE)
0.40U	4,4'-DDD (P,P'-DDD)
0.25U	ENDRIN
0.24U	ENDOSULFAN II (BETA)
0.37U	ENDOSULFAN SULFATE
0.52U	CHLORDANE (TECH. MIXTURE) /1
3.8U	PCB-1242 (AROCLOR 1242)
3.8U	PCB-1254 (AROCLOR 1254)
3.8U	PCB-1221 (AROCLOR 1221)

UG/L	ANALYTICAL RESULTS
3.8U	PCB-1232 (AROCLOR 1232)
3.8U	PCB-1248 (AROCLOR 1248)
3.8U	PCB-1260 (AROCLOR 1260)
3.8U	PCB-1016 (AROCLOR 1016)
23U	TOXAPHENE
--	CHLORDENE /2
--	ALPHA-CHLORDENE /2
--	BETA CHLORDENE /2
--	GAMMA-CHLORDENE /2
--	1-HYDROXYCHLORDENE /2
--	GAMMA-CHLORDANE /2
--	TRANS-NONACHLOR /2
--	ALPHA-CHLORDANE /2
--	CIS-NONACHLOR /2
--	OXYCHLORDANE (OCTACHLOREPOXIDE) /2
0.83U	METHOXYCHLOR
0.48U	ENDRIN KETONE

REMARKS

REMARKS

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 04/17/89

PROJECT NO. 89-300 SAMPLE NO. 33593 SAMPLE TYPE: DITCHWA PROG ELEM: NSF COLLECTED BY: B BOKEY
SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC
STATION ID: WH-002 N.E. BACKGROUND DITCH COLLECTION START: 02/28/89 1003 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS	MG/L	ANALYTICAL RESULTS
10U	SILVER	3.6	CALCIUM
30U	ARSENIC	1.4	MAGNESIUM
NA	BORON	3.3	IRON
91	BARIUM	3.2	SODIUM
5.0U	BERYLLIUM	2.0U	POTASSIUM
5.0U	CADMIUM		
10U	COBALT		
10U	CHROMIUM		
10U	COPPER		
10U	MOLYBDENUM		
20U	NICKEL		
40U	LEAD		
30U	ANTIMONY		
40U	SELENIUM		
25U	TIN		
38	STRONTIUM		
50U	TELLURIUM		
24	TITANIUM		
100U	THALLIUM		
10U	VANADIUM		
10U	YTTRIUM		
23	ZINC		
NA	ZIRCONIUM		
0.2U	MERCURY		
3500	ALUMINUM		
420	MANGANESE		

REMARKS ***REMARKS***

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 04/17/89

PROJECT NO. 89-300 SAMPLE NO. 33600 SAMPLE TYPE: DITCHWA
SOURCE: WESTINGHOUSE
STATION ID: WH-009 DITCH N. OF PARKING AREA

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 02/28/89 1605 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
10U	SILVER
30U	ARSENIC
NA	BORON
96	BARIUM
5.0U	BERYLLIUM
5.0U	CADMIUM
10U	COBALT
10U	CHROMIUM
10U	COPPER
10U	MOLYBDENUM
20U	NICKEL
40U	LEAD
30U	ANTIMONY
40U	SELENIUM
25U	TIN
68	STRONTIUM
50U	TELLURIUM
40	TITANIUM
100U	THALLIUM
10U	VANADIUM
10U	YTTRIUM
24	ZINC
NA	ZIRCONIUM
0.2U	MERCURY
8000	ALUMINUM
160	MANGANESE

MG/L	ANALYTICAL RESULTS
5.8	CALCIUM
1.2	MAGNESIUM
4.5	IRON
3.8	SODIUM
2.0U	POTASSIUM

REMARKS

REMARKS

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 04/17/89

PROJECT NO. 89-300 SAMPLE NO. 33605 SAMPLE TYPE: DITCHWA PROG ELEM: NSF COLLECTED BY: B BOKEY
SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC
STATION ID: WH-014 DITCH DISCHARGE COLLECTION START: 03/01/89 0915 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
10U	SILVER
30U	ARSENIC
NA	BORON
83	BARIUM
5.0U	BERYLLIUM
5.0U	CADMIUM
10U	COBALT
10U	CHROMIUM
10U	COPPER
10U	MOLYBDENUM
20U	NICKEL
40U	LEAD
30U	ANTIMONY
40U	SELENIUM
25U	TIN
67	STRONTIUM
50U	TELLURIUM
45	TITANIUM
100U	THALLIUM
10U	VANADIUM
10U	YTTRIUM
32	ZINC
NA	ZIRCONIUM
0.2U	MERCURY
6500	ALUMINUM
92	MANGANESE

MG/L	ANALYTICAL RESULTS
7.0	CALCIUM
2.1	MAGNESIUM
4.4	IRON
6.0	SODIUM
2.0U	POTASSIUM

REMARKS ***REMARKS***

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 04/17/89

PROJECT NO. 89-300 SAMPLE NO. 33608 SAMPLE TYPE: DITCHWA PROG ELEM: NSF COLLECTED BY: B BOKEY
SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC
STATION ID: WH-017 S.W. DITCH COLLECTION START: 03/01/89 0955 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
10U	SILVER
30U	ARSENIC
NA	BORON
89	BARIUM
5.0U	BERYLLIUM
5.0U	CADMIUM
10U	COBALT
10U	CHROMIUM
10U	COPPER
10U	MOLYBDENUM
20U	NICKEL
40U	LEAD
30U	ANTIMONY
40U	SELENIUM
25U	TIN
160	STRONTIUM
50U	TELLURIUM
45	TITANIUM
100U	THALLIUM
10U	VANADIUM
10U	YTTRIUM
10U	ZINC
NA	ZIRCONIUM
0.2U	MERCURY
3500	ALUMINUM
540	MANGANESE

MG/L	ANALYTICAL RESULTS
18	CALCIUM
10	MAGNESIUM
2.3	IRON
16	SODIUM
3.3	POTASSIUM

REMARKS

REMARKS

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 04/17/89

PROJECT NO. 89-300 SAMPLE NO. 33610 SAMPLE TYPE: AMBWA PROG ELEM: NSF COLLECTED BY: B BOKEY
SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC
STATION ID: WH-019 UPPER SUNSET LAKE COLLECTION START: 03/01/89 1015 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS	MG/L	ANALYTICAL RESULTS
10U	SILVER	2.7	CALCIUM
30U	ARSENIC	0.97	MAGNESIUM
NA	BORON	3.8	IRON
32	BARIUM	4.7	SODIUM
5.0U	BERYLLIUM	2.0U	POTASSIUM
5.0U	CADMIUM		
10U	COBALT		
10U	CHROMIUM		
10U	COPPER		
10U	MOLYBDENUM		
20U	NICKEL		
40U	LEAD		
30U	ANTIMONY		
40U	SELENIUM		
25U	TIN		
26	STRONTIUM		
50U	TELLURIUM		
18	TITANIUM		
100U	THALLIUM		
10U	VANADIUM		
10U	YTTRIUM		
10U	ZINC		
NA	ZIRCONIUM		
0.2U	MERCURY		
940	ALUMINUM		
160	MANGANESE		

REMARKS ***REMARKS***

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 04/17/89

PROJECT NO. 89-300 SAMPLE NO. 33612 SAMPLE TYPE: AMBWA
SOURCE: WESTINGHOUSE
STATION ID: WH-021 LOWER SUNSET LAKE

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 03/01/89 1130 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
10U	SILVER
30U	ARSENIC
NA	BORON
34	BARIUM
5.0U	BERYLLIUM
5.0U	CADMIUM
10U	COBALT
10U	CHROMIUM
10U	COPPER
10U	MOLYBDENUM
20U	NICKEL
40U	LEAD
30U	ANTIMONY
40U	SELENIUM
25U	TIN
28	STRONTIUM
50U	TELLURIUM
14	TITANIUM
100U	THALLIUM
10U	VANADIUM
10U	YTTRIUM
10U	ZINC
NA	ZIRCONIUM
0.2U	MERCURY
620	ALUMINUM
96	MANGANESE

MG/L	ANALYTICAL RESULTS
2.9	CALCIUM
1.1	MAGNESIUM
3.1	IRON
4.7	SODIUM
2.0U	POTASSIUM

REMARKS

REMARKS

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 04/17/89

PROJECT NO. 89-300 SAMPLE NO. 33614 SAMPLE TYPE: AMBWA
SOURCE: WESTINGHOUSE
STATION ID: WH-023 LOWER SUNSET LAKE DUPLICATE

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 03/01/89 1130 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
10U	SILVER
30U	ARSENIC
NA	BORON
36	BARIUM
5.0U	BERYLLIUM
5.0U	CADMIUM
10U	COBALT
10U	CHROMIUM
10U	COPPER
10U	MOLYBDENUM
20U	NICKEL
40U	LEAD
30U	ANTIMONY
40U	SELENIUM
25U	TIN
29	STRONTIUM
50U	TELLURIUM
19	TITANIUM
100U	THALLIUM
10U	VANADIUM
10U	YTTRIUM
10U	ZINC
NA	ZIRCONIUM
0.2U	MERCURY
820	ALUMINUM
140	MANGANESE

MG/L	ANALYTICAL RESULTS
3.1	CALCIUM
1.2	MAGNESIUM
4.0	IRON
4.8	SODIUM
2.0U	POTASSIUM

REMARKS

REMARKS

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 04/17/89

PROJECT NO. 89-300 SAMPLE NO. 33620 SAMPLE TYPE: BLKWA
SOURCE: WESTINGHOUSE
STATION ID: WH-029 INORGANIC FIELD BLANK

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 03/02/89 1040 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS
10U	SILVER
30U	ARSENIC
NA	BORON
10U	BARIUM
5.0U	BERYLLIUM
5.0U	CADMIUM
10U	COBALT
10U	CHROMIUM
10U	COPPER
10U	MOLYBDENUM
20U	NICKEL
40U	LEAD
30U	ANTIMONY
40U	SELENIUM
25U	TIN
10U	STRONTIUM
50U	TELLURIUM
10U	TITANIUM
100U	THALLIUM
10U	VANADIUM
10U	YTTRIUM
10U	ZINC
NA	ZIRCONIUM
0.2U	MERCURY
100U	ALUMINUM
10U	MANGANESE

MG/L	ANALYTICAL RESULTS
0.50U	CALCIUM
0.10U	MAGNESIUM
0.050U	IRON
1.0U	SODIUM
2.0U	POTASSIUM

REMARKS

REMARKS

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

04/18/89

SPECIFIED ANALYSIS DATA REPORT

*** ***
** PROJECT NO. 89-300 SAMPLE NO. 33593 SAMPLE TYPE: DITCHWA PROG ELEM: NSF COLLECTED BY: B BOKEY **
** SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC **
** STATION ID: WH-002 N.E. BACKGROUND DITCH COLLECTION START: 02/28/89 1003 STOP: 00/00/00 **
** **
*** ***

RESULTS	UNITS	PARAMETER
.05U	MG/L	AMMONIA
.07	MG/L	NITRATE-NITRITE NITROGEN
1.3	MG/L	TOTAL KJELDAHL NITROGEN
.21	MG/L	FLUORIDE
.004U	MG/L	CYANIDE

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

04/18/89

SPECIFIED ANALYSIS DATA REPORT

PROJECT NO. 89-300 SAMPLE NO. 33600 SAMPLE TYPE: DITCHWA
PROG ELEM: NSF COLLECTED BY: B BOKEY
SOURCE: WESTINGHOUSE
CITY: COLUMBIA ST: SC
STATION ID: WH-009 DITCH N. OF PARKING AREA
COLLECTION START: 02/28/89 1605 STOP: 00/00/00

RESULTS	UNITS	PARAMETER
.09	MG/L	AMMONIA
.93	MG/L	NITRATE-NITRITE NITROGEN
2.0	MG/L	TOTAL KJELDAHL NITROGEN
.20	MG/L	FLUORIDE
.004U	MG/L	CYANIDE

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

04/18/89

SPECIFIED ANALYSIS DATA REPORT

*** ***

** PROJECT NO. 89-300 SAMPLE NO. 33605 SAMPLE TYPE: DITCHWA PROG ELEM: NSF COLLECTED BY: B BOKEY **
** SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC **
** STATION ID: WH-014 DITCH DISCHARGE COLLECTION START: 03/01/89 0915 STOP: 00/00/00 **
** **

*** ***

RESULTS	UNITS	PARAMETER
.41	MG/L	AMMONIA
.76	MG/L	NITRATE-NITRITE NITROGEN
1.8	MG/L	TOTAL KJELDAHL NITROGEN
0.59	MG/L	FLUORIDE
.004U	MG/L	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.

04/18/89

SPECIFIED ANALYSIS DATA REPORT

PROJECT NO. 89-300 SAMPLE NO. 33608 SAMPLE TYPE: DITCHWA PROG ELEM: NSF COLLECTED BY: B BOKEY
SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC
STATION ID: WH-017 S.W. DITCH COLLECTION START: 03/01/89 0955 STOP: 00/00/00

RESULTS	UNITS	PARAMETER
4.3	MG/L	AMMONIA
1.4	MG/L	NITRATE-NITRITE NITROGEN
6.4	MG/L	TOTAL KJELDAHL NITROGEN
5.1	MG/L	FLUORIDE
.004U	MG/L	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.

04/18/89

SPECIFIED ANALYSIS DATA REPORT

PROJECT NO. 89-300 SAMPLE NO. 33610 SAMPLE TYPE: AMBWA PROG ELEM: NSF COLLECTED BY: B BOKEY
SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC
STATION ID: WH-019 UPPER SUNSET LAKE COLLECTION START: 03/01/89 1015 STOP: 00/00/00

RESULTS	UNITS	PARAMETER
.12	MG/L	AMMONIA
.25	MG/L	NITRATE-NITRITE NITROGEN
.76	MG/L	TOTAL KJELDAHL NITROGEN
.41	MG/L	FLUORIDE
.004U	MG/L	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.

04/18/89

SPECIFIED ANALYSIS DATA REPORT

PROJECT NO. 89-300 SAMPLE NO. 33612 SAMPLE TYPE: AMBWA PROG ELEM: NSF COLLECTED BY: B BOKEY
SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC
STATION ID: WH-021 LOWER SUNSET LAKE COLLECTION START: 03/01/89 1130 STOP: 00/00/00

RESULTS	UNITS	PARAMETER
.05U	MG/L	AMMONIA
.15	MG/L	NITRATE-NITRITE NITROGEN
.94	MG/L	TOTAL KJELDAHL NITROGEN
.29	MG/L	FLUORIDE
.004U	MG/L	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.

04/18/89

SPECIFIED ANALYSIS DATA REPORT

PROJECT NO. 89-300 SAMPLE NO. 33614 SAMPLE TYPE: AMBWA PROG ELEM: NSF COLLECTED BY: B BOKEY
SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC
STATION ID: WH-023 LOWER SUNSET LAKE DUPLICATE COLLECTION START: 03/01/89 1130 STOP: 00/00/00

RESULTS	UNITS	PARAMETER
.05U	MG/L	AMMONIA
.15	MG/L	NITRATE-NITRITE NITROGEN
.97	MG/L	TOTAL KJELDAHL NITROGEN
.30	MG/L	FLUORIDE

FOOTNOTES
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*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.

04/18/89

SPECIFIED ANALYSIS DATA REPORT

PROJECT NO. 89-300 SAMPLE NO. 33620 SAMPLE TYPE: BLKWA PROG ELEM: NSF COLLECTED BY: B BOKEY
SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC
STATION ID: WH-029 INORGANIC FIELD BLANK COLLECTION START: 03/02/89 1040 STOP: 00/00/00

RESULTS	UNITS	PARAMETER
.05U	MG/L	AMMONIA
.08	MG/L	NITRATE-NITRITE NITROGEN
.1U	MG/L	TOTAL KJELDAHL NITROGEN
.004U	MG/L	CYANIDE
.2U	MG/L	FLUORIDE

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 04/18/89

PROJECT NO. 89-300 SAMPLE NO. 33594 SAMPLE TYPE: SEDIM
SOURCE: WESTINGHOUSE
STATION ID: WH-003 N.E. BACKGROUND DITCH

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 02/28/89 1019 STOP: 00/00/00

UG/KG	ANALYTICAL RESULTS
46U	CHLOROMETHANE
46U	VINYL CHLORIDE
46U	BROMOMETHANE
46U	CHLOROETHANE
46U	TRICHLOROFLUOROMETHANE
46U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
330J	ACETONE
460U	CARBON DISULFIDE
46U	METHYLENE CHLORIDE
46U	TRANS-1,2-DICHLOROETHENE
46U	1,1-DICHLOROETHANE
460U	VINYL ACETATE
46U	CIS-1,2-DICHLOROETHENE
46U	2,2-DICHLOROPROPANE
460U	METHYL ETHYL KETONE
46U	BROMOCHLOROMETHANE
46U	CHLOROFORM
46U	1,1,1-TRICHLOROETHANE
46U	1,1-DICHLOROPROPENE
46U	CARBON TETRACHLORIDE
46U	1,2-DICHLOROETHANE
46U	BENZENE
46U	TRICHLOROETHENE(TRICHLOROETHYLENE)
46U	1,2-DICHLOROPROPANE
46U	DIBROMOMETHANE
46U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
46U	CIS-1,3-DICHLOROPROPENE
460U	METHYL ISOBUTYL KETONE
46U	TOLUENE
46U	TRANS-1,3-DICHLOROPROPENE
46U	1,1,2-TRICHLOROETHANE
46U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
46U	1,3-DICHLOROPROPANE
460U	METHYL BUTYL KETONE
46U	DIBROMOCHLOROMETHANE
46U	CHLOROBENZENE
46U	1,1,1,2-TETRACHLOROETHANE
46U	ETHYL BENZENE
46U	(M- AND/OR P-)XYLENE
46U	O-XYLENE
46U	STYRENE
46U	BROMOFORM
46U	BROMOBENZENE
46U	1,1,2,2-TETRACHLOROETHANE
46U	1,2,3-TRICHLOROPROPANE
46U	O-CHLOROTOLUENE
46U	P-CHLOROTOLUENE
46U	1,3-DICHLOROBENZENE
46U	1,4-DICHLOROBENZENE
46U	1,2-DICHLOROBENZENE
30.0	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 04/19/89

PROJECT NO. 89-300 SAMPLE NO. 33601 SAMPLE TYPE: SEDIM
SOURCE: WESTINGHOUSE
STATION ID: WH-010 DITCH N. OF PARKING AREA

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 02/28/89 1617 STOP: 00/00/00

UG/KG	ANALYTICAL RESULTS
160U	CHLOROMETHANE
160U	VINYL CHLORIDE
160U	BROMOMETHANE
160U	CHLOROETHANE
160U	TRICHLOROFLUOROMETHANE
160U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
1600U	ACETONE
1600U	CARBON DISULFIDE
160U	METHYLENE CHLORIDE
160U	TRANS-1,2-DICHLOROETHENE
160U	1,1-DICHLOROETHANE
1600U	VINYL ACETATE
160U	CIS-1,2-DICHLOROETHENE
160U	2,2-DICHLOROPROPANE
1600U	METHYL ETHYL KETONE
160U	BROMOCHLOROMETHANE
160U	CHLOROFORM
160U	1,1,1-TRICHLOROETHANE
160U	1,1-DICHLOROPROPENE
160U	CARBON TETRACHLORIDE
160U	1,2-DICHLOROETHANE
160U	BENZENE
160U	TRICHLOROETHENE(TRICHLOROETHYLENE)
160U	1,2-DICHLOROPROPANE
160U	DIBROMOMETHANE
160U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
160U	CIS-1,3-DICHLOROPROPENE
1600U	METHYL ISOBUTYL KETONE
2600J	TOLUENE
160U	TRANS-1,3-DICHLOROPROPENE
160U	1,1,2-TRICHLOROETHANE
160U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
160U	1,3-DICHLOROPROPANE
1600U	METHYL BUTYL KETONE
160U	DIBROMOCHLOROMETHANE
160U	CHLOROBENZENE
160U	1,1,1,2-TETRACHLOROETHANE
160U	ETHYL BENZENE
160U	(M- AND/OR P-)XYLENE
160U	O-XYLENE
160U	STYRENE
160U	BROMOFORM
160U	BROMOBENZENE
160U	1,1,2,2-TETRACHLOROETHANE
160U	1,2,3-TRICHLOROPROPANE
160U	O-CHLOROTOLUENE
160U	P-CHLOROTOLUENE
160U	1,3-DICHLOROBENZENE
160U	1,4-DICHLOROBENZENE
160U	1,2-DICHLOROBENZENE
36.0	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.

04/19/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 89-300 SAMPLE NO. 33604 SAMPLE TYPE: SEDIM PROG ELEM: NSF COLLECTED BY: B BOKEY
SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC
STATION ID: WH-013 SPRING COLLECTION START: 03/01/89 0855 STOP: 00/00/00

UG/KG	ANALYTICAL RESULTS	UG/KG	ANALYTICAL RESULTS
95U	CHLOROMETHANE	95U	CIS-1,3-DICHLOROPROPENE
95U	VINYL CHLORIDE	950U	METHYL ISOBUTYL KETONE
95U	BROMOMETHANE	95U	TOLUENE
95U	CHLOROETHANE	95U	TRANS-1,3-DICHLOROPROPENE
95U	TRICHLOROFLUOROMETHANE	95U	1,1,2-TRICHLOROETHANE
95U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)	480J	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
950U	ACETONE	95U	1,3-DICHLOROPROPANE
950U	CARBON DISULFIDE	950U	METHYL BUTYL KETONE
95U	METHYLENE CHLORIDE	95U	DIBROMOCHLOROMETHANE
95U	TRANS-1,2-DICHLOROETHENE	95U	CHLOROBENZENE
95U	1,1-DICHLOROETHANE	95U	1,1,1,2-TETRACHLOROETHANE
950U	VINYL ACETATE	95U	ETHYL BENZENE
95U	CIS-1,2-DICHLOROETHENE	95U	(M- AND/OR P-)XYLENE
95U	2,2-DICHLOROPROPANE	95U	O-XYLENE
950U	METHYL ETHYL KETONE	95U	STYRENE
95U	BROMOCHLOROMETHANE	95U	BROMOFORM
95U	CHLOROFORM	95U	BROMOBENZENE
95U	1,1,1-TRICHLOROETHANE	95U	1,1,2,2-TETRACHLOROETHANE
95U	1,1-DICHLOROPROPENE	95U	1,2,3-TRICHLOROPROPANE
95U	CARBON TETRACHLORIDE	95U	O-CHLOROTOLUENE
95U	1,2-DICHLOROETHANE	95U	P-CHLOROTOLUENE
95U	BENZENE	95U	1,3-DICHLOROBENZENE
95U	TRICHLOROETHENE(TRICHLOROETHYLENE)	95U	1,4-DICHLOROBENZENE
95U	1,2-DICHLOROPROPANE	95U	1,2-DICHLOROBENZENE
95U	DIBROMOMETHANE	25.0	PERCENT MOISTURE
95U	BROMODICHLOROMETHANE		

REMARKS

REMARKS

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 04/19/89

** PROJECT NO. 89-300 SAMPLE NO. 33606 SAMPLE TYPE: SEDIM
** SOURCE: WESTINGHOUSE
** STATION ID: WH-015 DITCH DISCHARGE

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 03/01/89 0930 STOP: 00/00/00

UG/KG	ANALYTICAL RESULTS
46U	CHLOROMETHANE
46U	VINYL CHLORIDE
46U	BROMOMETHANE
46U	CHLOROETHANE
46U	TRICHLOROFLUOROMETHANE
46U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
400J	ACETONE
460U	CARBON DISULFIDE
46U	METHYLENE CHLORIDE
46U	TRANS-1,2-DICHLOROETHENE
46U	1,1-DICHLOROETHANE
460U	VINYL ACETATE
46U	CIS-1,2-DICHLOROETHENE
46U	2,2-DICHLOROPROPANE
460U	METHYL ETHYL KETONE
46U	BROMOCHLOROMETHANE
46U	CHLOROFORM
46U	1,1,1-TRICHLOROETHANE
46U	1,1-DICHLOROPROPENE
46U	CARBON TETRACHLORIDE
46U	1,2-DICHLOROETHANE
46U	BENZENE
46U	TRICHLOROETHENE(TRICHLOROETHYLENE)
46U	1,2-DICHLOROPROPANE
46U	DIBROMOMETHANE
46U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
46U	CIS-1,3-DICHLOROPROPENE
460U	METHYL ISOBUTYL KETONE
46U	TOLUENE
46U	TRANS-1,3-DICHLOROPROPENE
46U	1,1,2-TRICHLOROETHANE
10J	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
46U	1,3-DICHLOROPROPANE
460U	METHYL BUTYL KETONE
46U	DIBROMOCHLOROMETHANE
46U	CHLOROBENZENE
46U	1,1,1,2-TETRACHLOROETHANE
46U	ETHYL BENZENE
46U	(M- AND/OR P-)XYLENE
46U	O-XYLENE
46U	STYRENE
46U	BROMOFORM
46U	BROMOBENZENE
46U	1,1,2,2-TETRACHLOROETHANE
46U	1,2,3-TRICHLOROPROPANE
46U	O-CHLOROTOLUENE
46U	P-CHLOROTOLUENE
46U	1,3-DICHLOROBENZENE
46U	1,4-DICHLOROBENZENE
46U	1,2-DICHLOROBENZENE
16.0	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 04/19/89

PROJECT NO. 89-300 SAMPLE NO. 33607 SAMPLE TYPE: SEDIM
SOURCE: WESTINGHOUSE
STATION ID: WH-016 DITCH DISCHARGE DUPLICATE

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 03/01/89 0930 STOP: 00/00/00

UG/KG	ANALYTICAL RESULTS
39U	CHLOROMETHANE
39U	VINYL CHLORIDE
39U	BROMOMETHANE
39U	CHLOROETHANE
39U	TRICHLOROFLUOROMETHANE
39U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
390U	ACETONE
390U	CARBON DISULFIDE
39U	METHYLENE CHLORIDE
39U	TRANS-1,2-DICHLOROETHENE
39U	1,1-DICHLOROETHANE
390U	VINYL ACETATE
39U	CIS-1,2-DICHLOROETHENE
39U	2,2-DICHLOROPROPANE
390U	METHYL ETHYL KETONE
39U	BROMOCHLOROMETHANE
39U	CHLOROFORM
39U	1,1,1-TRICHLOROETHANE
39U	1,1-DICHLOROPROPENE
39U	CARBON TETRACHLORIDE
39U	1,2-DICHLOROETHANE
39U	BENZENE
30J	TRICHLOROETHENE(TRICHLOROETHYLENE)
39U	1,2-DICHLOROPROPANE
39U	DIBROMOMETHANE
39U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
39U	CIS-1,3-DICHLOROPROPENE
390U	METHYL ISOBUTYL KETONE
39U	TOLUENE
39U	TRANS-1,3-DICHLOROPROPENE
39U	1,1,2-TRICHLOROETHANE
5.5J	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
39U	1,3-DICHLOROPROPANE
390U	METHYL BUTYL KETONE
39U	DIBROMOCHLOROMETHANE
39U	CHLOROBENZENE
39U	1,1,1,2-TETRACHLOROETHANE
39U	ETHYL BENZENE
39U	(M- AND/OR P-)XYLENE
39U	O-XYLENE
39U	STYRENE
39U	BROMOFORM
39U	BROMOBENZENE
39U	1,1,2,2-TETRACHLOROETHANE
39U	1,2,3-TRICHLOROPROPANE
39U	O-CHLOROTOLUENE
39U	P-CHLOROTOLUENE
39U	1,3-DICHLOROBENZENE
39U	1,4-DICHLOROBENZENE
39U	1,2-DICHLOROBENZENE
16.0	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.

04/18/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 89-300 SAMPLE NO. 33609 SAMPLE TYPE: SEDIM PROG ELEM: NSF COLLECTED BY: B BOKEY
SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC
STATION ID: WH-018 S.W. DITCH COLLECTION START: 03/01/89 1004 STOP: 00/00/00

UG/KG	ANALYTICAL RESULTS	UG/KG	ANALYTICAL RESULTS
43U	CHLOROMETHANE	43U	CIS-1,3-DICHLOROPROPENE
43U	VINYL CHLORIDE	430U	METHYL ISOBUTYL KETONE
43U	BROMOMETHANE	43U	TOLUENE
43U	CHLOROETHANE	43U	TRANS-1,3-DICHLOROPROPENE
43U	TRICHLOROFLUOROMETHANE	43U	1,1,2-TRICHLOROETHANE
43U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)	43U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
430U	ACETONE	43U	1,3-DICHLOROPROPANE
430U	CARBON DISULFIDE	430U	METHYL BUTYL KETONE
43U	METHYLENE CHLORIDE	43U	DIBROMOCHLOROMETHANE
43U	TRANS-1,2-DICHLOROETHENE	43U	CHLOROBENZENE
43U	1,1-DICHLOROETHANE	43U	1,1,1,2-TETRACHLOROETHANE
430U	VINYL ACETATE	43U	ETHYL BENZENE
43U	CIS-1,2-DICHLOROETHENE	43U	(M- AND/OR P-)XYLENE
43U	2,2-DICHLOROPROPANE	43U	O-XYLENE
430U	METHYL ETHYL KETONE	43U	STYRENE
43U	BROMOCHLOROMETHANE	43U	BROMOFORM
43U	CHLOROFORM	43U	BROMOBENZENE
43U	1,1,1-TRICHLOROETHANE	43U	1,1,2,2-TETRACHLOROETHANE
43U	1,1-DICHLOROPROPENE	43U	1,2,3-TRICHLOROPROPANE
43U	CARBON TETRACHLORIDE	43U	O-CHLOROTOLUENE
43U	1,2-DICHLOROETHANE	43U	P-CHLOROTOLUENE
43U	BENZENE	43U	1,3-DICHLOROBENZENE
43U	TRICHLOROETHENE(TRICHLOROETHYLENE)	43U	1,4-DICHLOROBENZENE
43U	1,2-DICHLOROPROPANE	43U	1,2-DICHLOROBENZENE
43U	DIBROMOMETHANE	23.0	PERCENT MOISTURE
43U	BROMODICHLOROMETHANE		

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.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 04/18/89

PROJECT NO. 89-300 SAMPLE NO. 33611 SAMPLE TYPE: SEDIM
SOURCE: WESTINGHOUSE
STATION ID: WH-020 UPPER SUNSET LAKE

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 03/01/89 1022 STOP: 00/00/00

UG/KG	ANALYTICAL RESULTS
55U	CHLOROMETHANE
55U	VINYL CHLORIDE
55U	BROMOMETHANE
55U	CHLOROETHANE
55U	TRICHLOROFLUOROMETHANE
55U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENF)
550U	ACETONE
550U	CARBON DISULFIDE
55U	METHYLENE CHLORIDE
55U	TRANS-1,2-DICHLOROETHENE
55U	1,1-DICHLOROETHANE
550U	VINYL ACETATE
55U	CIS-1,2-DICHLOROETHENE
55U	2,2-DICHLOROPROPANE
550U	METHYL ETHYL KETONE
55U	BROMOCHLOROMETHANE
55U	CHLOROFORM
55U	1,1,1-TRICHLOROETHANE
55U	1,1-DICHLOROPROPENE
55U	CARBON TETRACHLORIDE
55U	1,2-DICHLOROETHANE
55U	BENZENE
55U	TRICHLOROETHENE(TRICHLOROETHYLENE)
55U	1,2-DICHLOROPROPANE
55U	DIBROMOMETHANE
55U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
55U	CIS-1,3-DICHLOROPROPENE
550U	METHYL ISOBUTYL KETONE
55U	TOLUENE
55U	TRANS-1,3-DICHLOROPROPENE
55U	1,1,2-TRICHLOROETHANE
55U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
55U	1,3-DICHLOROPROPANE
550U	METHYL BUTYL KETONE
55U	DIBROMOCHLOROMETHANE
55U	CHLOROBENZENE
55U	1,1,1,2-TETRACHLOROETHANE
55U	ETHYL BENZENE
55U	(M- AND/OR P-)XYLENE
55U	O-XYLENE
55U	STYRENE
55U	BROMOFORM
55U	BROMOBENZENE
55U	1,1,2,2-TETRACHLOROETHANE
55U	1,2,3-TRICHLOROPROPANE
55U	O-CHLOROTOLUENE
55U	P-CHLOROTOLUENE
55U	1,3-DICHLOROBENZENE
55U	1,4-DICHLOROBENZENE
55U	1,2-DICHLOROBENZENE
41.0	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 04/18/89

PROJECT NO. 89-300 SAMPLE NO. 33613 SAMPLE TYPE: SEDIM
SOURCE: WESTINGHOUSE
STATION ID: WH-022 LOWER SUNSET LAKE

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 03/01/89 1142 STOP: 00/00/00

UG/KG	ANALYTICAL RESULTS
42U	CHLOROMETHANE
42U	VINYL CHLORIDE
42U	BROMOMETHANE
42U	CHLOROETHANE
42U	TRICHLOROFLUOROMETHANE
42U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
420U	ACETONE
420U	CARBON DISULFIDE
42U	METHYLENE CHLORIDE
42U	TRANS-1,2-DICHLOROETHENE
42U	1,1-DICHLOROETHANE
420U	VINYL ACETATE
42U	CIS-1,2-DICHLOROETHENE
42U	2,2-DICHLOROPROPANE
420U	METHYL ETHYL KETONE
42U	BROMOCHLOROMETHANE
42U	CHLOROFORM
42U	1,1,1-TRICHLOROETHANE
42U	1,1-DICHLOROPROPENE
42U	CARBON TETRACHLORIDE
42U	1,2-DICHLOROETHANE
42U	BENZENE
42U	TRICHLOROETHENE(TRICHLOROETHYLENE)
42U	1,2-DICHLOROPROPANE
42U	DIBROMOMETHANE
42U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
42U	CIS-1,3-DICHLOROPROPENE
420U	METHYL ISOBUTYL KETONE
42U	TOLUENE
42U	TRANS-1,3-DICHLOROPROPENE
42U	1,1,2-TRICHLOROETHANE
42U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
42U	1,3-DICHLOROPROPANE
420U	METHYL BUTYL KETONE
42U	DIBROMOCHLOROMETHANE
42U	CHLOROBENZENE
42U	1,1,1,2-TETRACHLOROETHANE
42U	ETHYL BENZENE
42U	(M- AND/OR P-)XYLENE
42U	O-XYLENE
42U	STYRENE
42U	BROMOFORM
42U	BROMOBENZENE
42U	1,1,2,2-TETRACHLOROETHANE
42U	1,2,3-TRICHLOROPROPANE
42U	O-CHLOROTOLUENE
42U	P-CHLOROTOLUENE
42U	1,3-DICHLOROBENZENE
42U	1,4-DICHLOROBENZENE
42U	1,2-DICHLOROBENZENE
27.0	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.

04/18/89

MISCELLANEOUS PURGEABLE ORGANICS - DATA REPORT

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**   PROJECT NO. 89-300   SAMPLE NO. 33613  SAMPLE TYPE: SEDIM      PROG ELEM: NSF   COLLECTED BY: B BOKEY              **
**   SOURCE: WESTINGHOUSE                                            CITY: COLUMBIA            ST: SC                   **
**   STATION ID: WH-022 LOWER SUNSET LAKE                            COLLECTION START: 03/01/89  1142   STOP: 00/00/00  **
**                                                                                                                      **
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
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ANALYTICAL RESULTS UG/KG

40JN THIOBISMETHANE

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.

PURGEABLE ORGANICS DATA REPORT 04/18/89

PROJECT NO. 89-300 SAMPLE NO. 33615 SAMPLE TYPE: SEDIM
SOURCE: WESTINGHOUSE
STATION ID: WH-024 N. OF DRUM STORAGE AREA

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 03/01/89 1417 STOP: 00/00/00

UG/KG	ANALYTICAL RESULTS
40U	CHLOROMETHANE
40U	VINYL CHLORIDE
40U	BROMOMETHANE
40U	CHLOROETHANE
40U	TRICHLOROFLUOROMETHANE
40U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
400U	ACETONE
400U	CARBON DISULFIDE
40U	METHYLENE CHLORIDE
40U	TRANS-1,2-DICHLOROETHENE
40U	1,1-DICHLOROETHANE
400U	VINYL ACETATE
40U	CIS-1,2-DICHLOROETHENE
40U	2,2-DICHLOROPROPANE
400U	METHYL ETHYL KETONE
40U	BROMOCHLOROMETHANE
40U	CHLOROFORM
40U	1,1,1-TRICHLOROETHANE
40U	1,1-DICHLOROPROPENE
40U	CARBON TETRACHLORIDE
40U	1,2-DICHLOROETHANE
40U	BENZENE
40U	TRICHLOROETHENE(TRICHLOROETHYLENE)
40U	1,2-DICHLOROPROPANE
40U	DIBROMOMETHANE
40U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
40U	CIS-1,3-DICHLOROPROPENE
400U	METHYL ISOBUTYL KETONE
40U	TOLUENE
40U	TRANS-1,3-DICHLOROPROPENE
40U	1,1,2-TRICHLOROETHANE
40U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
40U	1,3-DICHLOROPROPANE
400U	METHYL BUTYL KETONE
40U	DIBROMOCHLOROMETHANE
40U	CHLOROBENZENE
40U	1,1,1,2-TETRACHLOROETHANE
40U	ETHYL BENZENE
40U	(M- AND/OR P-)XYLENE
40U	O-XYLENE
40U	STYRENE
40U	BROMOFORM
40U	BROMOBENZENE
40U	1,1,2,2-TETRACHLOROETHANE
40U	1,2,3-TRICHLOROPROPANE
40U	O-CHLOROTOLUENE
40U	P-CHLOROTOLUENE
40U	1,3-DICHLOROBENZENE
40U	1,4-DICHLOROBENZENE
40U	1,2-DICHLOROBENZENE
22.0	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 04/18/89

PROJECT NO. 89-300 SAMPLE NO. 33618 SAMPLE TYPE: SEDIM
SOURCE: WESTINGHOUSE
STATION ID: WH-027 OIL RECOVERY AREA

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 03/02/89 0925 STOP: 00/00/00

UG/KG	ANALYTICAL RESULTS
41U	CHLOROMETHANE
41U	VINYL CHLORIDE
41U	BROMOMETHANE
41U	CHLOROETHANE
41U	TRICHLOROFLUOROMETHANE
41U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
410U	ACETONE
410U	CARBON DISULFIDE
41U	METHYLENE CHLORIDE
41U	TRANS-1,2-DICHLOROETHENE
41U	1,1-DICHLOROETHANE
410U	VINYL ACETATE
41U	CIS-1,2-DICHLOROETHENE
41U	2,2-DICHLOROPROPANE
410U	METHYL ETHYL KETONE
41U	BROMOCHLOROMETHANE
41U	CHLOROFORM
41U	1,1,1-TRICHLOROETHANE
41U	1,1-DICHLOROPROPENE
41U	CARBON TETRACHLORIDE
41U	1,2-DICHLOROETHANE
41U	BENZENE
41U	TRICHLOROETHENE(TRICHLOROETHYLENE)
41U	1,2-DICHLOROPROPANE
41U	DIBROMOMETHANE
41U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
41U	CIS-1,3-DICHLOROPROPENE
410U	METHYL ISOBUTYL KETONE
41U	TOLUENE
41U	TRANS-1,3-DICHLOROPROPENE
41U	1,1,2-TRICHLOROETHANE
41U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
41U	1,3-DICHLOROPROPANE
410U	METHYL BUTYL KETONE
41U	DIBROMOCHLOROMETHANE
41U	CHLOROBENZENE
41U	1,1,1,2-TETRACHLOROETHANE
41U	ETHYL BENZENE
41U	(M- AND/OR P-)XYLENE
41U	O-XYLENE
41U	STYRENE
41U	BROMOFORM
41U	BROMOBENZENE
41U	1,1,2,2-TETRACHLOROETHANE
41U	1,2,3-TRICHLOROPROPANE
41U	O-CHLOROTOLUENE
41U	P-CHLOROTOLUENE
41U	1,3-DICHLOROBENZENE
41U	1,4-DICHLOROBENZENE
41U	1,2-DICHLOROBENZENE
18.0	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

EXTRACTABLE ORGANICS DATA REPORT 03/29/89

PROJECT NO. 89-300 SAMPLE NO. 33594 SAMPLE TYPE: SEDIM
SOURCE: WESTINGHOUSE
STATION ID: WH-003 N.E. BACKGROUND DITCH

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 02/28/89 1019 STOP: 00/00/00

UG/KG	ANALYTICAL RESULTS
1800U	BIS(2-CHLOROETHYL) ETHER
1800U	BIS(2-CHLOROISOPROPYL) ETHER
1800U	N-NITROSODI-N-PROPYLAMINE
1800U	HEXACHLOROETHANE
1800U	NITROBENZENE
1800U	ISOPHORONE
1800U	BIS(2-CHLOROETHOXY) METHANE
1800U	1,2,4-TRICHLOROBENZENE
1800U	NAPHTHALENE
1800U	4-CHLOROANILINE
1800U	HEXACHLOROBUTADIENE
1800U	2-METHYLNAPHTHALENE
1800U	HEXACHLOROCYCLOPENTADIENE (HCCP)
1800U	2-CHLORONAPHTHALENE
1800U	2-NITROANILINE
1800U	DIMETHYL PHTHALATE
1800U	ACENAPHTHYLENE
1800U	2,6-DINITROTOLUENE
1800U	3-NITROANILINE
1800U	ACENAPHTHENE
1800U	DIBENZOFURAN
1800U	2,4-DINITROTOLUENE
1800U	DIETHYL PHTHALATE
1800U	FLUORENE
1800U	4-CHLOROPHENYL PHENYL ETHER
1800U	4-NITROANILINE
1800U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
1800U	4-BROMOPHENYL PHENYL ETHER
1800U	HEXACHLOROBENZENE (HCB)
1800U	PHENANTHRENE
1800U	ANTHRACENE
1800U	DI-N-BUTYLPHTHALATE

UG/KG	ANALYTICAL RESULTS
1800U	FLUORANTHENE
1800U	PYRENE
1800U	BENZYL BUTYL PHTHALATE
1800U	3,3'-DICHLOROBENZIDINE
1800U	BENZO(A)ANTHRACENE
1800U	CHRYSENE
14000	BIS(2-ETHYLHEXYL) PHTHALATE
1800U	DI-N-OCTYLPHTHALATE
1800U	BENZO(B AND/OR K)FLUORANTHENE
1800U	BENZO-A-PYRENE
1800U	INDENO (1,2,3-CD) PYRENE
1800U	DIBENZO(A,H)ANTHRACENE
1800U	BENZO(GHI)PERYLENE
1800U	PHENOL
1800U	2-CHLOROPHENOL
3600U	BENZYL ALCOHOL
1800U	2-METHYLPHENOL
1800U	(3-AND/OR 4-)METHYLPHENOL
1800U	2-NITROPHENOL
1800U	2,4-DIMETHYLPHENOL
3600U	BENZOIC ACID
1800U	2,4-DICHLOROPHENOL
1800U	4-CHLORO-3-METHYLPHENOL
1800U	2,4,6-TRICHLOROPHENOL
1800U	2,4,5-TRICHLOROPHENOL
3600U	2,4-DINITROPHENOL
3600U	4-NITROPHENOL
1800U	2,3,4,6-TETRACHLOROPHENOL
3600U	2-METHYL-4,6-DINITROPHENOL
3600U	PENTACHLOROPHENOL
32	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

EXTRACTABLE ORGANICS DATA REPORT 03/29/89

PROJECT NO. 89-300 SAMPLE NO. 33601 SAMPLE TYPE: SEDIM
SOURCE: WESTINGHOUSE
STATION ID: WH-010 DITCH N. OF PARKING AREA

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 02/28/89 1617 STOP: 00/00/00

UG/KG	ANALYTICAL RESULTS
11000U	BIS(2-CHLOROETHYL) ETHER
11000U	BIS(2-CHLOROISOPROPYL) ETHER
11000U	N-NITROSODI-N-PROPYLAMINE
11000U	HEXACHLOROETHANE
11000U	NITROBENZENE
11000U	ISOPHORONE
11000U	BIS(2-CHLOROETHOXY) METHANE
11000U	1,2,4-TRICHLOROBENZENE
11000U	NAPHTHALENE
11000U	4-CHLOROANILINE
11000U	HEXACHLOROBUTADIENE
11000U	2-METHYLNAPHTHALENE
11000U	HEXACHLOROCYCLOPENTADIENE (HCCP)
11000U	2-CHLORONAPHTHALENE
11000U	2-NITROANILINE
11000U	DIMETHYL PHTHALATE
11000U	ACENAPHTHYLENE
11000U	2,6-DINITROTOLUENE
11000U	3-NITROANILINE
11000U	ACENAPHTHENE
11000U	DIBENZOFURAN
11000U	2,4-DINITROTOLUENE
11000U	DIETHYL PHTHALATE
11000U	FLUORENE
11000U	4-CHLOROPHENYL PHENYL ETHER
11000U	4-NITROANILINE
11000U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
11000U	4-BROMOPHENYL PHENYL ETHER
11000U	HEXACHLOROBENZENE (HCB)
12000	PHENANTHRENE
11000U	ANTHRACENE
11000U	DI-N-BUTYLPHTHALATE

UG/KG	ANALYTICAL RESULTS
62000	FLUORANTHENE
48000	PYRENE
11000U	BENZYL BUTYL PHTHALATE
11000U	3,3'-DICHLOROBENZIDINE
13000	BENZO(A)ANTHRACENE
23000	CHRYSENE
11000U	BIS(2-ETHYLHEXYL) PHTHALATE
11000U	DI-N-OCTYLPHTHALATE
50000	BENZO(B AND/OR K)FLUORANTHENE
18000	BENZO-A-PYRENE
26000	INDENO (1,2,3-CD) PYRENE
11000U	DIBENZO(A,H)ANTHRACENE
26000U	BENZO(GHI)PERYLENE
11000U	PHENOL
11000U	2-CHLOROPHENOL
22000U	BENZYL ALCOHOL
11000U	2-METHYLPHENOL
11000U	(3-AND/OR 4-)METHYLPHENOL
11000U	2-NITROPHENOL
11000U	2,4-DIMETHYLPHENOL
22000U	BENZOIC ACID
11000U	2,4-DICHLOROPHENOL
11000U	4-CHLORO-3-METHYLPHENOL
11000U	2,4,6-TRICHLOROPHENOL
11000U	2,4,5-TRICHLOROPHENOL
22000U	2,4-DINITROPHENOL
22000U	4-NITROPHENOL
11000U	2,3,4,6-TETRACHLOROPHENOL
22000U	2-METHYL-4,6-DINITROPHENOL
22000U	PENTACHLOROPHENOL
39	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.

03/29/89

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

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**   PROJECT NO. 89-300    SAMPLE NO. 33601  SAMPLE TYPE: SEDIM       PROG ELEM: NSF   COLLECTED BY: B BOKEY                  **
**   SOURCE: WESTINGHOUSE                                              CITY: COLUMBIA              ST: SC                      **
**   STATION ID: WH-010 DITCH N. OF PARKING AREA                       COLLECTION START: 02/28/89  1617   STOP: 00/00/00       **
**                                                                                                                             **
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ANALYTICAL RESULTS UG/KG

1000JN	ACRIDINE
2000JN	CARBAZOLE
2000JN	METHYLPHENANTHRENE
2000JN	CYCLOPENTAPHENANTHRENE
10000JN	PHENANTHRENEDIONE
2000JN	NAPHTHALENEDICARBOXYLIC ACID
4000JN	BENZONAPHTHOFURAN (2 ISOMERS)
4000JN	BENZOFLUORENE (2 ISOMERS)
10000JN	METHYLFLUORANTHENE (3 ISOMERS)
2000JN	PHENANTHRENECARBONITRILE
10000JN	BENZOPHENANTHRENONE (4 ISOMERS)
20000JN	HEXANEDIOIC ACID, DIOCTYL ESTER
3000JN	BENZONAPHTHOTHIOPHENE
5000JN	BENZOPHENANTHRENE
1000JN	METHYLBENZANTHRACENE
4000J	BENZOFLUORANTHENE (NOT B OR K)

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 03/29/89

PROJECT NO. 89-300 SAMPLE NO. 33604 SAMPLE TYPE: SEDIM
SOURCE: WESTINGHOUSE
STATION ID: WH-013 SPRING

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 03/01/89 0855 STOP: 00/00/00

UG/KG	ANALYTICAL RESULTS
1800U	BIS(2-CHLOROETHYL) ETHER
1800U	BIS(2-CHLOROISOPROPYL) ETHER
1800U	N-NITROSODI-N-PROPYLAMINE
1800U	HEXACHLOROETHANE
1800U	NITROBENZENE
1800U	ISOPHORONE
1800U	BIS(2-CHLOROETHOXY) METHANE
1800U	1,2,4-TRICHLOROBENZENE
1800U	NAPHTHALENE
1800U	4-CHLOROANILINE
1800U	HEXACHLOROBUTADIENE
1800U	2-METHYLNAPHTHALENE
1800U	HEXACHLOROCYCLOPENTADIENE (HCCP)
1800U	2-CHLORONAPHTHALENE
1800U	2-NITROANILINE
1800U	DIMETHYL PHTHALATE
1800U	ACENAPHTHYLENE
1800U	2,6-DINITROTOLUENE
1800U	3-NITROANILINE
1800U	ACENAPHTHENE
1800U	DIBENZOFURAN
1800U	2,4-DINITROTOLUENE
1800U	DIETHYL PHTHALATE
1800U	FLUORENE
1800U	4-CHLOROPHENYL PHENYL ETHER
1800U	4-NITROANILINE
1800U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
1800U	4-BROMOPHENYL PHENYL ETHER
1800U	HEXACHLOROBENZENE (HCB)
1800U	PHENANTHRENE
1800U	ANTHRACENE
1800U	DI-N-BUTYLPHTHALATE

UG/KG	ANALYTICAL RESULTS
1800U	FLUORANTHENE
1800U	PYRENE
1800U	BENZYL BUTYL PHTHALATE
1800U	3,3'-DICHLOROBENZIDINE
1800U	BENZO(A)ANTHRACENE
1800U	CHRYSENE
1800U	BIS(2-ETHYLHEXYL) PHTHALATE
1800U	DI-N-OCTYLPHTHALATE
1800U	BENZO(B AND/OR K)FLUORANTHENE
1800U	BENZO-A-PYRENE
1800U	INDENO (1,2,3-CD) PYRENE
1800U	DIBENZO(A,H)ANTHRACENE
1800U	BENZO(GHI)PERYLENE
1800U	PHENOL
1800U	2-CHLOROPHENOL
3500U	BENZYL ALCOHOL
1800U	2-METHYLPHENOL
1800U	(3-AND/OR 4-)METHYLPHENOL
1800U	2-NITROPHENOL
1800U	2,4-DIMETHYLPHENOL
3500U	BENZOIC ACID
1800U	2,4-DICHLOROPHENOL
1800U	4-CHLORO-3-METHYLPHENOL
1800U	2,4,6-TRICHLOROPHENOL
1800U	2,4,5-TRICHLOROPHENOL
3500U	2,4-DINITROPHENOL
3500U	4-NITROPHENOL
1800U	2,3,4,6-TETRACHLOROPHENOL
3500U	2-METHYL-4,6-DINITROPHENOL
3500U	PENTACHLOROPHENOL
27	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.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

EXTRACTABLE ORGANICS DATA REPORT 03/29/89

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** PROJECT NO. 89-300    SAMPLE NO. 33606  SAMPLE TYPE: SEDIM      PROG ELEM: NSF   COLLECTED BY: B BOKEY                **
** SOURCE: WESTINGHOUSE                                            CITY: COLUMBIA              ST: SC                   **
** STATION ID: WH-015 DITCH DISCHARGE                              COLLECTION START: 03/01/89  0930   STOP: 00/00/00      **
**                                                                                                                        **
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UG/KG	ANALYTICAL RESULTS
1500U	BIS(2-CHLOROETHYL) ETHER
1500U	BIS(2-CHLOROISOPROPYL) ETHER
1500U	N-NITROSODI-N-PROPYLAMINE
1500U	HEXACHLOROETHANE
1500U	NITROBENZENE
1500U	ISOPHORONE
1500U	BIS(2-CHLOROETHOXY) METHANE
1500U	1,2,4-TRICHLOROBENZENE
1500U	NAPHTHALENE
1500U	4-CHLOROANILINE
1500U	HEXACHLOROBUTADIENE
1500U	2-METHYLNAPHTHALENE
1500U	HEXACHLOROCYCLOPENTADIENE (HCCP)
1500U	2-CHLORONAPHTHALENE
1500U	2-NITROANILINE
1500U	DIMETHYL PHTHALATE
1500U	ACENAPHTHYLENE
1500U	2,6-DINITROTOLUENE
1500U	3-NITROANILINE
1500U	ACENAPHTHENE
1500U	DIBENZOFURAN
1500U	2,4-DINITROTOLUENE
1500U	DIETHYL PHTHALATE
1500U	FLUORENE
1500U	4-CHLOROPHENYL PHENYL ETHER
1500U	4-NITROANILINE
1500U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
1500U	4-BROMOPHENYL PHENYL ETHER
1500U	HEXACHLOROBENZENE (HCB)
1500U	PHENANTHRENE
1500U	ANTHRACENE
1500U	DI-N-BUTYLPHTHALATE

UG/KG	ANALYTICAL RESULTS
1500U	FLUORANTHENE
1500U	PYRENE
1500U	BENZYL BUTYL PHTHALATE
1500U	3,3'-DICHLOROBENZIDINE
1500U	BENZO(A)ANTHRACENE
1500U	CHRYSENE
1500U	BIS(2-ETHYLHEXYL) PHTHALATE
1500U	DI-N-OCTYLPHTHALATE
1500U	BENZO(B AND/OR K)FLUORANTHENE
1500U	BENZO-A-PYRENE
1500U	INDENO (1,2,3-CD) PYRENE
1500U	DIBENZO(A,H)ANTHRACENE
1500U	BENZO(GHI)PERYLENE
1500U	PHENOL
1500U	2-CHLOROPHENOL
3000U	BENZYL ALCOHOL
1500U	2-METHYLPHENOL
1500U	(3-AND/OR 4-)METHYLPHENOL
1500U	2-NITROPHENOL
1500U	2,4-DIMETHYLPHENOL
3000U	BENZOIC ACID
1500U	2,4-DICHLOROPHENOL
1500U	4-CHLORO-3-METHYLPHENOL
1500U	2,4,6-TRICHLOROPHENOL
1500U	2,4,5-TRICHLOROPHENOL
3000U	2,4-DINITROPHENOL
3000U	4-NITROPHENOL
1500U	2,3,4,6-TETRACHLOROPHENOL
3000U	2-METHYL-4,6-DINITROPHENOL
3000U	PENTACHLOROPHENOL
18	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.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

03/29/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 89-300 SAMPLE NO. 33607 SAMPLE TYPE: SEDIM
SOURCE: WESTINGHOUSE
STATION ID: WH-016 DITCH DISCHARGE DUPLICATE

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 03/01/89 0930 STOP: 00/00/00

UG/KG	ANALYTICAL RESULTS
1600U	BIS(2-CHLOROETHYL) ETHER
1600U	BIS(2-CHLOROISOPROPYL) ETHER
1600U	N-NITROSODI-N-PROPYLAMINE
1600U	HEXACHLOROETHANE
1600U	NITROBENZENE
1600U	ISOPHORONE
1600U	BIS(2-CHLOROETHOXY) METHANE
1600U	1,2,4-TRICHLOROBENZENE
1600U	NAPHTHALENE
1600U	4-CHLOROANILINE
1600U	HEXACHLOROBUTADIENE
1600U	2-METHYLNAPHTHALENE
1600U	HEXACHLOROCYCLOPENTADIENE (HCCP)
1600U	2-CHLORONAPHTHALENE
1600U	2-NITROANILINE
1600U	DIMETHYL PHTHALATE
1600U	ACENAPHTHYLENE
1600U	2,6-DINITROTOLUENE
1600U	3-NITROANILINE
1600U	ACENAPHTHENE
1600U	DIBENZOFURAN
1600U	2,4-DINITROTOLUENE
1600U	DIETHYL PHTHALATE
1600U	FLUORENE
1600U	4-CHLOROPHENYL PHENYL ETHER
1600U	4-NITROANILINE
1600U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
1600U	4-BROMOPHENYL PHENYL ETHER
1600U	HEXACHLOROBENZENE (HCB)
1600U	PHENANTHRENE
1600U	ANTHRACENE
1600U	DI-N-BUTYLPHTHALATE

UG/KG	ANALYTICAL RESULTS
1600U	FLUORANTHENE
1600U	PYRENE
1600U	BENZYL BUTYL PHTHALATE
1600U	3,3'-DICHLOROBENZIDINE
1600U	BENZO(A)ANTHRACENE
1600U	CHRYSENE
1600U	BIS(2-ETHYLHEXYL) PHTHALATE
1600U	DI-N-OCTYLPHTHALATE
1600U	BENZO(B AND/OR K)FLUORANTHENE
1600U	BENZO-A-PYRENE
1600U	INDENO (1,2,3-CD) PYRENE
1600U	DIBENZO(A,H)ANTHRACENE
1600U	BENZO(GHI)PERYLENE
1600U	PHENOL
1600U	2-CHLOROPHENOL
3200U	BENZYL ALCOHOL
1600U	2-METHYLPHENOL
1600U	(3-AND/OR 4-)METHYLPHENOL
1600U	2-NITROPHENOL
1600U	2,4-DIMETHYLPHENOL
3200U	BENZOIC ACID
1600U	2,4-DICHLOROPHENOL
1600U	4-CHLORO-3-METHYLPHENOL
1600U	2,4,6-TRICHLOROPHENOL
1600U	2,4,5-TRICHLOROPHENOL
3200U	2,4-DINITROPHENOL
3200U	4-NITROPHENOL
1600U	2,3,4,6-TETRACHLOROPHENOL
3200U	2-METHYL-4,6-DINITROPHENOL
3200U	PENTACHLOROPHENOL
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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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

03/29/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 89-300 SAMPLE NO. 33609 SAMPLE TYPE: SEDIM
SOURCE: WESTINGHOUSE
STATION ID: WH-018 S.W. DITCH

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 03/01/89 1004 STOP: 00/00/00

UG/KG	ANALYTICAL RESULTS
1900U	BIS(2-CHLOROETHYL) ETHER
1900U	BIS(2-CHLOROISOPROPYL) ETHER
1900U	N-NITROSODI-N-PROPYLAMINE
1900U	HEXACHLOROETHANE
1900U	NITROBENZENE
1900U	ISOPHORONE
1900U	BIS(2-CHLOROETHOXY) METHANE
1900U	1,2,4-TRICHLOROBENZENE
1900U	NAPHTHALENE
1900U	4-CHLOROANILINE
1900U	HEXACHLOROBUTADIENE
1900U	2-METHYLNAPHTHALENE
1900U	HEXACHLOROCYCLOPENTADIENE (HCCP)
1900U	2-CHLORONAPHTHALENE
1900U	2-NITROANILINE
1900U	DIMETHYL PHTHALATE
1900U	ACENAPHTHYLENE
1900U	2,6-DINITROTOLUENE
1900U	3-NITROANILINE
1900U	ACENAPHTHENE
1900U	DIBENZOFURAN
1900U	2,4-DINITROTOLUENE
1900U	DIETHYL PHTHALATE
1900U	FLUORENE
1900U	4-CHLOROPHENYL PHENYL ETHER
1900U	4-NITROANILINE
1900U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
1900U	4-BROMOPHENYL PHENYL ETHER
1900U	HEXACHLOROBENZENE (HCB)
1900U	PHENANTHRENE
1900U	ANTHRACENE
1900U	DI-N-BUTYLPHTHALATE

UG/KG	ANALYTICAL RESULTS
1900U	FLUORANTHENE
1900U	PYRENE
1900U	BENZYL BUTYL PHTHALATE
1900U	3,3'-DICHLOROBENZIDINE
1900U	BENZO(A)ANTHRACENE
1900U	CHRYSENE
1900U	BIS(2-ETHYLHEXYL) PHTHALATE
1900U	DI-N-OCTYLPHTHALATE
1900U	BENZO(B AND/OR K)FLUORANTHENE
1900U	BENZO-A-PYRENE
1900U	INDENO (1,2,3-CD) PYRENE
1900U	DIBENZO(A,H)ANTHRACENE
1900U	BENZO(GHI)PERYLENE
1900U	PHENOL
1900U	2-CHLOROPHENOL
3800U	BENZYL ALCOHOL
1900U	2-METHYLPHENOL
1900U	(3-AND/OR 4-)METHYLPHENOL
1900U	2-NITROPHENOL
1900U	2,4-DIMETHYLPHENOL
3800U	BENZOIC ACID
1900U	2,4-DICHLOROPHENOL
1900U	4-CHLORO-3-METHYLPHENOL
1900U	2,4,6-TRICHLOROPHENOL
1900U	2,4,5-TRICHLOROPHENOL
3800U	2,4-DINITROPHENOL
3800U	4-NITROPHENOL
1900U	2,3,4,6-TETRACHLOROPHENOL
3800U	2-METHYL-4,6-DINITROPHENOL
3800U	PENTACHLOROPHENOL
39	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.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

03/29/89

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

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**   PROJECT NO. 89-300   SAMPLE NO. 33609  SAMPLE TYPE: SEDIM      PROG ELEM: NSF   COLLECTED BY: B BOKEY                         **
**   SOURCE: WESTINGHOUSE                                           CITY: COLUMBIA                ST: SC                           **
**   STATION ID: WH-018 S.W. DITCH                                  COLLECTION START: 03/01/89  1004   STOP: 00/00/00              **
**                                                                                                                                 **
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
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ANALYTICAL RESULTS UG/KG

N   PETROLEUM PRODUCT

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.

03/29/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 89-300 SAMPLE NO. 33611 SAMPLE TYPE: SEDIM
PROG ELEM: NSF COLLECTED BY: B BOKEY
SOURCE: WESTINGHOUSE
CITY: COLUMBIA ST: SC
STATION ID: WH-020 UPPER SUNSET LAKE
COLLECTION START: 03/01/89 1022 STOP: 00/00/00

UG/KG	ANALYTICAL RESULTS
2300U	BIS(2-CHLOROETHYL) ETHER
2300U	BIS(2-CHLOROISOPROPYL) ETHER
2300U	N-NITROSODI-N-PROPYLAMINE
2300U	HEXACHLOROETHANE
2300U	NITROBENZENE
2300U	ISOPHORONE
2300U	BIS(2-CHLOROETHOXY) METHANE
2300U	1,2,4-TRICHLOROBENZENE
2300U	NAPHTHALENE
2300U	4-CHLOROANILINE
2300U	HEXACHLOROBUTADIENE
2300U	2-METHYLNAPHTHALENE
2300U	HEXACHLOROCYCLOPENTADIENE (HCCP)
2300U	2-CHLORONAPHTHALENE
2300U	2-NITROANILINE
2300U	DIMETHYL PHTHALATE
2300U	ACENAPHTHYLENE
2300U	2,6-DINITROTOLUENE
2300U	3-NITROANILINE
2300U	ACENAPHTHENE
2300U	DIBENZOFURAN
2300U	2,4-DINITROTOLUENE
2300U	DIETHYL PHTHALATE
2300U	FLUORENE
2300U	4-CHLOROPHENYL PHENYL ETHER
2300U	4-NITROANILINE
2300U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
2300U	4-BROMOPHENYL PHENYL ETHER
2300U	HEXACHLOROBENZENE (HCB)
2300U	PHENANTHRENE
2300U	ANTHRACENE
2300U	DI-N-BUTYLPHTHALATE

UG/KG	ANALYTICAL RESULTS
2300U	FLUORANTHENE
2300U	PYRENE
2300U	BENZYL BUTYL PHTHALATE
2300U	3,3'-DICHLOROBENZIDINE
2300U	BENZO(A)ANTHRACENE
2300U	CHRYSENE
2300U	BIS(2-ETHYLHEXYL) PHTHALATE
2300U	DI-N-OCTYLPHTHALATE
2300U	BENZO(B AND/OR K)FLUORANTHENE
2300U	BENZO-A-PYRENE
2300U	INDENO (1,2,3-CD) PYRENE
2300U	DIBENZO(A,H)ANTHRACENE
2300U	BENZO(GHI)PERYLENE
2300U	PHENOL
2300U	2-CHLOROPHENOL
4600U	BENZYL ALCOHOL
2300U	2-METHYLPHENOL
2300U	(3-AND/OR 4-)METHYLPHENOL
2300U	2-NITROPHENOL
2300U	2,4-DIMETHYLPHENOL
4600U	BENZOIC ACID
2300U	2,4-DICHLOROPHENOL
2300U	4-CHLORO-3-METHYLPHENOL
2300U	2,4,6-TRICHLOROPHENOL
2300U	2,4,5-TRICHLOROPHENOL
4600U	2,4-DINITROPHENOL
4600U	4-NITROPHENOL
2300U	2,3,4,6-TETRACHLOROPHENOL
4600U	2-METHYL-4,6-DINITROPHENOL
4600U	PENTACHLOROPHENOL
45	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.

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

PROJECT NO. 89-300 SAMPLE NO. 33611 SAMPLE TYPE: SEDIM	PROG ELEM: NSF COLLECTED BY: B BOKEY
SOURCE: WESTINGHOUSE	CITY: COLUMBIA ST: SC
STATION ID: WH-020 UPPER SUNSET LAKE	COLLECTION START: 03/01/89 1022 STOP: 00/00/00

ANALYTICAL RESULTS UG/KG

N PETROLEUM PRODUCT

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 03/29/89

PROJECT NO. 89-300 SAMPLE NO. 33613 SAMPLE TYPE: SEDIM
SOURCE: WESTINGHOUSE
STATION ID: WH-022 LOWER SUNSET LAKE

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 03/01/89 1142 STOP: 00/00/00

UG/KG	ANALYTICAL RESULTS
1600U	BIS(2-CHLOROETHYL) ETHER
1600U	BIS(2-CHLOROISOPROPYL) ETHER
1600U	N-NITROSODI-N-PROPYLAMINE
1600U	HEXACHLOROETHANE
1600U	NITROBENZENE
1600U	ISOPHORONE
1600U	BIS(2-CHLOROETHOXY) METHANE
1600U	1,2,4-TRICHLOROBENZENE
1600U	NAPHTHALENE
1600U	4-CHLOROANILINE
1600U	HEXACHLOROBUTADIENE
1600U	2-METHYLNAPHTHALENE
1600U	HEXACHLOROCYCLOPENTADIENE (HCCP)
1600U	2-CHLORONAPHTHALENE
1600U	2-NITROANILINE
1600U	DIMETHYL PHTHALATE
1600U	ACENAPHTHYLENE
1600U	2,6-DINITROTOLUENE
1600U	3-NITROANILINE
1600U	ACENAPHTHENE
1600U	DIBENZOFURAN
1600U	2,4-DINITROTOLUENE
1600U	DIETHYL PHTHALATE
1600U	FLUORENE
1600U	4-CHLOROPHENYL PHENYL ETHER
1600U	4-NITROANILINE
1600U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
1600U	4-BROMOPHENYL PHENYL ETHER
1600U	HEXACHLOROBENZENE (HCB)
1600U	PHENANTHRENE
1600U	ANTHRACENE
1600U	DI-N-BUTYLPHTHALATE

UG/KG	ANALYTICAL RESULTS
1600U	FLUORANTHENE
330J	PYRENE
1600U	BENZYL BUTYL PHTHALATE
1600U	3,3'-DICHLOROBENZIDINE
280J	BENZO(A)ANTHRACENE
420J	CHRYSENE
1600U	BIS(2-ETHYLHEXYL) PHTHALATE
1600U	DI-N-OCTYLPHTHALATE
1100J	BENZO(B AND/OR K)FLUORANTHENE
280J	BENZO-A-PYRENE
1600U	INDENO (1,2,3-CD) PYRENE
1600U	DIBENZO(A,H)ANTHRACENE
1600U	BENZO(GHI)PERYLENE
1600U	PHENOL
1600U	2-CHLOROPHENOL
3100U	BENZYL ALCOHOL
1600U	2-METHYLPHENOL
1600U	(3-AND/OR 4-)METHYLPHENOL
1600U	2-NITROPHENOL
1600U	2,4-DIMETHYLPHENOL
3100U	BENZOIC ACID
1600U	2,4-DICHLOROPHENOL
1600U	4-CHLORO-3-METHYLPHENOL
1600U	2,4,6-TRICHLOROPHENOL
1600U	2,4,5-TRICHLOROPHENOL
3100U	2,4-DINITROPHENOL
3100U	4-NITROPHENOL
1600U	2,3,4,6-TETRACHLOROPHENOL
3100U	2-METHYL-4,6-DINITROPHENOL
3100U	PENTACHLOROPHENOL
32	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.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

03/29/89

EXTRACTABLE ORGANICS DATA REPORT

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** PROJECT NO. 89-300 SAMPLE NO. 33615 SAMPLE TYPE: SEDIM PROG ELEM: NSF COLLECTED BY: B BOKEY **
** SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC **
** STATION ID: WH-024 N. OF DRUM STORAGE AREA COLLECTION START: 03/01/89 1417 STOP: 00/00/00 **

*** ***

UG/KG	ANALYTICAL RESULTS
1600U	BIS(2-CHLOROETHYL) ETHER
1600U	BIS(2-CHLOROISOPROPYL) ETHER
1600U	N-NITROSODI-N-PROPYLAMINE
1600U	HEXACHLOROETHANE
1600U	NITROBENZENE
1600U	ISOPHORONE
1600U	BIS(2-CHLOROETHOXY) METHANE
1600U	1,2,4-TRICHLOROBENZENE
1600U	NAPHTHALENE
1600U	4-CHLOROANILINE
1600U	HEXACHLOROBUTADIENE
1600U	2-METHYLNAPHTHALENE
1600U	HEXACHLOROCYCLOPENTADIENE (HCCP)
1600U	2-CHLORONAPHTHALENE
1600U	2-NITROANILINE
1600U	DIMETHYL PHTHALATE
1600U	ACENAPHTHYLENE
1600U	2,6-DINITROTOLUENE
1600U	3-NITROANILINE
1600U	ACENAPHTHENE
1600U	DIBENZOFURAN
1600U	2,4-DINITROTOLUENE
1600U	DIETHYL PHTHALATE
1600U	FLUORENE
1600U	4-CHLOROPHENYL PHENYL ETHER
1600U	4-NITROANILINE
1600U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
1600U	4-BROMOPHENYL PHENYL ETHER
1600U	HEXACHLOROBENZENE (HCB)
1600U	PHENANTHRENE
1600U	ANTHRACENE
1600U	DI-N-BUTYLPHTHALATE

UG/KG	ANALYTICAL RESULTS
1600U	FLUORANTHENE
1600U	PYRENE
1600U	BENZYL BUTYL PHTHALATE
1600U	3,3'-DICHLOROBENZIDINE
1600U	BENZO(A)ANTHRACENE
1600U	CHRYSENE
1600U	BIS(2-ETHYLHEXYL) PHTHALATE
1600U	DI-N-OCTYLPHTHALATE
1600U	BENZO(B AND/OR K)FLUORANTHENE
1600U	BENZO-A-PYRENE
1600U	INDENO (1,2,3-CD) PYRENE
1600U	DIBENZO(A,H)ANTHRACENE
1600U	BENZO(GHI)PERYLENE
1600U	PHENOL
1600U	2-CHLOROPHENOL
3200U	BENZYL ALCOHOL
1600U	2-METHYLPHENOL
1600U	(3-AND/OR 4-)METHYLPHENOL
1600U	2-NITROPHENOL
1600U	2,4-DIMETHYLPHENOL
3200U	BENZOIC ACID
1600U	2,4-DICHLOROPHENOL
1600U	4-CHLORO-3-METHYLPHENOL
1600U	2,4,6-TRICHLOROPHENOL
1600U	2,4,5-TRICHLOROPHENOL
3200U	2,4-DINITROPHENOL
3200U	4-NITROPHENOL
1600U	2,3,4,6-TETRACHLOROPHENOL
3200U	2-METHYL-4,6-DINITROPHENOL
3200U	PENTACHLOROPHENOL
24	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

03/29/89

EXTRACTABLE ORGANICS DATA REPORT

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** PROJECT NO. 89-300 SAMPLE NO. 33618 SAMPLE TYPE: SEDIM PROG ELEM: NSF COLLECTED BY: B BOKEY **
** SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC **
** STATION ID: WH-027 OIL RECOVERY AREA COLLECTION START: 03/02/89 0925 STOP: 00/00/00 **

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UG/KG	ANALYTICAL RESULTS
1500U	BIS(2-CHLOROETHYL) ETHER
1500U	BIS(2-CHLOROISOPROPYL) ETHER
1500U	N-NITROSODI-N-PROPYLAMINE
1500U	HEXACHLOROETHANE
1500U	NITROBENZENE
1500U	ISOPHORONE
1500U	BIS(2-CHLOROETHOXY) METHANE
1500U	1,2,4-TRICHLOROBENZENE
1500U	NAPHTHALENE
200J	4-CHLOROANILINE
1500U	HEXACHLOROBUTADIENE
1500U	2-METHYLNAPHTHALENE
1500U	HEXACHLOROCYCLOPENTADIENE (HCCP)
1500U	2-CHLORONAPHTHALENE
1500U	2-NITROANILINE
1500U	DIMETHYL PHTHALATE
1500U	ACENAPHTHYLENE
1500U	2,6-DINITROTOLUENE
1500U	3-NITROANILINE
1500U	ACENAPHTHENE
1500U	DIBENZOFURAN
1500U	2,4-DINITROTOLUENE
1500U	DIETHYL PHTHALATE
1500U	FLUORENE
1500U	4-CHLOROPHENYL PHENYL ETHER
1500U	4-NITROANILINE
1500U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
1500U	4-BROMOPHENYL PHENYL ETHER
1500U	HEXACHLOROBENZENE (HCB)
1500U	PHENANTHRENE
1500U	ANTHRACENE
1500U	DI-N-BUTYLPHTHALATE

UG/KG	ANALYTICAL RESULTS
1500U	FLUORANTHENE
1500U	PYRENE
1500U	BENZYL BUTYL PHTHALATE
1500U	3,3'-DICHLOROBENZIDINE
1500U	BENZO(A)ANTHRACENE
1500U	CHRYSENE
1500U	BIS(2-ETHYLHEXYL) PHTHALATE
1500U	DI-N-OCTYLPHTHALATE
1500U	BENZO(B AND/OR K)FLUORANTHENE
1500U	BENZO-A-PYRENE
1500U	INDENO (1,2,3-CD) PYRENE
1500U	DIBENZO(A,H)ANTHRACENE
1500U	BENZO(GHI)PERYLENE
1500U	PHENOL
1500U	2-CHLOROPHENOL
2900U	BENZYL ALCOHOL
1500U	2-METHYLPHENOL
1500U	(3-AND/OR 4-)METHYLPHENOL
1500U	2-NITROPHENOL
1500U	2,4-DIMETHYLPHENOL
2900U	BENZOIC ACID
1500U	2,4-DICHLOROPHENOL
1500U	4-CHLORO-3-METHYLPHENOL
1500U	2,4,6-TRICHLOROPHENOL
1500U	2,4,5-TRICHLOROPHENOL
2900U	2,4-DINITROPHENOL
2900U	4-NITROPHENOL
1500U	2,3,4,6-TETRACHLOROPHENOL
2900U	2-METHYL-4,6-DINITROPHENOL
2900U	PENTACHLOROPHENOL
21	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.
04/25/89

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 89-300 SAMPLE NO. 33594 SAMPLE TYPE: SEDIM
SOURCE: WESTINGHOUSE
STATION ID: WH-003 N.E. BACKGROUND DITCH

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 02/28/89 1019 STOP: 00/00/00

UG/KG	ANALYTICAL RESULTS
31U	ALDRIN
19U	HEPTACHLOR
27U	HEPTACHLOR EPOXIDE
24U	ALPHA-BHC
41U	BETA-BHC
26U	GAMMA BHC (LINDANE)
31U	DELTA-BHC
34U	ENDOSULFAN I (ALPHA)
40U	DIELDRIN
65U	4,4'-DDT (P,P'-DDT)
45U	4,4'-DDE (P,P'-DDE)
88U	4,4'-DDD (P,P'-DDD)
53U	ENDRIN
45U	ENDOSULFAN II (BETA)
74U	ENDOSULFAN SULFATE
390U	CHLORDANE (TECH. MIXTURE) /1
460U	PCB-1242 (AROCLOR 1242)
510U	PCB-1254 (AROCLOR 1254)
460U	PCB-1221 (AROCLOR 1221)

UG/KG	ANALYTICAL RESULTS
460U	PCB-1232 (AROCLOR 1232)
460U	PCB-1248 (AROCLOR 1248)
510U	PCB-1260 (AROCLOR 1260)
460U	PCB-1016 (AROCLOR 1016)
3100U	TOXAPHENE
--	CHLORDENE /2
--	ALPHA-CHLORDENE /2
--	BETA CHLORDENE /2
--	GAMMA-CHLORDENE /2
--	1-HYDROXYCHLORDENE /2
--	GAMMA-CHLORDANE /2
--	TRANS-NONACHLOR /2
--	ALPHA-CHLORDANE /2
--	CIS-NONACHLOR /2
--	OXYCHLORDANE (OCTACHLOREPOXIDE) /2
140U	METHOXYCHLOR
49U	ENDRIN KETONE
32	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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1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS. 2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 04/25/89

** PROJECT NO. 89-300 SAMPLE NO. 33601 SAMPLE TYPE: SEDIM
** SOURCE: WESTINGHOUSE
** STATION ID: WH-010 DITCH N. OF PARKING AREA

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 02/28/89 1617 STOP: 00/00/00

UG/KG	ANALYTICAL RESULTS
70U	ALDRIN
41U	HEPTACHLOR
110U	HEPTACHLOR EPOXIDE
60U	ALPHA-BHC
250U	BETA-BHC
49U	GAMMA BHC (LINDANE)
68U	DELTA-BHC
67U	ENDOSULFAN I (ALPHA)
71U	DIELDRIN
380U	4,4'-DDT (P,P'-DDT)
100U	4,4'-DDE (P,P'-DDE)
160U	4,4'-DDD (P,P'-DDD)
98U	ENDRIN
120U	ENDOSULFAN II (BETA)
220U	ENDOSULFAN SULFATE
720U	CHLORDANE (TECH. MIXTURE) /1
780U	PCB-1242 (AROCLOR 1242)
1400U	PCB-1254 (AROCLOR 1254)
780U	PCB-1221 (AROCLOR 1221)

UG/KG	ANALYTICAL RESULTS
780U	PCB-1232 (AROCLOR 1232)
780U	PCB-1248 (AROCLOR 1248)
1400U	PCB-1260 (AROCLOR 1260)
780U	PCB-1016 (AROCLOR 1016)
6800U	TOXAPHENE
--	CHLORDENE /2
--	ALPHA-CHLORDENE /2
--	BETA CHLORDENE /2
--	GAMMA-CHLORDENE /2
--	1-HYDROXYCHLORDENE /2
--	GAMMA-CHLORDANE /2
--	TRANS-NONACHLOR /2
--	ALPHA-CHLORDANE /2
--	CIS-NONACHLOR /2
--	OXYCHLORDANE (OCTACHLOREPOXIDE) /2
960U	METHOXYCHLOR
130U	ENDRIN KETONE
39	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 04/25/89

PROJECT NO. 89-300 SAMPLE NO. 33604 SAMPLE TYPE: SEDIM
SOURCE: WESTINGHOUSE
STATION ID: WH-013 SPRING

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 03/01/89 0855 STOP: 00/00/00

UG/KG	ANALYTICAL RESULTS
30U	ALDRIN
18U	HEPTACHLOR
27U	HEPTACHLOR EPOXIDE
24U	ALPHA-BHC
40U	BETA-BHC
38U	GAMMA BHC (LINDANE)
30U	DELTA-BHC
33U	ENDOSULFAN I (ALPHA)
39U	DIELDRIN
64U	4,4'-DDT (P,P'-DDT)
37U	4,4'-DDE (P,P'-DDE)
65U	4,4'-DDD (P,P'-DDD)
52U	ENDRIN
44U	ENDOSULFAN II (BETA)
72U	ENDOSULFAN SULFATE
380U	CHLORDANE (TECH. MIXTURE) /1
450U	PCB-1242 (AROCLOR 1242)
500U	PCB-1254 (AROCLOR 1254)
450U	PCB-1221 (AROCLOR 1221)

UG/KG	ANALYTICAL RESULTS
450U	PCB-1232 (AROCLOR 1232)
450U	PCB-1248 (AROCLOR 1248)
500U	PCB-1260 (AROCLOR 1260)
450U	PCB-1016 (AROCLOR 1016)
3400U	TOXAPHENE
--	CHLORDENE /2
--	ALPHA-CHLORDENE /2
--	BETA CHLORDENE /2
--	GAMMA-CHLORDENE /2
--	1-HYDROXYCHLORDENE /2
--	GAMMA-CHLORDANE /2
--	TRANS-NONACHLOR /2
--	ALPHA-CHLORDANE /2
--	CIS-NONACHLOR /2
--	OXYCHLORDANE (OCTACHLOREPOXIDE) /2
130U	METHOXYCHLOR
54U	ENDRIN KETONE
27	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

04/25/89

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 89-300 SAMPLE NO. 33606 SAMPLE TYPE: SEDIM PROG ELEM: NSF COLLECTED BY: B BOKEY
SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC
STATION ID: WH-015 DITCH DISCHARGE COLLECTION START: 03/01/89 0930 STOP: 00/00/00

UG/KG	ANALYTICAL RESULTS	UG/KG	ANALYTICAL RESULTS
25U	ALDRIN	380U	PCB-1232 (AROCLOR 1232)
15U	HEPTACHLOR	380U	PCB-1248 (AROCLOR 1248)
22U	HEPTACHLOR EPOXIDE	420U	PCB-1260 (AROCLOR 1260)
20U	ALPHA-BHC	380U	PCB-1016 (AROCLOR 1016)
34U	BETA-BHC	2600U	TOXAPHENE
21U	GAMMA BHC (LINDANE)	--	CHLORDENE /2
25U	DELTA-BHC	--	ALPHA-CHLORDENE /2
28U	ENDOSULFAN I (ALPHA)	--	BETA CHLORDENE /2
33U	DIELDRIN	--	GAMMA-CHLORDENE /2
54U	4,4'-DDT (P,P'-DDT)	--	1-HYDROXYCHLORDENE /2
31U	4,4'-DDE (P,P'-DDE)	--	GAMMA-CHLORDANE /2
54U	4,4'-DDD (P,P'-DDD)	--	TRANS-NONACHLOR /2
44U	ENDRIN	--	ALPHA-CHLORDANE /2
37U	ENDOSULFAN II (BETA)	--	CIS-NONACHLOR /2
61U	ENDOSULFAN SULFATE	--	OXYCHLORDANE (OCTACHLOREPOXIDE) /2
320U	CHLORDANE (TECH. MIXTURE) /1	110U	METHOXYCHLOR
380U	PCB-1242 (AROCLOR 1242)	40U	ENDRIN KETONE
420U	PCB-1254 (AROCLOR 1254)	18	PERCENT MOISTURE
380U	PCB-1221 (AROCLOR 1221)		

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.

PESTICIDES/PCB'S DATA REPORT 04/25/89

PROJECT NO. 89-300 SAMPLE NO. 33607 SAMPLE TYPE: SEDIM
SOURCE: WESTINGHOUSE
STATION ID: WH-016 DITCH DISCHARGE DUPLICATE

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 03/01/89 0930 STOP: 00/00/00

UG/KG	ANALYTICAL RESULTS
27U	ALDRIN
16U	HEPTACHLOR
24U	HEPTACHLOR EPOXIDE
24U	ALPHA-BHC
36U	BETA-BHC
23U	GAMMA BHC (LINDANE)
27U	DELTA-BHC
30U	ENDOSULFAN I (ALPHA)
35U	DIELDRIN
58U	4,4'-DDT (P,P'-DDT)
33U	4,4'-DDE (P,P'-DDE)
58U	4,4'-DDD (P,P'-DDD)
47U	ENDRIN
40U	ENDOSULFAN II (BETA)
65U	ENDOSULFAN SULFATE
350U	CHLORDANE (TECH. MIXTURE) /1
450U	PCB-1242 (AROCLOR 1242)
450U	PCB-1254 (AROCLOR 1254)
450U	PCB-1221 (AROCLOR 1221)

UG/KG	ANALYTICAL RESULTS
450U	PCB 1232 (AROCLOR 1232)
450U	PCB-1248 (AROCLOR 1248)
450U	PCB-1260 (AROCLOR 1260)
450U	PCB-1016 (AROCLOR 1016)
2700U	TOXAPHENE
--	CHLORDENE /2
--	ALPHA-CHLORDENE /2
--	BETA CHLORDENE /2
--	GAMMA-CHLORDENE /2
--	1-HYDROXYCHLORDENE /2
--	GAMMA-CHLORDANE /2
--	TRANS-NONACHLOR /2
--	ALPHA-CHLORDANE /2
--	CIS-NONACHLOR /2
--	OXYCHLORDANE (OCTACHLOREPOXIDE) /2
120U	METHOXYCHLOR
43U	ENDRIN KETONE
20	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 04/25/89

PROJECT NO. 89-300 SAMPLE NO. 33609 SAMPLE TYPE: SEDIM
SOURCE: WESTINGHOUSE
STATION ID: WH-018 S.W. DITCH

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 03/01/89 1004 STOP: 00/00/00

UG/KG	ANALYTICAL RESULTS
33U	ALDRIN
20U	HEPTACHLOR
29U	HEPTACHLOR EPOXIDE
26U	ALPHA-BHC
43U	BETA-BHC
28U	GAMMA-BHC (LINDANE)
33U	DELTA-BHC
36U	ENDOSULFAN I (ALPHA)
42U	DIELDRIN
69U	4,4'-DDT (P,P'-DDT)
40U	4,4'-DDE (P,P'-DDE)
70U	4,4'-DDD (P,P'-DDD)
56U	ENDRIN
48U	ENDOSULFAN II (BETA)
78U	ENDOSULFAN SULFATE
410U	CHLORDANE (TECH. MIXTURE) /1
490U	PCB-1242 (AROCLOR 1242)
540U	PCB-1254 (AROCLOR 1254)
490U	PCB-1221 (AROCLOR 1221)

UG/KG	ANALYTICAL RESULTS
490U	PCB-1232 (AROCLOR 1232)
490U	PCB-1248 (AROCLOR 1248)
540U	PCB-1260 (AROCLOR 1260)
490U	PCB-1016 (AROCLOR 1016)
3300U	TOXAPHENE
--	CHLORDENE /2
--	ALPHA-CHLORDENE /2
--	BETA CHLORDENE /2
--	GAMMA-CHLORDENE /2
--	1-HYDROXYCHLORDENE /2
--	GAMMA-CHLORDANE /2
--	TRANS-NONACHLOR /2
--	ALPHA-CHLORDANE /2
--	CIS-NONACHLOR /2
--	OXYCHLORDANE (OCTACHLOREPOXIDE) /2
140U	METHOXYCHLOR
51U	ENDRIN KETONE
39	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. C-CONFIRMED BY GC/MS
1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS. 2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 04/25/89

PROJECT NO. 89-300 SAMPLE NO. 33611 SAMPLE TYPE: SEDIM
SOURCE: WESTINGHOUSE
STATION ID: WH-020 UPPER SUNSET LAKE

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 03/01/89 1022 STOP: 00/00/00

UG/KG	ANALYTICAL RESULTS
42U	ALDRIN
24U	HEPTACHLOR
35U	HEPTACHLOR EPOXIDE
31U	ALPHA-BHC
52U	BETA-BHC
33U	GAMMA BHC (LINDANE)
39U	DELTA-BHC
43U	ENDOSULFAN I (ALPHA)
51U	DIELDRIN
83U	4,4'-DDT (P,P'-DDT)
48U	4,4'-DDE (P,P'-DDE)
84U	4,4'-DDD (P,P'-DDD)
68U	ENDRIN
58U	ENDOSULFAN II (BETA)
94U	ENDOSULFAN SULFATE
500U	CHLORDANE (TECH. MIXTURE) /1
590U	PCB-1242 (AROCLOR 1242)
650U	PCB-1254 (AROCLOR 1254)
590U	PCB-1221 (AROCLOR 1221)

UG/KG	ANALYTICAL RESULTS
590U	PCB-1232 (AROCLOR 1232)
590U	PCB-1248 (AROCLOR 1248)
650U	PCB-1260 (AROCLOR 1260)
590U	PCB-1016 (AROCLOR 1016)
4000U	TOXAPHENE
--	CHLORDENE /2
--	ALPHA-CHLORDENE /2
--	BETA CHLORDENE /2
--	GAMMA-CHLORDENE /2
--	1-HYDROXYCHLORDENE /2
--	GAMMA-CHLORDANE /2
--	TRANS-NONACHLOR /2
--	ALPHA-CHLORDANE /2
--	CIS-NONACHLOR /2
--	OXYCHLORDANE (OCTACHLOREPOXIDE) /2
170U	METHOXYCHLOR
62U	ENDRIN KETONE
45	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 04/25/89

PROJECT NO. 89-300 SAMPLE NO. 33613 SAMPLE TYPE: SEDIM
SOURCE: WESTINGHOUSE
STATION ID: WH-022 LOWER SUNSET LAKE

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 03/01/89 1142 STOP: 00/00/00

UG/KG	ANALYTICAL RESULTS
20U	ALDRIN
16U	HEPTACHLOR
27U	HEPTACHLOR EPOXIDE
21U	ALPHA-BHC
39U	BETA-BHC
22U	GAMMA BHC (LINDANE)
29U	DELTA-BHC
29U	ENDOSULFAN I (ALPHA)
34U	DIELDRIN
85U	4,4'-DDT (P,P'-DDT)
41U	4,4'-DDE (P,P'-DDE)
83U	4,4'-DDD (P,P'-DDD)
45U	ENDRIN
39U	ENDOSULFAN II (BETA)
110U	ENDOSULFAN SULFATE
330U	CHLORDANE (TECH. MIXTURE) /1
390U	PCB-1242 (AROCLOR 1242)
430U	PCB-1254 (AROCLOR 1254)
390U	PCB-1221 (AROCLOR 1221)

UG/KG	ANALYTICAL RESULTS
390U	PCB-1232 (AROCLOR 1232)
390U	PCB-1248 (AROCLOR 1248)
430U	PCB-1260 (AROCLOR 1260)
390U	PCB-1016 (AROCLOR 1016)
2700U	TOXAPHENE
--	CHLORDENE /2
--	ALPHA-CHLORDENE /2
--	BETA CHLORDENE /2
--	GAMMA-CHLORDENE /2
--	1-HYDROXYCHLORDENE /2
--	GAMMA-CHLORDANE /2
--	TRANS-NONACHLOR /2
--	ALPHA-CHLORDANE /2
--	CIS-NONACHLOR /2
--	OXYCHLORDANE (OCTACHLOREPOXIDE) /2
120U	METHOXYCHLOR
66U	ENDRIN KETONE
32	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 04/25/89

PROJECT NO. 89-300 SAMPLE NO. 33615 SAMPLE TYPE: SEDIM
SOURCE: WESTINGHOUSE
STATION ID: WH-024 N. OF DRUM STORAGE AREA

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 03/01/89 1417 STOP: 00/00/00

UG/KG	ANALYTICAL RESULTS
23U	ALDRIN
14U	HEPTACHLOR
21U	HEPTACHLOR EPOXIDE
22U	ALPHA-BHC
40U	BETA-BHC
18U	GAMMA-BHC (LINDANE)
30U	DELTA-BHC
26U	ENDOSULFAN I (ALPHA)
34U	DIELDRIN
76U	4,4'-DDT (P,P'-DDT)
43U	4,4'-DDE (P,P'-DDE)
87U	4,4'-DDD (P,P'-DDD)
40U	ENDRIN
37U	ENDOSULFAN II (BETA)
100U	ENDOSULFAN SULFATE
350U	CHLORDANE (TECH. MIXTURE) /1
410U	PCB-1242 (AROCLOR 1242)
450U	PCB-1254 (AROCLOR 1254)
410U	PCB-1221 (AROCLOR 1221)

UG/KG	ANALYTICAL RESULTS
410U	PCB-1232 (AROCLOR 1232)
410U	PCB-1248 (AROCLOR 1248)
450U	PCB-1260 (AROCLOR 1260)
410U	PCB-1016 (AROCLOR 1016)
2800U	TOXAPHENE
--	CHLORDENE /2
--	ALPHA-CHLORDENE /2
--	BETA CHLORDENE /2
--	GAMMA-CHLORDENE /2
--	1-HYDROXYCHLORDENE /2
--	GAMMA-CHLORDANE /2
--	TRANS-NONACHLOR /2
--	ALPHA-CHLORDANE /2
--	CIS-NONACHLOR /2
--	OXYCHLORDANE (OCTACHLOREPOXIDE) /2
100U	METHOXYCHLOR
69U	ENDRIN KETONE
24	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 04/25/89

PROJECT NO. 89-300 SAMPLE NO. 33618 SAMPLE TYPE: SEDIM
SOURCE: WESTINGHOUSE
STATION ID: WH-027 OIL RECOVFRY AREA

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 03/02/89 0925 STOP: 00/00/00

UG/KG	ANALYTICAL RESULTS
21U	ALDRIN
12U	HEPTACHLOR
20U	HEPTACHLOR EPOXIDE
20U	ALPHA-BHC
36U	BETA-BHC
16U	GAMMA BHC (LINDANE)
27U	DELTA-BHC
24U	ENDOSULFAN I (ALPHA)
30U	DIELDRIN
68U	4,4'-DDT (P,P'-DDT)
39U	4,4'-DDE (P,P'-DDE)
77U	4,4'-DDD (P,P'-DDD)
36U	ENDRIN
33U	ENDOSULFAN II (BETA)
90U	ENDOSULFAN SULFATE
310U	CHLORDANE (TECH. MIXTURE) /1
370U	PCB-1242 (AROCLOR 1242)
410U	PCB-1254 (AROCLOR 1254)
370U	PCB-1221 (AROCLOR 1221)

UG/KG	ANALYTICAL RESULTS
370U	PCB-1232 (AROCLOR 1232)
370U	PCB-1248 (AROCLOR 1248)
410U	PCB-1260 (AROCLOR 1260)
370U	PCB-1016 (AROCLOR 1016)
2500U	TOXAPHENE
--	CHLORDENE /2
--	ALPHA-CHLORDENE /2
--	BETA CHLORDENE /2
--	GAMMA-CHLORDENE /2
--	1-HYDROXYCHLORDENE /2
--	GAMMA-CHLORDANE /2
--	TRANS-NONACHLOR /2
--	ALPHA-CHLORDANE /2
--	CIS-NONACHLOR /2
--	OXYCHLORDANE (OCTACHLOREPOXIDE) /2
93U	METHOXYCHLOR
61U	ENDRIN KETONE
21	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 04/17/89

PROJECT NO. 89-300 SAMPLE NO. 33594 SAMPLE TYPE: SEDIM
SOURCE: WESTINGHOUSE
STATION ID: WH-003 N.E. BACKGROUND DITCH

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 02/28/89 1019 STOP: 00/00/00

MG/KG	ANALYTICAL RESULTS
2.0U	SILVER
6.0U	ARSENIC
NA	BORON
92	BARIUM
1.0U	BERYLLIUM
1.0U	CADMIUM
2.1	COBALT
11	CHROMIUM
2.8	COPPER
2.0U	MOLYBDENUM
4.0U	NICKEL
14	LEAD
6.0U	ANTIMONY
8.0U	SELENIUM
5.0U	TIN
11	STRONTIUM
10U	TELLURIUM
160	TITANIUM
20U	THALLIUM
24	VANADIUM
4.2	YTTRIUM
6.7	ZINC
NA	ZIRCONIUM
0.05U	MERCURY
13000	ALUMINUM
72	MANGANESE

MG/KG	ANALYTICAL RESULTS
400	CALCIUM
260	MAGNESIUM
5700	IRON
200U	SODIUM
400U	POTASSIUM
30	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 04/17/89

PROJECT NO. 89-300 SAMPLE NO. 33601 SAMPLE TYPE: SEDIM
SOURCE: WESTINGHOUSE
STATION ID: WH-010 DITCH N. OF PARKING AREA

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 02/28/89 1617 STOP: 00/00/00

MG/KG	ANALYTICAL RESULTS
1.0U	SILVER
0.5U	ARSENIC
NA	BORON
55	BARIUM
0.50U	BERYLLIUM
0.50U	CADMIUM
1.4	COBALT
51	CHROMIUM
7.0	COPPER
1.0U	MOLYBDENUM
3.6	NICKEL
240	LEAD
3.0U	ANTIMONY
4.0U	SELENIUM
2.5U	TIN
7.2	STRONTIUM
5.0U	TELLURIUM
130	TITANIUM
10U	THALLIUM
14	VANADIUM
2.9	YTTRIUM
47	ZINC
NA	ZIRCONIUM
0.06	MERCURY
5800	ALUMINUM
110	MANGANESE

MG/KG	ANALYTICAL RESULTS
800	CALCIUM
320	MAGNESIUM
6300	IRON
100U	SODIUM
210	POTASSIUM
36	PERCENT MOISTURE

REMARKS

REMARKS

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.

METALS DATA REPORT 04/17/89

PROJECT NO. 89-300 SAMPLE NO. 33604 SAMPLE TYPE: SEDIM
SOURCE: WESTINGHOUSE
STATION ID: WH-013 SPRING

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 03/01/89 0855 STOP: 00/00/00

MG/KG	ANALYTICAL RESULTS
2.0U	SILVER
6.0U	ARSENIC
NA	BORON
52	BARIUM
0.78	BERYLLIUM
1.0U	CADMIUM
7.2	COBALT
11	CHROMIUM
9.5	COPPER
2.0U	MOLYBDENUM
5.5	NICKEL
11	LEAD
6.0U	ANTIMONY
8.0U	SELENIUM
5.0U	TIN
14	STRONTIUM
10U	TELLURIUM
290	TITANIUM
20U	THALLIUM
26	VANADIUM
6.8	YTTRIUM
16	ZINC
NA	ZIRCONIUM
0.06	MERCURY
12000	ALUMINUM
130	MANGANESE

MG/KG	ANALYTICAL RESULTS
1400	CALCIUM
460	MAGNESIUM
5300	IRON
200U	SODIUM
590	POTASSIUM
25	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
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*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 04/17/89

*** ***
** PROJECT NO. 89-300 SAMPLE NO. 33606 SAMPLE TYPE: SEDIM PROG ELEM: NSF COLLECTED BY: B BOKEY **
** SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC **
** STATION ID: WH-015 DITCH DISCHARGE COLLECTION START: 03/01/89 0930 STOP: 00/00/00 **
** **
*** ***

MG/KG	ANALYTICAL RESULTS
1.0U	SILVER
3.0U	ARSENIC
NA	BORON
12	BARIUM
0.50U	BERYLLIUM
0.50U	CADMIUM
1.0U	COBALT
3.8	CHROMIUM
1.0U	COPPER
1.0U	MOLYBDENUM
2.0U	NICKEL
1.8	LEAD
3.0U	ANTIMONY
4.0U	SELENIUM
2.5U	TIN
1.9	STRONTIUM
5.0U	TELLURIUM
71	TITANIUM
10U	THALLIUM
4.7	VANADIUM
1.2	YTTRIUM
5.5	ZINC
NA	ZIRCONIUM
0.05U	MERCURY
1700	ALUMINUM
78	MANGANESE

MG/KG	ANALYTICAL RESULTS
290	CALCIUM
120	MAGNESIUM
1700	IRON
100U	SODIUM
200U	POTASSIUM
16	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

04/17/89

METALS DATA REPORT

PROJECT NO. 89-300 SAMPLE NO. 33607 SAMPLE TYPE: SEDIM
SOURCE: WESTINGHOUSE
STATION ID: WH-016 DITCH DISCHARGE DUPLICATE

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 03/01/89 0930 STOP: 00/00/00

MG/KG	ANALYTICAL RESULTS
1.0U	SILVER
3.0U	ARSENIC
NA	BORON
23	BARIUM
0.50U	BERYLLIUM
0.50U	CADMIUM
1.4	COBALT
3.5	CHROMIUM
1.0U	COPPER
1.0U	MOLYBDENUM
2.0U	NICKEL
4.4	LEAD
3.0U	ANTIMONY
4.0U	SELENIUM
2.5U	TIN
2.7	STRONTIUM
5.0U	TELLURIUM
100	TITANIUM
10U	THALLIUM
7.1	VANADIUM
2.1	YTTRIUM
6.2	ZINC
NA	ZIRCONIUM
0.05U	MERCURY
2400	ALUMINUM
250	MANGANESE

MG/KG	ANALYTICAL RESULTS
160	CALCIUM
93	MAGNESIUM
2100	IRON
100U	SODIUM
200U	POTASSIUM
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.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 04/17/89

PROJECT NO. 89-300 SAMPLE NO. 33609 SAMPLE TYPE: SEDIM
SOURCE: WESTINGHOUSE
STATION ID: WH-018 S.W. DITCH

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 03/01/89 1004 STOP: 00/00/00

MG/KG	ANALYTICAL RESULTS
1.0U	SILVER
3.0U	ARSENIC
NA	BORON
24	BARIUM
0.50U	BERYLLIUM
0.50U	CADMIUM
1.5	COBALT
5.5	CHROMIUM
2.8	COPPER
1.0U	MOLYBDENUM
2.0U	NICKEL
4.8	LEAD
3.0U	ANTIMONY
4.0U	SELENIUM
2.5U	TIN
4.3	STRONTIUM
5.0U	TELLURIUM
190	TITANIUM
10U	THALLIUM
10	VANADIUM
2.6	YTTRIUM
8.1	ZINC
NA	ZIRCONIUM
0.05U	MERCURY
5200	ALUMINUM
70	MANGANESE

MG/KG	ANALYTICAL RESULTS
420	CALCIUM
360	MAGNESIUM
4100	IRON
100U	SODIUM
240	POTASSIUM
23	PERCENT MOISTURE

REMARKS

REMARKS

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.

METALS DATA REPORT 04/17/89

PROJECT NO. 89-300 SAMPLE NO. 33611 SAMPLE TYPE: SEDIM
SOURCE: WESTINGHOUSE
STATION ID: WH-020 UPPER SUNSET LAKE

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 03/01/89 1022 STOP: 00/00/00

MG/KG	ANALYTICAL RESULTS
4.0U	SILVER
12U	ARSENIC
NA	BORON
150	BARIUM
1.8	BERYLLIUM
2.0U	CADMIUM
13	COBALT
37	CHROMIUM
20	COPPER
4.0U	MOLYBDENUM
18	NICKEL
16	LEAD
12U	ANTIMONY
16U	SELENIUM
10U	TIN
20	STRONTIUM
20U	TELLURIUM
1700	TITANIUM
40U	THALLIUM
73	VANADIUM
17	YTTRIUM
68	ZINC
NA	ZIRCONIUM
0.05U	MERCURY
33000	ALUMINUM
470	MANGANESE

MG/KG	ANALYTICAL RESULTS
1100	CALCIUM
4400	MAGNESIUM
28000	IRON
400U	SODIUM
2500	POTASSIUM
41	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.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 04/17/89

*** ***
** PROJECT NO. 89-300 SAMPLE NO. 33613 SAMPLE TYPE: SEDIM PROG ELEM: NSF COLLECTED BY: B BOKEY **
** SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC **
** STATION ID: WH-022 LOWER SUNSET LAKE COLLECTION START: 03/01/89 1142 STOP: 00/00/00 **
** **
*** ***

MG/KG	ANALYTICAL RESULTS
1.0U	SILVER
3.0U	ARSENIC
NA	BORON
23	BARIUM
0.50U	BERYLLIUM
0.50U	CADMIUM
2.4	COBALT
2.6	CHROMIUM
1.9	COPPER
1.0U	MOLYBDENUM
2.0U	NICKEL
3.6	LEAD
3.0U	ANTIMONY
4.0U	SELENIUM
2.5U	TIN
2.7	STRONTIUM
5.0U	TELLURIUM
110	TITANIUM
10U	THALLIUM
4.9	VANADIUM
1.3	YTTRIUM
6.8	ZINC
NA	ZIRCONIUM
0.05U	MERCURY
2300	ALUMINUM
300	MANGANESE

MG/KG	ANALYTICAL RESULTS
240	CALCIUM
190	MAGNESIUM
2800	IRON
100U	SODIUM
200U	POTASSIUM
27	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.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 04/17/89

PROJECT NO. 89-300 SAMPLE NO. 33615 SAMPLE TYPE: SEDIM
SOURCE: WESTINGHOUSE
STATION ID: WH-024 N. OF DRUM STORAGE AREA

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 03/01/89 1417 STOP: 00/00/00

MG/KG	ANALYTICAL RESULTS
1.0U	SILVER
3.0U	ARSENIC
NA	BORON
45	BARIUM
0.50U	BERYLLIUM
0.50U	CADMIUM
2.8	COBALT
8.3	CHROMIUM
1.2	COPPER
1.0U	MOLYBDENUM
2.7	NICKEL
3.5	LEAD
3.0U	ANTIMONY
4.0U	SELENIUM
2.5U	TIN
6.1	STRONTIUM
5.0U	TELLURIUM
420	TITANIUM
10U	THALLIUM
15	VANADIUM
5.1	YTTRIUM
7.4	ZINC
NA	ZIRCONIUM
0.05U	MERCURY
8100	ALUMINUM
48	MANGANESE

MG/KG	ANALYTICAL RESULTS
210	CALCIUM
340	MAGNESIUM
2600	IRON
100U	SODIUM
300	POTASSIUM
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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*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 04/17/89

** PROJECT NO. 89-300 SAMPLE NO. 33618 SAMPLE TYPE: SEDIM PROG ELEM: NSF COLLECTED BY: B BOKEY **
** SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC **
** STATION ID: WH-027 OIL RECOVERY AREA COLLECTION START: 03/02/89 0925 STOP: 00/00/00 **

MG/KG	ANALYTICAL RESULTS
1.0U	SILVER
3.0U	ARSENIC
NA	BORON
10	BARIUM
0.50U	BERYLLIUM
0.50U	CADMIUM
2.0	COBALT
2.0	CHROMIUM
1.0U	COPPER
1.0U	MOLYBDENUM
4.2	NICKEL
1.8	LEAD
3.0U	ANTIMONY
4.0U	SELENIUM
2.5U	TIN
1.7	STRONTIUM
5.0U	TELLURIUM
110	TITANIUM
10U	THALLIUM
7.9	VANADIUM
1.8	YTTRIUM
3.0	ZINC
NA	ZIRCONIUM
0.05U	MERCURY
3500	ALUMINUM
12	MANGANESE

MG/KG	ANALYTICAL RESULTS
73	CALCIUM
87	MAGNESIUM
3100	IRON
100U	SODIUM
200U	POTASSIUM
18	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.

04/18/89

SPECIFIED ANALYSIS DATA REPORT

*** ***
** PROJECT NO. 89-300 SAMPLE NO. 33594 SAMPLE TYPE: SEDIM PROG ELEM: NSF COLLECTED BY: B BOKEY **
** SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC **
** STATION ID: WH-003 N.E. BACKGROUND DITCH COLLECTION START: 02/28/89 1019 STOP: 00/00/00 **
** **
*** ***

RESULTS	UNITS	PARAMETER
66	MG/KG	AMMONIA
50U	MG/KG	NITRATE-NITRITE NITROGEN
480	MG/KG	TOTAL KJELDAHL NITROGEN
61	MG/KG	FLUORIDE
.14U	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.

04/18/89

SPECIFIED ANALYSIS DATA REPORT

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**   PROJECT NO. 89-300    SAMPLE NO. 33601  SAMPLE TYPE: SEDIM        PROG ELEM: NSF   COLLECTED BY: B BOKEY                **
**   SOURCE: WESTINGHOUSE                                              CITY: COLUMBIA              ST: SC                     **
**   STATION ID: WH-010 DITCH N. OF PARKING AREA                       COLLECTION START: 02/28/89  1617   STOP: 00/00/00      **
**                                                                                                                           **
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
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RESULTS	UNITS	PARAMETER
60	MG/KG	AMMONIA
50U	MG/KG	NITRATE-NITRITE NITROGEN
890	MG/KG	TOTAL KJELDAHL NITROGEN
47	MG/KG	FLUORIDE
.15U	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.

04/18/89

SPECIFIED ANALYSIS DATA REPORT

PROJECT NO. 89-300 SAMPLE NO. 33604 SAMPLE TYPE: SEDIM PROG ELEM: NSF COLLECTED BY: B BOKEY
SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC
STATION ID: WH-013 SPRING COLLECTION START: 03/01/89 0855 STOP: 00/00/00

RESULTS	UNITS	PARAMETER
160	MG/KG	AMMONIA
50U	MG/KG	NITRATE-NITRITE NITROGEN
640	MG/KG	TOTAL KJELDAHL NITROGEN
570	MG/KG	FLUORIDE
.34	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.

04/18/89

SPECIFIED ANALYSIS DATA REPORT

*** ***
** PROJECT NO. 89-300 SAMPLE NO. 33606 SAMPLE TYPE: SEDIM PROG ELEM: NSF COLLECTED BY: B BOKEY **
** SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC **
** STATION ID: WH-015 DITCH DISCHARGE COLLECTION START: 03/01/89 0930 STOP: 00/00/00 **
** **
*** ***

RESULTS	UNITS	PARAMETER
17	MG/KG	AMMONIA
200	MG/KG	NITRATE-NITRITE NITROGEN
60	MG/KG	TOTAL KJELDAHL NITROGEN
28	MG/KG	FLUORIDE
.12U	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.

04/18/89

SPECIFIED ANALYSIS DATA REPORT

*** ***

** PROJECT NO. 89-300 SAMPLE NO. 33607 SAMPLE TYPE: SEDIM PROG ELEM: NSF COLLECTED BY: B BOKEY **
** SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC **
** STATION ID: WH-016 DITCH DISCHARGE DUPLICATE COLLECTION START: 03/01/89 0930 STOP: 00/00/00 **
** **

*** ***

RESULTS	UNITS	PARAMETER
7.1	MG/KG	AMMONIA
50U	MG/KG	NITRATE-NITRITE NITROGEN
56	MG/KG	TOTAL KJELDAHL NITROGEN
33	MG/KG	FLUORIDE
.12U	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.

04/18/89

SPECIFIED ANALYSIS DATA REPORT

PROJECT NO. 89-300 SAMPLE NO. 33609 SAMPLE TYPE: SEDIM
SOURCE: WESTINGHOUSE
STATION ID: WH-018 S.W. DITCH

PROG ELEM: NSF COLLECTED BY: B BOKEY
CITY: COLUMBIA ST: SC
COLLECTION START: 03/01/89 1004 STOP: 00/00/00

RESULTS	UNITS	PARAMETER
12	MG/KG	AMMONIA
50U	MG/KG	NITRATE-NITRITE NITROGEN
110	MG/KG	TOTAL KJELDAHL NITROGEN
59	MG/KG	FLUORIDE
.13U	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.

04/18/89

SPECIFIED ANALYSIS DATA REPORT

*** ***
** PROJECT NO. 89-300 SAMPLE NO. 33611 SAMPLE TYPE: SEDIM PROG ELEM: NSF COLLECTED BY: B BOKEY **
** SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC **
** STATION ID: WH-020 UPPER SUNSET LAKE COLLECTION START: 03/01/89 1022 STOP: 00/00/00 **
** **
*** ***

RESULTS	UNITS	PARAMETER
54	MG/KG	AMMONIA
50U	MG/KG	NITRATE-NITRITE NITROGEN
320	MG/KG	TOTAL KJELDAHL NITROGEN
120	MG/KG	FLUORIDE
.17U	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.

04/18/89

SPECIFIED ANALYSIS DATA REPORT

*** ***
** PROJECT NO. 89-300 SAMPLE NO. 33613 SAMPLE TYPE: SEDIM PROG ELEM: NSF COLLECTED BY: B BOKEY **
** SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC **
** STATION ID: WH-022 LOWER SUNSET LAKE COLLECTION START: 03/01/89 1142 STOP: 00/00/00 **
** **
*** ***

RESULTS	UNITS	PARAMETER
23	MG/KG	AMMONIA
50U	MG/KG	NITRATE-NITRITE NITROGEN
480	MG/KG	TOTAL KJELDAHL NITROGEN
39	MG/KG	FLUORIDE
.13U	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.

04/18/89

SPECIFIED ANALYSIS DATA REPORT

PROJECT NO. 89-300 SAMPLE NO. 33615 SAMPLE TYPE: SEDIM PROG ELEM: NSF COLLECTED BY: B BOKEY
SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC
STATION ID: WH-024 N. OF DRUM STORAGE AREA COLLECTION START: 03/01/89 1417 STOP: 00/00/00

RESULTS	UNITS	PARAMETER
4.5	MG/KG	AMMONIA
50U	MG/KG	NITRATE-NITRITE NITROGEN
14	MG/KG	TOTAL KJELDAHL NITROGEN
32	MG/KG	FLUORIDE
.12U	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.

04/18/89

SPECIFIED ANALYSIS DATA REPORT

PROJECT NO. 89-300 SAMPLE NO. 33618 SAMPLE TYPE: SEDIM PROG ELEM: NSF COLLECTED BY: B BOKEY
SOURCE: WESTINGHOUSE CITY: COLUMBIA ST: SC
STATION ID: WH-027 OIL RECOVERY AREA COLLECTION START: 03/02/89 0925 STOP: 00/00/00

RESULTS	UNITS	PARAMETER
3.3	MG/KG	AMMONIA
50U	MG/KG	NITRATE-NITRITE NITROGEN
9.0	MG/KG	TOTAL KJELDAHL NITROGEN
20	MG/KG	FLUORIDE
.12U	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.

U. S. ENVIRONMENTAL PROTECTION AGENCY
REGION IV, ATHENS, GEORGIA

MEMORANDUM

DATE: FEB 21 1989

SUBJECT: Screening Site Investigation (SSI), Westinghouse Commercial Nuclear Fuel Division, Richland County, Columbia, South Carolina, EPA Project Number 89-300

FROM: William Bokey
Hazardous Waste Section
Environmental Compliance Branch
Environmental Services Division

TO: Brian Hollaway, Project Manager
Site Investigation and Support Branch
Waste Management Division

THRU: M. D. Lair, Chief
Hazardous Waste Section
Environmental Compliance Branch
Environmental Services Division

Attached is a copy of the study plan for the screening site investigation to be conducted during the week of February 27, 1989 at the Westinghouse Commercial Nuclear Fuel Division Facility, Richland County, Columbia, South Carolina. If you have any questions or comments, please contact me at FTS 250-3588.

cc: Finger/Patton
Lair/Mundrick
Knight

File
South Carolina

Westinghouse
Commercial Nuclear
Fuel Div.

SCD 047554331

STUDY PLAN
WESTINGHOUSE COMMERCIAL NUCLEAR FUEL DIVISION FACILITY
RICHLAND COUNTY
COLUMBIA, SOUTH CAROLINA

INTRODUCTION

During the week of February 27, 1989, a screening site investigation (SSI) will be conducted at the Westinghouse Commercial Nuclear Fuel Division, Richland County, Columbia, South Carolina. The investigation will be conducted by William Bokey (field project manager), Roger Carlton, Dan Thoman and Christina Cunningham of the United States Environmental Protection Agency (US-EPA), Region IV, Environmental Services Division, Environmental Compliance Branch, Hazardous Waste Section. The investigation was requested by Mr. Brian Hollaway, US-EPA, Waste Management Division, Site Investigation and Support Branch.

OBJECTIVES

The objectives of this investigation is to identify and characterize any hazardous contaminants disposed and/or used at the facility, presently or in the past, which may be migrating into the area's surface and ground water. Data generated during this investigation will be used in evaluating the Westinghouse Commercial Nuclear Fuel Division Facility for Hazardous Ranking System (HRS) purposes. Demographic information will be obtained from data provided in the Bluff Road Remedial Investigation Report (which is located adjacent to the Westinghouse Facility) and the Update for Environmental Impact Appraisal Report, April 1983, provided by Westinghouse Facility personnel. However, all demographic information will be verified prior to inclusion into the SSI report.

SCOPE

Ground water, surface water, sediment and soil samples will be collected from locations on-site and adjacent to the Westinghouse facility. Ground water samples will be collected from six permanent monitoring wells and four temporary monitoring wells. The location of the Westinghouse Commercial Nuclear Fuel Division Facility is shown in Figure 1, while a plant schematic is presented in Figure 2.

BACKGROUND

The original plant was constructed in 1969 and is located on South Carolina Highway 48 (Bluff Road) in Richland County, approximately 8 miles southeast of Columbia, South Carolina. The Westinghouse plant fabricates nuclear fuel assemblies containing low-enriched (less than or equal to five percent uranium 235) uranium oxide fuel for use in commercial light-water nuclear-powered reactors.

The fabrication process involves the chemical conversion of uranium hexafluoride (UF_6) to uranium dioxide (UO_2) using the ammonium diuranate process. The ammonium diuranate process generates both liquid and solid wastes. Prior to chemical waste treatment, the aqueous waste stream contains one to three percent of ammonium fluoride and three to ten percent of free ammonia.

The ammonia is removed using steam distillation and recycled. Fluoride is removed by precipitation with calcium hydroxide and stored in holding lagoons. The supernatant discharge from the lagoons is combined with the effluent from the sanitary wastewater treatment plant and is discharged to Sunset Lake. The effluent is regulated via a NPDES permit issued by South Carolina Department of Health and Environmental Control (SC-DHEC).

In April 1980, ground water contamination was suspected when elevated concentrations of fluoride and ammonia nitrogen were detected in a pond and spring on the plant property. Subsequent ground water investigations indicated that the source of the contamination detected in the pond and spring was the plant wastewater treatment area where process wastewater containing fluoride and ammonia were received and the ammonia nitrogen storage area.

Another possible source of the fluoride contamination may have been a pit located south of the facility where calcium fluoride sludge was placed temporarily. However, the sludge was only stored there a short time because SC-DHEC requested that it be removed from the pit.

SITE GEOLOGY AND HYDROGEOLOGY

The upper most formation at the site is composed of a stratified, but poorly sorted, mixture of sand, clay, silt and gravel and includes sediments of the Okeefenokee Formation, which underlies the Okeefenokee Terrace. These shallow sediments generally occur to a depth of 20 to 40 feet at the plant site, depending on topography. The Black Mingo Formation occurs below the shallow sediments and consists of an upper clay unit and a basal sand unit. The thickness of the Black Mingo Formation beneath the plant site is estimated to be 75 feet. The Tuscaloosa Formation occurs below the Black Mingo Formation and overlies bedrock at a depth of approximately 240 feet to 290 feet below land surface. The Tuscaloosa Formation generally consists of multi-colored clay interbedded with fine-to coarse grained sand. The bedrock beneath the Tuscaloosa Formation is typically composed of igneous and metamorphic rock.

Four hydrogeologic units were identified during previous studies at the site. The units identified were: a shallow surficial aquifer beneath the site (unit 1); the upper 35 to 60 feet of the Black Mingo Formation which is composed of dry clay and brittle shale (unit 2); the basal sand portion of the Black Mingo Formation which is often referred to as the Lower Black Mingo Unit of the Black Mingo Aquifer System and is an artesian sand aquifer (unit 3); and the Tuscaloosa Aquifer System which consists of the sands and clays of the Tuscaloosa Formation (unit 4). It appears that the ground water flow in unit 1, near the wastewater treatment plant, is in a south-southwesterly direction.

SAMPLE LOCATIONS

A total of approximately 28 samples will be collected during the screening site investigation. It is anticipated that 10 ground water samples will be collected from 6 permanent and 4 temporarily installed monitoring wells. In addition, 4 subsurface soil samples will be collected from the saturated zone during the installation of the temporary monitoring wells. The temporary monitoring wells will be installed near the old and new drum storage areas, at the location of the calcium fluoride pit and at an upgradient location.

Surface water samples will be collected from 7 locations, including upstream/upgradient in the north and south drainage ditches, the confluence of the drainage ditches but prior to their discharge to Sunset Lake, the Westinghouse pond, the spring that discharges into the pond and two samples from Sunset Lake. In addition, 7 sediment samples will be collected in conjunction with the surface water samples.

ANALYTICAL REQUIREMENTS

Analysis will be required for a total of 30 samples. The total consists of 11 soil and sediment samples, 17 surface water and ground water samples and two duplicate samples. All samples will be analyzed for the complete Target Compound List (TCL). Water samples will also be analyzed for the nitrogen series and fluoride. Samples will be returned to ESD for in-house analyses.

METHODOLOGY

All sampling activities will be conducted in accordance with the Engineering Support Branch Standard Operating Procedures and Quality Assurance Manual, April 1, 1986. Sample analyses will be conducted in accordance with the Analytical Support Branch Operation and Quality Control Manual, June 1985.

SCHEDULE

February 27 - Travel to Columbia, South Carolina
February 28 - Begin Sampling Activities, Westinghouse Facility
March 1 - Continue Sampling Activities, Westinghouse Facility
March 2 - Complete Sampling Activities, Westinghouse Facility
March 3 - Return to Athens

FIGURE 1
PLANT LOCATION MAP
WESTINGHOUSE NFD
COLUMBIA, SOUTH CAROLINA

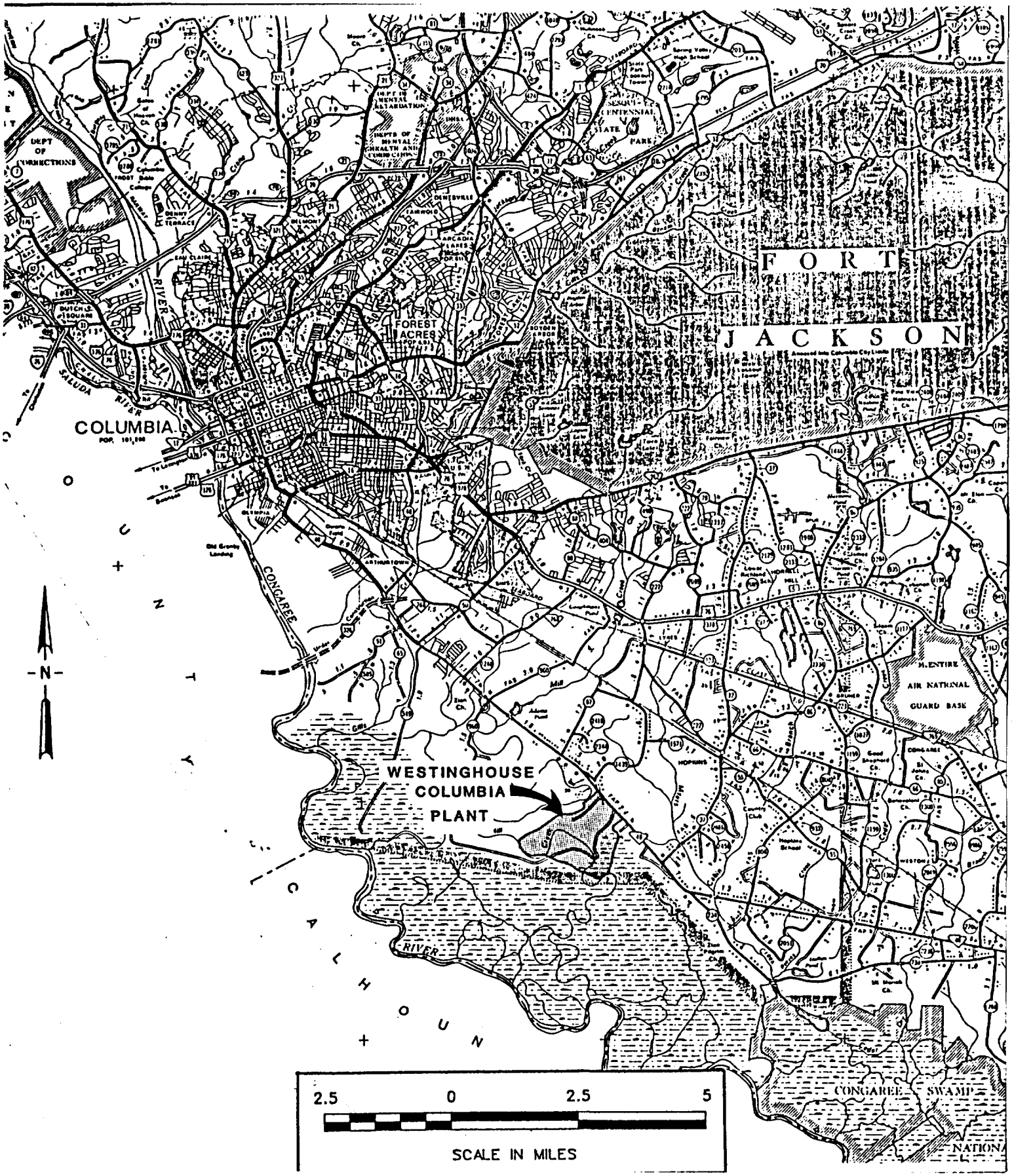
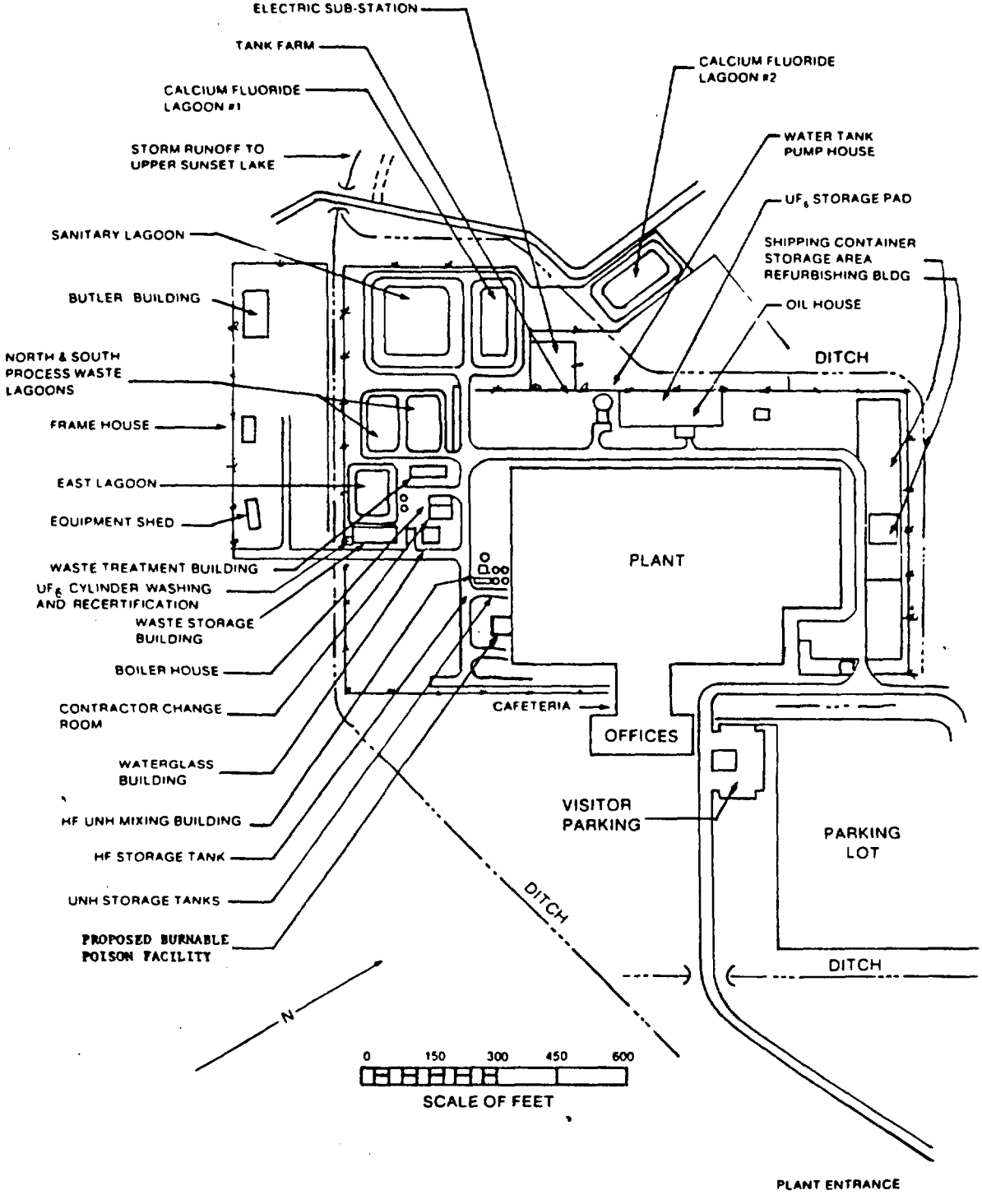


FIGURE 2
PLANT SCHEMATIC
WESTINGHOUSE NFD
COLUMBIA, SOUTH CAROLINA



REFERENCES

1. Groundwater Hydrology, Westinghouse Electric Corporation, Columbia, South Carolina, March 1982, Davis and Floyd, Inc., Consulting Engineers, Greenwood, South Carolina.

2. Update for Environmental Impact Appraisal, Westinghouse Electric Corporation, NFD Plant, Columbia, South Carolina, Docket No. 70-1151, April 1983.

3. Groundwater Mixing Zone Request, Westinghouse Columbia Plant, Richland County, South Carolina, June 2, 1988, S&ME, Inc., 11 Technology Circle, Columbia, South Carolina

4. Updated Preliminary Assessment, Westinghouse Electric-Nuclear Fuel Division, Richland County, June 13, 1988, South Carolina Department of Health and Environmental Control, Mr. Gerald Stewart

South Carolina Department of Health and Environmental Control

approved 8/19/88 SSI-High

2600 Bull Street
Columbia, S.C. 29201

Commissioner
Michael D. Jarrett

Board
Moses H. Clarkson, Jr., Chairman
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Toney Graham, Jr. M.D.

UPDATED PRELIMINARY ASSESSMENT
Westinghouse Electric-Nuclear Fuel Division
SCD 047 559 331 (3293)
Richland County

Completed by: Gerald Stewart
Date: June 13, 1988

I. BACKGROUND INFORMATION/SITE HISTORY

The Westinghouse Electric-Nuclear Fuel Division (Drawer R - Columbia, South Carolina) is located approximately 5.6 miles southeast of Columbia, South Carolina off S. C. Highway 48 (Bluff Road). Geographically, the site is positioned at 33 degrees, 52 minutes, 56.0 seconds North latitude and 080 degrees, 55 minutes, 19.3 seconds West longitude. The Columbia Plant is owned by the Westinghouse Electric Corporation.

Since 1969, the Westinghouse Electric Corporation has fabricated nuclear fuel assemblies containing uranium oxide fuel for use in nuclear-powered reactors (Ref. 1). The Columbia Plant also produced control rods and mechanical components. During the fabrication process, uranium hexafluoride is converted to uranium dioxide using an ammonia durante process and a direct conversion process (Ref. 1). Radioactive waste generated at the Westinghouse Plant is monitored by the U.S. Nuclear Regulatory Commission (NRC) for compliance with standards set forth in the company's permit (#SNM-1107). Industrial Wastewater, containing ammonia, fluoride, nitrogenous waste and trace amounts of uranium is passed through a NPDES permitted (#SC0001848) waste treatment facility consisting of several concrete lined lagoons (Ref. 2).

From 1969 to 1980, the Westinghouse Electric Company stored hazardous waste in above ground drums for disposal off-site at various disposal facilities. The specific type of waste stored in drums included spent halogenated solvents, spent non-halogenated solvents, wastewater treatment sludge, beryllium dust, acetone and hydrogen fluoride (Ref. 2). Additionally the company stored lime grit waste containing lead, cadmium, nickel and chromium, in 55-gallon drums for disposal at the Lexington County Landfill (Ref. 1).

II. REGULATORY HISTORY/RCRA SUMMARY

A. RCRA Summary

The Westinghouse Nuclear Fuel Division (WNFD) is a RCRA generator. In accordance with RCRA regulation, hazardous waste generated at the site is stored for less than ninety days. Since generator facilities are not

required to address hazardous waste units under RCRA regulations, the WNFD should be evaluated by the CERCLA Program.

III. WASTE CONTAINMENT AND HAZARDOUS SUBSTANCE ID

Laboratory analysis of samples collected from monitoring wells located at the WNFD has shown groundwater contamination at the site (Ref. 3). Hazardous leachate migrating from the site contains ammonia, nitrate and fluoride (Ref. 3). The source of contamination is suspected to be the concentrated waste treatment tanks and the ammonia storage tank area. Additionally, the waste treatment lagoons are suspected of having been a source of contamination in previous years (Ref. 3). Spillage of ammonia and fluoride from west lagoon, and discharge from Cafl (Calcium fluoride) pits are believed to be contributed to groundwater contamination (Ref. 2).

Since numerous sources of groundwater contamination exist at site, the amount of waste released into the environment can not be determined. Therefore, the worst possible condition is assumed to exist at the site.

IV. ENVIRONMENTAL ASSESSMENT OF THE GROUNDWATER PATHWAY

Westinghouse Electric Nuclear Fuel Division is located in the Upper Coastal Plain Physiographic Province. Private groundwater wells draw drinking water from the Middendorf Aquifer (Ref. 4). An estimated 1,417 people depending on drinking water pumped from the aquifer of concern, may be adversely effected by the migration of contaminated leachates from the site. The distance to the nearest groundwater well is approximately 2,250 feet from the site (Ref. 5).

V. RECOMMENDATIONS AND JUSTIFICATIONS

The WNFD is given a high priority for a Site Screening Investigation (SSI). Past waste handling practices at the Westinghouse Plant has led to contamination of groundwater with ammonia, fluoride and nitrate. The sources of contamination are suspected to be the waste treatment tanks, the ammonia storage tanks and the on-site lagoons. The environmental impact on ground water is being evaluated by SCDHEC Groundwater Protection Division. However, a SSI is needed to assure that CERCLA areas of concern are addressed.

During the SSI, the hazardous conditions associated with the on-site pits, abandoned landfill and drum storage area should be evaluated.

VI. REFERENCES

1. US EPA, Form 3510-1 (6-80) completed by Westinghouse Electric Corp. NFD.

2. SCDHEC - Files, Correspondence

3. Davis & Floyd Engineers, Inc. - Report on Groundwater Investigation - Westinghouse Electric Corporation Nuclear Fuel Division; November 1980, pp. 1 and 9.

4. SCDHEC Division of Hydrogeology - Report on Westinghouse Electric Corp. NFD. Completed by Judy Canova, June 8, 1988.

5. U.S. Geological Survey - Gadsen (1982), Saylors Lake (1972), Congaree (1982) and Fort Jackson South (1982), South Carolina Quadrangle

SSI HAZARD RANKING SYSTEM SCORING SUMMARY

FOR

Site Name: Westinghouse Electric Corporation - Nuclear Fuel Division
EPA ID Number: SCD 047 559 331
Address: Drawer R
City, State: Columbia, South Carolina

EPA REGION IV

SCORE STATUS: IN PREPARATION

SCORED BY: Gerald Stewart
Bureau of Solid and Hazardous Waste Management
South Carolina Department of Health and Environmental Control

DATE OF THIS REPORT: June 9, 1988
DATE OF LAST MODIFICATION:

GROUND WATER ROUTE SCORE	:	51.8
SURFACE WATER ROUTE SCORE	:	Not Scored
AIR ROUTE SCORE	:	Not Scored
MIGRATION SCORE	:	29.9
FIRE AND EXPLOSION SCORE	:	Not Scored
DIRECT CONTACT SCORE	:	Not Scored

Westinghouse Electric-Nuclear
Fuel Division - SCD 047 559 331

HRS GROUND WATER ROUTE SCORE

CATEGORY/FACTOR	RAW DATA	ASN. VALUE	SCORE
I. OBSERVED RELEASE Comments: Nitrate/Ammonia/Fluoride	Yes	45	45
II. ROUTE CHARACTERISTICS - Not Scored			
A. Depth to Aquifer of Concern			
1. Depth to Water Table Comments:	_____ feet		
2. Depth to Bottom of Waste Comments:	_____ feet		
3. Depth to Aquifer of Concern	_____ feet	____ (x2)	____
B. Net Precipitation			
1. Precipitation	_____ inches		
2. Evaporation (Score 1-2=3)	_____ inches		
3. Net Precipitation	_____ inches	____	____
C. Permeability Comments:	_____ cm/sec	____	____
D. Physical State Comments:		____	____
TOTAL ROUTE CHARACTERISTICS SCORE:			____
III. CONTAINMENT- Not Scored Comments:		____	____

Westinghouse Electric-Nuclear
Fuel Division - SCD 047 559 331

CATEGORY/FACTOR	RAW DATA	ASN. VALUE	SCORE
IV. WASTE CHARACTERISTICS			
A. Toxicity/Persistence Matrix Value:		12	12
Comments: Nitrate			
B. Waste Quantity - Worst possible condition is assumed to exist at the site.			
1. Cubic Yds	_____		
2. Drums	_____		
3. Gallons	_____		
4. Tons	_____		
(Convert Drums, Gallons, Tons to Cubic Yards) (1 + 2 + 3 + 4 = Total)			
5. Total	_____ Cu.yds.	8	8
TOTAL WASTE CHARACTERISTICS SCORE:			20
V. TARGETS			
A. Ground Water Use (three mile radius)		3 (x3)	9
Comments: Groundwater wells are used to supply drinking water to nearby residences.			
B. Distance to Nearest Well/Population Served			
1. Distance to Nearest Well	2,250 feet		
2. Population Served	1,417 Targets (3 mile radius)		
a. No. of Houses	373		
b. No. of Persons	_____		
c. No. of Connections	_____		
d. No. of Irrigated Acres	_____		
3. Matrix Value:		24	24
TOTAL TARGETS SCORE:			33

VI. SCORING

A. If line 1 is 45, multiply 1 x 4 x 5.
If line 1 is 0, multiply 2 x 3 x 4 x 5.

B. Divide A by 57,330 and multiply by 100 = Sgw.

GROUND WATER ROUTE SCORE (Sgw) = 51.8

Westinghouse Electric-Nuclear
Fuel Division - SCD 047 559 331

HRS SURFACE WATER ROUTE SCORE

CATEGORY/FACTOR	RAW DATA	ASN. VALUE	SCORE
I. OBSERVED RELEASE	_____	____	____
Comments:			
II. ROUTE CHARACTERISTICS			
A. Facility Slope/Intervening Terrain			
1. Site Located in Surface Water	_____		
2. Site Within Closed Basin	_____		
3. Facility Slope	_____%		
4. Intervening Slope	_____%		
5. Matrix Value for 3 and 4		____	____
B. 24-Hour Rainfall	_____inches	____	____
C. Distance to Down-Slope Water	_____feet	____(x2)	____
D. Physical State		____	____
Comments:			
TOTAL ROUTE CHARACTERISTICS SCORE:			____
III. CONTAINMENT		____	____
Comments:			
IV. WASTE CHARACTERISTICS			
A. Toxicity/Persistence Matrix Value:		____	____
Comments:			
B. Waste Quantity			
1. Cubic Yds	_____		
2. Drums	_____		
3. Gallons	_____		
4. Tons	_____		
(Convert Drums, Gallons, Tons to Cubic Yards)			
(1 + 2 + 3 + 4 = Total)			
5. Total	_____ Cu.Yds	____	____
TOTAL WASTE CHARACTERICS SCORE:			____

Westinghouse Electric-Nuclear
Fuel Division - SCD 047 559 331

CATEGORY/FACTOR	RAW DATA	ASN. VALUE	SCORE
V. TARGETS			
A. Surface Water Use (within 3 miles downstream)		____(x3)	____
Comments:			
B. Distance to Sensitive Environments		____(x2)	____
1. Coastal Wetlands	_____feet		
2. Fresh-water Wetlands	_____feet		
3. Critical Habitat	_____feet		
C. Distance to Water Supply Intake/Population Served			
1. Distance to Water Supply Intake	____miles		
2. Total Population Served	_____persons (3 mile radius)		
a. No. of Houses	_____		
b. No. of Persons	_____		
c. No. of Connections	_____		
d. No. of Irrigated Acres	_____		
3. Distance to Intake/Population Served Matrix	____		____
TOTAL TARGETS SCORE:			____

VI. SCORING

A. If line 1 i 45, multiply 1 x 4 x 5.
If line 1 is 0, multiply 2 x 3 x 4 x 5.

B. Divide A by 64,350 and multiply by 100 = Ssw.

SURFACE WATER ROUTE SCORE (Ssw) = _____

Westinghouse Electric-Nuclear
Fuel Division - SCD 047 559 331

HRS AIR ROUTE SCORE

CATEGORY/FACTOR	RAW DATA	ASN. VALUE	SCORE
I. OBSERVED RELEASE		____	____
Comments:			
II. WASTE CHARACTERISTICS			
A. Reactivity			
Comments:			
B. Incompatibility			
Comments:			
C. Reactivity/Incompatibility Matrix Value		____	____
D. Toxicity:		____ (x3)	____
Comments:			
E. Waste Quantity			
1. Cubic Yds	_____		
2. Drums	_____		
3. Gallons	_____		
4. Tons	_____		
(Convert Drums, Gallons, Tons to Cubic Yards)			
(1 + 2 + 3 + 4 = Total)			
5. Total	_____ Cu. yds.	____	____
TOTAL WASTE CHARACTERISTICS SCORE:			____
III. TARGETS			
A. Population			
1. 0 to 0.25 mile	_____		
2. 0 to 0.50 mile	_____		
3. 0 to 1.0 mile	_____		
4. 0 to 4.0 miles	_____		
5. Total Population within 4 miles score		____	____
B. Distance to Sensitive Environments:		____ (x2)	____
1. Coastal Wetlands	_____ feet		
2. Fresh-Water Wetlands	_____ feet		
3. Critical Habitat	_____ feet		
C. Distance to Land Uses:		____	____
1. Commercial/Industrial	_____ feet		
2. Park/Forest/Residential	_____ feet		
3. Agricultural Land	_____ feet		
4. Prime Farmland	_____ feet		
5. Historic Site Within View?			
TOTAL TARGETS SCORE:			____

Westinghouse Electric-Nuclear
Fuel Division - SCD 047 559 331

HRS AIR ROUTE SCORE

CATEGORY/FACTOR	RAW DATA	ASN. VALUE	SCORE

IV. SCORING

A. Multiply 1 x 2 x 3.

b. Divide A by 35,100 and multiply by 100 = Sa.

AIR ROUTE SCORE (Sa) = _____

Westinghouse Electric-Nuclear
Fuel Division - SCD 047 559 331

HAZARDOUS RANKING SYSTEM SCORING CALCULATIONS

Ground Water Route Score

Observed Release _____
Route Characteristics _____
Containment _____
Waste Characteristics _____
Targets

_____
= /57,330 x 100 = _____ Sgw

Surface Water Route Score

Observed Release _____
Route Characteristics _____
Containment _____
Waste Characteristics _____
Targets

_____
= /64,350 x 100 = _____ Ssw

Air Route Score

Observed Release _____
Waste Characteristics _____
Targets _____

_____
= /35,100 x 100 = _____ Sa

Summary of Migration Score Calculations

	S	S^2
Groundwater Route Score (S_{gw})	_____	_____
Surface Water Route Score (S_{sw})	_____	_____
Air Route Score (S_a)	_____	_____
$S^2_{gw} + S^2_{sw} + S^2_a$		_____
$S^2_{gw} + S^2_{sw} + S^2_a$		_____
$S^2_{gw} + S^2_{sw} + S^2_a$ /1.73 = S_m		_____

Westinghouse Electric-Nuclear
Fuel Division - SCD 047 559 331

FIRE AND EXPLOSION SCORE

CATEGORY/FACTOR	RAW DATA	ASN. VALUE	SCORE
I. CONTAINMENT			
A. Hazardous substances present:			
B. Type of containment, if applicable:			
C. Score:		____	____
II. WASTE CHARACTERISTICS			
A. Direct evidence		____	____
1. Type of instrument and measurements:			
B. Ignitability		____	____
1. Compound used:			
C. Reactivity		____	____
1. Most reactive compound:			
D. Incompatibility		____	____
1. Most incompatible pair of compounds:			
E. Hazardous Waste Quantity			
1. Total quantity of hazardous substances at the facility:			
2. Basis of estimating and/or computing waste quantity:			
TOTAL WASTE CHARACTERISTICS SCORE			____
III. TARGETS			
A. Distance to Nearest Population		____	____
B. Distance to Nearest Building		____	____
C. Distance to Sensitive Environment		____	____
1. Distance to wetlands: _____			
2. Distance to critical habitat: _____			

Westinghouse Electric-Nuclear
Fuel Division - SCD 047 559 331

CATEGORY/FACTOR	RAW DATA	ASN. VALUE	SCORE
D. Land Use		____	____
1. Distance to commercial/industrial area, if 1 mile or less: _____			
2. Distance to national or state park, forest, or wildlife reserve, if 2 miles or less: _____			
3. Distance to residential area, if 2 miles or less: _____			
4. Distance to agricultural land in production within past 5 years, if 2 miles or less: _____			
5. Distance to prime agricultural land in production within past 5 years, if 2 miles or less: _____			
6. Historic or Landmark site within view of the site: _____			
E. Population within 2-mile radius	_____	____	____
F. Buildings within 2-mile radius	_____	____	____
TOTAL TARGETS SCORE:			____

IV. SCORING

A. Multiply I x II x III = _____

B. Divide line IV-A by 1,440 and multiply by 100 = S_{FE} _____

FIRE AND EXPLOSION HAZARD SCORE (S_{FE}) = _____

Westinghouse Electric-Nuclear
Fuel Division - SCD 047 559 331

DIRECT CONTACT SCORE

CATEGORY/FACTOR	RAW DATA	ASN. VALUE	SCORE
I. OBSERVED INCIDENT		____	____
A. Date, location, and pertinent details or incident:			

NOTE

If line I is 45, proceed to line IV.
If line I is 0, proceed to line II.

II. ACCESSIBILITY		____	____
A. Describe type of barrier(s):			
III. CONTAINMENT		____	____
A. Type of containment, if applicable:			
IV. WASTE CHARACTERISTICS			
A. Toxicity			
1. Compounds evaluated:			
2. Compound with highest score:			
V. TARGETS			
A. Population within a 1-mile radius:	_____	____ (x4)	____
B. Distance to a critical habitat:	_____	____ (x4)	____
TOTAL TARGETS SCORE			____
VI. SCORING			
A. If line I is 45, multiply I x IV x V = _____ If line I is 0, multiply II x III x IV x V = _____			
B. Divide line VA-A by 21,600 and multiply by 100 = S_{DC}			

DIRECT CONTACT HAZARD SCORE (S_{DC}) = _____

Ref. #1 # SCD 001848

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 SC D 0 4 7 5 5 9 3 3 1

LABEL ITEMS

I. EPA I.D. NUMBER

III. FACILITY NAME

V. FACILITY MAILING ADDRESS

VI. FACILITY LOCATION

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	MARK 'X' NO	MARK 'X' FORM ATTACHED	SPECIFIC QUESTIONS	MARK 'X' YES	MARK 'X' NO	MARK 'X' 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		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 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 WESTINGHOUSE ELECTRIC CORPORATION NFD

IV. FACILITY CONTACT

A. NAME & TITLE (last, first, & title)	B. PHONE (area code & no.)
2 W. L. GOODWIN, MGR. REG. AFFAIR	803 776 2610

V. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX

3 P. O. DRAWER R

B. CITY OR TOWN	C. STATE	D. ZIP CODE
4 COLUMBIA	SC	29250

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER

5 SC ROUTE 48, BLUFF RD.

B. COUNTY NAME

RICHLAND

C. CITY OR TOWN	D. STATE	E. ZIP CODE	F. COUNTY CODE (if known)
6 COLUMBIA	SC	29250	

RECEIVED JUN 2 S.C. Dept. of Health & Environmental Control - Industrial - Agricultural Wastewater Division

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

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

A. FIRST	B. SECOND
7 2819 (specify) Nuclear Fuel Assemblies	7 (specify)
C. THIRD	**D. FOURTH**
7 (specify)	7 (specify)

VIII. OPERATOR INFORMATION

A. NAME: 8 WESTINGHOUSE ELECTRIC CORPORATION NFD

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.)*: A 803 776 2610

E. STREET OR P.O. BOX: P.O. DRAWER R

F. CITY OR TOWN: 8 COLUMBIA

G. STATE: SC

H. ZIP CODE: 29250

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

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES *(Discharges to Surface Water)*: 9 N SC0001848	D. PSD *(Air Emissions from Proposed Sources)*: 9 P
B. UIC *(Underground Injection of Fluids)*: 9 U	E. OTHER *(specify)*: 9 #19-0050 (specify) SC-DHEC Incinerator
C. RCRA *(Hazardous Wastes)*: 9 R	E. OTHER *(specify)*: 9 SNM 1107 (specify) NRC Operating License

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)*

The Columbia plant fabricates nuclear fuel assemblies containing low enriched (≤5% U-235) uranium oxide fuel for use in commercial light-water nuclear-powered reactors. The plant also produces control rods and mechanical components. The fabrication process involves the conversion of uranium hexafluoride to uranium dioxide using the ammonium diurante process and a direct conversion process. The uranium dioxide is formed into a ceramic fuel pellet used in the nuclear fuel assembly. Various recovery operations are carried out to support the conversion process including: oxidation, dissolution, chemical precipitation, washing, and solvent extraction. Other operations including welding, metal fabrication, and quality control testing are carried out in the mechanical area.

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
E. P. Loch, Manager, Columbia Plant		6/26

COMMENTS FOR OFFICIAL USE ONLY

C

Please print or type in the unshaded areas only.

EPA I.D. NUMBER (copy from Item 1 of Form 1): SCD047559331

Form Approved OMB No. 158-R0173

FORM 2C NPDES

U.S. ENVIRONMENTAL PROTECTION AGENCY
APPLICATION FOR PERMIT TO DISCHARGE WASTEWATER
EXISTING MANUFACTURING, COMMERCIAL, MINING AND SILVICULTURAL OPERATIONS
Consolidated Permits Program

I. OUTFALL LOCATION

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. OUTFALL NUMBER (list)	B. LATITUDE			C. LONGITUDE			D. RECEIVING WATER (name)
	1. DEG.	2. MIN.	3. SEC.	1. DEG.	2. MIN.	3. SEC.	
001	33	50	80	80	56	45	Congaree River

II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a water balance cannot be determined *(e.g., for certain mining activities)*, provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

B. For each outfall, provide a description of: (1) All operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and storm water runoff; (2) The average flow contributed by each operation; and (3) The treatment received by the wastewater. Continue on additional sheets if necessary.

1. OUTFALL NO. (list)	2. OPERATION(S) CONTRIBUTING FLOW		3. TREATMENT		
	a. OPERATION (list)	b. AVERAGE FLOW (include units)	a. DESCRIPTION	b. LIST CODES FROM TABLE 2C-1	
001	Chemical conversion of UF_6	70,000 GPD	Ammonia stripping	1	A
	to UO_2, includes process		Distillation	1	D
	contact cooling water		Flocculation	1	G
			Gas-phase separation	1	K
			Grit removal	1	M
			Chemical precipitation	2	C
			Ion exchange	2	J
			Neutralization	2	K
			Sludge lagoons	5	T
001	Sanitary wastewater	54,000 GPD	Disinfection	2	F
	generated from restrooms,		Activated sludge	3	A
	showers, kitchen waste, etc.		Aerated lagoons	3	B
			Pre-aeration	3	E
			Stabilization ponds	3	G

OFFICIAL USE ONLY *(effluent guidelines sub-categories)*

CONTINUED FROM THE FRONT

C. Except for storm runoff, leaks, or spills, are any of the discharges described in Items II-A or B intermittent or seasonal?

☐ YES *(complete the following table)* ☒ NO *(go to Section III)*

1. OUTFALL NUMBER *(list)*	2. OPERATION(s) CONTRIBUTING FLOW *(list)*	3. FREQUENCY		4. FLOW				
		a. DAYS PER WEEK *(specify average)*	b. MONTHS PER YEAR *(specify average)*	a. FLOW RATE *(in mgd)*		b. TOTAL VOLUME *(specify with units)*		c. DURATION *(in days)*
				1. LONG TERM AVERAGE	2. MAXIMUM DAILY	1. LONG TERM AVERAGE	2. MAXIMUM DAILY	
NA								

III. MAXIMUM PRODUCTION

A. Does an effluent guideline limitation promulgated by EPA under Section 304 of the Clean Water Act apply to your facility?

☐ YES *(complete Item III-B)* ☒ NO *(to to Section IV)*

B. Are the limitations in the applicable effluent guideline expressed in terms of production *(or other measure of operation)*?

☐ YES *(complete Item III-C)* ☒ NO *(go to Section IV)*

C. If you answered "Yes" to Item III-B, list the quantity which represents an actual measurement of your maximum level of production, expressed in the terms and units used in the applicable effluent guideline, and indicate the affected outfalls.

1. MAXIMUM QUANTITY			2. AFFECTED OUTFALLS *(list outfall numbers)*
a. QUANTITY PER DAY	b. UNITS OF MEASURE	c. OPERATION, PRODUCT, MATERIAL, ETC. *(specify)*	
NA			

IV. IMPROVEMENTS

A. Are you now required by any Federal, State or local authority to meet any implementation schedule for the construction, upgrading or operation of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

☐ YES *(complete the following table)* ☒ NO *(go to Item IV-B)*

1. IDENTIFICATION OF CONDITION, AGREEMENT, ETC.	2. AFFECTED OUTFALLS		3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATE	
	a. NO.	b. SOURCE OF DISCHARGE		a. REQUIRED	b. PROJECTED
NA					

B. OPTIONAL: You may attach additional sheets describing any additional water pollution control programs *(or other environmental projects which may affect your discharges)* you now have underway or which you plan. Indicate whether each program is now underway or planned, and indicate your actual or planned schedules for construction. ☐ MARK "X" IF DESCRIPTION OF ADDITIONAL CONTROL PROGRAMS IS ATTACHED

 CONTINUE ON PAGE 3

I.D. NUMBER (copy from Item 1 of Form 1)
SCD047559331

Form Approved OMB No. 158-R0173

V. INTAKE AND EFFLUENT CHARACTERISTICS

A, B, & C: See instructions before proceeding — Complete one set of tables for each outfall — Annotate the outfall number in the space provided. NOTE: Tables V-A, V-B, and V-C are included on separate sheets numbered V-1 through V-9.

D. Use the space below to list any of the pollutants listed in Table 2c-3 of the instructions, which you know or have reason to believe is discharged or may b discharged from any outfall. For every pollutant you list, briefly describe the reasons you believe it to be present and report any analytical data in you possession.

1. POLLUTANT	2. SOURCE	1. POLLUTANT	2. SOURCE
Uranium	Chemical conversion process of UF6 to U02 approximately 1mgU/l in effluent discharge.		

VI. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

A. Is any pollutant listed in Item V-C a substance or a component of a substance which you do or expect that you will over the next 5 years use or manufacture as an intermediate or final product or byproduct?

☐ YES (list all such pollutants below) ☒ NO (go to Item VI-B)

B. Are your operations such that your raw materials, processes, or products can reasonably be expected to vary so that your discharges of pollutants may during the next 5 years exceed two times the maximum values reported in Item V?

☐ YES (complete Item VI-C below) ☒ NO (go to Section VII)

C. If you answered "Yes" to Item VI-B, explain below and describe in detail the sources and expected levels of such pollutants which you anticipate will be discharged from each outfall over the next 5 years, to the best of your ability at this time. Continue on additional sheets if you need more space.

NA

CONTINUED FROM THE FRONT

VII. BIOLOGICAL TOXICITY TESTING DATA

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☐ YES *(identify the test(s) and describe their purposes below)* ☒ NO *(go to Section VIII)*

NA

VIII. CONTRACT ANALYSIS INFORMATION

Were any of the analyses reported in Item V performed by a contract laboratory or consulting firm?

☒ YES *(list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below)* ☐ NO *(go to Section IX)*

A. NAME	B. ADDRESS	C. TELEPHONE (area code & no.)	D. POLLUTANTS ANALYZED (list)
J. H. Carr & Associated	P.O. Box 90209 Columbia, SC	803-776-7789	All except ammonia and fluoride

IX. CERTIFICATION

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 individuals immediately responsible for obtaining the information, 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. PHONE NO. (area code & no.)
E. Paul Loch, Manager Columbia Plant	803-776-2610
C. SIGNATURE	**D. DATE SIGNED**
	6/26/86

Ref. #2

T

EPA Notification of Hazardous Waste Site

R

EXHIBIT "B"

United States Environmental Protection Agency Washington DC 20460

This initial notification information is required by Section 103(c) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 and must be mailed by June 9, 1981.

Please type or print in ink. If you need additional space, use separate sheets of paper. Indicate the letter of the item which applies.

810609

SCS000001024

A Person Required to Notify:

Enter the name and address of the person or organization required to notify.

Name: Westinghouse Electric Corporation

Street: P. O. Drawer R

City: Columbia, State: S. C. Zip Code: 29205

B Site Location:

Enter the common name (if known) and actual location of the site.

SCD 980558118

Name of Site: Westinghouse Nuclear Fuel Division

Street: Highway 48

City: Columbia County: Richland State: S. C. Zip Code: 29205

C Person to Contact:

Enter the name, title (if applicable), and business telephone number of the person to contact regarding information submitted on this form.

Name (Last, First and Title): Heath, Jim Radiological & Environmental Engr.

Phone: 803-776-2610 ext. 395

D Dates of Waste Handling:

Enter the years that you estimate waste treatment, storage, or disposal began and ended at the site.

From (Year): 1969 To (Year): 1980

E Waste Type: Choose the option you prefer to complete

Option I: Select general waste types and source categories. If you do not know the general waste types or sources, you are encouraged to describe the site in Item I—Description of Site.

General Type of Waste:
Place an X in the appropriate boxes. The categories listed overlap. Check each applicable category.

1. ☐ Organics
2. ☐ Inorganics
3. ☐ Solvents
4. ☐ Pesticides
5. ☐ Heavy metals
6. ☐ Acids
7. ☐ Bases
8. ☐ PCBs
9. ☐ Mixed Municipal Waste
10. ☐ Unknown
11. ☐ Other (Specify)

Source of Waste:
Place an X in the appropriate boxes.

1. ☐ Mining
2. ☐ Construction
3. ☐ Textiles
4. ☐ Fertilizer
5. ☐ Paper/Printing
6. ☐ Leather Tanning
7. ☐ Iron/Steel Foundry
8. ☐ Chemical, General
9. ☐ Plating/Polishing
10. ☐ Military/Ammunition
11. ☐ Electrical Conductors
12. ☐ Transformers
13. ☐ Utility Companies
14. ☐ Sanitary/Refuse
15. ☐ Photofinish
16. ☐ Lab/Hospital
17. ☐ Unknown
18. ☐ Other (Specify)

Option 2: This option is available to persons familiar with the Resource Conservation and Recovery Act (RCRA) Section 3001 regulations (40 CFR Part 261).

Specific Type of Waste:
EPA has assigned a four-digit number to each hazardous waste listed in the regulations under Section 3001 of RCRA. Enter the appropriate four-digit number in the boxes provided. A copy of the list of hazardous wastes and codes can be obtained by contacting the EPA Region serving the State in which the site is located.

F001	spent halogenated solvents
F003	spent non halogenated solvents
F006	[illegible]
P015	Beryllium dust
U002	acetone
U134	hydrogen flouride
U013	

RECEIVED EPA/REGION IV

00017

Form Approved
OMB No. 2000-0138

EPA Form 8900-1

Notification of Hazardous Waste Site — Side Two

F Waste Quantity:

Place an X in the appropriate boxes to indicate the facility types found at the site.

In the "total facility waste amount" space give the estimated combined quantity (volume) of hazardous wastes at the site using cubic feet or gallons.

In the "total facility area" space, give the estimated area size which the facilities occupy using square feet or acres.

Facility Type

1. ☐ Piles
2. ☐ Land Treatment
3. ☐ Landfill
4. ☐ Tanks
5. ☐ Impoundment
6. ☐ Underground Injection
7. ☒ Drums, Above Ground
8. ☐ Drums, Below Ground
9. ☐ Other (Specify) _____

Total Facility Waste Amount

cubic feet _____

gallons 5500

Total Facility Area

square feet _____

acres 1100

G Known, Suspected or Likely Releases to the Environment:

Place an X in the appropriate boxes to indicate any known, suspected, or likely releases of wastes to the environment.

☐ Known ☐ Suspected ☐ Likely ☒ None

Note: Items H and I are optional. Completing these items will assist EPA and State and local governments in locating and assessing hazardous waste sites. Although completing the items is not required, you are encouraged to do so.

H Sketch Map of Site Location: (Optional)

Sketch a map showing streets, highways, routes or other prominent landmarks near the site. Place an X on the map to indicate the site location. Draw an arrow showing the direction north. You may substitute a publishing map showing the site location.

I Description of Site: (Optional)

Describe the history and present conditions of the site. Give directions to the site and describe any nearby wells, springs, lakes, or housing. Include such information as how waste was disposed and where the waste came from. Provide any other information or comments which may help describe the site conditions.

J Signature and Title:

The person or authorized representative (such as plant managers, superintendents, trustees or attorneys) of persons required to notify must sign the form and provide a mailing address (if different than address in item A). For other persons providing notification, the signature is optional. Check the boxes which best describe the relationship to the site of the person required to notify. If you are not required to notify check "Other".

Name M. D'Amore, Plant Manager

Street P. O. Drawer R

City Columbia State S.C. Zip Code 29205

Signature M. D'Amore Date 5/4/81

☐ Owner, Present
☐ Owner, Past
☐ Transporter
☐ Operator, Present
☐ Operator, Past
☐ Other

Westinghouse
Electric Corporation

Chatham Center Office Building

Box 1017
Pittsburgh Pennsylvania 15230

June 8, 1981

U.S. EPA Region 4
Sites Notification
Atlanta, GA 30308

Gentlemen:

Attached find "Notification of Hazardous Waste Sites" forms for the Westinghouse facilities located at Columbia, South Carolina, Montevallo, Alabama, and Richmond, Kentucky.

Yours truly,

B A Kerns

B. A. Kerns
Manager, Environmental Control

BAK/mog

Enclosures

South Carolina
Department of
Health and
Environmental
Control

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COMMISSIONER
Robert S. Jackson, M.D.
2600 Bull Street
Columbia, S.C. 29201

October 20, 1981

MEMORANDUM

TO: Hartsill Truesdale, P.E., Director
Division of Engineering & Program Development
Bureau of Solid & Hazardous Waste Management

FROM: Chris Staton CDS
Waste Identification & Evaluation
Bureau of Solid & Hazardous Waste Management

SUBJECT: WESTINGHOUSE ELECTRIC CORPORATION, NFD, RICHLAND COUNTY

The lagoons on site presently contain calcium fluoride with traces of Uranium. The lagoons do not contain a hazardous waste as far as solid and hazardous waste is concerned. The lagoons are only partially full and are presently being solidified and disposed of at Barnwell.

CS:s

Westinghouse Electric Corporation

Nuclear Fuel Division
Manufacturing Department

Drawer R
Columbia South Carolina 29205
803 776 2610

September 15, 1978

Mr. James R. Ullery
Environmental Engineer
Solid Waste Management Division
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

Dear Mr. Ullery:

Subject: Lime Grit Disposal Permit

At our earlier meeting of September 14, 1978, we discussed our present Lime Grit disposal situation. Transportation methods and types of containers for the Lime Grit were the main topics discussed. Our proposed sequence for disposal would be the following:

1. Place the Lime Grit in clean 55 gallon drums.
2. Remove as much free water as possible and seal the drums.
3. Load the drums (approximately 40 maximum) into a 40 cubic yard metal box container.
4. Utilize Columbia Container Services to transport the Lime Grit to the Lexington County Sanitary Landfill.
5. We would also inform the landfill of the expected arrival of the Lime Grit as these shipments would occur on a somewhat irregular basis.

Background information on the Lime Grit is listed below:

1. Volume Generation: Approximately 20-40 55 gallon drums every 2-3 months.
2. General Composition (Vendor's Analysis):

Analysis	Percent
Silica Dioxide plus Insoluble Matter	0.80
Iron & Al Oxide	0.39
Magnesium Oxide	---
Loss on Ignition	1.51

Analysis	Percent
Carbon Dioxide	0.23
Calcium Carbonate	0.52
Available Lime Index	95.7
Slaking Rate	2.0
Water Insolubles Retained on 30 Mesh Sieve	0.3

3. Heavy Metal Composition: Samples analyzed by James H. Carr & Associates, Inc. Laboratories

Metal	Concentration (mg/l) 3 Sample Average
Pb	0.78
Hg	<½ PPB
Cd	0.74
Ni	2.73
Cu	1.55
Zn	0.87
Cr	1.53
Mn	1.37
Fe	11.3

4. Vendor of Lime: Longview Lime
   Division of SI Lime COmpany
   P. O. Box 26223
   Birmingham, Alabama 35226
   Phone: (205) 823-6615
5. Preferred disposal site: Lexington County Sanitary Landfill
6. Solids Content: Range (30-90)%

The Westinghouse Electric Corporation, Nuclear Fuel Division located off Bluff Road in Columbia, South Carolina requests a letter of authorization permitting the disposal of Lime Grit at the Lexington County Sanitary Landfill.

Should you require any additional information, contact either C. Sanders or B. Ervin in Radiological & Environmental Engineering at the Westinghouse facility.

We appreciate your assistance in this matter.

Sincerely,
WESTINGHOUSE ELECTRIC CORP.

B. L. Ervin
B. L. Ervin
Associate Radiological &
Environmental Engineer

W. L. Goodwin, Manager
Regulatory Compliance

BLE:lde

SEP 20 1978
S. C. DEPT. OF HEALTH AND
ENVIRONMENTAL CONTROL
SOLID WASTE

South Carolina Department of Health and Environmental Control

Ted

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2600 Bull Street
Columbia, S. C. 29201

MEMORANDUM

TO: Bob Gross, Director
Industrial Wastewater Division

FROM: Donald A. Duncan, Director
Ground-Water Protection Division

RE: Report on Groundwater Investigation
Westinghouse Electric Corporation
Nuclear Fuel Division
Richland County

DATE: May 18, 1981

The referenced report, received April 20, 1981 for Ground-Water Protection Division review, is primarily oriented toward the impact of the contamination on surface waters. Equal consideration should be given to the impact of the contamination on ground water.

While the referenced report is not intended as an assessment of the entire Westinghouse property or the potential for contamination of deeper aquifers, basic questions such as what conditions occur below 35 feet, at what depth does the next major aquifer occur, the absence or presence of continuous confining beds, and the potential for contamination from substances other than ammonia and flouride needs to be addressed.

The following comments are offered:

1) Wells 1-5 are not located. It was reported that wells 1 and 2 were "deeper" and had water levels approximately 10 to 15 feet lower than the shallow wells. This would indicate the potential for a substantial component of vertical flow and possible contamination of the deeper aquifer(s) (Black Mingo, possibly Black Creek, and Middendorf). A series of well pairs or well clusters screened at different depths would determine this. Water quality should be determined at wells 1-5 and any well pairs or clusters to verify the conclusion that ground-water contamination is isolated in the upper five feet of ground water. Such a situation is not to be expected, especially if in a recharge area. Borings completed at the S.C.R. & D. site across S.C. 48 from the Westinghouse property indicate the presence of a tight, dark clay (Black Mingo ?) at a depth of 45 feet (see South Carolina Department of Health and Environmental Control, 1981, Investigation of Ground Water at S.C.R. & D. Co. Bluff Road Site, Richland County, South Carolina). This unit may act as a confining bed if of sufficient areal

extent. Does this unit extend toward the river under the Westinghouse property?

2) I personally observed Will Coleman drilling a well on the Westinghouse property in 1977 or 1978. The location, construction details, water-level measurements, and water quality of wells drilled previous to this investigation should be reported.

3) A more complete water-quality analysis to include but not be limited to other nitrogen species (NO_2NO_3) radionuclides, chlorides, total dissolved solids, and metals should be made for all wells and lagoons. Included should be a report of how the wells were sampled. If pumped, for how long and at what rate.

4) The location, nature, and relationship of the abandoned filter-cake landfill and trash dump to the total ground-water problem should be determined. Is the filter cake landfill the same area as the CA F_2 sludge-burial pits? Are there other solid-waste-disposal activities on site which may influence interpretation of the data?

5) The locations of the concentrated waste-treatment tanks and ammonia-storage tanks shown in the 1968 engineering report need to be confirmed.

6) The referenced report estimates that 11.4 millon gallons of ground water is contaminated. At what concentrations of what parameters is this water contaminated? The ultimate fate of this body of contaminated water is not fully addressed.

7) Page 9 of the report states that the waste-treatment lagoons may have been a source of ground-water contamination in the past. As it is reported that a "highly permeable" sandy soil underlies these lagoons (p. 4, Appendix II pp. 2, 8 and Appendix IV p. 10) a more thorough investigation of the nature of their contents and possible impact on ground water is required. All lagoons should have impermeable liners and a leak detection system installed.

8) What is the nature of the corrective action taken to eliminate further ground-water contamination? What actions are to be taken regarding existing contaminated ground water? Pumping, treating ground-water, and then discharging to the pond or Sunset Lake should be investigated.

9) The discussion of ammonia is inadequate. No mention is made of ammonia being reduced to NO_2/NO_3 and the subsequent impact on health of nitrite/nitrate in ground water.

10) The relationship between natural flouride concentrations of soil profiles in Idaho and Tennessee to the Westinghouse problem is not clearly understood, nor is the report of fluoride concentrations which are lethal to goldfish pertinent to the ground-water problem.

11) The statement that the contamination is limited to the upper five feet of ground water is not documented. Analyses show contamination from flouride and ammonia is occurring in wells screened as deep as 16 feet below the water table. There is no meaningful data to evaluate the shallowest water table.

The approach to ground water at Westinghouse Nuclear Fuel Division has been piecemeal, surface water discharge oriented. The analyses provided tend to minimize the worse conditions. A meeting should be held with Westinghouse representatives, their engineers and their geologists to discuss the overall long-range ground-water conditions.

RLK/JMF/km

cc: Bureau of Solid and Hazardous Waste Management

Bob King, Director
Central Midlands

Bureau of Radiological Health

RECEIVED
MAY 22 1981
S. C. DEPT. OF HEALTH AND
ENVIRONMENTAL CONTROL
Bureau of Solid & Hazardous
Waste Management

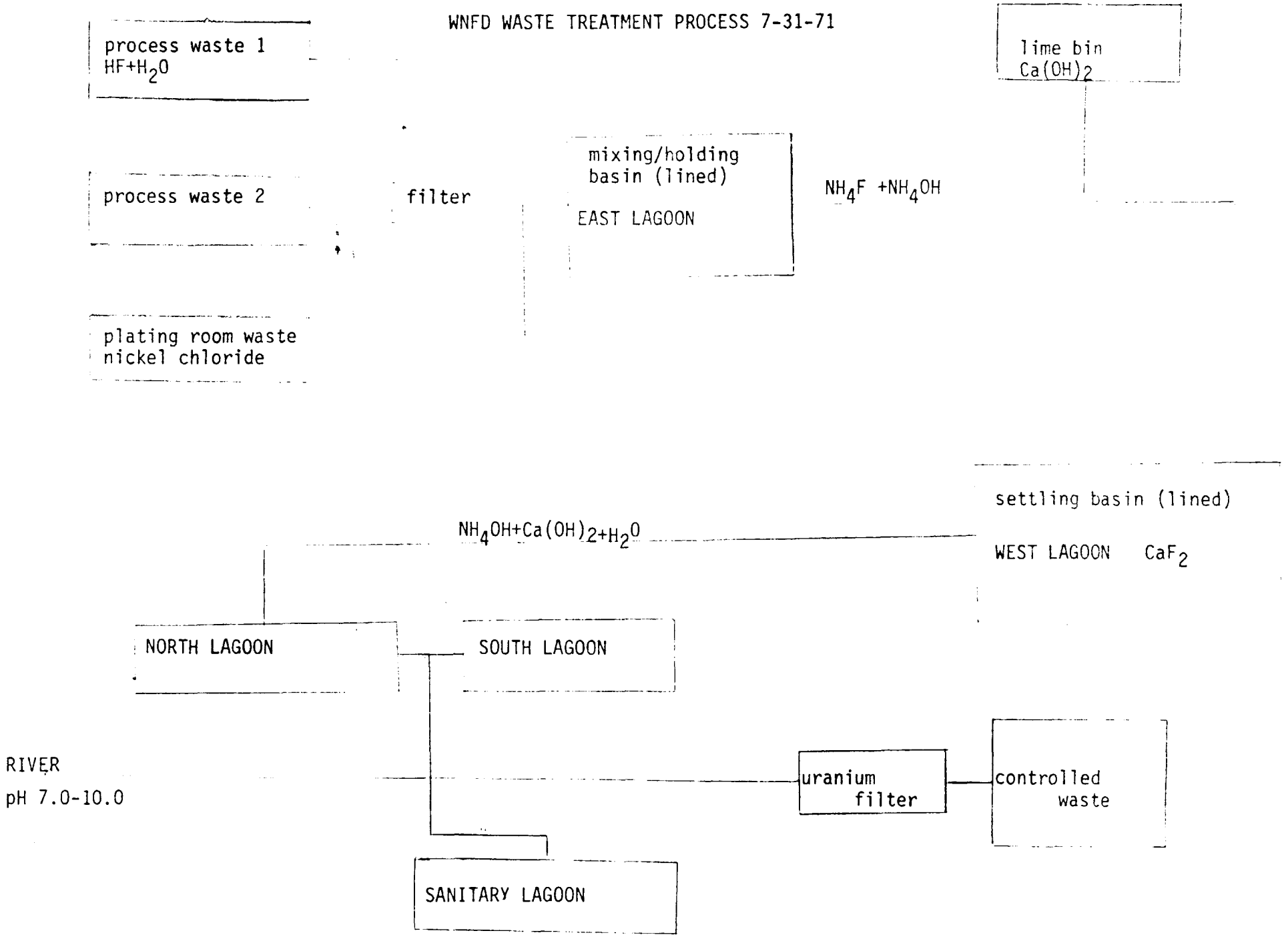
Westinghouse Nuclear Fuel Division (WNFD), Richland Co.

Abbreviated Summary Industrial Wastewater File

3-19-68	Permit #1190 for 1.17 acre oxidation pond.
1-15-69	Permit #1341 for process to remove flourine and diuranate by precipitation with excess lime.
1-17-69	Letter from DHEC to WNFD asking for specific nuclides to be released. Also level of radioactivity in filter cake to be buried.
1-23-69	Letter from WNFD to DHEC stating nuclides to be released will be U-235 and U-238 at combined total radioactivity of $3x10^{-5}$uC/ml. Filter cake also at $3x10^{-5}$ uC/ml.
6-14-71	Effluent sample analysis NH_3=2400 mg/l NO_3= >20 mg/l TKN=>2400 mg/l TDS=5000 mg/l
10-27-71	Ammonia spill from settling basin (west lagoon).
1-13-72	Flouride spill from settling basin (west lagoon).
2-1-72	Letter from WNFD to DHEC. West lagoon (settling basin) leaking as evidenced by analysis from french drain under lagoon 1-24-72. Sump installed and leakage pumped back into lagoon.
2-28-72	West lagoon drained and sludge removed. Lining to be cleaned to determine necessary corrective action.
3-9-73	Ca Fl storage pits accidentally discharged. Some got into Sunset Lake and killed some fish. Fl in lake back to normal.
5-7-74 to 5-10-74	EPA investigation of WNFD wastewater discharge. WNFD processes uranium hexaflouride into uranium dioxide by chemical conversion. Wastewater is slaked with calcium oxide to remvoe flouride as Ca Fl in lagoons. Ammonia (used as catalyst) is recovered in ammonia stills. A holding pond is used during still repairs.
11-27-74	Meeting with WNFD to discuss wastewater disposal alternatives. Proposed to combine concentrated NO_3 stream with sanitary waste and disposed of via land application. Agreed to submit info required ASAP.
1-3-75	Letter from WNFD to DHEC transmitting S.I. info. Contained soil boring logs for caissons around building and site utility map showing wells, property lines, proposed S.I. area, etc.
1-16-75	Memo: Glowacz to Dukes - investigated proposed S.I. site. Hydraulicly suitable for only 1/32 inch per day with high water table.
8-29-75	Proposed waste treatment upgrade. Still bottoms containing CaF_2 pumped after centrifuging as 50% slurry to #1 West lagoon. If centrifuge out-of-order, pumped to #1 West lagoon. New #2 West lagoon to be constructed in 1976 and lined with Gulfseal asphalt. When #1 West lagoon is full it will be sealed. The contaminated system is designed to handle trace (<30 mg/l) amounts of uranium. 3-2,000 gallon tanks receive the waste which is filtered and checked for radioactivity. If less than $3x10^{-5}$uC/ml, discharge is to river. Insoluble uranium is recovered.

8-29-75 cont.	Nickel Plating room effluent is pumped to river or #1 West lagoon depending upon nickel concentration.
9-10-75	Permit 3616 for modification to sanitary system with 1 existing sanitary lagoon and 4 holding lagoons.
9-24-75	Letter Solid Waste Division to J. McClure giving permission for storage of nickel contaminated HNO_3 from WNFD at the Bluff Road site. Storage limited to four months.
9-29-75	Letter WNFD to DHEC. WNFD will drum liquid in drums and liners provided by McClure. Intial transfer will be 70 drums. 20 drums per month there after.
7-11-76	Waste treatment upgrade proposal. 2-3,000 gallon S.S. tanks have replaced East lagoon as process waste storage. CaF_2 pumped to West lagoon. Clarified liquid transferred to quarantine lagoon North and South lagoons). After analysis discharged to river. West lagoon full of CaF_2 and East lagoon being filled. New #1. West lagoon to be constructed in 1977 (proposed liner, Gulfseal asphalt).
	Nickel plating waste reduced to 1mg/l or less of nickel. $NiSO_4$ presently being sold with low pH material. System will be installed to convert low pH material to $Ni(OH)_2$
7-28-77	Construction permit 4740 for modifications to existing WW treatment system. Includes construction of new CaF_2 settling lagoon. Supersedes previous permits.
5-9-79	Letter DHEC to WNFD. A construction permit required if wastewater system from planned plant construction is connected to city sewer. Also letter of approval from city is required.
11-2-79	WNFD report on NH_4OH spill which occurred 10-20-79. Determined that a reportable spill (sec. 311 CWA) did not occur. Drain valve was left open on ammonia storage tank during filling operations (25% NH_4OH solution). Spilled material pumped into #2 West lagoon. Spill area received continual dilution. Spill amount figure revised down from 4,000 gallons to 175 gallons. Exact amount never determined.
4-24-80	Letter WNFD to DHEC reporting dead carp in man-made pond on plant property. No radioactivity above background. High flouride and ammonia noted. Davis & Floyd retained to investigate.

WNFD WASTE TREATMENT PROCESS 7-31-71



South Carolina Department of Health and Environmental Control

2600 Bull Street
Columbia, S.C. 29201

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March 4, 1988

Mr. Roger E. Fischer
Senior Radiological & Environmental Engineer
WESTINGHOUSE ELECTRIC
Drawer R
Columbia, S. C. 29250

RE: Westinghouse Nuclear Fuel Division
Quarterly Monitoring Report
December 11, 1987
Richland County

Dear Mr. Fischer:

Department staff with the Ground-Water Protection Division have completed their review of the above referenced report and present the following comments and recommendations for your response.

1. Well W-16 is included in the monitoring program; however, data from this well was not contained in the December 11 report.

2. The monitoring data indicates that contaminant concentrations continue to decrease slowly, however ground-water quality continues to be impacted. The measured levels of Fluoride, Ammonia and Nitrate remain greater than the Class GB Ground-Water Standards.

3. As a result of the measured, undesirable impact to the ground-water which has continued, it is incumbent upon the Department to take appropriate action. Therefore, within ninety (90) days following receipt of this notice, submit to the Department either:

   a. an approvable proposal for ground-water remediation, or

   b. a request for establishment of a mixing zone.

Review of the data in Department files suggest that the criteria for granting of a mixing zone as set forth in Regulation 61-68, Water Classifications and Standards, could possibly be met. The request should reference the prior hydrogeological studies conducted at the site and should include proposed alternate standards to be incorporated into the monitoring program.

Please call 734-5303 if you have any questions or comments.

Sincerely,

William Krecker

William R. Krecker
Environmental Quality Manager
Water Quality Assessment
& Enforcement Division

WRK/sl

cc: Steve Thomas
Alton Boozer
Chris Doll

South Carolina Department of Health and Environmental Control

2600 Bull Street
Columbia, S.C. 29201

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Euta M. Colvin, M.D.

MEMORANDUM

To: Robert Bernardini, Engineer
Industrial And Agricultural Wastewater Division

From: James R. Hess, Hydrogeologist
Ground-Water Protection Division

Re: Westinghouse Electric Corporation
Nuclear Fuels Division
Richland County

RECEIVED
SEP - 4 1987
WASTEWATER DIVISION

Date: September 3, 1987

Figures depicting the concentration through time of fluoride, ammonia and nitrate from eleven ground-water monitoring wells at the referenced facility have been prepared and are attached. Nitrate analyses have been required only since 1984 and the gaps at the first and fourth quarter 1986 represent missing quarterly reports. As can be seen from the plots, the contaminants are only decreasing slightly in concentration. This may indicate that contaminants are continuing to be released into the ground-water. Additionally, since 1984 only wells within the contaminant plume (as identified from the December 1983 analysis) have been monitored with the exception of background well 24.

To ensure that the contaminant plume has not increased in size it is recommended that all monitoring wells at the site and surface water from the small pond which flows into Sunset Lake on a one-time basis be sampled and analyzed for pH, specific conductance, water level, fluoride, ammonia and nitrate. Since many of the wells have not been sampled for almost four years, it is important to thoroughly purge all wells by removing three to five well volumes of water prior to sampling. The gross alpha and gross beta activities (reports attached) are well within standards thus those parameters need not be analyzed for each well for this study, but routine analysis should continue. The Radiological Environmental Monitoring Division may wish to comment. It is requested that the sampling and analyses recommended above be conducted in lieu of the routine fourth quarter monitoring.

If any further information is required, please advise.

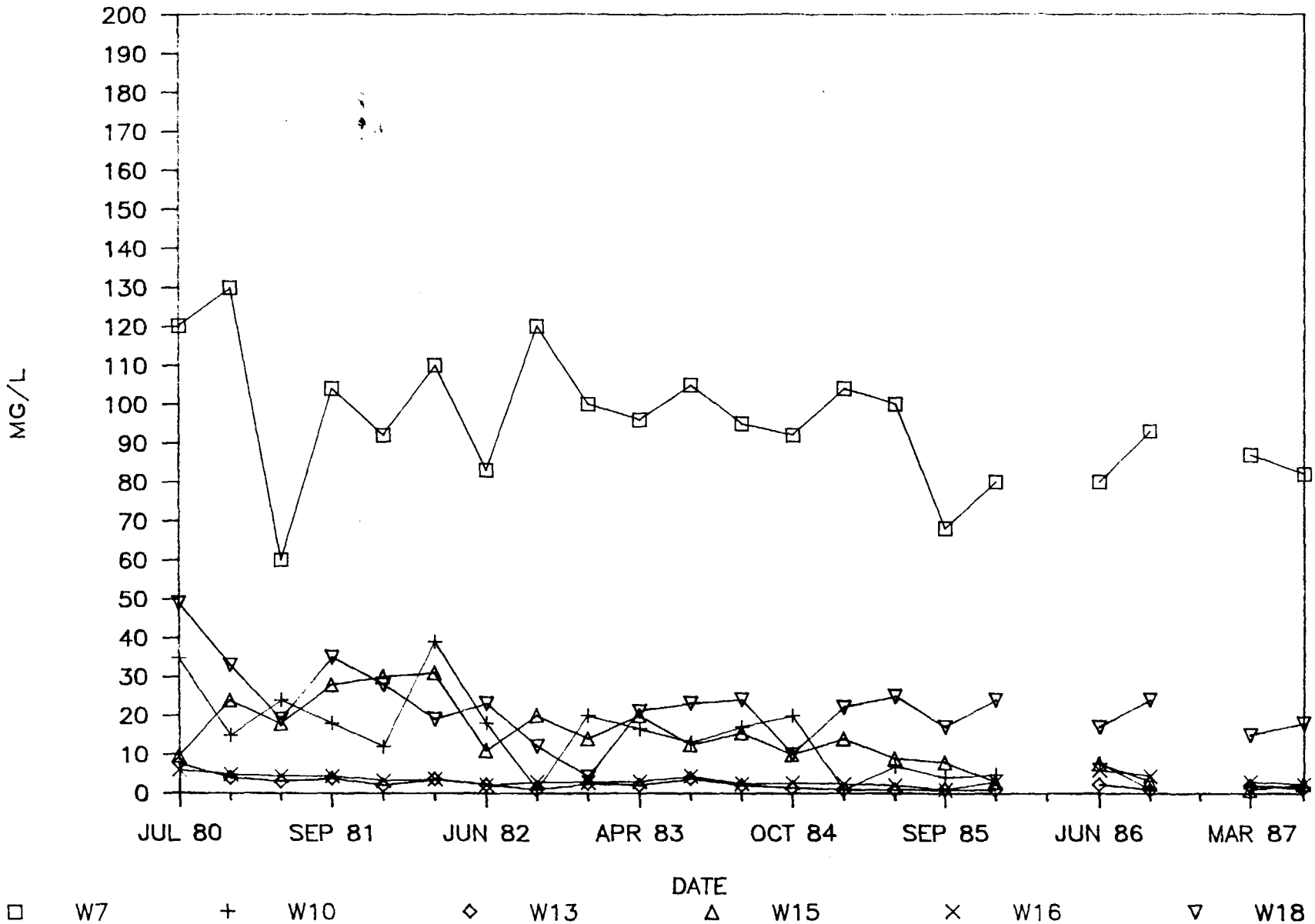
JRH/lr
WHOUSE

cc: C.N. Bivens, Director
Division of Radiological Environmental Monitoring

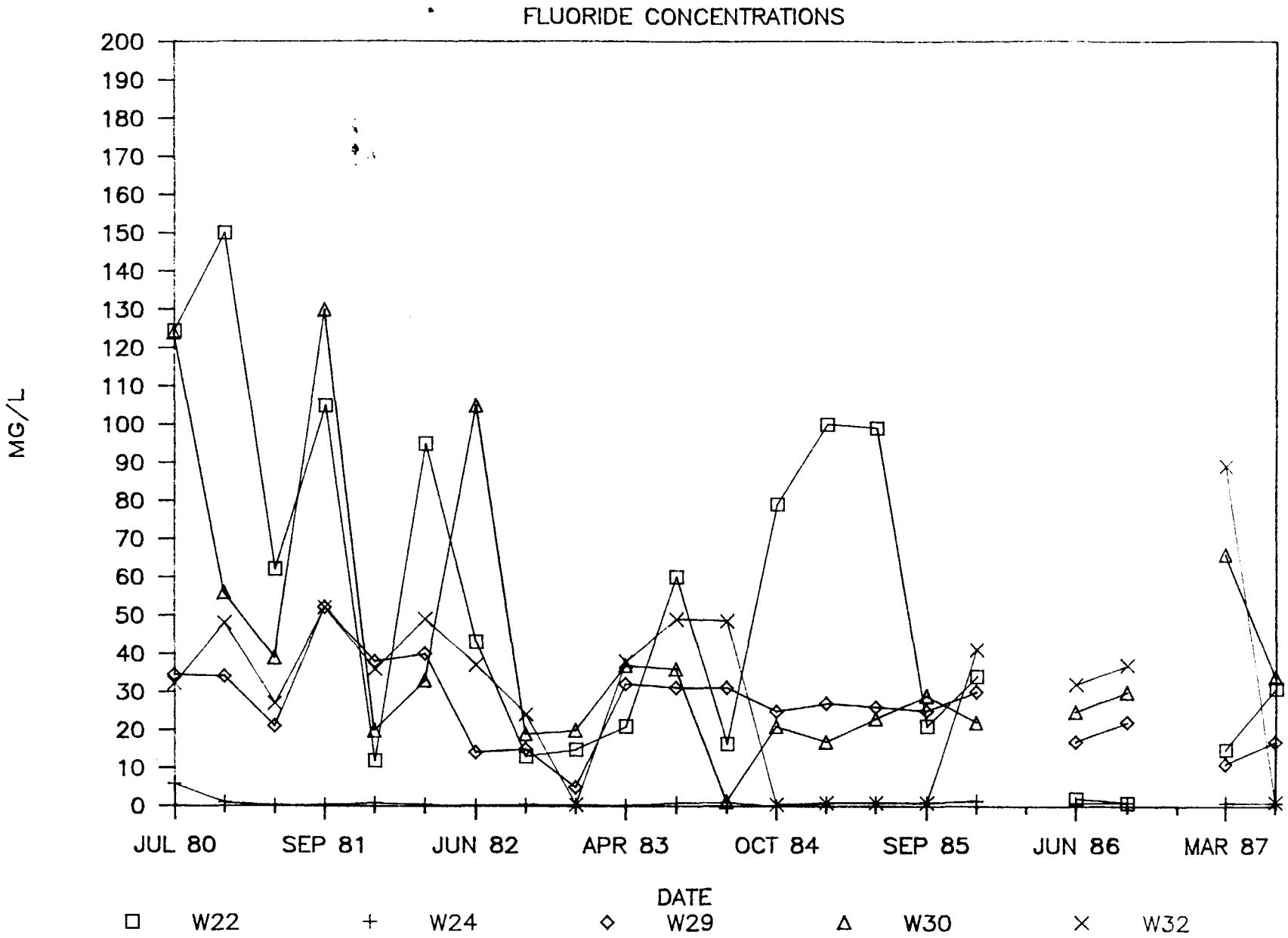
Joe Rucker, Director
Central Midlands District

WESTINGHOUSE NUCLEAR FUELS DIVISION

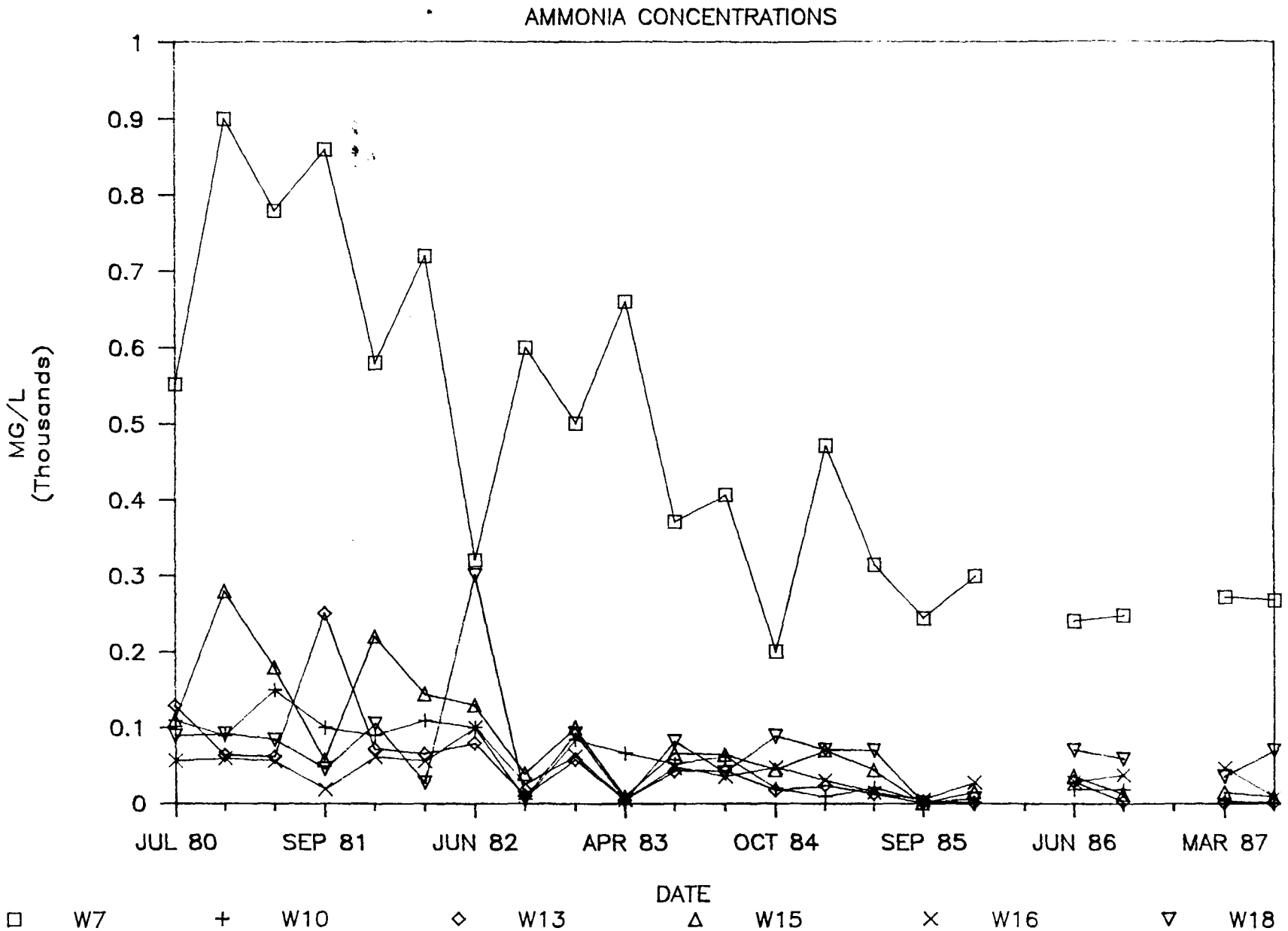
FLUORIDE CONCENTRATIONS



WESTINGHOUSE NUCLEAR FUELS DIVISION

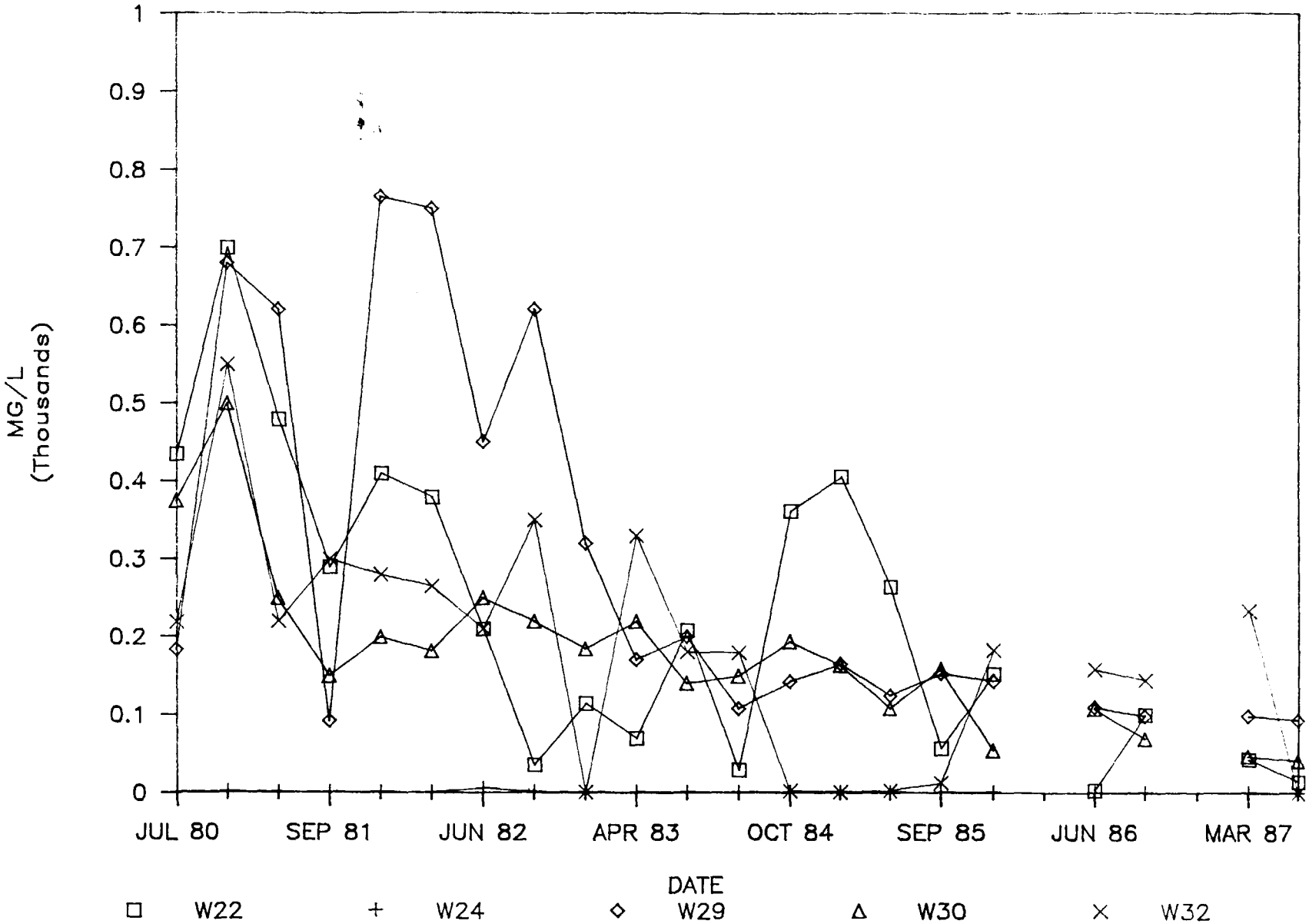


WESTINGHOUSE NUCLEAR FUELS DIVISION

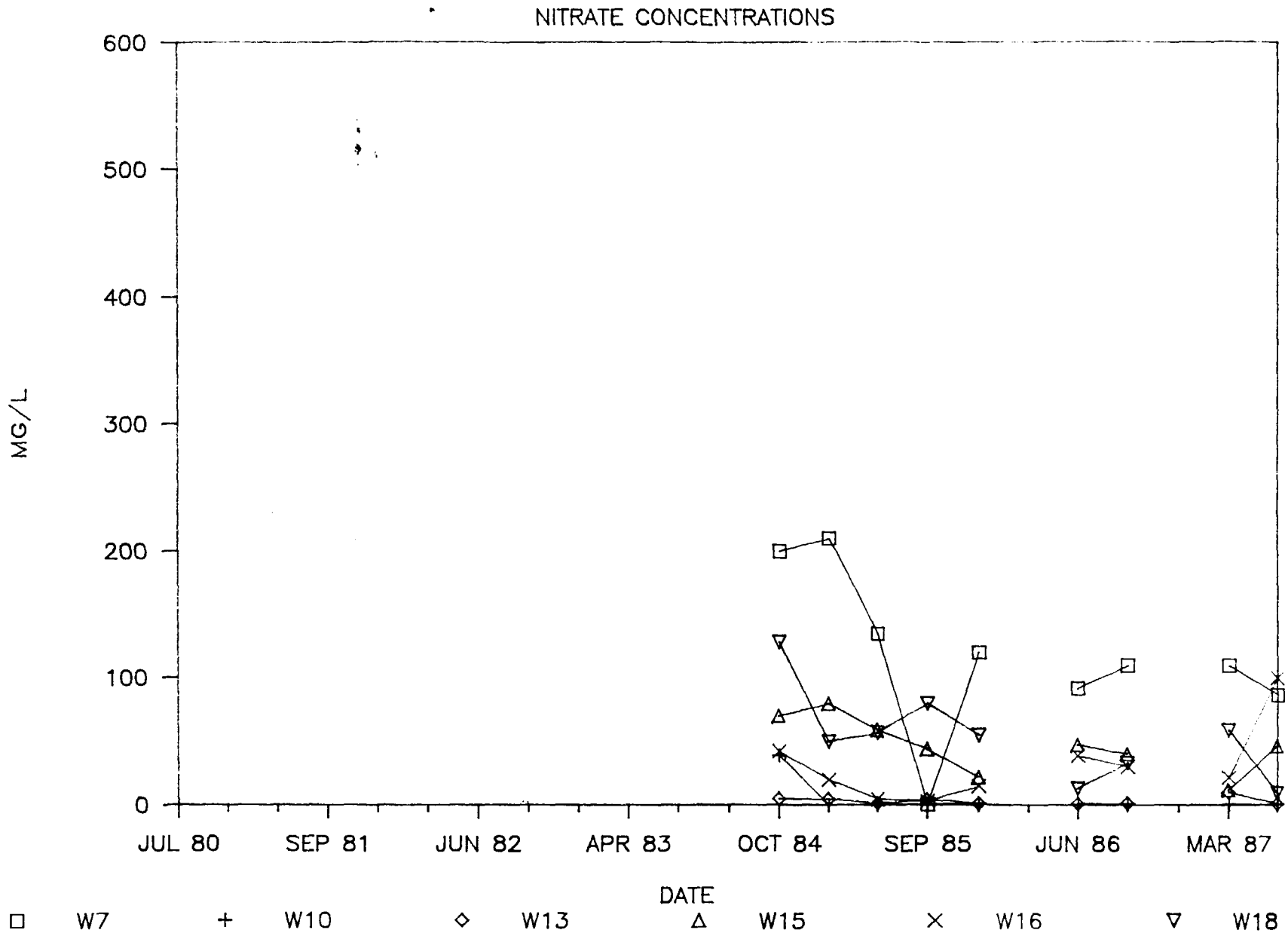


WESTINGHOUSE NUCLEAR FUELS DIVISION

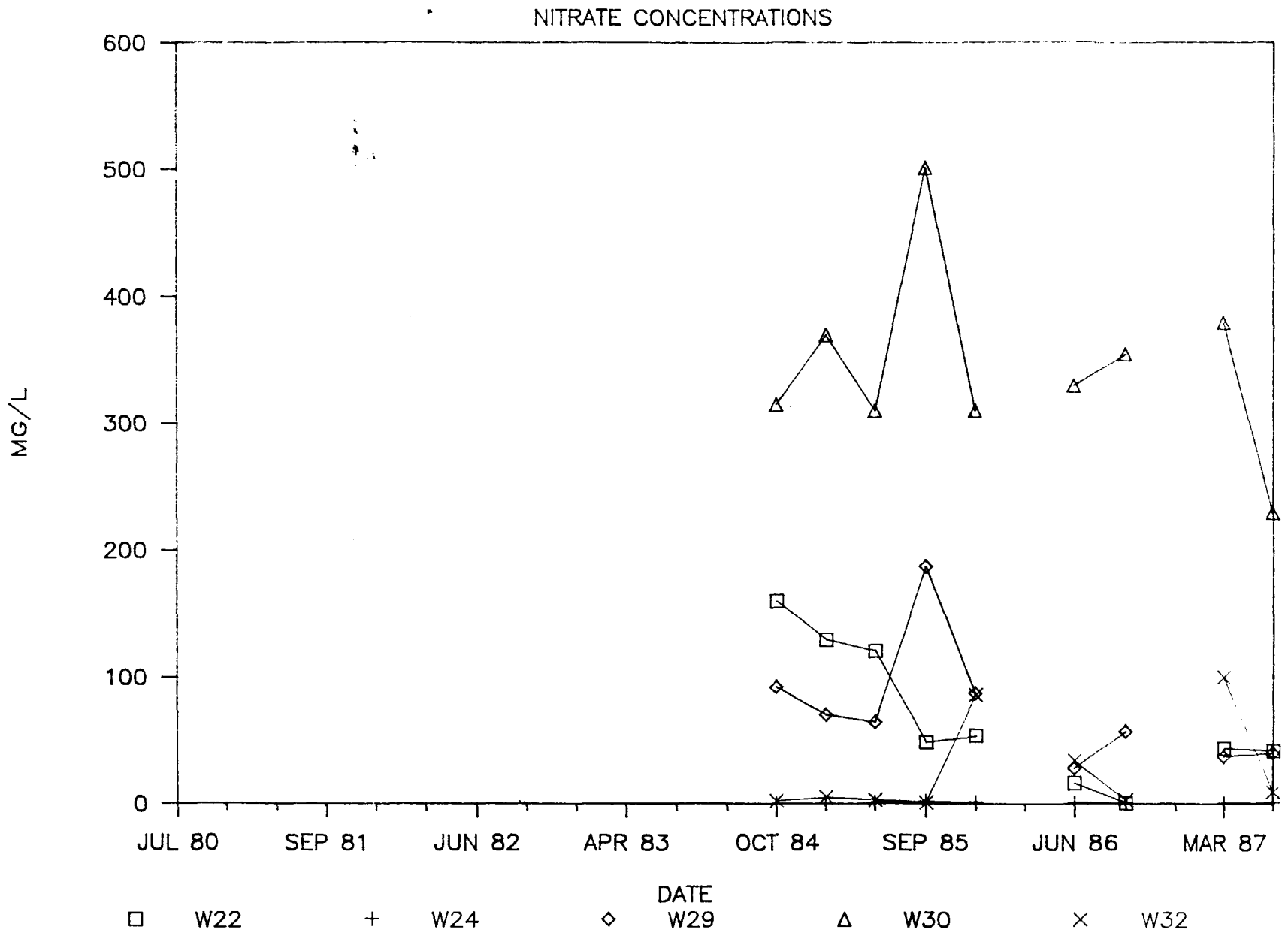
AMMONIA CONCENTRATIONS



WESTINGHOUSE NUCLEAR FUELS DIVISION



WESTINGHOUSE NUCLEAR FUELS DIVISION



WESTINGHOUSE NUCLEAR FUEL DIVISION

COLUMBIA, SOUTH CAROLINA

SPECIAL GROUNDWATER RADIOLOGICAL REPORT

uCi/ml x 10^{-6}

6/26/87

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AUG 21 1987
WATER
PROTECTION DIVISION

Well	Gross Alpha	Gross Beta
W7	0.008	0.488
W10	0.007	<0.003
W13	0.022	0.010
W15	0.027	0.104
W16	0.047	0.026
W18	0.127	0.076
W22	0.015	0.037
W24	0.010	0.010
W29	0.025	0.034
W30	0.027	0.024
W32	0.017	0.042

RECEIVED
AUG 21 1987
WATER
PROTECTION DIVISION

WESTINGHOUSE NUCLEAR FUEL DIVISION

COLUMBIA, SOUTH CAROLINA

SPECIAL GROUNDWATER RADIOLOGICAL REPORT

uCi/ml x 10^{-5} = pCi/l

3/31/87

3

Well	Gross Alpha	Gross Beta
W7	0.019	0.554
W10	0.018	0.008
W13	0.022	0.008
W15	0.159	0.101
W16	0.020	0.047
W18	0.651	0.231
W22	0.027	0.021
W24	<0.002	<0.003
W29	0.036	0.043
W30	0.051	0.046
W32	0.034	0.407

WESTINGHOUSE NUCLEAR FUEL DIVISION

COLUMBIA, SOUTH CAROLINA

SPECIAL GROUNDWATER RADIOLOGICAL REPORT

uCi/ml x 10^{-6}

9/12/86

Well	Gross Alpha	Gross Beta
W7	0.019	0.099
W10	0.067	0.074
W13	0.056	0.119
W15	0.173	0.242
W18	0.559	0.185
W22	0.116	0.034
W24	0.008	0.009
W29	0.023	0.052
W30	0.093	0.159
W32	0.020	0.159

RECEIVED
OCT 22 1986
S.C. Dept. of Health & Environmental Control - Industrial - Agricultural Wastewater Division

WP2743E:3p.12

1987
PROTECTION DIVISION

RICHARD
RIC

WESTINGHOUSE NUCLEAR FUEL DIVISION

COLUMBIA, SOUTH CAROLINA

SPECIAL GROUNDWATER RADIOLOGICAL REPORT

uCi/ml x 10^{-6}

6/21/86

Well	Gross Alpha	Gross Beta
W7	0.002	0.228
W10	0.032	0.036
W13	0.024	0.063
W15	0.176	0.380
W16	0.055	0.101
W18	0.253	0.252
W22	0.011	0.320
W24	0.007	0.016
W29	0.013	0.048
W30	0.042	0.126
W32	0.018	0.384

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JUL 25 1986
S.C. Dept. of Health & Environmental Control - Industrial - Agricultural Wastewater Division

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PROTECTION DIVISION

WP2743E:3p.10

WESTINGHOUSE NUCLEAR FUEL DIVISION

COLUMBIA, SOUTH CAROLINA

SPECIAL GROUNDWATER RADIOLOGICAL REPORT

uCi/ml x 10^{-6}

12/8/85

Well	Gross Alpha	Gross Beta
W7	0.012	0.908
W10	0.019	0.015
W13	0.011	0.025
W15	0.004	0.009
W16	0.007	0.021
W18	0.547	0.225
W22	0.020	0.084
W24	0.005	0.003
W29	0.023	0.040
W30	0.086	0.111
W32	0.007	0.149

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GROUNDWATER
PROTECTION DIVISION

WP2743E:3p.6

WESTINGHOUSE ELECTRIC CORPORATION

COLUMBIA, SOUTH CAROLINA

SPECIAL GROUNDWATER RADIOLOGICAL REPORT

uCi/ml x 10^{-6}

9/8/85

Well	Gross Alpha	Gross Beta
W7	0.009	0.379
W10	0.054	0.026
W13	0.055	0.030
W15	0.016	0.038
W16	0.004	<0.003
W18	0.465	0.105
W22	0.019	0.038
W24	0.007	0.005
W29	0.046	0.041
W30	0.092	0.094
W32	0.008	0.015

RECEIVED

WP2743E:3p.4

WESTINGHOUSE ELECTRIC CORPORATION

COLUMBIA, SOUTH CAROLINA

SPECIAL GROUNDWATER RADIOLOGICAL REPORT

uCi/ml X 10^{-6}

RECEIVED

MAR 2 3 1987

PROTECTION DIVISION

JUNE 27, 1985

Well	Gross Alpha	Gross Beta
W7	0.005	2.601
W10	0.004	0.041
W13	0.017	0.024
W15	0.007	0.301
W16	< 0.002	0.010
W18	0.261	0.121
W22	0.070	0.262
W24	< 0.002	0.004
W29	0.022	0.037
W30	0.090	0.112
W32	< 0.002	0.014

WP0214E:3

WESTINGHOUSE ELECTRIC CORPORATION

COLUMBIA, SOUTH CAROLINA

SPECIAL GROUNDWATER RADIOLOGICAL REPORT

uCi/ml x 10^{-6}

3/28/85

Well	Gross Alpha	Gross Beta
W7	0.002	1.217
W10	0.136	0.096
W13	0.022	0.026
W15	0.046	0.173
W18	0.254	0.156
W22	0.050	0.828
W24	0.000	0.009
W29	0.013	0.055
W30	0.111	0.240
W32	0.004	0.025

DAVIS & FLOYD, INC.

ENVIRONMENTAL SERVICES DIVISION
POST OFFICE DRAWER 428
GREENWOOD, SOUTH CAROLINA 29646

LABORATORY ANALYSIS

FOR: WESTINGHOUSE ELECTRIC CORP.
LOCATION: COLUMBIA, SC
JOB NUMBER: 3067-1

SAMPLE DATE: 3-3-81
REPORT DATE: 3-31-81

PARAMETER	highest readings (worst case) WELL #7	shallow well background & Coastal Bermu. Hayfield WELL #24
ARSENIC	<.005	<.005
BARIUM	.100	<.1
CADMIUM	<.005	<.005
CHROMIUM (TOTAL)	<.01	<.01
FLUORIDE	49.000	<1
LEAD	<.05	<.05
MERCURY	<.2	<.2
NITROGEN-NITRATE	310.000	.700
NITROGEN-AMMONIA	602.000	3.860
SELENIUM	<.01	<.01
SILVER	<.01	<.01
TURBIDITY	1.200	1.700
CHLORIDE	20.000	2.000
COPPER	<.01	<.01
HYDROGEN SULFIDE	<.01	<.01
IRON	.040	.040
MANGANESE	<.005	.018
SULFATE	125.000	18.000
SOLIDS-DISSOLVED	642.000	50.000
ZINC	.021	.042
COLOR	25.000	5.000
pH	9.400	6.000
SURFACTANTS (MBAS)	.540	.470

NOTES
1. ALL ANALYSES ARE IN MG/L UNLESS OTHERWISE NOTED.
2. pH IS IN pH UNITS.
3. TURBIDITY IS EXPRESSED AS NTU UNITS.
4. COLOR IS EXPRESSED IN COLOR UNITS.
5. MERCURY IS IN MICROGRAMS/LITER.
6. FOR ANALYSES HAVING THE LESS THAN (<) NOTATION THE VALUE PRESENTED IS THE LOWER LIMIT OF DETECTION FOR THE METHOD AND/OR INSTRUMENT.

SAMPLED BY MIKE SMITH

ANALYSIS BY MPG, JDK, GTS

CHECKED BY John H. McCord Jr.
JOHN H. MCCORD JR.

APPROVED BY E. Carl Burrell Jr.
E. CARL BURRELL JR.

NO. 810253

REPORT ON

GROUNDWATER INVESTIGATIONS

WESTINGHOUSE ELECTRIC CORPORATION

NUCLEAR FUEL DIVISION

COLUMBIA, SOUTH CAROLINA

BRIEF SUMMARY

Davis & Floyd, Inc., under the direction of the Westinghouse Electric Corporation, Nuclear Fuel Division, located in Columbia, South Carolina, has completed an investigation of groundwater contamination regarding both the source of contamination and suspected boundaries of the leachate plume. This investigation has determined that the leachate plume is emptying into both the pond (located on Westinghouse property) and Sunset Lake. The source of this contaminate is apparently the concentrated waste treatment tank area and the ammonia storage tank area. In addition, the waste treatment lagoons are also suspected of having been a source of contamination in previous years.

As a result of these findings, an engineering report has been completed and is submitted as a part of this report on the impact of discharging the contents of the pond, located on Westinghouse property, into Sunset Lake. Also included as a part of this report is a more recent set of groundwater elevations as requested by South Carolina Department of Health and Environmental Control.

I. INTRODUCTION

Davis & Floyd, Inc. has completed a groundwater monitoring investigation at the Nuclear Fuel Division facility of the Westinghouse Electric Corporation, located in Columbia, South Carolina. This investigation was initiated as a result of a fish kill which occurred on approximately April 13, 1980 in a pond located on Westinghouse property. The fish kill resulted in the death of approximately 43 carp. At this time, Westinghouse personnel monitored the water quality of the pond and found high concentrations of both fluoride (60 mg/l) and ammonia nitrogen (69 mg/l). In addition, a spring discharging into the pond was monitored by Westinghouse personnel and found to have fluoride and ammonia nitrogen concentration of 180 mg/l and 295 mg/l, respectively. The Westinghouse facility in question uses both ammonia and fluoride in its manufacturing process.

The purpose of this report is to discuss the findings of a hydrogeologic assessment and groundwater quality monitoring program which was initiated.

II. SUMMARY OF INVESTIGATION

The following hydrogeologic investigation was conducted in two phases. The first phase involved the installation of 12 temporary groundwater observation wells. These temporary wells were installed in order to obtain base information regarding groundwater flow, direction of groundwater flow, areas of contamination and soil permeabilities. The second phase of the investigation resulted in the installation of 16 additional water quality monitoring wells. These water quality monitoring wells were located at predetermined locations in the hope of estimating the boundaries of, the leachate plume, as well as the source(s) of contamination. Both the temporary and water quality wells, along with associated soil classifications, were performed by Law Engineering Testing Company under the guidance of Davis & Floyd, Inc.

A. Phase I

The depths of the temporary observation wells ranged from 20 feet to 35.5 feet. These depths were in part selected as a result of previous work performed on-site by Law Engineering Testing Company. During this previous work, the groundwater level was determined to be at a depth of approximately 10 feet. In addition, well depths were determined on a site-specific basis with a desire to vary the well depths, thereby providing information relating to the depth of the suspected leachate plume. Phase I of this study yielded the following results:

1. Groundwater flow appears to be in a general southwest direction from both the east and south lagoon areas, as well

as the abandoned filter cake landfill. Groundwater flow in this direction could enter the pond.

2. The upper sandy soil encountered in Well Nos. 6, 7, 8, 9, and 17 may extend towards grid north (toward both south and east lagoons) and actually underlie the lagoons. Therefore, any leachate entering this highly permeable area would have a path in the direction of the pond.

3. Permeability tests, while not exact, are consistent with the soil types and indicate high permeabilities.

4. Temporary observation Well Nos. 7, 10, 13, 15, and 16 contained high concentrations of ammonia nitrogen.

5. Temporary observation Well Nos. 7, 10, 13, and 15 contained high concentrations of fluorides.

6. Those wells exhibiting the highest concentrations of contamination had a depth of 20 feet to 25 feet.

Table I and Table II contain the ammonia nitrogen and fluoride concentrations, respectively, found during this phase of the investigation. Table III contains the well depths, along with groundwater levels. The map in Appendix I locates the Phase I wells, along with the above information. Appendix II contains a copy of Law Engineering's Phase I investigation

B. Phase II

The water quality monitoring wells were installed such that each intersected the first 5 feet of the groundwater table. This was done since the results of Phase I indicated groundwater

contamination in the upper groundwater regions only. Those wells installed to locate the boundaries of the suspected leachate plume were placed along two arcs. These arcs are located south of the waste treatment plant and were calculated using the soil permeabilities found in Phase I of this investigation. Those wells which were installed to locate the leachate source were in selected areas adjacent to the waste treatment plant and main building. Phase II yielded the following results:

1. Groundwater flow south of the waste treatment plant continues to be in a southwest direction into Sunset Lake.
2. Groundwater flow immediately south of Sunset Lake may flow northward back into Sunset Lake. Due to the lack of groundwater data in this area, however, a definite conclusion cannot be drawn at this time.
3. Groundwater contamination appears to be isolated to the upper 5 feet of groundwater.
4. No groundwater contamination was found south of Sunset Lake.
5. No groundwater contamination was found north of the concentrated waste treatment tanks.
6. No groundwater contamination was found north of the ammonia storage facilities.

Table IV and Table V contain the ammonia nitrogen and fluoride concentrations, respectively, found during Phase II of this investigation. Table VI contains the well depths, along with groundwater levels. The map in Appendix III locates both the Phase I and Phase II wells.

III. AREA OF CONTAMINATION

In order to put the magnitude of contamination in perspective, an effort has been made to estimate the volume of groundwater contaminated. This was done in accordance with the following assumptions.

- The boundaries of the leachate plume exists as indicated in Appendix V.
- The average surface elevation of the monitoring wells is 136.69 feet.
- The average groundwater level is approximately 124.83 feet.
- Approximately 30 percent of the volume is groundwater.

With these considerations in mind, a volume of approximately 11,436,480.0 gallons of groundwater would presently be contaminated.

A. Ammonia Contamination

Assuming one wished to estimate the amount of concentrated ammonia waste which would have to be spilled or leaked to result in a concentration of 295 mg/l of ammonia in the spring at the pond, the following assumptions are made:

1. Groundwater flow is approximately 84 feet per year.
2. The source of contamination is the concentrated waste tanks.
3. Volume of groundwater contaminated is 11,436,480 gallons.
4. Distance from source to pond is approximately 660 feet.
5. Concentration of ammonia waste is [illegible] ppm.

These assumptions would generate the following information:

1. Time for contaminate to reach the pond from the suspected source - 7.86 years.

2. Amount of concentrated ammonia waste necessary to result in a 295 mg/l ammonia concentration in pond is 1.77 gallons/day.

B. Fluoride Contamination

Using similar assumptions as above, if one wished to estimate the amount of concentrated fluoride waste necessary to generate a fluoride concentration of 185 mg/l at the pond, assuming a fluoride concentration of 20,000 ppm, a volume of 4.43 gallons/day would have been spilled.

The above volume estimates for both ammonia and flouride concentrations necessary to result in the concentrations recorded at the ponds are theoretical values only. These numbers should not be interpreted as an accurate description of the actual groundwater situation in any form.

IV. ADDITIONAL WORK

As a part of this report, an engineering report was completed regarding the impact of discharging the contents of the Westinghouse pond into Sunset Lake. This report may be found in Appendix VI. Also, more recent groundwater elevations have been taken at the request of South Carolina Department of Health and Environmental Control and may be found in Appendix VII. These groundwater elevations were taken in order to determine if additional monitoring wells would be required.

V. CONCLUSIONS

Westinghouse presently has two identifiable sources of groundwater contamination. These sources are the concentrated waste treatment tanks and the ammonia storage tank area. In addition, the waste treatment lagoons may have been a source of groundwater contamination in previous years. The leachate plume appears to be traveling in a southwest direction from the waste treatment facility. This plume is apparently emptying into the pond located on Westinghouse property, as well as into Sunset Lake. The boundaries of the leachate plume are suspected to be fairly narrow, approximately 600 feet in width. No groundwater contamination was found south of Sunset Lake or north of the waste treatment facility.

South Carolina Department of Health and Environmental Control

Ref. # 4.

2600 Bull Street
Columbia, S.C. 29201

Commissioner
Michael D. Jarrett

Board
Moses H. Clarkson, Jr., Chairman
Oren L. Brady, Jr., Vice-Chairman
Euta M. Colvin, M.D., Secretary
Harry M. Hallman, Jr.
Henry S. Jordan, M.D.
Toney Graham, Jr. M.D.

MEMORANDUM

TO: John Cresswell, Manager
Site Screening Section
Division of Site Engineering and Screening
Bureau of Solid and Hazardous Waste Management

FROM: Judy Canova, Hydrologist JC
Superfund and Solid Waste Section
Division of Hydrogeology
Bureau of Solid and Hazardous Waste Management

DATE: June 8, 1988

RE: Westinghouse Nuclear Fuel Division
Richland County
SCD 047 559 331
Preliminary Assessment Update
Hydrogeologic Review

To assist in the preliminary assessment of the referenced facility, a hydrogeologic literature review was completed.

Westinghouse Nuclear Fuel is located in the Upper Coastal Plain physiographic province. On site, about 165' of semi-consolidated to unconsolidated sediments rests on crystalline basement rock (US Nuclear Regulatory Commission, 1983). The sedimentary section contains the Middendorf, Black Mingo, and Terrace (Okefenokee) Units (ibid, 1983). Site location is shown in Figure 1.

Work by Davis and Floyd, Inc. (1980, 1982) indicate ground water occurs at seven to twenty-three feet and flows to the south-southwest. Composition of the unsaturated zone includes silty sands and sandy clays. Measured hydraulic conductivities of the surficial Okefenokee range from $.8 \times 10^{-4}$ to 3.1×10^{-4} c/s. This unit is approximately thirty to fifty feet thick and contains sand with silt and gravel. It may be used for domestic water supply.

Below the Okefenokee is the Black Mingo, divided into Upper and Lower members. The Upper Black Mingo serves as an aquiclude as it has a significantly lower hydraulic conductivity than the surrounding formations (Davis and Floyd, 1980, 1982). Work done

by Golder & Associates (1986) on the Bluff Road Site, approximately one thousand feet east of Westinghouse indicates a ten feet thick continuous clay layer on the Upper Black Mingo and a downward vertical gradient. Another clay layer, approximately seventeen feet thick was found resting on the Middendorf, the regional water supply aquifer. A pumping test of the Okefenokee yielded no drawdown in the Black Mingo. Although the surficial sediments were significantly contaminated, no contamination was observed in the deeper Black Mingo wells.

Based on South Carolina Water Resources Commission well tabulations, none of the nearby public supply wells are in the aquifer of concern.

Davis & Floyd, 1980, Report on Ground Water Investigations, Westinghouse Electric Corporation, Nuclear Fuel Division, Columbia, SC. Davis & Floyd, Inc. Job # 3067-1.

Spigner and Glover, 1982, Ground Water Hydrology, Westinghouse Electric Corporation, Columbia, SC. Davis & Floyd, Inc. Job # 3067-1, 50 p.

US Nuclear Regulatory Commission, 1983, SNM 1107 - Update for Environmental Impact Appraisal, Westinghouse Electric, Columbia, SC: Docket # 70-1151.

Golder & Associates, 1986, Remedial Investigations, Bluff Road Site, Richland County, South Carolina (Draft), 73 p.

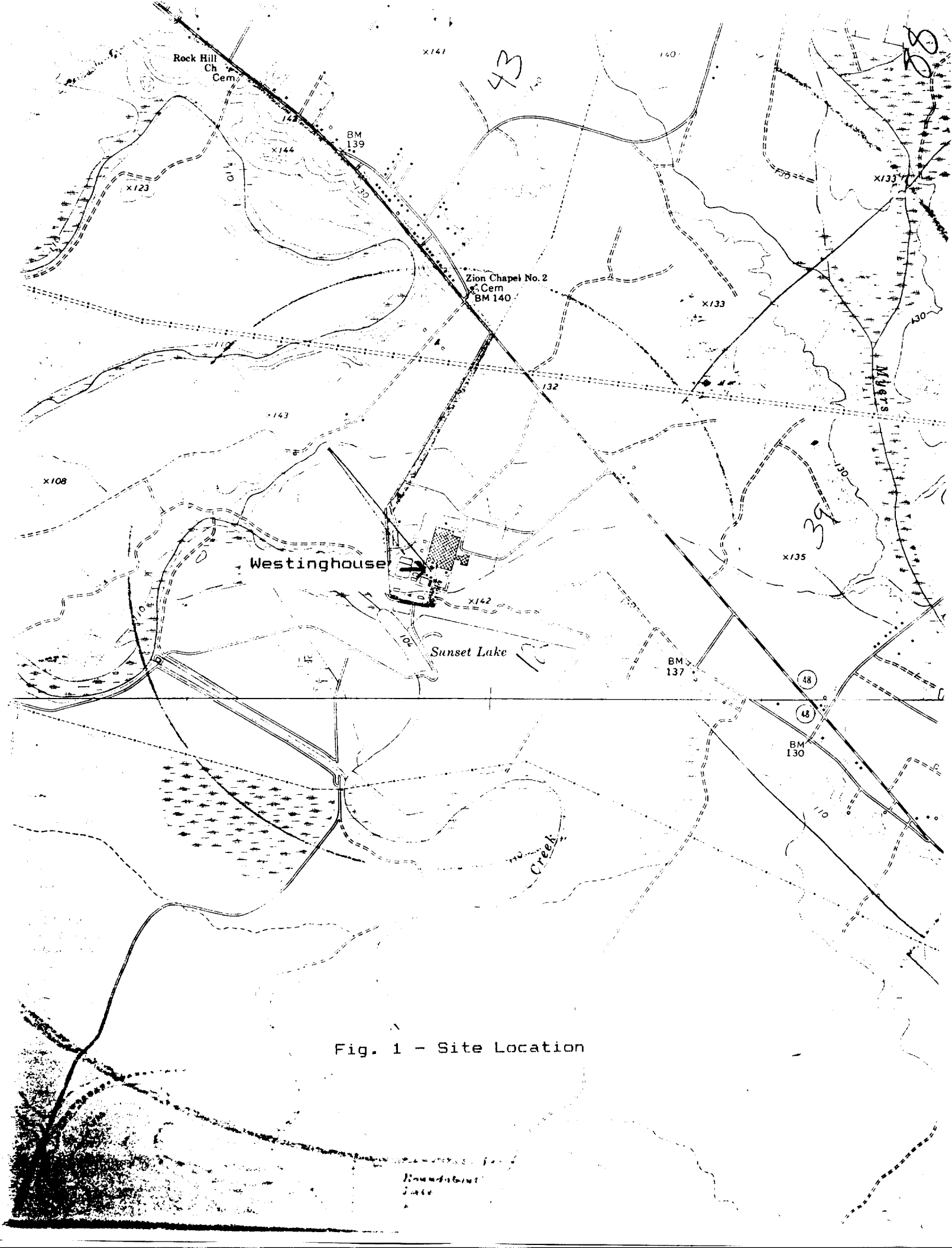

Fig. 1 - Site Location

South Carolina Department of Health and Environmental Control

2600 Bull Street
Columbia, S.C. 29201

Commissioner
Michael D. Jarrett

Board
Moses H. Clarkson, Jr., Chairman
Oren L. Brady, Jr., Vice-Chairman
Euta M. Colvin, M.D., Secretary
Harry M. Hallman, Jr.
Henry S. Jordan, M.D.
Toney Graham, Jr. M.D.

MEMORANDUM

TO: Gerald Stewart, EQM
Site Screening Section
Bureau of Solid and Hazardous Waste Management

FROM: Judy Canova, Hydrologist JC
Superfund and Solid Waste Section
Bureau of Solid and Hazardous Waste Management

DATE: April 27, 1988

RE: Sole Source Aquifers and Karst Terrain

The following sites are not in areas with sole source aquifers or karst topography:

C&S Waste Oil	SCD 982 119 315
Cardinal Chemical	SCD 003 339 447
Cone Mills Corporation	SCD 003 344 652
Sumter Casket	SCD 003 347 465
American Can	SCD 003 361 441
Harley Corporation	SCD 000 822 122
Quality Drum	SCD 021 396 312
Crown Central	SCD 043 980 002
St. Charles Gin	SCD 036 251 411
Roller Bearing	SCD 041 384 520
Exide Corporation	SCD 041 388 554
Duracell International	SCD 030 509 418
Industrial Chemical	SCD 044 442 333
National Fence Manufacturing	SCD 045 451 390
Westinghouse Electric	SCD 047 559 331
Helena Chemical	SCD 030 110 373

OVERSIZED

DOCUMENT

SITE DATA EPA ID No.: SCD047599331 SHEET 01
****

(ACTION : *_* - FOR DATA ENTRY USE ONLY)

SF ID: *__* *__* *__* SITE NAME: WESTINGHOUSE NUCLEAR FUEL DIV SOURCE: R SOURCE COUNTS (NOT UPDATABLE)

__ *__* STREET: HWY 48 CONG. DIST.: 02 NOTIS: 1

NATL PRIORITY: N CITY: COLUMBIA ST: SC ZIP: 29205-____ STS: 0

HRS: *___._* CNTY NAME: RICHLAND CNTY CODE: 079 HWDMS: 0

HRS DATE (YY/MM): *__/__* LATITUDE: *__/__/__._* LONGITUDE: *___/__/__._* COMPOSITE: 0

RESPONSE TERMINATION (CHECK ONE IF APPLICABLE): PENDING *_* NO FURTHER ACTION X OTHER: 0

ENFORCEMENT DISPOSITION (CHECK ANY THAT APPLY): NO VIABLE RESPONSIBLE PARTY *_* VOLUNTARY RESPONSE *_*

ENFORCED RESPONSE *_* COST RECOVERY *_*

EVENTS
******

	(ACTION - FOR DATE ENTRY USE ONLY)	EVENT TYPE	DATE (YY/MM) STARTED	DATE (YY/MM) COMPLETED	CONDUCTED BY EPA	STATE	RESP/PARTY	OTHER	COUNTS
EVENTS	*_*	(X) SITE DISCOVERY (SD)		81/06					
	_	(X) PRELIMINARY ASSESSMENT (PA)		82/09					
	_	SITE INVESTIGATION (SI)	*__/__*	*__/__*	*_*	*_*			
	_	REMEDIAL ACTION (RD)	*__/__*	*__/__*	*_*	*_*	*_*	*_*	*__*
	_	REMOVAL ACTION (RV)	*__/__*	*__/__*					*__*
ENFORCE EVENTS	*_*	ENFORCEMENT INVESTIGATION (EI)	*__/__*	*__/__*	*_*	*_*		*_*	
	_	ADMINISTRATIVE ORDER (AO)	*__/__*	*__/__*	*_*	*_*		*_*	
	_	JUDICIAL ACTION (JA)	*__/__*	*__/__*	*_*	*_*		*_*	

SITE NAME: WESTINGHOUSE NUCLEAR FUEL DIV

ALIAS AND ALIAS LOCATION DATA
****

ALIAS (ACTION *_* - FOR DATA ENTRY USE ONLY)

SEQ. NO.: *__* ALIAS NAME: *_____* SOURCE: *_*

ALIAS LOCATION (ACTION *_* - FOR DATA ENTRY USE ONLY)

CONTIGUOUS PORTION OF SITE: *_*

STREET: *_____* CONG. DIST.: *__*

CITY: *_____* ST: *__* ZIP: *_____-____*

CNTY NAME: *_____* CNTY CODE: *___*

LATITUDE: *__/__/__._* LONGITUDE: *___/__/__._*

ALIAS (ACTION *_* - FOR DATA ENTRY USE ONLY)

SEQ. NO.: *__* ALIAS NAME: *_____* SOURCE: *_*

ALIAS LOCATION (ACTION *_* - FOR DATA ENTRY USE ONLY)

CONTIGUOUS PORTION OF SITE: *_*

STREET: *_____* CONG. DIST.: *__*

CITY: *_____* ST: *__* ZIP: *_____-____*

CNTY NAME: *_____* CNTY CODE: *___*

LATITUDE: *__/__/__._* LONGITUDE: *___/__/__._*

EPA ID NO.: SCD047559331 SHEET 03

SITE NAME: WESTINGHOUSE NUCLEAR FUEL DIV

SITE COMMENTS
****

(ACTION - FOR DATA ENTRY USE ONLY)	COMMENT NUMBER	COMMENT

REGION: 04

U. S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF EMERGENCY AND REMEDIAL RESPONSE
DATA BASE UPDATED 83/03/24
T.1 - ERRIS TURNAROUND DOCUMENT

RUN DATE: 83/03/24
RUN TIME: 19:38:52

EPA ID NO.: SCD047559331 SHEET 04

SITE NAME: WESTINGHOUSE NUCLEAR FUEL DIV

REGIONAL ENTRIES
****

(ACTION - FOR DATA ENTRY USE ONLY)	ENTRY CODE	DESCRIPTION	DATE1 (YY/MM/DD)	DATE2 (YY/MM/DD)	DATE3 (YY/MM/DD)	FREE FIELD
_	*____.__*	*				*
		*	* __/__/__ *	* __/__/__ *	* __/__/__ *	* *
_	*____.__*	*				*
		*	* __/__/__ *	* __/__/__ *	* __/__/__ *	* *
_	*____.__*	*				*
		*	* __/__/__ *	* __/__/__ *	* __/__/__ *	* *
_	*____.__*	*				*
		*	* __/__/__ *	* __/__/__ *	* __/__/__ *	* *
_	*____.__*	*				*
		*	* __/__/__ *	* __/__/__ *	* __/__/__ *	* *
_	*____.__*	*				*
		*	* __/__/__ *	* __/__/__ *	* __/__/__ *	* *
_	*____.__*	*				*
		*	* __/__/__ *	* __/__/__ *	* __/__/__ *	* *
_	*____.__*	*				*
		*	* __/__/__ *	* __/__/__ *	* __/__/__ *	* *
_	*____.__*	*				*
		*	* __/__/__ *	* __/__/__ *	* __/__/__ *	* *
_	*____.__*	*				*
		*	* __/__/__ *	* __/__/__ *	* __/__/__ *	* *
_	*____.__*	*				*
		*	* __/__/__ *	* __/__/__ *	* __/__/__ *	* *
_	*____.__*	*				*
		*	* __/__/__ *	* __/__/__ *	* __/__/__ *	* *
_	*____.__*	*				*
		*	* __/__/__ *	* __/__/__ *	* __/__/__ *	* *

MAR 15 1983

POTENTIAL HAZARDOUS WASTE SITE
IDENTIFICATION AND PRELIMINARY ASSESSMENT

EPA

REGION	SITE NUMBER (to be assigned by Hq)
4	

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

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

SCD047559331 RICHLAND
WESTINGHOUSE NUCLEAR FUEL DIVISION
HIGHWAY 48
COLUMBIA SC 29205
HEATH, JIM, RAD & ENV EN* 8037762610

TION
ET (or other identifier)

E | E. ZIP CODE | F. COUNTY NAME

2. TELEPHONE NUMBER

H. TYPE OF OWNERSHIP

☐ 1. FEDERAL ☐ 2. STATE ☐ 3. COUNTY ☐ 4 MUNICIPAL ☑ 5 PRIVATE ☐ 6 UNKNOWN

I. SITE DESCRIPTION

~~Landfill~~ Drums above ground

"103-C NOTIFICATION" DATE: 810609
EARL WILLIAMS
PHONE: 803-758-5544

K. DATE IDENTIFIED (mo., day, & yr.)

2. TELEPHONE NUMBER

lete this section last)

☐ 1. HIGH ☐ 2. MEDIUM ☐ 3 LOW ☑ 4 NONE ☐ 5 UNKNOWN

B. RECOMMENDATION

☑ 1. NO ACTION NEEDED *(no hazard)*

☐ 2. IMMEDIATE SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR:
b. WILL BE PERFORMED BY:

☐ 3. SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR:
b. WILL BE PERFORMED BY:

☐ 4. SITE INSPECTION NEEDED *(low priority)*

C. PREPARER INFORMATION

1. NAME	2. TELEPHONE NUMBER	3. DATE (mo., day, & yr.)
Dolphus Browning	803-758-5681	9-26-82

III. SITE INFORMATION

A. SITE STATUS

☑ 1. ACTIVE *(Those industrial or municipal sites which are being used for waste treatment, storage, or disposal on a continuing basis, even if infrequently.)*

☐ 2. INACTIVE *(Those sites which no longer receive wastes.)*

☐ 3. OTHER *(specify)*: *(Those sites that include such incidents like "midnight dumping" where no regular or continuing use of the site for waste disposal has occurred.)*

B. IS GENERATOR ON SITE?

☐ 1. NO ☑ 2. YES *(specify generator's four-digit SIC Code)*:

C. AREA OF SITE *(in acres)*: 100

D. IF APPARENT SERIOUSNESS OF SITE IS HIGH, SPECIFY COORDINATES
1. LATITUDE *(deg.—min.—sec.)*
2. LONGITUDE *(deg.—min.—sec.)*

E. ARE THERE BUILDINGS ON THE SITE?

☐ 1. NO ☑ 2. YES *(specify)*: Offices

T2070-2 (10-79)

Continue On Reverse

Continued From Front

IV. CHARACTERIZATION OF SITE ACTIVITY

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

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

E. SPECIFY DETAILS OF SITE ACTIVITIES AS NEEDED

Wastes F001 U002
F003 U134
F006 U013
P015

5500 gallons of total waste

V. WASTE RELATED INFORMATION

A. WASTE TYPE

[ ] 1 UNKNOWN [ ] 2 LIQUID [ ] 3. SOLID [ ] 4. SLUDGE [ ] 5. GAS

B. WASTE CHARACTERISTICS

[ ] 1 UNKNOWN [ ] 2. CORROSIVE [ ] 3. IGNITABLE [ ] 4 RADIOACTIVE [ ] 5 HIGHLY VOLATILE
[ ] 6 TOXIC [ ] 7 REACTIVE [ ] 8 INERT [ ] 9 FLAMMABLE

[ ] 10. OTHER (*specify*): _____

C. WASTE CATEGORIES

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

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

a. SLUDGE	b. OIL	c. SOLVENTS	d. CHEMICALS	e. SOLIDS	f. OTHER
AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT
UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE
'X' (1) PAINT, PIGMENTS	'X' (1) OILY WASTES	'X' (1) HALOGENATED SOLVENTS	'X' (1) ACIDS	'X' (1) FLYASH	'X' (1) LABORATORY PHARMACEUT.
(2) METALS SLUDGES	(2) OTHER (*specify*):	(2) NON-HALOGNTD. SOLVENTS	(2) PICKLING LIQUORS	(2) ASBESTOS	(2) HOSPITAL
(3) POTW		(3) OTHER (*specify*)	(3) CAUSTICS	(3) MILLING/ MINE TAILINGS	(3) RADIOACTIVE
(4) ALUMINUM SLUDGE			(4) PESTICIDES	(4) FERROUS SMLTG. WASTES	(4) MUNICIPAL
(5) OTHER (*specify*):			(5) DYES/INKS	(5) NON-FERROUS SMLTG. WASTES	(5) OTHER (*specify*):
			(6) CYANIDE	(6) OTHER (*specify*):	
			(7) PHENOLS		
			(8) HALOGENS		
			(9) PCB		
			(10) METALS		
			(11) OTHER (*specify*)		

 Continue On Page 3

Continued From Page 2

V. WASTE RELATED INFORMATION *(continued)*

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

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

Westinghouse is a generator of hazardous waste and doesn't store over than 90 days.

VI. HAZARD DESCRIPTION

A. TYPE OF HAZARD	B. POTENTIAL HAZARD *(mark 'X')*	C. ALLEGED INCIDENT *(mark 'X')*	D. DATE OF INCIDENT *(mo., day, yr.)*	E. REMARKS
A 1. NO HAZARD	X			
2. HUMAN HEALTH				
3. NON-WORKER INJURY/EXPOSURE				
4. WORKER INJURY				
5. CONTAMINATION OF WATER SUPPLY				
6. CONTAMINATION OF FOOD CHAIN				
7. CONTAMINATION OF GROUND WATER				
8. CONTAMINATION OF SURFACE WATER				
9. DAMAGE TO FLORA/FAUNA				
10. FISH KILL				
11. CONTAMINATION OF AIR				
12. NOTICEABLE ODORS				
13. CONTAMINATION OF SOIL				
14. PROPERTY DAMAGE				
15. FIRE OR EXPLOSION				
16. SPILLS/LEAKING CONTAINERS/ RUNOFF/STANDING LIQUIDS				
17. SEWER, STORM DRAIN PROBLEMS				
18. EROSION PROBLEMS				
19. INADEQUATE SECURITY				
20. INCOMPATIBLE WASTES				
21. MIDNIGHT DUMPING				
22. OTHER *(specify)*:				

 Continue On Reverse

Continued From Front

VII. PERMIT INFORMATION

A. INDICATE ALL APPLICABLE PERMITS HELD BY THE SITE.

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

B. IN COMPLIANCE?

- [x] 1. YES
- [ ] 2. NO
- [ ] 3. UNKNOWN
- 4. WITH RESPECT TO *(list regulation name & number)*: _____

VIII. PAST REGULATORY ACTIONS

- [x] A. NONE
- [ ] B. YES *(summarize below)*

IX. INSPECTION ACTIVITY *(past or on-going)*

- [x] A. NONE
- [ ] B. YES *(complete items 1,2,3, & 4 below)*

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

X. REMEDIAL ACTIVITY *(past or on-going)*

- [x] A. NONE
- [ ] B. YES *(complete items 1, 2, 3, & 4 below)*

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

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

Continued From Front

VII. PERMIT INFORMATION

A. INDICATE ALL APPLICABLE PERMITS HELD BY THE SITE.

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

B. IN COMPLIANCE?

- [x] 1. YES
- [ ] 2. NO
- [ ] 3. UNKNOWN

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

VIII. PAST REGULATORY ACTIONS

- [x] A. NONE
- [ ] B. YES *(summarize below)*

IX. INSPECTION ACTIVITY *(past or on-going)*

- [x] A. NONE
- [ ] B. YES *(complete items 1, 2, 3, & 4 below)*

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

X. REMEDIAL ACTIVITY *(past or on-going)*

- [x] A. NONE
- [ ] B. YES *(complete items 1, 2, 3, & 4 below)*

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

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

NUCLEAR

POTENTIAL HAZARDOUS WASTE SITE
IDENTIFICATION AND PRELIMINARY ASSESSMENT

REGION: IV

SITE NUMBER (to be assigned by Hq):

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

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

FJS L-11 A+B

I. SITE IDENTIFICATION

A. SITE NAME: Westinghouse Electric Corporation

B. STREET *(or other identifier)*: Bluff Rd

C. CITY: Columbia

D. STATE: S.C.

E. ZIP CODE: 29250

F. COUNTY NAME: Richland

G. OWNER/OPERATOR *(if known)*

1. NAME: C.F. Sanders, Manager, Radiological & Environmental Engineering

2. TELEPHONE NUMBER: 803) 776-2610

H. TYPE OF OWNERSHIP

☐ 1. FEDERAL ☐ 2. STATE ☐ 3. COUNTY ☐ 4. MUNICIPAL ☑ 5. PRIVATE ☐ 6. UNKNOWN

I. SITE DESCRIPTION: Nuclear fuel rod assembly plant.

J. HOW IDENTIFIED *(i.e., citizen's complaints, OSHA citations, etc.)*: CPIC

K. DATE IDENTIFIED *(mo., day, & yr.)*:

L. PRINCIPAL STATE CONTACT

1. NAME: Ted Buchanan - SCDHEC

2. TELEPHONE NUMBER: 803) 758-5681

II. PRELIMINARY ASSESSMENT *(complete this section last)*

A. APPARENT SERIOUSNESS OF PROBLEM

☐ 1. HIGH ☐ 2. MEDIUM ☐ 3. LOW ☑ 4. NONE ☐ 5. UNKNOWN

B. RECOMMENDATION

☐ 1. NO ACTION NEEDED *(no hazard)*

☑ 3. SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR: Jan 5-9, 1981
b. WILL BE PERFORMED BY:

☐ 2. IMMEDIATE SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR:
b. WILL BE PERFORMED BY:

☐ 4. SITE INSPECTION NEEDED *(low priority)*

C. PREPARER INFORMATION

1. NAME: W. Frank Mills Jr

2. TELEPHONE NUMBER: 704) 288-7711

3. DATE *(mo., day, & yr.)*: 3/10/81

III. SITE INFORMATION

A. SITE STATUS

☑ 1. ACTIVE *(Those industrial or municipal sites which are being used for waste treatment, storage, or disposal on a continuing basis, even if infrequently.)*

☐ 2. INACTIVE *(Those sites which no longer receive wastes.)*

☐ 3. OTHER *(specify)*: *(Those sites that include such incidents like "midnight dumping" where no regular or continuing use of the site for waste disposal has occurred.)*

B. IS GENERATOR ON SITE?

☐ 1. NO

☑ 2. YES *(specify generator's ~~four-digit SIC Code~~)*: NRC # SNM-1107

C. AREA OF SITE *(in acres)*: ~100

D. IF APPARENT SERIOUSNESS OF SITE IS HIGH, SPECIFY COORDINATES

1. LATITUDE *(deg.-min.-sec.)*:

2. LONGITUDE *(deg.-min.-sec.)*:

E. ARE THERE BUILDINGS ON THE SITE?

☐ 1. NO ☑ 2. YES *(specify)*: Fuel loading + assembly plant.

Continued From Front

IV. CHARACTERIZATION OF SITE ACTIVITY

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

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

E. SPECIFY DETAILS OF SITE ACTIVITIES AS NEEDED

V. WASTE RELATED INFORMATION

A. WASTE TYPE

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

B. WASTE CHARACTERISTICS

☐ 1. UNKNOWN ☐ 2. CORROSIVE ☐ 3. IGNITABLE ☑ 4. RADIOACTIVE ☐ 5. HIGHLY VOLATILE
☐ 6. TOXIC ☐ 7. REACTIVE ☐ 8. INERT ☐ 9. FLAMMABLE

☐ 10. OTHER *(specify)*: _____

C. WASTE CATEGORIES

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

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

a. SLUDGE	b. OIL	c. SOLVENTS	d. CHEMICALS	e. SOLIDS	f. OTHER
AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT
UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE
'X' (1) PAINT, PIGMENTS	'X' (1) OILY WASTES	'X' (1) HALOGENATED SOLVENTS	'X' (1) ACIDS	'X' (1) FLYASH	'X' (1) LABORATORY PHARMACEUT.
(2) METALS SLUDGES	(2) OTHER *(specify)*:	(2) NON-HALOGNTD. SOLVENTS	(2) PICKLING LIQUORS	(2) ASBESTOS	(2) HOSPITAL
(3) POTW		(3) OTHER *(specify)*:	(3) CAUSTICS	(3) MILLING/ MINE TAILINGS	(3) RADIOACTIVE
(4) ALUMINUM SLUDGE			(4) PESTICIDES	(4) FERROUS SMLTG. WASTES	(4) MUNICIPAL
(5) OTHER *(specify)*:			(5) DYES/INKS	(5) NON-FERROUS SMLTG. WASTES	(5) OTHER *(specify)*:
			(6) CYANIDE	(6) OTHER *(specify)*:	
			(7) PHENOLS		
			(8) HALOGENS		
			(9) PCB		
			(10) METALS		
			(11) OTHER *(specify)*		

 Continue On Page 3

Continued From Page 2

[illegible]

3. LIST SUBSTANCES OF GREATEST CONCERN [illegible]

4. ADDITIONAL COMMENTS OR NARRATIVE DESCRIPTION OF SITUATION KNOWN OR REPORTED [illegible] AT THE SITE.

Westinghouse is a generator of hazardous waste and doesn't store over than 90 days

7. HAZARD DESCRIPTION

A. TYPE OF HAZARD	B. POTENTIAL HAZARD (mark "X")	C. ALLEGED INCIDENT (mark "X")	D. DATE OF INCIDENT (mo./day/yr.)	E. REMARKS
1. NO HAZARD	X			
2. HUMAN HEALTH				
3. NON-WORKER INJURY/EXPOSURE				
4. WORKER INJURY				
5. CONTAMINATION OF WATER SUPPLY				
6. CONTAMINATION OF FOOD CHAIN				
7. CONTAMINATION OF GROUND WATER				
8. CONTAMINATION OF SURFACE WATER				
9. DAMAGE TO FLORA/FAUNA				
10. FISH KILL				
11. CONTAMINATION OF AIR				
12. NOTICEABLE ODORS				
13. CONTAMINATION OF SOIL				
14. PROPERTY DAMAGE				
15. FIRE OR EXPLOSION				
16. SPILLS/LEAKING CONTAINERS/ RUNOFF/STANDING LIQUIDS				
17. SEWER, STORM DRAIN PROBLEMS				
18. EROSION PROBLEMS				
19. INADEQUATE SECURITY				
20. INCOMPATIBLE WASTES				
21. MIDNIGHT DUMPING				
22. OTHER [illegible]				

Continued From Front

VII. PERMIT INFORMATION

A. INDICATE ALL APPLICABLE PERMITS HELD BY THE SITE.

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

B. IN COMPLIANCE?

- [x] 1. YES
- [ ] 2. NO
- [ ] 3. UNKNOWN
- 4. WITH RESPECT TO *(list regulation name & number)*: _____

VIII. PAST REGULATORY ACTIONS

- [x] A. NONE
- [ ] B. YES *(summarize below)*

IX. INSPECTION ACTIVITY *(past or on-going)*

- [ ] A. NONE
- [ ] B. YES *(complete items 1,2,3, & 4 below)*

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

X. REMEDIAL ACTIVITY *(past or on-going)*

- [ ] A. NONE
- [ ] B. YES *(complete items 1, 2, 3, & 4 below)*

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

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

EPA

POTENTIAL HAZARDOUS WASTE SITE
IDENTIFICATION AND PRELIMINARY ASSESSMENT

REGION: IV

SITE NUMBER (to be assigned by Hq): SC000010016

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

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

I. SITE IDENTIFICATION

A. SITE NAME: Westinghouse Electric

B. STREET *(or other identifier)*: P.O. Box 248

C. CITY: Hampton

D. STATE: S.C.

E. ZIP CODE: 29924

F. COUNTY NAME: Hampton

G. OWNER/OPERATOR *(if known)*

1. NAME:

2. TELEPHONE NUMBER:

H. TYPE OF OWNERSHIP

☐ 1. FEDERAL ☐ 2. STATE ☐ 3. COUNTY ☐ 4. MUNICIPAL ☒ 5. PRIVATE ☐ 6. UNKNOWN

I. SITE DESCRIPTION: 2 waste lagoons had phenols & zinc. One has been filled with soil; other no longer receives wastes. No ground H_2O monitoring.

J. HOW IDENTIFIED *(i.e., citizen's complaints, OSHA citations, etc.)*: Moffett - State

K. DATE IDENTIFIED *(mo., day, & yr.)*:

L. PRINCIPAL STATE CONTACT

1. NAME: Earl Williams, Div. Dir.

2. TELEPHONE NUMBER: (803) 758-5681

II. PRELIMINARY ASSESSMENT *(complete this section last)*

A. APPARENT SERIOUSNESS OF PROBLEM

☐ 1. HIGH ☐ 2. MEDIUM ☒ 3. LOW ☐ 4. NONE ☐ 5. UNKNOWN

B. RECOMMENDATION

☐ 1. NO ACTION NEEDED *(no hazard)*

☐ 2. IMMEDIATE SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR:
b. WILL BE PERFORMED BY:

☒ 3. SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR:
b. WILL BE PERFORMED BY: E&E

☐ 4. SITE INSPECTION NEEDED *(low priority)*

C. PREPARER INFORMATION

1. NAME: B. L. Harland E&E

2. TELEPHONE NUMBER: (404) 288-7711

3. DATE *(mo., day, & yr.)*: 9-2-81

III. SITE INFORMATION

A. SITE STATUS

☒ 1. ACTIVE *(Those industrial or municipal sites which are being used for waste treatment, storage, or disposal on a continuing basis, even if infrequently.)*

☐ 2. INACTIVE *(Those sites which no longer receive wastes.)*

☐ 3. OTHER *(specify)*: *(Those sites that include such incidents like "midnight dumping" where no regular or continuing use of the site for waste disposal has occurred.)*

B. IS GENERATOR ON SITE?

☐ 1. NO ☒ 2. YES *(specify generator's four-digit SIC Code)*: 2821

C. AREA OF SITE *(in acres)*:

D. IF APPARENT SERIOUSNESS OF SITE IS HIGH, SPECIFY COORDINATES

1. LATITUDE *(deg.-min.-sec.)*: 32° 45' 32"

2. LONGITUDE *(deg.-min.-sec.)*: 81° 05' 18"

E. ARE THERE BUILDINGS ON THE SITE?

☐ 1. NO ☒ 2. YES *(specify)*:

Continue On Reverse

Continued From Front

IV. CHARACTERIZATION OF SITE ACTIVITY

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

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

E. SPECIFY DETAILS OF SITE ACTIVITIES AS NEEDED 2 waste lagoons had phenols & Zinc. one has been filled with soil; other no longer receives wastes. No groundwater monitoring. Private drinking wells of unknown depth & construction nearby.

V. WASTE RELATED INFORMATION

A. WASTE TYPE

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

B. WASTE CHARACTERISTICS

☐ 1. UNKNOWN ☐ 2. CORROSIVE ☐ 3. IGNITABLE ☐ 4. RADIOACTIVE ☐ 5. HIGHLY VOLATILE
☒ 6. TOXIC ☐ 7. REACTIVE ☐ 8. INERT ☐ 9. FLAMMABLE

☐ 10. OTHER (specify): _____

C. WASTE CATEGORIES

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

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

a. SLUDGE	b. OIL	c. SOLVENTS	d. CHEMICALS	e. SOLIDS	f. OTHER
AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT
UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE
'X' (1) PAINT, PIGMENTS	'X' (1) OILY WASTES	'X' (1) HALOGENATED SOLVENTS	'X' (1) ACIDS	'X' (1) FLYASH	'X' (1) LABORATORY PHARMACEUT.
(2) METALS SLUDGES	(2) OTHER (specify):	(2) NON-HALOGNTD. SOLVENTS	(2) PICKLING LIQUORS	(2) ASBESTOS	(2) HOSPITAL
(3) POTW		(3) OTHER (specify):	(3) CAUSTICS	(3) MILLING/ MINE TAILINGS	(3) RADIOACTIVE
(4) ALUMINUM SLUDGE			(4) PESTICIDES	(4) FERROUS SMLTG. WASTES	(4) MUNICIPAL
(5) OTHER (specify):			(5) DYES/INKS	(5) NON-FERROUS SMLTG. WASTES	(5) OTHER (specify):
			(6) CYANIDE	(6) OTHER (specify):	
			(7) PHENOLS		
			(8) HALOGENS		
			(9) PCB		
			(10) METALS		
			(11) OTHER (specify)		

 Continue On Page 3

Continued From Page 2

V. WASTE RELATED INFORMATION *(continued)*

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

Lagoons filled and covered. No problem unless groundH2O already contaminated.

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

VI. HAZARD DESCRIPTION

A. TYPE OF HAZARD	B. POTENTIAL HAZARD *(mark 'X')*	C. ALLEGED INCIDENT *(mark 'X')*	D. DATE OF INCIDENT *(mo., day, yr.)*	E. REMARKS
1. NO HAZARD				
2. HUMAN HEALTH				
3. NON-WORKER INJURY/EXPOSURE				
4. WORKER INJURY				
5. CONTAMINATION OF WATER SUPPLY				
6. CONTAMINATION OF FOOD CHAIN				
7. CONTAMINATION OF GROUND WATER				
8. CONTAMINATION OF SURFACE WATER	X			
9. DAMAGE TO FLORA/FAUNA				
10. FISH KILL				
11. CONTAMINATION OF AIR				
12. NOTICEABLE ODORS				
13. CONTAMINATION OF SOIL				
14. PROPERTY DAMAGE				
15. FIRE OR EXPLOSION				
16. SPILLS/LEAKING CONTAINERS/ RUNOFF/STANDING LIQUIDS				
17. SEWER, STORM DRAIN PROBLEMS				
18. EROSION PROBLEMS				
19. INADEQUATE SECURITY				
20. INCOMPATIBLE WASTES				
21. MIDNIGHT DUMPING				
22. OTHER *(specify)*:				

 Continue On Reverse

Continued From Front

VII. PERMIT INFORMATION

A. INDICATE ALL APPLICABLE PERMITS HELD BY THE SITE.

SC0000/830

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

B. IN COMPLIANCE?

- [ ] 1. YES
- [ ] 2. NO
- [ ] 3. UNKNOWN

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

VIII. PAST REGULATORY ACTIONS

- [ ] A. NONE
- [ ] B. YES *(summarize below)*

IX. INSPECTION ACTIVITY *(past or on-going)*

- [ ] A. NONE
- [ ] B. YES *(complete items 1,2,3, & 4 below)*

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

X. REMEDIAL ACTIVITY *(past or on-going)*

- [ ] A. NONE
- [ ] B. YES *(complete items 1, 2, 3, & 4 below)*

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

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

Westinghouse
Electric Corporation

Chatham Center Office Building

Box 1017
Pittsburgh Pennsylvania 15230

June 8, 1981

U.S. EPA Region 4
Sites Notification
Atlanta, GA 30308

Gentlemen:

Attached find "Notification of Hazardous Waste Sites" forms for the Westinghouse facilities located at Columbia, South Carolina, Montevallo, Alabama, and Richmond, Kentucky.

Yours truly,

B A Kerns

B. A. Kerns
Manager, Environmental Control

BAK/mog

Enclosures

EPA Notification of Hazardous Waste Site

EXHIBIT "B"

United States Environmental Protection Agency Washington DC 20460

This initial notification information is required by Section 103(c) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 and must be mailed by June 9, 1981.

Please type or print in ink. If you need additional space, use separate sheets of paper. Indicate the letter of the item which applies.

810609

SCS000001024

A Person Required to Notify:

Enter the name and address of the person or organization required to notify.

SCD 047 559 331

Name: Westinghouse Electric Corporation

Street: P. O. Drawer R

City: Columbia, State: S. C. Zip Code: 29205

B Site Location:

Enter the common name (if known) and actual location of the site.

~~SCD 980555118~~

Name of Site: Westinghouse Nuclear Fuel Division

Street: Highway 48

City: Columbia County: Richland State: S. C. Zip Code: 29205

C Person to Contact:

Enter the name, title (if applicable), and business telephone number of the person to contact regarding information submitted on this form.

Name (Last, First and Title): Heath, Jim Radiological & Environmental Engr.

Phone: 803-776-2610 ext. 395

D Dates of Waste Handling:

Enter the years that you estimate waste treatment, storage, or disposal began and ended at the site.

From (Year): 1969 To (Year): 1980

E Waste Type: Choose the option you prefer to complete

Option I: Select general waste types and source categories. If you do not know the general waste types or sources, you are encouraged to describe the site in Item I—Description of Site.

General Type of Waste:
Place an X in the appropriate boxes. The categories listed overlap. Check each applicable category.

1. ☐ Organics
2. ☐ Inorganics
3. ☐ Solvents
4. ☐ Pesticides
5. ☐ Heavy metals
6. ☐ Acids
7. ☐ Bases
8. ☐ PCBs
9. ☐ Mixed Municipal Waste
10. ☐ Unknown
11. ☐ Other (Specify)

Source of Waste:
Place an X in the appropriate boxes.

1. ☐ Mining
2. ☐ Construction
3. ☐ Textiles
4. ☐ Fertilizer
5. ☐ Paper/Printing
6. ☐ Leather Tanning
7. ☐ Iron/Steel Foundry
8. ☐ Chemical, General
9. ☐ Plating/Polishing
10. ☐ Military/Ammunition
11. ☐ Electrical Conductors
12. ☐ Transformers
13. ☐ Utility Companies
14. ☐ Sanitary/Refuse
15. ☐ Photofinish
16. ☐ Lab/Hospital
17. ☐ Unknown
18. ☐ Other (Specify)

Option 2: This option is available to persons familiar with the Resource Conservation and Recovery Act (RCRA) Section 3001 regulations (40 CFR Part 261).

Specific Type of Waste:
EPA has assigned a four-digit number to each hazardous waste listed in the regulations under Section 3001 of RCRA. Enter the appropriate four-digit number in the boxes provided. A copy of the list of hazardous wastes and codes can be obtained by contacting the EPA Region serving the State in which the site is located.

F001
F003
F006
P015
U002
U134
U013

JUN 9 12 40 PM '81 ENFORCEMENT DIVISION

RECEIVED EPA/REGION IV 0001171

Form Approved
OMB No. 2000-0138

EPA Form 8900-1

F Waste Quantity:

Place an X in the appropriate boxes to indicate the facility types found at the site.

In the "total facility waste amount" space give the estimated combined quantity (volume) of hazardous wastes at the site using cubic feet or gallons.

In the "total facility area" space, give the estimated area size which the facilities occupy using square feet or acres.

Facility Type

1. ☐ Piles
2. ☐ Land Treatment
3. ☐ Landfill
4. ☐ Tanks
5. ☐ Impoundment
6. ☐ Underground Injection
7. ☒ Drums, Above Ground
8. ☐ Drums, Below Ground
9. ☐ Other (Specify) _____

Total Facility Waste Amount

cubic feet _____

gallons 5500

Total Facility Area

square feet _____

acres 1100

G Known, Suspected or Likely Releases to the Environment:

Place an X in the appropriate boxes to indicate any known, suspected, or likely releases of wastes to the environment.

☐ Known ☐ Suspected ☐ Likely ☒ None

Note: Items H and I are optional. Completing these items will assist EPA and State and local governments in locating and assessing hazardous waste sites. Although completing the items is not required, you are encouraged to do so.

H Sketch Map of Site Location: (Optional)

Sketch a map showing streets, highways, routes or other prominent landmarks near the site. Place an X on the map to indicate the site location. Draw an arrow showing the direction north. You may substitute a publishing map showing the site location.

I Description of Site: (Optional)

Describe the history and present conditions of the site. Give directions to the site and describe any nearby wells, springs, lakes, or housing. Include such information as how waste was disposed and where the waste came from. Provide any other information or comments which may help describe the site conditions.

J Signature and Title:

The person or authorized representative (such as plant managers, superintendents, trustees or attorneys) of persons required to notify must sign the form and provide a mailing address (if different than address in item A). For other persons providing notification, the signature is optional. Check the boxes which best describe the relationship to the site of the person required to notify. If you are not required to notify check "Other".

Name M. D'Amore, Plant Manager

Street P. O. Drawer R

City Columbia State S.C. Zip Code 29205

Signature M D'Amore Date 5/4/81

☐ Owner, Present
☐ Owner, Past
☐ Transporter
☐ Operator, Present
☐ Operator, Past
☐ Other

EPA

POTENTIAL HAZARDOUS WASTE SITE
FINAL STRATEGY DETERMINATION

REGION	SITE NUMBER
IV	SCD001001016

File this form in the regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force *(EN-335)*; 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME	B. STREET	
Westinghouse Electric	P.O. Box 248	
C. CITY	**D. STATE**	**E. ZIP CODE**
Hampton	S.C.	29924

II. FINAL DETERMINATION

Indicate the recommended action*(s)* and agency*(ies)* that should be involved by marking 'X' in the appropriate boxes.

RECOMMENDATION	MARK 'X'	ACTION AGENCY: EPA	STATE	LOCAL	PRIVATE
A. NO ACTION NEEDED	X				
B. REMEDIAL ACTION NEEDED, BUT NO RESOURCES AVAILABLE *(If yes, complete Section III.)*					
C. REMEDIAL ACTION *(If yes, complete Section IV.)*					
D. ENFORCEMENT ACTION *(If yes, specify in Part E whether the case will be primarily managed by the EPA or the State and what type of enforcement action is anticipated.)*					

E. RATIONALE FOR FINAL STRATEGY DETERMINATION

Based on E&E report of April 16, 1981.

F. IF A CASE DEVELOPMENT PLAN HAS BEEN PREPARED, SPECIFY THE DATE PREPARED *(mo., day, & yr.)*	G. IF AN ENFORCEMENT CASE HAS BEEN FILED, SPECIFY THE DATE FILED *(mo., day, & yr.)*

H. PREPARER INFORMATION

1. NAME	2. TELEPHONE NUMBER	3. DATE *(mo., day, & yr.)*
Ron W. Jorgen	257-2234	4/30/81

III. REMEDIAL ACTIONS TO BE TAKEN WHEN RESOURCES BECOME AVAILABLE

List all remedial actions, such as excavation, removal, etc. to be taken as soon as resources become available. See instructions for a list of Key Words for each of the actions to be used in the spaces below. Provide an estimate of the approximate cost of the remedy.

A. REMEDIAL ACTION	B. ESTIMATED COST	C. REMARKS
	$	
	$	
	$	
	$	
	$	
	$	
	$	
	$	
D. TOTAL ESTIMATED COST $		

Continue On Reverse

Continued From Front

IV. REMEDIAL ACTIONS

A. SHORT TERM/EMERGENCY ACTIONS *(On Site and Off-Site)*: List all emergency actions taken or planned to bring the site under immediate control, e.g., restrict access, provide alternate water supply, etc. See instructions for a list of Key Words for each of the actions to be used in the spaces below.

1. ACTION	2. ACTION START DATE *(mo,day,&yr)*	3. ACTION END DATE *(mo,day,&yr)*	4. ACTION AGENCY *(EPA, State, Private Party)*	5. COST	6. SPECIFY 311 OR OTHER ACTION; INDICATE THE MAGNITUDE OF THE WORK REQUIRED.
				$	
				$	
				$	
				$	
				$	
				$	

B. LONG TERM STRATEGY *(On Site and Off-Site)*: List all long term solutions, e.g., excavation, removal, ground water monitoring wells, etc. See instructions for a list of Key Words for each of the actions to be used in the spaces below.

1. ACTION	2. ACTION START DATE *(mo,day,&yr)*	3. ACTION END DATE *(mo,day,&yr)*	4. ACTION AGENCY *(EPA, State Private Party)*	5. COST	6. SPECIFY 311 OR OTHER ACTION; INDICATE THE MAGNITUDE OF THE WORK REQUIRED.
				$	
				$	
				$	
				$	
				$	
				$	

C. MANHOURS AND COST BY ACTION AGENCY

1. ACTION AGENCY	2. TOTAL MAN-HOURS FOR REMEDIAL ACTIVITIES	3. TOTAL COST FOR REMEDIAL ACTIVITIES
a. EPA		$
b. STATE		$
c. PRIVATE PARTIES		$
d. OTHER *(specify)*:		$