Southern Nuclear Operating Company
Post Office Box 1295
Birmingham, Alabama 35201
Telephone (205) 868-5131

Southern Nuclear Operating Company
the southern electric system

Dave Morey
Vice President
Farley Project

February 03, 1995

Docket Nos. 50-348
50-364

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

Joseph M. Farley Nuclear Plant
NPDES Permit Renewal

Gentlemen:

Enclosed in accordance with Section 3.2 of the Joseph M. Farley Nuclear Plant (FNP) Environmental Protection Plan (Units 1 & 2), Appendix B to Facility Operating License Nos. NPF-2 and NPF-8, is a copy of the package for renewal of the FNP National Pollutant Discharge Elimination System (NPDES) Permit Number AL0024619 submitted to the Alabama Department of Environmental Management.

Should you have any questions, please advise.

Respectfully submitted,

DN Morey

Dave N. Morey

LFD:sls
ENV-95-019
Enclosure

cc: Southern Nuclear Operating Company
R. D. Hill, Plant Manager

U. S. Nuclear Regulatory Commission, Washington, DC
B. L. Siegel, Licensing Project Manager

U. S. Nuclear Regulatory Commission, Region II
S. D. Ebneter, Regional Administrator
T. M. Ross, Senior Resident Inspector

Cool
1/1

U. S. Nuclear Regulatory Commission
ENV-95-019

bcc: w/o Enclosure:
J. D. Woodard
C. L. Buck
SNC REES Route: T. C. Moorer / K. W. McCracken / S. L. Sanford
Commitment Tracking System (2)
ES File: E.01.06

ENCLOSURE TO ENV-95-019

Southern Nuclear Operating Company
Post Office Box 1295
Birmingham, Alabama 35201-1295
Telephone 205 868-5000

Southern Nuclear Operating Company
the southern electric system

ENV-95-013

February 1, 1995

CERTIFIED MAIL, RETURN RECEIPT REQUESTED

FARLEY NUCLEAR PLANT
NPDES Permit No. AL0024619

Director
Alabama Department of Environmental Management
1751 Congressman Dickinson Drive
Montgomery, Alabama 36130
Attention: Industrial Branch, Water Division

Dear Sir:

Enclosed is the NPDES Permit renewal application package for Farley Nuclear Plant (FNP). The current permit became effective on September 1, 1990 and expires on August 31, 1995. The renewal package contains completed EPA Forms 3510-1, -2C and -2F. Enclosure 1 contains EPA Form 3510-1 and the required topographic map.

Enclosure 2 contains EPA Form 3510-2C. Certain specific information required by the form, including a line drawing and intake/effluent chemical analysis data, is provided as attachments. In addition, Enclosure 2 includes the following:

- A description of corrosion inhibitors, biocides, and chemical treatments used at FNP
- Descriptive information and data for water uses at FNP
- A detailed description of proposed permit revisions and the bases for each revision.

This additional information is provided to describe water/wastewater management practices at FNP and define major revisions proposed for the renewed permit.

Enclosure 3 contains EPA Form 3510-2F. Certain information required by EPA Form 2F, including stormwater sample analyses conducted in accordance with guidance provided by ADEM, is provided in attachments to Enclosure 3.

A check in the amount of $900.00 is enclosed for payment of the required permit renewal fee per ADEM Admin. Code R. 335-1-6. If you have any questions or require additional information regarding the enclosed reapplication package for FNP, please contact Lesa Daniels at (205) 868-5937.

Sincerely,

W. C. Carr
Manager, Environmental Services

WCC/LPD:sls

Enclosures

cc: J. M. Coles (w/Enclosures)

ENCLOSURE 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 7-31-88

FORM 1 GENERAL

U.S. ENVIRONMENTAL PROTECTION AGENCY

GENERAL INFORMATION

Consolidated Permits Program

(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER

F A L 0 0 2 4 6 1 9 — 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
A. Is this facility a **publicly owned treatment works** which results in a **discharge** to **waters of the U.S.**? (FORM 2A)		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
E. Does or will this facility treat, store, or dispose of **hazardous wastes**? (FORM 3)		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	
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	

SPECIFIC QUESTIONS	MARK 'X' YES	NO	FORM ATTACHED
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	
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	
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	
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	
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: F A R L E Y N U C L E A R P L A N T

IV. FACILITY CONTACT

A. NAME & TITLE *(last, first, & title)*	B. PHONE *(area code & no.)*
2 C A R R , W . C . - M G R - E N V . S V C S .	2 0 5 | 8 7 0 | 6 3 8 7

V. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX

3 P . O . B O X 1 2 9 5

B. CITY OR TOWN	C. STATE	D. ZIP CODE
4 B I R M I N G H A M	A L	3 5 2 0 1

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER

5 H O U S T O N C O U N T Y H W Y 9 5 S O U T H

B. COUNTY NAME

H O U S T O N

C. CITY OR TOWN	D. STATE	E. ZIP CODE	F. COUNTY CODE (if known)
6 C O L U M B I A	A L	3 6 3 1 9	

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

SOUTHERN NUCLEAR OPERATING 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 205 868 5000

E. STREET OR P.O. BOX

P.O. BOX 1295

F. CITY OR TOWN

BIRMINGHAM

G. STATE AL

H. ZIP CODE 35201

IX. INDIAN LAND

Is the facility located on Indian lands? ☐ YES ☒ NO

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Water): 9N AL0024619	**D. PSD** (Air Emissions from Proposed Sources): 9P NONE
B. UIC (Underground Injection of Fluids): 9U NONE	**E. OTHER** (specify): 9 (specify)
C. RCRA (Hazardous Wastes): 9R NONE	**E. OTHER** (specify): 9 (specify)

XI. MAP

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

XII. NATURE OF BUSINESS (provide a brief description)

GENERATION OF ELECTRICITY THROUGH THE USE OF NUCLEAR FUEL.

*FARLEY NUCLEAR PLANT IS OWNED BY ALABAMA POWER COMPANY AND OPERATED BY SOUTHERN NUCLEAR OPERATING COMPANY.

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. D. WOODARD EXECUTIVE VICE PRESIDENT		1-25-95

COMMENTS FOR OFFICIAL USE ONLY

C

ATTACHMENT TO EPA FORM 1
SECTION XI TOPOGRAPHIC MAP

ENCLOSURE 2
EPA FORM 2C

Please print or type in the unshaded areas only.

EPA I.D. NUMBER (copy from Item 1 of Form 1): AL0024619

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			C. LONGITUDE			D. RECEIVING WATER (name)
	1. DEG.	2. MIN.	3. SEC.	1. DEG.	2. MIN.	3. SEC.	
001-009	31	12	52	85	05	55	Chattahoochee River

II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

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

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

1. OUTFALL NO. (list)	2. OPERATION(S) CONTRIBUTING FLOW		3. TREATMENT		
	a. OPERATION (list)	b. AVERAGE FLOW (include units)	a. DESCRIPTION	b. LIST CODES FROM TABLE 2C-1	
001	Main Combined Facility	8.23×10^7 GPD		4A	
	Discharge				
005	Cooling Tower Blowdown	*		4A	
	Unit 1				
006	Cooling Tower Overflow -	*		4A	
	Unit 1				
007	Cooling Tower Blowdown -				
	Unit 2	*		4A	
008	Cooling Tower Overflow -				
	Unit 2	*		4A	
009	Sewage Treatment Plant	4.0×10^4 GPD		4A,	2F,
	(New plant replaces previous	DSN009, -010 and -011;		IV,	3A
	maximum flow: 100,000 GPD)				
	*Intermittent Flow				

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

Please print or type in the unshaded areas only.

EPA I.D. NUMBER (copy from Item 1 of Form 1)
AL0024619

Form Approved.
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			C. LONGITUDE			D. RECEIVING WATER (name)
	1. DEG.	2. MIN.	3. SEC.	1. DEG.	2. MIN.	3. SEC.	
012-020	31	12	52	85	05	35	Chattahoochee 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	
012	Chemical Metal Cleaning Wastes	*		4A	
013	Treated Chromate Bearing Wastewater	*			
014	Waste Settling Pond	3.0×10^5 GPD		4A,	1V
015	Turbine Bldg. Sump - Unit 1	1.2×10^4 GPD		4A	
016	Turbine Bldg. Sump - Unit 2	1.6×10^4 GPD		4A	
019	Liquid Radwaste System - Unit 1	5.0×10^3 GPD		4A,	2I
020	Liquid Radwaste System - Unit 2	5.0×10^4 GPD		4A,	2J

* Intermittent Flow

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

Please print or type in the unshaded areas only.

EPA I.D. NUMBER (copy from Item 1 of Form 1): AL0024619

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

FORM 2C NPDES

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

I. OUTFALL LOCATION

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

A. OUTFALL NUMBER (list)	B. LATITUDE			C. LONGITUDE			D. RECEIVING WATER (name)
	1. DEG.	2. MIN.	3. SEC.	1. DEG.	2. MIN.	3. SEC.	
022-025	31	12	52	85	05	55	Chattahoochee River
026-028	31	13	45	85	06	45	Wilson Creek
029-030	31	12	52	85	05	55	Chattahoochee 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	
022	River Water Bldg Sump (South)	*		4A	
023	River Water Bldg Sump (North)	*		4A	
030	Intake Screen Backwash Water to the Intake Canal, Units 1&2	*		4A	
	Storm Water Discharges:				
024	Southeast Yard Drainage	*		4A	
025	East Yard Drainage	*		4A	
026	Northwest Yard Drainage	*		4A	
027	Northcentral Yard Drainage	*		4A	
028	West Yard Drainage	*		4A	
029	Southwest Yard Drainage	*		4A	

* Intermittent Flow

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?

[X] 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)*		DURATION *(in days)*
				1. LONG TERM AVERAGE	2. MAXIMUM DAILY	1. LONG TERM AVERAGE	2. MAXIMUM DAILY	
005	Cooling Tower Blowdown-Unit 1							
006	Cooling Tower Overflow-Unit 1							
007	Cooling Tower Blowdown-Unit 2							
008	Cooling Tower Overflow-Unit 2							
012	Chemical Metal Cleaning Wastes							

III. PRODUCTION

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

[X] YES *(complete Item III-B)* [ ] NO *(to to Section IV)*

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

[ ] YES *(complete Item III-C)* [X] 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)* [X] 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

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

[X] 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	
013	Treated Chromate Bearing Waste-Water							
022	River Water Bldg. Sump (South)							
023	River Water Bldg. Sump (North)							
024	Southeast Yard Drainage							
025	East Yard Drainage							

III. PRODUCTION

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

[X] 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)* [X] 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 *(list outfall numbers)*
a. QUANTITY PER DAY	b. UNITS OF MEASURE	c. OPERATION, PRODUCT, MATERIAL, ETC. *(specify)*	

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)* [X] 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

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	
026	Northwest Yard Drainage							
027	Northcentral Yard Drainage							
028	West Yard Drainage							
029	Southwest Yard Drainage							
030	Intake Screen Backwash Water, Units 1 & 2							

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 *(to to Section IV)*

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

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

C. If you answered "yes" to Item III-B, list the quantity which represents an actual measurement of your 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 *(list outfall numbers)*
a. QUANTITY PER DAY	b. UNITS OF MEASURE	c. OPERATION, PRODUCT, MATERIAL, ETC. *(specify)*	

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

EPA I.D. NUMBER (copy from Item 1 of Form 1)
AL0024619

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

V. INTAKE AND EFFLUENT CHARACTERISTICS

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

D. Use the space below to list any of the pollutants listed in Table 2c-3 of the instructions, which you know or have reason to believe is discharged or may 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, CHLORIN
ORLANDO LABORATORIES, INC.	P. O. BOX 149127 ORLANDO, FLORIDA 32814	(407)896-6645	GROSS ALPHA

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. D. WOODARD EXECUTIVE VICE PRESIDENT	(205) 868-5086
C. SIGNATURE	D. DATE SIGNED
J. D. Woodard	1-25-95

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)
AL0024619

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

OUTFALL NO.

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. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	2. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	2. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	2. EFFLUENT c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	2. EFFLUENT c. LONG TERM AVRG. VALUE (if available) (2) MASS	2. EFFLUENT d. NO. OF ANALYSES	3. UNITS (specify if blank) a. CONCENTRATION	3. UNITS (specify if blank) b. MASS	4. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	4. INTAKE (optional) a. LONG TERM AVERAGE VALUE (2) MASS	4. INTAKE (optional) b. NO. OF ANALYSES
a. Biochemical Oxygen Demand (BOD)												
b. Chemical Oxygen Demand (COD)		SEE ATTACHED CHEMICAL ANALYSIS REPORTS										
c. Total Organic Carbon (TOC)												
d. Total Suspended Solids (TSS)												
e. Ammonia (as N)												
f. Flow	VALUE		VALUE		VALUE					VALUE		
g. Temperature (winter)	VALUE		VALUE		VALUE			°C		VALUE		
h. Temperature (summer)	VALUE		VALUE		VALUE			°C		VALUE		
i. pH	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM				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	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
a. Bromide (24959-67-9)														
b. Chlorine, Total Residual				SEE ATTACHED CHEMICAL ANALYSIS REPORTS										
c. Color														
d. Fecal Coliform														
e. Fluoride (16984-48-8)														
f. Nitrate-Nitrite (as N)														

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)														
h. Oil and Grease														
i. Phosphorus (as P), Total (7723-14-0)														
j. Radioactivity														
(1) Alpha, Total														
(2) Beta, Total														
(3) Radium, Total														
(4) Radium 226, Total														
k. Sulfate (as SO_4) (14808-79-8)														
l. Sulfide (as S)														
m. Sulfite (as SO_3) (14265-45-3)														
n. Surfactants														
o. Aluminum, Total (7429-90-5)														
p. Barium, Total (7440-39-3)														
q. Boron, Total (7440-42-8)														
r. Cobalt, Total (7440-48-4)														
s. Iron, Total (7439-89-6)														
t. Magnesium, Total (7439-95-4)														
u. Molybdenum, Total (7439-98-7)														
v. Manganese, Total (7439-96-5)														
w. Tin, Total (7440-31-5)														
x. Titanium, Total (7440-32-6)														

SEE ATTACHED CHEMICAL ANALYSIS REPORTS

EPA I.D. NUMBER *(copy from Item 1 of Form 1)*	OUTFALL NUMBER
AL0024619	

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

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		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)															
2M. Arsenic, Total (7440-38-2)				SEE ATTACHED CHEMICAL ANALYSIS REPORTS											
3M. Beryllium, Total, 7440-41-7)															
4M. Cadmium, Total (7440-43-9)															
5M. Chromium, Total (7440-47-3)															
6M. Copper, Total (7440-50-8)															
7M. Lead, Total (7439-92-1)															
8M. Mercury, Total (7439-97-6)															
9M. Nickel, Total (7440-02-0)															
10M. Selenium, Total (7782-49-2)															
11M. Silver, Total (7440-22-4)															
12M. Thallium, Total (7440-28-0)															
13M. Zinc, Total (7440-66-6)															
14M. Cyanide, Total (57-12-5)															
15M. Phenols, Total															
DIOXIN															
2,3,7,8-Tetrachlorodibenzo-P-Dioxin (1764-01-6)				DESCRIBE RESULTS											

CONTINUED FROM THE FRONT

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	
GC/MS FRACTION — VOLATILE COMPOUNDS															
1V. Acrolein (107-02-8)															
2V. Acrylonitrile (107-13-1)															
3V. Benzene (71-43-2)															
4V. Bis (Chloromethyl) Ether (542-88-1)															
5V. Bromoform (75-25-2)															
6V. Carbon Tetrachloride (56-23-5)															
7V. Chlorobenzene (108-90-7)															
8V. Chlorodibromomethane (124-48-1)															
9V. Chloroethane (75-00-3)															
10V. 2-Chloroethylvinyl Ether (110-75-8)															
11V. Chloroform (67-66-3)															
12V. Dichlorobromomethane (75-27-4)															
13V. Dichlorodifluoromethane (75-71-8)															
14V. 1,1-Dichloroethane (75-34-3)															
15V. 1,2-Dichloroethane (107-06-2)															
16V. 1,1-Dichloroethylene (75-35-4)															
17V. 1,2-Dichloropropane (78-87-5)															
18V. 1,3-Dichloropropylene (542-75-6)															
19V. Ethylbenzene (100-41-4)															
20V. Methyl Bromide (74-83-9)															
21V. Methyl Chloride (74-87-3)															

SEE ATTACHED CHEMICAL ANALYSIS REPORTS

EPA I.D. NUMBER (copy from Item 1 of Form 1): AL0024619

OUTFALL NUMBER:

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

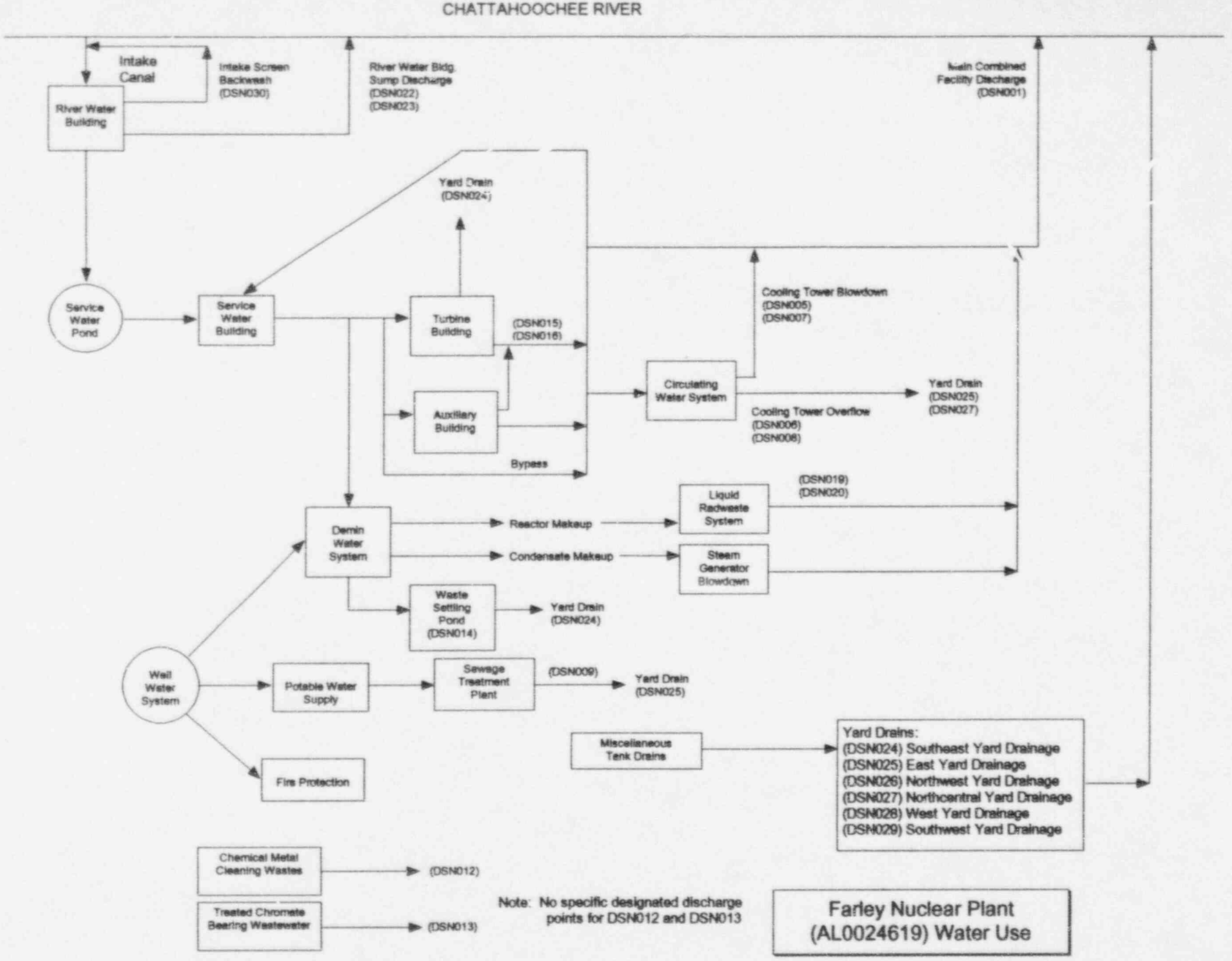
1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X' a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	(2) 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)															
23V. 1,1,2,2-Tetrachloroethane (79-34-5)				SEE ATTACHED CHEMICAL ANALYSIS REPORTS											
24V. Tetrachloroethylene (127-18-4)															
25V. Toluene (108-88-3)															
26V. 1,2-Trans-Dichloroethylene (156-60-5)															
27V. 1,1,1-Trichloroethane (71-55-6)															
28V. 1,1,2-Trichloroethane (79-00-5)															
29V. Trichloroethylene (79-01-6)															
30V. Trichlorofluoromethane (75-69-4)															
31V. Vinyl Chloride (75-01-4)															
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)															
2A. 2,4-Dichlorophenol (120-83-2)				SEE ATTACHED CHEMICAL ANALYSIS REPORTS											
3A. 2,4-Dimethylphenol (105-67-9)															
4A. 4,6-Dinitro-O-Cresol (534-52-1)															
5A. 2,4-Dinitrophenol (51-28-5)															
6A. 2-Nitrophenol (88-75-5)															
7A. 4-Nitrophenol (100-02-7)															
8A. P-Chloro-M-Cresol (59-50-7)															
9A. Pentachlorophenol (87-86-5)															
10A. Phenol (108-95-2)															
11A. 2,4,6-Trichlorophenol (88-06-2)															

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X' a. BELIEVED PRESENT	b. BELIEVED ABSENT	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															
1B. Acenaphthene (83-32-9)															
2B. Acenaphtylene (208-96-8)															
3B. Anthrscene (120-12-7)															
4B. Benzidine (92-87-5)															
5B. Benzo (a) Anthracene (56-55-3)															
6B. Benzo (a) Pyrene (50-32-8)															
7B. 3,4-Benzo-fluoranthene (205-99-2)															
8B. Benzo (ghi) Perylene (191-24-2)															
9B. Benzo (k) Fluoranthene (207-08-9)															
10B. Bis (2-Chloro-ethoxy) Methane (111-91-1)															
11B. Bis (2-Chloro-ethyl) Ether (111-44-4)															
12B. Bis (2-Chloroiso-propyl) Ether (102-80-1)															
13B. Bis (2-Ethyl-hexyl) Phthalate (117-81-7)															
14B. 4-Bromo-phenyl Phenyl Ether (101-55-3)															
15B. Butyl Benzyl Phthalate (85-68-7)															
16B. 2-Chloro-naphthalene (91-58-7)															
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)															
18B. Chrysene (218-01-9)															
19B. Dibenzo (a,h) Anthracene (53-70-3)															
20B. 1,2-Dichloro-benzene (95-50-1)															
21B. 1,3-Dichloro-benzene (541-73-1)															

SEE ATTACHED CHEMICAL ANALYSIS REPORTS

ATTACHMENT TO EPA FORM 2C
SECTION II A LINE DRAWING


CHATTAHOOCHEE RIVER
Intake Canal
Intake Screen Backwash (DSN030)
River Water Building
River Water Bldg. Sump Discharge (DSN022) (DSN023)
Main Combined Facility Discharge (DSN001)
Yard Drain (DSN024)
Service Water Pond
Service Water Building
Turbine Building
(DSN015) (DSN016)
Cooling Tower Blowdown (DSN005) (DSN007)
Circulating Water System
Yard Drain (DSN025) (DSN027)
Cooling Tower Overflow (DSN006) (DSN008)
Auxiliary Building
Bypass
(DSN019) (DSN020)
Liquid Radwaste System
Demin Water System
Reactor Makeup
Condensate Makeup
Steam Generator Blowdown
Waste Settling Pond (DSN014)
Yard Drain (DSN024)
Well Water System
Potable Water Supply
Sewage Treatment Plant
(DSN009)
Yard Drain (DSN025)
Miscellaneous Tank Drains
Yard Drains:
(DSN024) Southeast Yard Drainage
(DSN025) East Yard Drainage
(DSN026) Northwest Yard Drainage
(DSN027) Northcentral Yard Drainage
(DSN028) West Yard Drainage
(DSN029) Southwest Yard Drainage
Fire Protection
Chemical Metal Cleaning Wastes
(DSN012)
Treated Chromate Bearing Wastewater
(DSN013)
Note: No specific designated discharge points for DSN012 and DSN013
Farley Nuclear Plant (AL0024619) Water Use

ATTACHMENT TO EPA FORM 2C
SECTION IV A&B INTAKE AND EFFLUENT CHARACTERISTICS
CHEMICAL ANALYSIS FORM

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

Alabama Power

Certificate of Analysis

TO : MS. LESA DANIELS
ADDRESS: SOUTHERN NUCLEAR
BIN B-064, INVERNESS

REPORT DATE : 01/05/95
SAMPLE DATE/TIME: 11/15/94 11:30
SAMPLE NUMBER : 941115-0059
LOCATION NUMBER : FNP

DESCRIPTION: FARLEY NUCLEAR PLANT, INTAKE

TEST	REFERENCE	ANALYSIS DATE	RESULT	UNITS
INTAKE AND EFFLUENT CHARACTERISTICS (PART A)				
Biochemical Oxygen Demand, 5 Day	Std Md 18th Ed-5210B	11/21/94	< 1.	mg/l
Chemical Oxygen Demand	EPA 410.1	12/09/94	6.	mg/l
Organic Carbon, Total	EPA PB84/415.1	11/30/94	2.84	mg/l
Solids, Total Suspended	EPA PB84/160.2	11/16/94	7.	mg/l
Nitrogen, Ammonia	EPA PB84/350.2	11/18/94	< 0.005	mg/l
Temperature		11/15/94	17.0	Deg C
pH	EPA PB84/150.1	11/15/94	7.60	SU
INTAKE AND EFFLUENT CHARACTERISTICS (PART B)				
Bromide	EPA PB84/382.1	11/18/94	< 0.02	mg/l
Chlorine, Total Residual		11/15/94	< 0.01	mg/l
Color	EPA PB84/110.3	11/16/94	12.	PCU
Coliform, Fecal	Std Md 18th Ed-9221C	11/16/94	30.	#/100ml
Fluoride	EPA 340.2	11/18/94	0.09	mg/l
Nitrate-Nitrite (as N)	EPA 353.2	11/16/94	0.72	mg/l
Nitrogen, Total Organic	EPA PB84/351.3	01/05/95	0.06	mg/l
Oil and Grease	EPA PB84/413.1	11/21/94	6.4	mg/l
Phosphorus, Total	EPA 365.2	11/23/94	0.086	mg/l
Sulfate	EPA PB84/300.0	11/18/94	10.6	mg/l
Sulfide	EPA PB84/376.2	11/22/94	0.008	mg/l
Sulfite	EPA PB84/377.1	11/15/94	< 2.0	mg/l
Surfactants	EPA PB84/425.1	11/17/94	< 0.02	mg/l
Aluminum, Total	EPA PB84/200.7	12/21/94	0.282	mg/l
Barium, Total	EPA PB84/200.7	12/21/94	0.188	mg/l
Boron, Total	EPA PB84/200.7	12/02/94	< 0.001	mg/l
Cobalt, Total	EPA PB84/200.7	12/21/94	< 0.002	mg/l

Chemist	Quality Control	Supv. Chemist	Page
			1 of 7

S-2790 Rev. 8/85

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

Alabama Power

Certificate of Analysis

TO : MS. LESA DANIELS
ADDRESS: SOUTHERN NUCLEAR
BIN B-064, INVERNESS

REPORT DATE : 01/05/95
SAMPLE DATE/TIME: 11/15/94 11:30
SAMPLE NUMBER : 941115-0059
LOCATION NUMBER : FNP

DESCRIPTION: FARLEY NUCLEAR PLANT, INTAKE

TEST	REFERENCE	ANALYSIS DATE	RESULT	UNITS
INTAKE AND EFFLUENT CHARACTERISTICS (PART B)				
Iron, Total	EPA PB84/200.7	12/29/94	0.664	mg/l
Magnesium, Total	EPA PB84/200.7	12/29/94	1.51	mg/l
Molybdenum, Total	EPA PB84/200.7	12/21/94	< 0.002	mg/l
Manganese, Total	EPA PB84/200.7	11/23/94	0.053	mg/l
Tin, Total	EPA PB84/200.7	12/21/94	< 0.005	mg/l
Titanium, Total	EPA PB84/200.7	12/21/94	0.005	mg/l
METALS, CYANIDE, AND TOTAL PHENOLS				
Antimony, Total	EPA PB84/200.7	12/21/94	< 0.003	mg/l
Arsenic, Total	EPA PB84/200.7	12/21/94	< 0.005	mg/l
Beryllium, Total	EPA PB84/200.7	12/21/94	< 0.003	mg/l
Cadmium, Total	EPA PB84/200.7	12/21/94	< 0.002	mg/l
Chromium, Total	EPA PB84/200.7	12/29/94	< 0.001	mg/l
Copper, Total	EPA PB84/200.7	12/21/94	< 0.002	mg/l
Lead, Total	EPA PB84/200.7	12/29/94	< 0.002	mg/l
Mercury, Total	EPA PB84/245.1	11/16/94	< 0.0002	mg/l
Nickel, Total	EPA PB84/200.7	12/21/94	< 0.002	mg/l
Selenium, Total	EPA PB84/200.7	11/29/94	< 0.001	mg/l
Silver, Total	EPA PB84/200.7	12/21/94	< 0.002	mg/l
Thallium, Total	EPA PB84/200.7	12/21/94	< 0.003	mg/l
Zinc, Total	EPA PB84/200.7	12/21/94	0.023	mg/l
Cyanide, Total	EPA PB84/335.3	11/23/94	< 0.005	mg/l
Phenol, Total	EPA PB84/420.1	11/17/94	< 0.01	mg/l

Chemist	Quality Control	Supv. Chemist	Page 2 of 7

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

Alabama Power

Certificate of Analysis

TO : MS. LESA DANIELS
ADDRESS: SOUTHERN NUCLEAR
BIN B-064, INVERNESS

REPORT DATE : 01/05/95
SAMPLE DATE/TIME: 11/15/94 11:30
SAMPLE NUMBER : 941115-0059
LOCATION NUMBER : FNP

DESCRIPTION: FARLEY NUCLEAR PLANT, INTAKE

TEST		REFERENCE	ANALYSIS DATE	RESULT	UNITS
VOLATILE COMPOUNDS					
Acrolein	1V	EPA PB83/603/624	11/23/94	< 0.020	mg/l
Acrylonitrile	2V	EPA PB83/603/624	11/23/94	< 0.020	mg/l
Benzene		EPA 624	11/18/94	< 0.005	mg/l
Bromoform		EPA 624	11/18/94	< 0.005	mg/l
Carbon Tetrachloride		EPA 624	11/18/94	< 0.005	mg/l
Chlorobenzene		EPA 624	11/22/94	< 0.005	mg/l
Chlorodibromomethane		EPA 624	11/18/94	< 0.005	mg/l
Chloroethane		EPA 624	11/22/94	< 0.005	mg/l
2-Chloroethylvinyl Ether		EPA 624	11/22/94	< 0.005	mg/l
Chloroform		EPA 624	11/22/94	< 0.005	mg/l
Dichlorobromomethane		EPA 624	11/18/94	< 0.005	mg/l
1,1-Dichloroethane		EPA 624	11/22/94	< 0.005	mg/l
1,2-Dichloroethane		EPA 624	11/18/94	< 0.005	mg/l
1,1-Dichloroethylene		EPA 624	11/18/94	< 0.005	mg/l
1,2-Dichloropropane		EPA 624	11/22/94	< 0.005	mg/l
1,3-Dichloropropylene		EPA 624	11/22/94	< 0.005	mg/l
Ethylbenzene		EPA 624	11/18/94	< 0.005	mg/l
Methyl bromide		EPA 624	11/18/94	< 0.005	mg/l
Methyl Chloride		EPA 624	11/22/94	< 0.005	mg/l
Methylene Chloride		EPA 624	11/22/94	< 0.005	mg/l
1,1,2,2-Tetrachloroethane		EPA 624	11/22/94	< 0.005	mg/l
Tetrachloroethylene		EPA 624	11/18/94	< 0.005	mg/l
Toluene		EPA 624	11/18/94	< 0.005	mg/l
1,2-trans-dichloroethylene		EPA 624	11/18/94	< 0.005	mg/l
1,1,1-Trichloroethane		EPA 624	11/18/94	< 0.005	mg/l
1,1,2-Trichloroethane		EPA 624	11/18/94	< 0.005	mg/l
Trichloroethylene		EPA 624	11/18/94	< 0.005	mg/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 : MS. LESA DANIELS
ADDRESS: SOUTHERN NUCLEAR
BIN B-064, INVERNESS

REPORT DATE : 01/05/95
SAMPLE DATE/TIME: 11/15/94 11:30
SAMPLE NUMBER : 941115-0059
LOCATION NUMBER : FNP

DESCRIPTION: FARLEY NUCLEAR PLANT, INTAKE

TEST	REFERENCE	ANALYSIS DATE	RESULT	UNITS
VOLATILE COMPOUNDS				
Vinyl Chloride	EPA 624	11/22/94	< 0.005	mg/l
ACID COMPOUNDS				
2-chlorophenol	EPA 625	12/09/94	< 0.010	mg/l
2,4-dichlorophenol	EPA 625	12/09/94	< 0.010	mg/l
2,4-dimethylphenol	EPA 625	12/09/94	< 0.010	mg/l
4,6-Dinitro-O-Cresol	EPA 625	12/09/94	< 0.050	mg/l
2,4-dinitrophenol	EPA 625	12/09/94	< 0.050	mg/l
2-nitrophenol	EPA 625	12/09/94	< 0.010	mg/l
4-nitrophenol	EPA 625	12/09/94	< 0.050	mg/l
p-Chloro-m-Cresol	EPA 625	12/09/94	< 0.020	mg/l
Pentachlorophenol	EPA 625	12/09/94	< 0.050	mg/l
Phenol	EPA 625	12/12/94	< 0.010	mg/l
2,4,6-trichlorophenol	EPA 625	12/09/94	< 0.010	mg/l
BASE / NEUTRAL COMPOUNDS				
Acenaphthene	EPA 625	12/09/94	< 0.010	mg/l
Acenaphthylene	EPA 625	12/09/94	< 0.010	mg/l
Anthracene	EPA 625	12/09/94	< 0.010	mg/l
Benzidine	EPA 625	12/09/94	< 0.010	mg/l
Benzo(a)anthracene	EPA 625	12/09/94	< 0.010	mg/l
Benzo(a)pyrene	EPA 625	12/09/94	< 0.010	mg/l
3,4-Benzofluoranthene	EPA 625	12/09/94	< 0.010	mg/l
Benzo(g,h,i)perylene	EPA 625	12/09/94	< 0.010	mg/l
Benzo(k)fluoranthene	EPA 625	12/09/94	< 0.010	mg/l

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General Test Laboratory
Building Number 8
P.O. Box 2641
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TO : MS. LESA DANIELS
ADDRESS: SOUTHERN NUCLEAR
BIN B-064, INVERNESS

REPORT DATE : 01/05/95
SAMPLE DATE/TIME: 11/15/94 11:30
SAMPLE NUMBER : 941115-0059
LOCATION NUMBER : FNP

DESCRIPTION: FARLEY NUCLEAR PLANT, INTAKE

TEST	REFERENCE	ANALYSIS DATE	RESULT	UNITS
BASE / NEUTRAL COMPOUNDS				
Bis(2-chloroethoxy)methane	EPA 625	12/09/94	< 0.010	mg/l
Bis(2-chloroethyl)ether	EPA 625	12/09/94	< 0.010	mg/l
Bis(2-Chloroisopropyl)ether	EPA 625	12/09/94	< 0.010	mg/l
Bis(2-ethylhexyl)phthalate	EPA 625	12/09/94	< 0.010	mg/l
4-Bromophenyl phenyl ether	EPA 625	12/09/94	< 0.010	mg/l
Butylbenzyl phthalate	EPA 625	12/09/94	< 0.010	mg/l
2-Chloronaphthalene	EPA 625	12/09/94	< 0.010	mg/l
4-Chlorophenyl phenyl ether	EPA 625	12/09/94	< 0.010	mg/l
Chrysene	EPA 625	12/09/94	< 0.010	mg/l
Dibenzo(a,h)anthracene	EPA 625	12/09/94	< 0.010	mg/l
1,2-Dichlorobenzene	EPA 625	12/09/94	< 0.010	mg/l
1,3-Dichlorobenzene	EPA 625	12/09/94	< 0.010	mg/l
1,4-Dichlorobenzene	EPA 625	12/09/94	< 0.010	mg/l
3,3'-dichlorobenzidine	EPA 625	12/09/94	< 0.020	mg/l
Diethyl phthalate	EPA 625	12/09/94	< 0.010	mg/l
Dimethyl phthalate	EPA 625	12/09/94	< 0.010	mg/l
Di-n-butylphthalate	EPA 625	12/09/94	< 0.010	mg/l
2,4-dinitrotoluene	EPA 625	12/09/94	< 0.010	mg/l
2,6-Dinitrotoluene	EPA 625	12/09/94	< 0.010	mg/l
Di-n-octyl phthalate	EPA 625	12/09/94	< 0.010	mg/l
1,2-diphenylhydrazine(as azobenzene)	EPA 625	12/09/94	< 0.010	mg/l
Fluoranthene	EPA 625	12/09/94	< 0.010	mg/l
Fluorene	EPA 625	12/09/94	< 0.010	mg/l
Hexachlorobenzene	EPA 625	12/09/94	< 0.010	mg/l
Hexachlorobutadiene	EPA 625	12/09/94	< 0.010	mg/l
Hexachlorocyclopentadiene	EPA 625	12/09/94	< 0.010	mg/l
Hexachloroethane	EPA 625	12/09/94	< 0.010	mg/l

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General Test Laboratory
Building Number 8
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Alabama Power

Certificate of Analysis

TO : MS. LESA DANIELS
ADDRESS: SOUTHERN NUCLEAR
BIN B-064, INVERNESS

REPORT DATE : 01/05/95
SAMPLE DATE/TIME: 11/15/94 11:30
SAMPLE NUMBER : 941115-0059
LOCATION NUMBER : FNP

DESCRIPTION: FARLEY NUCLEAR PLANT, INTAKE

TEST		REFERENCE	ANALYSIS DATE	RESULT	UNITS
BASE / NEUTRAL COMPOUNDS					
Indeno(1,2,3-cd)pyrene		EPA 625	12/09/94	< 0.010	mg/l
Isophorone		EPA 625	12/09/94	< 0.010	mg/l
Naphthalene		EPA 625	12/12/94	< 0.010	mg/l
Nitrobenzene		EPA 625	12/09/94	< 0.010	mg/l
N-nitrosodimethylamine		EPA 625	12/09/94	< 0.020	mg/l
N-nitrosodi-N-propylamine		EPA 625	12/09/94	< 0.010	mg/l
N-nitrosodiphenlyamine		EPA 625	12/09/94	< 0.010	mg/l
Phenanthrene		EPA 625	12/09/94	< 0.010	mg/l
Pyrene		EPA 625	12/09/94	< 0.010	mg/l
1,2,4-Trichlorobenzene		EPA 625	12/09/94	< 0.010	mg/l
PESTICIDES					
Aldrin	1P	EPA 608	11/29/94	< 0.0001	mg/l
alpha-BHC	2P	EPA PB83/608	11/29/94	< 0.0001	mg/l
beta-BHC	3P	EPA PB83/608	11/29/94	< 0.0001	mg/l
gamma-BHC	4P	EPA PB83/608	11/29/94	< 0.0001	mg/l
delta-BHC	5P	EPA PB83/608	11/29/94	< 0.0001	mg/l
Chlordane	6P	EPA PB83/608	11/29/94	< 0.0005	mg/l
4,4'-DDT	7P	EPA PB83/608	11/29/94	< 0.0002	mg/l
4,4'-DDE	8P	EPA PB83/608	11/29/94	< 0.0002	mg/l
4,4'-DDD	9P	EPA 608	11/29/94	< 0.0002	mg/l
Dieldrin	10P	EPA 608	11/29/94	< 0.0001	mg/l
alpha-endosulfan	11P	EPA PB83/608	11/29/94	< 0.0005	mg/l
beta-Endosulfan	12P	EPA PB83/608	11/29/94	< 0.0005	mg/l
Endosulfan sulfate	13P	EPA PB83/608	11/29/94	< 0.0005	mg/l
Endrin	14P	EPA 608	11/29/94	< 0.0002	mg/l

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TO : MS. LESA DANIELS
ADDRESS: SOUTHERN NUCLEAR
BIN B-064, INVERNESS

REPORT DATE : 01/05/95
SAMPLE DATE/TIME: 11/15/94 11:30
SAMPLE NUMBER : 941115-0859
LOCATION NUMBER : FNP

DESCRIPTION: FARLEY NUCLEAR PLANT, INTAKE

TEST		REFERENCE	ANALYSIS DATE	RESULT	UNITS
PESTICIDES					
Endrin aldehyde	15P	EPA PB83/608	11/29/94	< 0.0002	mg/l
Heptachlor	16P	EPA PB83/608	11/29/94	< 0.0001	mg/l
Heptachlor epoxide	17P	EPA PB83/608	11/29/94	< 0.0001	mg/l
PCB, 1242	18P	EPA PB89/608	11/29/94	< 0.0005	mg/l
PCB, 1254	19P	EPA PB89/608	11/29/94	< 0.0005	mg/l
PCB, 1221	20P	EPA PB89/608	11/29/94	< 0.0005	mg/l
PCB, 1232	21P	EPA PB89/608	11/29/94	< 0.0005	mg/l
PCB, 1248	21P	EPA PB89/608	11/29/94	< 0.0005	mg/l
PCB, 1260	23P	EPA PB89/608	11/29/94	< 0.0005	mg/l
PCB, 1016	24P	EPA PB89/608	11/29/94	< 0.0005	mg/l
Toxaphene	25P	EPA PB83/608	11/29/94	< 0.002	mg/l

This Certificate is for the physical and/or chemical characteristics of the sample as submitted.
The laboratory cannot attest to the origin and representation of the sample.

CC: MR. W. S. HILL

Chemist	Quality Control	Supv. Chemist	Page
	MARK LESTER	C. W. HORN W. H. WESTON	7 of 7

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

Certificate of Analysis

TO : MS. LESA DANIELS
ADDRESS: SOUTHERN NUCLEAR
BIN B-064, INVERNESS

REPORT DATE : 01/05/95
SAMPLE DATE/TIME: 11/15/94 11:15
SAMPLE NUMBER : 941115-0060
LOCATION NUMBER : FNP

DESCRIPTION: FARLEY NUCLEAR PLANT, DISCHARGE

TEST	REFERENCE	ANALYSIS DATE	RESULT	UNITS
INTAKE AND EFFLUENT CHARACTERISTICS (PART A)				
Biochemical Oxygen Demand, 5 Day	Std Md 18th Ed-5210B	11/21/94	< 1.	mg/l
Chemical Oxygen Demand	EPA 410.1	12/09/94	4.	mg/l
Organic Carbon, Total	EPA PB84/415.1	11/30/94	3.46	mg/l
Solids, Total Suspended	EPA PB84/160.2	11/16/94	1.	mg/l
Nitrogen, Ammonia	EPA PB84/350.2	11/18/94	0.034	mg/l
Temperature		11/15/94	19.0	Deg C
pH	EPA PB84/150.1	11/15/94	7.00	SU
INTAKE AND EFFLUENT CHARACTERISTICS (PART B)				
Bromide	EPA PB84/302.1	11/18/94	< 0.02	mg/l
Chlorine, Total Residual		11/15/94	0.12	mg/l
Color	EPA PB84/110.3	11/16/94	18.	PCU
Coliform, Fecal	Std Md 18th Ed-9221C	11/16/94	20.	#/100ml
Fluoride	EPA 340.2	11/18/94	0.09	mg/l
Nitrate-Nitrite (as N)	EPA 353.2	11/16/94	0.37	mg/l
Nitrogen, Total Organic	EPA PB84/351.3	01/05/95	0.04	mg/l
Oil and Grease	EPA PB84/413.1	12/09/94	< 1.0	mg/l
Phosphorus, Total	EPA 365.2	11/23/94	0.040	mg/l
Sulfate	EPA PB84/300.0	11/18/94	7.3	mg/l
Sulfide	EPA PB84/376.2	11/22/94	0.015	mg/l
Sulfite	EPA PB84/377.1	11/15/94	< 2.0	mg/l
Surfactants	EPA PB84/425.1	11/17/94	< 0.02	mg/l
Aluminum, Total	EPA PB84/200.7	12/21/94	0.189	mg/l
Barium, Total	EPA PB84/200.7	12/21/94	0.250	mg/l
Boron, Total	EPA PB84/200.7	12/02/94	< 0.001	mg/l
Cobalt, Total	EPA PB84/200.7	12/21/94	< 0.002	mg/l

Chemist	Quality Control	Supv. Chemist	Page 1 of 7

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General Test Laboratory
Building Number 8
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Alabama Power

Certificate of Analysis

TO : MS. LESA DANIELS
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BIN B-064, INVERNESS

REPORT DATE : 01/05/95
SAMPLE DATE/TIME: 11/15/94 11:15
SAMPLE NUMBER : 941115-0060
LOCATION NUMBER : FNP

DESCRIPTION: FARLEY NUCLEAR PLANT, DISCHARGE

TEST	REFERENCE	ANALYSIS DATE	RESULT	UNITS
INTAKE AND EFFLUENT CHARACTERISTICS (PART B)				
Iron, Total	EPA PB84/200.7	12/29/94	0.489	mg/l
Magnesium, Total	EPA PB84/200.7	12/29/94	1.42	mg/l
Molybdenum, Total	EPA PB84/200.7	12/21/94	< 0.002	mg/l
Manganese, Total	EPA PB84/200.7	11/23/94	0.038	mg/l
Tin, Total	EPA PB84/200.7	12/21/94	< 0.005	mg/l
Titanium, Total	EPA PB84/200.7	12/21/94	< 0.002	mg/l
METALS, CYANIDE, AND TOTAL PHENOLS				
Antimony, Total	EPA PB84/200.7	12/21/94	< 0.003	mg/l
Arsenic, Total	EPA PB84/200.7	12/19/94	< 0.005	mg/l
Beryllium, Total	EPA PB84/200.7	12/21/94	< 0.003	mg/l
Cadmium, Total	EPA PB84/200.7	11/23/94	< 0.001	mg/l
Chromium, Total	EPA PB84/200.7	12/29/94	< 0.001	mg/l
Copper, Total	EPA PB84/200.7	12/21/94	< 0.002	mg/l
Lead, Total	EPA PB84/200.7	12/29/94	0.003	mg/l
Mercury, Total	EPA PB84/245.1	11/16/94	< 0.0002	mg/l
Nickel, Total	EPA PB84/200.7	12/21/94	0.005	mg/l
Selenium, Total	EPA PB84/200.7	11/29/94	< 0.001	mg/l
Silver, Total	EPA PB84/200.7	12/21/94	< 0.002	mg/l
Thallium, Total	EPA PB84/200.7	12/21/94	< 0.003	mg/l
Zinc, Total	EPA PB84/200.7	12/21/94	0.182	mg/l
Cyanide, Total	EPA PB84/335.3	11/23/94	< 0.005	mg/l
Phenol, Total	EPA PB84/420.1	11/17/94	< 0.01	mg/l

Chemist	Quality Control	Supv. Chemist	Page 2 of 7

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SAMPLE NUMBER : 941115-0060
LOCATION NUMBER : FNP

DESCRIPTION: FARLEY NUCLEAR PLANT, DISCHARGE

TEST		REFERENCE	ANALYSIS DATE	RESULT	UNITS
VOLATILE COMPOUNDS					
Acrolein	1V	EPA PB83/603/624	11/23/94	< 0.020	mg/l
Acrylonitrile	2V	EPA PB83/603/624	11/23/94	< 0.020	mg/l
Benzene		EPA 624	11/18/94	< 0.005	mg/l
Bromoform		EPA 624	11/18/94	< 0.005	mg/l
Carbon Tetrachloride		EPA 624	11/18/94	< 0.005	mg/l
Chlorobenzene		EPA 624	11/22/94	< 0.005	mg/l
Chlorodibromomethane		EPA 624	11/18/94	< 0.005	mg/l
Chloroethane		EPA 624	11/22/94	< 0.005	mg/l
2-Chloroethylvinyl Ether		EPA 624	11/22/94	< 0.005	mg/l
Chloroform		EPA 624	11/22/94	< 0.005	mg/l
Dichlorobromomethane		EPA 624	11/18/94	< 0.005	mg/l
1,1-Dichloroethane		EPA 624	11/22/94	< 0.005	mg/l
1,2-Dichloroethane		EPA 624	11/18/94	< 0.005	mg/l
1,1-Dichloroethylene		EPA 624	11/18/94	< 0.005	mg/l
1,2-Dichloropropane		EPA 624	11/22/94	< 0.005	mg/l
1,3-Dichloropropylene		EPA 624	11/22/94	< 0.005	mg/l
Ethylbenzene		EPA 624	11/18/94	< 0.005	mg/l
Methyl bromide		EPA 624	11/18/94	< 0.005	mg/l
Methyl Chloride		EPA 624	11/22/94	< 0.005	mg/l
Methylene Chloride		EPA 624	11/22/94	< 0.005	mg/l
1,1,2,2-Tetrachloroethane		EPA 624	11/22/94	< 0.005	mg/l
Tetrachloroethylene		EPA 624	11/18/94	< 0.005	mg/l
Toluene		EPA 624	11/18/94	< 0.005	mg/l
1,2-trans-dichloroethylene		EPA 624	11/18/94	< 0.005	mg/l
1,1,1-Trichloroethane		EPA 624	11/18/94	< 0.005	mg/l
1,1,2-Trichloroethane		EPA 624	11/18/94	< 0.005	mg/l
Trichloroethylene		EPA 624	11/18/94	< 0.005	mg/l

Chemist	Quality Control	Supv. Chemist	Page 3 of 7

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General Test Laboratory
Building Number 8
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Alabama Power

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TO : MS. LESA DANIELS
ADDRESS: SOUTHERN NUCLEAR
BIN B-064, INVERNESS

REPORT DATE : 01/05/95
SAMPLE DATE/TIME: 11/15/94 11:15
SAMPLE NUMBER : 941115-0060
LOCATION NUMBER : FNP

DESCRIPTION: FARLEY NUCLEAR PLANT, DISCHARGE

TEST	REFERENCE	ANALYSIS DATE	RESULT	UNITS
VOLATILE COMPOUNDS				
Vinyl Chloride	EPA 624	11/22/94	< 0.005	mg/l
ACID COMPOUNDS				
2-chlorophenol	EPA 625	12/09/94	< 0.010	mg/l
2,4-dichlorophenol	EPA 625	12/09/94	< 0.010	mg/l
2,4-dimethylphenol	EPA 625	12/09/94	< 0.010	mg/l
4,6-Dinitro-O-Cresol	EPA 625	12/09/94	< 0.050	mg/l
2,4-dinitrophenol	EPA 625	12/09/94	< 0.050	mg/l
2-nitrophenol	EPA 625	12/09/94	< 0.010	mg/l
4-nitrophenol	EPA 625	12/09/94	< 0.050	mg/l
p-Chloro-m-Cresol	EPA 625	12/09/94	< 0.020	mg/l
Pentachlorophenol	EPA 625	12/09/94	< 0.050	mg/l
Phenol	EPA 625	12/12/94	< 0.010	mg/l
2,4,6-trichlorophenol	EPA 625	12/09/94	< 0.010	mg/l
BASE / NEUTRAL COMPOUNDS				
Acenaphthene	EPA 625	12/09/94	< 0.010	mg/l
Acenaphthylene	EPA 625	12/09/94	< 0.010	mg/l
Anthracene	EPA 625	12/09/94	< 0.010	mg/l
Benzidine	EPA 625	12/09/94	< 0.010	mg/l
Benzo(a)anthracene	EPA 625	12/09/94	< 0.010	mg/l
Benzo(a)pyrene	EPA 625	12/09/94	< 0.010	mg/l
3,4-Benzofluoranthene	EPA 625	12/09/94	< 0.010	mg/l
Benzo(g,h,i)perylene	EPA 625	12/09/94	< 0.010	mg/l
Benzo(k)fluoranthene	EPA 625	12/09/94	< 0.010	mg/l

Chemist	Quality Control	Supv. Chemist	Page 4 of 7

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REPORT DATE : 01/05/95
SAMPLE DATE/TIME: 11/15/94 11:15
SAMPLE NUMBER : 941115-0060
LOCATION NUMBER : FNP

DESCRIPTION: FARLEY NUCLEAR PLANT, DISCHARGE

TEST	REFERENCE	ANALYSIS DATE	RESULT	UNITS
BASE / NEUTRAL COMPOUNDS				
Bis(2-chloroethoxy)methane	EPA 625	12/09/94	< 0.010	mg/l
Bis(2-chloroethyl)ether	EPA 625	12/09/94	< 0.010	mg/l
Bis(2-Chloroisopropyl)ether	EPA 625	12/09/94	< 0.010	mg/l
Bis(2-ethylhexyl)phthalate	EPA 625	12/09/94	0.010	mg/l
4-Bromophenyl phenyl ether	EPA 625	12/09/94	< 0.010	mg/l
Butylbenzyl phthalate	EPA 625	12/09/94	< 0.010	mg/l
2-Chloronaphthalene	EPA 625	12/09/94	< 0.010	mg/l
4-Chlorophenyl phenyl ether	EPA 625	12/09/94	< 0.010	mg/l
Chrysene	EPA 625	12/09/94	< 0.010	mg/l
Dibenzo(a,h)anthracene	EPA 625	12/09/94	< 0.010	mg/l
1,2-Dichlorobenzene	EPA 625	12/09/94	< 0.010	mg/l
1,3-Dichlorobenzene	EPA 625	12/09/94	< 0.010	mg/l
1,4-Dichlorobenzene	EPA 625	12/09/94	< 0.010	mg/l
3,3'-dichlorobenzidine	EPA 625	12/09/94	< 0.020	mg/l
Diethyl phthalate	EPA 625	12/09/94	< 0.010	mg/l
Dimethyl phthalate	EPA 625	12/09/94	< 0.010	mg/l
Di-n-butylphthalate	EPA 625	12/09/94	< 0.010	mg/l
2,4-dinitrotoluene	EPA 625	12/09/94	< 0.010	mg/l
2,6-Dinitrotoluene	EPA 625	12/09/94	< 0.010	mg/l
Di-n-octyl phthalate	EPA 625	12/09/94	< 0.010	mg/l
1,2-diphenylhydrazine(as azobenzene)	EPA 625	12/09/94	< 0.010	mg/l
Fluoranthene	EPA 625	12/09/94	< 0.010	mg/l
Fluorene	EPA 625	12/09/94	< 0.010	mg/l
Hexachlorobenzene	EPA 625	12/09/94	< 0.010	mg/l
Hexachlorobutadiene	EPA 625	12/09/94	< 0.010	mg/l
Hexachlorocyclopentadiene	EPA 625	12/09/94	< 0.010	mg/l
Hexachloroethane	EPA 625	12/09/94	< 0.010	mg/l

Chemist	Quality Control	Supv. Chemist	Page 5 of 7

5-2790 Rev. 8.85

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

Alabama Power

Certificate of Analysis

TO : MS. LESA DANIELS
ADDRESS: SOUTHERN NUCLEAR
BIN B-064, INVERNESS

REPORT DATE : 01/05/95
SAMPLE DATE/TIME: 11/15/94 11:15
SAMPLE NUMBER : 941115-0060
LOCATION NUMBER : FNP

DESCRIPTION: FARLEY NUCLEAR PLANT, DISCHARGE

TEST		REFERENCE	ANALYSIS DATE	RESULT	UNITS
BASE / NEUTRAL COMPOUNDS					
Indeno(1,2,3-cd)pyrene		EPA 625	12/09/94	< 0.010	mg/l
Isophorone		EPA 625	12/09/94	< 0.010	mg/l
Naphthalene		EPA 625	12/12/94	< 0.010	mg/l
Nitrobenzene		EPA 625	12/09/94	< 0.010	mg/l
N-nitrosodimethylamine		EPA 625	12/09/94	< 0.020	mg/l
N-nitrosodi-N-propylamine		EPA 625	12/09/94	< 0.010	mg/l
N-nitrosodiphenlyamine		EPA 625	12/09/94	< 0.010	mg/l
Phenanthrene		EPA 625	12/09/94	< 0.010	mg/l
Pyrene		EPA 625	12/09/94	< 0.010	mg/l
1,2,4-Trichlorobenzene		EPA 625	12/09/94	< 0.010	mg/l
PESTICIDES					
Aldrin	1P	EPA 608	11/29/94	< 0.0001	mg/l
alpha-BHC	2P	EPA PB83/608	11/29/94	< 0.0001	mg/l
beta-BHC	3P	EPA PB83/608	11/29/94	< 0.0001	mg/l
gamma-BHC	4P	EPA PB83/608	11/29/94	< 0.0001	mg/l
delta-BHC	5P	EPA PB83/608	11/29/94	< 0.0001	mg/l
Chlordane	6P	EPA PB83/608	11/29/94	< 0.0005	mg/l
4,4'-DDT	7P	EPA PB83/608	11/29/94	< 0.0002	mg/l
4,4'-DDE	8P	EPA PB83/608	11/29/94	< 0.0002	mg/l
4,4'-DDD	9P	EPA 608	11/29/94	< 0.0002	mg/l
Dieldrin	10P	EPA 608	11/29/94	< 0.0001	mg/l
alpha-endosulfan	11P	EPA PB83/608	11/29/94	< 0.0005	mg/l
beta-Endosulfan	12P	EPA PB83/608	11/29/94	< 0.0005	mg/l
Endosulfan sulfate	13P	EPA PB83/608	11/29/94	< 0.0005	mg/l
Endrin	14P	EPA 608	11/29/94	< 0.0002	mg/l

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

Alabama Power

Certificate of Analysis

TO : MS. LESA DANIELS
ADDRESS: SOUTHERN NUCLEAR
BIN B-064, INVERNESS

REPORT DATE : 01/05/95
SAMPLE DATE/TIME: 11/15/94 11:15
SAMPLE NUMBER : 941115-0060
LOCATION NUMBER : FNP

DESCRIPTION: FARLEY NUCLEAR PLANT, DISCHARGE

TEST		REFERENCE	ANALYSIS DATE	RESULT	UNITS
PESTICIDES					
Endrin aldehyde	15P	EPA PB83/608	11/29/94	< 0.0002	mg/l
Heptachlor	16P	EPA PB83/608	11/29/94	< 0.0001	mg/l
Heptachlor epoxide	17P	EPA PB83/608	11/29/94	< 0.0001	mg/l
PCB, 1242	18P	EPA PB89/608	11/29/94	< 0.0005	mg/l
PCB, 1254	19P	EPA PB89/608	11/29/94	< 0.0005	mg/l
PCB, 1221	20P	EPA PB89/608	11/29/94	< 0.0005	mg/l
PCB, 1232	21P	EPA PB89/608	11/29/94	< 0.0005	mg/l
PCB, 1248	21P	EPA PB89/608	11/29/94	< 0.0005	mg/l
PCB, 1260	23P	EPA PB89/608	11/29/94	< 0.0005	mg/l
PCB, 1016	24P	EPA PB89/608	11/29/94	< 0.0005	mg/l
Toxaphene	25P	EPA PB83/608	11/29/94	< 0.002	mg/l

This Certificate is for the physical and/or chemical characteristics of the sample as submitted.
The laboratory cannot attest to the origin and representation of the sample.

CC: MR. W. S. HILL

Chemist	Quality Control	Supv. Chemist	Page
	MARK LESTER	C.W.HORN W.H.WESTON	7 of 7

Orlando Laboratories, Inc.
P.O. Box 149127, Orlando, FL 32814
(407) 896-6645 FAX (407) 898-6588

REPORT OF ANALYSIS

Alabama Power Company
General Test Laboratory
P.O. Box 2641, GSC #8
Birmingham, AL 35291
Attn: Mark Lester

Work Order # : 94-12-142
Date Received: 12/08/94
Date Reported: 12/21/94
OLI Contact: J_BEATO

Work ID: Farley NP-NPDES Repermitting
Samples collected by: Client
Total Samples: 2

Sample Identification	Description of Analysis	Description of Analysis
01A 941115-0059	Gross Alpha	
02A 941115-0060	Gross Alpha	QC for Radiochemistry

Respectfully Submitted,
ORLANDO LABORATORIES, INC.

Eric Malarek
LABORATORY DIRECTOR

Sharon Kunsman (for)
Sharon Kunsman
QUALITY CONTROL

Results of Analysis

Work ID: Farley NP-NPDES Repermitting Work Order: 94-12-142

Client Number:		941115-0059	941115-0060
OLI Number:		01A	02A
Gross Alpha: Water			
EPA 900 0	Units	Result/Flag	Result/Flag
Gross Alpha	pCi/l	0.6 U	0.7
Counting Error	pCi/l	+/- 0.4	+/- 0.4

QA for Analysis

Work ID: Farley NP-NPDES Repermitting Work Order: 94-12-142

	Test Description	Method	Prep	Run	Analyst
Client No: 941115-0059 OLI No: 01A Matrix: Water Collected: 11/15/94 11:30:00	Gross Alpha	EPA_900_0	NA	12/12/94	MJN

	Test Description	Method	Prep	Run	Analyst
Client No: 941115-0060 OLI No: 02A Matrix: Water Collected: 11/15/94 11:15:00	Gross Alpha	EPA_900_0	NA	12/12/94	MJN

Alabama Power Company
Attn: Mark Lester

Report Number: 94-12-142

Quality Control Data Sheets

Parameter	OLI Sample #	Matrix Spike % Recovery	Matrix Spike Dup % Recovery	Relative Percent Difference	Analysis Date	Analyst
Gross Alpha	9412141-01	110	125	13	12/12/94	MJN

ORLANDO LABORATORIES, INC.
REPORT ANALYSIS CODES

Quai	Definition
<	Less Than
>	Greater Than
A	Value reported is the mean (average) of two or more determinations.
B	Results were based upon colony counts outside the acceptable range.
C	Less Than 50 Non-Coliform Background Bacteria
CFU	Colony Forming Units
D.O.	Diluted Out
E	Less Than 200 Non-Coliform Background Bacteria
G	More Than 200 Non-Coliform Background Bacteria
H	Value based on field kit determination and may not be accurate.
I	The reported value is between the laboratory MDL and the laboratory practica quantitation limit.
J	Indicates an Estimated Value; value not accurate.
MCL	Maximum Contaminant Level
MDL	The Method Detection Limit at a 1 dilution factor (and 0% moisture if soil/sedimen for each compound/analyte.
N	Presumptive evidence of presence of material. (Library search, evidence of possibl interference, evidence of analyte but QC requirements for confirmation not met.)
NA	Not Applicable
N/C	No Combustion
NR	Not Requested
Q	Sample analyzed beyond the accepted holding time per client's approval.
T	Value reported is less than the laboratory method detection limit. It is reported fc information purposes only and not for statistical analysis.
U	Indicates the compound was analyzed, but not detected. The numerical valu preceding the 'U' is the limit of detection for that compound, based upon the dilutio (and moisture content if soil/sediment).
V	Analyte was detected in both the sample and the associated Method Blank.
W	Value obtained is less than the lowest value reported under the "T" code. N response was found.
Y	The lab sample was received incompletely, improperly or not preserved ar preserved at the laboratory for analysis.
Z	Too many colonies were present (TNTC). The numeric value represents the filtratic volume (mL).

ORLANDO LABORATORIES, INC. CERTIFICATIONS

State	Drinking Water Certification	Environmental Certification
Florida	HRS 83141	HRS E83033
Alabama	40020	Not Required*
Georgia	---	Not Required*
Michigan	Certified	Not Required*
North Carolina	12700	101
South Carolina	96016	96016
Tennessee	02928	UST - listed
Virginia	00248	Not Required*

DER Comprehensive QA Approval #860106G

*Indicates no Florida certification program is in place and/or state will accept Florida certificatio

P.O. Box 149127, Orlando, FL 32814
(407) 896-6545 FAX (407) 898-6588

CHAIN OF CUSTODY RECORD
(INSTRUCTIONS ON BACK)

(1) INVOICE TO: (Company and Individual) ADDRESS (City, State, Zip)
Alabama Power Co., Tamey Johnson, P.O. Box 2641 GSC #B, B'ham, AL 35291

(2) CONTACT PERSON/PHONE # INVOICE
(205) 664-6194

(3) RB NUMBER
A5904

(4) OLI WORK ORDER #
9412142

(5) ORIGINAL REPORT TO: (Company and Individual) ADDRESS (City, State, Zip)
Alabama Power Co., Mark Lester, P.O. Box 2641 GSC #B, B'ham AL 35291

(6) CONTACT PERSON/PHONE # REPORT
(205) 664-6182

(7) (OPTIONAL) ADDITIONAL REPORTS SENT TO: ADDRESS (City, State, Zip)

(8) CLIENT PROJECT NAME
FARLEY NP - NPDES Reperm. Hrng

(9) CLIENT PROJECT #
P.O GTL 757

(10) SAMPLE IDENTIFICATION	(11) DATE/TIME	(12) COMP	GRAB	WATER	SOIL	OTHER	(13) SAMPLE DESCRIPTION	(17) NUMBER OF CONTAINERS	(18) REQUESTED ANALYSIS	(19) REMARKS
1 941115-0059	11/15/94 1130			✓			Farley NP - Intake	2		If 275 Run 226, 228
2 941115-0060	11/15/94 1115			✓			Farley NP - Discharge	2		

TRANSFER NUMBER	(14) RELINQUISHED BY	(15) DATE/TIME	(16) ACCEPTED BY
1st	[signature]	11/29/94 1030	Mark Lester
2nd	Mark Lester	12/1/94 1430	Airborne
3rd	Airborne Express	12/8/94 10:00	[signature]

(20) ADDITIONAL REMARKS
Fed x Econ

(21) COOLER #'s
MO 325

(22) SAMPLER'S SIGNATURE

OL 001 (6/93)

LAB

ATTACHMENT TO EPA FORM 2C
CORROSION INHIBITORS, BIOCIDES, AND OTHER CHEMICAL PRODUCTS IN USE AT FARLEY NUCLEAR PLANT

Corrosion Inhibitors, Biocides, and Chemical Treatments
Used at Farley Nuclear Plant

A. Service Water System - Units 1 & 2 (Service Water Intake Structure)

Chlorine Dioxide

Added at a rate of approximately 10 #/unit/hour for approximately one hour three (3) times per day to maintain a concentration of less than 0.1 ppm. Chlorine dioxide is generated onsite using DREWCHLOR (sodium chlorite solution), a sodium hypochlorite solution, and an HCL solution.

Sodium Hypochlorite

Added in accordance with Best Management Practices (BMP) plan to maintain concentrations adequate to control Corbicula (Asiatic clams) in the service water system. Rate is controlled to assure that TRC values are in compliance with permit discharge limits.

Drewsperse 739 Dispersant

Added to maintain a rate of approximately 200 - 1400 ml/min. for approximately 25 minutes duration six (6) times per day per unit (one unit at a time) to maintain a concentration of approximately 1.5 - 20.6 ppm product.

B. Circulating Water System - Units 1 and 2

Chlorine Dioxide

Added at a rate of approximately 100 #/unit/hour for one hour three (3) days per week to achieve a concentration of approximately 2.7 ppm in the system and no detectable TRC. Chlorine dioxide is generated using DREWCHLOR (sodium chlorite solution), a sodium hypochlorite solution, and an HCL solution.

Zinc Chloride (50% Solution)

Added at a rate of approximately 2.6 gal/day to maintain a concentration of approximately 0.6 ppm zinc in circulating water canal.

Drew WPD 11-136 (Polyacrylate)

Added at a rate of approximately 5 gal/day to maintain a concentration of approximately 1.4 ppm product in circulating water system.

Biosperse 212

Added once per week to achieve a concentration of approximately 75 ppm product in the circulating water system for algae control.

Drew WPD 11 -166 (Tolytriazole Buffered with Sodium Hydroxide)

Added at a rate of approximately 2 gal/day to maintain approximately 1.0 ppm of tolytriazole for corrosion control.

Drewsperse L-474 Defoamer

Added to circulating water system to improve system efficiency from June through October at a rate to achieve a concentration of approximately 16 ppm per unit per day. Added during the remaining months of year at a rate to achieve a concentration of approximately 3 - 9 ppm as needed to control foam.

C. Reactor Coolant System

Lithium Hydroxide

Added at a rate to maintain approximately 0.20 - 4.36 ppm concentration in reactor coolant system.

Boric Acid

Added to achieve a maximum of approximately 2500 ppm in the reactor coolant system.

Hydrogen Peroxide

Treatment during unit shutdown uses approximately 40 quarts.

Hydrazine

Treatment during unit startup uses approximately 5 quarts.

Zinc Acetate

Added to maintain approximately 0.08 ppm zinc in the reactor coolant system.

D. Secondary System Chemical Control

Hydrazine

Added as needed to maintain approximately 110 ppb concentration in the secondary system. During wet lay-up process, hydrazine concentration is maintained at 75-200 ppm.

Boric Acid

Added to maintain approximately 5-10 ppm concentration during operation. During unit startup, added to maintain approximately 45-50 ppm concentration.

Ammonium Hydroxide

Added as needed in the secondary system for pH control.

Ethanolamine (ETA)

Added as needed to the secondary system to maintain a concentration of approximately 1-4 ppm.

E. Component Cooling Water System

Potassium Chromate

Added as needed to maintain approximately 175-1000 ppm concentration with 400 ppm as the normal range for corrosion control.

Potassium Dichromate

Added as needed in the system for pH control.

Potassium Hydroxide

Added as needed in the system for pH control.

F. Service Building / Turbine Building HVAC Systems

Drewguard 4109 Corrosion Treatment (4% Sodium Nitrite Solution)

Added as needed in systems to maintain approximately 300 to 1400 ppm concentration.

G. Diesel Generator Jacket Water System

Drewguard 4109

Added as needed to maintain approximately 500-1000 ppm concentration in the system.

BIOSPERSE 254

Previously approved for use by ADEM (July 29, 1992) in system as an antimicrobial product for control of slime-forming/sulfate-reducing bacteria and algae. This product is not currently in use at FNP but may be utilized in the future.

H. Sewage Treatment Plant

Calcium / Sodium Hypochlorite

Added in concentrations necessary to achieve sufficient residual to assure bacteriological control.

I. Drinking Water System

Production & Construction Systems

Sodium hypochlorite added to maintain approximately 0.5 - 2.0 ppm FAC residual in systems.

ATTACHMENT TO EPA FORM 2C
DESCRIPTIVE INFORMATION AND DATA FOR WATER USES

Farley Nuclear Plant

Descriptive Information and Data for Water Uses

Introduction

Farley Nuclear Plant (FNP), located on the west bank of the Chattahoochee River at approximately river mile 44.3, consists of two generating units with a total nameplate rating of 1720 megawatts. The plant provides approximately 25 percent of the power available to Alabama Power customers.

Service water, which provides cooling and make-up water to both units, is withdrawn from a 95 acre service water pond which is supplied from the Chattahoochee River. The FNP river water intake structure is located at the terminus of a 275 foot intake canal and delivers water from the Chattahoochee River to the service water pond. During normal plant operation, the service water pond stores water pumped from the river prior to use in the service water system. The service water system receives make-up from the service water intake structure located at the service water pond. Service water is pumped from the service water intake structure to the Plant to provide once-through cooling water to certain plant systems and make-up water to the water treatment plant and circulating water system. The service water pond also provides the required cooling water storage capacity to accomplish and maintain simultaneous safe shutdown and cooldown conditions for both nuclear reactor units.

The discharges of service water from each unit are combined and carried to the plant discharge structure (DSN001) by a single 60 inch diameter pipe.

The Farley Nuclear Plant circulating water system consists of recirculating mechanical draft cooling towers which provide cooling for the main condensers. Make-up to the circulating water system is provided to replace water lost to cooling tower evaporation, drift and blowdown. Blowdown is mixed with once through service water and routed for discharge via DSN001.

The water treatment plant provides high purity water to the reactors and steam generators.

A 100,000 GPD sewage treatment plant provides treatment of sanitary wastes at FNP.

NOTE:

The following information provides detail on water use at Farley Nuclear Plant required for the NPDES Permit renewal application. The information is categorized by plant system. Current NPDES point source designations are indicated in parentheses.

River Water System

River Water Intake - North and South

Farley Nuclear Plant withdraws water from the Chattahoochee River for cooling and other plant uses via a 275 foot intake canal. The river water intake structure contains two sections, each housing five (5) pumps with a total capacity of 48,750 gpm. The river water pumps provide water to a storage pond for plant use. The pumps also provide water for river water screen backwash, pump cooling, and filter backwash.

River Water Intake Screen Backwash - North and South (DSN030)

The screens are backwashed, as necessary, at different intervals during the day. Material removed from the screens during backwashing is disposed, as necessary, in a solid waste landfill. The screen backwash water is returned to the intake canal. The average flow combined for both units is 45,000 GPD and the maximum flow is 140,000 GPD.

River Water Pumps Mini-Flow - South

The mini-flow provides pump protection by allowing a minimum flow from the pump discharge header to the wet pit. The average flow is approximately 1,440,000 GPD and the maximum flow is approximately 2,160,000 GPD.

River Water Pumps Mini-Flow - North

The mini-flow provides pump protection by allowing a minimum flow from the pump discharge header to the wet pit. The average flow is approximately 1,440,000 GPD and the maximum flow is approximately 2,160,000 GPD.

River Water Building Sump Discharge - South (DSN022) and North (DSN023)

All cooling water and leakage flows are routed to the building sump and are subsequently discharged to the Chattahoochee River. The average flow for DSN022 is approximately 22,000 GPD . The average flow for DSN023 is approximately 7,800 GPD. Flows are itemized below:

(1) River Water Pumps Cooling Water

The cooling water is supplied from the river water pumps discharge header and is discharged to the building sump.

(2) River Water Pumps Air Compressor Cooling Water

Air compressor cooling water is supplied from the river water pumps discharge header and is discharged through the building sump.

(3) River Pumps Cooling Water-Filter Backwash Water

The backwash water is supplied from the river water pumps discharge header and flushes debris from the filter. The water is discharged to the building sump.

Service Water System

Service Water Intake Structure - Units 1 and 2

The Farley Nuclear Plant service water system withdraws water from the service water pond for plant cooling and other plant uses. The service water system primarily provides cooling water for various plant systems. It also provides water to the water treatment plant for production of high quality water for use in the reactors and steam supply system. The components of the service water system are itemized below:

Service Water Intake Screen Backwash - Units 1 and 2

The intake screens are backwashed, as needed, at different intervals during the day. Material removed from the screens by backwashing is disposed in a solid waste landfill. The backwash water is routed back to the service water pond.

Service Water Pumps Mini-Flow - Units 1 and 2

The mini-flow provides pump protection by allowing a minimum flow from the pump discharge header to the wet-pit.

Service Water Structure Sump Discharge - Units 1 and 2

All cooling waters and leakage flows are routed to the building sump and are subsequently discharged to the Southwest Yard Drainage (DSN029). The components which discharge to the building sump are itemized below:

(1) Service Water Pump Cooling Water - Units 1 and 2

The cooling water is supplied from the service water pumps and is discharged to the building sump.

(2) Service Water Pumps Air Compressor Cooling Water - Units 1 and 2

Air compressor cooling water is supplied from the service water pumps discharge header and is discharged to the building sump.

Once Through Cooling Water System

This discharge is composed of the combined flows of service water used for plant equipment cooling. The components contributing to this discharge are itemized below:

(1) Auxiliary Building and Containment Building Equipment Cooling Water - Units 1 & 2

Various equipment cooling waters in the auxiliary building and the containment building exchange heat to service water which is ultimately discharged as once-through cooling water via DSN001.

(2) Diesel Generator Building Equipment Cooling Water - Units 1 and 2

This water provides cooling water for the emergency diesels and is discharged as once-through cooling water. The system is supplied by service water.

(3) Turbine Building Equipment Cooling Water - Units 1 and 2

The service water system provides cooling water for various equipment heat exchangers in the turbine building. The water is ultimately discharged as once-through cooling water.

(4) Dilution By-Pass - Units 1 and 2

By-pass lanes in the service water system are provided to allow flow in excess of demand to be discharged in order to protect plant components from over-pressurization.

Turbine Building System

Turbine Building Sump - Units 1 and 2 (DSN015, DSN016)

This discharge consists of all drains, cooling waters, and leakage flows collected in the

turbine building. The components contributing to this discharge are described below:

(1) Turbine Building Chemistry Lab Drains - Units 1 and 2

Wastes from routine chemical analyses on the steam system are discharged to the Unit 2 turbine building sump.

(2) Turbine Building Floor Drains - Units 1 and 2

The floor drain system collects equipment and valve leakage and routes it to the turbine building sump.

(3) Condenser Circulating Water Box Drain - Units 1 and 2

This discharge is required periodically for maintenance of the condenser and for investigation of condenser tube leaks. This water is discharged to the turbine building sump.

(4) Circulating Water Canal Drainage - Units 1 and 2

During outages maintenance may require drainage of the circulating water system. A portion of this drainage is routed to the turbine building sump.

(5) Auxiliary Building Sumps - Units 1 and 2

The auxiliary building sumps collect water from equipment draining and valve leakoff. The sumps normally discharge to the turbine building sump.

Diesel Building System

Diesel Building Sump

Drains in the emergency diesel room are routed to a sump/oil-water separator outside the diesel building which is routed to the southeast yard drain. Diesel building air compressor cooling water (service water) continuously flows through this discharge path. The components of this system currently are:

(1) Floor Drain System

The floor drain system collects equipment and valve leakage and routes it to the diesel building sump.

(2) Air Compressor Cooling Water

Service water provided as air compressor cooling water is routed to the diesel building sump.

Liquid Radwaste System

Liquid Radwaste System - Units 1 and 2 (DSN019, DSN020)

Reactor and auxiliary system leakages and other auxiliary building wastes which are not recyclable are processed, as necessary, to ensure that all discharges are well below the limits established by the Nuclear Regulatory Commission. This discharge is also processed, as necessary, to remove chromates. Boron, which is used in the reactor and auxiliary systems, may be discharged in low concentrations via this system. This system ultimately discharges to the Chattahoochee River via DSN001.

(1) Refueling Water Storage Tank Retention Area - Units 1 and 2

For radiological control, a retention area has been constructed around the refueling water storage tank which is designed to contain the volume of the entire tank in the event of rupture. Water from equipment leakage is also routed to the liquid radwaste system via this area.

(2) Reactor Make-Up Water Storage Tank Retention Area - Units 1 and 2

For radiological control, a retention area has been constructed around the reactor make-up water storage tank which is designed to contain the volume of the entire tank in the event of rupture. Water from equipment leakage is routed to the liquid radwaste system.

(3) Waste Solidification Building Sump - Units 1 and 2

All drains, cooling waters, and equipment leakages in the waste solidification building are routed to the building sump. This sump is routed to the liquid radwaste system.

(4) Low Level Radwaste Storage Building Sump - Units 1 and 2

This sump is provided as a captive sump to contain any emergency release.

Steam Generator Blowdown - Units 1 and 2

The steam generators must be blown down to minimize the concentration of contaminants in the system and to regulate treatment chemical concentrations.

Water Treatment Plant System

Waste Settling Pond (DSN014)

The effluent from the water treatment plant complex sump and runoff from the water treatment plant bulk chemical storage area is discharged via the waste settling pond. The pond discharge is ultimately routed to the Southeast Yard Drainage (DSN024). Components contributing to this discharge include:

(1) Water Treatment Plant Complex Sump

This sump collects all water treatment wastes, regeneration wastes, backwashes, and cooling water. The discharge from this sump is routed to the waste settling pond. The components are identified as follows:

a. Clarifier Backwash
The clarifier uses alum, coagulant, chlorine, and a pH adjuster to convert service water to a purity level acceptable for demineralization. Backwash of the clarifier is required periodically each day to remove accumulated material. This flow is routed to the water treatment plant complex sump.

b. Water Treatment Plant Carbon Filter Backwash - Units 1 and 2
The backwash removes suspended solids which are retained on top of the carbon during the backwash operation. This discharge is routed to the water treatment plant complex sump.

c. Water Treatment Plant Sump - Units 1 and 2
All demineralizer regeneration wastes are discharged to this sump. The effluent from this sump is discharged to the neutralization tank.

d. Neutralization Tank - Units 1 and 2
This tank is used in conjunction with the water treatment plant sump to recirculate and neutralize regeneration wastes prior to discharge. Tank capacity is 20,000 gallons. The tank discharge is routed to the water treatment plant complex sump.

e. Ionics Water Treatment System
All backwash and treatment system rinse water is routed to the water treatment plant complex sump. Wastewaters associated with periodic cleaning of the system are also routed to the water treatment plant complex sump.

(2) Acid and Caustic Tank Area Storm Runoff

This discharge consists of the runoff from the pad on which the acid and caustic bulk tanks are located. This discharge is routed to the waste settling pond.

Cooling Tower System - Units 1 and 2

The cooling tower system is a closed circuit system which includes the condensers and cooling towers. Components of this discharge include:

(1) Cooling Tower System Evaporation / Drift - Units 1 and 2

Evaporation/drift is estimated to be approximately 2% of the cooling tower system flow rate.

(2) Cooling Tower Blowdown - Units 1 and 2 (DSN005, DSN007)

Blowdown of the cooling tower system is required to maintain the proper chemical balance in the cooling tower system. At times, the blowdown is isolated while chemical additions for corrosion protection are being made. Average flows for DSN005 and DSN007 are approximately 710,000 gallons per event and 730,000 gallons per event, respectively.

(3) Cooling Tower System Overflow - Units 1 and 2 (DSN006, DSN008)

Periodically, due to imbalances or equipment malfunction in the cooling tower system, some of the system contents will overflow the basin and flow to the yard drains. When this occurs, action is initiated to correct the problem. Average flows for DSN006 and DSN008 are approximately 45,000 gallons per event per unit, based on 4 hours per event and 3 events per year.

Condenser Drain (Hot Well Flush) System - Units 1 and 2

This discharge is used periodically to control the level of contaminants in the steam cycle, especially during plant start-ups and in chemical control during system transients.

Sewage Treatment Plant (DSN009) System

In May 1994, the three sewage treatment plants at FNP covered by the existing NPDES permit were replaced by a new sewage treatment plant. The three old plants are no longer in operation and will be permanently closed. The new plant has a capacity of 100,000 GPD with 96% BOD removal. A sand filter is in place to improve plant efficiency. The effluent from the sand filter can be discharged through three separate paths:

East Yard Drainage System (normal flow path)
Waste Settling Pond (alternate)
Southeast Yard Drainage System (alternate)

Miscellaneous Systems

(1) Chemical Metal Cleaning Wastes (DSN012) System

Wastewaters which result from chemical metal cleaning activities associated with plant systems will be treated and discharged in accordance with the requirements of 40 CFR Part 423. This generic point establishes monitoring requirements and effluent limits for the treatment process. The effluent from the treatment process may be discharged to various outfalls based on the location of the metal cleaning activities provided DSN012 limits are met.

(2) Treated Chromate Bearing Waste Water (DSN013) System

This discharge point involves a portable ion-exchange wastewater treatment unit which is used to remove chromium from component cooling water containing potassium chromate as a corrosion inhibitor. This portable system may be moved to various parts of the plant for use and may be released via numerous sumps and drains which are routed to various discharge points. Monitoring to confirm compliance with chromium limits is conducted on each batch of wastewater treated. The average flow is approximately 500 gallons per batch.

Yard Drainage System

(1) Southeast Yard Drainage (DSN024)

This drainage receives storm runoff from buildings and yards in the southeast areas of the plant as well as equipment cooling water and other non-routine inputs. The average flow is approximately 34,900,000 gallons per event from a drainage area of

approximately 204 acres. This drainage consists of the following:

(a) Southeast Yard Drain

This drain system provides a discharge path for the roof and yard drains in the southeast parts of the plant. Other inputs to the system are described below:

1. Diesel Building Sump
   The discharge from the diesel building sump is routed to the southeast yard drain.

2. Low Voltage Switchyard Transformer Area Runoff
   All plant main power transformers are surrounded by a concrete berm which will direct any transformer oil from a spill or rupture to an oil separator. Any rainwater which collects in the area passes through the oil separator prior to discharge to the yard drains. The separator is designed to retain the entire volume of the largest transformer in case of rupture.

3. Circulating Water Pumps Sump Discharge - Unit 1
   This discharge is primarily sanitary water. Cooling water supplied by the circulating water pump discharge header is used as a back-up supply.

4. Service Building HVAC Sump Discharge
   This discharge is used to regulate the amount of suspended and dissolved solids in the HVAC system below the allowable levels. Supply to this system is demineralized water or potable water.

5. Diesel Generator Fuel Oil Storage Tanks Unloading Pad Storm Runoff
   The unloading pad is designed to provide containment for any diesel fuel spilled during unloading activities. Periodically, the rainwater that collects on the pad must be drained. This drainage is routed to the southeast yard drain.

6. Turbine Building Oil Sump - Unit 1
   The turbine building oil sump collects small amounts of water in addition to the oil from various equipment. The water is discharged through a portable oil/water separator to the southeast yard drain.

(b) Utility Building Area Runoff

General runoff from this area is routed to the southeast yard drainage.

(c) Auxiliary Boiler Diesel Fuel Oil Tank Retention Area Storm Runoff

The auxiliary boiler diesel fuel oil tank is surrounded by a containment structure which is designed to retain the entire contents of the tank in case of rupture. Periodically, rainwater which collects inside the containment structure must be drained. This drainage is routed to the southeast yard drainage.

(d) Waste Settling Pond

Discharge from the waste settling pond is routed to the southeast yard drainage.

(2) East Yard Drainage (DSN025)

This drainage receives storm runoff from buildings and yards in the east plant areas as well as equipment cooling water and other non-routine inputs. The average flow is approximately 684,200 gallons per event from a drainage area of approximately 4 acres.

East Yard Drain

The east yard drain is the collection point for all the various plant water inputs to the east yard drainage. The inputs are described below:

1. Tendon Access Gallery Sump Discharge - Units 1 and 2
   This discharge consists primarily of ground water which seeps into the annulus around the containment buildings.

2. Fire Pump Cooling Water
   The supply for this cooling water is the fire pump discharge header. The discharge is routed to the east yard drain.

3. Central Alarm Station HVAC Cooling Water
   The sanitary water system provides the cooling water to the Central Alarm Station HVAC system. The discharge is routed to the east yard drain.

4. Cooling Tower System Overflow - Unit 1 (DSN006)
   Periodically, due to imbalances or equipment malfunctions in the cooling tower system, some of the system contents will overflow the basins and will flow to the east yard drain. When this occurs, immediate action is initiated to correct the problem. The contents of the system are periodically pumped out for maintenance. This volume of water is discharged to the east yard drain.

5. Electrical Cable Tunnel Sump Discharge
   There is a concrete underground tunnel which connects the diesel generator building with the Unit #1 Auxiliary building. This tunnel provides a path for emergency power to be supplied to the plant. The sump collects and discharges any ground water which may collect in the tunnel to the east yard drain.

6. Turbine Building Air Compressor Cooling Water - Units 1 & 2
   The service water system provides cooling water to the Turbine building air compressors. This discharge is routed to the east yard drain.

(3) Northcentral Yard Drainage (DSN027)

The northcentral yard drainage collects storm runoff from buildings and yards in the northcentral area of the plant as well as plant water inputs on a routine basis. The northcentral yard drain consists of three pipes which merge into one common discharge prior to contact with Wilson Creek. The average flow is approximately 855,300 gallons per event from a drainage area of approximately 5 acres. The components of this system are described below:

1. Circulating Water Pump Sump Discharge - Unit 2
   This discharge is primarily cooling water supplied by the circulating water pump discharge heater. Sanitary water is supplied as a backup.

2. Turbine Building Oil Sump - Unit 2
   The turbine building oil sump collects small amounts of water in addition to the oil from various equipment. The water is discharged through a portable oil/water separator to the north central yard drain.

3. Cooling Tower System Overflow - Unit 2 (DSN008)
   Periodically, due to imbalances or equipment malfunctions in the cooling tower system, some of the system contents will overflow the basins and will flow to the north central yard drain. When this occurs, immediate action is initiated to correct the problem. The contents of the system are periodically pumped out for maintenance. This volume of water is discharged to the north central yard drain.

(4) Northwest Yard Drainage (DSN026)

The northwest yard drain collects runoff from a small part of the northwest area of the plant and receives the discharge from the construction air compressor structure.

The average flow is approximately 684,200 gallons per event from an approximate drainage area of 4 acres. The discharges from the air compressor structure are described below:

(a) Construction Air Compressor Cooling Water

The potable water system provides secondary cooling for the compressed air system. The discharge is routed through an oil/water separator to the northwest yard drain.

(b) Construction Air Compressor Structure Drains

The floor drains from the air compressor structure are routed through an oil/water separator to the northwest yard drain.

(c) High Voltage Switchyard Drainage

This discharge consists of stormwater drainage from the west side of the high voltage switchyard to the northwest yard drain.

(5) West Yard Drainage (DSN028)

The west yard drain collects runoff from the west portion of the plant and the construction garage and routes it to Wilson Creek. The average flow is approximately 2,600,000 gallons per event from a drainage area of approximately 15 acres.

(a) Construction Garage Wash Area Oil/Water Separator

Discharge from the construction garage wash area is discharged to an oil/water separator. The effluent from the oil/water separator discharges to the west yard drain which ultimately discharges to Wilson Creek.

(6) Southwest Yard Drainage (DSN029)

The southwest yard drainage system provides a discharge path for drainage from the southwest area of the plant, the main parking lot, and the Fire Training Center. The average flow is approximately 500,000 gallons per event from an approximate area of 2 acres.

(a) Fire Training Area Fuel Oil Storage Area Oil/Water Separator

The oil/water separator removes any oil which may be combined with rainwater inside the oil storage area berm prior to discharge. The discharge from this oil water separator is routed to the southwest yard discharge.

(b) Fire Training Area Storm Water Runoff

The majority of the stormwater runoff from this area is routed to a oil/water separator before discharging to the southwest yard drainage.

(c) Main Parking Lot Runoff

Storm water runoff from the main parking lot is routed to the southwest yard drainage.

(d) Service Water Structure Sump Discharge - Units 1 and 2

All cooling waters and leakage flows are routed to the building sump and are subsequently discharged to the southwest yard drainage.

(7) Water Tank Drainage System

There are several tank systems that store water for various plant uses. On occasion, these tanks require drainage for testing or maintenance operations. The tanks in this system are described below:

(a) Clarified/Well Water Storage Tank Drainage

Drainage from this tank would be routed to the southeast yard drain.

(b) Demineralizer Water Storage Tank Drainage

Drainage from these tanks would be routed to the southeast yard drain.

(c) Condensate Storage Tank Drainage - Units 1 and 2

Drainage from these tanks would be routed to the east yard drain.

(d) Sanitary Water Tank Drainage (Production & Construction)

Drainage from these tanks would be routed to the east yard drain (Production) and the northwest yard drain (Construction).

(e) Fire Protection Tank Drainage

Drainage from these tanks would be routed to the east yard drain.

(8) Well Water System

On-site wells provide groundwater for the sanitary water system, for the fire protection system, and as back-up to the demineralizers. Occasionally, if a well has not been used for a period of time, it must be flushed to produce water of acceptable quality for plant use.

(9) Miscellaneous Valve Boxes - Units 1 and 2

Miscellaneous valve boxes which collect and discharge any rainwater or valve leakoff to the yard drain system are located in various areas of the plant.

ATTACHMENT TO EPA FORM 2C
PROPOSED PERMIT REVISIONS

FARLEY NUCLEAR PLANT
NPDES Permit No. AL0024619

Description of Proposed Permit Revisions

DSN001 - Main Combined Facility Discharge

1. It is requested that the requirements of DSN001 be revised to allow monitoring of Total Chromium once per month by grab sample at this outfall. Monitoring at this point is proposed in lieu of previous internal monitoring requirements at outfalls DSN019 and DSN020 (Liquid Radwaste Systems, Units 1 and 2).

   The proposed revision is intended to provide a monitoring point which is representative of all potential paths for discharge of chromium used as a corrosion inhibitor in the Farley Nuclear Plant component cooling water system. It is proposed that a monitoring requirement for chromium be included in Part I of the permit for DSN001. The proposed monitoring frequency is once per month. A narrative statement indicating Water Quality Standards shall not be violated is proposed in lieu of numerical limits since chromium concentrations should be near or below detection levels at DSN001. The following footnote language is proposed:

   "Discharges of chromium via this DSN shall not violate State Water Quality Standards in the receiving stream."

2. It is requested that footnote 4 be modified to read:

   "Samples to be collected during periods of discharge after lay-up or other non-routine activities where hydrazine has been added."

   This modification is proposed to clarify monitoring requirements for non-routine discharges containing hydrazine not resulting from lay-up activities.

DSN002 - Service Water and Service Water Bypass, Unit 1
DSN003 - Service Water and Service Water Bypass, Unit 2

It is requested that DSN002 and DSN003 be deleted. These internal points were monitored in a previous NPDES permit, but are no longer utilized. The existing permit defines the points but does not require monitoring.

DSN005 - Cooling Tower Blowdown, Unit 1
DSN006 - Cooling Tower Overflow, Unit 1
DSN007 - Cooling Tower Blowdown - Unit 2
DSN008 - Cooling Tower Overflow, Unit 2

It is requested that the monitoring frequency for Total Zinc for these outfalls be reduced to once per month. This request is based on past monitoring data which documents consistent compliance with the 1.0 ppm limit for zinc .

DSN009 - Main Sewage Treatment Plant 1

In May 1994, the three sewage treatment plants at FNP covered by the existing NPDES permit were replaced by a new sewage treatment plant. The discharge from the new sewage treatment plant is routed through the existing DSN009 discharge path. It is requested that the title for this outfall be modified to delete the word "Main" and the number "1" designation, since the new sewage treatment plant will be only one in operation at Plant Farley.

DSN010 - Sewage Treatment Plant 2A
DSN011 - Sewage Treatment Plant 2B

It is requested that these outfalls be deleted from the permit. Sewage treatment plants 2A and 2B are no longer in operation and will be permanently closed.

DSN013 - Treated Chromate Bearing Wastewater

The treated Chromate Bearing Wastewater DSN013 permit point provides discharge monitoring requirements for a portable ion-exchange wastewater treatment unit which is used to remove chromium from component cooling water containing potassium chromate as a corrosion inhibitor. This unit is moved to various locations as needed to treat chromated water at FNP. Monitoring to confirm compliance with chromium limits is conducted on each batch of wastewater treated. Since an ion exchange process is utilized, monitoring for Oil and Grease and Total Suspended Solids is not warranted. Past monitoring data documents TSS and O & G values have been consistently low or non-detectable.

It is requested that the monitoring requirements for Oil and Grease and Total Suspended Solids be removed from the permit for this DSN.

DSN014 - Waste Settling Pond

It is requested that the monitoring frequency for the parameters of flow, pH, Oil and Grease, and Total Suspended Solids be reduced to once per quarter. This request is based on past monitoring data which documents consistent compliance with monitoring parameters for this point.

DSN015 - Turbine Building Sump, Unit 1
DSN016 - Turbine Building Sump, Unit 2

It is requested that monitoring requirements for Total Suspended Solids be deleted since the wastewater discharged via these outfalls is primarily plant service water (river water) which, during certain periods, is naturally high in suspended solids. As such, monitoring for suspended solids is not representative of the process wastewater.

DSN017 - Steam Generator Blowdown, Unit 1
DSN018 - Steam Generator Blowdown, Unit 2

1. It is requested that these outfalls be deleted from the permit. Steam generator blowdown at FNP consists of a low flow (approximately 100 gpm) stream of ultra pure water (approximately 20-30 umhos/cm conductivity). Monitoring of this stream for Total Suspended Solids (TSS) and Oil and Grease is not necessary. Historic monitoring data documents that values for TSS and Oil and Grease are consistently below detection limits.

2. In addition, it is requested that the requirement to monitor boron at these outfalls be removed from the permit. Historic monitoring data also confirms that discharges of boron associated with these DSN's are not of environmental concern.

DSN019 - Liquid Radwaste System - Unit 1
DSN020 - Liquid Radwaste System - Unit 2

1. It is requested that the monitoring requirements for Total Chromium be deleted from these discharge points. Monitoring for Total Chromium at the Main Combined Facility Discharge has been proposed in lieu of monitoring at these DSN's. Wastewater containing chromates discharged via these points is treated using ion exchange resins such that no significant potential for discharge of chromium exists. As such, monitoring for chromium at these DSN's is not necessary.

2. It is requested that the monitoring requirements for Total Suspended Solids be reduced from once per quarter to once per 6 months. This request is based on past compliance history for these outfalls.

3. It is requested that the following sentence be deleted:

   "All wastes discharged through this serial number shall, as a minimum, receive treatment consisting of filtration."

   This sentence has been carried forward from previous permits and is no longer relevant to the disposal process for this wastewater.

DSN021 - Plant Transformer Area Runoff

It is requested that this outfall be deleted since this discharge is a component of the existing permitted Southeast Yard Drainage (DSN024) outfall. No monitoring requirements were specified in previous permits for this DSN.

DSN022 - River Water Building Sump - Unit 1
DSN023 - River Water Building Sump - Unit 2

It is requested that the names for these outfalls be changed to River Water Building Sump - South (DSN022) and River Water Building Sump - North (DSN023) to more accurately describe the outfalls.

DSN031 - Service Water Structure Sump Discharge

It is requested that this outfall be deleted since this discharge is a component of the existing permitted Southwest Yard Drainage (DSN029). No monitoring requirements were specified in previous permits for this DSN.

DSN032 - River Water Pumps Mini-Flow to the Intake Canal, Unit 1
DSN033 - River Water Pumps Mini-Flow to the Intake Canal, Unit 2

It is requested that these outfalls be deleted from the permit. The River Water Pumps Mini-Flows provide a mechanism to ensure a small flow of river water at all times to prevent pump overpressurization. The water flowing in these lines is river water which is withdrawn from the intake canal and returned directly to the intake canal. Since the discharge consists only of river water which is not altered chemically or physically by the mini-flow process, definition as a discharge monitoring point in the permit seems unwarranted. As such, these points are unnecessary and should be deleted.

DSN034 - Miscellaneous Low Flow, Noncontact Cooling Water Sources

This generic point was contained in the existing and previous permits to cover discharges of low flow non-contact cooling water to storm drains. It is requested that this outfall be deleted since this type of discharge is now a component of non-storm water discharge exceptions identified in EPA's final NPDES general permits for storm water discharges associated with industrial activity. These authorized non-storm water discharges included the following: discharges from fire fighting activities, fire hydrant flushings, potable water sources including waterline flushings, irrigation drainage, lawn watering, routine external building washdown that does not use detergents or other compounds, pavement washwaters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used, air conditioning condensate, uncontaminated

springs, uncontaminated ground water, and foundation or footing drains where flows are not contaminated with process materials such as solvents.

ADDITIONAL ITEMS

1. It is requested that the language of Part IV.A.11) be revised to read:

   "Permittee shall document the reapplication of wood preservative chemicals in the tower and the expected maximum concentration(s) of toxicants that are expected in the cooling tower blowdown and in DSN001. The documentation shall be maintained at the facility and shall be made available upon the request of the State Director or his designee. During the first week of cooling operation following a reapplication of wood preservatives, the permittee shall begin the toxicity testing program required by Part IV, Page 20 of this permit, unless directed otherwise by the Director. Additionally, documentation and retesting shall be required at the time of any future retreatment of the tower."

2. It is requested that the following item be added under Part IV.A of the permit:

   "Stormwater runoff may include non-storm discharges consisting of discharges from fire fighting activities, fire hydrant flushings, potable water sources including waterline flushings, irrigation drainage, lawn watering, routine eternal building washdown that does not use detergents or other compounds, pavement washwaters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where uncontaminated springs, uncontaminated groundwater, and foundation or footing drains where flows are not contaminated with process materials such as solvents."

3. It is requested that the language in Part IV.C.2 be revised to read:

   "The above biomonitoring tests shall begin 90 days after the effective date of this permit, and be performed once per year through the expiration date of this permit. Biomonitoring test results obtained during each period shall be summarized on the appropriate report form approved by the Department, and submitted no later than 28 days following the period. Samples collected for biomonitoring tests shall be collected during periods of cooling tower blowdown."

ENCLOSURE 3
EPA FORM 2F

Please print or type in the unshaded areas only

EPA ID Number (copy from item I of Form 1)
AL0024619

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

Form 2F NPDES

United States Environmental Protection Agency
Washington, DC 20460

Application for Permit To Discharge Stormwater 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 ATTACHMENT		

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.

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 ATTACHMENT				

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, in the last three years, 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 ATTACHMENT

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
	N/A	

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. D. WOODARD EXECUTIVE VICE PRESIDENT		1-25-95

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 ATTACHMENT

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 FARLEY IN THE LAST THREE YEARS.

Continued from Page 2

EPA ID Number *(copy from Item I of Form 1)*
AL0024619

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 pollutant listed in Table 2F-2 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

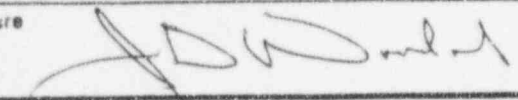
Were any of the analyses reported in Item V performed by a contract laboratory or consulting firm?

[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 and temperature

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. D. WOODARD EXECUTIVE VICE PRESIDENT	(205) 868-5086
C. Signature 	D. Date Signed 1-25-95

EPA ID Number (copy from item I of Form 1)
AL0024619

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

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 30 Minutes	Flow-weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite		
Oil and Grease						
Biological Oxygen Demand (BOD5)	SEE ATTACHED CHEMICAL ANALYSIS REPORTS					
Chemical Oxygen Demand (COD)						
Total Suspended Solids (TSS)						
Total Kjeldahl Nitrogen						
Nitrate plus Nitrite Nitrogen						
Total Phosphorus						
	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 30 Minutes	Flow-weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite		
SEE ATTACHED CHEMICAL ANALYSIS REPORTS						

Continue on Reverse

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		
N/A						

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 (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 floe rate during rain event (gallons/minute or specify units	6. Total flow from rain event (gallons or specify units)	7. Season sample was taken	8. Form of Precipitation (rainfall, snowmelt)
12/29/94	420	0.33	> 72 hours	0.138cfs	1871ft^3	Winter	Rainfall

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

SEE ATTACHMENT

ATTACHMENT TO EPA FORM 2F
SECTION 1 OUTFALL LOCATIONS

OUTFALL LOCATIONS

The following outfalls located on the Farley Nuclear Plant site convey stormwater runoff from areas associated with industrial activity to the Chattahoochee River. None of the areas discharge directly to the river but discharge directly or indirectly to small tributaries, including Wilson Creek, which ultimately discharge to the Chattahoochee River. The stormwater drainages and their corresponding DSN's are tabulized below. DSN's 024, 025, and 029 discharge indirectly to the Chattahoochee River (31 deg. 12 min. 52 sec. Latitude, 85 deg. 05 min. 55 sec. Longitude) via unnamed tributaries on the site. DSN's 026, 027, and 028 discharge to Wilson Creek (31 deg. 13 min. 45 sec. Latitude, 85 deg. 06 min. 45 sec. Longitude).

Description	**Discharge Serial No. (DSN)**
Southeast Yard Drainage	DSN024
East Yard Drainage	DSN025
Northwest Yard Drainage	DSN026
Northcentral Yard Drainage	DSN027
West Yard Drainage	DSN028
Southwest Yard Drainage	DSN029

ATTACHMENT TO EPA FORM 2F
SECTION III SITE DRAINAGE MAP

ATTACHMENT TO EPA FORM 2F
SECTION IV A DESCRIPTION OF STORMWATER OUTFALLS

DESCRIPTION OF STORMWATER OUTFALLS

The following outfalls are utilized to convey stormwater associated with industrial activity at Farley Nuclear Plant from the referenced drainage areas to the Chattahoochee River. The drainage areas are briefly described in the following table.

Outfall	Description
DSN024 Southeast Yard Drainage	The Southeast Yard Drainage receives stormwater runoff from buildings and yards in the southeast areas of the plant. The average flow is approximately 34,900,000 gallons per event from a drainage area of approximately 204 acres.
DSN025 East Yard Drainage	This drainage receives stormwater runoff from buildings and yards in the east plant areas. The average flow is approximately 684,200 gallons per event from a drainage area of approximately 4 acres.
DSN026 Northwest Yard Drainage	This drainage receives runoff from the northwest area of the plant. The average flow is approximately 684,200 gallons per event from an approximate drainage area of 4 acres.
DSN027 Northcentral Yard Drainage	This drainage receives stormwater runoff from buildings and yards in the northcentral area of the plant. The flow is approximately 855,300 gallons per event from a drainage area of approximately 5 acres.
DSN028 West Yard Drainage	This drainage receives stormwater runoff from primarily yard areas in the west portion of the site. The average flow is approximately 2,600,000 gallons per event from a drainage area of approximately 15 acres.

DESCRIPTION OF STORMWATER OUTFALLS (CONT'D)

DSN029 Southwest Yard Drainage	This drainage receives stormwater from the southwest portion of the plant including the main parking lot and Fire Training Center. The average flow is approximately 500,000 gallons per event from a drainage area of approximately 2 acres.

ATTACHMENT TO EPA FORM 2F
SECTION IV B MATERIALS MANAGEMENT PRACTICES

ATTACHMENT TO EPA FORM 2-F

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

There have been no significant quantities of hazardous materials at Farley Nuclear Plant over the past three years which have been treated, stored, or disposed in a manner which would result in exposure to storm water and/or contamination of storm water runoff. The following Farley Nuclear Plant procedures address management of hazardous materials and hazardous wastes and provide guidance relative to prevention of contamination resulting from contact with stormwater.

FNP-0-AP-60 Oil Spill Prevention, Control, and Countermeasure Plan, Hazardous Waste Contingency Plan

FNP-0-CCP-900 Hazardous Waste Holding Area Requirements

FNP-0-CCP-901 Shipping of Hazardous Wastes

FNP-0-CCP-904 Receipt and Identification of Industrial Wastes

FNP-0-CCP-905 Chemistry Support to FNP-0-M-49

FNP-0-M-49 Chemical Product Control Program

FNP-0-SHP-26 Hazard Communication Program

FNP-0-SHP-30 Waste Disposal

FNP-0-SHP-116 Operation of the Farley Nuclear Plant Landfill

FNP-0-TCP-23 Hazardous Waste Training Plan

In addition to the above procedures, proactive materials management practices are employed to minimize contact of hazardous materials with stromwater including indoor storage, structural control measures, secondary containment for tanks and container storage, and materials management training. A formal Hazard Communication Program (FNP-0-SHP-26) has also been implemented.

ATTACHMENT TO EPA FORM 2F
SECTION IV C STRUCTURAL CONTROL MEASURES

DESCRIPTION OF STRUCTURAL CONTROLS

Structural control methods utilized at Farley Nuclear Plant to control contact of stormwater with pollutants include:

Containments

Concrete containments are utilized around tanks and drum storage areas containing hazardous materials. Drainage from containment areas is strictly controlled by procedure to ensure accumulated rainwater is not contaminated with the stored material prior to release.

Site Drainage System

A system of pipes, concrete culverts, and spillways is utilized to collect and channel stormwater flow in areas where high flows pose significant potential for erosion.

Use of Grass Swales, Vegetation/Revegetation of Eroded Areas

Natural grass swales are utilized when appropriate for drainage of sheet flow runoff from large areas of the site. This promotes infiltration and minimizes erosion by slowing runoff velocity. Eroded or newly disturbed areas are promptly vegetated to prevent soil contamination of runoff.

ATTACHMENT TO EPA FORM 2F
SECTION V B DESCRIPTION OF SAMPLE POINTS

DESCRIPTION OF STORMWATER SAMPLE POINTS/SAMPLING PROCESS

Stormwater samples were obtained from two sample points on the Farley Nuclear Plant site during a 0.33 inch rainfall event which occurred on December 29, 1994. The sample points were a yard drain near Cooling Tower 1C and a drain near the bulk hydrogen storage area. Both points are located in the power block area and are representative of the quality of stormwater runoff associated with industrial activity at Farley Nuclear Plant. Both manual grab and manual composite samples were collected in accordance with EPA methodology during the rainfall event. Field data and analytical data are presented in a separate attachment.

The stormwater drainage system at Farley Nuclear Plant was evaluated for non-stormwater discharges by:

(1) Review of drainage drawings

(2) Plant walkdowns, and

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

ATTACHMENT TO EPA FORM 2F
SECTION VII A & B DISCHARGE INFORMATION
CHEMICAL ANALYSIS REPORTS

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

Alabama Power

Certificate of Analysis

TO : MS. LESA DANIELS
ADDRESS: SOUTHERN NUCLEAR
BIN B-064, INVERNESS

REPORT DATE : 01/17/95
SAMPLE DATE/TIME: 12/29/94 12:30
SAMPLE NUMBER : 941230-0062
LOCATION NUMBER : FNP001

DESCRIPTION: FNP STORMWATER, POINT #1, YARD DRAIN BY HYDROGEN CYL, GRAB

TEST	REFERENCE	RESULT	UNITS
pH	EPA PB84/150.1	8.33	SU
Biochemical Oxygen Demand, 5 Day	Std Md 18th Ed-5210B	4.	mg/l
Chemical Oxygen Demand	EPA 410.1	31.	mg/l
Precipitation		0.33	inches
Precipitation duration		7.0	hours
Flow		1871.0	cubic ft
Oil and Grease	EPA PB84/413.1	< 1.0	mg/l
Solids, Total Suspended	EPA PB84/160.2	9.	mg/l
Temperature		15.0	Deg C
Nitrate-Nitrite (as N)	EPA 353.2	1.58	mg/l
Nitrogen, Total Kjehldahl	EPA PB84/351.3	0.34	mg/l
Phosphorus, Total	EPA 365.2	0.262	mg/l

This Certificate is for the physical and/or chemical characteristics of the sample as submitted.
The laboratory cannot attest to the origin and representation of the sample.

CC: MR. W. S. HILL
MR. JIM PORLIER

Chemist	Quality Control	Supv. Chemist	Page
	MARK LESTER	HAROLD WESTON	1 of 1

5-2790 Rev. 8/85
FILE: SW

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

Alabama Power

Certificate of Analysis

TO : MS. LESA DANIELS
ADDRESS: SOUTHERN NUCLEAR
BIN B-064, INVERNESS

REPORT DATE : 01/17/95
SAMPLE DATE/TIME: 12/29/94 12:30
SAMPLE NUMBER : 941230-0063
LOCATION NUMBER : FNP001

DESCRIPTION: FNP STORMWATER, POINT #1, YARD DRAIN BY HYDROGEN CYL, COMPOS

TEST	REFERENCE	RESULT	UNITS
Biochemical Oxygen Demand, 5 Day	Std Md 18th Ed-5210B	4.	mg/l
Chemical Oxygen Demand	EPA 410.1	19.	mg/l
Precipitation		0.33	inches
Precipitation duration		7.0	hours
Flow		1871.0	cubic ft
Solids, Total Suspended	EPA PB84/160.2	6.	mg/l
Nitrate-Nitrite (as N)	EPA 353.2	1.91	mg/l
Nitrogen, Total Kjehldahl	EPA PB84/351.3	0.21	mg/l
Phosphorus, Total	EPA 365.2	0.146	mg/l

This Certificate is for the physical and/or chemical characteristics of the sample as submitted.
The laboratory cannot attest to the origin and representation of the sample.

CC: MR. W. S. HILL
MR. JIM PORLIER

Chemist	Quality Control	Supv. Chemist	Page
	MARK LESTER	HAROLD WESTON	1 of 1

5-2790 Rev. 8/85
FILE: SW

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

Alabama Power

Certificate of Analysis

TO : MS. LESA DANIELS
ADDRESS: SOUTHERN NUCLEAR
BIN B-064, INVERNESS

REPORT DATE : 01/17/95
SAMPLE DATE/TIME: 12/29/94 12:30
SAMPLE NUMBER : 941230-0065
LOCATION NUMBER : FNP002

DESCRIPTION: FNP STORMWATER, POINT 2, YARD DRAIN BY COOLING TWR 1C, GRAB

TEST	REFERENCE	RESULT	UNITS
pH	EPA PB84/150.1	8.55	SU
Biochemical Oxygen Demand, 5 Day	Std Md 18th Ed-5210B	4.	mg/l
Chemical Oxygen Demand	EPA 410.1	53.	mg/l
Precipitation		0.35	inches
Precipitation duration		7.0	hours
Flow		357.0	cubic ft
Oil and Grease	EPA PB84/413.1	< 1.0	mg/l
Solids, Total Suspended	EPA PB84/160.2	44.	mg/l
Temperature		14.0	Deg C
Nitrate-Nitrite (as N)	EPA 353.2	1.79	mg/l
Nitrogen, Total Kjehldahl	EPA PB84/351.3	0.44	mg/l
Phosphorus, Total	EPA 365.2	0.398	mg/l

This Certificate is for the physical and/or chemical characteristics of the sample as submitted.
The laboratory cannot attest to the origin and representation of the sample.

CC: MR. W. S. HILL
MR. JIM PORLIER

Chemist	Quality Control	Supv. Chemist	Page
	MARK LESTER	HAROLD WESTON	1 of 1

S-2790 Rev. 8/85
FILE: SW

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

Alabama Power

Certificate of Analysis

TO : MS. LESA DANIELS
ADDRESS: SOUTHERN NUCLEAR
BIN B-064, INVERNESS

REPORT DATE : 01/17/95
SAMPLE DATE/TIME: 12/29/94 15:40
SAMPLE NUMBER : 941230-0066
LOCATION NUMBER : FNP002

DESCRIPTION: FNP STORMWATER, POINT 2, YARD DRAIN BY COOLING TWR 1C, COMP

TEST	REFERENCE	RESULT	UNITS
Biochemical Oxygen Demand, 5 Day	Std Md 18th Ed-5210B	4.	mg/l
Chemical Oxygen Demand	EPA 410.1	44.	mg/l
Precipitation		0.33	inches
Precipitation duration		7.0	hours
Flow		357.0	cubic ft
Solids, Total Suspended	EPA PB84/160.2	47.	mg/l
Nitrate-Nitrite (as N)	EPA 353.2	1.46	mg/l
Nitrogen, Total Kjehldahl	EPA PB84/351.3	0.20	mg/l
Phosphorus, Total	EPA 365.2	0.345	mg/l

This Certificate is for the physical and/or chemical characteristics of the sample as submitted.
The laboratory cannot attest to the origin and representation of the sample.

CC: MR. W. S. HILL
MR. JIM PORLIER

Chemist	Quality Control	Supv. Chemist	Page
	MARK LESTER	HAROLD WESTON	1 of 1

S-2790 Rev. 8-85
FILE: SW

FNP-O-CCP-208
Page _____ of _____

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

Alabama Power

Requested Completion Date 12-30-94 Results To: Lean Daniels -ES Ext. _____

(Explain) NPDES Permit Renewal

Jim Parker -FNP/ENV Ext. 4265

Dept. No. _____

Site Representative _____ Requested By J Parker

Collector(s) Jim Pope, Susan Beasley, Brian Hilliard Date Sampled 12-29-94 Time 1230 AM (PM)

Location of Sampling (Name of Facility, etc.) FNP

Analyses Requested O+G, TSS, BOD, COD, TKN, Total P, NO_3/NO_2

Rain Water Samples

Special Handling and/or Storage Refrigerate

Relinquished By	Date/Time	Received By	Date/Time
Richard L. Hilliard	12/30/94 1237		
John M. Morris	12/30/94 1235	Mary Lester	12/30/94 1300

Sample No.	Field Information (Sample Description, Date, Etc.)		* Lab ID
			941230
1	Sample Point #1 Grab - O+G	12-29-94/1230	
2	Sample Point #1 Grab - COD, TKN & Total P	12-29-94/1230	62
3	Sample Point #1 Grab - BOD, TSS & Nitrate/Nitrite	12-29-94/1230	
4	Sample Point #1 Composite - COD, TKN & Total P	12-29-94/1230 1530	63
5	Sample Point #1 Composite - BOD, TSS & Nitrate/Nitrite	12-29-94/1230 1530	
6	Sample Point #2 - Same as #1	12-29-94/1240	65
7	#2	12-29-94/1240	
8	#3	12-29-94/1240	
9	#4	12-29-94/1240 1540	66
10	#5	12-29-94/1240 1540	

* For General Lab Use Only

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

Form 5-4001a Rev. 4/90

CHM Form 508
Page 1 of 2
Rev. 28

44-00149

ATTACHMENT TO EPA FORM 2F
SECTION VII D DESCRIPTION OF SAMPLING/FLOW MEASUREMENT METHODOLOGY

ATTACHMENT TO EPA FORM 2F

FARLEY NUCLEAR PLANT
EPA FORM 3510-2F
ITEM VII.D.9

Description of Sampling Method and Flow Measurement:

The collection of the samples for the reported analyses was performed using appropriate sample containers, sample preservation and holding times. For the parameters of pH and oil and grease, grab samples were taken during the first 30 minutes of the discharge as required. For all other parameters, both a grab sample collected during the first 30 minutes of the discharge and a flow-weighted composite sample were taken for analysis. All samples were collected from the discharge resulting from a storm event greater than 0.1 inches (0.33 inches total rainfall).

Flow rate was determined by estimating velocity of the storm water in the discharge pipe and measuring the pipe wetted cross-sectional area. Based on repeated measurements conducted over the duration of the sampling event, the maximum observed flow rate was 0.138 cubic feet per second.

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