Georgia Power Company
40 Inverness Center Parkway
Post Office Box 1295
Birmingham, Alabama 35201
Telephone 205 877-7279

J. T. Beckham, Jr.
Vice President—Nuclear
Hatch Project

Georgia Power
the southern electric system

HL-2227
0003084

June 11, 1992

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

PLANT HATCH - UNITS 1 and 2
NRC DOCKETS 50-321, 50-366
OPERATING LICENSES, DPR-57, NPF-5
NPDES PERMIT RENEWAL APPLICATION

Gentlemen:

In accordance with Plant Hatch Units 1 and 2 Environmental Technical Specifications Section 5.6.3.2, enclosed is a copy of the renewal application for the National Pollutant Discharge Elimination System Permit No. GA 0004120. This permit renewal application has been submitted to the State of Georgia, Department of Natural Resources, Environmental Protection Division.

If you have any questions in this regard, please contact this office.

Sincerely,

J. T. Beckham, Jr.

SRM/ld

Enclosure: NPDES Permit Renewal Application

cc: Georgia Power Company (w/o encl)
Mr. H. L. Sumner, General Manager - Nuclear Plant
NORMS

U.S. Nuclear Regulatory Commission, Washington, D.C. (w/o encl)
Mr. K. Jabbour, Licensing Project Manager - Hatch

U.S. Nuclear Regulatory Commission, Region II (w/o encl)
Mr. S. D. Ebneter, Regional Administrator
Mr. L. D. Wert, Senior Resident Inspector - Hatch

C001

Georgia Power Company
333 Piedmont Avenue
Atlanta, Georgia 30308
Telephone 404 526 6526

Mailing Address
Post Office Box 4545
Atlanta, Georgia 30302

C. M. Hobson
Manager
Environmental Affairs

May 29, 1992

STEAM-ELECTRIC GENERATING FACILITIES
Applications for Permit Renewal

Mr. David M. Word
Chief, Water Protection Branch
Environmental Protection Division
205 Butler Street, SE - Room 1070
Atlanta, Georgia 30334

Dear Mr. Word:

Attached are our completed Forms 1 and 2C for the renewal of the following NPDES permits.

PLANT	ARKWRIGHT	- NPDES	PERMIT	NO.	GA0026069
PLANT	BOWEN	- NPDES	PERMIT	NO.	GA0001449
PLANT	BRANCH	- NPDES	PERMIT	NO.	GA0026051
PLANT	HAMMOND	- NPDES	PERMIT	NO.	GA0001457
PLANT	HATCH	- NPDES	PERMIT	NO.	GA0004120
PLANT	MCDONOUGH/ATKINSON	- NPDES	PERMIT	NO.	GA0001431
PLANT	MCMANUS	- NPDES	PERMIT	NO.	GA0003794
PLANT	MITCHELL	- NPDES	PERMIT	NO.	GA0001465
PLANT	WANSLEY	- NPDES	PERMIT	NO.	GA0026778
PLANT	YATES	- NPDES	PERMIT	NO.	GA0001473

The following supporting documentation is also attached:

1. Evaluations demonstrating that the ash treatment systems of the above referenced plants have adequate storage volume to meet EPA's co-treatment guidelines through the next permit term unless otherwise noted;

2. Line drawings showing the water flow through the subject plants;

3. Site maps showing the location of process waste water discharges;

4. EPA Form 2F, Application for Permit to Discharge Storm Water Discharges Associated with Industrial Activity;

5. Site drainage maps in accordance with Form 2F, Section III;

6. A general narrative description which details material handling practices and non-structural controls as required by Form 2F, Section IV.B. & IV.C.;

7. Drawings which contain other storm water discharge information required by Form 2F;

8. Descriptions of the evaluation of non-storm water discharges required by Form 2F, Section V.B.;

9. Chemical analytical data for representative storm water discharges collected at the referenced plants and;

10. Descriptions of storm events sampled and methods of flow measurement as required by Form 2F, VII.D;

11. Applications for Sludge Management Plans for Plants Branch and Hatch;

12. Schedules for construction of treatment facilities and other waste water related retrofits at Plants Bowen and Branch which have been previously discussed with the Division in anticipation of water quality based permit limitations.

In reference to the changes in discharges at Plant Branch, Georgia Power requests that a dilution factor of 2.5 be applied to discharges directed to Lake Sinclair because the use of a 7Q10 flow is inappropriate for an impoundment.

Georgia Power Company requests that the thermal variance provisions (thermal mixing zones) granted under Section 316(a) of the Clean Water Act and Section 391-3-6-.03(10) of the Georgia Rules and Regulations for Water Quality Control for the following generating facilities be continued unchanged in the reissued permits:

PLANT	ARKWRIGHT	-	NPDES	PERMIT	NO. GA0026069
PLANT	HAMMOND	-	NPDES	PERMIT	NO. GA0001457
PLANT	MCDONOUGH/ATKINSON	-	NPDES	PERMIT	NO. GA0001431
PLANT	MCMANUS	-	NPDES	PERMIT	NO. GA0003794
PLANT	MITCHELL	-	NPDES	PERMIT	NO. GA0001465
PLANT	YATES	-	NPDES	PERMIT	NO. GA0001473

The basis of our request is: (a) plant operating conditions and load factors which would affect the thermal component of the discharges are unchanged and are expected to remain so for the term of the reissued permits, (b) there are no changes, to the Company's knowledge, to discharges from other sources in the plant site area which would interact

with the thermal discharges, and (c) there are no changes, to the Company's knowledge, to the biotic community of the receiving water bodies which would impact the previous 316 determinations.

We also request a variance in accordance with the above referenced state and federal regulations for our Plant Branch - NPDES No. GA0026051. Attached to Plant Branch's application is a report of the hydrothermal and biological studies which we have conducted on Lake Sinclair to support our variance request which is detailed in the report.

In accordance with the provisions of 40 CFR 122.21.(g)(7) we collected quantitative data on storm water outfalls which we considered to be representative for that plant. We consider these outfalls to be substantially identical in the nature of their effluent with all other storm water discharges associated with industrial activity at that plant. The quantitative data from these representative outfalls is considered applicable to all storm water outfalls for each plant. We have also submitted quality assurance/quality control sample data for the storm water chemical analyses.

We have been unable to collect the quantitative data required by EPA Form 2F for storm water outfalls at Plant McManus because of technical difficulties with the automatic sampling equipment and the timely occurrence of appropriate rainfall events. Storm water samples were collected at Plant Wansley on May 16, 1992. We will provide you with the remainder of the required data as soon as it is available.

We request that provisions concerning analytical variability be included in each permit and propose the following language:

(a) If the results for a given sample are such that a parameter is not detected at or above the method detection limit, a value of zero will be reported for that sample and the detection limit will also be reported. Such sample shall be deemed to be in compliance with the permit limit. (EPD to specify required detection limits)

(b) The Division recognizes the inherent analytical variability in approved test methods and procedures and further agrees that such issues can be raised by the permittee as a defense in an enforcement action.

Given the extremely low water quality based effluent limitations being calculated for some of the permits, the determination of compliance or noncompliance with those limitations could be within the error bounds (analytical

variability) of approved analytical methods. We point out that these limitations are calculated based on "average" flows, both discharge and receiving stream. An "average", by definition, is a single value that summarizes a set of values known to vary significantly over time. Therefore, variability is introduced in the setting of the limitation in the first place. Obtaining a grab sample of an effluent, although it may be representative of the nature of the discharge at the time of sampling, may not be taken during "average" conditions on which the limitation was based.

It is, therefore, important that such variability be considered both during the setting of effluent limitations and in the event that an enforcement action for an alleged violation should occur. The Company is not seeking to avoid enforcement. Rather, we only wish to be allowed to present such matters to EPD for their consideration and exercise of regulatory discretion in appropriate cases.

We also request that the provisions provided by 40CFR122.41(l)(6)(iii) regarding waiver, on a case-by-case basis, of 5-day written reports be incorporated into the permit. Specifically, that provision states "The Director may waive the written report on a case-by-case basis for reports under paragraph (l)(6)(ii) of this section if the oral report has been received within 24 hours." The Division has followed this practice of waiving written reports in the past on a case-by-case basis if proper oral notification was made. However, if this provision is not contained in our permits, an issue could be raised regarding permit compliance, even if the Division should wish to waive the written report. This could pose an unnecessary administrative burden on both the Company and the Division.

We recognize that the Division does not have a large staff to handle its heavy workload and that often draft permits cannot be circulated until a significant amount of time has elapsed from EPD's receipt of the permit application. For that reason, the time period for taking comments and incorporating them into a draft permit is often very short. We believe that communication with the Division early in the process is the preferable way to proceed. There may well be conceptual issues that arise in advance of the actual drafting of the permit which could benefit from discussion between Georgia Power and the Division. For the foregoing reasons we are ready to discuss permit issues with the Division as soon as the Division feels it is in a position to do so, even if a draft permit has not yet been written.

If you have questions or comments, please advise.

Yours very truly,

C. M. Hobson

GNG:gg
Attachments

xc: Mr. Lawrence W. Hedges, Program Manager, Industrial Waste Water Program

bc: D. H. Evans
K. E. Adams
R. L. Boyer
J. L. Conn
C. L. Donaldson, Jr.
J. T. Beckham With Attachment(Hatch)
A. R. James " (Arkwright)
R. E. Leggett " (Bowen)
K. M. Stefanini " (Branch)
P. P. Boren " (Hammond)
H. L. Sumner " (Hatch)
J. M. Mostellar " (McDonough/Atkinson)
W. L. Dunlap, Jr. " (McManus)
J. H. Jones " (Mitchell)
W. C. Sewell " (Wansley)
M. J. Knowles " (Yates)
W. C. Carr " (Hatch)
W. C. Philips " (All except Hatch)
A. P. Reeves " (All except Hatch)
T. C. Moorer " (Hatch)
H. A. Rosenzweig
J. B. Burke
K. A. N. Bulleit
O. C. Rittenhouse
M. C. Meeks
F. L. Cox
J. E. Edinger " (Branch)
R. G. King " (Branch)
POW- 07-01-01-00 (Arkwright)
07-01-02-00 (Bowen)
07-01-03-00 (Branch)
07-01-04-00 (Hammond)
07-01-05-00 (McDonough/Atkinson)
07-01-06-00 (McManus)
07-01-07-00 (Mitchell)
07-01-09-00 (Wansley)
07-01-11-00 (Yates)
07-01-12-00 (Hatch)

ENCLOSURE 1

EPA Forms 1, 2C, and 2F

ATTACHMENT 1

EPA Form 1

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. 2040-0086 Approval expires 5-31-92

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 | D

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

III. NAME OF FACILITY

1 SKIP: Edwin I. Hatch Nuclear Plant

IV. FACILITY CONTACT

A. NAME & TITLE (last, first, & title)	B. PHONE (area code & no.)
2 Hobson C. M., Mgr., Environmental Affairs	404 526 7778

V. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX

3 P. O. Box 4545

B. CITY OR TOWN	C. STATE	D. ZIP CODE
4 Atlanta	GA	30302

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER

5 P. O. Box 4545

B. COUNTY NAME

Appling

C. CITY OR TOWN	D. STATE	E. ZIP CODE	F. COUNTY CODE (if known)
6 Baxley	GA	31513	

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

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

A. FIRST	B. SECOND
4911 (specify) Generation of Electricity	(specify)
C. THIRD	**D. FOURTH**
(specify)	(specify)

VIII. OPERATOR INFORMATION

A. NAME: Georgia Power Company

B. Is the name listed in Item VIII-A also the owner? ☒ 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 404 526 6526

E. STREET OR P.O. BOX: P. O. Box 4545

F. CITY OR TOWN: Atlanta

G. STATE: GA

H. ZIP CODE: 30302

IX. INDIAN LAND
Is the facility located on Indian lands? ☐ YES ☒ NO

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Water): GN GA0004120

D. PSD (Air Emissions from Proposed Sources): GP None

B. UIC (Underground Injection of Fluids): None

E. OTHER (specify): G (specify)

C. RCRA (Hazardous Wastes): None

E. OTHER (specify): G (specify)

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

XII. NATURE OF BUSINESS (provide a brief description)

Generation of Electricity using Nuclear Power

** Jointly owned by Georgia Power Company, Oglethorpe Power Corporation, Municipal Electric Authority of Georgia, and the City of Dalton, Georgia.

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
J. T. Beckham, Jr. Vice President - Plant Hatch	J T Beckham Jr	5/29/92

COMMENTS FOR OFFICIAL USE ONLY

C

EPA Form 3510-1 (8-90)

ATTACHMENT 2

EPA Form 2C

Please print or type in the unshaded areas only.

FORM 2C NPDES

EPA

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.	
01-04	31	56	02N	082	20	39E	Altamaha 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	
01	Unit 1 Final Plant Discharge	15,900 GPM	50,000 GPM Maximum	2F	4A
01 A	Unit 1 Cooling Tower Blowdown	15,825 GPM	34,000 GPM Maximum	2F	4A
01 B	Unit 1 Cooling Water Overflow		*Intermittent Flow	2F	4A
01 C	Unit 1 Auxiliary Non-contact Cooling Water	22,000 GPM	34,000 GPM Maximum	4A	
01 D	Diesel Generator Non-contact Cooling Water (1A, 1C, Diesel Generators)	1,400 GPM	1,400 GPM Maximum	4A	
01 D	Diesel Generator Non-contact Cooling Water (1B, 2A, 2C Diesel Generators)		* Intermittent Flow	4A	

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

Continued on next page
CONTINUE ON REVERSE

Please print or type in the unshaded areas only.

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

OMB No. 2040-0086
Approval expires 7-31-88

FORM 2C NPDES

EPA

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

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A. OUTFALL NUMBER (list)	B. LATITUDE			C. LONGITUDE			D. RECEIVING WATER (name)
	1. DEG.	2. MIN.	3. SEC.	1. DEG.	2. MIN.	3. SEC.	
01-04	31	56	02N	082	20	39E	Altamaha 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	
01 E	Unit 1 Low Volume Waste		* Intermittent Flow	4A	
01 F	Sewage Treatment Plant	8 GPM	50 GPM Maximum	2F, 3A	4A
01 G	Low Volume Wastes (Makeup Demineralizer/ Neutralization Tank)		* Intermittent Flow	4A	
01 H	Low Volume Wastes (Pressure Filter Backwash)		* Intermittent Flow	4A	
01 I	Unit 1 Cooling Tower Basin Drains		* Intermittent Flow	2F	4A
02	Unit 2 Final Plant Discharge	8000 GPM	50,000 GPM Maximum	2F	4A

OFFICIAL USE ONLY (effluent guidelines sub-categories)

Continued on next page
CONTINUE ON REVERSE

Please print or type in the unshaded areas only.

FORM 2C NPDES

EPA

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.	
01-04	31	56	02N	082	20	39E	Altamaha 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	
02 A	Unit 2 Cooling Tower Blowdown	8000 GPM	34,000 GPM Maximum		
02 B	Unit 2 Cooling Tower Basin Overflow to Storm Drains		* Intermittent Flow	2F	4A
02 C	Unit 2 Cooling Water Overflow		* Intermittent Flow	2F	4A
02 D	Unit 2 Auxiliary Non-contact Cooling Water	21,250 GPM	34,000 GPM Maximum	4A	
02 E	Unit 2 Low Volume Waste (Liquid Radwaste)		* Intermittent Flow	4A	
03	Intake Screen Backwash		* Intermittent Flow	2F	4A

OFFICIAL USE ONLY (effluent guidelines sub-categories)

CONTINUE ON REVERSE
Continued on next page

Please print or type in the unshaded areas only.

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

OMB No. 2040-0086
Approval expires 7-31-88

FORM 2C NPDES

EPA

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 1. DEG.	2. MIN.	3. SEC.	C. LONGITUDE 1. DEG.	2. MIN.	3. SEC.	D. RECEIVING WATER (name)
01-04	31	56	02N	082	20	39E	Altamaha 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. OUT-FALL NO (list)	2. OPERATION(S) CONTRIBUTING FLOW a. OPERATION (list)	b. AVERAGE FLOW (include units)	3. TREATMENT a. DESCRIPTION	b. LIST CODES FROM TABLE 2C-1	
03 A	Intake Strainer Backwash		* Intermittent Flow	4A	
04	Chiller Water Blowdown/ Draining		* Intermittent Flow	4A	

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 a. DAYS PER WEEK (specify average)	3. FREQUENCY b. MONTHS PER YEAR (specify average)	4. FLOW a. FLOW RATE (in mgd) 1. LONG TERM AVERAGE	4. FLOW a. FLOW RATE (in mgd) 2. MAXIMUM DAILY	4. FLOW b. TOTAL VOLUME (specify with units) 1. LONG TERM AVERAGE	4. FLOW b. TOTAL VOLUME (specify with units) 2. MAXIMUM DAILY	4. FLOW c. DURATION (in days)
01 B	Unit 1 Cooling Water Overflow							
01 D	Diesel Generator Non-contact Cooling Water (1B, 2A, 2C)		*	See Attached Table				
01 E	Low Volume Waste (Liquid Radwaste Unit 1)							
01 G	Low Volume Wastes (Makeup Demineralizer)							

III. 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 (go 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 level of production, expressed in the terms and units used in the applicable effluent guideline, and indicate the affected outfalls.

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

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 a. NO.	2. AFFECTED OUTFALLS b. SOURCE OF DISCHARGE	3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATE a. REQUIRED	4. FINAL COMPLIANCE DATE b. PROJECTED

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

 Continued on next page CONTINUE ON PAGE 3

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 a. DAYS PER WEEK (specify average)	3. FREQUENCY b. MONTHS PER YEAR (specify average)	4. FLOW a. FLOW RATE (in mgd) 1. LONG TERM AVERAGE	4. FLOW a. FLOW RATE (in mgd) 2. MAXIMUM DAILY	4. FLOW b. TOTAL VOLUME (specify with units) 1. LONG TERM AVERAGE	4. FLOW b. TOTAL VOLUME (specify with units) 2. MAXIMUM DAILY	4. FLOW c. DURATION (in days)
01 H	Low Volume Waste (Pressure Filter Backwash)		*	See Attached Table				
01 I	Unit 1 Cooling Tower Basin Drain							
02 B	Unit 2 Cooling Tower Basin Overflow to Storm Drains							
02 C	Unit 2 Cooling Water Overflow							

III. 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 (go 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 level of production, expressed in the terms and units used in the applicable effluent guideline, and indicate the affected outfalls

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

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 a. NO.	2. AFFECTED OUTFALLS b. SOURCE OF DISCHARGE	3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATE a. REQUIRED	4. FINAL COMPLIANCE DATE b. PROJECTED

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

Continued on next page CONTINUE ON PAGE 3

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	
02 E	Unit 2 Low Volume Waste (Liquid Radwaste)			* See Attached Table				
03	Intake Screen Backwash							
03 A	Intake Strainer Backwash							
04	Chiller Water Blowdown/ Draining							

III. 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 *(go 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 level of production, expressed in the terms and units used in the applicable effluent guideline, and indicate the affected outfalls.

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

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

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

CONTINUED FROM PAGE 2

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 seperate 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 be 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 your possession.

1. POLLUTANT	2. SOURCE	1. POLLUTANT	2. SOURCE
None			

VI. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

Is any pollutant listed in Item V-C a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

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

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)*

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)
Alabama Power Company General Test Laboratory	Building No 8, P. O. Box 2641 Birmingham, AL 35291	(205) 664-6182	All except pH, Temperature, Chlorine

IX. CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. NAME & OFFICIAL TITLE (type or print)	B. PHONE NO. (area code & no.)
J. T. Beckham, Jr. Vice President - Plant Hatch	(205) 877-7279
C. SIGNATURE: J. T. Beckham Jr.	D. DATE SIGNED: 5/29/92

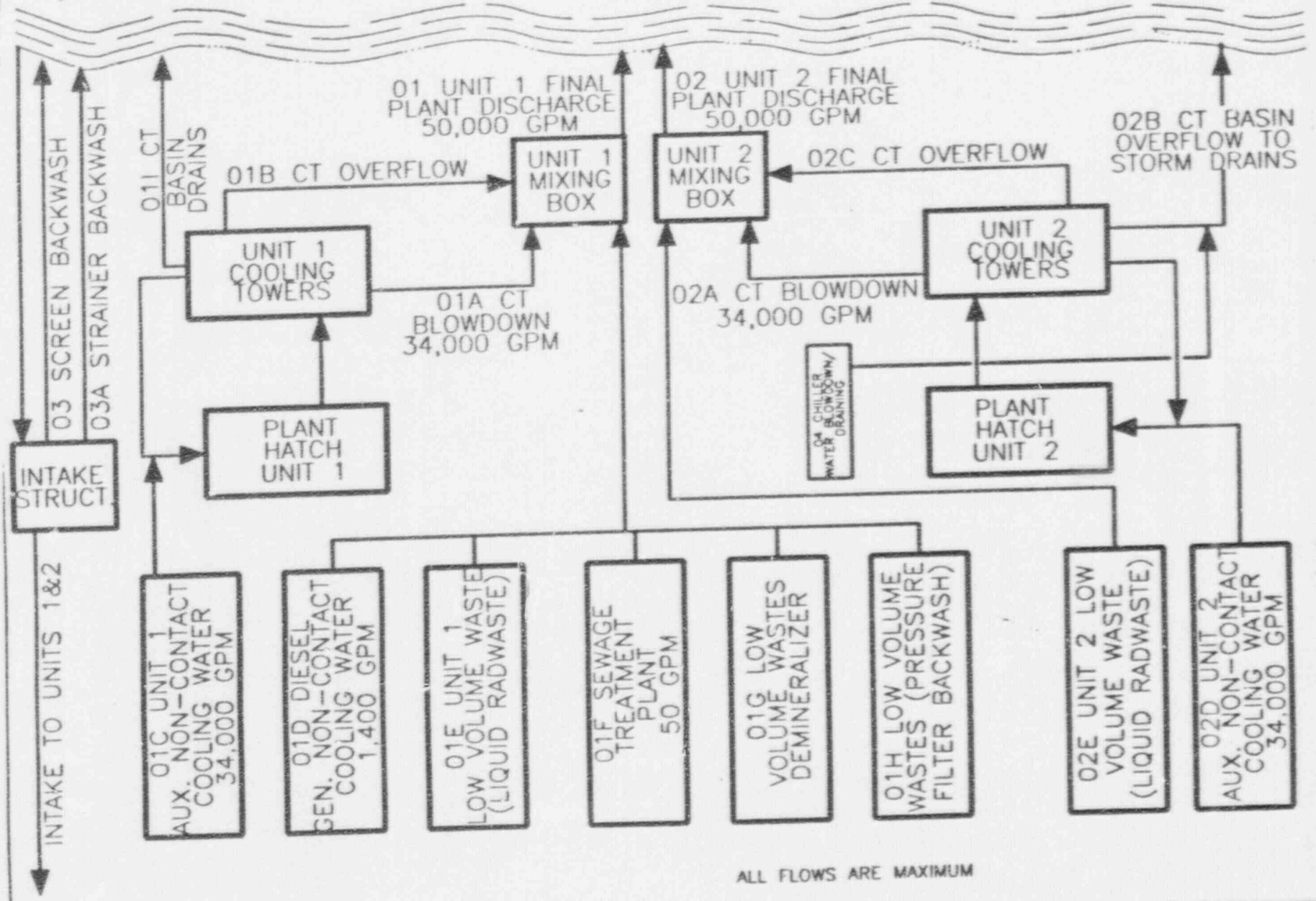
EPA FORM 2C

SECTION II. A

FLOW DIAGRAM

GEORGIA POWER COMPANY
PLANT HATCH
NPDES PERMIT NO. GA0004120

5/20/92 J.W.S.
HATCH.DWG



ALL FLOWS ARE MAXIMUM

EPA FORM 2C SECTION II. C

INTERMITTENT FLOW TABLE

E. I. Hatch Nuclear Plant
NPDES Permit No. GA0004120

Intermittent Flow Table
EPA Form 2C Section II.C

Outfall	Description of Intermittent Flow
01B - Unit 1 Cooling Water Overflow	This point is defined in the existing NPDES Permit as OSN01B and is utilized periodically in lieu of the blowdown valve to control the level in the Unit 1 cooling tower basin. The discharge from this point is sampled for the same parameters as Unit 1 cooling tower blowdown (OSN 1A) when chemical treatment is performed. Average flow is 15,825 gpm when in service.
01D - Diesel Generator Non-contact Cooling Water (1B, 2A 2C Diesel Generators)	Discharge from this OSN occurs only when diesel generators are operated or during certain test operations. Flow is approximately 2100 gpm and occurs for approximately 5 hours every 14 days.
01E - Unit 1 Low Volume Waste (Liquid Radwaste)	Liquid radwaste is released on a batch basis. The frequency of release is variable and depends on radwaste system operation frequency. Average flow is 65 gpm (100 gpm maximum); duration is normally 2 hours per batch.
01G - Low Volume Waste (Makeup Demineralizer/ Neutralization Tank)	Discharge from the makeup demineralizer occurs on a batch basis. The frequency of release is dependent on operation of the demineralizers. Average flow is 320 gpm (650 gpm maximum); duration of discharge is normally 1.5 hours per event.
01H - Low Volume Waste (Pressure Filter Backwash)	Discharge from the pressure filters occurs on a per backwash basis. The frequency of release is dependent on operation of the pressure filter system but is generally once per 10 days. Average flow is 500 gpm (700 gpm maximum); duration of discharge is normally 0.5 hours.

E. I. Hatch Nuclear Plant
NPDES Permit No. GA0004120

Intermittent Flow Table
EPA Form 2C Section II.C

Outfall	Description of Intermittent Flow
01I - Unit 1 Cooling Tower Basin Drains	The Unit 1 cooling tower basin drains are utilized during outages to drain the cooling tower system to support outage related cooling tower maintenance. EPD approval has always been obtained prior to draining. This new OSN is provided to eliminate the need for prior EPD approval of this outage related operation. The discharge volume is approximately 3.5 million gallons discharged over a 48 hour period. The discharge will be sampled for FAC, TRC, Zn, Cr, and pH prior to discharge. Results will be reported in the quarterly Operations Monitoring Report.
02B - Unit 2 Cooling Tower Basin Overflow to Storm Drains	The Unit 2 cooling tower basin overflow to storm drains is utilized during outages to drain the Unit 2 cooling tower system. This point is currently permitted as OSN 02B. The discharge volume is approximately 3.5 million gallons discharged over a 48 hour period.
02C - Unit 2 Cooling Water Overflow	This point is defined in the existing NPDES Permit as OSN02C and is utilized periodically in lieu of the blowdown valve to control the level in the Unit 2 cooling tower system. The discharge from this point is sampled for the same parameters as the Unit 2 cooling tower blowdown (OSN02A) when chemical treatment is performed. Average flow is approximately 8000 gpm when in service.
02E - Unit 2 Low Volume Waste (Liquid Radwaste)	Liquid radwaste is released on a batch basis. The frequency of release is variable and depends on radwaste system operation frequency. Average flow is 65 gpm (100 gpm maximum); duration is normally 2 hours per batch.
03 - Intake Screen Backwash	This point is defined in the existing NPDES Permit as OSN03. The intake screens are backwashed approximately once per shift. The average flow is 412 gpm (500 gpm maximum). Duration of backwash varies but is generally less than 15 minutes.

E. I. Hatch Nuclear Plant
NPDES Permit No. GA0004120

Intermittent Flow Table
EPA Form 2C Section II.C

Outfall	Description of Intermittent Discharge
03A - Intake Strainer Backwash	The Plant Service Water intake lines are equipped with strainers to remove small debris entrained in the water by pump operation. Each strainer is backwashed with service water approximately once per shift at a flow of approximately 500 gpm. The discharge from the strainer backwash is routed through a 12 inch line into a stillwell area on the downstream side of the intake structure where it is ultimately discharged to the Altamaha River.
04 - Chiller Water Blowdown/ Draining	This point is defined in the existing permit as OSN04 - 2P65 Chiller Water Blowdown. The point is currently permitted to receive blowdown from the 2P65 chiller only. EPD approval has been obtained in the past for draining this and other chillers containing sodium nitrite as a corrosion inhibitor. Concentrations of nitrite in the system are maintained within a range of 500 - 2000 ppm. The maximum drainage flow rate is 65 gpm. Draining of these systems occurs on an infrequent basis and is normally associated with maintenance operations. The revision to this OSN is provided to eliminate the need for prior EPD approval of this operation. Documentation of each draining event will be included with the quarterly Operations Monitoring Report submittal.

EPA FORM 2C SECTION V

INTAKE AND EFFLUENT CHARACTERISTICS

E. I. HATCH NUCLEAR PLANT

UNIT 1

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets *(use the same format)* instead of completing these pages. SEE INSTRUCTIONS.

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

Form Approved. OMB No. 2040-0086. Approval expires 7-31-88

OUTFALL NO. 01

V. INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)*

PART A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (2) MASS	d. NO. OF ANALYSES	3. UNITS (specify if blank) a. CONCENTRATION	3. UNITS b. MASS	4. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	4. INTAKE a. LONG TERM AVERAGE VALUE (2) MASS	4. INTAKE b. NO. OF ANALYSES
a. Biochemical Oxygen Demand (BOD)	5.	810.3					1	mg/L	lb/day	4.	1899.	1
b. Chemical Oxygen Demand (COD)	96.	15559.					1	mg/L	lb/day	13.	6171.	1
c. Total Organic Carbon (TOC)	9.549	1548.					1	mg/L	lb/day	4.601	2184.	1
d. Total Suspended Solids (TSS)	28.	4538.					1	mg/L	lb/day	19.	9019.	1
e. Ammonia (as N)	0.111	17.9					1	mg/L	lb/day	0.087	41.3	1
f. Flow	VALUE 14,000.		VALUE		VALUE 13,500.		8	GPM		VALUE 39,541.7		
g. Temperature (winter)	VALUE N/A		VALUE		VALUE N/A			°C		VALUE N/A		
h. Temperature (summer)	VALUE 26.1		VALUE		VALUE 25.3		8	°C		VALUE 16.1		8
i. pH	MINIMUM 7.41	MAXIMUM 7.76	MINIMUM	MAXIMUM			8	STANDARD UNITS				

PART B - Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X" a. BELIEVED PRESENT	2. MARK "X" b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE b. NO. OF ANALYSES
a. Bromide (24959-67-9)		X	0.29	47.					1	mg/L	lb/day	0.01	4.74	1
b. Chlorine, Total Residual		X	<0.01	<1.62					8	mg/L	lb/day	0.01	4.74	8
c. Color	X		96						1	PCU		48		1
d. Fecal Coliform	X		30						1	col/ 100 ml		20		1
e. Fluoride (16984-48-8)	X		0.26	42.1					1	mg/L	lb/day	0.11	52.3	1
f. Nitrate-Nitrite (as N)	X		0.79	128					1	mg/L	lb/day	0.33	156.7	1

CONTINUE ON REVERSE

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X' a. BELIEVED PRESENT	2. MARK 'X' b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	3. EFFLUENT c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	3. EFFLUENT c. LONG TERM AVRG. VALUE (if available) (2) MASS	3. d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (2) MASS	5. b. NO. OF ANALYSES
g. Nitrogen, Total Organic (as N)	X		0.69	111.8					1	mg/L	lb/day	0.35	166.1	1
h. Oil and Grease	X		1.3	210.7					1	mg/L	lb/day	4.9	2326	1
i. Phosphorus (as P), Total (7723-14-0)	X		0.105	17.0					1	mg/L	lb/day	0.054	25.6	1
j. Radioactivity														
(1) Alpha, Total	X		0.4						1	pC1/L		1.1		1
(2) Beta, Total	X		7.7						1	pC1 /L		0.0		1
(3) Radium, Total				N/A										
(4) Radium 226, Total				N/A										
k. Sulfate (as SO_4) (14808-79-8)	X		11.7	1896.2					1	mg/L	lb/day	6.0	2848.0	1
l. Sulfide (as S)		X	<0.0005	<0.81					1	mg/L	lb/day	<0.005	<2.4	1
m. Sulfite (as SO_3) (14265-46-3)														
n. Surfactants		X	<0.01	<1.62					1	mg/L	lb/day	0.03	14.2	1
o. Aluminum, Total (7429-90-5)	X		3.35	542.9					1	mg/L	lb/day	1.73	821.2	1
p. Barium, Total (7440-39-3)	X		0.07	11.3					1	mg/L	lb/day	0.04	18.9	1
q. Boron, Total (7440-42-8)	X		0.02	3.2					1	mg/L	lb/day	0.06	28.5	1
r. Cobalt, Total (7440-48-4)		X	<0.01	< 62					1	mg/L	lb/day	<0.01	<4.74	1
s. Iron, Total (7439-89-6)	X		3.94	638.6					1	mg/L	lb/day	1.97	935.	1
t. Magnesium, Total (7439-95-4)	X		2.78	450.5					1	mg/L	lb/day	1.51	716.0	1
u. Molybdenum, Total (7439-98-7)		X	<0.01	<1.62					1	mg/L	lb/day	<0.01	<4.74	1
v. Manganese, Total (7439-96-5)	X		0.10	16.2					1	mg/L	lb/day	0.06	28.5	1
w. Tin, Total (7440-31-5)		X	<0.01	<1.62					1	mg/L	lb/day	<0.01	<4.74	1
x. Titanium, Total (7440-32-6)	X		0.08	12.96					1	mg/L	lb/day	0.05	23.73	1

EPA I.D. NUMBER (copy from Item 1 of Form 1)	OUTFALL NUMBER
	01

Form Approved
OMB No. 2040-0086
Approval expires 7-31-88

CONTINUED FROM PAGE 3 OF FORM 2-C

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a *(secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions)*, mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. However, mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table *(all 7 pages)* for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)	X		X	<0.03	<4.86					1	mg/L	lb/day	<0.03	<4.24	1
2M. Arsenic, Total (7440-38-2)	X		X	<0.005	<0.81					1	mg/L	lb/day	<0.005	<2.37	1
3M. Beryllium, Total, 7440-41-7)	X		X	<0.01	<1.62					1	mg/L	lb/day	<0.01	<4.74	1
4M. Cadmium, Total (7440-43-9)	X		X	<0.01	<1.62					1	mg/L	lb/day	<0.01	<4.74	1
5M. Chromium, Total (7440-47-3)	X		X	<0.01	<1.62					1	mg/L	lb/day	<0.01	<4.74	1
6M. Copper, Total (7440-50-8)	X		X	<0.02	<3.24					1	mg/L	lb/day	<0.02	<9.49	1
7M. Lead, Total (7439-92-1)	X		X	<0.01	<1.62					1	mg/L	lb/day	<0.01	<4.74	1
8M. Mercury, Total (7439-97-6)	X		X	<0.0002	<0.03					1	mg/L	lb/day	<0.0002	<0.09	1
9M. Nickel, Total (7440-02-0)	X		X	<0.02	<3.24					1	mg/L	lb/day	<0.02	<9.49	1
10M. Selenium, Total (7782-49-2)	X		X	<0.005	<0.81					1	mg/L	lb/day	<0.005	<2.37	1
11M. Silver, Total (7440-22-4)	X		X	<0.01	<1.62					1	mg/L	lb/day	<0.01	<4.74	1
12M. Thallium, Total (7440-28-0)	X		X	<0.05	8.10					1	mg/L	lb/day	<0.03	<4.24	1
13M. Zinc, Total (7440-66-6)	X	X		0.03	4.86					1	mg/L	lb/day	0.02	9.49	1
14M. Cyanide, Total (57-12-5)	X		X	<0.025	<4.05					1	mg/L	lb/day	<0.025	<1.86	1
15M. Phenols, Total	X		X	<0.01	<1.62					1	mg/L	lb/day	<0.01	<4.74	1
DIOXIN															
2,3,7,8 Tetrachlorodibenzo P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS											

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X' a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (if available) (2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (optional) b. NO. OF ANALYSES
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Acrolein (107-02-8)	X		X	<0.020	<3.24					1	mg/L	lb/day	<0.020	<9.49	1
2V. Acrylonitrile (107-13-1)	X		X	<0.020	<3.24					1	mg/L	lb/day	<0.020	<9.49	1
3V. Benzene (71-43-2)	X		X	<0.0005	<0.081					1	mg/L	lb/day	<0.0005	<0.24	1
4V. Bis (Chloromethyl) Ether (542-88-1)			X	<0.0005	<0.081					1	mg/L	lb/day	<0.0005	<0.24	1
5V. Bromoform (75-25-2)	X		X	<0.0005	<0.081					1	mg/L	lb/day	<0.0005	<0.24	1
6V. Carbon Tetrachloride (56-23-5)	X		X	<0.0005	<0.081					1	mg/L	lb/day	<0.0005	<0.24	1
7V. Chlorobenzene (108-90-7)	X		X	<0.0005	<0.081					1	mg/L	lb/day	<0.0005	<0.24	1
8V. Chlorodibromomethane (124-48-1)	X		X	<0.0005	<0.081					1	mg/L	lb/day	<0.0005	<0.24	1
9V. Chloroethane (75-00-3)	X		X	<0.0005	<0.081					1	mg/L	lb/day	<0.0005	<0.24	1
10V. 2-Chloroethylvinyl Ether (110-75-8)	X		X	<0.0005	<0.081					1	mg/L	lb/day	<0.0005	<0.24	1
11V. Chloroform (67-66-3)	X		X	<0.0005	<0.081					1	mg/L	lb/day	<0.0005	<0.24	1
12V. Dichlorobromomethane (75-27-4)	X		X	<0.0005	<0.081					1	mg/L	lb/day	<0.0005	<0.24	1
13V. Dichlorodifluoromethane (75-71-8)	X		X	<0.0005	<0.081					1	mg/L	lb/day	<0.0005	<0.24	1
14V. 1,1-Dichloroethane (75-34-3)	X		X	<0.0005	<0.081					1	mg/L	lb/day	<0.0005	<0.24	1
15V. 1,2-Dichloroethane (107-06-2)	X		X	<0.0005	<0.081					1	mg/L	lb/day	<0.0005	<0.24	1
16V. 1,1-Dichloroethylene (75-35-4)	X		X	<0.0005	<0.081					1	mg/L	lb/day	<0.0005	<0.24	1
17V. 1,2-Dichloropropane (78-87-5)	X		X	<0.0005	<0.081					1	mg/L	lb/day	<0.0005	<0.24	1
18V. 1,3-Dichloropropylene (542-75-6)	X		X	<0.0005	<0.081					1	mg/L	lb/day	<0.0005	<0.24	1
19V. Ethylbenzene (100-41-4)	X		X	<0.0005	<0.081					1	mg/L	lb/day	<0.0005	<0.24	1
20V. Methyl Bromide (74-83-9)	X		X	<0.0005	<0.081					1	mg/L	lb/day	<0.0005	<0.24	1
21V. Methyl Chloride (74-87-3)	X		X	<0.0005	<0.081					1	mg/L	lb/day	<0.0005	<0.24	1

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EPA I.D. NUMBER (copy from Item 1 of Form 1) | OUTFALL NUMBER: 01

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1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X' a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION – VOLATILE COMPOUNDS (continued)															
22V. Methylene Chloride (75-09-2)	X		X	<0.0005	<0.08					1	mg/L	lb/day	<0.0005	<0.24	1
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	X		X	<0.0005	<0.08					1	mg/L	lb/day	<0.0005	<0.24	1
24V. Tetrachloroethylene (127-18-4)	X		X	<0.0005	<0.08					1	mg/L	lb/day	<0.0005	<0.24	1
25V. Toluene (108-88-3)	X		X	<0.0005	<0.08					1	mg/L	lb/day	<0.0005	<0.24	1
26V. 1,2-Trans-Dichloroethylene (156-60-5)	X		X	<0.0005	<0.08					1	mg/L	lb/day	<0.0005	<0.24	1
27V. 1,1,1-Trichloroethane (71-55-6)	X		X	<0.0005	<0.08					1	mg/L	lb/day	<0.0005	<0.24	1
28V. 1,1,2-Trichloroethane (79-00-5)	X		X	<0.0005	<0.08					1	mg/L	lb/day	<0.0005	<0.24	1
29V. Trichloroethylene (79-01-6)	X		X	<0.0005	<0.08					1	mg/L	lb/day	<0.0005	<0.24	1
30V. Trichlorofluoromethane (75-69-4)	X		X	<0.0005	<0.08					1	mg/L	lb/day	<0.0005	<0.24	1
31V. Vinyl Chloride (75-01-4)	X		X	<0.0005	<0.08					1	mg/L	lb/day	<0.0005	<0.24	1
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)	X		X	<0.01	<1.62					1	mg/L	lb/day	<0.01	<4.74	1
2A. 2,4-Dichlorophenol (120-83-2)	X		X	<0.01	<1.62					1	mg/L	lb/day	<0.01	<4.74	1
3A. 2,4-Dimethylphenol (105-67-9)	X		X	<0.01	<1.62					1	mg/L	lb/day	<0.01	<4.74	1
4A. 4,6-Dinitro-O-Cresol (534-52-1)	X		X	<0.05	<8.10					1	mg/L	lb/day	<0.05	<23.7	1
5A. 2,4-Dinitrophenol (51-28-5)	X		X	<0.05	<8.10					1	mg/L	lb/day	<0.05	<23.7	1
6A. 2-Nitrophenol (88-75-5)	X		X	<0.01	<1.62					1	mg/L	lb/day	<0.01	<4.74	1
7A. 4-Nitrophenol (100-02-7)	X		X	<0.05	<8.10					1	mg/L	lb/day	<0.05	<23.7	1
8A. P-Chloro-M-Cresol (59-50-7)	X		X	<0.01	<1.62					1	mg/L	lb/day	<0.01	<4.74	1
9A. Pentachlorophenol (87-86-5)	X		X	<0.01	<1.62					1	mg/L	lb/day	<0.01	<4.74	1
10A. Phenol (108-95-2)	X		X	<0.01	<1.62					1	mg/L	lb/day	<0.01	<4.74	1
11A. 2,4,6-Trichlorophenol (88-06-2)	X		X	<0.01	<1.62					1	mg/L	lb/day	<0.01	<4.74	1

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. TESTED REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (if available) (2) MASS	d. NO OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (optional) b. NO OF ANALYSES
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
18. Acenaphthene (83-32-9)	X		X	< 0.01	< 1.62					1	mg/L	lb/day	<0.01	<4.74	1
28. Acenaphtylene (208-96-8)	X		X	<0.005	< 0.8					1	mg/L	lb/day	<0.005	<2.37	1
38. Anthracene (120-12-7)	X		X	< 0.01	< 1.62					1	mg/L	lb/day	<0.01	<4.74	1
48. Benzidine (92-87-5)	X		X	< 0.08	<12.96					1	mg/L	lb/day	<0.08	<37.9	1
58. Benzo (a) Anthracene (56-55-3)	X		X	<0.01	< 1.62					1	mg/L	lb/day	<0.01	<4.74	1
68. Benzo (a) Pyrene (50-32-8)	X		X	<0.01	< 1.62					1	mg/L	lb/day	<0.01	<4.74	1
78. 3,4-Benzo-fluoranthene (205-99-2)	X		X	<0.01	< 1.62					1	mg/L	lb/day	<0.01	<4.74	1
88. Benzo (ghi) Perylene (191-24-2)	X		X	<0.01	< 1.62					1	mg/L	lb/day	<0.01	<4.74	1
98. Benzo (k) Fluoranthene (207-08-9)	X		X	<0.01	< 1.62					1	mg/L	lb/day	<0.01	<4.74	1
108. Bis (2-Chloro-ethoxy) Methane (111-91-1)	X		X	<0.01	< 1.62					1	mg/L	lb/day	<0.01	<4.74	1
118. Bis (2-Chloro-ethyl) Ether (111-44-4)	X		X	<0.01	< 1.62					1	mg/L	lb/day	<0.01	<4.74	1
128. Bis (2-Chloroiso-propyl) Ether (102-80-1)	X		X	< 0.01	< 1.62					1	mg/L	lb/day	<0.01	<4.74	1
138. Bis (2-Ethyl-hexyl) Phthalate (117-81-7)	X		X	<0.01	< 1.62					1	mg/L	lb/day	<0.01	<4.74	1
148. 4-Bromo-phenyl Phenyl Ether (101-55-3)	X		X	< 0.01	< 1.62					1	mg/L	lb/day	<0.01	<4.74	1
158. Butyl Benzyl Phthalate (85-68-7)	X		X	< 0.01	< 1.62					1	mg/L	lb/day	<0.01	<4.74	1
168. 2-Chloro-naphthalene (91-58-7)	X		X	<0.01	< 1.62					1	mg/L	lb/day	<0.01	<4.74	1
178. 4-Chloro-phenyl Phenyl Ether (7005-72-3)	X		X	<0.01	< 1.62					1	mg/L	lb/day	<0.01	<4.74	1
188. Chrysene (218-01-9)	X		X	< 0.01	< 1.62					1	mg/L	lb/day	<0.01	<4.74	1
198. Dibenzo (a,h) Anthracene (53-70-3)	X		X	<0.01	< 1.62					1	mg/L	lb/day	<0.01	<4.74	1
208. 1,2-Dichloro-benzene (95-50-1)	X		X	< 0.01	< 1.62					1	mg/L	lb/day	<0.01	<4.74	1
218. 1,3-Dichloro-benzene (541-73-1)	X		X	< 0.01	<1.62					1	mg/L	lb/day	<0.01	<4.74	1

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EPA I.D. NUMBER (copy from Item 1 of Form 1) | OUTFALL NUMBER: 01

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Approval expires 7-31-88

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1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X' a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO OF ANALYSES
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (continued)															
22B. 1,4-Dichlorobenzene (106-46-7)	X			<0.01	<1.62					1	mg/L	lb/day	<0.01	<4.74	1
23B. 3,3'-Dichlorobenzidine (91-94-1)	X			<0.02	<3.24					1	mg/L	lb/day	<0.02	<9.49	1
24B. Diethyl Phthalate (84-66-2)	X			<0.01	<1.62					1	mg/L	lb/day	<0.01	<4.74	1
25B. Dimethyl Phthalate (131-11-3)	X			<0.01	<1.62					1	mg/L	lb/day	<0.01	<4.74	1
26B. Di-N-Butyl Phthalate (84-74-2)	X			<0.01	<1.62					1	mg/L	lb/day	<0.01	<4.74	1
27B. 2,4-Dinitrotoluene (121-14-2)	X			<0.02	<3.24					1	mg/L	lb/day	<0.01	<4.74	1
28B. 2,6-Dinitrotoluene (606-20-2)	X			<0.02	<3.24					1	mg/L	lb/day	<0.02	<9.49	1
29B. Di-N-Octyl Phthalate (117-84-0)	X			<0.01	<1.62					1	mg/L	lb/day	<0.01	<4.74	1
30B. 1,2-Diphenylhydrazine (as Azobenzene) (122-66-7)	X			<0.01	<1.62					1	mg/L	lb/day	<0.01	<4.74	1
31B. Fluoranthene (206-44-0)	X			<0.01	<1.62					1	mg/L	lb/day	<0.01	<4.74	1
32B. Fluorene (86-73-7)	X			<0.01	<1.62					1	mg/L	lb/day	<0.01	<4.74	1
33B. Hexachlorobenzene (118-74-1)	X			<0.01	<1.62					1	mg/L	lb/day	<0.01	<4.74	1
34B. Hexachlorobutadiene (87-68-3)	X			<0.01	<1.62					1	mg/L	lb/day	<0.01	<4.74	1
35B. Hexachlorocyclopentadiene (77-47-4)	X			<0.01	<1.62					1	mg/L	lb/day	<0.01	<4.74	1
36B. Hexachloroethane (67-72-1)	X			<0.002	<0.32					1	mg/L	lb/day	<0.002	<0.95	1
37B. Indeno (1,2,3-cd) Pyrene (193-39-5)	X			<0.01	<1.62					1	mg/L	lb/day	<0.01	<4.74	1
38B. Isophorone (78-59-1)	X			<0.01	<1.62					1	mg/L	lb/day	<0.01	<4.74	1
39B. Naphthalene (91-20-3)	X			<0.01	<1.62					1	mg/L	lb/day	<0.01	<4.74	1
40B. Nitrobenzene (98-95-3)	X			<0.01	<1.62					1	mg/L	lb/day	<0.01	<4.74	1
41B. N-Nitrosodimethylamine (62-75-9)	X			<0.01	<1.62					1	mg/L	lb/day	<0.01	<4.74	1
42B. N-Nitrosodi-N-Propylamine (621-64-7)	X			<0.01	<1.62					1	mg/L	lb/day	<0.01	<4.74	1

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X' a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO OF ANALYSES
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS *(continued)*															
43B. N-Nitrosodiphenylamine (86-30-6)	X		X	<0.01	< 1.62					1	mg/L	lb/day	<0.01	<4.74	1
44B. Phenanthrene (85-01-8)	X		X	<0.01	< 1.62					1	mg/L	lb/day	<0.01	<4.74	1
45B. Pyrene (129-00-0)	X		X	<0.01	< 1.62					1	mg/L	lb/day	<0.01	<4.74	1
46b. 1,2,4-Trichlorobenzene (120-82-1)	X		X	<0.01	< 1.62					1	mg/L	lb/day	<0.01	<4.74	1
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)			X	<0.0001	< 0.02					1	mg/L	lb/day	<0.0001	<0.05	1
2P. α-BHC (319-84-6)			X	<0.0001	< 0.02					1	mg/L	lb/day	<0.0001	<0.05	1
3P. β-BHC (319-85-7)			X	<0.0001	< 0.02					1	mg/L	lb/day	<0.0001	<0.05	1
4P. γ-BHC (58-89-9)			X	<0.0001	< 0.02					1	mg/L	lb/day	<0.0001	<0.05	1
5P. δ-BHC (319-86-8)			X	<0.0001	< 0.02					1	mg/L	lb/day	<0.0001	<0.05	1
6P. Chlordane (57-74-9)			X	<0.0005	< 0.08					1	mg/L	lb/day	<0.0005	<0.24	1
7P. 4,4'-DDT (50-29-3)			X	<0.0002	< 0.03					1	mg/L	lb/day	<0.0002	<0.09	1
8P. 4,4'-DDE (72-55-9)			X	<0.0002	< 0.03					1	mg/L	lb/day	<0.0002	<0.09	1
9P. 4,4'-DDD (72-54-8)			X	<0.0002	< 0.03					1	mg/L	lb/day	<0.0002	<0.09	1
10P. Dieldrin (60-57-1)			X	<0.0001	< 0.02					1	mg/L	lb/day	<0.0001	<0.05	1
11P. α-Endosulfan (115-29-7)			X	<0.0005	< 0.08					1	mg/L	lb/day	<0.0005	<0.24	1
12P. β-Endosulfan (115-29-7)			X	<0.0005	< 0.08					1	mg/L	lb/day	<0.0005	<0.24	1
13P. Endosulfan Sulfate (1031-07-8)			X	<0.0005	< 0.08					1	mg/L	lb/day	<0.0005	<0.24	1
14P. Endrin (72-20-8)			X	<0.0002	< 0.03					1	mg/L	lb/day	<0.0002	<0.09	1
15P. Endrin Aldehyde (7421-93-4)			X	<0.0002	< 0.03					1	mg/L	lb/day	<0.0002	<0.09	1
16P. Heptachlor (76-44-8)			X	<0.0001	< 0.02					1	mg/L	lb/day	<0.0001	<0.05	1

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1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. TEST INCLUDED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO OF ANALYSES
GC/MS FRACTION – PESTICIDES (continued)															
17P. Heptachlor Epoxide (1024-57-3)			X	<0.0001	<0.02					1	mg/L	lb/day	<0.0001	<0.05	1
18P. PCB-1242 (53469-21-9)			X	<0.0005	<0.08					1	mg/L	lb/day	<0.0005	<0.24	1
19P. PCB-1254 (11097-69-1)			X	<0.0005	<0.08					1	mg/L	lb/day	<0.0005	<0.24	1
20P. PCB-1221 (11104-28-2)			X	<0.0005	<0.08					1	mg/L	lb/day	<0.0005	<0.24	1
21P. PCB-1232 (11141-16-5)			X	<0.0005	<0.08					1	mg/L	lb/day	<0.0005	<0.24	1
22P. PCB-1248 (12672-29-6)			X	<0.0005	<0.08					1	mg/L	lb/day	<0.0005	<0.24	1
23P. PCB-1260 (11096-82-5)			X	<0.0005	<0.08					1	mg/L	lb/day	<0.0005	<0.24	1
24P. PCB-1016 (12674-11-2)			X	<0.0005	<0.08					1	mg/L	lb/day	<0.0005	<0.24	1
25P. Toxaphene (8001-35-2)			X	<0.0002	<0.03					1	mg/L	lb/day	<0.0002	<0.09	1

EPA FORM 2C SECTION V

INTAKE AND EFFLUENT CHARACTERISTICS

E. I. HATCH NUCLEAR PLANT

UNIT 2

PLEASE PRINT OR TYPE IN THE SHADED AREAS ONLY. You may report some or all of this information on separate sheets (use the same format) instead of completing these pages. SEE INSTRUCTIONS.

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

Form Approved
OMB No. 2040-0086
Approval expires 7-31-88

OUTFALL NO. 2

V. INTAKE AND EFFLUENT CHARACTERISTICS (continued from page 3 of Form 2-C)

PART A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	3. UNITS (specify if blank) a. CONCENTRATION	b. MASS	4. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
a. Biochemical Oxygen Demand (BOD)	5	390.1					1	mg/L		* See Data for Unit 1		
b. Chemical Oxygen Demand (COD)	22	1716.7					1	mg/L				
c. Total Organic Carbon (TOC)	7.139	549.2					1	mg/L				
d. Total Suspended Solids (TSS)	19	1482.6					1	mg/L				
e. Ammonia (as N)	0.001	0.08					1	mg/L				
f. Flow	VALUE 17000		VALUE		VALUE .6500		8	GPM		VALUE		
g. Temperature (winter)	VALUE N/A		VALUE		VALUE N/A			°C		VALUE		
h. Temperature (summer)	VALUE 25.6		VALUE		VALUE 27.4		8	°C		VALUE 16.1		
i. pH	MINIMUM 6.83	MAXIMUM 7.9	MINIMUM	MAXIMUM			8	STANDARD UNITS				

PART B - Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X" a. BELIEVED PRESENT	b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
a. Bromide (24959-67-9)		X	<0.01	<0.78					1	mg/L	lb/day	* See Data for Unit 1		
b. Chlorine, Total Residual		X	<0.01	<0.78					8	mg/L	lb/day			
c. Color	X		75						1	PCU				
d. Fecal Coliform	X		20	7.80					1	Col/ 100ml				
e. Fluoride (16984-48-8)	X		0.10	42.13					1	mg/L	lb/day			
f. Nitrate-Nitrite (as N)	X		0.54						1	mg/L	lb/day			

CONTINUE ON REVERSE

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X' a. BELIEVED PRESENT	2. MARK 'X' b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	3. EFFLUENT c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	3. EFFLUENT c. LONG TERM AVRG. VALUE (if available) (2) MASS	3. EFFLUENT d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (optional) b. NO. OF ANALYSES
g. Nitrogen, Total Organic (as N)	X		<0.01	<0.78					1	mg/L	lb/day			
h. Oil and Grease	X		2.7	210.7					1	mg/L	lb/day			
i. Phosphorus (as P), Total (7723-14-0)	X		0.062	4.84					1	mg/L	lb/day			
j. Radioactivity														
(1) Alpha, Total	X		0.1						1	pCi/L				
(2) Beta, Total	X		1.5						1	pCi/L				
(3) Radium, Total				N/A										
(4) Radium 226, Total				N/A										
k. Sulfate (as SO_4) (14808-79-8)	X		680.7						1	mg/L	lb/day			
l. Sulfide (as S)		X	<0.0004						1	mg/L	lb/day			
m. Sulfite (as SO_3) (14265-45-3)														
n. Surfactants		X	<0.01	<0.78					1	mg/L	lb/day			
o. Aluminum, Total (7429-90-5)	X		2.54	198.2					1	mg/L	lb/day			
p. Barium, Total (7440-39-3)	X		0.06	4.68					1	mg/L	lb/day			
q. Boron, Total (7440-42-8)	X		0.03	2.34					1	mg/L	lb/day			
r. Cobalt, Total (7440-48-4)		X	<0.01	<0.78					1	mg/L	lb/day			
s. Iron, Total (7439-89-6)	X		3.08	240.3					1	mg/L	lb/day			
t. Magnesium, Total (7439-95-4)	X		2.29	178.7					1	mg/L	lb/day			
u. Molybdenum, Total (7439-98-7)		X	<0.01	<0.78					1	mg/L	lb/day			
v. Manganese, Total (7439-96-5)	X		0.08	6.24					1	mg/L	lb/day			
w. Tin, Total (7440-31-5)		X	<0.01	<0.78					1	mg/L	lb/day			
x. Titanium, Total (7440-32-6)	X		0.06	4.68					1	mg/L	lb/day			

CONTINUE ON PAGE V-3

EPA I.D. NUMBER (copy from Item 1 of Form 1)	OUTFALL NUMBER
	02

Form Approved
OMB No. 2040-0086
Approval expires 7-31-88

CONTINUED FROM PAGE 3 OF FORM 2-C

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part, please review each carefully. Complete one table (all 7 pages) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (+) CONCENTRATION	a. MAXIMUM DAILY VALUE (+) MASS	b. MAXIMUM 30 DAY VALUE (if available) (+) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (if available) (+) MASS	c. LONG TERM AVRG. VALUE (if available) (+) CONCENTRATION	c. LONG TERM AVRG. VALUE (if available) (+) MASS	d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE (+) CONCENTRATION	a. LONG TERM AVERAGE VALUE (+) MASS	b. NO. OF ANALYSES
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)	X		X	< 0.03	< 2.34					1	mg/L	lb/day			
2M. Arsenic, Total (7440-38-2)	X		X	< 0.005	< 0.39					1	mg/L	lb/day			
3M. Beryllium, Total, 7440-41-7)	X		X	< 0.01	< 0.78					1	mg/L	lb/day			
4M. Cadmium, Total (7440-43-9)	X		X	< 0.01	< 0.78					1	mg/L	lb/day			
5M. Chromium, Total (7440-47-3)	X		X	< 0.01	< 0.78					1	mg/L	lb/day			
6M. Copper, Total (7440-50-8)	X		X	< 0.02	< 1.56					1	mg/L	lb/day			
7M. Lead, Total (7439-92-1)	X		X	< 0.01	< 0.78					1	mg/L	lb/day			
8M. Mercury, Total (7439-97-6)	X		X	< 0.0002	< 0.02					1	mg/L	lb/day			
9M. Nickel, Total (7440-02-0)	X		X	< 0.02	< 1.56					1	mg/L	lb/day			
10M. Selenium, Total (7782-49-2)	X		X	< 0.005	< 0.39					1	mg/L	lb/day			
11M. Silver, Total (7440-22-4)	X		X	< 0.01	< 0.78					1	mg/L	lb/day			
12M. Thallium, Total (7440-28-0)	X		X	< 0.03	< 2.34					1	mg/L	lb/day			
13M. Zinc, Total (7440-66-6)	X	X		0.08	3.17					1	mg/L	lb/day			
14M. Cyanide, Total (57-12-5)	X		X	< 0.025	< 1.95					1	mg/L	lb/day			
15M. Phenols, Total	X		X	< 0.01	< 0.78					1	mg/L	lb/day			
DIOXIN															
2,3,7,8 Tetrachlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS											

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X' a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Acrolein (107-02-8)	X		X	< 0.020	<1.56					1	mg/L	lb/day			
2V. Acrylonitrile (107-13-1)	X		X	< 0.020	<1.56					1	mg/L	lb/day			
3V. Benzene (71-43-2)	X		X	< 0.0005	<0.04					1	mg/L	lb/day			
4V. Bis (Chloromethyl) Ether (542-88-1)			X	< 0.0005	<0.04					1	mg/L	lb/day			
5V. Bromoform (75-25-2)	X		X	< 0.0005	<0.04					1	mg/L	lb/day			
6V. Carbon Tetrachloride (56-23-5)	X		X	< 0.0005	<0.04					1	mg/L	lb/day			
7V. Chlorobenzene (108-90-7)	X		X	< 0.0005	< 0.04					1	mg/L	lb/day			
8V. Chlorodibromomethane (124-48-1)	X		X	< 0.0005	< 0.04					1	mg/L	lb/day			
9V. Chloroethane (75-00-3)	X		X	< 0.0005	<0.04					1	mg/L	lb/day			
10V. 2-Chloroethylvinyl Ether (110-75-8)	X		X	< 0.0005	< 0.04					1	mg/L	lb/day			
11V. Chloroform (67-66-3)	X		X	< 0.0005	< 0.04					1	mg/L	lb/day			
12V. Dichlorobromomethane (75-27-4)	X		X	< 0.0005	< 0.04					1	mg/L	lb/day			
13V. Dichlorodifluoromethane (75-71-8)	X		X	< 0.0005	< 0.04					1	mg/L	lb/day			
14V. 1,1-Dichloroethane (75-34-3)	X		X	< 0.0005	< 0.04					1	mg/L	lb/day			
15V. 1,2-Dichloroethane (107-06-2)	X		X	< 0.0005	< 0.04					1	mg/L	lb/day			
16V. 1,1-Dichloroethylene (75-35-4)	X		X	< 0.0005	< 0.04					1	mg/L	lb/day			
17V. 1,2-Dichloropropane (78-87-5)	X		X	< 0.0005	< 0.04					1	mg/L	lb/day			
18V. 1,3-Dichloropropylene (542-75-6)	X		X	< 0.0005	< 0.04					1	mg/L	lb/day			
19V. Ethylbenzene (100-41-4)	X		X	< 0.0005	< 0.04					1	mg/L	lb/day			
20V. Methyl Bromide (74-83-9)	X		X	< 0.0005	< 0.04					1	mg/L	lb/day			
21V. Methyl Chloride (74-87-3)	X		X	< 0.0005	< 0.04					1	mg/L	lb/day			

CONTINUE ON PAGE V-5

CONTINUED FROM PAGE V-4

1. POLLUTANT AND CAS NUMBER (If available)	2. MARK "X" a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (+) CONCENTRATION	a. MAXIMUM DAILY VALUE (-) MASS	b. MAXIMUM 30 DAY VALUE (if available) (+) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (-) MASS	c. LONG TERM AVRG. VALUE (if available) (+) CONCENTRATION	c. LONG TERM AVRG. VALUE (-) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (+) CONCENTRATION	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (-) MASS	5. INTAKE (optional) b. NO. OF ANALYSES
GC/MS FRACTION — VOLATILE COMPOUNDS (continued)															
22V. Methylene Chloride (75-09-2)	X		X	<0.0005	< 0.04					1	mg/L	lb/day			
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	X		X	<0.0005	<0.04					1	mg/L	lb/day			
24V. Tetrachloroethylene (127-18-4)	X		X	<0.0005	<0.04					1	mg/L	lb/day			
25V. Toluene (108-88-3)	X		X	<0.0005	<0.04					1	mg/L	lb/day			
26V. 1,2-Trans-Dichloroethylene (156-60-5)	X		X	< 0.0005	<0.04					1	mg/L	lb/day			
27V. 1,1,1-Trichloroethane (71-55-6)	X		X	<0.0005	<0.04					1	mg/L	lb/day			
28V. 1,1,2-Trichloroethane (79-00-5)	X		X	<0.0005	<0.04					1	mg/L	lb/day			
29V. Trichloroethylene (79-01-6)	X		X	<0.0005	<0.04					1	mg/L	lb/day			
30V. Trichlorofluoromethane (75-69-4)	X		X	<0.0005	<0.04					1	mg/L	lb/day			
31V. Vinyl Chloride (75-01-4)	X		X	< 0.0005	<0.04					1	mg/L	lb/day			
GC/MS FRACTION — ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)	X		X	< 0.01	<0.78					1	mg/L	lb/day			
2A. 2,4-Dichlorophenol (120-83-2)	X		X	< 0.01	<0.78					1	mg/L	lb/day			
3A. 2,4-Dimethylphenol (105-67-9)	X		X	<0.01	<0.78					1	mg/L	lb/day			
4A. 4,6-Dinitro-O-Cresol (534-52-1)	X		X	<0.05	<3.90					1	mg/L	lb/day			
5A. 2,4-Dinitrophenol (51-28-5)	X		X	< 0.05	<3.90					1	mg/L	lb/day			
6A. 2-Nitrophenol (88-75-5)	X		X	< 0.01	<0.78					1	mg/L	lb/day			
7A. 4-Nitrophenol (100-02-7)	X		X	< 0.05	<3.90					1	mg/L	lb/day			
8A. P-Chloro-M-Cresol (59-50-7)	X		X	< 0.01	<0.78					1	mg/L	lb/day			
9A. Pentachlorophenol (87-86-5)	X		X	< 0.01	<0.78					1	mg/L	lb/day			
10A. Phenol (108-95-2)	X		X	< 0.01	<0.78					1	mg/L	lb/day			
11A. 2,4,6-Trichlorophenol (88-06-2)	X		X	< 0.01	<0.78					1	mg/L	lb/day			

CONTINUE ON REVERSE

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. Effluent b. Intake (optional) c. Believed absent	3. EFFLUENT a. MAXIMUM DAILY VALUE (+) Concentration	a. MAXIMUM DAILY VALUE (+) Mass	b. MAXIMUM 30 DAY VALUE (if available) (-) Concentration	b. MAXIMUM 30 DAY VALUE (if available) (+) Mass	c. LONG TERM AVRG. VALUE (if available) (+) Concentration	c. LONG TERM AVRG. VALUE (if available) (+) Mass	d. NO. OF ANALYSES	4. UNITS a. Concentration	4. UNITS b. Mass	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (+) Concentration	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (+) Mass	5. INTAKE (optional) b. NO. OF ANALYSES
GC/MS FRACTION — BASE/NEUTRAL COMPOUNDS													
1B. Acenaphthene (83-32-9)	X	X	<0.01	<0.78					1	mg/L	lb/day			
2B. Acenaphtylene (208-96-8)	X	X	<0.005	<0.39					1	mg/L	lb/day			
3B. Anthracene (120-12-7)	X	X	<0.01	<0.78					1	mg/L	lb/day			
4B. Benzidine (92-87-5)	X	X	<0.08	<6.42					1	mg/L	lb/day			
5B. Benzo (a) Anthracene (56-55-3)	X	X	<0.01	<0.78					1	mg/L	lb/day			
6B. Benzo (a) Pyrene (50-32-8)	X	X	<0.01	<0.78					1	mg/L	lb/day			
7B. 3,4-Benzo-fluoranthene (205-99-2)	X	X	<0.01	<0.78					1	mg/L	lb/day			
8B. Benzo (ghi) Perylene (191-24-2)	X	X	<0.01	<0.78					1	mg/L	lb/day			
9B. Benzo (k) Fluoranthene (207-08-9)	X	X	<0.01	<0.78					1	mg/L	lb/day			
10B. Bis (2-Chloro-ethoxy) Methane (111-91-1)	X	X	<0.01	<0.78					1	mg/L	lb/day			
11B. Bis (2-Chloro-ethyl) Ether (111-44-4)	X	X	<0.01	<0.78					1	mg/L	lb/day			
12B. Bis (2-Chloroiso-propyl) Ether (102-80-1)	X	X	<0.01	<0.78					1	mg/L	lb/day			
13B. Bis (2-Ethyl-hexyl) Phthalate (117-81-7)	X	X	<0.01	<0.78					1	mg/L	lb/day			
14B. 4-Bromo-phenyl Phenyl Ether (101-55-3)	X	X	<0.01	<0.78					1	mg/L	lb/day			
15B. Butyl Benzyl Phthalate (85-68-7)	X	X	<0.01	<0.78					1	mg/L	lb/day			
16B. 2-Chloro-naphthalene (91-58-7)	X	X	<0.01	<0.78					1	mg/L	lb/day			
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)	X	X	<0.01	<0.78					1	mg/L	lb/day			
18B. Chrysene (218-01-9)	X	X	<0.01	<0.78					1	mg/L	lb/day			
19B. Dibenzo (a,h) Anthracene (53-70-3)	X	X	<0.01	<0.78					1	mg/L	lb/day			
20B. 1,2-Dichloro-benzene (95-50-1)	X	X	<0.01	<0.78					1	mg/L	lb/day			
21B. 1,3-Dichloro-benzene (541-73-1)	X	X	<0.01	<0.78					1	mg/L	lb/day			

EPA I.D. NUMBER (copy from Item 1 of Form 1) | OUTFALL NUMBER: 02

Form Approved
OMB No. 2040-0086
Approval expires 7-31-88

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (+) CONCENTRATION	a. MAXIMUM DAILY VALUE (+) MASS	b. MAXIMUM 30 DAY VALUE (if available) (+) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (if available) (+) MASS	c. LONG TERM AVRG. VALUE (if available) (+) CONCENTRATION	c. LONG TERM AVRG. VALUE (if available) (+) MASS	d. NO OF ANAL YSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (+) CONCENTRATION	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (+) MASS	5. INTAKE (optional) b. NO OF ANAL YSES
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (continued)															
22B. 1,4-Dichlorobenzene (106-46-7)	X		X	< 0.01	< 0.78					1	mg/L	lb/day			
23B. 3,3'-Dichlorobenzidine (91-94-1)	X		X	< 0.02	< 1.56					1	mg/L	lb/day			
24B. Diethyl Phthalate (84-66-2)	X		X	< 0.01	< 0.78					1	mg/L	lb/day			
25B. Dimethyl Phthalate (131-11-3)	X		X	< 0.01	< 0.78					1	mg/L	lb/day			
26B. Di-N-Butyl Phthalate (84-74-2)	X		X	< 0.01	< 0.78					1	mg/L	lb/day			
27B. 2,4-Dinitrotoluene (121-14-2)	X		X	< 0.02	< 1.56					1	mg/L	lb/day			
28B. 2,6-Dinitrotoluene (606-20-2)	X		X	< 0.02	< 1.56					1	mg/L	lb/day			
29B. Di-N-Octyl Phthalate (117-84-0)	X		X	< 0.01	< 0.78					1	mg/L	lb/day			
30B. 1,2-Diphenylhydrazine (as Azobenzene) (122-66-7)	X		X	< 0.01	< 0.78					1	mg/L	lb/day			
31B. Fluoranthene (206-44-0)	X		X	< 0.01	< 0.78					1	mg/L	lb/day			
32B. Fluorene (86-73-7)	X		X	< 0.01	< 0.78					1	mg/L	lb/day			
33B. Hexachlorobenzene (118-74-1)	X		X	< 0.01	< 0.78					1	mg/L	lb/day			
34B. Hexachlorobutadiene (87-68-3)	X		X	< 0.01	< 0.78					1	mg/L	lb/day			
35B. Hexachlorocyclopentadiene (77-47-4)	X		X	< 0.01	< 0.78					1	mg/L	lb/day			
36B. Hexachloroethane (67-72-1)	X		X	< 0.002	< 0.02					1	mg/L	lb/day			
37B. Indeno (1,2,3-cd) Pyrene (193-39-5)	X		X	< 0.01	< 0.78					1	mg/L	lb/day			
38B. Isophorone (78-59-1)	X		X	< 0.01	< 0.78					1	mg/L	lb/day			
39B. Naphthalene (91-20-3)	X		X	< 0.01	< 0.78					1	mg/L	lb/day			
40B. Nitrobenzene (98-95-3)	X		X	< 0.01	< 0.78					1	mg/L	lb/day			
41B. N-Nitrosodimethylamine (62-75-9)	X		X	< 0.01	< 0.78					1	mg/L	lb/day			
42B. N-Nitrosodi-N-Propylamine (621-64-7)	X		X	< 0.01	< 0.78					1	mg/L	lb/day			

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X' a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. (2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	b. (2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	c. (2) MASS	d. NO OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. (2) MASS	b. NO OF ANALYSES
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS *(continued)*															
43B. N-Nitrosodiphenylamine (86-30-6)	X		X	<0.01	<0.78					1	mg/L	lb/day			
44B. Phenanthrene (85-01-8)	X		X	<0.01	<0.78					1	mg/L	lb/day			
45B. Pyrene (129-00-0)	X		X	<0.01	<0.78					1	mg/L	lb/day			
46B. 1,2,4-Trichlorobenzene (120-82-1)	X		X	<0.01	<0.78					1	mg/L	lb/day			
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)			X	<0.0001	<0.01					1	mg/L	lb/day			
2P. α-BHC (319-84-6)			X	<0.0001	<0.01					1	mg/L	lb/day			
3P. β-BHC (319-85-7)			X	<0.0001	<0.01					1	mg/L	lb/day			
4P. γ-BHC (58-89-9)			X	<0.0001	<0.01					1	mg/L	lb/day			
5P. δ-BHC (319-86-8)			X	<0.0001	<0.01					1	mg/L	lb/day			
6P. Chlordane (57-74-9)			X	<0.0005	<0.04					1	mg/L	lb/day			
7P. 4,4'-DDT (50-29-3)			X	<0.0002	<0.02					1	mg/L	lb/day			
8P. 4,4'-DDE (72-55-9)			X	<0.0002	<0.02					1	mg/L	lb/day			
9P. 4,4'-DDD (72-54-8)			X	<0.0002	<0.02					1	mg/L	lb/day			
10P. Dieldrin (60-57-1)			X	<0.0001	<0.01					1	mg/L	lb/day			
11P. α-Endosulfan (115-29-7)			X	<0.0005	<0.04					1	mg/L	lb/day			
12P. β-Endosulfan (115-29-7)			X	<0.0005	<0.04					1	mg/L	lb/day			
13P. Endosulfan Sulfate (1031-07-8)			X	<0.0005	<0.04					1	mg/L	lb/day			
14P. Endrin (72-20-8)			X	<0.0002	<0.02					1	mg/L	lb/day			
15P. Endrin Aldehyde (7421-93-4)			X	<0.0002	<0.02					1	mg/L	lb/day			
16P. Heptachlor (76-44-8)			X	<0.0001	<0.01					1	mg/L	lb/day			

CONTINUE ON PAGE V-9

Form Approved
OMB No. 2040-0086
Approval expires 7-31-88

EPA I.D. NUMBER (copy from Item 1 of Form 1) | OUTFALL NUMBER: 02

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X' a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO OF ANALYSES
GC/MS FRACTION – PESTICIDES (continued)															
17P. Heptachlor Epoxide (1024-57-3)			X	<0.0001	<0.001					1	mg/L	lb/day			
18P. PCB-1242 (53469-21-9)			X	<0.0005	<0.04					1	mg/L	lb/day			
19P. PCB-1254 (11097-69-1)			X	<0.0005	<0.04					1	mg/L	lb/day			
20P. PCB-1221 (11104-28-2)			X	<0.0005	<0.04					1	mg/L	lb/day			
21P. PCB-1232 (11141-16-5)			X	<0.0005	<0.04					1	mg/L	lb/day			
22P. PCB-1248 (12672-29-6)			X	<0.0005	<0.04					1	mg/L	lb/day			
23P. PCB-1260 (11096-82-5)			X	<0.0005	<0.04					1	mg/L	lb/day			
24P. PCB-1016 (12674-11-2)			X	<0.0005	<0.04					1	mg/L	lb/day			
25P. Toxaphene (8001-35-2)			X	<0.0002	<0.02					1	mg/L	lb/day			

EPA FORM 2C

SITE PLAN

ATTACHMENT 3

EPA Form 2F

Please print or type in the unshaded areas only

EPA ID Number (copy from Item 1 of Form 1)

Form Approved. OMB No. 2040-0086
Approval expires 8-31-92

Form 2F (NPDES)

EPA

United States Environmental Protection Agency
Washington, DC 20460

Application for Permit to Discharge Storm Water Discharges Associated with Industrial Activity

Paperwork Reduction Act Notice

Public reporting burden for this application is estimated to average 28.6 hours per application, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate, any other aspect of this collection of information, or suggestions for improving this form, including suggestions which may increase or reduce this burden to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M St., SW, Washington, DC 20460, or Director, Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

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)
	See Attached Drawing E 44032		

II. 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.

1. Identification of Conditions, Agreements, Etc.	2. Affected Outfalls		3. Brief Description of Project	4. Final Compliance Date	
	number	source of discharge		a. req.	b. proj.
N/A					

B. You may attach additional sheets describing any additional water pollution (or other environmental projects which may affect your discharges) you now have under way or which you plan. Indicate whether each program is now under way or planned, and indicate your actual or planned schedules for construction.

III. Site Drainage Map

Attach a site map showing topography (or indicating the outline of drainage areas served by the outfall(s) covered in the application if a topographic map is unavailable) depicting the facility including: each of its intake and discharge structures; the drainage area of each storm water outfall; paved areas and buildings within the drainage area of each storm water outfall; each known past or present areas used for outdoor storage or disposal of significant materials; each existing structural control measure to reduce pollutants in storm water runoff; materials loading and access areas; areas where pesticides, herbicides, soil conditioners and fertilizers are applied; each of its hazardous waste treatment, storage or disposal units (including each area not required to have a RCRA permit which is used for accumulating hazardous waste under 40 CFR 262.34); each well where fluids from the facility are injected underground; springs, and other surface water bodies which receive storm water discharges from the facility.

Continue on Page 2

See Attached Drawings E 44030 and E 44031

Continued from the Front

IV. Narrative Description of Pollutant Sources

A. For each outfall, provide an estimate of the area (include units) of impervious surfaces (including paved areas and building roofs) drained to the outfall, and an estimate of the total surface area drained by the outfall.

Outfall Number	Area of Impervious Surface (provide units)	Total Area Drained (provide units)	Outfall Number	Area of Impervious Surface (provide units)	Total Area Drained (provide units)
	* See Attached	Drawing E 44032			

B. Provide a narrative description of significant materials that are currently or in the past three years have been treated, stored or disposed in a manner to allow exposure to storm water; method of treatment, storage, or disposal; past and present materials management practices employed to minimize contact by these materials with storm water runoff; materials loading and access areas; and the location, manner, and frequency in which pesticides, herbicides, soil conditioners, and fertilizers are applied.

* See Attached Drawing E 44032 and Attachment 1

C. For each outfall, provide the location and a description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff, and a description of the treatment the storm water receives, including the schedule and type of maintenance for control and treatment measures and the ultimate disposal of any solid or fluid wastes other than by discharge.

Outfall Number	Treatment	List Codes from Table 2F-1
	* See Attached Drawing E 44032	

V. Nonstormwater Discharges

A. I certify under penalty of law that the outfall(s) covered by this application have been tested or evaluated for the presence of nonstormwater discharges, and that all nonstormwater discharges from these outfall(s) are identified in either an accompanying Form 2C or Form 2E application for the outfall.

Name and Official Title (type or print)	Signature	Date Signed
J. T. Beckham, Jr. Vice President - Plant Hatch	J T Beckham Jr	5/29/92

B. Provide a description of the method used, the date of any testing, and the onsite drainage points that were directly observed during a test.

* See Narrative Description in Attachment 2

VI. Significant Leaks or Spills

Provide existing information regarding the history of significant leaks or spills of toxic or hazardous pollutants at the facility in the last three years, including the approximate date and location of the spill or leak, and the type and amount of material released.

There have been no significant leaks or spills of toxic or hazardous materials at Plant Hatch in the last three (3) years.

Continued from Page 2

EPA ID Number (copy from Item 1 of Form 1)

VII. Discharge Information

A, B, C, & D: See instructions before proceeding. Complete one set of tables for each outfall. Annotate the outfall number in the space provided.

Tables VII-A, VII-B, and VII-C are included on separate sheets numbered VII-1 and VII-2

E. Potential discharges not covered by analysis - is any toxic pollutant listed in table 2F-2, 2F-3 or 2F-4, a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

[ ] Yes (list all such pollutants below) [X] No (go to Section IX)

VIII. 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 (list all such pollutants below) [X] No (go to Section IX)

IX. Contract Analysis Information

Were any of the analysis reported in item VII performed by a contract laboratory or consulting firm?

[X] Yes (list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below) [ ] No (go to Section X)

A. Name	B. Address	C. Area Code & Phone No.	D. Pollutants Analyzed
Alabama Power Company General Test Laboratory	Building No. 8 P. O. Box 2641 Birmingham, AL 35291	(205) 664-6182	All except pH, temperature, and chlorine.

X. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. Name & Official Title (type or print)	B. Area Code and Phone No.
J. T. Beckham, Jr. Vice President - Plant Hatch	(205) 877-7279
C. Signature: J. T. Beckham Jr.	D. Date Signed: 5/29/92

EPA ID Number (copy from Item 1 of Form 1)

Form Approved. OMB No. 2040-0086
Approval expires 8-31-82

VII. Discharge Information (Continued from page 3 of Form 2F)

Part A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant and CAS Number (if available)	Maximum Values (include units)		Average Values (include units)		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-weighted Composite		
Oil and Grease		N/A				
Biological Oxygen Demand (BOD5)		* See Attached Chemical Analysis Reports				
Chemical Oxygen Demand (COD)		(Attachment 3)				
Total Suspended Solids (TSS)						
Total Nitrogen						
Total Phosphorus						
pH	Minimum	Maximum	Minimum	Maximum		

Part B - List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number (if available)	Maximum Values (include units)		Average Values (include units)		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-weighted Composite		
		* See Attached Chemical Analysis Reports (Attachment 3)				

Continued from the Front

Part C - List each pollutant shown in Tables 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.

Pollutant and CAS Number (if available)	Maximum Values (include units)		Average Values (include units)		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite		
	* See Attached Chemical Analysis Reports (Attachment 3)					

Part D - Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm Event (in minutes)	3. Total rainfall during storm event (in inches)	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event (gallons/minute or specify units	6. Total flow from rain event (gallons or specify units)

7. Provide a description of the method of flow measurement or estimate.

* See Attachment 4

ATTACHMENT 1 TO EPA FORM 2F

EPA FORM 3510-2F
ITEM IV. B
MATERIALS MANAGEMENT PRACTICES

Reference the following Georgia Power Company Environmental Guidelines: EG-320, Rev. 2, Control, Handling, Disposal, and Recycling of Hazardous Waste, which addresses definitions, determination of hazards, generator status, disposal, and recycling of hazardous waste; EG-330, Rev. 0, Hazardous Materials/Waste Spill Notification, Containment, and Cleanup, which includes spill detection, identification, assessment, notification, control, and cleanup on land or water of petroleum products, solvents, and other chemicals; EG-350 Rev. 0, Solid Waste, which addresses minimization policies, handling, recycling, and disposal; EG-520, Rev.1, Combined Oil and Hazardous Materials SPCC and Contingency Plan; and EG-900, Rev.0, Guidelines for Application of Herbicides, which covers selection, handling, application, storage, disposal, spills, recordkeeping, and licensing.

In addition to these specific Environmental Affairs Corporate Departmental Guidelines, proactive site specific materials management practices are employed to minimize contact of significant materials with stormwater (e.g., indoor storage, secondary containment structural control measures, and ongoing materials handling training). Also, a formal Hazard Communication Program (EG-310 Rev. 1) is in place at all applicable GPC facilities.

ATTACHMENT 2 TO EPA FORM 2F

PLANT E. I. HATCH
EPA FORM 3510-2F

ITEM V, PART B

Evaluation of the storm drain system for non-stormwater discharges was accomplished by:

(a) Review of drainage and piping drawings;

(b) Plant walkdowns, and;

(c) Interviews of maintenance, engineering, and operations personnel.

ATTACHMENT 3 TO EPA FORM 2F

CHEMICAL ANALYSIS REPORTS

STORMWATER SAMPLES

General Test Laboratory
Building Number 8
P.O. Box 2641
Birmingham, Al. 35291

Alabama Power

Certificate of Analysis

TO : MR TOM MOORER
ADDRESS: SOUTHERN NUCLEAR

REPORT DATE : 02/10/92
SAMPLE DATE : 01/28/92
SAMPLE NUMBER : 920128-0102
LOCATION NUMBER: BPCO

DESCRIPTION: PLANT HATCH, AREA 1 GRAB SAMPLE FIELD BLANK

TEST	REFERENCE	ANALYSIS DATE	RESULT	UNITS
INTAKE AND EFFLUENT CHARACTERISTICS (PART B)				
Aluminum, Total	EPA PB84/200.7	02/07/92	< 0.03	mg/l
Barium, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Boron, Total	STANDARD METHOD 404A	02/04/92	< 0.01	mg/l
Cobalt, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Iron, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Magnesium, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Molybdenum, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Manganese, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Tin, Total	EPA PB84/200.7	02/07/92	0.02	mg/l
Titanium, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
METALS, CYANIDE, AND TOTAL PHENOLS				
Antimony, Total	EPA PB84/200.7	02/07/92	< 0.03	mg/l
Arsenic, Total	EPA PB84/206.2	01/29/92	< 0.005	mg/l
Beryllium, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Cadmium, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Chromium, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Copper, Total	EPA PB84/200.7	02/07/92	< 0.02	mg/l
Lead, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Mercury, Total	EPA PB84/245.1	01/30/92	< 0.0002	mg/l
Nickel, Total	EPA PB84/200.7	02/07/92	< 0.02	mg/l
Selenium, Total	EPA PB84/200.7	02/07/92	< 0.03	mg/l
Silver, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Thallium, Total	EPA PB84/200.7	02/07/92	< 0.03	mg/l
Zinc, Total	EPA PB84/200.7	02/07/92	0.01	mg/l

Chemist	Quality Control	Supv. Chemist	Page 1 of

S-2790 Rev 8-91

General Test Laboratory
Building Number 8
P.O. Box 2641
Birmingham, Al. 35291

Alabama Power

Certificate of Analysis

TO : MR TOM ADDKER
ADDRESS: SOUTHERN NUCLEAR

REPORT DATE : 02/10/92
SAMPLE DATE : 01/28/92
SAMPLE NUMBER : 920128-0102
LOCATION NUMBER: BPCD

DESCRIPTION: PLANT HATCH AREA 1 GRAB SAMPLE FIELD BLANK

TEST		REFERENCE	ANALYSIS DATE	RESULT	UNITS
VOLATILE COMPOUNDS					
Acrolein	1V	EPA PB83/683/624	02/05/92	(0.020	ug/l
Acrylonitrile	2V	EPA PB83/683/624	02/05/92	(0.020	ug/l
Benzene	3V	EPA PB83/624	02/10/92	(0.0005	ug/l
Bromoform	5V	EPA PB83/624	02/10/92	(0.0005	ug/l
Carbon Tetrachloride	6V	EPA PB83/624	02/10/92	(0.0005	ug/l
Chlorobenzene	7V	EPA PB83/624	02/10/92	(0.0005	ug/l
Chlorodibromoethane	8V	EPA PB83/624	02/10/92	(0.0005	ug/l
Chloroethane	9V	EPA PB83/624	02/10/92	(0.0005	ug/l
2-Chloroethylvinyl Ether	10V	EPA PB83/624	02/10/92	(0.0005	ug/l
Chloroform	11V	EPA PB83/624	02/10/92	(0.0005	ug/l
Dichlorobromomethane	12V	EPA PB83/624	02/10/92	(0.0005	ug/l
1,1-Dichloroethane	14V	EPA PB83/624	02/10/92	(0.0005	ug/l
1,2-Dichloroethane	15V	EPA PB83/624	02/10/92	(0.0005	ug/l
1,1-Dichloroethylene	16V	EPA PB83/624	02/10/92	(0.0005	ug/l
1,2-Dichloropropane	17V	EPA PB83/624	02/10/92	(0.0005	ug/l
1,3-Dichloropropylene	18V	EPA PB83/624	02/10/92	(0.0005	ug/l
Ethylbenzene	19V	EPA PB83/624	02/10/92	(0.0005	ug/l
Methyl bromide	20V	EPA PB83/624	02/10/92	(0.0005	ug/l
Methyl Chloride	21V	EPA PB83/624	02/10/92	(0.0005	ug/l
Methylene Chloride	22V	EPA PB83/624	02/10/92	(0.0005	ug/l
1,1,2,2-Tetrachloroethane	23V	EPA PB83/624	02/10/92	(0.0005	ug/l
Tetrachloroethylene	24V	EPA PB83/624	02/10/92	(0.0005	ug/l
Toluene	25V	EPA PB83/624	02/10/92	(0.0005	ug/l
1,2-trans-dichloroethylene	26V	EPA PB83/624	02/10/92	(0.0005	ug/l
1,1,1-Trichloroethane	27V	EPA PB83/624	02/10/92	(0.0005	ug/l
1,1,2-Trichloroethane	28V	EPA PB83/624	02/10/92	(0.0005	ug/l
Trichloroethylene	29V	EPA PB83/624	02/10/92	(0.0005	ug/l
Vinyl Chloride	31V	EPA PB83/624	02/10/92	(0.0005	ug/l

CC: MR. W. S. HILL

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General Test Laboratory
Building Number 8
P.O. Box 2641
Birmingham, Al. 35291

Alabama Power

Certificate of Analysis

TO : MR. TOM MOORER
ADDRESS: SOUTHERN NUCLEAR

REPORT DATE : 02/10/92
SAMPLE DATE : 01/28/92
SAMPLE NUMBER : 920120-0103
LOCATION NUMBER: BPCO

DESCRIPTION: PLANT HATCH, AREA 1 COMP SAMPLE FIELD BLANK

TEST	REFERENCE	ANALYSIS DATE	RESULT	UNITS
INTAKE AND EFFLUENT CHARACTERISTICS (PART B)				
Aluminum, Total	EPA PB84/200.7	02/07/92	< 0.03	mg/l
Barium, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Boron, Total	STANDARD METHOD 404A	02/04/92	< 0.01	mg/l
Cobalt, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Iron, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Magnesium, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Molybdenum, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Manganese, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Tin, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Titanium, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
METALS, CYANIDE, AND TOTAL PHENOLS				
Antimony, Total	EPA PB84/200.7	02/07/92	0.04	mg/l
Arsenic, Total	EPA PB84/206.2	01/29/92	< 0.005	mg/l
Beryllium, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Cadmium, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Chromium, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Copper, Total	EPA PB84/200.7	02/07/92	< 0.02	mg/l
Lead, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Mercury, Total	EPA PB84/245.1	01/30/92	< 0.0002	mg/l
Nickel, Total	EPA PB84/200.7	02/07/92	< 0.02	mg/l
Selenium, Total	EPA PB84/200.7	02/07/92	< 0.03	mg/l
Silver, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Thallium, Total	EPA PB84/200.7	02/07/92	< 0.03	mg/l
Zinc, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l

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General Test Laboratory
Building Number 8
P.O. Box 2641
Birmingham, Al. 35291

Alabama Power

Certificate of Analysis

TO : MR. TOM MOORER
ADDRESS: SOUTHERN NUCLEAR

REPORT DATE : 02/10/92
SAMPLE DATE : 01/28/92
SAMPLE NUMBER : 920128-0103
LOCATION NUMBER: 6PCD

DESCRIPTION: PLANT HATCH, AREA 1 COMP SAMPLE FIELD BLANK

TEST		REFERENCE	ANALYSIS DATE	RESULT	UNITS
VOLATILE COMPOUNDS					
Acrolein	1V	EPA PB83/603/624	02/05/92	(0.009	ug/l
Acrylonitrile	2V	EPA PB83/603/624	02/05/92	(0.009	ug/l
Benzene	3V	EPA PB83/624	02/16/92	(0.0005	ug/l
Bromoform	5V	EPA PB83/624	02/10/92	(0.0005	ug/l
Carbon Tetrachloride	6V	EPA PB83/624	02/10/92	(0.0005	ug/l
Chlorobenzene	7V	EPA PB83/624	02/10/92	(0.0005	ug/l
Chlorodibromoethane	8V	EPA PB83/624	02/10/92	(0.0005	ug/l
Chloroethane	9V	EPA PB83/624	02/10/92	(0.0005	ug/l
2-Chloroethylvinyl Ether	10V	EPA PB83/624	02/10/92	(0.0005	ug/l
Chloroform	11V	EPA PB83/624	02/10/92	(0.0005	ug/l
Dichlorobromoethane	12V	EPA PB83/624	02/10/92	(0.0005	ug/l
1,1-Dichloroethane	14V	EPA PB83/624	02/10/92	(0.0005	ug/l
1,2-Dichloroethane	15V	EPA PB83/624	02/10/92	(0.0005	ug/l
1,1-Dichloroethylene	16V	EPA PB83/624	02/10/92	(0.0005	ug/l
1,2-Dichloropropane	17V	EPA PB83/624	02/10/92	(0.0005	ug/l
1,3-Dichloropropylene	18V	EPA PB83/624	02/10/92	(0.0005	ug/l
Ethylbenzene	19V	EPA PB83/624	02/10/92	(0.0005	ug/l
Methyl bromide	20V	EPA PB83/624	02/10/92	(0.0005	ug/l
Methyl Chloride	21V	EPA PB83/624	02/10/92	(0.0005	ug/l
Methylene Chloride	22V	EPA PB86/624	02/10/92	(0.0005	ug/l
1,1,2,2-Tetrachloroethane	23V	EPA PB83/624	02/10/92	(0.0005	ug/l
Tetrachloroethylene	24V	EPA PB83/624	02/10/92	(0.0005	ug/l
Toluene	25V	EPA PB83/624	02/10/92	(0.0005	ug/l
1,2-trans-dichloroethylene	26V	EPA PB83/624	02/10/92	(0.0005	ug/l
1,1,1-Trichloroethane	27V	EPA PB83/624	02/10/92	(0.0005	ug/l
1,1,2-Trichloroethane	28V	EPA PB83/624	02/10/92	(0.0005	ug/l
Trichloroethylene	29V	EPA PB83/624	02/10/92	(0.0005	ug/l
Vinyl Chloride	31V	EPA PB83/624	02/10/92	(0.0005	ug/l

CC: MR. W. S. HILL

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General Test Laboratory
Building Number 8
P.O. Box 2641
Birmingham, Al. 35291

Alabama Power

Certificate of Analysis

TO : MR. TOM MOORER
ADDRESS: SOUTHERN NUCLEAR

REPORT DATE : 02/10/92
SAMPLE DATE : 01/28/92
SAMPLE NUMBER : 920128-0104
LOCATION NUMBER: BPCO

DESCRIPTION: PLANT HATCH, SITE 2 8900 SAMPLE FIELD BLANK

TEST	REFERENCE	ANALYSIS DATE	RESULT	UNITS
INTAKE AND EFFLUENT CHARACTERISTICS (PART B)				
Aluminum, Total	EPA PB84/200.7	02/07/92	< 0.03	mg/l
Barium, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Boron, Total	STANDARD METHOD [illegible]	02/04/92	< 0.01	mg/l
Cobalt, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Iron, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Magnesium, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Molybdenum, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Manganese, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Tin, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Titanium, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
METALS, CYANIDE, AND TOTAL PHENOLS				
Antimony, Total	EPA PB84/200.7	02/07/92	0.04	mg/l
Arsenic, Total	EPA PB84/206.2	01/29/92	< 0.005	mg/l
Beryllium, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Cadmium, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Chromium, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Copper, Total	EPA PB84/200.7	02/07/92	< 0.02	mg/l
Lead, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Mercury, Total	EPA PB84/245.1	01/30/92	< 0.0002	mg/l
Nickel, Total	EPA PB84/200.7	02/07/92	< 0.02	mg/l
Selenium, Total	EPA PB84/200.7	02/07/92	< 0.03	mg/l
Silver, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Thallium, Total	EPA PB84/200.7	02/07/92	< 0.03	mg/l
Zinc, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l

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General Test Laboratory
Building Number 8
P.O. Box 2641
Birmingham, Al. 35291

Alabama Power

Certificate of Analysis

TO : MR. TOM MOORER
ADDRESS: SOUTHERN NUCLEAR

REPORT DATE : 02/10/92
SAMPLE DATE : 01/28/92
SAMPLE NUMBER : 920128-0104
LOCATION NUMBER: BPCO

DESCRIPTION: PLANT HATCH, SITE 2 BRAB SAMPLE FIELD BLANK

TEST		REFERENCE	ANALYSIS DATE	RESULT	UNITS
VOLATILE COMPOUNDS					
Acrolein	1V	EPA PB83/603/624	02/05/92	< 0.020	ug/l
Acrylonitrile	2V	EPA PB83/603/624	02/05/92	< 0.020	ug/l
Benzene	3V	EPA PB83/624	02/10/92	< 0.0005	ug/l
Bromoform	5V	EPA PB83/624	02/10/92	< 0.0005	ug/l
Carbon Tetrachloride	6V	EPA PB83/624	02/10/92	< 0.0005	ug/l
Chlorobenzene	7V	EPA PB83/624	02/10/92	< 0.0005	ug/l
Chlorodibromoethane	8V	EPA PB83/624	02/10/92	< 0.0005	ug/l
Chloroethane	9V	EPA PB83/624	02/10/92	< 0.0005	ug/l
2-Chloroethylvinyl Ether	10V	EPA PB83/624	02/10/92	< 0.0005	ug/l
Chloroform	11V	EPA PB83/624	02/10/92	< 0.0005	ug/l
Dichlorobromoethane	12V	EPA PB83/624	02/10/92	< 0.0005	ug/l
1,1-Dichloroethane	14V	EPA PB83/624	02/10/92	< 0.0005	ug/l
1,2-Dichloroethane	15V	EPA PB83/624	02/10/92	< 0.0005	ug/l
1,1-Dichloroethylene	16V	EPA PB83/624	02/10/92	< 0.0005	ug/l
1,2-Dichloropropane	17V	EPA PB83/624	02/10/92	< 0.0005	ug/l
1,3-Dichloropropylene	18V	EPA PB83/624	02/10/92	< 0.0005	ug/l
Ethylbenzene	19V	EPA PB83/624	02/10/92	< 0.0005	ug/l
Methyl bromide	20V	EPA PB83/624	02/10/92	< 0.0005	ug/l
Methyl Chloride	21V	EPA PB83/624	02/10/92	< 0.0005	ug/l
Methylene Chloride	22V	EPA PB86/624	02/10/92	< 0.0005	ug/l
1,1,2,2-Tetrachloroethane	23V	EPA PB83/624	02/10/92	< 0.0005	ug/l
Tetrachloroethylene	24V	EPA PB83/624	02/10/92	< 0.0005	ug/l
Toluene	25V	EPA PB83/624	02/10/92	< 0.0005	ug/l
1,2-trans-dichloroethylene	26V	EPA PB83/624	02/10/92	< 0.0005	ug/l
1,1,1-Trichloroethane	27V	EPA PB83/624	02/10/92	< 0.0005	ug/l
1,1,2-Trichloroethane	28V	EPA PB83/624	02/10/92	< 0.0005	ug/l
Trichloroethylene	29V	EPA PB83/624	02/10/92	< 0.0005	ug/l
Vinyl Chloride	31V	EPA PB83/624	02/10/92	< 0.0005	ug/l

CC: MR. W. S. HILL

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General Test Laboratory
Building Number 8
P.O. Box 2641
Birmingham, Al. 35291

Alabama Power

Certificate of Analysis

TO : MR. TOM MOORER
ADDRESS: SOUTHERN NUCLEAR

REPORT DATE : 02/10/92
SAMPLE DATE : 01/28/92
SAMPLE NUMBER : 920128-0105
LOCATION NUMBER: GPCD

DESCRIPTION: PLANT HATCH, SITE 2 COMPOSITE SAMPLE FIELD BLANK

TEST	REFERENCE	ANALYSIS DATE	RESULT	UNITS
INTAKE AND EFFLUENT CHARACTERISTICS (PART B)				
Aluminum, Total	EPA PB84/200.7	02/07/92	< 0.03	mg/l
Barium, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Boron, Total	STANDARD METHOD 404A	02/04/92	< 0.01	mg/l
Cobalt, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Iron, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Magnesium, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Molybdenum, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Manganese, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Tin, Total	EPA PB84/200.7	02/07/92	0.01	mg/l
Titanium, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
METALS, CYANIDE, AND TOTAL PHENOLS				
Antimony, Total	EPA PB84/200.7	02/07/92	0.03	mg/l
Arsenic, Total	EPA PB84/206.2	01/29/92	< 0.005	mg/l
Beryllium, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Cadmium, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Chromium, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Copper, Total	EPA PB84/200.7	02/07/92	< 0.02	mg/l
Lead, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Mercury, Total	EPA PB84/245.1	01/30/92	< 0.0002	mg/l
Nickel, Total	EPA PB84/200.7	02/07/92	< 0.02	mg/l
Selenium, Total	EPA PB84/200.7	02/07/92	< 0.03	mg/l
Silver, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Thallium, Total	EPA PB84/200.7	02/07/92	< 0.03	mg/l
Zinc, Total	EPA PB84/200.7	02/07/92	0.01	mg/l

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General Test Laboratory
Building Number 8
P.O. Box 2641
Birmingham, Al. 35291

Alabama Power

Certificate of Analysis

TO : MR. TOM MOORER
ADDRESS: SOUTHERN NUCLEAR

REPORT DATE : 02/10/92
SAMPLE DATE : 01/28/92
SAMPLE NUMBER : 920128-0185
LOCATION NUMBER: GPCO

DESCRIPTION: PLANT HATCH, SITE 2 COMPOSITE SAMPLE FIELD BLANK

TEST		REFERENCE	ANALYSIS DATE	RESULT	UNITS
VOLATILE COMPOUNDS					
Acrolein	1V	EPA PB83/[illegible]3/624	02/05/92	< 0.020	mg/l
Acrylonitrile	2V	EPA PB83/[illegible]3/624	02/05/92	< 0.020	mg/l
Benzene	3V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Bromoform	5V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Carbon Tetrachloride	6V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Chlorobenzene	7V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Chlorodibromomethane	8V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Chloroethane	9V	EPA PB83/624	02/10/92	< 0.0005	mg/l
2-Chloroethylvinyl Ether	10V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Chloroform	11V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Dichlorobromomethane	12V	EPA PB83/624	02/10/92	< 0.0005	mg/l
1,1-Dichloroethane	14V	EPA PB83/624	02/10/92	< 0.0005	mg/l
1,2-Dichloroethane	15V	EPA PB83/624	02/10/92	< 0.0005	mg/l
1,1-Dichloroethylene	16V	EPA PB83/624	02/10/92	< 0.0005	mg/l
1,2-Dichloropropane	17V	EPA PB83/624	02/10/92	< 0.0005	mg/l
1,3-Dichloropropylene	18V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Ethylbenzene	19V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Methyl bromide	20V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Methyl Chloride	21V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Methylene Chloride	22V	EPA PB86/624	02/10/92	< 0.0005	mg/l
1,1,2,2-Tetrachloroethane	23V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Tetrachloroethylene	24V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Toluene	25V	EPA PB83/624	02/10/92	< 0.0005	mg/l
1,2-trans-dichloroethylene	26V	EPA PB83/624	02/10/92	< 0.0005	mg/l
1,1,1-Trichloroethane	27V	EPA PB83/624	02/10/92	< 0.0005	mg/l
1,1,2-Trichloroethane	28V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Trichloroethylene	29V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Vinyl Chloride	31V	EPA PB83/624	02/10/92	< 0.0005	mg/l

CC: MR. W. S. HILL

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General Test Laboratory,
Building Number 8
P.O. Box 2641
Birmingham, Al. 35291

Alabama Power

Certificate of Analysis

TO : MR. TOM MOORER
ADDRESS: SOUTHERN NUCLEAR

REPORT DATE : 02/26/92
SAMPLE DATE : 01/28/92
SAMPLE NUMBER : 920128-0186
LOCATION NUMBER: BPCO

DESCRIPTION: BPCO PLANT MATCH, SITE 1, STORMWATER RUNOFF, GRAB SAMPLE

TEST	REFERENCE	ANALYSIS DATE	RESULT	UNITS
INTAKE AND EFFLUENT CHARACTERISTICS (PART A)				
Biochemical Oxygen Demand, 5 Day	STANDARD METHOD 507	02/03/92	1.	mg/l
Chemical Oxygen Demand	EPA PB84/410	02/13/92	6.	mg/l
Organic Carbon, Total	EPA PB84/415.1	02/07/92	2.	mg/l
Solids, Total Suspended	EPA PB84/160.2	01/29/92	2.	mg/l
Nitrogen, Ammonia	EPA PB84/350.2	02/06/92	0.120	mg/l
Temperature		01/28/92	12.0	Degrees C
pH		01/28/92	7.49	SU
INTAKE AND EFFLUENT CHARACTERISTICS (PART B)				
Bromide	EPA PB84/382.1	01/29/92	0.017	mg/l
Chlorine, Total Residual		01/28/92	< 0.01	mg/l
Color		01/29/92	21.	PCU
Coliform, Fecal	STANDARD METHOD 909C	01/30/92	160.	org/100ml
Fluoride	EPA PB84/300.0	01/29/92	0.10	mg/l
Nitrate-Nitrite (as N)	*Standard Method 421	05/06/92	0.76	mg/l
Nitrogen, Total Organic	EPA PB84/351.3	05/06/92	0.27	mg/l
Oil and Grease	EPA PB84/413.1	02/17/92	1.1	mg/l
Phosphorus, Total	EPA PB84/365.2	02/03/92	0.065	mg/l
Sulfate	EPA PB84/300.0	01/29/92	9.0	mg/l
Sulfide	EPA PB84/376.2	01/29/92	0.03	mg/l
Surfactants	EPA PB84/425.1	01/30/92	0.06	mg/l
Aluminum, Total	EPA PB84/200.7	02/07/92	0.73	mg/l
Barium, Total	EPA PB84/200.7	02/07/92	0.09	mg/l
Boron, Total	STANDARD METHOD 4.6.4A	02/13/92	0.06	mg/l
Cobalt, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Iron, Total	EPA PB84/200.7	02/07/92	0.29	mg/l
Magnesium, Total	EPA PB84/200.7	02/07/92	0.62	mg/l
Molybdenum, Total	EPA PB84/200.7	02/07/92	< 0.01	mg/l
Manganese, Total	EPA PB84/200.7	02/07/92	0.01	mg/l

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6-2780 Rev. 8/85

General Test Laboratory
Building Number 8
P.O. Box 2641
Birmingham, Al. 35291

Alabama Power

Certificate of Analysis

TO : MR. TOM MOORER
ADDRESS: SOUTHERN NUCLEAR

REPORT DATE : 02/28/92
SAMPLE DATE : 01/28/92
SAMPLE NUMBER : 920128-0106
LOCATION NUMBER: GPCO

DESCRIPTION: GPCO PLANT MATCH, SITE 1, STORMWATER RUNOFF, GRAB SAMPLE

TEST		REFERENCE	ANALYSIS DATE	RESULT	UNITS
INTAKE AND EFFLUENT CHARACTERISTICS (PART B)					
Tin, Total		EPA PB84/200.7	02/07/92	< 0.01	mg/l
Titanium, Total		EPA PB84/200.7	02/07/92	0.03	mg/l
METALS, CYANIDE, AND TOTAL PHENOLS					
Antimony, Total		EPA PB84/200.7	02/07/92	0.04	mg/l
Arsenic, Total		EPA PB84/206.2	01/29/92	< 0.005	mg/l
Beryllium, Total		EPA PB84/200.7	02/07/92	< 0.01	mg/l
Cadmium, Total		EPA PB84/200.7	02/07/92	< 0.01	mg/l
Chromium, Total		EPA PB84/200.7	02/07/92	< 0.01	mg/l
Copper, Total		EPA PB84/200.7	02/07/92	< 0.02	mg/l
Lead, Total		EPA PB84/200.7	02/07/92	< 0.01	mg/l
Mercury, Total		EPA PB84/245.1	01/30/92	< 0.0002	mg/l
Nickel, Total		EPA PB84/200.7	02/07/92	< 0.02	mg/l
Selenium, Total		EPA PB84/200.7	02/07/92	< 0.03	mg/l
Silver, Total		EPA PB84/200.7	02/07/92	< 0.01	mg/l
Thallium, Total		EPA PB84/200.7	02/07/92	< 0.03	mg/l
Zinc, Total		EPA PB84/200.7	02/07/92	0.10	mg/l
Cyanide, Total		EPA PB84/335.2	02/05/92	< 0.01	mg/l
Phenol, Total		EPA PB84/420.1	01/30/92	< 0.01	mg/l
VOLATILE COMPOUNDS					
Acrolein	1V	EPA PB83/603/624	02/05/92	< 0.020	mg/l
Acrylonitrile	2V	EPA PB83/603/624	02/05/92	< 0.020	mg/l
Benzene	3V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Bromoform	5V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Carbon Tetrachloride	6V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Chlorobenzene	7V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Chlorodibromomethane	8V	EPA PB83/624	02/10/92	< 0.0005	mg/l

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General Test Laboratory
Building Number 8
P.O. Box 2641
Birmingham, Al. 35291

Alabama Power

Certificate of Analysis

TO : MR. TOM MOORER
ADDRESS: SOUTHERN NUCLEAR

REPORT DATE : 02/26/92
SAMPLE DATE : 01/28/92
SAMPLE NUMBER : 920120-0106
LOCATION NUMBER: BPCO

DESCRIPTION: BPCO PLANT HATCH, SITE 1, STORMWATER RUNOFF, GRAB SAMPLE

TEST		REFERENCE	ANALYSIS DATE	RESULT	UNITS
VOLATILE COMPOUNDS					
Chloroethane	9V	EPA PB83/624	02/10/92	< 0.0005	mg/l
2-Chloroethylvinyl Ether	10V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Chloroform	11V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Dichlorobromoethane	12V	EPA PB83/624	02/10/92	< 0.0005	mg/l
1,1-Dichloroethane	14V	EPA PB83/624	02/10/92	< 0.0005	mg/l
1,2-Dichloroethane	15V	EPA PB83/624	02/10/92	< 0.0005	mg/l
1,1-Dichloroethylene	16V	EPA PB83/624	02/10/92	< 0.0005	mg/l
1,2-Dichloropropane	17V	EPA PB83/624	02/10/92	< 0.0005	mg/l
1,3-Dichloropropylene	18V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Ethylbenzene	19V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Methyl bromide	20V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Methyl Chloride	21V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Methylene Chloride	22V	EPA PB83/624	02/10/92	< 0.0005	mg/l
1,1,2,2-Tetrachloroethane	23V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Tetrachloroethylene	24V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Toluene	25V	EPA PB83/624	02/10/92	< 0.0005	mg/l
1,2-trans-dichloroethylene	26V	EPA PB83/624	02/10/92	< 0.0005	mg/l
1,1,1-Trichloroethane	27V	EPA PB83/624	02/10/92	< 0.0005	mg/l
1,1,2-Trichloroethane	28V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Trichloroethylene	29V	EPA PB83/624	02/10/92	< 0.0025	mg/l
Vinyl Chloride	31V	EPA PB83/624	02/10/92	< 0.0005	mg/l
ACID COMPOUNDS					
2-chlorophenol	1A	EPA PB83/625	02/11/92	< 0.01	mg/l
2,4-dichlorophenol	2A	EPA PB83/625	02/11/92	< 0.01	mg/l
2,4-dimethylphenol	3A	EPA PB83/625	02/11/92	< 0.01	mg/l
2-methyl-4,6-dinitrophenol	4A	EPA PB83/625	02/11/92	< 0.05	mg/l
2,4-dinitrophenol	5A	EPA PB83/625	02/11/92	< 0.05	mg/l
2-nitrophenol	6A	EPA PB83/625	02/11/92	< 0.01	mg/l

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General Test Laboratory
Building Number 8
P.O. Box 2641
Birmingham, Al. 35291

Alabama Power

Certificate of Analysis

TO : MR. TOM MOORER
ADDRESS: SOUTHERN NUCLEAR

REPORT DATE : 02/28/92
SAMPLE DATE : 01/28/92
SAMPLE NUMBER : 920128-0106
LOCATION NUMBER: BPCO

DESCRIPTION: BPCO PLANT MATCH, SITE 1, STORMWATER RUNOFF, GRAB SAMPLE

TEST		REFERENCE	ANALYSIS DATE	RESULT	UNITS
ACID COMPOUNDS					
4-nitrophenol	7A	EPA P883/625	02/11/92	< 0.05	mg/l
4-chloro-3-methylphenol	8A	EPA P883/625	02/11/92	< 0.01	mg/l
Pentachlorophenol	9A	EPA P883/625	02/11/92	< 0.01	mg/l
Phenol	10A	EPA P883/625	02/11/92	< 0.01	mg/l
2,4,6-trichlorophenol	11A	EPA P883/625	02/11/92	< 0.01	mg/l
BASE / NEUTRAL COMPOUNDS					
Acenaphthene	1B	EPA P883/625	02/11/92	< 0.01	mg/l
Acenaphthylene	2B	EPA P883/625	02/11/92	< 0.005	mg/l
Anthracene	3B	EPA P883/625	02/11/92	< 0.01	mg/l
Benzidine	4B	EPA P883/625	02/11/92	< 0.08	mg/l
Benzo(a)anthracene	5B	EPA P883/625	02/11/92	< 0.01	mg/l
Benzo(a)pyrene	6B	EPA P883/625	02/11/92	< 0.01	mg/l
Benzo(b)fluoranthene	7B	EPA P883/625	02/11/92	< 0.01	mg/l
Benzo(g,h,i)perylene	8B	EPA P883/625	02/11/92	< 0.01	mg/l
Benzo(k)fluoranthene	9B	EPA P883/625	02/11/92	< 0.01	mg/l
Bis(2-chloroethoxy)methane	10B	EPA P883/625	02/11/92	< 0.01	mg/l
Bis(2-chloroethyl)ether	11B	EPA P883/625	02/11/92	< 0.01	mg/l
Bis(2-Chloroisopropyl)ether	12B	EPA P883/625	02/11/92	< 0.01	mg/l
Bis(2-ethylhexyl)phthalate	13B	EPA P883/625	02/11/92	< 0.01	mg/l
4-Bromophenyl phenyl ether	14B	EPA P883/625	02/11/92	< 0.01	mg/l
Butylbenzyl phthalate	15B	EPA P883/625	02/11/92	< 0.01	mg/l
2-Chloronaphthalene	16B	EPA P883/625	02/11/92	< 0.01	mg/l
4-Chlorophenyl phenyl ether	17B	EPA P883/625	02/11/92	< 0.01	mg/l
Chrysene	18B	EPA P883/625	02/11/92	< 0.01	mg/l
Dibenzo(a,h)anthracene	19B	EPA P883/625	02/11/92	< 0.01	mg/l
1,2-Dichlorobenzene	20B	EPA P883/625	02/11/92	< 0.01	mg/l
1,3-Dichlorobenzene	21B	EPA P883/625	02/11/92	< 0.01	mg/l
1,4-Dichlorobenzene	22B	EPA P883/625	02/11/92	< 0.01	mg/l

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General Test Laboratory
Building Number 8
P.O. Box 2641
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Alabama Power

Certificate of Analysis

TO : MR. TOM MOORER
ADDRESS: SOUTHERN NUCLEAR

REPORT DATE : 02/26/92
SAMPLE DATE : 01/26/92
SAMPLE NUMBER : 920126-0106
LOCATION NUMBER: GPCO

DESCRIPTION: GPCO PLANT HATCH, SITE 1, STORMWATER RUNOFF, GRAB SAMPLE

TEST		REFERENCE	ANALYSIS DATE	RESULT	UNITS
BASE / NEUTRAL COMPOUNDS					
3,3'-dichlorobenzidine	23B	EPA PB83/625	02/11/92	< 0.02	ug/l
Diethyl phthalate	24B	EPA PB83/625	02/11/92	< 0.01	ug/l
Dimethyl phthalate	25B	EPA PB83/625	02/11/92	< 0.01	ug/l
Di-n-butylphthalate	26B	EPA PB83/625	02/11/92	< 0.01	ug/l
2,4-dinitrotoluene	27B	EPA PB83/625	02/11/92	< 0.02	ug/l
2,6-Dinitrotoluene	28B	EPA PB83/625	02/11/92	< 0.02	ug/l
Di-n-octyl phthalate	29B	EPA PB83/625	02/11/92	< 0.01	ug/l
1,2-diphenylhydrazine(as azobenzene)	30B	EPA PB83/625	02/11/92	< 0.01	ug/l
Fluoranthene	31B	EPA PB83/625	02/11/92	< 0.01	ug/l
Fluorene	32B	EPA PB83/625	02/11/92	< 0.01	ug/l
Hexachlorobenzene	33B	EPA PB83/625	02/11/92	< 0.01	ug/l
Hexachlorobutadiene	34B	EPA PB83/625	02/11/92	< 0.01	ug/l
Hexachlorocyclopentadiene	35B	EPA PB83/625	02/11/92	< 0.01	ug/l
Hexachloroethane	36B	EPA PB83/625	02/11/92	< 0.002	ug/l
Indeno(1,2,3-cd)pyrene	37B	EPA PB83/625	02/11/92	< 0.01	ug/l
Isophorone	38B	EPA PB83/625	02/11/92	< 0.01	ug/l
Naphthalene	39B	EPA PB83/625	02/11/92	< 0.01	ug/l
Nitrobenzene	40B	EPA PB83/625	02/11/92	< 0.01	ug/l
N-nitrosodimethylamine	41B	EPA PB83/625	02/11/92	< 0.01	ug/l
N-nitrosodi-N-propylamine	42B	EPA PB83/625	02/11/92	< 0.01	ug/l
N-nitrosodiphenylamine	43B	EPA PB83/625	02/11/92	< 0.01	ug/l
Phenanthrene	44B	EPA PB83/625	02/11/92	< 0.01	ug/l
Pyrene	45B	EPA PB83/625	02/11/92	< 0.01	ug/l
1,2,4-Trichlorobenzene	46B	EPA PB83/625	02/11/92	< 0.01	ug/l

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General Test Laboratory
Building Number 8
P.O. Box 2641
Birmingham, Al. 35291

Alabama Power

Certificate of Analysis

TO : MR. TOM MOORER
ADDRESS: SOUTHERN NUCLEAR

REPORT DATE : 02/28/92
SAMPLE DATE : 01/28/92
SAMPLE NUMBER : 920128-0186
LOCATION NUMBER: BPCO

DESCRIPTION: BPCO PLANT MATCH, SITE 1, STORMWATER RUNOFF, GRAB SAMPLE

TEST		REFERENCE	ANALYSIS DATE	RESULT	UNITS
PESTICIDES					
Aldrin	1P	EPA PB83/606	02/28/92	<0.00001	mg/l
alpha-BHC	2P	EPA PB83/606	02/07/92	<0.00001	mg/l
beta-BHC	3P	EPA PB83/606	02/07/92	<0.00001	mg/l
gamma-BHC	4P	EPA PB83/606	02/07/92	<0.00001	mg/l
delta-BHC	5P	EPA PB83/606	02/07/92	<0.00005	mg/l
Chlordane	6P	EPA PB83/606	02/07/92	<0.00002	mg/l
4,4'-DDT	7P	EPA PB83/606	02/07/92	<0.00001	mg/l
4,4'-DDE	8P	EPA PB83/606	02/07/92	<0.00001	mg/l
4,4'-DDD	9P	EPA PB83/606	02/07/92	< 0.0001	mg/l
Dieldrin	10P	EPA PB83/606	02/07/92	<0.00001	mg/l
alpha-endosulfan	11P	EPA PB83/606	02/07/92	<0.00001	mg/l
beta-Endosulfan	12P	EPA PB83/606	02/07/92	<0.00001	mg/l
Endosulfan sulfate	13P	EPA PB83/606	02/07/92	<0.00005	mg/l
Endrin	14P	EPA PB83/606	02/07/92	< 0.0001	mg/l
Endrin aldehyde	15P	EPA PB83/606	02/07/92	<0.00005	mg/l
Heptachlor	16P	EPA PB83/606	02/07/92	< 0.0001	mg/l
Heptachlor epoxide	17P	EPA PB83/606	02/07/92	< 0.0001	mg/l
PCB, 1242	18P	EPA PB83/606	02/18/92	< 0.0005	mg/l
PCB, 1254	19P	EPA PB83/606	02/19/92	< 0.0005	mg/l
PCB, 1221	20P	EPA PB83/606	02/24/92	< 0.0005	mg/l
PCB, 1232	21P	EPA PB83/606	02/24/92	< 0.0005	mg/l
PCB, 1248	22P	EPA PB83/606	02/19/92	< 0.0005	mg/l
PCB, 1260	23P	EPA PB83/606	02/18/92	< 0.0005	mg/l
PCB, 1016	24P	EPA PB83/606	02/24/92	< 0.0005	mg/l
Toxaphene	25P	EPA PB83/606	02/07/92	<0.00002	mg/l

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General Test Laboratory
Building Number B
P.O. Box 2641
Birmingham, Al. 35291

Alabama Power

Certificate of Analysis

TO : MR. TOM MOORER
ADDRESS: SOUTHERN NUCLEAR

REPORT DATE : 02/28/92
SAMPLE DATE : 01/28/92
SAMPLE NUMBER : 920128-0106
LOCATION NUMBER: BPCD

DESCRIPTION: BPCD PLANT MATCH, SITE 1, STORMWATER RUNOFF, GRAB SAMPLE

TEST	REFERENCE	ANALYSIS DATE	RESULT	UNITS
MISCELLANEOUS				
Nitrogen, Total Kjehldahl	EPA P004/351.3	02/12/92	0.39	mg/l
Nitrogen, Nitrate	EPA P004/300.0	01/29/92	0.75	mg/l
Nitrogen, Nitrite	EPA P004/354.1	01/29/92	0.000	mg/l

CC: MR. W. S. HILL

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General Test Laboratory
Building Number 8
P.O. Box 2641
Birmingham, Al. 35291

Alabama Power

Certificate of Analysis

TO : MR. TOM MOORER
ADDRESS: SOUTHERN NUCLEAR

REPORT DATE : 02/10/92
SAMPLE DATE : 01/28/92
SAMPLE NUMBER : 920128-0107
LOCATION NUMBER: GPCO

DESCRIPTION: GPCO PLANT MATCH, SITE 1 BAGS SAMPLE TRIP BLANK

TEST		REFERENCE	ANALYSIS DATE	RESULT	UNITS
VOLATILE COMPOUNDS					
Acrolein	1V	EPA PB83/603/624	02/05/92	< 0.020	mg/l
Acrylonitrile	2V	EPA PB83/603/624	02/05/92	< 0.020	mg/l
Benzene	3V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Bromoform	5V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Carbon Tetrachloride	6V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Chlorobenzene	7V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Chlorodibromoethane	8V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Chloroethane	9V	EPA PB83/624	02/10/92	< 0.0005	mg/l
2-Chloroethylvinyl Ether	10V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Chloroform	11V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Dichlorobromoethane	12V	EPA PB83/624	02/10/92	< 0.0005	mg/l
1,1-Dichloroethane	14V	EPA PB83/624	02/10/92	< 0.0005	mg/l
1,2-Dichloroethane	15V	EPA PB83/624	02/10/92	< 0.0005	mg/l
1,1-Dichloroethylene	16V	EPA PB83/624	02/10/92	< 0.0005	mg/l
1,2-Dichloropropane	17V	EPA PB83/624	02/10/92	< 0.0005	mg/l
1,3-Dichloropropylene	18V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Ethylbenzene	19V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Methyl bromide	20V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Methyl Chloride	21V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Methylene Chloride	22V	EPA PB86/624	02/10/92	< 0.0005	mg/l
1,1,2,2-Tetrachloroethane	23V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Tetrachloroethylene	24V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Toluene	25V	EPA PB83/624	02/10/92	< 0.0005	mg/l
1,2-trans-dichloroethylene	26V	EPA PB83/624	02/10/92	< 0.0005	mg/l
1,1,1-Trichloroethane	27V	EPA PB83/624	02/10/92	< 0.0005	mg/l
1,1,2-Trichloroethane	28V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Trichloroethylene	29V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Vinyl Chloride	31V	EPA PB83/624	02/10/92	< 0.0005	mg/l

CC: MR. W. S. HILL

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General Test Laboratory
Building Number 8
P.O. Box 2641
Birmingham, Al. 35291

Alabama Power

Certificate of Analysis

TO : MR. TOM MOORER
ADDRESS: SOUTHERN NUCLEAR

REPORT DATE : 03/02/92
SAMPLE DATE : 01/28/92
SAMPLE NUMBER : 920128-0106
LOCATION NUMBER: BPCD

DESCRIPTION: BPCD PLT MATCH, SITE 1, STORMWATER RUNOFF COMPOSITE SAMPLE

TEST	REFERENCE	ANALYSIS DATE	RESULT	UNITS
INTAKE AND EFFLUENT CHARACTERISTICS (PART A)				
Biochemical Oxygen Demand, 5 Day	STANDARD METHOD 507	02/03/92	2.	mg/l
Chemical Oxygen Demand	EPA P804/410	02/13/92	4.	mg/l
Organic Carbon, Total	EPA P804/415.1	02/07/92	2.	mg/l
Solids, Total Suspended	EPA P804/160.2	01/29/92	< 1.	mg/l
Nitrogen, Ammonia	EPA P804/350.2	02/06/92	0.045	mg/l
Temperature		01/28/92	12.4	Degrees C
pH		01/28/92	7.35	SU
INTAKE AND EFFLUENT CHARACTERISTICS (PART B)				
Bromide	EPA P804/300.1	01/29/92	0.017	mg/l
Chlorine, Total Residual		01/28/92	< 0.01	mg/l
Color		01/29/92	28.	PCU
Fluoride	EPA P804/300.0	01/29/92	0.05	mg/l
Nitrate-Nitrite (as N)	Standard Method 421	05/06/92	0.59	mg/l
Nitrogen, Total Organic	EPA P804/351.3	05/06/92	0.91	mg/l
Phosphorus, Total	*EPA P804/365.2	02/03/92	0.075	mg/l
Sulfate	EPA P804/300.0	01/29/92	5.9	mg/l
Sulfide	EPA P804/376.2	01/29/92	0.03	mg/l
Surfactants	EPA P804/425.1	01/30/92	0.02	mg/l
Aluminum, Total	EPA P804/200.7	02/07/92	1.16	mg/l
Barium, Total	EPA P804/200.7	02/07/92	0.06	mg/l
Boron, Total	STANDARD METHOD 404A	02/13/92	0.03	mg/l
Cobalt, Total	EPA P804/200.7	02/07/92	0.01	mg/l
Iron, Total	EPA P804/200.7	02/07/92	0.36	mg/l
Magnesium, Total	EPA P804/200.7	02/07/92	0.53	mg/l
Molybdenum, Total	EPA P804/200.7	02/07/92	< 0.01	mg/l
Manganese, Total	EPA P804/200.7	02/07/92	0.01	mg/l
Tin, Total	EPA P804/200.7	02/07/92	< 0.01	mg/l
Titanium, Total	EPA P804/200.7	02/07/92	0.05	mg/l

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General Test Laboratory
Building Number 8
P.O. Box 2641
Birmingham, Al. 35291

Alabama Power

Certificate of Analysis

TO : MR. TOM MOORER
ADDRESS: SOUTHERN NUCLEAR

REPORT DATE : 03/02/92
SAMPLE DATE : 01/28/92
SAMPLE NUMBER : 920128-0106
LOCATION NUMBER: BPCD

DESCRIPTION: BPCD PLT MATCH, SITE 1, STORMWATER RUNOFF COMPOSITE SAMPLE

TEST		REFERENCE	ANALYSIS DATE	RESULT	UNITS
METALS, CYANIDE, AND TOTAL PHENOLS					
Antimony, Total		EPA PB84/200.7	02/07/92	0.03	mg/l
Arsenic, Total		EPA PB84/206.2	01/29/92	< 0.005	mg/l
Beryllium, Total		EPA PB84/200.7	02/07/92	< 0.01	mg/l
Cadmium, Total		EPA PB84/200.7	02/07/92	< 0.01	mg/l
Chromium, Total		EPA PB84/200.7	02/07/92	< 0.01	mg/l
Copper, Total		EPA PB84/200.7	02/07/92	0.02	mg/l
Lead, Total		EPA PB84/200.7	02/07/92	< 0.01	mg/l
Mercury, Total		EPA PB84/245.1	01/30/92	< 0.0002	mg/l
Nickel, Total		EPA PB84/200.7	02/07/92	< 0.02	mg/l
Selenium, Total		EPA PB84/200.7	02/07/92	< 0.04	mg/l
Silver, Total		EPA PB84/200.7	02/07/92	< 0.01	mg/l
Thallium, Total		EPA PB84/200.7	02/07/92	< 0.03	mg/l
Zinc, Total		EPA PB84/200.7	02/07/92	0.07	mg/l
VOLATILE COMPOUNDS					
Acrolein	1V	EPA PB83/603/624	02/05/92	< 0.020	mg/l
Acrylonitrile	2V	EPA PB83/603/624	02/05/92	< 0.020	mg/l
Benzene	3V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Bromoform	5V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Carbon Tetrachloride	6V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Chlorobenzene	7V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Chlorodibromomethane	8V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Chloroethane	9V	EPA PB83/624	02/10/92	< 0.0005	mg/l
2-Chloroethylvinyl Ether	10V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Chloroform	11V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Dichlorobromomethane	12V	EPA PB83/624	02/10/92	< 0.0005	mg/l
1,1-Dichloroethane	14V	EPA PB83/624	02/10/92	< 0.0005	mg/l
1,2-Dichloroethane	15V	EPA PB83/624	02/10/92	< 0.0005	mg/l
1,1-Dichloroethylene	16V	EPA PB83/624	02/10/92	< 0.0005	mg/l

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General Test Laboratory
Building Number 8
P.O. Box 2641
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Alabama Power

Certificate of Analysis

TO : MR. TOM MOORER
ADDRESS: SOUTHERN NUCLEAR

REPORT DATE : 03/02/92
SAMPLE DATE : 01/28/92
SAMPLE NUMBER : 920128-0106
LOCATION NUMBER: BPCD

DESCRIPTION: BPCD PLT HATCH, SITE 1, STORMWATER RUNOFF COMPOSITE SAMPLE

TEST		REFERENCE	ANALYSIS DATE	RESULT	UNITS
VOLATILE COMPOUNDS					
1,2-Dichloropropane	17V	EPA PB83/624	02/10/92	< 0.0005	mg/l
1,3-Dichloropropylene	18V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Ethylbenzene	19V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Methyl bromide	20V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Methyl Chloride	21V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Methylene Chloride	22V	EPA PB86/624	02/10/92	< 0.0005	mg/l
1,1,2,2-Tetrachloroethane	23V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Tetrachloroethylene	24V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Toluene	25V	EPA PB83/624	02/10/92	< 0.0005	mg/l
1,2-trans-dichloroethylene	26V	EPA PB83/624	02/10/92	< 0.0005	mg/l
1,1,1-Trichloroethane	27V	EPA PB83/624	02/10/92	< 0.0005	mg/l
1,1,2-Trichloroethane	28V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Trichloroethylene	29V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Vinyl Chloride	31V	EPA PB83/624	02/10/92	< 0.0005	mg/l
ACID COMPOUNDS					
2-chlorophenol	1A	EPA PB83/625	02/11/92	< 0.01	mg/l
2,4-dichlorophenol	2A	EPA PB83/625	02/11/92	< 0.01	mg/l
2,4-dimethylphenol	3A	EPA PB83/625	02/11/92	< 0.01	mg/l
2-methyl-4,6-dinitrophenol	4A	EPA PB83/625	02/11/92	< 0.05	mg/l
2,4-dinitrophenol	5A	EPA PB83/625	02/11/92	< 0.05	mg/l
2-nitrophenol	6A	EPA PB83/625	02/11/92	< 0.01	mg/l
4-nitrophenol	7A	EPA PB83/625	02/11/92	< 0.05	mg/l
4-chloro-3-methylphenol	8A	EPA PB83/625	02/11/92	< 0.01	mg/l
Pentachlorophenol	9A	EPA PB83/625	02/11/92	< 0.01	mg/l
Phenol	10A	EPA PB83/625	02/11/92	< 0.01	mg/l
2,4,6-trichlorophenol	11A	EPA PB83/625	02/11/92	< 0.01	mg/l

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General Test Laboratory
Building Number 8
P.O. Box 2641
Birmingham, Al. 35291

Alabama Power

Certificate of Analysis

TO : MR. TOM MOORER
ADDRESS: SOUTHERN NUCLEAR

REPORT DATE : 03/02/92
SAMPLE DATE : 01/28/92
SAMPLE NUMBER : 920128-0100
LOCATION NUMBER: BPCO

DESCRIPTION: BPCO PLT MATCH, BITE 1, STORMWATER RUNOFF COMPOSITE SAMPLE

TEST		REFERENCE	ANALYSIS DATE	RESULT	UNITS
BASE / NEUTRAL COMPOUNDS					
Acenaphthene	1B	EPA 8083/625	02/11/92	< 0.01	ug/l
Acenaphthylene	2B	EPA 8083/625	02/11/92	< 0.005	ug/l
Anthracene	3B	EPA 8083/625	02/11/92	< 0.01	ug/l
Benzidine	4B	EPA 8083/625	02/11/92	< 0.05	ug/l
Benzo(a)anthracene	5B	EPA 8083/625	02/11/92	< 0.01	ug/l
Benzo(a)pyrene	6B	EPA 8083/625	02/11/92	< 0.01	ug/l
Benzo(b)fluoranthene	7B	EPA 8083/625	02/11/92	< 0.01	ug/l
Benzo(g,h,i)perylene	8B	EPA 8083/625	02/11/92	< 0.01	ug/l
Benzo(k)fluoranthene	9B	EPA 8083/625	02/11/92	< 0.01	ug/l
Bis(2-chloroethoxy)methane	10B	EPA 8083/625	02/11/92	< 0.01	ug/l
Bis(2-chloroethyl)ether	11B	EPA 8083/625	02/11/92	< 0.01	ug/l
Bis(2-Chloroisopropyl)ether	12B	EPA 8083/625	02/11/92	< 0.01	ug/l
Bis(2-ethylhexyl)phthalate	13B	EPA 8083/625	02/11/92	0.06	ug/l
4-Bromophenyl phenyl ether	14B	EPA 8083/625	02/11/92	< 0.01	ug/l
Butylbenzyl phthalate	15B	EPA 8083/625	02/11/92	< 0.01	ug/l
2-Chloronaphthalene	16B	EPA 8083/625	02/11/92	< 0.01	ug/l
4-Chlorophenyl phenyl ether	17B	EPA 8083/625	02/11/92	< 0.01	ug/l
Chrysene	18B	EPA 8083/625	02/11/92	< 0.01	ug/l
Dibenzo(a,h)anthracene	19B	EPA 8083/625	02/11/92	< 0.01	ug/l
1,2-Dichlorobenzene	20B	EPA 8083/625	02/11/92	< 0.01	ug/l
1,3-Dichlorobenzene	21B	EPA 8083/625	02/11/92	< 0.01	ug/l
1,4-Dichlorobenzene	22B	EPA 8083/625	02/11/92	< 0.01	ug/l
3,3'-dichlorobenzidine	23B	EPA 8083/625	02/11/92	< 0.02	ug/l
Diethyl phthalate	24B	EPA 8083/625	02/11/92	< 0.01	ug/l
Dimethyl phthalate	25B	EPA 8083/625	02/11/92	< 0.01	ug/l
Di-n-butylphthalate	26B	EPA 8083/625	02/11/92	< 0.01	ug/l
2,4-dinitrotoluene	27B	EPA 8083/625	02/11/92	< 0.02	ug/l
2,6-Dinitrotoluene	28B	EPA 8083/625	02/11/92	< 0.02	ug/l
Di-n-octyl phthalate	29B	EPA 8083/625	02/11/92	< 0.01	ug/l
1,2-diphenylhydrazine(as azobenzene)	30B	EPA 8083/625	02/11/92	< 0.01	ug/l

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General Test Laboratory
Building Number 8
P.O. Box 2641
Birmingham, Al. 35291

Alabama Power

Certificate of Analysis

TO : MR. TOM MOORER
ADDRESS: SOUTHERN NUCLEAR

REPORT DATE : 03/02/92
SAMPLE DATE : 01/28/92
SAMPLE NUMBER : 920128-0108
LOCATION NUMBER: BPCO

DESCRIPTION: BPCO PLT MATCH, SITE 1, STORMWATER RUNOFF COMPOSITE SAMPLE

TEST		REFERENCE	ANALYSIS DATE	RESULT	UNITS
BASE / NEUTRAL COMPOUNDS					
Fluoranthene	31B	EPA PB83/625	02/11/92	< 0.01	ug/l
Fluorene	32B	EPA PB83/625	02/11/92	< 0.01	ug/l
Hexachlorobenzene	33B	EPA PB83/625	02/11/92	< 0.01	ug/l
Hexachlorobutadiene	34B	EPA PB83/625	02/11/92	< 0.01	ug/l
Hexachlorocyclopentadiene	35B	EPA PB83/625	02/11/92	< 0.01	ug/l
Hexachloroethane	36B	EPA PB83/625	02/11/92	< 0.002	ug/l
Indeno(1,2,3-cd)pyrene	37B	EPA PB83/625	02/11/92	< 0.01	ug/l
Isophorone	38B	EPA PB83/625	02/11/92	< 0.01	ug/l
Naphthalene	39B	EPA PB83/625	02/11/92	< 0.01	ug/l
Nitrobenzene	40B	EPA PB83/625	02/11/92	< 0.01	ug/l
N-nitrosodimethylamine	41B	EPA PB83/625	02/11/92	< 0.01	ug/l
N-nitrosodi-N-propylamine	42B	EPA PB83/625	02/11/92	< 0.01	ug/l
N-nitrosodiphenylamine	43B	EPA PB83/625	02/11/92	< 0.01	ug/l
Phenanthrene	44B	EPA PB83/625	02/11/92	< 0.01	ug/l
Pyrene	45B	EPA PB83/625	02/11/92	< 0.01	ug/l
1,2,4-Trichlorobenzene	46B	EPA PB83/625	02/11/92	< 0.01	ug/l
PESTICIDES					
Aldrin	1P	EPA PB83/608	02/28/92	(0.00001	ug/l
alpha-BHC	2P	EPA PB83/608	02/07/92	(0.00001	ug/l
beta-BHC	3P	EPA PB83/608	02/07/92	(0.00001	ug/l
gamma-BHC	4P	EPA PB83/608	02/07/92	(0.00001	ug/l
delta-BHC	5P	EPA PB83/608	02/07/92	(0.00005	ug/l
Chlordane	6P	EPA PB83/608	02/07/92	(0.00002	ug/l
4,4'-DDT	7P	EPA PB83/608	02/07/92	(0.00001	ug/l
4,4'-DDE	8P	EPA PB83/608	02/07/92	(0.00001	ug/l
4,4'-DDD	9P	EPA PB83/608	02/07/92	< 0.0001	ug/l
Dieldrin	10P	EPA PB83/608	02/07/92	(0.00001	ug/l
alpha-endosulfan	11P	EPA PB83/608	02/07/92	(0.00001	ug/l

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General Test Laboratory
Building Number 8
P.O. Box 2641
Birmingham, Al. 35291

Alabama Power

Certificate of Analysis

TO : MR. TOM MOORER
ADDRESS: SOUTHERN NUCLEAR

REPORT DATE : 03/02/92
SAMPLE DATE : 01/28/92
SAMPLE NUMBER : 920128-0108
LOCATION NUMBER: BPCO

DESCRIPTION: BPCO PLT MNTCH, SITE 1, STORMWATER RUNOFF COMPOSITE SAMPLE

TEST		REFERENCE	ANALYSIS DATE	RESULT	UNITS
PESTICIDES					
beta-Endosulfan	12P	EPA PB83/608	02/07/92	(0.00001	mg/l
Endosulfan sulfate	13P	EPA PB83/608	02/07/92	(0.00005	mg/l
Endrin	14P	EPA PB83/608	02/07/92	(0.0001	mg/l
Endrin aldehyde	15P	EPA PB83/608	02/07/92	(0.00005	mg/l
Heptachlor	16P	EPA PB83/608	02/07/92	(0.0001	mg/l
Heptachlor epoxide	17P	EPA PB83/608	02/07/92	(0.0001	mg/l
PCB, 1242	18P	EPA PB83/608	02/27/92	(0.0005	mg/l
PCB, 1254	19P	EPA PB83/608	02/19/92	(0.0005	mg/l
PCB, 1221	20P	EPA PB83/608	02/24/92	(0.0005	mg/l
PCB, 1232	21P	EPA PB83/608	02/24/92	(0.0005	mg/l
PCB, 1248	22P	EPA PB83/608	02/19/92	(0.0005	mg/l
PCB, 1260	23P	EPA PB83/608	02/27/92	(0.0005	mg/l
PCB, 1016	24P	EPA PB83/608	02/24/92	(0.0005	mg/l
Toxaphene	25P	EPA PB83/608	02/07/92	(0.00002	mg/l
MISCELLANEOUS					
Nitrogen, Total Kjehldahl		EPA PB84/351.3	02/12/92	0.96	mg/l
Nitrogen, Nitrate		EPA PB84/300.0	01/29/92	0.58	mg/l
Nitrogen, Nitrite		EPA PB84/354.1	01/29/92	0.008	mg/l

CC: MR. W. S. HILL

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General Test Laboratory
Building Number 8
P.O. Box 2641
Birmingham, Al. 35291

Alabama Power

Certificate of Analysis

TO : MR. TOM MOORER
ADDRESS: SOUTHERN NUCLEAR

REPORT DATE : 02/10/92
SAMPLE DATE : 01/28/92
SAMPLE NUMBER : 920128-0109
LOCATION NUMBER: BPCO

DESCRIPTION: BPCO PLANT HATCH. SITE 1 COMPOSITE SAMPLE TRIP BLANK

TEST		REFERENCE	ANALYSIS DATE	RESULT	UNITS
VOLATILE COMPOUNDS					
Acrolein	1V	EPA PB83/603/624	02/05/92	< 0.020	mg/l
Acrylonitrile	2V	EPA PB83/603/624	02/05/92	< 0.020	mg/l
Benzene	3V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Bromoform	5V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Carbon Tetrachloride	6V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Chlorobenzene	7V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Chlorodibromoethane	8V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Chloroethane	9V	EPA PB83/624	02/10/92	< 0.0005	mg/l
2-Chloroethylvinyl Ether	10V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Chloroform	11V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Dichlorobromomethane	12V	EPA PB83/624	02/10/92	< 0.0005	mg/l
1,1-Dichloroethane	14V	EPA PB83/624	02/10/92	< 0.0005	mg/l
1,2-Dichloroethane	15V	EPA PB83/624	02/10/92	< 0.0005	mg/l
1,1-Dichloroethylene	16V	EPA PB83/624	02/10/92	< 0.0005	mg/l
1,2-Dichloropropane	17V	EPA PB83/624	02/10/92	< 0.0005	mg/l
1,3-Dichloropropylene	18V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Ethylbenzene	19V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Methyl bromide	20V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Methyl Chloride	21V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Methylene Chloride	22V	EPA PB86/624	02/10/92	< 0.0005	mg/l
1,1,2,2-Tetrachloroethane	23V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Tetrachloroethylene	24V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Toluene	25V	EPA PB83/624	02/10/92	< 0.0005	mg/l
1,2-trans-dichloroethylene	26V	EPA PB83/624	02/10/92	< 0.0005	mg/l
1,1,1-Trichloroethane	27V	EPA PB83/624	02/10/92	< 0.0005	mg/l
1,1,2-Trichloroethane	28V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Trichloroethylene	29V	EPA PB83/624	02/10/92	< 0.0005	mg/l
Vinyl Chloride	31V	EPA PB83/624	02/10/92	< 0.0005	mg/l

CC: MR. W. S. HILL

Chemist	Quality Control: Mark Foster	Supervising Chemist: Charles Howe	Page 1

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General Test Laboratory
Building Number 8
P.O. Box 2641
Birmingham, Al. 35291

Alabama Power

Certificate of Analysis

TO : MR. TOM MOORER
ADDRESS: SOUTHERN NUCLEAR

REPORT DATE : 04/07/92
SAMPLE DATE : 03/10/92
SAMPLE NUMBER : 920311-0031
LOCATION NUMBER: BPCO

DESCRIPTION: PLANT HATCH, SITE 2, STORMWATER RUNOFF, GRAB SAMPLE

TEST	REFERENCE	ANALYSIS DATE	RESULT	UNITS
INTAKE AND EFFLUENT CHARACTERISTICS (PART A)				
Biochemical Oxygen Demand, 5 Day	STANDARD METHOD 507	03/17/92	2.	mg/l
Chemical Oxygen Demand	EPA PBL../416	03/26/92	44.	mg/l
Organic Carbon, Total	EPA PB84/415.1	03/17/92	23.521	mg/l
Solids, Total Suspended	EPA PB84/160.2	03/13/92	35.	mg/l
Nitrogen, Ammonia	EPA PB84/350.2	04/01/92	0.029	mg/l
Temperature		03/10/92	19.1	Degrees C
pH		03/10/92	9.29	SU
INTAKE AND EFFLUENT CHARACTERISTICS (PART B)				
Bromide	EPA PB84/302.1	03/12/92	0.02	mg/l
Chlorine, Total Residual		03/10/92	< 0.01	mg/l
Color		03/[illegible]/92	118.	PCU
Coliform, Fecal	STANDARD METHOD 909C	[illegible]12/92	10.	org/100ml
Fluoride	EPA PB84/300.0	[illegible]/92	0.19	mg/l
Nitrate-Nitrite (as N)	Standard Method 421	04/07/92	0.09	mg/l
Nitrogen, Total Organic	EPA PB84/351.3	04/07/92	0.52	mg/l
Oil and Grease	EPA PB84/413.1	03/24/92	7.3	mg/l
Phosphorus, Total	EPA PB84/365.2	04/01/92	0.063	mg/l
Sulfate	EPA PB84/300.0	03/12/92	13.6	mg/l
Sulfide	EPA PB84/376.2	03/16/92	0.050	mg/l
Surfactants	EPA PB84/425.1	03/11/92	0.03	mg/l
Aluminum, Total	EPA PB84/200.7	03/30/92	1.67	mg/l
Barium, Total	EPA PB84/200.7	03/30/92	0.04	mg/l
Boron, Total	STANDARD METHOD 404A	03/20/92	0.02	mg/l
Cobalt, Total	EPA PB84/200.7	03/30/92	< 0.01	mg/l
Iron, Total	EPA PB84/200.7	03/31/92	1.66	mg/l
Magnesium, Total	EPA PB84/200.7	03/30/92	1.32	mg/l
Molybdenum, Total	EPA PB84/200.7	03/30/92	< 0.01	mg/l
Manganese, Total	EPA PB84/200.7	03/30/92	0.09	mg/l

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General Test Laboratory
Building Number 8
P.O. Box 2641
Birmingham, Al. 35291

Alabama Power

Certificate of Analysis

TO : MR. TOM MOOHER
ADDRESS: SOUTHERN NUCLEAR

REPORT DATE : 04/07/92
SAMPLE DATE : 03/10/92
SAMPLE NUMBER : 920311-0031
LOCATION NUMBER: 6PCD

DESCRIPTION: PLANT HATCH, SITE 2, STORMWATER RUNOFF, GRAB SAMPLE

TEST		REFERENCE	ANALYSIS DATE	RESULT	UNITS
INTAKE AND EFFLUENT CHARACTERISTICS (PART B)					
Tin, Total		EPA PB84/200.7	03/30/92	0.02	mg/l
Titanium, Total		EPA PB84/200.7	03/30/92	0.02	mg/l
METALS, CYANIDE, AND TOTAL PHENOLS					
Antimony, Total		EPA PB84/200.7	03/30/92	< 0.03	mg/l
Arsenic, Total		EPA PB84/206.2	03/13/92	< 0.005	mg/l
Beryllium, Total		EPA PB84/200.7	03/30/92	< 0.01	mg/l
Cadmium, Total		EPA PB84/200.7	03/30/92	< 0.01	mg/l
Chromium, Total		EPA PB84/200.7	03/30/92	< 0.01	mg/l
Copper, Total		EPA PB84/200.7	03/31/92	0.03	mg/l
Lead, Total		EPA PB84/200.7	03/31/92	0.03	mg/l
Mercury, Total		EPA PB84/245.1	03/16/92	< 0.0002	mg/l
Nickel, Total		EPA PB84/200.7	03/30/92	< 0.02	mg/l
Selenium, Total		EPA PB84/270.2	03/13/92	< 0.005	mg/l
Silver, Total		EPA PB84/200.7	03/30/92	< 0.01	mg/l
Thallium, Total		EPA PB84/200.7	03/30/92	0.03	mg/l
Zinc, Total		EPA PB84/200.7	03/30/92	< 0.01	mg/l
Cyanide, Total		EPA PB84/335.2	03/24/92	< 0.025	mg/l
Phenol, Total		EPA PB84/420.1	03/20/92	< 0.01	mg/l
VOLATILE COMPOUNDS					
Acrolein	1V	EPA PB83/603/624	04/02/92	< 0.020	mg/l
Acrylonitrile	2V	EPA PB83/603/624	04/02/92	< 0.020	mg/l
Benzene	3V	EPA PB83/624	04/01/92	< 0.0005	mg/l
Bromoform	5V	EPA PB83/624	04/01/92	< 0.0005	mg/l
Carbon Tetrachloride	6V	EPA PB83/624	04/01/92	< 0.0005	mg/l
Chlorobenzene	7V	EPA PB83/624	04/01/92	< 0.0005	mg/l
Chlorodibromomethane	8V	EPA PB83/624	04/01/92	< 0.0005	mg/l

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General Test Laboratory
Building Number 8
P.O. Box 2641
Birmingham, Al. 35291

Alabama Power

Certificate of Analysis

TO : MR. TOM MOORER
ADDRESS: SOUTHERN NUCLEAR

REPORT DATE : 04/07/92
SAMPLE DATE : 03/10/92
SAMPLE NUMBER : 920311-0031
LOCATION NUMBER: BPCO

DESCRIPTION: PLANT HATCH, SITE 2, STORMWATER RUNOFF, 3RAB SAMPLE

TEST		REFERENCE	ANALYSIS DATE	RESULT	UNITS
VOLATILE COMPOUNDS					
Chloroethane	9V	EPA PB83/624	04/01/92	< 0.0005	mg/l
2-Chloroethylvinyl Ether	10V	EPA PB83/624	04/01/92	< 0.0005	mg/l
Chloroform	11V	EPA PB83/624	04/01/92	< 0.0005	mg/l
Dichlorobromomethane	12V	EPA PB83/624	04/01/92	< 0.0005	mg/l
1,1-Dichloroethane	14V	EPA PB83/624	04/01/92	< 0.0005	mg/l
1,2-Dichloroethane	15V	EPA PB83/624	04/01/92	< 0.0005	mg/l
1,1-Dichloroethylene	16V	EPA PB83/624	04/01/92	< 0.0005	mg/l
1,2-Dichloropropane	17V	EPA PB83/624	04/01/92	< 0.0005	mg/l
1,3-Dichloropropylene	18V	EPA PB83/624	04/01/92	< 0.0005	mg/l
Ethylbenzene	19V	EPA PB83/624	04/01/92	< 0.0005	mg/l
Methyl bromide	20V	EPA PB83/624	04/01/92	< 0.0005	mg/l
Methyl Chloride	21V	EPA PB83/624	04/01/92	< 0.0005	mg/l
Methylene Chloride	22V	EPA PB86/624	04/01/92	< 0.0005	mg/l
1,1,2,2-Tetrachloroethane	23V	EPA PB83/624	04/01/92	< 0.0005	mg/l
Tetrachloroethylene	24V	EPA PB83/624	04/01/92	< 0.0005	mg/l
Toluene	25V	EPA PB83/624	04/01/92	< 0.0005	mg/l
1,2-trans-dichloroethylene	26V	EPA PB83/624	04/01/92	< 0.0005	mg/l
1,1,1-Trichloroethane	27V	EPA PB83/624	04/01/92	< 0.0005	mg/l
1,1,2-Trichloroethane	28V	EPA PB83/624	04/01/92	< 0.0005	mg/l
Trichloroethylene	29V	EPA PB83/624	04/01/92	< 0.0005	mg/l
Vinyl Chloride	31V	EPA PB83/624	04/01/92	< 0.0005	mg/l
ACID COMPOUNDS					
2-chlorophenol	1A	EPA PB83/625	04/07/92	< 0.01	mg/l
2,4-dichlorophenol	2A	EPA PB83/625	04/07/92	< 0.01	mg/l
2,4-dimethylphenol	3A	EPA PB83/625	04/07/92	< 0.01	mg/l
2-methyl-4,6-dinitrophenol	4A	EPA PB83/625	04/07/92	< 0.05	mg/l
2,4-dinitrophenol	5A	EPA PB83/625	04/07/92	< 0.05	mg/l
2-nitrophenol	6A	EPA PB83/625	04/07/92	< 0.01	mg/l

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General Test Laboratory
Building Number 8
P.O. Box 2641
Birmingham, Al. 35291

Alabama Power

Certificate of Analysis

TO : MR. TOM MOORER
ADDRESS: SOUTHERN NUCLEAR

REPORT DATE : 04/07/92
SAMPLE DATE : 03/10/92
SAMPLE NUMBER : 920311-0031
LOCATION NUMBER: EPCO

DESCRIPTION: PLANT HATCH, SITE 2. STORMWATER RUNOFF, BRAB SAMPLE

TEST		REFERENCE	ANALYSIS DATE	RESULT	UNITS
ACID COMPOUNDS					
4-nitrophenol	7P	EPA PB83/625	04/07/92	< 0.05	mg/l
4-chloro-3-methylphenol	8A	EPA PB83/625	04/07/92	< 0.01	mg/l
Pentachlorophenol	9A	EPA PB83/625	04/07/92	< 0.01	mg/l
Phenol	10A	EPA PB83/625	04/07/92	< 0.01	mg/l
2,4,6-trichlorophenol	11A	EPA PB83/625	04/07/92	< 0.01	mg/l
BASE / NEUTRAL COMPOUNDS					
Acenaphthene	1B	EPA PB83/625	04/07/92	< 0.01	mg/l
Acenaphthylene	2B	EPA PB83/625	04/07/92	< 0.005	mg/l
Anthracene	3B	EPA PB83/625	04/07/92	< 0.01	mg/l
Benzidine	4B	EPA PB83/625	04/07/92	< 0.05	mg/l
Benzo(a)anthracene	5B	EPA PB83/625	04/07/92	< 0.01	mg/l
Benzo(a)pyrene	6B	EPA PB83/625	04/07/92	< 0.01	mg/l
Benzo(b)fluoranthene	7B	EPA PB83/625	04/07/92	< 0.01	mg/l
Benzo(g,h,i)perylene	8B	EPA PB83/625	04/07/92	< 0.01	mg/l
Benzo(k)fluoranthene	9B	EPA PB83/625	04/07/92	< 0.01	mg/l
Bis(2-chloroethoxyl)methane	10B	EPA PB83/625	04/07/92	< 0.01	mg/l
Bis(2-chloroethyl)ether	11B	EPA PB83/625	04/07/92	< 0.01	mg/l
Bis(2-Chloroisopropyl)ether	12B	EPA PB83/625	04/07/92	< 0.01	mg/l
Bis(2-ethylhexyl)phthalate	13B	EPA PB83/625	04/07/92	< 0.01	mg/l
4-Bromophenyl phenyl ether	14B	EPA PB83/625	04/07/92	< 0.01	mg/l
Butylbenzyl phthalate	15B	EPA PB83/625	04/07/92	< 0.01	mg/l
2-Chloronaphthalene	16B	EPA PB83/625	04/07/92	< 0.01	mg/l
4-Chlorophenyl phenyl ether	17B	EPA PB83/625	04/07/92	< 0.01	mg/l
Chrysene	18B	EPA PB83/625	04/07/92	< 0.01	mg/l
Dibenzo(a,h)anthracene	19B	EPA PB83/625	04/07/92	< 0.01	mg/l
1,2-Dichlorobenzene	20B	EPA PB83/625	04/07/92	< 0.01	mg/l
1,3-Dichlorobenzene	21B	EPA PB83/625	04/07/92	< 0.01	mg/l
1,4-Dichlorobenzene	22B	EPA PB83/625	04/07/92	< 0.01	mg/l

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General Test Laboratory
Building Number 8
P.O. Box 2641
Birmingham, Al. 35291

Alabama Power

Certificate of Analysis

TO : MR. TOM MOORER
ADDRESS: SOUTHERN NUCLEAR

REPORT DATE : 04/07/92
SAMPLE DATE : 03/10/92
SAMPLE NUMBER : 920311-0031
LOCATION NUMBER: SPCO

DESCRIPTION: PLANT HATCH, SITE 2, STORMWATER RUNOFF, GRAB SAMPLE

TEST		REFERENCE	ANALYSIS DATE	RESULT	UNITS
BASE / NEUTRAL COMPOUNDS					
3,3'-dichlorobenzidine	23B	EPA PB83/625	04/07/92	< 0.02	ug/l
Diethyl phthalate	24B	EPA PB83/625	04/07/92	< 0.01	ug/l
Dimethyl phthalate	25B	EPA PB83/625	04/07/92	< 0.01	ug/l
Di-n-butylphthalate	26B	EPA PB83/625	04/07/92	< 0.01	ug/l
2,4-dinitrotoluene	27B	EPA PB83/625	04/07/92	< 0.02	ug/l
2,6-Dinitrotoluene	28B	EPA PB83/625	04/07/92	< 0.02	ug/l
Di-n-octyl phthalate	29B	EPA PB83/625	04/07/92	< 0.01	ug/l
1,2-diphenylhydrazine(as azobenzene)	30B	EPA PB83/625	04/07/92	< 0.01	ug/l
Fluoranthene	31B	EPA PB83/625	04/07/92	< 0.01	ug/l
Fluorene	32B	EPA PB83/625	04/07/92	< 0.01	ug/l
Hexachlorobenzene	33B	EPA PB83/625	04/07/92	< 0.01	ug/l
Hexachlorobutadiene	34B	EPA PB83/625	04/07/92	< 0.01	ug/l
Hexachlorocyclopentadiene	35B	EPA PB83/625	04/07/92	< 0.01	ug/l
Hexachloroethane	36B	EPA PB83/625	04/07/92	< 0.002	ug/l
Indeno(1,2,3-cd)pyrene	37B	EPA PB83/625	04/07/92	< 0.01	ug/l
Isophorone	38B	EPA PB83/625	04/07/92	< 0.01	ug/l
Naphthalene	39B	EPA PB83/625	04/07/92	< 0.01	ug/l
Nitrobenzene	40B	EPA PB83/625	04/07/92	< 0.01	ug/l
N-nitrosodimethylamine	41B	EPA PB83/625	04/07/92	< 0.01	ug/l
N-nitrosodi-N-propylamine	42B	EPA PB83/625	04/07/92	< 0.01	ug/l
N-nitrosodiphenylamine	43B	EPA PB83/625	04/07/92	< 0.01	ug/l
Phenanthrene	44B	EPA PB83/625	04/07/92	< 0.01	ug/l
Pyrene	45B	EPA PB83/625	04/07/92	< 0.01	ug/l
1,2,4-Trichlorobenzene	46B	EPA PB83/625	04/07/92	< 0.01	ug/l

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General Test Laboratory
Building Number 8
P.O. Box 2641
Birmingham, Al. 35291

Alabama Power

Certificate of Analysis

TO : MR. TOM MOORER
ADDRESS: SOUTHERN NUCLEAR

REPORT DATE : 04/07/92
SAMPLE DATE : 03/10/92
SAMPLE NUMBER : 920311-0031
LOCATION NUMBER: SPCO

DESCRIPTION: PLANT HATCH, SITE 2, STORMWATER RUNOFF, BASE SAMPLE

TEST		REFERENCE	ANALYSIS DATE	RESULT	UNITS
PESTICIDES					
Aldrin	1P	EPA PB83/608	03/26/92	(0.00001	ug/l
alpha-BHC	2P	EPA PB83/608	03/26/92	(0.00001	ug/l
beta-BHC	3P	EPA PB83/608	03/26/92	(0.00001	ug/l
gamma-BHC	4P	EPA PB83/608	03/26/92	(0.00001	ug/l
delta-BHC	5P	EPA PB83/608	03/26/92	(0.00005	ug/l
Chlordane	6P	EPA PB83/608	03/26/92	(0.0000[illegible]	ug/l
4,4'-DDT	7P	EPA PB83/608	03/26/92	(0.0000[illegible]	ug/l
4,4'-DDE	8P	EPA PB83/608	03/26/92	(0.00001	ug/l
4,4'-DDD	9P	EPA PB83/608	03/26/92	(0.0001	ug/l
Dieldrin	10P	EPA PB83/608	03/26/92	(0.00001	ug/l
alpha-endosulfan	11P	EPA PB83/608	03/26/92	(0.00001	ug/l
beta-Endosulfan	12P	EPA PB83/608	03/26/92	(0.00001	ug/l
Endosulfan sulfate	13P	EPA PB83/608	03/26/92	(0.00005	ug/l
Endrin	14P	EPA PB83/608	03/26/92	(0.0001	ug/l
Endrin aldehyde	15P	EPA PB83/608	03/26/92	(0.00005	ug/l
Heptachlor	16P	EPA PB83/608	03/26/92	(0.0001	ug/l
Heptachlor epoxide	17P	EPA PB83/608	03/26/92	(0.0001	ug/l
PCB, 1242	18P	EPA PB83/608	03/31/92	(0.0005	ug/l
PCB, 1254	19P	EPA PB83/608	03/31/92	(0.0005	ug/l
PCB, 1221	20P	EPA PB83/608	03/31/92	(0.0005	ug/l
PCB, 1232	21P	EPA PB83/608	03/31/92	(0.0005	ug/l
PCB, 1248	22P	EPA PB83/608	03/31/92	(0.0005	ug/l
PCB, 1260	23P	EPA PB83/608	03/31/92	(0.0005	ug/l
PCB, 1016	24P	EPA PB83/608	03/31/92	(0.0005	ug/l
Toxaphene	25P	EPA PB83/608	03/26/92	(0.00002	ug/l

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General Test Laboratory
Building Number 8
P.O. Box 2641
Birmingham, Al. 35291

Alabama Power

Certificate of Analysis

TO : MR. TOM MOORER
ADDRESS: SOUTHERN NUCLEAR

REPORT DATE : 04/07/92
SAMPLE DATE : 03/10/92
SAMPLE NUMBER : 920311-0031
LOCATION NUMBER: GPCO

DESCRIPTION: PLANT MATCH, SITE 2, STORMWATER RUNOFF, GRAB SAMPLE

TEST	REFERENCE	ANALYSIS DATE	RESULT	UNITS
MISCELLANEOUS				
Nitrogen, Total Kjehldahl	EPA PB84/351.3	04/01/92	0.54	mg/l
Nitrogen, Nitrate	EPA PB84/300.0	03/12/92	0.06	mg/l
Nitrogen, Nitrite	EPA PB84/354.1	03/11/92	0.007	mg/l

CC: MR. W. S. HILL

Chemist: | Quality Control: Mark Foster | Supv. Chemist: Harold Wesson | Page 7 of

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General Test Laboratory
Building Number 8
P.O. Box 2641
Birmingham, Al. 35291

Alabama Power

Certificate of Analysis

TO : MR. TOM MOORER
ADDRESS: SOUTHERN NUCLEAR

REPORT DATE : 04/03/92
SAMPLE DATE : 03/10/92
SAMPLE NUMBER : 920311-0832
LOCATION NUMBER: SPCD

DESCRIPTION: PLANT HATCH, SITE 2, [illegible] SAMPLE TRIP BLANK

TEST		REFERENCE	ANALYSIS DATE	RESULT	UNITS
VOLATILE COMPOUNDS					
Acrolein	1V	EPA PB83/643/624	04/02/92	(0.020	ug/l
Acrylonitrile	2V	EPA PB83/643/624	04/02/92	(0.020	ug/l
Benzene	3V	EPA PB83/624	04/03/92	(0.0005	ug/l
Bromoform	5V	EPA PB83/624	04/03/92	(0.0005	ug/l
Carbon Tetrachloride	6V	EPA PB83/624	04/03/92	(0.0005	ug/l
Chlorobenzene	7V	EPA PB83/624	04/03/92	(0.0005	ug/l
Chlorodibromomethane	8V	EPA PB83/624	04/03/92	(0.0005	ug/l
Chloroethane	9V	EPA PB83/624	04/03/92	(0.0005	ug/l
2-Chloroethylvinyl Ether	10V	EPA PB83/624	04/03/92	(0.0005	ug/l
Chloroform	11V	EPA PB83/624	04/03/92	(0.0005	ug/l
Dichlorobromomethane	12V	EPA PB83/624	04/03/92	(0.0005	ug/l
1,1-Dichloroethane	14V	EPA PB83/624	04/03/92	(0.0005	ug/l
1,2-Dichloroethane	15V	EPA PB83/624	04/03/92	(0.0005	ug/l
1,1-Dichloroethylene	16V	EPA PB83/624	04/03/92	(0.0005	ug/l
1,2-Dichloropropane	17V	EPA PB83/624	04/03/92	(0.0005	ug/l
1,3-Dichloropropylene	18V	EPA PB83/624	04/03/92	(0.0005	ug/l
Ethylbenzene	19V	EPA PB83/624	04/03/92	(0.0005	ug/l
Methyl bromide	20V	EPA PB83/624	04/03/92	(0.0005	ug/l
Methyl Chloride	21V	EPA PB83/624	04/03/92	(0.0005	ug/l
Methylene Chloride	22V	EPA PB86/624	04/03/92	0.0006	ug/l
1,1,2,2-Tetrachloroethane	23V	EPA PB83/624	04/03/92	(0.0005	ug/l
Tetrachloroethylene	24V	EPA PB83/624	04/03/92	(0.0005	ug/l
Toluene	25V	EPA PB83/624	04/03/92	(0.0005	ug/l
1,2-trans-dichloroethylene	26V	EPA PB83/624	04/03/92	(0.0005	ug/l
1,1,1-Trichloroethane	27V	EPA PB83/624	04/03/92	(0.0005	ug/l
1,1,2-Trichloroethane	28V	EPA PB83/624	04/03/92	(0.0005	ug/l
Trichloroethylene	29V	EPA PB83/624	04/03/92	(0.0005	ug/l
Vinyl Chloride	31V	EPA PB83/624	04/03/92	(0.0005	ug/l

CC: MR. W. S. HILL

Chemist	Quality Control: Mark Foster	Supervisor: Charles Foster	Page of

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General Test Laboratory
Building Number 8
P.O. Box 2641
Birmingham, Al. 35291

Alabama Power

Certificate of Analysis

TO : MR. TOM MOORER
ADDRESS: SOUTHERN NUCLEAR

REPORT DATE : 05/01/92
SAMPLE DATE : 03/19/92
SAMPLE NUMBER : 920319-0015
LOCATION NUMBER: 0PCO

DESCRIPTION: PLANT HATCH, SITE 2, STORMWATER RUNOFF COMPOSITE SAMPLE

TEST	REFERENCE	ANALYSIS DATE	RESULT	UNITS
INTAKE AND EFFLUENT CHARACTERISTICS (PART A)				
Biochemical Oxygen Demand, 5 Day	STANDARD METHOD 507	03/25/92	2.	mg/l
Chemical Oxygen Demand	EPA P004/410	03/26/92	29.	mg/l
Organic Carbon, Total	EPA P004/415.1	03/26/92	11.683	mg/l
Solids, Total Suspended	EPA P004/160.2	03/20/92	27.	mg/l
Nitrogen, Ammonia	EPA P004/350.2	04/01/92	0.021	mg/l
Temperature		03/19/92	21.1	Degrees C
pH		03/19/92	7.58	SU
INTAKE AND EFFLUENT CHARACTERISTICS (PART B)				
Bromide	EPA P004/300.1	03/23/92	< 0.01	mg/l
Chlorine, Total Residual		03/19/92	0.20	mg/l
Color		03/20/92	140.	PCU
Fluoride	EPA P004/300.0	03/23/92	0.32	mg/l
Nitrate-Nitrite (as N)	Standard Method 421	05/01/92	0.55	mg/l
Nitrogen, Total Organic	EPA P004/351.3	05/01/92	0.25	mg/l
Phosphorus, Total	EPA P004/365.2	03/25/92	0.077	mg/l
Sulfate	EPA P004/300.0	03/27/92	13.6	mg/l
Sulfide	EPA P004/376.2	03/24/92	0.011	mg/l
Surfactants	EPA P004/425.1	03/20/92	0.02	mg/l
Aluminum, Total	EPA P004/200.7	04/14/92	2.63	mg/l
Barium, Total	EPA P004/200.7	04/14/92	0.07	mg/l
Boron, Total	STANDARD METHOD 404A	03/20/92	0.05	mg/l
Cobalt, Total	EPA P004/200.7	04/17/92	< 0.01	mg/l
Iron, Total	EPA P004/200.7	04/14/92	3.11	mg/l
Magnesium, Total	EPA P004/200.7	04/14/92	0.05	mg/l
Molybdenum, Total	EPA P004/200.7	04/17/92	< 0.01	mg/l
Manganese, Total	EPA P004/200.7	04/14/92	0.09	mg/l
Tin, Total	EPA P004/200.7	04/17/92	0.01	mg/l
Titanium, Total	EPA P004/200.7	04/17/92	0.03	mg/l

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General Test Laboratory
Building Number 8
P.O. Box 2641
Birmingham, Al. 35291

Alabama Power

Certificate of Analysis

TO : MR. TOM MOORER
ADDRESS: SOUTHERN NUCLEAR

REPORT DATE : 05/01/92
SAMPLE DATE : 03/19/92
SAMPLE NUMBER : 920319-0015
LOCATION NUMBER: EPCD

DESCRIPTION: PLANT HATCH, SITE 2, STORMWATER RUNOFF COMPOSITE SAMPLE

TEST		REFERENCE	ANALYSIS DATE	RESULT	UNITS
METALS, CYANIDE, AND TOTAL PHENOLS					
Antimony, Total		EPA PB84/208.7	04/17/92	< 0.03	mg/l
Arsenic, Total		EPA PB84/206.2	03/26/92	0.006	mg/l
Beryllium, Total		EPA PB84/208.7	04/17/92	< 0.01	mg/l
Cadmium, Total		EPA PB84/208.7	04/14/92	< 0.01	mg/l
Chromium, Total		EPA PB84/208.7	04/16/92	< 0.01	mg/l
Copper, Total		EPA PB84/208.7	04/14/92	< 0.02	mg/l
Lead, Total		EPA PB84/208.7	04/14/92	0.02	mg/l
Mercury, Total		EPA PB84/245.1	04/16/92	0.0023	mg/l
Nickel, Total		EPA PB84/208.7	04/14/92	< 0.02	mg/l
Selenium, Total		EPA PB84/270.2	03/27/92	< 0.005	mg/l
Silver, Total		EPA PB84/208.7	04/14/92	2.63	mg/l
Thallium, Total		EPA PB84/208.7	04/17/92	0.04	mg/l
Zinc, Total		EPA PB84/208.7	04/14/92	0.04	mg/l
VOLATILE COMPOUNDS					
Acrolein	1V	EPA PB83/583/624	04/02/92	< 0.020	mg/l
Acrylonitrile	2V	EPA PB83/583/624	04/02/92	< 0.020	mg/l
Benzene	3V	EPA PB83/624	04/01/92	< 0.0005	mg/l
Bromoform	5V	EPA PB83/624	04/01/92	< 0.0005	mg/l
Carbon Tetrachloride	6V	EPA PB83/624	04/01/92	< 0.0005	mg/l
Chlorobenzene	7V	EPA PB83/624	04/01/92	< 0.0005	mg/l
Chlorodibromomethane	8V	EPA PB83/624	04/01/92	< 0.0005	mg/l
Chloroethane	9V	EPA PB83/624	04/01/92	< 0.0005	mg/l
2-Chloroethylvinyl Ether	10V	EPA PB83/624	04/01/92	< 0.0005	mg/l
Chloroform	11V	EPA PB83/624	04/01/92	< 0.0005	mg/l
Dichlorobromomethane	12V	EPA PB83/624	04/01/92	< 0.0005	mg/l
1,1-Dichloroethane	14V	EPA PB83/624	04/01/92	< 0.0005	mg/l
1,2-Dichloroethane	15V	EPA PB83/624	04/01/92	< 0.0005	mg/l
1,1-Dichloroethylene	16V	EPA PB83/624	04/01/92	< 0.0005	mg/l

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General Test Laboratory
Building Number 8
P.O. Box 2641
Birmingham, Al. 35291

Alabama Power

Certificate of Analysis

TO : MR. TOM MOORER
ADDRESS: SOUTHERN NUCLEAR

REPORT DATE : 03/01/92
SAMPLE DATE : 03/19/92
SAMPLE NUMBER : 920319-0015
LOCATION NUMBER: SPCD

DESCRIPTION: PLANT HATCH, SITE 2, STORMWATER RUNOFF COMPOSITE SAMPLE

TEST		REFERENCE	ANALYSIS DATE	RESULT	UNITS
VOLATILE COMPOUNDS					
1,2-Dichloropropane	17V	EPA PB83/624	04/01/92	< 0.0005	mg/l
1,3-Dichloropropylene	18V	EPA PB83/624	04/01/92	< 0.0005	mg/l
Ethylbenzene	19V	EPA PB83/624	04/01/92	< 0.0005	mg/l
Methyl bromide	20V	EPA PB83/624	04/01/92	< 0.0005	mg/l
Methyl Chloride	21V	EPA PB83/624	04/01/92	< 0.0005	mg/l
Methylene Chloride	22V	EPA PB86/624	04/01/92	< 0.0005	mg/l
1,1,2,2-Tetrachloroethane	23V	EPA PB83/624	04/01/92	< 0.0005	mg/l
Tetrachloroethylene	24V	EPA PB83/624	04/01/92	< 0.0005	mg/l
Toluene	25V	EPA PB83/624	04/01/92	< 0.0005	mg/l
1,2-trans-dichloroethylene	26V	EPA PB83/624	04/01/92	< 0.0005	mg/l
1,1,1-Trichloroethane	27V	EPA PB83/624	04/01/92	< 0.0005	mg/l
1,1,2-Trichloroethane	28V	EPA PB83/624	04/01/92	< 0.[illegible]	mg/l
Trichloroethylene	29V	EPA PB83/624	04/01/92	< 0.0025	mg/l
Vinyl Chloride	31V	EPA PB83/624	04/01/92	< 0.0005	mg/l
ACID COMPOUNDS					
2-chlorophenol	1A	EPA PB83/625	04/07/92	< 0.01	mg/l
2,4-dichlorophenol	2A	EPA PB83/625	04/07/92	< 0.01	mg/l
2,4-dimethylphenol	3A	EPA PB83/625	04/07/92	< 0.01	mg/l
2-methyl-4,6-dinitrophenol	4A	EPA PB83/625	04/07/92	< 0.05	mg/l
2,4-dinitrophenol	5A	EPA PB83/625	04/07/92	< 0.05	mg/l
2-nitrophenol	6A	EPA PB83/625	04/07/92	< 0.01	mg/l
4-nitrophenol	7A	EPA PB83/625	04/07/92	< 0.05	mg/l
4-chloro-3-methylphenol	8A	EPA PB83/625	04/07/92	< 0.01	mg/l
Pentachlorophenol	9A	EPA PB83/625	04/07/92	< 0.01	mg/l
Phenol	10A	EPA PB83/625	04/07/92	< 0.01	mg/l
2,4,6-trichlorophenol	11A	EPA PB83/625	04/07/92	< 0.01	mg/l

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General Test Laboratory
Building Number 8
P.O. Box 26[illegible]
Birmingham, Al. 35291

Alabama Power

Certificate of Analysis

TO : MR. TOM MOORER
ADDRESS: SOUTHERN NUCLEAR

REPORT DATE : 05/01/92
SAMPLE DATE : 03/19/92
SAMPLE NUMBER : 920319-0013
LOCATION NUMBER: SPCO

DESCRIPTION: PLANT HATCH, SITE 2, STORMWATER RUNOFF COMPOSITE SAMPLE

TEST		REFERENCE	ANALYSIS DATE	RESULT	UNITS
BASE / NEUTRAL COMPOUNDS					
Acenaphthene	1B	EPA PB83/625	04/07/92	< 0.01	ug/l
Acenaphthylene	2B	EPA PB83/625	04/07/92	< 0.005	ug/l
Anthracene	3B	EPA PB83/625	04/07/92	< 0.01	ug/l
Benzidine	4B	EPA PB83/625	04/07/92	< 0.06	ug/l
Benzo(a)anthracene	5B	EPA PB83/625	04/07/92	< 0.01	ug/l
Benzo(a)pyrene	6B	EPA PB83/625	04/07/92	< 0.01	ug/l
Benzo(b)fluoranthene	7B	EPA PB83/625	04/07/92	< 0.01	ug/l
Benzo(g,h,i)perylene	8B	EPA PB83/625	04/07/92	< 0.01	ug/l
Benzo(k)fluoranthene	9B	EPA PB83/625	04/07/92	< 0.01	ug/l
Bis(2-chloroethoxy)methane	10B	EPA PB83/625	04/07/92	< 0.01	ug/l
Bis(2-chloroethyl)ether	11B	EPA PB83/625	04/07/92	< 0.01	ug/l
Bis(2-Chloroisopropyl)ether	12B	EPA PB83/625	04/07/92	< 0.01	ug/l
Bis(2-ethylhexyl)phthalate	13B	EPA PB83/625	04/07/92	< 0.01	ug/l
4-Bromophenyl phenyl ether	14B	EPA PB83/625	04/07/92	< 0.01	ug/l
Butylbenzyl phthalate	15B	EPA PB83/625	04/07/92	< 0.01	ug/l
2-Chloronaphthalene	16B	EPA PB83/625	04/07/92	< 0.01	ug/l
4-Chlorophenyl phenyl ether	17B	EPA PB83/625	04/07/92	< 0.01	ug/l
Chrysene	18B	EPA PB83/625	04/07/92	< 0.01	ug/l
Dibenzo(a,h)anthracene	19B	EPA PB83/625	04/07/92	< 0.01	ug/l
1,2-Dichlorobenzene	20B	EPA PB83/625	04/07/92	< 0.01	ug/l
1,3-Dichlorobenzene	21B	EPA PB83/625	04/07/92	< 0.01	ug/l
1,4-Dichlorobenzene	22B	EPA PB83/625	04/07/92	< 0.01	ug/l
3,3'-dichlorobenzidine	23B	EPA PB83/625	04/07/92	< 0.02	ug/l
Diethyl phthalate	24B	EPA PB83/625	04/07/92	< 0.01	ug/l
Dimethyl phthalate	25B	EPA PB83/625	04/07/92	< 0.01	ug/l
Di-n-butyl phthalate	26B	EPA PB83/625	04/07/92	< 0.01	ug/l
2,4-dinitrotoluene	27B	EPA PB83/625	04/07/92	< 0.02	ug/l
2,6-Dinitrotoluene	28B	EPA PB83/625	04/07/92	< 0.02	ug/l
Di-n-octyl phthalate	29B	EPA PB83/625	04/07/92	< 0.01	ug/l
1,2-diphenylhydrazine(as azobenzene)	30B	EPA PB83/625	04/07/92	< 0.01	ug/l

Chemist	Quality Control	Supv. Chemist	Page
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General Test Laboratory
Building Number 8
P.O. Box 2641
Birmingham, Al. 35291

Alabama Power

Certificate of Analysis

TO : MR. TOM MOORER
ADDRESS: SOUTHERN NUCLEAR

REPORT DATE : 05/01/92
SAMPLE DATE : 03/19/92
SAMPLE NUMBER : 920319-0015
LOCATION NUMBER: 0-100

DESCRIPTION: PLANT HATCH, SITE 2, STORMWATER RUNOFF COMPOSITE SAMPLE

TEST		REFERENCE	ANALYSIS DATE	RESULT	UNITS
BASE / NEUTRAL COMPOUNDS					
Fluoranthene	31B	EPA PB83/625	04/07/92	< 0.01	ug/l
Fluorene	32B	EPA PB83/625	04/07/92	< 0.01	ug/l
Hexachlorobenzene	33B	EPA PB83/625	04/07/92	< 0.01	ug/l
Hexachlorobutadiene	34B	EPA PB83/625	04/07/92	< 0.01	ug/l
Hexachlorocyclopentadiene	35B	EPA PB83/625	04/07/92	< 0.01	ug/l
Hexachloroethane	36B	EPA PB83/625	04/07/92	< 0.002	ug/l
Indeno(1,2,3-cd)pyrene	37B	EPA PB83/625	04/07/92	< 0.01	ug/l
Isophorone	38B	EPA PB83/625	04/07/92	< 0.01	ug/l
Naphthalene	39B	EPA PB83/625	04/07/92	< 0.01	ug/l
Nitrobenzene	40B	EPA PB83/625	04/07/92	< 0.01	ug/l
N-nitrosodimethylamine	41B	EPA PB83/625	04/07/92	< 0.01	ug/l
N-nitrosodi-N-propylamine	42B	EPA PB83/625	04/07/92	< 0.01	ug/l
N-nitrosodiphenylamine	43B	EPA PB83/625	04/07/92	< 0.01	ug/l
Phenanthrene	44B	EPA PB83/625	04/07/92	< 0.01	ug/l
Pyrene	45B	EPA PB83/625	04/07/92	< 0.01	ug/l
1,2,4-Trichlorobenzene	46B	EPA PB83/625	04/07/92	< 0.01	ug/l
PESTICIDES					
Aldrin	1P	EPA PB83/608	04/28/92	< 0.0001	ug/l
alpha-BHC	2P	EPA PB83/608	04/28/92	< 0.0001	ug/l
beta-BHC	3P	EPA PB83/608	04/28/92	< 0.0001	ug/l
gamma-BHC	4P	EPA PB83/608	04/28/92	< 0.0001	ug/l
delta-BHC	5P	EPA PB83/608	04/28/92	< 0.0001	ug/l
Chlordane	6P	EPA PB83/608	03/26/92	0.00002	ug/l
4,4'-DDT	7P	EPA PB83/608	04/28/92	< 0.0002	ug/l
4,4'-DDE	8P	EPA PB83/608	04/28/92	< 0.0002	ug/l
4,4'-DDD	9P	EPA PB83/608	04/28/92	< 0.0002	ug/l
Dieldrin	18P	EPA PB83/608	04/28/92	< 0.0001	ug/l
alpha-endosulfan	11P	EPA PB83/608	04/28/92	< 0.0005	ug/l

Chemist	Quality Control	Busn. Chemist	Page
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General Test Laboratory
Building Number 8
P.O. Box 2641
Birmingham, Al. 35291

Alabama Power

Certificate of Analysis

TO : MR. TOM MCCRARY
ADDRESS: SOUTHERN NUCLEAR

REPORT DATE : 05/01/92
SAMPLE DATE : 03/19/92
SAMPLE NUMBER : 920319-0015
LOCATION NUMBER: EPCO

DESCRIPTION: PLANT HATCH, SITE 2, STORMWATER RUNOFF COMPOSITE SAMPLE

TEST		REFERENCE	ANALYSIS DATE	RESULT	UNITS
PESTICIDES					
alpha-Endosulfan	12P	EPA PB83/608	04/28/92	< 0.0005	mg/l
Endosulfan sulfate	13P	EPA PB83/608	04/28/92	< 0.0005	mg/l
Endrin	14P	EPA PB83/608	04/28/92	< 0.0002	mg/l
Endrin aldehyde	15P	EPA PB83/608	04/28/92	< 0.0002	mg/l
Heptachlor	16P	EPA PB83/608	04/28/92	< 0.0001	mg/l
Heptachlor epoxide	17P	EPA PB83/608	04/28/92	< 0.0001	mg/l
PCB, 1242	18P	EPA PB83/608	05/01/92	< 0.0005	mg/l
PCB, 1254	19P	EPA PB83/608	05/01/92	< 0.0005	mg/l
PCB, 1221	20P	EPA PB83/608	05/01/92	< 0.0005	mg/l
PCB, 1232	21P	EPA PB83/608	05/01/92	< 0.0005	mg/l
PCB, 1248	22P	EPA PB83/608	05/01/92	< 0.0005	mg/l
PCB, 1260	23P	EPA PB83/608	05/01/92	< 0.0005	mg/l
PCB, 1016	24P	EPA PB83/608	05/01/92	< 0.0005	mg/l
Toxaphene	25P	EPA PB83/608	03/26/92	< 0.00002	mg/l
MISCELLANEOUS					
Nitrogen, Total Kjeldahl		EPA PB84/351.3	04/01/92	0.27	mg/l
Nitrogen, Nitrate		EPA PB84/300.0	03/20/92	0.54	mg/l
Nitrogen, Nitrite		EPA PB84/354.1	03/20/92	< 0.010	mg/l

CC: MR. W. S. HILL

Chemist	Quality Control	Supervisor	Page
	Mark Foster	Charles Hobson	6 of

6-2780 Rev 8/91

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General Test Laboratory
Building Number 8
P.O. Box 2641
Birmingham, Al. 35291

Alabama Power

Certificate of Analysis

TO : MR. TOM MOORER
ADDRESS: SOUTHERN NUCLEAR

REPORT DATE : 04/02/92
SAMPLE DATE : 03/19/92
SAMPLE NUMBER : 920319-0022
LOCATION NUMBER: BPCO

DESCRIPTION: PLANT HATCH, SITE 2, COMPOSITE SAMPLE TRIP BLANK

TEST		REFERENCE	ANALYSIS DATE	RESULT	UNITS
VOLATILE COMPOUNDS					
Acrolein	1V	EPA PB83/683/624	04/02/92	(0.010	mg/l
Acrylonitrile	2V	EPA PB83/683/624	04/02/92	(0.020	mg/l
Benzene	3V	EPA PB83/624	04/01/92	(0.0005	mg/l
Bromoform	5V	EPA PB83/624	04/01/92	(0.0005	mg/l
Carbon Tetrachloride	6V	EPA PB83/624	04/01/92	(0.0005	mg/l
Chlorobenzene	7V	EPA PB83/624	04/01/92	(0.0005	mg/l
Chlorodibromoethane	8V	EPA PB83/624	04/01/92	(0.0005	mg/l
Chloroethane	9V	EPA PB83/624	04/01/92	(0.0005	mg/l
2-Chloroethylvinyl Ether	10V	EPA PB83/624	04/01/92	(0.0005	mg/l
Chloroform	11V	EPA PB83/624	04/01/92	(0.0005	mg/l
Dichlorobromomethane	12V	EPA PB83/624	04/01/92	(0.0005	mg/l
1,1-Dichloroethane	14V	EPA PB83/624	04/01/92	(0.0005	mg/l
1,2-Dichloroethane	15V	EPA PB83/624	04/01/92	(0.0005	mg/l
1,1-Dichloroethylene	16V	EPA PB83/624	04/01/92	(0.0005	mg/l
1,2-Dichloropropane	17V	EPA PB83/624	04/01/92	(0.0005	mg/l
1,3-Dichloropropylene	18V	EPA PB83/624	04/01/92	(0.0005	mg/l
Ethylbenzene	19V	EPA PB83/624	04/01/92	(0.0005	mg/l
Methyl bromide	20V	EPA PB83/624	04/01/92	(0.0005	mg/l
Methyl Chloride	21V	EPA PB83/624	04/01/92	(0.0005	mg/l
Methylene Chloride	22V	EPA PB86/624	04/01/92	(0.0005	mg/l
1,1,2,2-Tetrachloroethane	23V	EPA PB83/624	04/01/92	(0.0005	mg/l
Tetrachloroethylene	24V	EPA PB83/624	04/01/92	(0.0005	mg/l
Toluene	25V	EPA PB83/624	04/01/92	(0.0005	mg/l
1,2-trans-dichloroethylene	26V	EPA PB83/624	04/01/92	(0.0005	mg/l
1,1,1-Trichloroethane	27V	EPA PB83/624	04/01/92	(0.0005	mg/l
1,1,2-Trichloroethane	28V	EPA PB83/624	04/01/92	(0.0005	mg/l
Trichloroethylene	29V	EPA PB83/624	04/01/92	(0.0005	mg/l
Vinyl Chloride	31V	EPA PB83/624	04/01/92	(0.0005	mg/l

CC: MR. M. S. HILL

Chemist	Quality Control: Mark Lester	Supv. Chemist: Harold Jackson	Page of

6-2780 Rev 8/85

FILE: EI

NET NATIONAL ENVIRONMENTAL TESTING, INC.

NET Gulf Coast, Inc.
Gulfport Division
15199 Community Road
Gulfport, MS 39503

Tel: (601) 867-3038
Fax: (601) 865-9396

ANALYTICAL REPORT

ALABAMA POWER COMPANY
C/O M.H. Maddox, GSC #8
P.O. Box 2011
Birmingham, AL 35291

ATTENTION:

Purchase Order: M093984

IDENTIFICATION: SEE BELOW

DATE: 05/04/1992

DATE SAMPLE RECEIVED: 04/02/1992

JOB NUMBER: 92.0642

PAGE NUMBER: 1

SAMPLE NUMBER: 47975		
CLIENT I.D.: PLANT HATCH-SITE 2(GRAB) 920311-0031		UNITS
Gross Alpha	1.5+/-1.9	pCi/L
Gross Beta	6.1+/-3.2	pCi/L

SAMPLE NUMBER: 47976		
CLIENT I.D.: PLANT HATCH-SITE 2(COMP) 920319-0015		UNITS
Gross Alpha	2.8+/-1.9	pCi/L
Gross Beta	4.4+/-3.1	pCi/L

APPROVED:

Karen H. Brown

KAREN H. BROWN
DIVISION MANAGER

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Gulf Coast, Inc.
Gulfport Division
15199 Community Road
Gulfport, MS 39503

Tel: (601) 863-3036
Fax: (601) 865-9396

ANALYTICAL REPORT

ALABAMA POWER COMPANY
C/O Mark Lester, GSC #8
P.O. Box 2641
Birmingham, AL 35291

ATTENTION:

Purchase Order: M093863

IDENTIFICATION: SEE BELOW

DATE: 03/16/1992

DATE SAMPLE RECEIVED: 02/24/1992

JOB NUMBER: 92.0364

PAGE NUMBER: 1

SAMPLE NUMBER:	47032	920128-0102	
CLIENT I.D.:	#1 PLANT HATCH, SITE 1	Grab Field Blank	UNITS
Gross Alpha		0.0+/-2.4	pCi/L
Gross Beta		0.0+/-3.3	pCi/L

SAMPLE NUMBER:	47033	920128-0104	
CLIENT I.D.:	#2 PLANT HATCH, SITE 2	Grab Field Blank	UNITS
Gross Alpha		0.0+/-2.0	pCi/L
Gross Beta		0.0+/-3.2	pCi/L

SAMPLE NUMBER:	47034	920128-0106	
CLIENT I.D.:	#3 PLANT HATCH, SITE 1	Grab Sample	UNITS
Gross Alpha		0.0+/-1.5	pCi/L
Gross Beta		0.0+/-3.1	pCi/L

APPROVED:

Karen H Brown

KAREN H. BROWN
DIVISION MANAGER

ANALYTICAL REPORT

ALABAMA POWER COMPANY
C/O Mark Lester, GSC #8
P.O. Box 2641
Birmingham, AL 35291

ATTENTION:

Purchase Order: M093863

IDENTIFICATION: SEE BELOW

DATE: 03/16/1992

DATE SAMPLE RECEIVED: 02/24/1992

JOB NUMBER: 92.0364

PAGE NUMBER: 2

SAMPLE NUMBER:	47035	920128-0108	
CLIENT I.D.:	#4 PLANT HATCH, SITE 1	Composite	UNITS
Gross Alpha		0.3+/-1.2	pCi/L
Gross Beta		0.8+/-3.0	pCi/L

APPROVED:

Karen H Brown

KAREN H. BROWN
DIVISION MANAGER

Page 1 of 1

Chain of Custody
Sample Analysis Request
General Test Laboratory, G.S.C. 8

Alabama Power

Requested Completion Date _____ Results To George G. Ll Ext. 8-526-3[illegible]

(Explain) NPDES Stormwater Certification (Field Blank Samples)

17th Floor Environmental Affairs, 333 Piedmont, Atlanta

Dept. No. _____

Site Representative: Byron K. Feimster

Requested By: Byron K. Feimster

Collector(s): Fred Cox, Rob Butts

Date Sampled: 1/23/92

Time: 1300 AM (PM)

Location of Sampling (Name of Facility, etc.): Plant E.I. Hatch Site 1

Analyses Requested: NPDES Storm water analysis

Special Handling and/or Storage: Keep cool ~ 4°C

Relinquished by	Date/Time	Received By	Date/Time

Sample No	Field Information (Sample Description, Date, Etc.)	* Lab ID
1	(2) 500 ml Plastic Bottles w/ H_2O_2	
2	6 (40 ml) VOC Vials	
3	1 Gallon Container (Radiation Blank)	920128
	Area 1 Grab	102
	Area 1 Comp	103

* For General Lab Use Only

NOTE: See instructions on reverse side.
Shaded areas used when chain of custody is required.

Form 5 400-4 Rev. 4-91

Page 1 of 1

Chain of Custody
Sample Analysis Request
General Test Laboratory, G.S.C. 8

Alabama Power

Requested Completion Date _____

Results To George G. Ivy II Ext. 8-526-3[illegible]

(Explain) NPDES Stormwater

Certification

(Field Blank Sample)

17th Floor Environmental Affairs

333 Piedmont, Atlanta

Dept. No. _____

Site Representative: Byron K. Feimster

Requested By: Byron K. Feimster

Collector(s): Fred Cox, Rick Butts

Date Sampled: 1/23/91

Time: 1400 AM (PM)

Location of Sampling (Name of Facility, etc.): Plant E.I. Hatch Site 2.

Analyses Requested: NPDES Storm water analysis

Special Handling and/or Storage: Keep cool ~ 4°C

Relinquished By	Date/Time	Received By	Date/Time

Sample No.	Field Information (Sample Description, Date, Etc.)	* Lab ID
1	250 ml Plastic Bottle w/ H2SO4	
2	6 (40 ml) VOC Vials	
3	1 Gallon Cubitainer (RADIATION BLANK)	920128
	Site 2 Grab	104
	Site 2 Comp	105

* For General Lab Use Only

NOTE: See instructions on reverse side.
Shaded areas used when chain of custody is required.

Form 3 40014 Rev. 4 90

STORMWATER SAMPLING FIELD MEASUREMENTS

PLANT E. J. HATCH

The following field measurement data (Part B) was taken at the plant site using the equipment detailed below:

A. EQUIPMENT:

1. Model Orion 811 pH Meter

   Serial # 34273

   Model Combination pH Electrode

   Serial # 81-C

   Automatic temperature compensation? (YES) NO

2. 4 pH buffer, Lot # U24494 pH 7 Lot # 116 Exp. Date July '93

   Exp. Date: 4-2-96

   10 pH buffer, Lot # G-025

   Exp. Date: 1-30-93

3. Model DC-100 Cubic ~~Amperometric~~ Hach Titrator

   Serial # 90115049C

4. Model ~~0F~~ -20 + 110°C NIST Thermometer

   Certif. # NBS 179894

B. DATA

SITE	SAMPLE TYPE	DATE	TIME	pH	TEMP (°C)	TRC	REMARKS
1	GRAB FIELD BLANK	1-25-92	1900	N/A	N/A	N/A	—
1	COMPOSITE FIELD BLANK	1-25-92	1300	N/A	N/A	N/A	—
1	RADIATION FIELD BLANK	1-25-92	1300	N/A	N/A	N/A	—
2	GRAB FIELD BLANK	1-25-92	1400	N/A	N/A	N/A	—
2	COMPOSITE FIELD BLANK	1-25-92	1400	N/A	N/A	N/A	—
2	RADIATION FIELD BLANK	1-25-92	1400	N/A	N/A	N/A	—
1	GRAB SAMPLE	1-28-92	0700	7.49	12°C	0.0	—
1	COMPOSITE SAMPLE	1-28-92	0700	7.35	12.4°C	2.1	—
1	RADIATION SAMPLE	1-28-92	0700	N/A	N/A	N/A	—

Chain of Custody
Sample Analysis Request
General Test Laboratory, G.S.C. 8

Alabama Power

Requested Completion Date _____ Results To: George Guill Ext. 8-526-7

(Explain) NPDES STORMWATER CERTIFICATION (GRAB SAMPLE) — 17th Floor Environmental Affairs, 333 Piedmont, Atlanta

Dept. No. _____

See Representative: Byron K. Feemster | Requested By: Byron K. Feemster

Collector(s): Nelson Hughes | Date Sampled: 1-28-92 | Time: 0730 AM PM

Location of Sampling (Name of Facility, etc.): Plant E.J. Hatch Site 1

Analyses Requested: NPDES STORMWATER ANALYSES

Special Handling and/or Storage: KEEP COOL ~ 4°C

Relinquished By	Date/Time	Received By	Date/Time

Sample No.	Field Information (Sample Description, Date, Etc.)	* Lab ID
1	1 GALLON PLASTIC BOTTLE	
2	1 liter PLASTIC Bottle w/ HNO_3	920128
3	½ GALLON Bottle (PLASTIC)	106
4	1 GALLON Amber GLASS Bottle w/ H_2SO_4	
5	(6) 40 ml VOC vials w/ HCL	
6	1 GALLON Amber GLASS Bottle	
7	1 liter amber glass bottle w/ zinc Acetate	
8	½ GALLON Amber GLASS Bottle w/ 4 ml NaOH	
9	1 liter GLASS bottle w/ H_2SO_4	
10	250 ml PLASTIC sterile Bottle	
	7.49 pH 12.0° 0.7	
	TB	107

* For General Lab Use Only

NOTE: See instructions on reverse side.
Shaded areas used when chain of custody is required.

Form T-4001-A Rev. 4-90

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Chain of Custody
Sample Analysis Request
General Test Laboratory, G.S.C. 8

Alabama Power

Requested Completion Date

Results To: George Gwill Ext 8-526-75

(Explain) NPDES Stormwater Certification (composite sample)

17th Floor Environmental Affairs
333 Piedmont, Atlanta

Dept. No.

Site Representative: Byron K Feemster

Requested By: Byron K Feemster

Collector(s): Same N/A

Date Sampled: 1-28-92

Time: 0700 AM PM

Location of Sampling (Name of Facility, etc.): Plant R.S. Hatch Site 1

Analyses Requested: NPDES Stormwater Analysis

Special Handling and/or Storage: Keep cool ~ 4°C

Relinquished By	Date/Time	Received By	Date/Time

Sample No.	Field Information (Sample Description, Date, Etc.)	* Lab ID
1	1 Gallon Plastic Bottle w/ HNO_3	
2	1 liter Plastic Bottle w/ HNO_3	920128
3	½ Gallon Plastic Bottle	108
4	1 liter amber glass bottle w/ H_2SO_4	
5	(6) 40 ml VOC vials w/ HCl	
6	1 Gallon Amber Glass bottle	
7	1 liter Amber Glass bottle w/ 1.5 ml zinc acetate + NaOH	
	pH 7.35 Temp 12.4 Cl_2 <.1	
	TB	109

* For General Lab Use Only

NOTE: See instructions on reverse side.
Shaded areas used when chain of custody is required.

Form 5-40014 Rev. 4/90

44-00

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STORMWATER SAMPLING FIELD MEASUREMENTS

PLANT E. J. HINTON

The following field measurement data (Part B) was taken at the plant site using the equipment detailed below:

A. EQUIPMENT:

1. Model Orion 811 pH Meter

   Serial # 34273

   Model ~~Combination pH~~ Electrode

   Serial # 81-C

   Automatic temperature compensation? (YES) NO

2. 4 pH buffer, Lot # U24494

   Exp. Date: 4-2-96

   10 pH buffer, Lot # G-025

   Exp. Date: 1-30-93

   pH 7 Lot # 2116 Exp. Date 3-14-93

3. Model DC-100 Cubic ~~Amperom~~ Hach aric Titrator

   Serial # 90115049Z

4. Model ~~ASF~~ -20+110°C NIST Thermometer

   Certif. # NB 179894

B. DATA

SITE	SAMPLE TYPE	DATE	TIME	pH	TEMP (°C)	TRC	REMARKS
1	GRAB FIELD BLANK	1-23-92	1300	N/A	N/A	N/A	—
1	COMPOSITE FIELD BLANK	1-23-92	1300	N/A	N/A	N/A	—
1	RADIATION FIELD BLANK	1-23-92	1300	N/A	N/A	N/A	—
2	GRAB FIELD BLANK	1-23-92	1400	N/A	N/A	N/A	—
2	COMPOSITE FIELD BLANK	1-23-92	1400	N/A	N/A	N/A	—
2	RADIATION FIELD BLANK	1-23-92	1400	N/A	N/A	N/A	—
1	GRAB SAMPLE	1-28-92	0700	7.49	12°C	0.0	—
1	COMPOSITE SAMPLE	1-28-92	0700	7.35	12.4°C	2.1	—
1	RADIATION SAMPLE	1-28-92	0700	N/A	N/A	N/A	—

DATA

SITE	SAMPLE TYPE	DATE	TIME	pH	TEMP (°C)	TRC	REMARKS
2	GRAB SAMPLE						
2	COMPOSITE SAMPLE						
2	RADIATION SAMPLE			N/A	N/A	N/A	

Page _____ of _____

Chain of Custody
Sample Analysis Request
General Test Laboratory, G.S.C. 8

Alabama Power

Requested Completion Date _____ Results To Cheryl Cowell Ext. 8526

(Explain) NPDES STORM WATER CERTIFICATION (GRAB SAMPLE) — 17th Street Environmental Area, 333 Piedmont, Atlanta

Dept. No. _____

Site Representative	Requested By
Byron K. Feemster	Byron K. Feimster

Collection(s)	Date Sampled	Time
BK Feimster	03-10-92	1415 AM (PM)

Location of Sampling (Name of Facility, etc.)
PLANT E. I. HATCH SITE

Analyses Requested
NPDES STORM WATER ANALYSES

Special Handling and/or Storage
KEEP COOL ~ 4°C

Relinquished By	Date/Time	Received By	Date/Time
		[illegible]	3/11/92 [illegible]

Sample No.	Field Information (Sample Description, Date, Etc.)	* Lab ID 92-211
1	1 GALLON PLASTIC BOTTLE	
2	1 liter Plastic Bottle w/HNO3	31
3	½ GALLON BOTTLE (PLASTIC)	
4	1 GALLON Amber Glass Bottle w/ H2SO4	
5	(6) 40 ml VOA vials w/ HCl	
6	1 GALLON Amber Glass Bottle	
7	1 liter amber glass bottle w/ zinc Acetate	
8	½ GALLON Amber Glass Bottle w/ 4 ml NaOH	
9	1 liter Glass bottle w/ H2SO4	
10	250 ml Plastic sterile bottle	
	0.2 cl	
	18 °C trip blank	32

* For General Lab Use Only

NOTE: See instructions on reverse side.
Shaded areas used when chain of custody is required.

Form 5-40014 Rev. 4.92

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Chain of Custody
Sample Analysis Request
General Test Laboratory, G.S.C. 8

Alabama Power

Requested Completion Date ASAP

Results To: George Grill Ext. 8-826-34

(Explain) NPDES STORMWATER Certification

17th Floor ENV. AFFAIRS
333 Piedmont Atlanta

Dept. No.

Site Representative: Byron K. Feimster

Requested By: BK Feimster

Collector(s): Same

Date Sampled: 19 MAR 92

Time: 0515 (AM) PM

Location of Sampling (Name of Facility, etc.): Plant Hatch Site 2

Analyses Requested: NPDES STORMWATER ANALYSIS

Special Handling and/or Storage: Keep Cool 4°C

Relinquished By	Date/Time	Received By	Date/Time
		Paula Foster	3/19/92 1214

Sample No.	Field Information (Sample Description, Date, Etc.)	* Lab ID
	1 GALLON PLASTIC BOTTLE w/ HNO_3	
2	1 liter PLASTIC BOTTLE w/ HNO_3	
3	½ GALLON PLASTIC BOTTLE	15
4	1 liter amber GLASS w/ H_2SO_4	
5	6 40 ml glass VIALS w/ HCL	
6	1 GALLON AMBER GLASS	
7	1 liter CLEAR glass BOTTLE	
	pH Temp T.R. Cl_2	
	7.5 21.1 0.2	
	trip blank	22

* For General Lab Use Only

NOTE: See instructions on reverse side.
Shaded areas used when chain of custody is required.

Form 3-40014 Rev. 4-90

44-0

STORMWATER SAMPLING FIELD MEASUREMENTS

PLANT ~~HATCH~~

The following field measurement data (Part B) was taken at the plant site using the equipment detailed below:

A. EQUIPMENT:

1. Model Orion 811 pH Meter

   Serial # 34273

   Model ~~Combination pH~~ Electrode

   Serial # 81-0

   Automatic temperature compensation? (YES) NO

2. 4 pH buffer, Lot # E126

   Exp. Date: Jun '93

   7 pH buffer, Lot # E-116

   Exp. Date: July 93

3. Model 41100-52 ~~Amperometric Titrator~~ DR-100 Colorimeter

   Serial # 90115048S

4. Model -20° + 110°C NIST Thermometer

   Certif. # 88917

B. DATA

SITE	SAMPLE TYPE	DATE	TIME	pH	TEMP (°C)	TRC	REMARKS
1	GRAB FIELD BLANK			N/A	N/A	N/A	
1	COMPOSITE FIELD BLANK			N/A	N/A	N/A	
1	RADIATION FIELD BLANK			N/A	N/A	N/A	
2	GRAB FIELD BLANK			N/A	N/A	N/A	
2	COMPOSITE FIELD BLANK			N/A	N/A	N/A	
2	RADIATION FIELD BLANK			N/A	N/A	N/A	
1	GRAB SAMPLE						
1	COMPOSITE SAMPLE						
1	RADIATION SAMPLE			N/A	N/A	N/A	

B DATA

SITE	SAMPLE TYPE	DATE	TIME	pH	TEMP (°C)	TRC	REMARKS
2	GRAB SAMPLE	—	—		—	—	—
2	COMPOSITE SAMPLE	19MAR82	0515	7.5	21.1	.2	[illegible]
2	RADIATION SAMPLE	—	—	N/A	N/A	N/A	

ATTACHMENT 4

EPA FORM 2F SECTION VII, PART D

PLANT HATCH

EPA FORM 3510-2F
Section VII, Part D

	1 Date of Storm Event	2 Duration of Storm (minutes)	3 Total Rainfall During Storm (inches)	4 No. of Hours Between Beg. of Storm Measured and End of Prev. Meas. Rain Event	5 Maximum Flow During Rain (CFS)	6 Total Flow From Rain Event (CF)	7 Season Sample Was Taken	8 Form of Precip. (Rainfall/ Snowfall)
G1	1/28/92	1485	1.13	115	2.1	68170	Winter	Rain
G2	3/10/92	N/A	0.90	85	N/A	N/A	Spring	Rain
R1	1/28/92	1485	1.13	115	2.1	68170	Winter	Rain
R2	3/10/92	N/A	0.90	85	N/A	N/A	Spring	Rain
C1	1/28/92	1485	1.13	115	2.1	68170	Winter	Rain
C2	3/19/92	531	1.23	168	15.02	287176	Spring	Rain

G1. Grab Sample for Drainage Area 18. Rainfall start @ 1:03 a.m., runoff start @ 6:40 a.m. and sampled @ 6:56 a.m.
G2. Grab Sample for Drainage Area 10. Rainfall start @ (N/A), runoff start @ (N/A) and sampled @ 2:15 p.m.
R1. Radiation Sample for Drainage Area 18. Rainfall start @ 1:03 a.m., runoff start @ 6:40 a.m. and sampled @ 6:46 a.m.
R2. Radiation Sample for Drainage Area 10. Rainfall start @ (N/A), runoff start @ (N/A) and sampled @ 2:15 p.m.
C1. Composite Sample for Drainage Area 18. Rainfall start @ 1:03 a.m., runoff start @ 6:40 a.m. and sampled @ 7:07 a.m.
C2. Composite Sample for Drainage Area 10. Rainfall start @ 1:49 a.m., runoff start @ 3:50 a.m. and sampled @ 4:30 a.m.
(Samples G2 and R2 were obtained using the "Off-Line Sampling" feature (flowmeter error); therefore flow data is not available.)

9. **Description of the method of flow measurement:** Flow measurements were made using an ISCO Model 3230 flow meter. This flow meter measures the depth of flow with a bubbler gage and converts it to a flow rate using the Manning's Equation. Values of channel slope, channel cross sectional area, the channel roughness for the Manning's Equation were measured or estimated by a Professional Engineer.

STORMWATER SITE PLAN DRAWINGS

ENCLOSURE 2

Sludge Management Plan

Application for Approval of a Sludge Management Plan

Georgia Environmental Protection Division
Water Quality Control Section
270 Washington Street, S.W.
Atlanta, Georgia 30334
(404)656-4769

INSTRUCTIONS: Sludge management plans are required as an integral part of all applications for National Pollutant Discharge Elimination System (NPDES) wastewater discharge permits, pretreatment proposals, and construction grant applications from wastewater treatment facilities which generate significant quantities of sludge. This form should be completed and submitted along with the application or proposal to the permitting or approving group within the Water Quality Control Section. For larger or more complicated facilities, a conference with the permitting group may be advisable to define the requirements of the plan in more detail.

I. TYPE OF APPLICATION (check one)

- ☐ Municipal Construction Grant
- ☐ Municipal NPDES Permit
- ☐ Industrial Pretreatment Proposal

  Type of Industry _____
- ☒ Industrial NPDES Permit

  Type of Industry Electric Utility
- ☐ Other (specify) _____

Enter application number if known _____

II. SLUDGE GENERATOR

Name Edwin I. Hatch Nuclear Plant

Authorized Representative C. M. Hobson - Mgr. Environmental Affairs

Mailing Address P. O. Box 4545

Atlanta, Georgia 30302

Telephone Number (404) 526-7778

III. DISPOSAL FACILITY OPERATOR (If same as generator, enter "Same")

Name Same

Authorized Representative _____

Mailing Address _____

_____

Telephone Number _____

A. Is this a public or private facility?

____ Public ___X___ Private

B. Is this an existing or proposed new disposal facility?

___X___ Existing ____ New

C. Will any sludge be disposed in a permitted public sanitary landfill?

____ Yes ___X___ No

IV. LOCATION OF OPERATION (Describe below or attach map)

See Attached Map

_____

V. Describe the type and source of sludge generated. Include Standard Industrial Classification (SIC) codes if applicable. Sewage Treatment Plant Sludge Generated at Steam Electric Generating Plant (SIC Code 4911).

_____

VI. Describe the type of sludge processing proposed (stabilization, thickening, conditioning, dewatering, chemical or heat treatment, etc.)

Aerobic Digestion

_____

_____

VII. Describe the type of sludge disposal proposed (landfilling, land spreading or injection, lagooning, incineration, etc.)

Land Application - See Attached Sludge Management Plan.

If sludges are to be disposed by landfilling, land farming, land spreading or lagooning, the basic requirements of the sludge management plan are described on the back of this form.

VIII. Will operation be permanent and continuous? X Yes ____ No

If not, describe operating schedule: NOTE: Sludge will be removed as necessary from sewage treatment plant and managed via land application.

IX. What is the approximate quantity of sludge to be disposed in pounds per year or gallons per year?

84,000 gallons

X. Do you have reason to believe that any of the EPA identified priority pollutants may be present in this sludge? ____ Yes X No

If yes, indicate pollutants and concentrations and attach laboratory analyses.

XI. Has this sludge been tested to determine if it is hazardous under the Georgia Rules for Hazardous Waste Management? ____ Yes X No

XII. Do you have any reason to believe that any of this sludge would be classified as hazardous under the Georgia Rules for Hazardous Waste Management? ____ Yes X No

XIII. Will the sludge to be disposed come solely from the treatment of domestic sewage? ____ Yes X No

Applicant's Name Edwin I. Hatch Nuclear Plant

Authorized Representative C. M. Hobson - Mgr. Environmental Affairs

Signature J. T. Beckham, Jr. Date 5/29/92

J. T. Beckham, Jr.
Vice President - Plant Hatch

Plant Hatch
Management Plan for Land Disposal Of Sewage Treatment Sludge

I. Soil Characteristics

The Edwin I. Hatch Nuclear Plant is located on the south bank of the Altamaha River in Appling County, Georgia. The area is in the Coastal Terraces subprovince of the Atlantic Coastal Plain province. The site is underlain by approximately 4000 feet of relatively unconsolidated Mesozoic and Cenozoic sands, gravels, clays, marls, claystones, sandstones, and limestones. No structural features affect the material underlying the site. No major or minor fault zones are near the site, nor were any local faults discovered during field mapping, exploratory drilling, and construction. The site is underlain by both confined and unconfined aquifers.

Field exploration conducted during preconstruction revealed that the local geology is relatively simple and no major anomalies exist. The surficial geology is composed of flood plain and alluvial deposits for approximately the first 40 feet. The floodplain lithology is described as sand and gravel; poorly sorted, subrounded, quartz and feldspar; loose carbonaceous. This layer is underlain by the Brandywine Formation of the Pleistocene Age. The higher elevations on the site display the lithology of the Altamaha Formation which is characterized as: sandy clay; greenish gray to red; sand is fine to course, subangular, poorly sorted quartz and feldspar; mottled. Borings taken near the proposed land application site revealed soil characterized as firm to dense multicolored clayey and siltey sands with clay zones. Underlying the surficial sands is a hard layer which displays partial cementation.

A soil characterization test has been performed on representative soil obtained from the land application area. Data from the characterization is provided in Attachment 1.

II. Site Topography

The topography of the Plant Hatch site is a gently rolling surface sloping toward the Altamaha River. The elevation of the site along the river is approximately 75 feet MSL rising to approximately 100 feet MSL at the south site boundary. In the northwest corner of the site, the south bank of the Altamaha River is bordered by a narrow floodplain. The floodplain area broadens significantly in the area of the site. The drainage of the site is mainly accomplished by a wet weather branch (drainage swale) that nearly bisects the site in a northeast-southwest direction. The site is heavily wooded and the floodplain area is covered with dense underbrush.

The area proposed for land application is located beneath the transmission line on the west plant boundary (near Highway 1). The land application site is approximately 70 acres in size and is covered primarily with grass and low growing brush. No crops are grown in the area. A site topographic map with the proposed land application site noted is provided as Attachment 2. Slopes, drainage and other topographic features are noted on the map.

III. Acreage

The proposed land application site is approximately 70 acres in size.

IV. Statement of Land Use and Crops to Be Grown

The land is currently utilized as a transmission line right-of-way. Vegetation consists of grass and low growing brush; No crops will be grown on the land application site.

V. Method of Application and Description of Operational Procedures

Sludge from the sewage treatment plant sludge holding tank is pumped into a tank truck which is equipped with a manifold system for distribution of the sludge to the ground surface. The truck then conveys the material to the application area and distributes the sludge directly onto the ground surface. Approximately 7000 gallons per month of sludge is applied to the land application area.

VI. General Location Map Showing Proximity to Surface Water, Wells, Dwellings, Etc.

A general location map is provided as Attachment 3.

VII. The Design Average Flow of the Wastewater Treatment Facility Generating the Sludge, and the Source of Sludge for Application

The Plant Hatch sewage treatment system consists of two 35,000 gpd extended aeration treatment plants which are normally operated in series to treat wastewaters from site restrooms, shower facilities, and other domestic type sewage wastes. Industrial wastewaters are not treated in this system. The average flowrate during series operation is approximately 21,000 gpd. The source of sludge is a 3500 gallon sludge holding tank which collects waste sludge from the treatment process.

The units are capable of operation in parallel with a combined maximum flowrate of 70,000 gpd.

VIII. Analysis of Sludge

A sludge sampling and analysis program will be initiated to characterize Plant Hatch sewage treatment plant sludge. Results from the sampling program will be submitted to EPD for approval prior to implementation of this Sludge Management Plan.

IX. Topographic Map

A site topographic map is provided as Attachment 2.

X. General Area Topographic Map Showing Municipal or Community Wells Within 1 Mile of Facility

There are no municipal or community wells within one mile of the facility. Plant Hatch wells are noted in Attachment 2.

ATTACHMENT 1

Soil Cnaracterization

General Test Laboratory
Building Numbe: 8
P.O. Box 2641
Birmingham, Al. 35291

Alabama Power

Certificate of Analysis

TO : MR. TOM MOORER
ADDRESS: SOUTHERN NUCLEAR

REPORT DATE : 05/22/92
SAMPLE DATE : 05/21/92
SAMPLE NUMBER : 920521-0039
LOCATION NUMBER : HATCH

DESCRIPTION: PLANT HATCH, SAMPLE # 2, SOIL, WEST SIDE OF PLANT UNDER PAVILN

TEST	REFERENCE	RESULT	UNITS
pH	ASTM D 4972	4.5	SU

A Visual (Textural) Classification was performed on this sample at Alabama Power Company's PGS Civil Concrete and Soils Laboratory.

Color and Hue: 10 YR 3/2 ref: Munsell Color Chart System

Texture: Loam

CC: MR. W. S HILL

Chemist	Quality Control	Supv. Chemist	Page
	Mark Foster	Howard Warlen	of

5-2700 Rev 8/85

FILE: EI

ATTACHMENT 2

Land Application Site Topographic Map

ATTACHMENT 3

General Location Map

ENCLOSURE 3
Proposal for Use of Bromine

Alternate Biocide Program for Plant Hatch

1. Introduction

1.1 Description of Current Biofouling Program

The current biofouling program at Plant Hatch is applied to two systems; service water, which includes Residual Heat Removal (RHR) service water and Plant Service Water (PSW), and the circulating water system. The treatment programs for each system are different and are conducted separately.

The Residual Heat Removal (RHR) service water and Plant Service Water (PSW) systems at Plant Hatch are once-through systems. The RHR service water and PSW pumps take suction from the Altamaha River at the intake structure. After passing through the components of their respective systems, the water is routinely discharged to the circulating water flume to provide makeup to the circulating water system. The present service water treatment program at Plant Hatch consists of biofouling control using liquid sodium hypochlorite. Sodium hypochlorite is injected at the intake structure to provide biofouling control for the service water systems. Residual chlorine concentrations are measured at the discharge from service water to the circulating water flume to monitor efficiency of service water chlorination and optimize (minimize) chlorine use. The circulating water system treatment program is conducted separately from the service water program.

The circulating water system flume level is lowered and the cooling tower blowdown valve is closed prior to beginning chlorination of the circulating water system. Sodium hypochlorite is injected directly into the flume to provide biofouling control for the main condenser, piping, and other circulating water system components. Chlorine residuals in the circulating water system are normally allowed to dissipate to less than detectable levels prior to opening the blowdown valve or overflowing the circulating water flume.

1.2 Justification for Alternate Biocide in Lieu of Current Biofouling Control

The current sodium hypochlorite based biofouling control strategies are being investigated in an attempt to develop an optimal program which will provide effective biological control and minimize the discharge of chlorine residuals to the Altamaha River. This investigation has revealed several areas associated with sodium hypochlorite use at Plant Hatch which are obstacles to development of an optimum biofouling control program.

The percentage of the hypochlorous acid species (HOCl) which provides the active biocidal component formed from the dissociation of sodium hypochlorite in water diminishes significantly at pH values above 6.5. In order to provide effective biological control at elevated pH, excess sodium hypochlorite must be provided to produce adequate amounts of the active HOCl species.

As pH increases, the percentage of HOCl continues to decrease to less than 50 percent at pH 7.5. At pH 8, the HOCl species is less than 20 percent. The addition of excess sodium hypochlorite at elevated pH to provide adequate concentrations of the active HOCl species results in higher chlorine residual concentrations and increased time for residual decay. In addition, corrosion rates for mild steel and copper based alloys may be significantly affected. The presence of organics and nitrogen (as ammonia) also can significantly affect the efficiency of sodium hypochlorite.

The use of sodium bromide in conjunction with sodium hypochlorite provides several distinct advantages at Plant Hatch. The hypobromous acid species formed during the dissociation of sodium bromide in the presence of HOCl provides a much more effective biocide in the pH range of 5 to 11. At pH 7.5 over 95 percent HOBr is available (< 50 percent for HOCl). Chloramines formed by the reaction of HOCl with nitrogen are poor biocides. Unlike chloramines, bromamines have excellent biocidal properties. Therefore, effective biofouling control can be achieved with a lower dosage of bromine. This results in lower residuals in the system and, since bromine residuals decay faster than chlorine residuals, less time is required for the residual concentrations to decay. In addition, bromine is a milder oxidizing agent than chlorine such that corrosion of mild steel and copper based alloys is not a significant concern. The following items are provided as justification for the use of bromine at Plant Hatch:

1. The pH of river water generally ranges from approximately 6.9 to 7.9 during the year. The HOBr species present in this pH range is significantly higher than the HOCl species which ultimately results in more effective biocidal control with less biocide. The pH in the circulating water system may range significantly higher than the above values due to cycling effects. The efficiency of bromine in the circulating water system may be even more pronounced.

2. Organic and nitrate loading from the Altamaha River at times produces significant chlorine demand. Higher doses of sodium hypochlorite are required during these periods to produce the desired FAC concentration. Chlorine residuals formed during these periods require much longer decay times which may impact efficiency of the circulating water system. Bromine appears to be more effective under such conditions.

3. High levels of chlorine necessary to provide biological control at elevated pH and in the presence of organics and/or nitrogen (ammonia) are of concern with regard to corrosion of copper alloy and mild steel components in the service water systems and mild steel components of the circulating water system. The use of bromine in these systems does not produce corrosion concerns because bromine is not an aggressive metal oxidizer.

4. The current sodium hypochlorite program does not successfully control algae growth during warm months. It is believed that bromine combined with periodic addition of a selective algaecide such as triazine can effectively control algae growth in the Plant Hatch cooling towers. A request for approval of a triazine based algaecide (Calgon H-640) will be provided to EPD for review in separate correspondence.

The proposed use of bromine is expected to provide significant improvement in the performance of the biofouling control program at Plant Hatch and produce a significant reduction in the amount of discharged biocide residual due to the increased efficiency of bromine.

1.3 Product Description - Calgon Sodium Bromide

Calgon H-960 Microbicide is a bromine-donating compound in the form of liquid sodium bromide which is designed to supplement conventional chlorination for biofouling control on heat exchange surfaces in once-through and recirculating cooling water systems. The product is used in conjunction with sodium hypochlorite to produce two active oxidizing compounds (hypobromous (HOBr) and hypochlorous (HOCl) acids). Hypobromous acid is a much more effective biocide than hypochlorous acid which results in lower total halogen requirements to maintain effective biological control than when sodium hypochlorite is used alone. Hypobromous acid reacts with ammonia present in the system to form bromamines. Bromamines, unlike chloramines, are effective biocides; therefore, more effective biological control can be achieved with less chemical addition. Additional product information and the Material Safety Data Sheet (MSDS) for Calgon H-960 are provided as Attachment 1.

2.1 Proposed Program

Evaluation of a biological treatment program utilizing sodium bromide (Calgon H-960) activated with sodium hypochlorite is proposed for immediate implementation on the Unit 1 and 2 service water systems at Plant Hatch. A program for use of bromine in the Plant Hatch Unit 1 and 2 circulating water systems has also been developed. Approval for use of bromine in the circulating water system is also requested although implementation is not planned at this time.

2.2 Application Rates and Injection Points

During service water system biocide application, Calgon H-960 and sodium hypochlorite will be injected at the intake structure at a target dosage rate of 1.2 ppm for each chemical for one hour per day.

In the initial phases of the program, the dosage rate and duration of treatment may be varied to optimize the treatment process. During the treatment process, the service water systems for the unit undergoing biocidal treatment will normally be aligned to provide makeup to the circulating water system for that unit. Biocide addition will be closely monitored to ensure applicable NPDES Permit requirements are met. No detectable bromine residuals are anticipated at the river discharge when the system is aligned to provide makeup to the circulating water system (normal alignment). In the event, the service water systems must be aligned directly to the river discharge, appropriate monitoring will be conducted to ensure NPDES Permit requirements are met.

The proposed biocide addition for the circulating water system requires lowering the circulating water flume level and diverting service water (makeup) flow to the discharge structure. Calgon H-960 and sodium hypochlorite will be injected directly to the circulating water flume upstream of the circulating water pump suction at a target dosage rate of 1.2 ppm for each chemical for 1 hour per day. In the initial phases of this program, the dosage rates and duration of treatment may be varied to optimize the treatment process. The flume level will be controlled and the blowdown valve secured during the treatment process until residual oxidants can no longer be detected. Upon confirmation of dissipation of residual oxidants, the service water systems will be diverted back to provide circulating water makeup and normal operation of the flume will be restored. The program is designed to support operation of the system to preclude discharge of residual oxidants. In the event discharge is required prior to complete dissipation of residuals, appropriate monitoring will be conducted of the cooling tower blowdown (or overflow) to ensure NPDES Permit requirements are met.

Implementation of the bromine program for the Plant Hatch Unit 1 and Unit 2 circulating water systems is still under evaluation and is dependent, in part, on the success of bromine use in the service water systems. Approval is requested at this time to expedite implementation of the program for the circulating water systems in the future if the evaluation process indicates such a program is desirable.

2.3 Duration of Program

The Calgon H-960 program for the Plant Hatch Unit 1 and Unit 2 service water systems is proposed as a test program with an eighteen month duration to allow adequate evaluation. If the program proves effective, EPD will be requested to provide approval for implementation of the program on a permanent basis. The program for the Plant Hatch Unit 1 and Unit 2 circulating water systems is also proposed as an eighteen month test program. The program will be evaluated during an eighteen month period which will be considered separate from the period assigned for the service water systems.

2.4 Expected Benefits to the System

Plant Hatch expects the application of Calgon H-960 to provide the following benefits:

1. More effective biocidal control with less chemical usage.
2. Improved efficiency of biocontrol at elevated pH values.
3. Decreased rates of corrosion for copper alloys and mild steel.
4. Reduction of the potential for cooling tower wood delignification.
5. Reduction in the amount of total halogen required for biological control.
6. Reduction in the time of biocide treatment with a corresponding reduction in the time required for dissipation of oxidant residuals.
7. Improved efficiency in the presence of organics and ammonia.
8. Reduction in the amount of total oxidant residual discharged to the environment.

2.5 Methods of Data Evaluation and Analysis

Plant Hatch is currently developing a database on the service water and circulating water systems which includes water chemistry, corrosion rates, condenser performance, and condenser cleanliness factor information. This information will provide the baseline for evaluation of the Calgon H-960 program. The same information will be collected during the Calgon H-960 test period and compared to determine the overall effectiveness of the program. In addition to the above, feed rates and overall chemical use will be closely monitored to determine the minimum amount of chemicals required to achieve effective biofouling control.

2.6 Evaluation of Environmental Effects of Calgon H-960

Calgon H-960 is registered with the United States Environmental Protection Agency (EPA Registration No. 3377-25-10445) as a biocide for use in recirculating and once-through cooling water systems. The product will be fed in strict compliance with the product label.

The use of a sodium bromide/sodium hypochlorite combination is expected to significantly reduce the amount of total residual chlorine discharge. The increased availability of the HOBr species at elevated pH compared to the HOCl species will significantly reduce the amount of biocide required to produce biological control in the system being treated which, in turn, will result in a decrease of the amount of residual discharged. The bromamine species formed by the reaction of bromine with ammonia has essentially the same efficacy as hypobromous acid. Because the chloramine species has relatively little biological efficacy, additional sodium hypochlorite must be fed to provide the free available chlorine species (hypochlorous acid) to achieve biological control when significant amounts of ammonia and/or organics are present. The use of a sodium bromide/sodium hypochlorite combination in lieu of sodium hypochlorite should produce a net decrease in total residual oxidant discharge due to the increased efficiency of bromine. The use of bromine will also result in shorter application times and it is anticipated that the amount of time required to dissipate oxidant residuals in the circulating water system will also decrease.

The use of Calgon H-960 is expected to provide a significant environmental benefit when compared to the current sodium hypochlorite program. Field studies developed by the Sodium Bromide Panel of the Chemical Manufacturers Association indicate that bromamines decay in the environment at a rate three times faster than chloramines. The field study also indicates that the use of sodium bromide generally reduces the amount of treatment chemical ultimately discharged to the environment. Reducing the amount of chemical discharged to aquatic systems, while achieving the treatment objective, minimizes costs and provides a net benefit to the environment. A copy of the field study is provided as Attachment 2.

3. Monitoring Program

3.1 Analytical Methods

Because both sodium bromide and sodium hypochlorite are used in the system, monitoring will be based on measurement of residual oxidant both as free residual (FRO) and total residual (TRO). Analytical methods will be consistent with the requirements of 40 CFR Part 136.

3.2 Analytical Procedures

Current Plant Hatch procedures for measurement of chlorine residuals will be modified, as appropriate, to facilitate measurement as free and total residual oxidant.

3.3 Quality Control/Quality Assurance

The current Quality Assurance/Quality Control program at Plant Hatch will be applicable to any new or revised analytical procedures and techniques associated with the use of sodium bromide. Records of calibration, equipment maintenance, etc., will be maintained in accordance with the NPDES Permit standards.

3.4 Sample Collection

Process Control Samples

Service Water - Process control samples will be taken of the service water systems at a point representative of the discharge to the circulating water flume to ensure target values for biocide addition are met. Other sample points may be added if determined necessary to evaluate chemical treatment program performance.

Circulating Water System - Process control samples will be taken of the circulating water system at various representative points in the system to determine biocide residual concentrations. Sample points will be designated to provide a representation of biocide concentration in the circulating water system. Additional sample points may be added if necessary.

NPDES Permit Samples

Service Water - Plant Hatch service water systems are normally diverted to the circulating water flume to provide makeup to the circulating water system. As such, no monitoring is proposed when the system is in this configuration. In the event the service water systems are aligned directly to the discharge structure, appropriate sampling will be conducted to monitor residual oxidant during periods of chemical treatment to ensure NPDES Permit requirements are met.

Circulating Water System - In the event the bromine biocide program is implemented for the circulating water system, the following sampling protocol is proposed. The circulating water system will be operated to minimize discharge of residual oxidant. The circulating water flume will be monitored at a point representative of the highest concentration for FRO and TRO. The system will be returned to normal operation when oxidant residuals are no longer detected. In the event discharge is required prior to dissipation of residual oxidant, samples will be taken at 15 minute intervals at a point representative of the discharge for FRO and TRO. Current NPDES Permit requirements for cooling tower blowdown will be utilized for determining compliance. Compliance will be based on FRO and TRO values meeting the current limitations for free available chlorine (FAC) and total residual chlorine (TRC) contained in the existing permit.

3.5 Reporting of Monitoring Results

Results of monitoring conducted for process control will be retained at Plant Hatch in accordance with applicable procedures for data retention. Process control data will not be submitted to EPD routinely but will be maintained available for review upon request.

Routine NPDES compliance monitoring results will be recorded in the appropriate format and submitted to the EPD with the quarterly Operations Monitoring Report.

3.6 Process and Procedural Control

Complete detailed procedures will be prepared prior to implementation of the Calgon H-960 program. These procedures will be strictly followed by Plant Hatch personnel during administration of the program.

ATTACHMENT 1

Product Information

ATTACHMENT 1

CALGON CORPORATION
SUBSIDIARY OF MERCK & CO., INC.

WATER MANAG DIVISIO..

JCLEAR DUSTRY IODUCTS & SERVICES

Bulletin No. 3-35

H-960 MICROBIOCIDE

DESCRIPTION

H-960 Microbiocide is a bromine-donating compound in liquid form designed to supplement conventional chlorination for control of biofouling on heat exchange surfaces in once-through and recirculating cooling systems. When introduced into a chlorinated water stream, H-960 releases two powerful oxidizing hypohalous acids providing superior biocidal effectiveness at costs that approximate chlorination. H-960 also controls the growth of microorganisms in the bulk water and removes existing biofouling from system surfaces. Residual chlorine concentrations are greatly reduced so that discharge restrictions can be easily met.

ADVANTAGES

- **More Effective than Chlorine Alone**
  H-960 releases balanced amounts of hypobromous (HOBr) and hypochlorous (HOCl) acids. Lower total halogen is required to maintain microbiological control than when chlorine is used alone.

  Hypobromous acid is a more effective biocide than hypochlorous acid, producing greater kills in a shorter period of time. The hypobromous acid formed is about four times more active than hypochlorous acid.

- **Effective Over a Wide pH Range**
  H-960 effectively controls microorganisms in cooling water systems over a pH range of 6.0-9.0. The hypobromite ion (OBr^-) is nearly as effective as undissociated hypobromous acid. The hypochlorite ion (OCl^-), which is the predominant form at pH>8.0, is significantly less effective than the hypochlorous acid. Therefore, at high pH, H-960 is more effective in maintaining microbiological control at lower treatment levels than chlorine fed alone.

- **Reduces Toxic By-Product Discharge**
  Chlorine reacts with naturally occurring organics in water to form toxic compounds such as trihalomethanes (THM's). By using H-960, chlorine feed is typically cut in half, significantly reducing THM formation and discharge.

- **Broad Spectrum Activity**
  H-960 provides broad spectrum control of slime-producing microorganisms such as bacteria, fungi, and algae in open recirculating cooling water systems.

- **Unaffected in the Presence of Ammonia**
  H-960 remains active in the presence of ammonia. When ammonia is present in cooling waters, both chlorine and bromine will react with it to form haloamines. The chloramines formed are less effective biocides. Bromamines have relatively the same biocidal effectiveness as hypobromous acid.

- **No Adverse Effect on System Wood or Metallurgy**
  H-960 releases balanced amounts of hypobromous and hypochlorous acids. Because lower total halogen is required for microbiological control, there is reduced potential for wood delignification or corrosion of system metallurgy.

EPA REGISTRATION

H-960 is registered by the United States Environmental Protection Agency (EPA Registration No. 3377-25-10445) as a biocide for use in recirculating and once-through cooling water systems.

DIRECTIONS FOR USE

Badly fouled systems MUST BE cleaned before treatment is begun.

Feed H-960 after the oxidant injection point into the water to be treated. Be sure rapid mixing of the treated water, H-960, and oxidant is achieved. Your Calgon representative will recommend appropriate feed equipment to assure complete mixing of the material.

Dosage Rates

Add H-960 to the system at 0.25 to 1.0 $NaBr/Cl_2$ mole ratio. For example:

1. 0.07-0.31 gallons H-960 per pound chlorine gas (99.9%).
2. 0.10-0.41 gallons H-960 per gallon sodium hypochlorite (12.5% available chlorine).

Initial Dose: When the system is noticeably fouled, add 0.004 to 0.05 gallons H-960 per 1000 gallons of water in the system and oxidize with either gaseous chlorine (.008 to .15 lbs. per 1000 gallons) or sodium hypochlorite solution (.006 to .12 gallons per 1000 gallons). Maintain a free halogen residual (0.1-0.3 ppm as Cl_2) for a minimum of one hour. Repeat as necessary until control is evident.

Subsequent Dose: When microbial control is evident, add 0.001 to 0.05 gallons of H-960 per 1000 gallons of water in the system and oxidize with either gaseous chlorine (.004 to .15 lbs. per 1000 gallons) or sodium hypochlorite solution (.003 to .12 gallons per 1000 gallons).

Once-Through Cooling Water

Initial Dose: When the system is noticeably fouled, add 0.004 to 0.05 gallons of H-960 per 1000 gallons of water in the system and oxidize with either gaseous chlorine (0.02 to .30 lbs. per 1000 gallons) or sodium hypochlorite solution (.02 to .25 gallons per 1000 gallons). Maintain a free halogen residual (0.1-0.3 ppm Cl_2) for a minimum of one hour. Repeat as necessary until control is evident.

Subsequent Dose: When microbial control is evident, add 0.001 to 0.05 gallons H-960 per 1000 gallons of water in the system and oxidize with either gaseous chlorine (.008 to .30 lbs. per 1000 gallons) or sodium hypochlorite solution (.006 to 0.25 gallons per 1000 gallons).

CONTROL TESTING

The best indication of the successful application of H-960 is visual inspection of tower surfaces or monitoring changes in heat transfer on metal surfaces or process equipment. Usually, a free oxidant residual is required to achieve biological control. Use of on-site bacteria counts or microscopic examination provide relative indicators of system cleanliness and biological control. If bacteria counts are used, note that counts may be high immediately after biocide addition. Counts will lower as control is achieved.

TYPICAL PROPERTIES

Active Ingredient	Sodium Bromide, 39%
Appearance	Clear liquid
pH (diluted 1:10 with water)	8.0
Specific Gravity @ 77° F	1.42
Density, pounds per gallon	11.8
Odor	Slight
Freeze Point, °F	-10

PACKAGING

H-960 is available in 55-gallon drums or delivered to on-site storage facilities via bulk or Calgon Bulk Liquid Service-Plus.℠

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MATERIAL SAFETY DATA SHEET

DATE November 30, 1988

CALGON CORPORATION
SUBSIDIARY OF MERCK & CO., INC.

PRODUCT NAME H-950 Microbiocide

SECTION I

MANUFACTURER'S NAME	Calgon Corporation	EMERGENCY TELEPHONE NO.	(412) 777-8000
ADDRESS	P.O. Box 1346, Pittsburgh, Pennsylvania 15230		
CHEMICAL NAME AND SYNONYMS	Microbiocide	FORMULA	Multicomponent Liquid

SECTION II HAZARDOUS INGREDIENTS

PRINCIPAL HAZARDOUS COMPONENT (S)	CAS #	% BY WEIGHT	ORAL LD_{50}	DERMAL LD_{50}	TLV (Units) ACGIH	OSHA	OTHER
Chemical Name Sodium Bromide Common Name	7647-15-6	38	> 8000 mg/kg*	> 2000 mg/kg*	Not Listed	Not Listed	N/A
Chemical Name Common Name							
Chemical Name Common Name							
Chemical Name Common Name							
Chemical Name Common Name							

*Animal testing on a 46% solution of sodium bromide.

SECTION III PHYSICAL DATA

BOILING POINT (° F)	212 - 234	SPECIFIC GRAVITY (H_2O=1)	1.38 - 1.44
VAPOR PRESSURE (mmHg.)	17.5 at 68°F for aqueous portion of solution	PERCENT VOLATILE BY VOLUME (%)	~ 82
VAPOR DENSITY (AIR=1)	Similar to Water	pH	Not Available
SOLUBILITY IN WATER	Miscible	OTHER	N/A
APPEARANCE AND ODOR	Clear liquid		

N/A = Not applicable

While this information and recommendations set forth herein are believed to be accurate as of the

SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method Used)	This product is not flammable or combustible.
EXTINGUISHING MEDIA	This product is not flammable or combustible.
SPECIAL FIRE FIGHTING PROCEDURES	Exercise caution when fighting fires involving chemical substances. Self-contained breathing apparatus and protective clothing are essential.
UNUSUAL FIRE AND EXPLOSION HAZARDS	None known.

SECTION V HEALTH HAZARD DATA

EFFECT OF OVEREXPOSURE

A. ACUTE

1. INGESTION — Based on animal testing for a similar product, this product would be expected to be practically non-toxic if swallowed.

2. INHALATION — This product is not expected to present an inhalation hazard.

3. DERMAL EXPOSURE

a. TOXIC — Based on animal testing for a similar product, this product would not be expected to produce systemic toxicity if it is absorbed through the skin.

b. IRRITATION — Prolonged or repeated contact with skin may produce irritation and superficial burns.

c. SENSITIZATION — No data were available to suggest that this product may produce an allergic skin reaction.

4. EYE IRRITATION

This product may produce irritation upon contact with the eye.

5. SUBCHRONIC, CHRONIC, OTHER

No information was available to suggest that this product may produce adverse health effects following subchronic or chronic exposure.

FIRST AID

A. EYE

In case of contact, flush eyes with plenty of water for at least 15 minutes. Seek medical aid.

B. SKIN

In case of contact, wash with soap and plenty of water. If irritation develops, seek medical aid.

C. INGESTION

If swallowed, give two glasses of water. Do not induce vomiting. Seek medical aid.

D. INHALATION

Not Applicable

SECTION XVI REACTIVITY DATA

ITY	STABLE	X	CONDITIONS TO AVOID: Extremely high heat
	UNSTABLE		

COMPATABILITY (Materials to Avoid): Avoid contact with strong oxidizers (other than sodium hypochlorite and chlorine), acids, alkaloidal and heavy metal salts. This product is corrosive to aluminum.

HAZARDOUS DECOMPOSITION PRODUCTS: During a fire, hydrogen bromide or bromine may be released.

SECTION XVII SPILL OR LEAK PROCEDURES

PORTABLE QUANTITIES (RQ) LBS OF EPA HAZARDOUS SUBSTANCES IN PRODUCT

1. N/A
2.
3.

NOTIFY EPA OF PRODUCT SPILLS EQUAL TO OR EXCEEDING: N/A LBS.

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Dispose of in accordance with local, state and Federal regulations. Dike area to contain as much spilled material as possible. Remove any remaining material by absorbing on vermiculite or other suitable absorbing material and place in a sealed metal container for disposal.

WASTE DISPOSAL METHOD: Dispose of in accordance with all Federal, state and local regulations. Pesticide wastes are acutely hazardous. Do not discharge into lakes, streams, ponds, or public waters unless in accordance with NPDES permit. For guidance, contact your Regional Office of the EPA.

SECTION XVIII HANDLING/STORAGE

PROTECTIVE GLOVES: Rubber gloves	EYE PROTECTION: Chemical splash goggles

OTHER PROTECTIVE CLOTHING: Not required

RESPIRATORY PROTECTION: Not required

VENTILATION			OTHER
Normal	LOCAL EXHAUST	Not required	N/A
	MECHANICAL (General)	Recommended	

STORAGE & HANDLING

WARNING!

May cause eye irritation.
Avoid contact with eyes.
Wear chemical splash goggles when handling.
Wash thoroughly after handling.
Keep container closed when not in use.

OTHER PRECAUTIONS

Store drums in well-ventilated, dry area.

N/A = Item not applicable

ATTACHMENT 2

Bromine Toxicity Study