Dave Morey
Vice President
Farley Project

Southern Nuclear Operating Company
P.O. Box 1295
Birmingham, Alabama 35201

Tel 205.992.5131

SOUTHERN COMPANY
Energy to Serve Your World℠

May 16, 2000

Docket Nos.: 50-348
50-364

NEL-00-0138

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555-0001

Joseph M. Farley Nuclear Plant
NPDES Permit Renewal

Ladies and 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.

If you have questions please advise.

Respectfully submitted,

Dave Morey

GDE/maf: nrcapptran.doc
Attachment
1. SNC Letter ENV-00-115, May 3, 2000
RE NPDES Permit No. AL0024619

C001

NRR-070

cc: Southern Nuclear Operating Company
Mr. L. M. Stinson, General Manager

U. S. Nuclear Regulatory Commission, Washington, D. C.
Mr. L. M. Padovan, Licensing Project Manager – Farley

U. S. Nuclear Regulatory Commission, Region II
Mr. L. A. Reyes, Regional Administrator
Mr. T. P. Johnson, Senior Resident Inspector – Farley

ATTACHMENT

SNC LETTER ENV-00-115, May 3, 2000

RE

NPDES PERMIT NO. AL0024619

Southern Nuclear
Operating Company, Inc.
P. O. Box 1295
Birmingham, Alabama 35201-1295

Tel 205.992.5000

SOUTHERN COMPANY
Energy to Serve Your World℠

ENV-00-115

May 3, 2000

FEDERAL EXPRESS

Farley Nuclear Plant
NPDES Permit No. AL0024619

Mr. James W. Warr, Director
Alabama Department of Environmental Management
1751 Cong. W. L. Dickinson Drive
Montgomery, Alabama 36109-2608
Attention: Industrial Branch, Water Division

Dear Mr. Warr:

Enclosed is the NPDES Permit renewal application package for Farley Nuclear Plant (FNP). The current permit became effective November 1, 1995, and expires on October 31, 2000. The renewal package contains the completed ADEM Supplementary Permit Application Form and EPA Forms 3510-1, 3510-2C, and 3510-2F. Enclosure 1 contains the ADEM Supplementary Permit Application Form.

Enclosure 2 contains EPA Form 3510-1 and the required topographic map.

Enclosure 3 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 3 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 bases for each revision.

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

Enclosure 4 contains EPA Form 3510-2F. Certain information required by the form, including stormwater sample analyses, is provided in attachments to Enclosure 4.

A check in the amount of $4,800.00 is enclosed for payment of the required permit renewal fee per ADEM Administrative Code R.335-1-6. If you have any questions or require additional information regarding the enclosed reapplication package for FNP, please contact Greg Elmore at (205) 992-5264.

Sincerely,

T. C. Moorer for

Wayne C. Carr
Manager - Environmental Services

WCC/GDE

Enclosures

cc: Jim Phillips (w/Enclosures)

bcc: w/o Enclosure:
J. D. Woodard
D. N. Morey
R. D. Hill
L. M. Stinson
M. J. Ajluni
C. L. Buck
R. A. Livingston
J. D. Grogan
W. A. Sim
J. R. Porlier
SNC REES Route: T. C. Moorer / K. W. McCracken / A. H. Lovoy

w/Enclosure:
FNP Document Control (R-Type G01.029)
ES File E.01.13
SNC Document Management - Farley

Enclosure 1

ADEM NPDES Supplementary Permit Application Form

Farley Nuclear Plant
AL0024619

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
SUPPLEMENTARY PERMIT APPLICATION

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
WATER DIVISION - INDUSTRIAL SECTION
POST OFFICE BOX 301463
MONTGOMERY, ALABAMA 36130-1463

INSTRUCTIONS: THIS FORM SHOULD BE TYPED OR PRINTED IN INK.
IF INSUFFICIENT SPACE IS AVAILABLE TO ADDRESS ANY ITEM BELOW
PLEASE CONTINUE ON AN ATTACHED SHEET OF PAPER.

PURPOSE OF THIS APPLICATION

- ☐ INTIAL PERMIT APPLICATION FOR NEW FACILITY
- ☐ INITIAL PERMIT APPLICATION FOR EXISTING FACILITY
- ☐ MODIFICATION OF EXISTING PERMIT
- ☒ REISSUANCE OF EXISTING PERMIT

1. NAME OF FACILITY: Joseph M. Farley Nuclear Plant

FACILITY CONTACT (NAME & TITLE)
(IF POSSIBLE SHOULD BE SOMEONE LOCATED AT FACILITY): Wayne C. Carr, Manager - Env. Services

FACILITY MAILING ADDRESS (STREET OR P O BOX)	CITY	STATE	ZIP CODE
P.O. Box 1295	Birmingham	AL	35201

PHONE (AREA CODE & NUMBER): (205) 992-6387

2. FACILITY LOCATION (STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER): Houston County Highway 95 South

COUNTY	CITY	STATE	ZIP CODE
Houston	Columbia	AL	36319

3. PRIMARY SIC CODE: 4911

SECONDARY SIC CODE: N/A

4. NPDES OR GENERAL PERMIT NUMBERS (IF APPLICABLE): AL0024619

SID PERMIT NUMBER (IF APPLICABLE): N/A

5. RESPONSIBLE OFFICIAL OR CORPORATE OFFICER NAME * (TYPE OR PRINT): J. D. Woodard

OFFICIAL TITLE (TYPE OR PRINT): Executive Vice President

6. PARENT CORPORATION OF APPLICANT, IF ANY, AND MAILING ADDRESS
Southern Company, 270 Peachtree Street, Atlanta, GA 30303

7. SUBSIDIARY CORPORATION(S) OF APPLICANT OPERATING IN ALABAMA, IF ANY
N/A

8. (a) IF THE APPLICANT IS A PARTNERSHIP, CORPORATION, ASSOCIATION, OR OTHER BUSINESS ENTITY, IDENTIFY THE NAME, TITLE OR POSITION, AND RESIDENCE ADDRESS OF EACH OFFICER, PARTNER, DIRECTOR, OR PERSON PERFORMING A FUNCTION SIMILAR TO A DIRECTOR, OF THE APPLICANT HAVING THE AUTHORITY AND RESPONSIBILITY TO PREVENT AND ABATE VIOLATIONS OF THE ALABAMA WATER POLLUTION CONTROL ACT, AND THE ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT RULES AND REGULATIONS.

NAME	TITLE/POSITION	~~RESIDENCE ADDRESS~~
W. George Hairston III	President & CEO	(334) 899-5156 *
Jack D. Woodard	Executive Vice President	* Emergency Director phone
Dave N. Morey	Vice Pres. Farley Proj.	number where these contacts
		may be reached 24 hours a day.

*** - SEE SIGNATORY REQUIREMENTS FOR PERMIT APPLICATIONS FOR PROPER PERSON(S), PAGE 4**

(b) LIST NAME, PHONE NUMBER, AND ADDRESS OF REGISTERED AGENT OF THE APPLICANT LISTED ABOVE:

N/A

9. PERMIT NUMBERS AND/OR NAMES OF ANY PERMITS ISSUED BY ADEM OR EPA FOR AN ACTIVITY LOCATED IN ALABAMA THAT IS PRESENTLY HELD BY THE APPLICANT OR ITS PARENT OR SUBSIDIARY CORPORATION:

PERMIT NAME	PERMIT NUMBER	HELD BY
See Attached		

10. WATER SUPPLY SOURCE: (LIST IN MILLION GALLONS PER DAY (MGD) THE QUANTITY OF WATER USED FROME EACH SOURCE)

NOTE: IF MORE THAN ONE WELL OR SURFACE INTAKE PROVIDE DATA FOR EACH ON AN ATTACHMENT

CITY: 0 MGD WELL: See Attached WELL DEPTH: _____ FT LATITUDE _____ LONGITUDE _____

SURFACE INTAKE: 93.9 MGD INTAKE ELEVATION 64 * FT LATITUDE 31 13 01 LONGITUDE 85 05 58

NAME OF SURFACE WATER SOURCE: Chattahoochee River

11. PROVIDE A DESCRIPTION OF THE LOCATION OF ALL SITES INVOLVED IN THE STORAGE OF SOLIDS OR LIQUIDS THAT COULD BE ACCIDENTLY DISCHARGED TO A WATER OF THE STATE, EITHER DIRECTLY OR INDIRECTLY VIA SUCH AVENUES AS STORMW ATER DRAINAGE, MUNICIPAL WASTEWATER SYSTEMS, ETC., THAT ARE LOCATED AT THE FACILITY FOR WHICH THE NPDES APPLICATION IS BEING MADE. WHERE POSSIBLE THE LOCATION SHOULD BE NOTED ON THE MAP REQUIRED BY ITEM XI OF THE NPDES APPLICATION BEING MADE:

DESCRIPTION OF WASTE	DESCRIPTION OF STORAGE LOCATION
See Attached	See Attached

12. PROVIDE A DESCRIPTION OF THE LOCATION OF THE ULTIMATE DISPOSAL SITES OF SOLID OR LIQUID WASTE BY-PRODUCTS (SUCH AS SLUDGES) FROM ANY WASTEWATER TREATMENT SYSTEM LOCATED AT THE FACILITY.

DESCRIPTION OF WASTE (TO INCLUDE QUANTITY DISPOSED IN POUNDS/DAY)	DESCRIPTION OF STORAGE LOCATION
Sewage Treatment Sludge	City of Dothan Wastewater Treatment Plant
50,000 gal annually as batch releases	
(approx. 415,000 lb based on a specific gravity of 8.3 lb/gal)	

IN ACCORDANCE WITH 40 CFR 131.12 AND THE ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT ADMINISTRATIVE CODE, SECTION 335-6-10-.04 FOR ANTIDEGRADATION, THE FOLLOWING INFORMATION MUST BE PROVIDED. IF APPLICABLE. IT IS THE APPLICANT'S RESPONSIBILITY TO DEMONSTRATE THE SOCIAL AND ECONOMIC IMPORTANCE OF THE PROPOSED ACTIVITY. IF FURTHER INFORMATION IS REQUIRED TO MAKE THIS DEMONSTRATION, ATTACH ADDITIONAL SHEETS TO THE APPLICATION.

IS THIS A NEW OR INCREASED DISCHARGE THAT BEGAN AFTER APRIL 3, 1991? YES [ ] NO [X]. IF YES, COMPLETE QUESTIONS A THROUGH E UNDER ITEM 13 BELOW. IF NO, DO NOT COMPLETE THIS SECTION.

13. INFORMATION REQUIRED FOR NEW OR INCREASED DISCHARGES TO HIGH QUALITY WATERS.

A. OTHER THAN DIRECT DISCHARGE UNDER AN NPDES PERMIT, IS ANOTHER DISCHARGE ALTERNATIVE AVAILABLE (RECIRCULATION, SANITARY SEWER CONNECTION, LAND APPLICATION, ETC.)? YES [ ] NO [ ] REGARDLESS OF YOUR ANSWER ATTACHMENT I MUST BE COMPLETED AND SUBMITED WITH THIS APPLICATION.

B. WILL ACTIVITY OF THIS FACILITY AFFECT EMPLOYMENT (I.E., INCREASING, MAINTAINING, OR AVOIDING A REDUCTION IN EMPLOYMENT)? YES [ ] NO [ ]

* The bottom elevation of the intake canal is 64 feet above mean sea level.

C. WILL THE ACTIVITY OF THIS FACILITY CAUSE AN INCREASE IN PRODUCTION? YES [ ] NO [ ]

D. WILL THE ACTIVITY OF THIS FACILITY IMPROVE THE COMMUNITY TAX BASE? YES [ ] NO [ ]

E. WILL THE ACTIVITY OF THIS FACILITY HELP TO IMPROVE OR CORRECT AN ENVIRONMENTAL OR PUBLIC HEALTH PROBLEM? YES [ ] NO [ ]

IS YOUR DISCHARGE LOCATED WITHIN THE 10 FOOT ELEVATION OF MOBILE OR BALDWIN COUNTY? YES [ ] NO [X]
IF THE ANSWER TO THE ABOVE QUESTION IS YES, COMPLETE ITEM 14 BELOW.

14. INFORMATION REQUIRED FOR DISCHARGES TO WATERS OF THE COASTAL ZONE:

		YES	NO	UNKNOWN
A.	DOES THE PROJECT INVOLVE DISCHARGE TO COASTAL WATERS?	❑	❑	❑
B.	IS THIS PERMIT REQUIREING NEW CONSTRUCTION?	❑	❑	❑
C.	WILL THE PROJECT BE A SOURCE OF NEW AIR EMISSIONS?	❑	❑	❑
D.	DOES THE PROJECT INVOLVE DREDGING AND/OR FILLING?	❑	❑	❑
	HAS THE COE PERMIT BEEN RECEIVED?	❑	❑	❑
	CORPS PROJECT NUMBER_____			
E.	DOES THE PROJECT INVOLVE WETLANDS AND/OR SUBMERSED GRASSBEDS?	❑	❑	❑
F.	ARE OYSTER REEFS LOCATED NEAR THE PROJECT SITE? (INCLUDE MAP SHOWING PROJECT AND DISCHARGE LOCATION AND OYSTER REEFS)	❑	❑	❑
G.	DOES THE PROJECT INVOLVE THE SITING, CONSTRUCTION AND OPERATION OF AN ENERGY FACILITY AS DEFINED IN ADEM ADMIN. CODE R. 335-8-1-.02(bb)?	❑	❑	❑
H.	DOES THE PROJECT INVOLVE SHORELINE EROSION MITIGATION?	❑	❑	❑
I.	DOES THE PROJECT INVOLVE CONSTRUCTION ON BEACHES AND DUNES?	❑	❑	❑
J.	WILL THE PROJECT INTERFERE WITH PUBLIC ACCESS TO COASTAL WATERS?	❑	❑	❑
K.	DOES THE PROJECT LIE WITHIN THE 100 YEAR FLOODPLAIN?	❑	❑	❑
L.	DOES THE PROJECT INVOLVE THE REGISTRATION, SALE, USE OR APPLICATION OF PESTICIDES?	❑	❑	❑
M.	DOES THE PROJECT PROPOSE TO CONSTRUCT A NEW WELL OR ALTER AN EXISTING WELL TO PUMP MORE THAN 50 GPD – PERMIT OBTAINED?	❑	❑	❑

15. DESCRIPTION OF OPERATIONS (IF A NEW DISCHARGER PROVIDE ESTIMATED PRODUCTION)

	PRODUCTS(S) MANUFACTURED	LAST 12 MONTHS HIGHEST MONTH PRODUCTION (PROVIDE ACTUAL PRODUCTION & INCLUDE UNITS)	LAST 12 MONTHS DAYS OF OPERATION	HIGHEST PRODUCTION YEAR OF LAST 5 YEARS MONTHLY AVERAGE (PROVIDE ACTUAL PRODUCTION & INCLUDE UNITS	HIGHEST PRODUCTION YEAR OF LAST 5 YEARS DAYS OF OPERATION PER MONTH
A.	This is a two unit steam electric generating facility with a				
B.	combined rating of 1,804 megawatts.				
C.					
D.					

THE INFORMATION IN THIS FORM MUST BE CERTIFIED BY A RESPONSIBLE OFFICIAL AS DEFINED IN THE SIGNATORY REQUIREMENTS FOR PERMIT APPLICATIONS.

"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 RESONSIBLE 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."

"IF FURTHER CERTIFY UNDER PENALTY OF LAW THAT ALL ANALYSES REPORTED AS LESS THAN DETECTABLE IN THIS APPLICATION OR ATTACHMENTS THERETO WERE PERFORMED USING THE EPA APPROVED TEST METHOD HAVING THE LOWEST DETECTION LIMIT FOR THE SUBSTANCE TESTED."

NAME & OFFICIAL TITLE (TYPE OR PRINT)	ADDRESS	AREA CODE & PHONE NUMBER
J. D. Woodard, Exec. Vice Pres.	40 Inverness Center Pkwy	(205) 992-5086

SIGNATURE

DATE SIGNED 5-2-00

SIGNATORY REQUIREMENTS FOR PERMIT APPLICATIONS

RESPONSIBLE OFFICIAL IS DEFINED AS FOLLOWS:

1. IN THE CASE OF A CORPORATION, BY A PRINCIPAL OFFICER OF AT LEAST THE LEVEL OF VICE-PRESIDENT;
2. IN THE CASE OF A PARTNERSHIP, BY A GENERAL PARTNER;
3. IN THE CASE OF A SOLE PROPRIETORSHIP, BY THE PROPRIETOR; OR
4. IN THE CASE OF A MUNICIPAL, STATE, FEDERAL, OR OTHER PUBLIC FACILITY, BY EITHER A PRINCIPAL EXECUTIVE OFFICER, OR RANKING ELECTED OFFICIAL.

ATTACHMENT I

IMPLEMENTATION PROCEDURES FOR TIER 2
OF THE ANTIDEGRADATION POLICY
(Rule 335-6-10-.04(3))

I. Introduction

A. Federal rules at 40 CFR 131.12 require that States ". . . develop and adopt a statewide antidegradation policy and identify the methods for implementing such policy . . . " Alabama's antidegradation policy is found in rule 335-6-10-.04 of the ADEM Administrative Code, and addresses three categories of waters/uses:

1. high quality waters that constitute an outstanding national resource (Tier 3),

2. waters where the quality exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water (Tier 2), and

3. existing instream water uses and the level of water quality necessary to protect the existing uses (Tier 1).

B. Tier 3 waters are those waters designated pursuant to the Outstanding National Resource Water (ONRW) special designation found at 335-6-10-.10, and are identified in Rule 335-6-11-.02.

Tier 1 waters are considered to be (except as noted under the Tier 2 description):

1. those waters identified on the most recent Section 303(d) list, and

2. those waters for which attainment of applicable water quality standards has been, or is expected to be, achieved through implementation of effluent limitations more stringent than technology-based controls (BPT, BAT, and secondary treatment).

Tier 2 waters are considered to be all other waters (those waters not identified as either Tier 3 or Tier 1 waters), and waters assigned the use classification of Outstanding Alabama Water (OAW).

II. Applicable Discharges

A. All new or expanded discharges (except discharges eligible for coverage under general permits) covered by the NPDES permitting program are potentially subject to the provisions of Rule 335-6-10-.04(3). Applicants for such discharges are required to demonstrate " . . . that the proposed discharge is necessary for important economic or social development" as a part of the permit application process.

B. After receipt of a permit application for a potentially covered discharge, the Department will determine whether the proposed discharge is to a Tier 2 water, as defined in item I.B. above. Of necessity, this determination will be made on a case-by-case basis.

III. Permit Process

A. The basic framework of the permitting process is unchanged for a covered discharge to a Tier 2 water. However, the process is enhanced to document the consideration of Tier 2 provisions. The additional documentation includes:

1. the Department's determination that the application is for a new or expanded discharge,

2. the Department's determination that the receiving stream is considered to be a Tier 2 water, and

3. the applicant's demonstration " . . . that the proposed discharge is necessary for important economic or social development."

B. All three items will be documented in the permit file and/or fact sheet. The public notice process will be used to announce a proposed decision to deny or to allow a covered discharge to a Tier 2 water, while the final determination will be made and documented concurrently with the final decision regarding the permit application for a covered discharge.

IV. Applicant's Demonstration of Necessity/Importance

Documentation by the applicant " . . . that the proposed discharge is necessary for important economic or social development" should include:

A. A completed *Alternatives Analysis* checklist (copy attached); and N/A

B. A demonstration that the proposed discharge will accommodate important economic or social development by providing information (including an indication of the extent or degree of change, if appropriate) relative to the following items, if applicable:

1. the discharger will be correcting an environmental or public health problem;
2. the discharger will be increasing employment (at its existing facility or as the result of locaating a new facility);
3. the discharger will be increasing its production level;
4. the discharger will be avoiding a reduction in its employment level'
5. the discharger will be increasing its efficiency;
6. there will be industrial, commercial, or residential growth in the community; and
7. the discharger will be providing economic or social benefit to the community.

N/A

ALTERNATIVE ANALYSIS

Applicant Project: N/A

All new or expanded discharges (except discharges eligible for coverage under general permits) covered by the NPDES permitting program are subject to the provisions of the antidegradation policy. Applicants for such discharges to Tier 2 waters are required to demonstrate " . . . that the proposed discharge is necessary for important economic or social development." As a part of this demonstration, the applicant must complete an evaluation of the discharge alternatives listed below, to include calculation of total annualized project costs for each technically feasible alternative using the attached worksheets (Worksheet B for public-sector projects and Worksheet R for private-sector projects). Alternatives with total annualized project costs that are less than 110% of the total annualized project costs for the Tier 2 discharge proposal are considered viable alternatives.

Alternative	Viable	Non-Viable	Comment
1 Land Application			
2 Pretreatment/Discharge to POTW			
3 Relocation of Discharge			
4 Reuse/Recycle			
5 Process/Treatment Alternatives			
6 On-site/Sub-surface Disposal			
(other project-specific alternatives considered by the applicant; attach additional sheets if necessary			
7			
8			
9			

Pursuant to ADEM Administrative Code Rule 335-6-3-.04, I certify on behalf of the applicant that I have completed an evaluation of the discharge alternatives identified above, and reached the conclusions indicated.

Signature: _____
(Professional Engineer)

Date: _____

(Supporting documentation to be attached, referenced, or otherwise handled as appropriate.)

WORKSHEET B

Calculation of Total Annualized Project Costs

A. Capital Costs

Capital Cost of Project $ N/A

Other One-Time Costs of Project (Please List, if any):

_____ $_____

_____ $_____

_____ $_____

Total Capital Costs (Sum column) $_____(1)

Portion of Capital Costs to be Paid for with Grant Monies $_____(2)

Capital Costs to be Financed [Calculate: (1) – (2)] $_____(3)

Type of financing (e.g., G.O. bond, revenue bond, bank loan) _____

Interest Rate for Financing (expressed as decimal) _____(i)

Time Period of Financing (in years) _____(n)

Annualization Factor = $\frac{1}{(1+i)^n - 1} + i$ (or see Appendix B) _____(4)

Annualized Capital Cost [Calculate: (3) x (4)] _____(5)

B. Operating and Maintenance Costs

Annual Costs of Operation and Maintenance (including but not limited to: monitoring, inspection, permitting fees, waste disposal charges, repair, administration and replacement.) (Please list below)

_____ $_____

_____ $_____

_____ $_____

_____ $_____

Total Annual O & M Costs (Sum column) $_____(6)

C. Total Annual Cost of Pollution Control Project

Total Annual Cost of Pollution Control Project [(5) + (6)] $_____(7)

WORKSHEET R

Private-Sector Development
Calculation of Total Annualized Project Costs

Capital Costs to be financed (Supplied by applicant)	$ N/A (1)
Interest rate for Financing (Expressed as a decimal)	_____ (i)
Time Period of Financing (Assume 10 years*)	10 years (n)
Annualization Factor** = $\frac{i}{(1+i)^{10} - 1} + 1$	_____ (2)
Annualized Capital Cost [Calculate: (1) x (2)]	$ _____ (3)
Annual Cost of Operation and Maintenance (including but not limited to monitoring, inspection, permitting fees, waste disposal charges, repair, administration and replacement)***	$ _____ (4)
Total Annual Cost of Pollution Control Project [(3) + (4)]	$ _____ (5)

* While actual payback schedules may differ across projects and companies, assume equal annual payments over a 10-year period for consistency in comparing projects.

** Or see Appendix B for calculated annualization factors.

*** For recurring costs that occur less frequently than once a year, pro rate the cost over the relevant number of years (e.g., for pumps replaced once every three years, include one-third of the cost in each year).

APPENDIX B

Table of Annualization Factors

Year	Interest Rate											
	0.005	0.010	0.015	0.020	0.025	0.030	0.035	0.040	0.045	0.050	0.055	0.060
1	1.0050	1.0100	1.0150	1.0200	1.0250	1.0300	1.0350	1.0400	1.0450	1.0500	1.0550	1.0600
2	0.5038	0.5075	0.5113	0.5150	0.5188	0.5226	0.5264	0.5302	0.534	0.5378	0.5416	0.5454
3	0.3367	0.3400	0.3434	0.3468	0.3501	0.3535	0.3569	0.3603	0.3638	0.3672	0.3707	0.3741
4	0.2531	0.2563	0.2594	0.2626	0.2658	0.2690	0.2723	0.2755	0.2787	0.282	0.2853	0.2886
5	0.2030	0.2060	0.2091	0.2122	0.2152	0.2184	0.2215	0.2246	0.2278	0.2310	0.2342	0.2374
6	0.1696	0.1725	0.1722	0.1785	0.1815	0.1846	0.1877	0.1908	0.1939	0.197	0.2002	0.2034
7	0.1457	0.1486	0.1516	0.1545	0.1575	0.1605	0.1635	0.1666	0.1697	0.1728	0.1760	0.1791
8	0.1278	0.1307	0.1336	0.1365	0.1395	0.1425	0.1455	0.1485	0.1516	0.1547	0.1579	0.1610
9	0.1139	0.1167	0.1196	0.1225	0.1255	0.1284	0.1314	0.1345	0.1376	0.1407	0.1438	0.1470
10	0.1028	0.1056	0.1084	0.1113	0.1143	0.1172	0.1202	0.1233	0.1264	0.1295	0.1327	0.1359
11	0.0937	0.0965	0.0993	0.1022	0.1051	0.1081	0.1111	0.1141	0.1172	0.1204	0.1236	0.1268
12	0.0861	0.0888	0.0917	0.0946	0.0975	0.1005	0.1035	0.1066	0.1097	0.1128	0.1160	0.1193
13	0.0796	0.0824	0.0852	0.0881	0.0910	0.0940	0.0971	0.1001	0.1033	0.1065	0.1097	0.1130
14	0.0741	0.0769	0.0797	0.0826	0.0855	0.0885	0.0916	0.0947	0.0978	0.1010	0.1043	0.1076
15	0.0694	0.0721	0.0749	0.0778	0.0808	0.0838	0.0868	0.0899	0.0931	0.0963	0.0996	0.1030
16	0.0652	0.0679	0.0708	0.0737	0.0766	0.0796	0.0827	0.0858	0.0890	0.0923	0.0956	0.0990
17	0.0615	0.0643	0.0671	0.0700	0.0729	0.0760	0.0790	0.0822	0.0854	0.0887	0.0920	0.0954
18	0.0582	0.0610	0.0638	0.0667	0.0697	0.0727	0.0758	0.0790	0.0822	0.085	0.0889	0.0924
19	0.0553	0.0581	0.0609	0.0638	0.0668	0.0698	0.0729	0.0761	0.0794	0.0827	0.0862	0.0896
20	0.0527	0.0554	0.0582	0.0612	0.0641	0.0672	0.0704	0.0736	0.0796	0.0802	0.0837	0.0872

Year	Interest Rate											
	0.065	0.070	0.075	0.080	0.085	0.090	0.095	0.100	0.105	0.110	0.115	0.120
1	1.0650	1.0700	1.0750	1.0800	1.0850	1.0900	1.0950	1.1000	1.1050	1.1100	1.1150	1.1200
2	0.5493	0.5531	0.5569	0.5608	0.5646	0.5685	0.5723	0.5762	0.5801	0.5839	0.5878	0.5917
3	0.3776	0.3811	0.3845	0.3880	0.3915	0.3951	0.3986	0.4021	0.4057	0.4092	0.4128	0.4163
4	0.2919	0.2952	0.2986	0.3019	0.3053	0.3087	0.3121	0.3155	0.3189	0.3223	0.3258	0.3292
5	0.2406	0.2439	0.2472	0.2505	0.2538	0.2571	0.2604	0.2638	0.2672	0.2706	0.2740	0.2774
6	0.2066	0.2098	0.2130	0.2163	0.2196	0.2229	0.2263	0.2296	0.2330	0.2364	0.2398	0.2432
7	0.1823	0.1856	0.1888	0.1921	0.1954	0.1987	0.2020	0.2054	0.2088	0.2122	0.2157	0.2191
8	0.1642	0.1675	0.1707	0.1740	0.1773	0.1807	0.1840	0.1874	0.1909	0.1943	0.1978	0.2013
9	0.1502	0.1535	0.1568	0.1601	0.1634	0.1668	0.1702	0.1736	0.1771	0.1806	0.1841	0.1877
10	0.1391	0.1424	0.1457	0.149	0.1524	0.1558	0.1593	0.1627	0.1663	0.1698	0.1734	0.1770
11	0.1301	0.1334	0.1367	0.1401	0.1435	0.1469	0.1504	0.1540	0.1575	0.1611	0.1648	0.1684
12	0.1226	0.1259	0.1293	0.1327	0.1362	0.1397	0.1432	0.1468	0.1504	0.1540	0.1577	0.1614
13	0.1163	0.1197	0.1231	0.1265	0.1300	0.1336	0.1372	0.1408	0.1444	0.1482	0.1519	0.1557
14	0.1109	0.1143	0.1178	0.1213	0.1248	0.1284	0.1321	0.1357	0.1395	0.1432	0.147	0.1509
15	0.1064	0.1098	0.1133	0.1168	0.1204	0.1241	0.1277	0.1315	0.1352	0.1391	0.1429	0.1468
16	0.1024	0.1059	0.1094	0.113	0.1166	0.1203	0.1240	0.1278	0.1316	0.1355	0.1394	0.1434
17	0.0989	0.1024	0.1060	0.1096	0.1133	0.1170	0.1208	0.1247	0.1285	0.1325	0.1364	0.1405
18	0.0959	0.0994	0.1030	0.1067	0.1104	0.1142	0.1180	0.1219	0.1259	0.1298	0.1339	0.1379
19	0.0932	0.0968	0.1004	0.1041	0.1079	0.1117	0.1156	0.1195	0.1235	0.1276	0.1316	0.1358
20	0.0908	0.0944	0.0981	0.1019	0.1057	0.1095	0.1135	0.1175	0.1215	0.1256	0.1297	0.1339

FOR DEPARTMENT USE ONLY

DOCUMENTATION OF ANTIDEGRADATION REVIEW

Applicant/Project: N/A

Alabama's antidegradation policy is found in rule 335-6-10-.04 of the ADEM Administrative code, and addresses three categories of waters/uses:

- high quality waters that constitute an outstanding national resource (Tier 3),
- waters where the quality exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water (Tier 2), and
- existing instream water uses and the level of water quality necessary to protect the existing uses (Tier 1).

All new or expanded discharges (except discharges eligible for coverage under general permits) covered by the NPDES permitting program are subject to the provisions of the antidegradation policy. Applicants for such discharges to Tier 2 waters are required to demonstrate " . . . that the proposed discharge is necessary for important economic or social development" as a part of the permit application process.

Consideration of Tier 2 provisions is documented below (this completed form will be placed in the permit file):

1. Is the application for a new or expanded discharge? (If yes, go to item 2; if no, antidegradation review is not required.)
   Yes _____ No _____

2. Is the receiving stream considered to be a Tier 3 water? (If yes, refer to ONRW provisions at 335-6-10-.10; if no, go to item 3.)
   Yes _____ No _____

3. Is the receiving stream considered to be a Tier 1 water? (If yes, refer to Tier 1 provisions at 335-6-10-.04(2); if no, go to item 4.)
   Yes _____ No _____

4. Is the receiving stream considered to be a Tier 2 water? (If yes, go to item 5.) Yes _____ No _____

5. Has the applicant submitted a completed *Alternatives Analysis* checklist? (If yes, go to item 6.) Yes _____ No _____

6. Has the applicant submitted information demonstrating that the proposed discharge will accommodate important economic or social development? (If yes, all information needed for the antidegradation review is available.) Yes _____ No _____

The information submitted by the applicant demonstrating that the proposed discharge will accommodate important economic or social development and the completed *Alternatives Analysis* checklist will be placed in the permit file, and utilized by the Department in making a determination regarding permit issuance.

Completed By:_____ Date:_____

Attachment to Supplementary Permit Application Form

Item 9. List of Permits

Farley Nuclear Plant
AL0024619

Permits Issued by ADEM or EPA Held by Applicant
Farley Nuclear Plant

Permit Name	Permit Number	Held By
NPDES Permit	AL0024619	Southern Nuclear Operating Co
Water Supply Permit	96-583	Southern Nuclear Operating Co
Solid Waste Disposal Facility Permit	35-05R	Southern Nuclear Operating Co
Certificate of Use (Issued by Office of Water Resources)	OWR-0063	Southern Nuclear Operating Co
Dredging Permit (Issued by U.S. Army Corps of Engineers)	AL99-00024-H	Southern Nuclear Operating Co
Dredging Permit (Issued by U.S. Army Corps of Engineers)	AL96-02372-L	Southern Nuclear Operating Co

Attachment to Supplementary Permit Application Form

Item 10. Well Water Supply Sources

Farley Nuclear Plant
AL0024619

Well Water Supply Sources
Farley Nuclear Plant

Well	Capacity (MGD)	Depth (ft)	Latitude	Longitude
Production Well #1	Out of Service	980	E 724,950.0	N 261,500.0
Production Well #2	0.720	775	E 726,283.5	N 267,069.0
Production Well #3	0.180	392	E 724,900.5	N 261,440.0
Construction Well #1	0.216	244	E 724,800.5	N 264,812.5
Construction Well #2	0.216	325	E 723,800.0	N 264,812.5
Daniel Well #3	Abandoned			
Daniel Well #4	Abandoned			

Attachment to Supplementary Permit Application Form

Item 11. Materials Management

Farley Nuclear Plant
AL0024619

Supplementary Form, Question 11 – Materials Management Practices for Farley Nuclear Plant

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There have been no significant quantities of hazardous materials at FNP over the past three (3) years which have been treated, stored, or disposed in a manner which would result in exposure to stormwater and / or contamination of stormwater runoff. The following FNP 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-SHP-26
FNP-0-SHP-26	Chemical Product Control and 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 stormwater 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.

Enclosure 2

US EPA Form 1

Farley Nuclear Plant
AL0024619

FORM 1 GENERAL

EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY

GENERAL INFORMATION

Consolidated Permits Program

(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER

F A L 0 0 2 4 6 1 9

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

II. POLLUTANT CHARACTERISTICS

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

SPECIFIC QUESTIONS	MARK 'X' YES	MARK 'X' NO	MARK 'X' FORM ATTACHED
A. Is this facility a publicly owned treatment works which results in a discharge to waters of the U.S.? (FORM 2A)		X	
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	MARK 'X' NO	MARK 'X' 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 / 9 9 2 / 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	

A. FIRST	B. SECOND
7 4911 (specify) Generation of Electricity	7 (specify) N/A
C. THIRD	**D. FOURTH**
7 (specify) N/A	7 (specify) N/A

VIII. OPERATOR INFORMATION

A. NAME: 8 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) N/A

D. PHONE (area code & no.): A 205 992 5000

E. STREET OR P.O. BOX: P.O. BOX 1295

F. CITY OR TOWN: B 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): 9 N AL0024619	**D. PSD** (Air Emissions from Proposed Sources): 9 P NONE
B. UIC (Underground Injection of Fluids): 9 U NONE	**E. OTHER** (specify): 9 NONE (specify) N/A
C. RCRA (Hazardous Wastes): 9 R NONE	**E. OTHER** (specify): 9 NONE (specify) N/A

XI. MAP

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

XII. NATURE OF BUSINESS (provide a brief description)

Generation of electricity through the use of nuclear fuel.

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		5-2-00

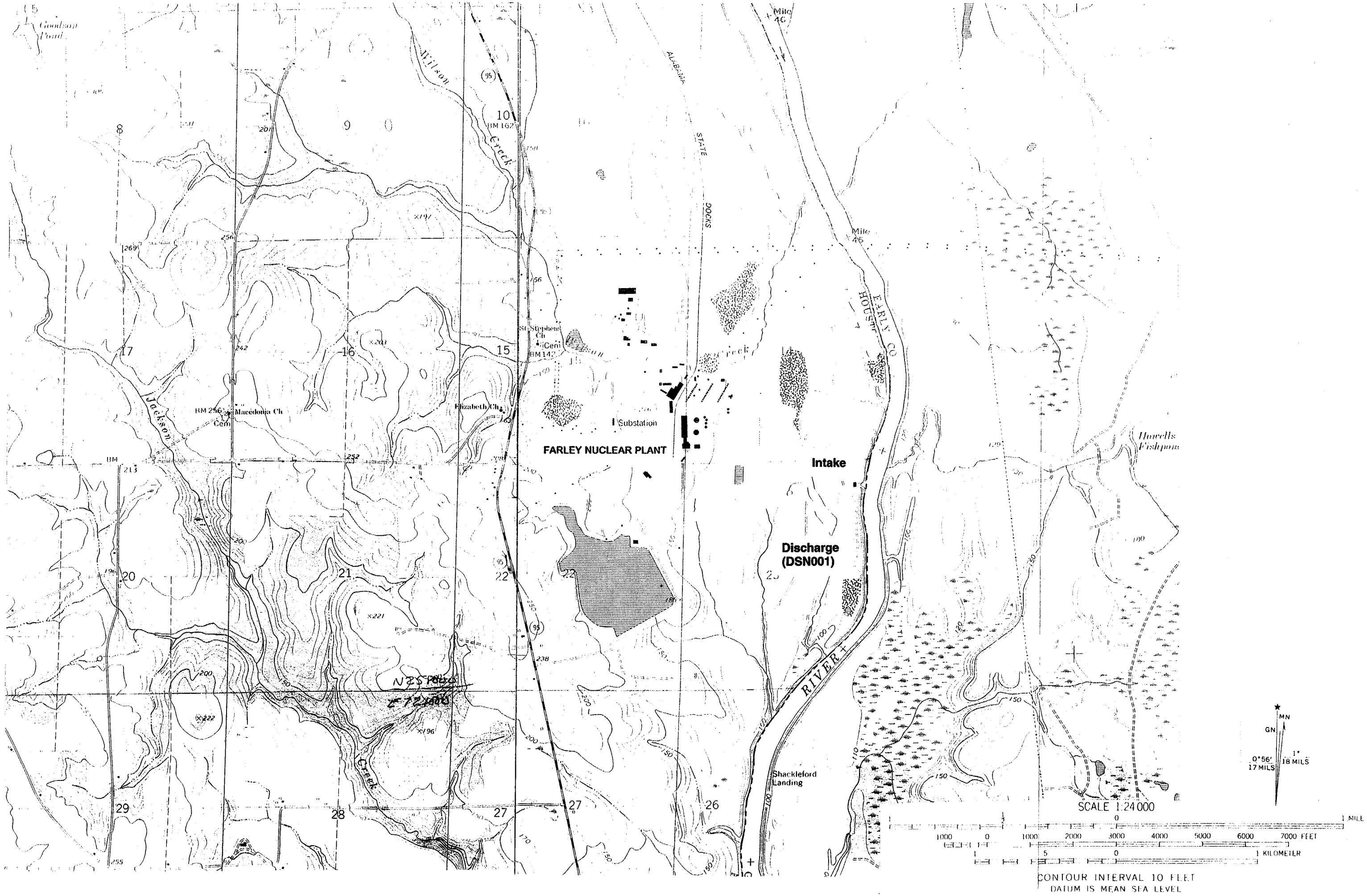
COMMENTS FOR OFFICIAL USE ONLY

C

Attachment to US EPA Form 1

Section XI. Topographic Map

Farley Nuclear Plant
AL0024619


FARLEY NUCLEAR PLANT
Substation
Intake
Discharge
(DSN001)
RIVER
Shackleford
Landing
Macedonia Ch
Cem
Elizabeth Ch
St Stephens
Ch
Cem
Jackson
Creek
Hillson
Creek
Creek
ALABAMA
STATE
DOCKS
EARLY CO
HOUSE
Mile
46
Howells
Fishpond
Goodson
Pond
SCALE 1:24 000
CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL
1 MILE
7000 FEET
1 KILOMETER
MN
GN
0°56'
17 MILS
1°
18 MILS

Enclosure 3

US EPA Form 2C

Farley Nuclear Plant
AL0024619

Please print or type in the unshaded areas only. AL0024619 Approval expires 5-31-92

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 1. DEG.	2. MIN.	3. SEC.	C. LONGITUDE 1. DEG.	2. MIN.	3. SEC.	D. RECEIVING WATER (name)
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 narrative 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.

A. OUTFALL NUMBER (list)	B. OPERATION(S) CONTRIBUTING FLOW a. OPERATION (list)	b. AVERAGE FLOW (include units)	C. TREATMENT a. DESCRIPTION	b. LIST CODES FROM TABLE 2C-1	
001	Main Combined Facility Discharge	81.16 MGD		4-A	
005	Cooling Tower Blowdown - Unit 1	*		4-A	
006	Cooling Tower Overflow - Unit 1	*		4-A	
007	Cooling Tower Blowdown - Unit 2	*		4-A	
008	Cooling Tower Overflow - Unit 2	*		4-A	
009	Sewage Treatment Plant (100,000 GPD Design Flow)	0.02 MGD		4-A 1-V	2-F 3-A
	* Intermittent Flow				

OFFICIAL USE ONLY (effluent guidelines sub-categories)

Please print or type in the unshaded areas only. AL0024619 Approval expires 5-31-92

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 1. DEG.	2. MIN.	3. SEC.	C. LONGITUDE 1. DEG.	2. MIN.	3. SEC.	D. RECEIVING WATER (name)
012-019	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 narrative 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.

I. OUTFALL NUMBER	A. OPERATION(S) CONTRIBUTING FLOW: 1. OPERATION (list)	B. AVERAGE FLOW (include units)	C. TREATMENT: 1. DESCRIPTION	2. LIST CODES FROM TABLE C-1	
012	Chemical Metal Cleaning	*		4-A	
	Wastes				
013	Treated Chromate Bearing	*			
	Wastewater				
014	Waste Settling Pond	0.30 MGD		4-A	1-V
015	Turbine Building Sump -	*		4-A	
	Unit 1				
016	Turbine Building Sump -	*		4-A	
	Unit 2				
019	Liquid Radwaste System -	*		4-A	2-J
	Unit 1				
	* Intermittent Flow				

OFFICIAL USE ONLY (effluent guidelines sub-categories)

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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 1. DEG.	2. MIN.	3. SEC.	C. LONGITUDE 1. DEG.	2. MIN.	3. SEC.	D. RECEIVING WATER (name)
020-025	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 schematic 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 NUMBER (list)	2. OPERATION(S) CONTRIBUTING FLOW a. OPERATION (list)	b. AVERAGE FLOW (include units)	3. TREATMENT a. DESCRIPTION	b. LIST CODES FROM TABLE 2C-1	
020	Liquid Radwaste System -	*		4-A	2-J
	Unit 2				
022	River Water Building Sump -	*		4-A	
	South				
023	River Water Building Sump -	*		4-A	
	North				
030	Intake Screen Backwash	*		4-A	
	Water to Intake Canal				
	(Units 1 & 2)				
024	Southeast Yard Drainage	*		4-A	
025	East Yard Drainage	*		4-A	
	* Intermittent Flow				

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

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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 1. DEG.	2. MIN.	3. SEC.	C. LONGITUDE 1. DEG.	2. MIN.	3. SEC.	D. RECEIVING WATER (name)
026-028	31	13	45	85	05	45	Wilson Creek
029	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 schematic 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 a. OPERATION (list)	b. AVERAGE FLOW (include units)	3. TREATMENT a. DESCRIPTION	b. LIST CODES FROM TABLE 2C-1	
026	Northwest Yard Drainage	*		4-A	
027	Northcentral Yard Drainage	*		4-A	
028	West Yard Drainage	*		4-A	
029	Southwest Yard Drainage	*		4-A	
	* Intermittent Flow				

OFFICIAL USE ONLY (effluent guidelines sub-categories)

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	
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							
013	Treated Chromate Bearing Wastewater							

III. PRODUCTION

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

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

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

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

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

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

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. EST. DATE FOR COMPLETION	
	a. NO.	b. SOURCE OF DISCHARGE		a. REQUIRED	b. PROJECTED
N/A					

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

 CONTINUE ON PAGE 3

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	
022	River Water Building Sump-South							
023	River Water Building Sump-North							
024	Southeast Yard Drainage							
025	East Yard Drainage							
026	Northwest Yard Drainage							
027	Northcentral 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?

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

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

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

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

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

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
N/A					

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

 CONTINUE ON PAGE 3

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

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

1. OUTFALL NUMBER (list)	2. OPERATION(s) CONTRIBUTING FLOW (list)	3. FREQUENCY a. DAYS PER WEEK (specify average)	b. MONTHS PER YEAR (specify average)	4. FLOW a. FLOW RATE (in mgd) 1. LONG TERM AVERAGE	2. MAXIMUM DAILY	b. TOTAL VOLUME (specify with units) 1. LONG TERM AVERAGE	2. MAXIMUM DAILY	c. DURATION (in days)
028	West Yard Drainage							
029	Southwest Yard Drainage							
030	Intake Screen Backwash Water, Units 1 & 2							
015	Turbine Building Sump, Unit 1							
016	Turbine Building Sump, Unit 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 (go to Section IV)

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

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

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

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

IV. IMPROVEMENTS

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

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

1. IDENTIFICATION OF CONDITION, AGREEMENT, ETC.	2. AFFECTED OUTFALLS a. NO.	b. SOURCE OF DISCHARGE	3. BRIEF DESCRIPTION OF PROJECT	4. ESTIMATED DATE a. SCHEDULE	b. ACTUAL
N/A					

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

 CONTINUE ON PAGE 3

CONTINUED FROM THE FRONT

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

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

1. OUTFALL NUMBER (list)	2. OPERATION(s) CONTRIBUTING FLOW (list)	3. FREQUENCY		4. FLOW				
		a. DAYS PER WEEK (specify average)	b. MONTHS PER YEAR (specify average)	a. FLOW RATE (in mgd)		b. TOTAL VOLUME (specify with units)		c. DURATION (in days)
				1. LONG TERM AVERAGE	2. MAXIMUM DAILY	1. LONG TERM AVERAGE	2. MAXIMUM DAILY	
019	Liquid Radwaste System - Unit 1							
020	Liquid Radwaste System - Unit 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 (go to Section IV)

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

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

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

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

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
N/A					

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

 CONTINUE ON PAGE 3

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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)*

N/A

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?

[X] YES *(identify the test(s) and describe their purposes below)* [ ] NO *(go to Section VIII)*

Annual biomonitoring as required by existing NPDES permit on the Main Combined Facility Discharge (DSN001).

VIII. 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 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) 664-6194	All except pH, temperature, chlorine
Florida Radiochemistry Services, Inc.	5456 Hoffner Ave. Suite 201 Orlando, FL 32812	(407) 382-7733	Radiological

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) 992-5086
C. SIGNATURE	**D. DATE SIGNED**
J. D. Woodard	5-2-00

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

OUTFALL N

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

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

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE *(if available)* (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE *(if available)* (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	3. UNITS *(specify if blank)* a. CONCENTRATION	b. MASS	4. INTAKE *(optional)* a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSE
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 pollutan 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 ma 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 requirement

1. POLLUTANT AND CAS NO. *(if available)*	2. MARK 'X' a. BELIEVED PRESENT	b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE *(if available)* (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE *(if available)* (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE *(optional)* a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSE
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	b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
g. Nitrogen, Total Organic (as N)														
h. Oil and Grease			SEE ATTACHED CHEMICAL ANALYSIS REPORTS											
i. Phosphorus (as P), Total (7723-14-0)														
j. Radioactivity														
(1) Alpha, Total														
(2) Beta, Total														
(3) Radium, Total			SEE ATTACHED CHEMICAL ANALYSIS REPORTS											
(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)														

CONTINUE ON PAGE V-

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

CONTINUED FROM PAGE 3 OF FORM 2-C

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry. 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 2b for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2a for any fraction, 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 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 might 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" 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 AVG. 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. ANALYSES
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)															
2M. Arsenic, Total (7440-38-2)															
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 (1746-01-6)				DESCRIBE RESULTS											

SEE ATTACHED CHEMICAL ANALYSIS REPORTS

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. TEST INCLUDED	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	e. CONCENTRATION	f. 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

CONTINUE ON PAGE V

CONTINUED FROM PAGE V-4

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. TEST INCLUDED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVERG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS (continued)															
22V. Methylene Chloride (75-09-2)															
23V. 1,1,2,2-Tetrachloroethane (79-34-5)															
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)															
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)															

SEE ATTACHED CHEMICAL ANALYSIS REPORTS

SEE ATTACHED CHEMICAL ANALYSIS REPORTS

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X' a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (i) CONCENTRATION	(ii) MASS	b. MAXIMUM 30 DAY VALUE (if available) (i) CONCENTRATION	(ii) MASS	c. LONG TERM AVRG. VALUE (if available) (i) CONCENTRATION	(ii) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (i) CONCENTRATION	(ii) MASS	b. NO. OF ANALYSES
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)															
2B. Acenaphthylene (208-96-8)															
3B. Anthracene (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-Chloro-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

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CONTINUED FROM PAGE V-6

AL0024619

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. N AI Y
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS *(continued)*															
22B. 1,4-Dichlorobenzene (106-46-7)															
23B. 3,3'-Dichlorobenzidine (91-94-1)															
24B. Diethyl Phthalate (84-66-2)															
25B. Dimethyl Phthalate (131-11-3)															
26B. Di-N-Butyl Phthalate (84-74-2)															
27B. 2,4-Dinitrotoluene (121-14-2)															
28B. 2,6-Dinitrotoluene (606-20-2)															
29B. Di-N-Octyl Phthalate (117-84-0)															
30B. 1,2-Diphenylhydrazine *(as Azobenzene)* (122-66-7)															
31B. Fluoranthene (206-44-0)															
32B. Fluorene (86-73-7)															
33B. Hexachlorobenzene (118-74-1)															
34B. Hexachlorobutadiene (87-68-3)															
35B. Hexachlorocyclopentadiene (77-47-4)															
36B. Hexachloroethane (67-72-1)															
37B. Indeno *(1,2,3-cd)* Pyrene (193-39-5)															
38B. Isophorone (78-59-1)															
39B. Naphthalene (91-20-3)															
40B. Nitrobenzene (98-95-3)															
41B. N-Nitrosodimethylamine (62-75-9)															
42B. N-Nitrosodi-N-Propylamine (621-64-7)															

SEE ATTACHED CHEMICAL ANALYSIS REPORTS

CONTINUE ON REVE

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 – BASE/NEUTRAL COMPOUNDS *(continued)*															
43B. N-Nitrosodiphenylamine (86-30-6)															
44B. Phenanthrene (85-01-8)															
45B. Pyrene (129-00-0)					SEE ATTACHED CHEMICAL ANALYSIS REPORTS										
46B. 1,2,4-Trichlorobenzene (120-82-1)															
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)															
2P. α-BHC (319-84-6)															
3P. β-BHC (319-85-7)					SEE ATTACHED CHEMICAL ANALYSIS REPORTS										
4P. γ-BHC (58-89-9)															
5P. δ-BHC (319-86-8)															
6P. Chlordane (57-74-9)															
7P. 4,4'-DDT (50-29-3)															
8P. 4,4'-DDE (72-55-9)															
9P. 4,4'-DDD (72-54-8)															
10P. Dieldrin (60-57-1)															
11P. α-Endosulfan (115-29-7)															
12P. β-Endosulfan (115-29-7)															
13P. Endosulfan Sulfate (1031-07-8)															
14P. Endrin (72-20-8)															
15P. Endrin Aldehyde (7421-93-4)															
16P. Heptachlor (76-44-8)															

CONTINUE ON PAGE V-9

CONTINUED FROM PAGE V-8

AL0024619

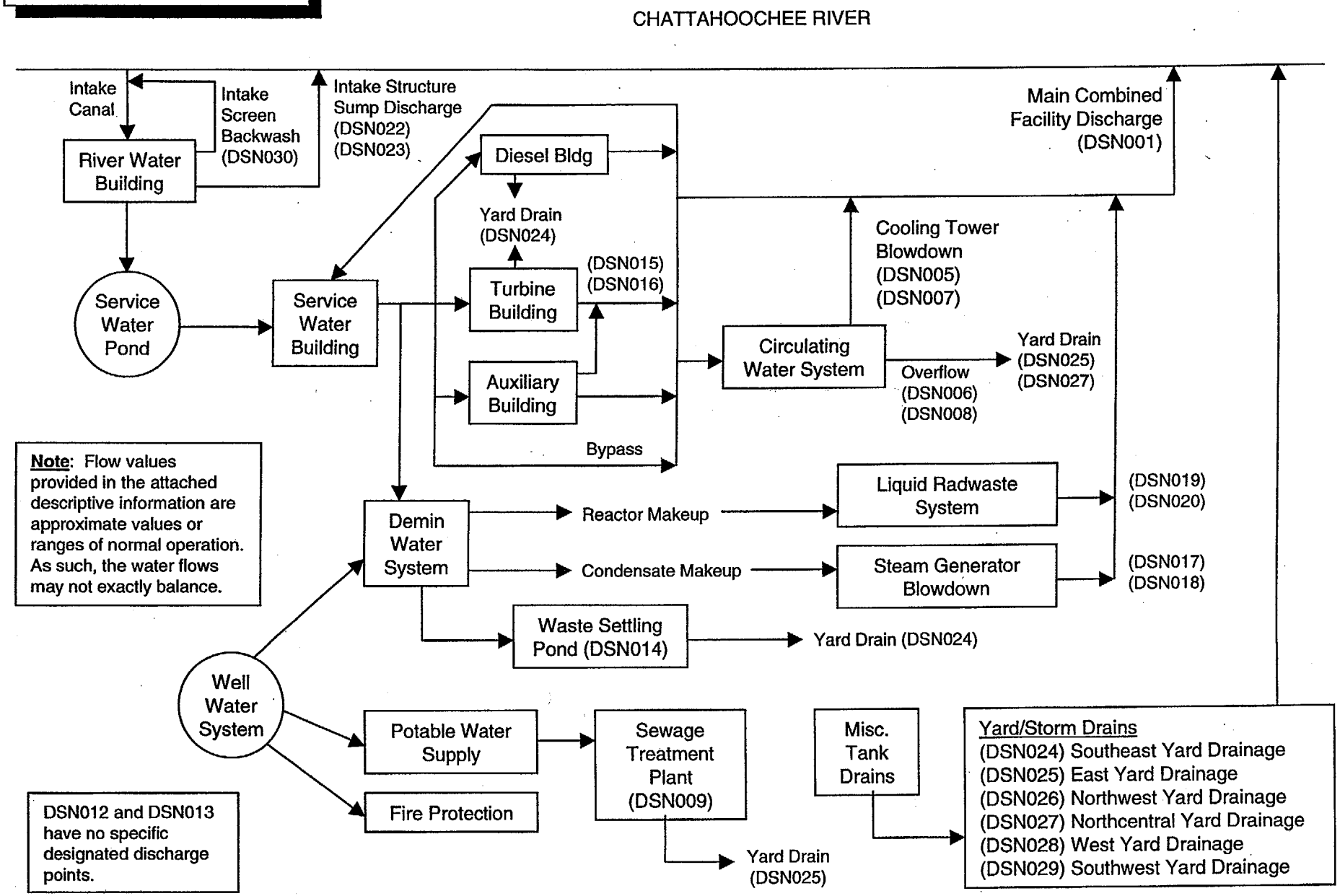
1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. PRESENT IN EFFLUENT	b. ABSENT	c. BELIEVED PRESENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS						
GC/MS FRACTION — PESTICIDES (continued)															
17P. Heptachlor Epoxide (1024-57-3)															
18P. PCB-1242 (53469-21-9)				SEE ATTACHED CHEMICAL ANALYSIS REPORTS											
19P. PCB-1254 (11097-69-1)															
20P. PCB-1221 (11104-28-2)															
21P. PCB-1232 (11141-16-5)															
22P. PCB-1248 (12672-29-6)															
23P. PCB-1260 (11096-82-5)															
24P. PCB-1016 (12674-11-2)															
25P. Toxaphene (8001-35-2)															

Attachment to US EPA Form 2C

Section IIA. Line Drawing

Farley Nuclear Plant
AL0024619

Farley Nuclear Plant
Line Drawing/Water Balance
Permit No. AL0024619



Note: Flow values provided in the attached descriptive information are approximate values or ranges of normal operation. As such, the water flows may not exactly balance.

DSN012 and DSN013 have no specific designated discharge points.

Attachment to US EPA Form 2C

Section IVA and B. Intake and Effluent Characteristics
Chemical Analysis Reports

Farley Nuclear Plant
AL0024619

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

ALABAMA POWER
A SOUTHERN COMPANY

CERTIFICATE OF ANALYSIS

To: Mr. Jim Porlier
Farley Nuclear Plant

Customer Account : NFNPINTK
Sample Date : 17-Apr-00
Customer ID : AL-0024619
Delivery Date : 17-Apr-00

Description: FNP - Intake Water FNP030
Repermitting

Laboratory ID Number: AE12326

Name	Analyst	Test Date	Reference	Vio Spec	MDL	Results	Units
Volatile Compounds							
Acrolein	RAH	4/18/00	EPA 603		0.002	Not Detected	mg/l
Acrylonitrile	RAH	4/18/00	EPA 603		0.001	Not Detected	mg/l
Benzene	RAH	4/20/00	EPA 624		0.0020	Not Detected	mg/l
Bromoform	RAH	4/20/00	EPA 624		0.003	Not Detected	mg/l
Carbon Tetrachloride	RAH	4/20/00	EPA 624		0.002	Not Detected	mg/l
Chlorobenzene	RAH	4/20/00	EPA 624		0.001	Not Detected	mg/l
Chlorodibromomethane	RAH	4/20/00	EPA 624		0.001	Not Detected	mg/l
Chloroethane	RAH	4/20/00	EPA 624		0.002	Not Detected	mg/l
2-Chloroethylvinyl Ether	RAH	4/20/00	EPA 624		0.001	Not Detected	mg/l
Chloroform	RAH	4/20/00	EPA 624		0.002	Not Detected	mg/l
Dichlorobromomethane	RAH	4/20/00	EPA 624		0.001	Not Detected	mg/l
1,1-Dichloroethane	RAH	4/20/00	EPA 624		0.002	Not Detected	mg/l
1,2-Dichloroethane	RAH	4/20/00	EPA 624		0.002	Not Detected	mg/l
1,1-Dichloroethylene	RAH	4/20/00	EPA 624		0.001	Not Detected	mg/l
1,2-Dichloropropane	RAH	4/20/00	EPA 624		0.002	Not Detected	mg/l
1,3-Dichloropropene	RAH	4/20/00	EPA 624		0.002	Not Detected	mg/l
Ethylbenzene	RAH	4/20/00	EPA 624		0.0020	Not Detected	mg/l
Methyl Bromide	RAH	4/20/00	EPA 624		0.002	Not Detected	mg/l
Methyl Chloride	RAH	4/20/00	EPA 624		0.002	Not Detected	mg/l
Methylene Chloride	RAH	4/20/00	EPA 624		0.002	Not Detected	mg/l
1,1,2,2-Tetrachloroethane	RAH	4/20/00	EPA 624		0.002	Not Detected	mg/l
Tetrachloroethylene	RAH	4/20/00	EPA 624		0.002	Not Detected	mg/l
Toluene	RAH	4/20/00	EPA 624		0.0020	Not Detected	mg/l
1,2-trans-Dichloroethylene	RAH	4/20/00	EPA 624		0.001	Not Detected	mg/l
1,1,1-Trichloroethane	RAH	4/20/00	EPA 624		0.001	Not Detected	mg/l
1,1,2-Trichloroethane	RAH	4/20/00	EPA 624		0.002	Not Detected	mg/l
Trichloroethylene	RAH	4/20/00	EPA 624		0.002	Not Detected	mg/l
Vinyl Chloride	RAH	4/20/00	EPA 624		0.001	Not Detected	mg/l

This Certificate is for the physical and/or chemical characteristics of the sample as submitted.

Comments:

cc: Mr. Greg Elmore
Southern Nuclear

Quality Control _____ **Supervision** _____ **Date:** 01-May-00

smk/NC

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

ALABAMA POWER
A SOUTHERN COMPANY

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Farley Nuclear Plant

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Sample Date : 17-Apr-00
Customer ID : AL-0024619
Delivery Date : 17-Apr-00

Description: FNP - Intake Water FNP030
Repermitting

Laboratory ID Number: AE12326

Name	Analyst	Test Date	Reference	Vio Spec	MDL	Results	Units
Pesticides							
Aldrin	RSP	4/21/00	EPA 608		0.003	Not Detected	mg/l
alpha-BHC	RSP	4/21/00	EPA 608		0.003	Not Detected	mg/l
beta-BHC	RSP	4/21/00	EPA 608		0.003	Not Detected	mg/l
delta-BHC	RSP	4/21/00	EPA 608		0.003	Not Detected	mg/l
gamma-BHC (Lindane)	RSP	4/21/00	EPA 608		0.003	Not Detected	mg/l
Chlordane	RSP	4/21/00	EPA 608		0.003	Not Detected	mg/l
4,4p-DDT	RSP	4/21/00	EPA 608		0.003	Not Detected	mg/l
4,4p-DDE	RSP	4/21/00	EPA 608		0.003	Not Detected	mg/l
4,4p-DDD	RSP	4/21/00	EPA 608		0.003	Not Detected	mg/l
Dieldrin	RSP	4/21/00	EPA 608		0.003	Not Detected	mg/l
alpha-Endosulfan	RSP	4/21/00	EPA 608		0.003	Not Detected	mg/l
beta-Endosulfan	RSP	4/21/00	EPA 608		0.003	Not Detected	mg/l
Endosulfan sulfate	RSP	4/21/00	EPA 608		0.003	Not Detected	mg/l
Endrin	RSP	4/21/00	EPA 608		0.001	Not Detected	mg/l
Endrin aldehyde	RSP	4/21/00	EPA 608		0.003	Not Detected	mg/l
Heptachlor	RSP	4/21/00	EPA 608		0.003	Not Detected	mg/l
Heptachlor epoxide	RSP	4/21/00	EPA 608		0.003	Not Detected	mg/l
PCB, Aroclor 1242	RSP	4/21/00	EPA 608		10.	Not Detected	mg/l
PCB, Aroclor 1254	RSP	4/21/00	EPA 608		10.	Not Detected	mg/l
PCB, Aroclor 1221	RSP	4/21/00	EPA 608		10.	Not Detected	mg/l
PCB, Aroclor 1232	RSP	4/21/00	EPA 608		10.	Not Detected	mg/l
PCB, Aroclor 1248	RSP	4/21/00	EPA 608		10.	Not Detected	mg/l
PCB, Aroclor 1260	RSP	4/21/00	EPA 608		10.	Not Detected	mg/l
PCB, Aroclor 1016	RSP	4/21/00	EPA 608		10.	Not Detected	mg/l
Toxaphene	RSP	4/21/00	EPA 608		0.003	Not Detected	mg/l
Metals, Cyanide, Total Phenols							
Aluminum, Total	JA3	4/18/00	EPA 200.7		0.006	0.379	mg/l
Antimony, Total	JA3	4/18/00	EPA 200.7		0.002	Not Detected	mg/l

This Certificate is for the physical and/or chemical characteristics of the sample as submitted.

Comments:

cc: Mr. Greg Elmore
Southern Nuclear

Quality Control _____ **Supervision** _____ **Date:** 01-May-00

smk/NC

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

ALABAMA POWER
A SOUTHERN COMPANY

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Farley Nuclear Plant

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Sample Date : 17-Apr-00
Customer ID : AL-0024619
Delivery Date : 17-Apr-00

Description: FNP - Intake Water FNP030
Repermitting

Laboratory ID Number: AE12326

Name	Analyst	Test Date	Reference	Vio Spec	MDL	Results	Units
Metals, Cyanide, Total Phenols							
Arsenic, Total	JA3	4/18/00	EPA 200.7		0.005	Not Detected	mg/l
Barium, Total	JA3	4/18/00	EPA 200.7		0.002	0.024	mg/l
Beryllium, Total	JA3	4/18/00	EPA 200.7		0.001	Not Detected	mg/l
Boron, Total	JA3	4/18/00	EPA 200.7		0.002	0.0190	mg/l
Cadmium, Total	JA3	4/18/00	EPA 200.7		0.002	Not Detected	mg/l
Chromium, Total	JA3	4/18/00	EPA 200.7		0.001	Not Detected	mg/l
Cobalt, Total	JA3	4/18/00	EPA 200.7		0.002	Not Detected	mg/l
Copper, Total	JA3	4/18/00	EPA 200.7		0.002	Not Detected	mg/l
Iron, Total	JA3	4/18/00	EPA 200.7		0.002	0.561	mg/l
Lead, Total	JA3	4/18/00	EPA 200.7		0.001	Not Detected	mg/l
Magnesium, Total	JA3	4/18/00	EPA 200.7		0.01	4.02	mg/l
Manganese, Total	JA3	4/18/00	EPA 200.7		0.002	0.101	mg/l
Mercury, Total	WM	4/24/00	EPA 245.1		0.0002	Not Detected	mg/l
Molybdenum, Total	JA3	4/18/00	EPA 200.7		0.002	Not Detected	mg/l
Nickel, Total	JA3	4/18/00	EPA 200.7		0.002	Not Detected	mg/l
Selenium, Total	JA3	4/18/00	EPA 200.7		0.005	Not Detected	mg/l
Silver, Total	JA3	4/18/00	EPA 200.7		0.002	Not Detected	mg/l
Thallium, Total	JA3	4/18/00	EPA 200.7		0.002	0.007	mg/l
Tin, Total	JA3	4/18/00	EPA 200.7		0.005	Not Detected	mg/l
Titanium, Total	JA3	4/18/00	EPA 200.7		0.002	0.014	mg/l
Zinc - Total	JA3	4/18/00	EPA 200.7		0.002	0.021	mg/l
Cyanide, Total	EMH	4/21/00	EPA 335.3		0.005	Not Detected	mg/l
Phenol, Total	RSP	4/21/00	EPA 420.1		0.01	Not Detected	mg/l
General Characteristics							
Temperature, Intake	FLD	4/17/00			0.	69.8	Degrees F
Field pH	FLD	4/17/00	EPA 150.1		0.	7.06	SU
Biochemical Oxygen Demand, 5 Day	BDW	4/24/00	SM 5210B		1.	1	mg/l
Chemical Oxygen Demand	BDW	4/25/00	EPA 410.1		1.	3	mg/l

This Certificate is for the physical and/or chemical characteristics of the sample as submitted.

Comments:

cc: Mr. Greg Elmore
Southern Nuclear

Quality Control _____ **Supervision** _____ **Date:** 01-May-00

smk/NC

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

ALABAMA POWER
A SOUTHERN COMPANY

CERTIFICATE OF ANALYSIS

To: Mr. Jim Porlier
Farley Nuclear Plant

Customer Account : NFNPINTK
Sample Date : 17-Apr-00
Customer ID : AL-0024619
Delivery Date : 17-Apr-00

Description: FNP - Intake Water FNP030
Repermitting

Laboratory ID Number: AE12326

Name	Analyst	Test Date	Reference	Vio Spec	MDL	Results	Units
General Characteristics							
Total Organic Carbon	KRC	4/21/00	EPA 415.1		0.30	2.42	mg/l
Solids - Suspended	JS	4/21/00	EPA 160.2		1.	5	mg/l
Nitrogen, Ammonia	EMH	4/19/00	EPA 350.1		0.01	0.09	mg/l
Bromide	EMH	4/19/00	EPA 300.0		0.02	Not Detected	mg/l
Chlorine, Total Residual	FLD	4/17/00	Field Test		0.01	Not Detected	mg/l
Color	FKK	4/17/00	EPA 110.3		0.	19	PCU
Fluoride	EMH	4/19/00	EPA 340.2		0.02	Not Detected	mg/l
Nitrogen, Nitrate/Nitrite	EMH	4/18/00	EPA 353.2		0.02	0.52	mg/l
Nitrogen, Total Organic	EMH	4/19/00	EPA 351.3		0.01	0.680	mg/l
Oil and Grease	BDW	4/24/00	EPA 1664		1.0	2.8	mg/l
Phosphorus, Total	ACP	4/20/00	EPA 365.2		0.001	0.034	mg/l as P
Sulfate	EMH	4/19/00	EPA 300.0		1.0	9.24	mg/l
Sulfide	FKK	4/20/00	EPA 376.2		0.01	0.03	mg/l
Sulfite	FKK	4/17/00	EPA 377.1		0.25	Not Detected	mg/l
Surfactants (Foaming Agents)	FKK	4/18/00	EPA 425.1		0.01	0.02	mg/l
Nitrogen, Total Kjeldahl	EMH	4/20/00	EPA 351.2		0.01	0.77	mg/l
Base/Neutral Compounds							
Acenaphthene	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l
Acenaphthylene	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l
Anthracene	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l
Benzidine	RSP	4/20/00	EPA 625		0.007	Not Detected	mg/l
Benzo(a)anthracene	RSP	4/20/00	EPA 625		0.003	Not Detected	mg/l
Benzo(a)pyrene	RSP	4/20/00	EPA 625		0.003	Not Detected	mg/l
3,4-Benzofluoranthene	RSP	4/20/00	EPA 625		0.003	Not Detected	mg/l
Benzo(g,h,i)perylene	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l
Benzo(k)fluoranthene	RSP	4/20/00	EPA 625		0.003	Not Detected	mg/l
Bis(2-chloroethoxy)methane	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l
Bis(2-chloroethyl)ether	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l

This Certificate is for the physical and/or chemical characteristics of the sample as submitted.

Comments:

cc: Mr. Greg Elmore
Southern Nuclear

Quality Control _____ **Supervision** _____ **Date:** 01-May-00

smk/NC

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

ALABAMA POWER
A SOUTHERN COMPANY

CERTIFICATE OF ANALYSIS

To: Mr. Jim Porlier
Farley Nuclear Plant

Customer Account : NFNPINTK
Sample Date : 17-Apr-00
Customer ID : AL-0024619
Delivery Date : 17-Apr-00

Description: FNP - Intake Water FNP030
Repermitting

Laboratory ID Number: AE12326

Name	Analyst	Test Date	Reference	Vio Spec	MDL	Results	Units
Base/Neutral Compounds							
Bis(2-chloroisopropyl)ether	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l
Bis(2-ethylhexyl)phthalate	RSP	4/20/00	EPA 625		0.004	Not Detected	mg/l
4-Bromophenyl phenyl ether	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l
Butyl benzyl phthalate	RSP	4/20/00	EPA 625		0.003	Not Detected	mg/l
2-Chloronaphthalene	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l
4-Chlorophenyl phenyl ether	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l
Chrysene	RSP	4/20/00	EPA 625		0.003	Not Detected	mg/l
Dibenzo(a,h)anthracene	RSP	4/20/00	EPA 625		0.003	Not Detected	mg/l
1,2-Dichlorobenzene	RSP	4/20/00	EPA 625		0.003	Not Detected	mg/l
1,3-Dichlorobenzene	RSP	4/20/00	EPA 625		0.003	Not Detected	mg/l
1,4-Dichlorobenzene	RSP	4/20/00	EPA 625		0.004	Not Detected	mg/l
3,3p-Dichlorobenzidine	RSP	4/20/00	EPA 625		0.013	Not Detected	mg/l
Diethyl phthalate	RSP	4/20/00	EPA 625		0.003	Not Detected	mg/l
Dimethyl phthalate	RSP	4/20/00	EPA 625		0.003	Not Detected	mg/l
Di-n-butylphthalate	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l
2,4-Dinitrotoluene	RSP	4/20/00	EPA 625		0.003	Not Detected	mg/l
2,6-Dinitrotoluene	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l
Di-n-octylphthalate	RSP	4/20/00	EPA 625		0.004	Not Detected	mg/l
1,2-Diphenylhydrazine	RSP	4/20/00	EPA 625		0.003	Not Detected	mg/l
Fluoranthene	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l
Fluorene	RSP	4/20/00	EPA 625		0.003	Not Detected	mg/l
Hexachlorobenzene	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l
Hexachlorobutadiene	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l
Hexachlorocyclopentadiene	RSP	4/20/00	EPA 625		0.001	Not Detected	mg/l
Hexachloroethane	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l
Indeno(1,2,3-cd)pyrene	RSP	4/20/00	EPA 625		0.003	Not Detected	mg/l
Isophorone	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l
Naphthalene	RSP	4/20/00	EPA 625		0.003	Not Detected	mg/l

This Certificate is for the physical and/or chemical characteristics of the sample as submitted.

Comments:

cc: Mr. Greg Elmore
Southern Nuclear

Quality Control _____ **Supervision** _____ **Date:** 01-May-00

smk/NC

General Test Laboratory
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A SOUTHERN COMPANY

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Laboratory ID Number: AE12326

Name	Analyst	Test Date	Reference	Vio Spec	MDL	Results	Units
Base/Neutral Compounds							
Nitrobenzene	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l
N-Nitrosodimethylamine	RSP	4/20/00	EPA 625		0.003	Not Detected	mg/l
N-Nitrosodi-n-propylamine	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l
N-Nitrosodiphenylamine	RSP	4/20/00	EPA 625		0.003	Not Detected	mg/l
Phenanthrene	RSP	4/20/00	EPA 625		0.001	Not Detected	mg/l
Pyrene	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l
1,2,4-Trichlorobenzene	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l
Acid Compounds							
2-Chlorophenol	RSP	4/20/00	EPA 625		0.004	Not Detected	mg/l
2,4-Dichlorophenol	RSP	4/20/00	EPA 625		0.003	Not Detected	mg/l
2,4-Dimethylphenol	RSP	4/20/00	EPA 625		0.003	Not Detected	mg/l
4,6-Dinitro-o-cresol	RSP	4/20/00	EPA 625		0.003	Not Detected	mg/l
2,4-Dinitrophenol	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l
2-Nitrophenol	RSP	4/20/00	EPA 625		0.004	Not Detected	mg/l
4-Nitrophenol	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l
P-Chloro-M-Cresol	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l
Pentachlorophenol	RSP	4/20/00	EPA 625		0.008	Not Detected	mg/l
Phenol	RSP	4/20/00	EPA 625		0.001	Not Detected	mg/l
2,4,6-Trichlorophenol	RSP	4/20/00	EPA 625		0.001	Not Detected	mg/l

This Certificate is for the physical and/or chemical characteristics of the sample as submitted.

Comments:

cc: Mr. Greg Elmore
Southern Nuclear

Quality Control _____ **Supervision** _____ **Date:** 01-May-00

smk/NC

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

ALABAMA POWER
A SOUTHERN COMPANY

CERTIFICATE OF ANALYSIS

To: Mr. Jim Porlier
Farley Nuclear Plant

Customer Account : NFNPINTK
Sample Date : 26-Apr-00
Customer ID : AL-0024619
Delivery Date : 26-Apr-00

Description: FNP - Intake Water Coliform
Repermitting

Laboratory ID Number: AE13329

Name	Analyst	Test Date	Reference	Vio Spec	MDL	Results	Units
General Characteristics							
Coliform - Fecal	BDW	4/27/00	SM 9222D		1.	15	colonies/100

This Certificate is for the physical and/or chemical characteristics of the sample as submitted.

Comments:

cc: Mr. Greg Elmore
Southern Nuclear

Quality Control _____ **Supervision** _____ **Date:** 02-May-00

smk/NC

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

ALABAMA POWER
A SOUTHERN COMPANY

CERTIFICATE OF ANALYSIS

To: Mr. Jim Porlier
Farley Nuclear Plant

Customer Account : NFNPDISC
Sample Date : 17-Apr-00
Customer ID : AL-0024619
Delivery Date : 17-Apr-00

Description: FNP - Discharge FNP001
Repermitting

Laboratory ID Number: AE12324

Name	Analyst	Test Date	Reference	Vio Spec	MDL	Results	Units
Volatile Compounds							
Acrolein	RAH	4/18/00	EPA 603		0.002	Not Detected	mg/l
Acrylonitrile	RAH	4/18/00	EPA 603		0.001	Not Detected	mg/l
Benzene	RAH	4/20/00	EPA 624		0.0020	Not Detected	mg/l
Bromoform	RAH	4/20/00	EPA 624		0.003	Not Detected	mg/l
Carbon Tetrachloride	RAH	4/20/00	EPA 624		0.002	Not Detected	mg/l
Chlorobenzene	RAH	4/20/00	EPA 624		0.001	Not Detected	mg/l
Chlorodibromomethane	RAH	4/20/00	EPA 624		0.001	Not Detected	mg/l
Chloroethane	RAH	4/20/00	EPA 624		0.002	Not Detected	mg/l
2-Chloroethylvinyl Ether	RAH	4/20/00	EPA 624		0.001	Not Detected	mg/l
Chloroform	RAH	4/20/00	EPA 624		0.002	Not Detected	mg/l
Dichlorobromomethane	RAH	4/20/00	EPA 624		0.001	Not Detected	mg/l
1,1-Dichloroethane	RAH	4/20/00	EPA 624		0.002	Not Detected	mg/l
1,2-Dichloroethane	RAH	4/20/00	EPA 624		0.002	Not Detected	mg/l
1,1-Dichloroethylene	RAH	4/20/00	EPA 624		0.001	Not Detected	mg/l
1,2-Dichloropropane	RAH	4/20/00	EPA 624		0.002	Not Detected	mg/l
1,3-Dichloropropene	RAH	4/20/00	EPA 624		0.002	Not Detected	mg/l
Ethylbenzene	RAH	4/20/00	EPA 624		0.0020	Not Detected	mg/l
Methyl Bromide	RAH	4/20/00	EPA 624		0.002	Not Detected	mg/l
Methyl Chloride	RAH	4/20/00	EPA 624		0.002	Not Detected	mg/l
Methylene Chloride	RAH	4/20/00	EPA 624		0.002	Not Detected	mg/l
1,1,2,2-Tetrachloroethane	RAH	4/20/00	EPA 624		0.002	Not Detected	mg/l
Tetrachloroethylene	RAH	4/20/00	EPA 624		0.002	Not Detected	mg/l
Toluene	RAH	4/20/00	EPA 624		0.0020	Not Detected	mg/l
1,2-trans-Dichloroethylene	RAH	4/20/00	EPA 624		0.001	Not Detected	mg/l
1,1,1-Trichloroethane	RAH	4/20/00	EPA 624		0.001	Not Detected	mg/l
1,1,2-Trichloroethane	RAH	4/20/00	EPA 624		0.002	Not Detected	mg/l
Trichloroethylene	RAH	4/20/00	EPA 624		0.002	Not Detected	mg/l
Vinyl Chloride	RAH	4/20/00	EPA 624		0.001	Not Detected	mg/l

This Certificate is for the physical and/or chemical characteristics of the sample as submitted.

Comments:

cc: Mr. Greg Elmore
Southern Nuclear

Quality Control _____ **Supervision** _____ **Date:** 01-May-00

smk/NC

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

ALABAMA POWER
A SOUTHERN COMPANY

CERTIFICATE OF ANALYSIS

To: Mr. Jim Porlier
Farley Nuclear Plant

Customer Account : NFNPDISC
Sample Date : 17-Apr-00
Customer ID : AL-0024619
Delivery Date : 17-Apr-00

Description: FNP - Discharge FNP001
Repermitting

Laboratory ID Number: AE12324

Name	Analyst	Test Date	Reference	Vio Spec	MDL	Results	Units
Pesticides							
Aldrin	RSP	4/21/00	EPA 608		0.003	Not Detected	mg/l
alpha-BHC	RSP	4/21/00	EPA 608		0.003	Not Detected	mg/l
beta-BHC	RSP	4/21/00	EPA 608		0.003	Not Detected	mg/l
delta-BHC	RSP	4/21/00	EPA 608		0.003	Not Detected	mg/l
gamma-BHC (Lindane)	RSP	4/21/00	EPA 608		0.003	Not Detected	mg/l
Chlordane	RSP	4/21/00	EPA 608		0.003	Not Detected	mg/l
4,4p-DDT	RSP	4/21/00	EPA 608		0.003	Not Detected	mg/l
4,4p-DDE	RSP	4/21/00	EPA 608		0.003	Not Detected	mg/l
4,4p-DDD	RSP	4/21/00	EPA 608		0.003	Not Detected	mg/l
Dieldrin	RSP	4/21/00	EPA 608		0.003	Not Detected	mg/l
alpha-Endosulfan	RSP	4/21/00	EPA 608		0.003	Not Detected	mg/l
beta-Endosulfan	RSP	4/21/00	EPA 608		0.003	Not Detected	mg/l
Endosulfan sulfate	RSP	4/21/00	EPA 608		0.003	Not Detected	mg/l
Endrin	RSP	4/21/00	EPA 608		0.001	Not Detected	mg/l
Endrin aldehyde	RSP	4/21/00	EPA 608		0.003	Not Detected	mg/l
Heptachlor	RSP	4/21/00	EPA 608		0.003	Not Detected	mg/l
Heptachlor epoxide	RSP	4/21/00	EPA 608		0.003	Not Detected	mg/l
PCB, Aroclor 1242	RSP	4/21/00	EPA 608		10.	Not Detected	mg/l
PCB, Aroclor 1254	RSP	4/21/00	EPA 608		10.	Not Detected	mg/l
PCB, Aroclor 1221	RSP	4/21/00	EPA 608		10.	Not Detected	mg/l
PCB, Aroclor 1232	RSP	4/21/00	EPA 608		10.	Not Detected	mg/l
PCB, Aroclor 1248	RSP	4/21/00	EPA 608		10.	Not Detected	mg/l
PCB, Aroclor 1260	RSP	4/21/00	EPA 608		10.	Not Detected	mg/l
PCB, Aroclor 1016	RSP	4/21/00	EPA 608		10.	Not Detected	mg/l
Toxaphene	RSP	4/21/00	EPA 608		0.003	Not Detected	mg/l
Metals, Cyanide, Total Phenols							
Aluminum, Total	JA3	4/18/00	EPA 200.7		0.006	0.485	mg/l
Antimony, Total	JA3	4/18/00	EPA 200.7		0.002	Not Detected	mg/l

This Certificate is for the physical and/or chemical characteristics of the sample as submitted.

Comments:

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Southern Nuclear

Quality Control _____ **Supervision** _____ **Date:** 01-May-00

smk/NC

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

ALABAMA POWER
A SOUTHERN COMPANY

CERTIFICATE OF ANALYSIS

To: Mr. Jim Porlier
Farley Nuclear Plant

Customer Account : NFNPDISC
Sample Date : 17-Apr-00
Customer ID : AL-0024619
Delivery Date : 17-Apr-00

Description: FNP - Discharge FNP001
Repermitting

Laboratory ID Number: AE12324

Name	Analyst	Test Date	Reference	Vio Spec	MDL	Results	Units
Metals, Cyanide, Total Phenols							
Arsenic, Total	JA3	4/18/00	EPA 200.7		0.005	Not Detected	mg/l
Barium, Total	JA3	4/18/00	EPA 200.7		0.002	0.025	mg/l
Beryllium, Total	JA3	4/18/00	EPA 200.7		0.001	Not Detected	mg/l
Boron, Total	JA3	4/18/00	EPA 200.7		0.002	0.0390	mg/l
Cadmium, Total	JA3	4/18/00	EPA 200.7		0.002	Not Detected	mg/l
Chromium, Total	JA3	4/18/00	EPA 200.7		0.001	Not Detected	mg/l
Cobalt, Total	JA3	4/18/00	EPA 200.7		0.002	Not Detected	mg/l
Copper, Total	JA3	4/18/00	EPA 200.7		0.002	0.006	mg/l
Iron, Total	JA3	4/18/00	EPA 200.7		0.002	0.515	mg/l
Lead, Total	JA3	4/18/00	EPA 200.7		0.001	Not Detected	mg/l
Magnesium, Total	JA3	4/18/00	EPA 200.7		0.01	4.35	mg/l
Manganese, Total	JA3	4/18/00	EPA 200.7		0.002	0.055	mg/l
Mercury, Total	WM	4/24/00	EPA 245.1		0.0002	Not Detected	mg/l
Molybdenum, Total	JA3	4/18/00	EPA 200.7		0.002	Not Detected	mg/l
Nickel, Total	JA3	4/18/00	EPA 200.7		0.002	Not Detected	mg/l
Selenium, Total	JA3	4/18/00	EPA 200.7		0.005	Not Detected	mg/l
Silver, Total	JA3	4/18/00	EPA 200.7		0.002	Not Detected	mg/l
Thallium, Total	JA3	4/18/00	EPA 200.7		0.002	0.006	mg/l
Tin, Total	JA3	4/18/00	EPA 200.7		0.005	Not Detected	mg/l
Titanium, Total	JA3	4/18/00	EPA 200.7		0.002	0.018	mg/l
Zinc - Total	JA3	4/18/00	EPA 200.7		0.002	0.026	mg/l
Cyanide, Total	EMH	4/21/00	EPA 335.3		0.005	Not Detected	mg/l
Phenol, Total	RSP	4/21/00	EPA 420.1		0.01	Not Detected	mg/l
General Characteristics							
Temperature, Discharge	FLD	4/17/00	Field Data		0.	75.2	Deg F
Field pH	FLD	4/17/00	EPA 150.1		0.	7.08	SU
Biochemical Oxygen Demand, 5 Day	BDW	4/24/00	SM 5210B		1.	1	mg/l
Chemical Oxygen Demand	BDW	4/25/00	EPA 410.1		1.	11	mg/l

This Certificate is for the physical and/or chemical characteristics of the sample as submitted.

Comments:

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Southern Nuclear

Quality Control _____ **Supervision** _____ **Date:** 01-May-00

smk/NC

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

ALABAMA POWER
A SOUTHERN COMPANY

CERTIFICATE OF ANALYSIS

To: Mr. Jim Porlier
Farley Nuclear Plant

Customer Account : NFNPDISC
Sample Date : 17-Apr-00
Customer ID : AL-0024619
Delivery Date : 17-Apr-00

Description: FNP - Discharge FNP001
Repermitting

Laboratory ID Number: AE12324

Name	Analyst	Test Date	Reference	Vio Spec	MDL	Results	Units
General Characteristics							
Total Organic Carbon	KRC	4/21/00	EPA 415.1		0.30	2.63	mg/l
Solids - Suspended	JS	4/21/00	EPA 160.2		1.	6	mg/l
Nitrogen, Ammonia	EMH	4/19/00	EPA 350.1		0.01	0.08	mg/l
Bromide	EMH	4/19/00	EPA 300.0		0.02	Not Detected	mg/l
Chlorine, Total Residual	FLD	4/17/00	Field Test		0.01	Not Detected	mg/l
Color	FKK	4/17/00	EPA 110.3		0.	24	PCU
Fluoride	EMH	4/19/00	EPA 340.2		0.02	Not Detected	mg/l
Nitrogen, Nitrate/Nitrite	EMH	4/18/00	EPA 353.2		0.02	0.62	mg/l
Nitrogen, Total Organic	EMH	4/19/00	EPA 351.3		0.01	0.860	mg/l
Oil and Grease	BDW	4/24/00	EPA 1664		1.0	2.4	mg/l
Phosphorus, Total	ACP	4/20/00	EPA 365.2		0.001	0.034	mg/l as P
Sulfate	EMH	4/19/00	EPA 300.0		1.0	12.4	mg/l
Sulfide	FKK	4/20/00	EPA 376.2		0.01	0.03	mg/l
Sulfite	FKK	4/17/00	EPA 377.1		0.25	Not Detected	mg/l
Surfactants (Foaming Agents)	FKK	4/18/00	EPA 425.1		0.01	0.03	mg/l
Nitrogen, Total Kjeldahl	EMH	4/20/00	EPA 351.2		0.01	0.94	mg/l
Base/Neutral Compounds							
Acenaphthene	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l
Acenaphthylene	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l
Anthracene	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l
Benzidine	RSP	4/20/00	EPA 625		0.007	Not Detected	mg/l
Benzo(a)anthracene	RSP	4/20/00	EPA 625		0.003	Not Detected	mg/l
Benzo(a)pyrene	RSP	4/20/00	EPA 625		0.003	Not Detected	mg/l
3,4-Benzofluoranthene	RSP	4/20/00	EPA 625		0.003	Not Detected	mg/l
Benzo(g,h,i)perylene	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l
Benzo(k)fluoranthene	RSP	4/20/00	EPA 625		0.003	Not Detected	mg/l
Bis(2-chloroethoxy)methane	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l
Bis(2-chloroethyl)ether	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l

This Certificate is for the physical and/or chemical characteristics of the sample as submitted.

Comments:

cc: Mr. Greg Elmore
Southern Nuclear

Quality Control _____ **Supervision** _____ **Date:** 01-May-00

smk/NC

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

ALABAMA POWER
A SOUTHERN COMPANY

CERTIFICATE OF ANALYSIS

To: Mr. Jim Porlier
Farley Nuclear Plant

Customer Account : NFNPDISC
Sample Date : 17-Apr-00
Customer ID : AL-0024619
Delivery Date : 17-Apr-00

Description: FNP - Discharge FNP001
Repermitting

Laboratory ID Number: AE12324

Name	Analyst	Test Date	Reference	Vio Spec	MDL	Results	Units
Base/Neutral Compounds							
Bis(2-chloroisopropyl)ether	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l
Bis(2-ethylhexyl)phthalate	RSP	4/20/00	EPA 625		0.004	Not Detected	mg/l
4-Bromophenyl phenyl ether	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l
Butyl benzyl phthalate	RSP	4/20/00	EPA 625		0.003	Not Detected	mg/l
2-Chloronaphthalene	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l
4-Chlorophenyl phenyl ether	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l
Chrysene	RSP	4/20/00	EPA 625		0.003	Not Detected	mg/l
Dibenzo(a,h)anthracene	RSP	4/20/00	EPA 625		0.003	Not Detected	mg/l
1,2-Dichlorobenzene	RSP	4/20/00	EPA 625		0.003	Not Detected	mg/l
1,3-Dichlorobenzene	RSP	4/20/00	EPA 625		0.003	Not Detected	mg/l
1,4-Dichlorobenzene	RSP	4/20/00	EPA 625		0.004	Not Detected	mg/l
3,3p-Dichlorobenzidine	RSP	4/20/00	EPA 625		0.013	Not Detected	mg/l
Diethyl phthalate	RSP	4/20/00	EPA 625		0.003	Not Detected	mg/l
Dimethyl phthalate	RSP	4/20/00	EPA 625		0.003	Not Detected	mg/l
Di-n-butylphthalate	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l
2,4-Dinitrotoluene	RSP	4/20/00	EPA 625		0.003	Not Detected	mg/l
2,6-Dinitrotoluene	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l
Di-n-octylphthalate	RSP	4/20/00	EPA 625		0.004	Not Detected	mg/l
1,2-Diphenylhydrazine	RSP	4/20/00	EPA 625		0.003	Not Detected	mg/l
Fluoranthene	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l
Fluorene	RSP	4/20/00	EPA 625		0.003	Not Detected	mg/l
Hexachlorobenzene	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l
Hexachlorobutadiene	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l
Hexachlorocyclopentadiene	RSP	4/20/00	EPA 625		0.001	Not Detected	mg/l
Hexachloroethane	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l
Indeno(1,2,3-cd)pyrene	RSP	4/20/00	EPA 625		0.003	Not Detected	mg/l
Isophorone	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l
Naphthalene	RSP	4/20/00	EPA 625		0.003	Not Detected	mg/l

This Certificate is for the physical and/or chemical characteristics of the sample as submitted.

Comments:

cc: Mr. Greg Elmore
Southern Nuclear

Quality Control _____ **Supervision** _____ **Date:** 01-May-00

smk/NC

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

ALABAMA POWER
A SOUTHERN COMPANY

CERTIFICATE OF ANALYSIS

To: Mr. Jim Porlier
Farley Nuclear Plant

Customer Account : NFNPDISC
Sample Date : 17-Apr-00
Customer ID : AL-0024619
Delivery Date : 17-Apr-00

Description: FNP - Discharge FNP001
Repermitting

Laboratory ID Number: AE12324

Name	Analyst	Test Date	Reference	Vio Spec	MDL	Results	Units
Base/Neutral Compounds							
Nitrobenzene	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l
N-Nitrosodimethylamine	RSP	4/20/00	EPA 625		0.003	Not Detected	mg/l
N-Nitrosodi-n-propylamine	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l
N-Nitrosodiphenylamine	RSP	4/20/00	EPA 625		0.003	Not Detected	mg/l
Phenanthrene	RSP	4/20/00	EPA 625		0.001	Not Detected	mg/l
Pyrene	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l
1,2,4-Trichlorobenzene	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l
Acid Compounds							
2-Chlorophenol	RSP	4/20/00	EPA 625		0.004	Not Detected	mg/l
2,4-Dichlorophenol	RSP	4/20/00	EPA 625		0.003	Not Detected	mg/l
2,4-Dimethylphenol	RSP	4/20/00	EPA 625		0.003	Not Detected	mg/l
4,6-Dinitro-o-cresol	RSP	4/20/00	EPA 625		0.003	Not Detected	mg/l
2,4-Dinitrophenol	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l
2-Nitrophenol	RSP	4/20/00	EPA 625		0.004	Not Detected	mg/l
4-Nitrophenol	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l
P-Chloro-M-Cresol	RSP	4/20/00	EPA 625		0.002	Not Detected	mg/l
Pentachlorophenol	RSP	4/20/00	EPA 625		0.008	Not Detected	mg/l
Phenol	RSP	4/20/00	EPA 625		0.001	Not Detected	mg/l
2,4,6-Trichlorophenol	RSP	4/20/00	EPA 625		0.001	Not Detected	mg/l

This Certificate is for the physical and/or chemical characteristics of the sample as submitted.

Comments:

cc: Mr. Greg Elmore
Southern Nuclear

Quality Control _____ **Supervision** _____ **Date:** 01-May-00

smk/NC

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

ALABAMA POWER
A SOUTHERN COMPANY

CERTIFICATE OF ANALYSIS

To: Mr. Jim Porlier
Farley Nuclear Plant

Customer Account : NFNPDISC
Sample Date : 24-Apr-00
Customer ID : AL-0024619
Delivery Date : 24-Apr-00

Description: FNP -Discharge Coliform Repermitting

Laboratory ID Number: AE12983

Name	Analyst	Test Date	Reference	Vio Spec	MDL	Results	Units
General Characteristics							
Temperature, Discharge	FLD	4/24/00	Field Data		0.	75.2	Deg F
Field pH	FLD	4/24/00	EPA 150.1		0.	7.10	SU
Chlorine, Total Residual	FLD	4/24/00	Field Test		0.01	Not Detected	mg/l
Coliform - Fecal	BDW	4/25/00	SM 9222D		1.	1	colonies/100

This Certificate is for the physical and/or chemical characteristics of the sample as submitted.

Comments:

cc: Mr. Greg Elmore
Southern Nuclear

Quality Control _____ **Supervision** _____ **Date:** 01-May-00

smk/NC

Florida Radiochemistry Services, Inc.

Analysis Report

Lab Sample I.D.	2004074-01	2004074-02
Client I.D.	AE 12324	AE 12326
Gross Alpha	1.0	0.5
Error +/-	0.4	0.3
MDL	0.5	0.5
EPA Method	900.0	900.0
Analysis Date	4/22/00	4/22/00
Gross Beta	4.2	3.2
Error +/-	0.6	0.6
MDL	0.8	0.8
EPA Method	900.0	900.0
Analysis Date	4/22/00	4/22/00
Radium 226	0.5	0.6
Error +/-	0.4	0.4
MDL	0.4	0.4
EPA Method	903.1	903.1
Analysis Date	4/25/00	4/25/00
Total Radium	<0.7	<0.6
Error +/-	0.4	0.5
MDL	0.7	0.6
EPA Method	903.0	903.0
Analysis Date	4/26/00	4/26/00
Units	pCi/l	pCi/l
Analyst	MJN	MJN

Florida Radiochemistry Services, Inc.

QA Page

Analyte	Sample #	Date Analyzed	Sample Result	Amount Spiked	Spike Result	Spike /Dup Result	Spike % Rec.	Spike Dup % Rpd
Gross Alpha	2004070-03	4/24/00	0.7	8.5	8.2	8.2	88	0.0
Gross Beta	2004070-03	4/24/00	1.3	12.6	12.9	13.4	92	3.8
Radium 226	2004074-02	4/25/00	0.6	23.4	22.2	23.0	92	3.5
Total Radium	2004074-02	4/26/00	<0.6	23.5	23.0	21.5	98	6.7

	Quality Control Limits	
	% RPD	% Rec.
Gross Alpha	24.8	66-122
Gross Beta	17.5	80-106
Radium 226	15.8	71-116
Total Radium	7.4	79-115

Attachment to US EPA Form 2C

Corrosion Inhibitors, Biocides, and Other Chemical Products in Use

Farley Nuclear Plant
AL0024619

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

Service Water System – Units 1 & 2 (Service Water Intake Structure)

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.

Circulating Water System – Units 1 & 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 the circulating water canal.

Drew WPD 11-541 (Polyacrylate)

Added at a rate of approximately 2.5 gal/day to maintain a concentration of approximately 0.7 ppm product in the circulating water system.

Drewsperse 739 Dispersant

Added at a rate of approximately 65 ml/min continuously to each unit's circulation water canal to maintain a concentration of approximately 12.5 ppm product in the circulating water.

Biosperse 3250

Added once per week to achieve a concentration of approximately 30 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. Used only in the Unit 2 Circulating Water System.

Drewsperse L-474 Defoamer

Added to the 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.

Reactor Coolant System

Lithium Hydroxide

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

Boric Acid

Added to achieve a maximum of approximately 2,500 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

Currently added to maintain approximately 25 – 35 ppb zinc in the reactor coolant system. It is planned to reduce the concentration to 10 – 15 ppb zinc in the spring of 2001.

Secondary System Chemical Control

Hydrazine

Added as needed to maintain approximately 110 – 150 ppb concentration in the secondary system. During wet lay-up process, hydrazine concentration is maintained at 75 – 500 ppm in the steam generators.

Boric Acid

Added to maintain approximately 5 – 10 ppm boron during operation. During unit startup, added to maintain approximately 45 – 50 ppm concentration. FNP is in the process of replacing the steam generators on both units. This effort will be complete in the spring of 2001. At that time, boric acid will no longer be added to the secondary system.

Ethanolamine (ETA)

Added as needed to the secondary system to maintain a concentration of approximately 0.5 – 4.0 ppm.

Ammonium Chloride

Added as needed to the secondary system at a rate of approximately 0.05 – 0.30 ml/min of a 10 – 40 ppm chloride solution.

Component Cooling Water System

Potassium Chromate

Added as needed to maintain approximately 175 – 1,000 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.

Service Building / Turbine Building HVAC Systems

Drewguard 4109 Corrosion Treatment (4% Sodium Nitrite Solution)

Added as needed in systems to maintain approximately 300 – 1,400 ppm concentration.

Diesel Generator Jacket Water System

Drewguard 4109

Added as needed to maintain approximately 500 – 1,000 ppm concentration in the system.

BIOSPERSE 254

Previously approved for use by ADEM (July 29, 1992) in the 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.

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

Added as necessary for yellow metal corrosion control.

Sewage Treatment Plant

Calcium / Sodium Hypochlorite

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

Sodium Hydroxide

Added in concentrations necessary for the purpose of alkalinity control.

Drinking Water System

Production & Construction Systems

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

Attachment to US EPA Form 2C

Descriptive Information and Data for Water Uses

Farley Nuclear Plant
AL0024619

Descriptive Information and Data for Water Uses
at Farley Nuclear Plant

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 1,804 megawatts. The plant provides approximately 20 to 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 200 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 FNP 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 FNP 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

FNP withdraws water from the Chattahoochee River for cooling and other plant uses via a 200 foot intake canal. The river water intake structure contains two (2) 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 & 2

The FNP 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 systems. The components of the service water system are itemized below:

Service Water Intake Screen Backwash – Units 1 & 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 & 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 & 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 & 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 & 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 & 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 & 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 & 2

   By-pass lines 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 & 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 itemized below:

1. Turbine Building Chemistry Lab Drains – Units 1 & 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 & 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 & 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 & 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 & 2

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

6. Draining of Steam Generators – Units 1 & 2

   During outages the steam generators may be drained through 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 (DSN024). 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 & 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 & 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 a 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 & 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 & 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 & 2

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

Steam Generator Blowdown – Units 1 & 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 & 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 & 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 & 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.

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 & 2

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

1. Cooling Tower System Evaporation / Drift – Units 1 & 2

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

2. Cooling Tower Blowdown – Units 1 & 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 control of biofouling and corrosion protection are being made. Average flows for DSN005 and DSN007 are approximately 1.19 MGD and 1.41 MGD during discharge, respectively. The cooling towers are typically blown down for three to four hours each day.

3. Cooling Tower System Overflow – Units 1 & 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 annual flows for DSN006 and DSN008 are approximately 45,000 gallons per unit, based on four (4) hours per event and three (3) events per year.

Condenser Drain (Hot Well Flush) System – Units 1 & 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 System (DSN009)

The sewage treatment 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 (3) separate paths:

East Yard Drainage System (normal flow path) (DSN025)
Waste Settling Pond (alternate) (DSN014)
Southeast Yard Drainage System (alternate) (DSN024)

Miscellaneous Systems

1. Chemical Metal Cleaning Wastes System (DSN012)

   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 System (DSN013)

   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.

3. Petroleum Storage Area (DSN035)

   Various diked petroleum storage areas are drained as necessary to remove accumulated rainwater. Best Management Practices (BMP) are used when draining diked areas, in accordance with the provisions of the existing NPDES permit.

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:

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

b. 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.

c. 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.

d. Circulating Water Canal Drainage – Unit 1
During outages maintenance may require drainage of the circulating water system. A portion of this drainage may be routed to the yard drainage system.

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

f. 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.

g. 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.

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:

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

B. 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.

C. 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.

D. 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.

E. 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.

F. 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.

G. Circulating Water Canal Drainage – Unit 1
During outages maintenance may require drainage of the circulating water system. A portion of this drainage may be routed to the yard drainage system.

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 (3) 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 five (5) acres. The components of this system are described below:

A. Circulating Water Pump Sump Discharge – Unit 2
This discharge is primarily cooling water supplied by the circulating water pump discharge header. Sanitary water is supplied as a backup.

B. 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 northcentral yard drain.

C. 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 northcentral 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 northcentral yard drain.

D. Circulating Water Canal Drainage – Unit 2
During outages maintenance may require drainage of the circulating water system. A portion of this drainage may be routed to the yard drainage system.

4. Northwest Yard Drainage (DSN026)

The northwest yard drainage 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 four (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 fifteen (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 two (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 drainage.

B. Fire Training Area Stormwater 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
Stormwater runoff from the main parking lot is routed to the southwest yard drainage.

D. Service Water Structure Sump Discharge – Units 1 & 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 & 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 & 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 US EPA Form 2C

Proposed Permit Revisions

Farley Nuclear Plant
AL0024619

Description of Proposed Permit Revisions
for Farley Nuclear Plant

Part IV(A): Other Conditions

It is requested that the "Other Conditions" section be revised to indicate that the permittee will comply with all U.S. Nuclear Regulatory Commission requirements relative to discharges. The proposed revision is intended to clarify guidance for radiological aspects of discharges from Farley Nuclear Plant. The following language is proposed:

"The permittee shall comply with all U.S. Nuclear Regulatory Commission requirements relative to discharges."

This language is consistent with the guidance provided for DSN019 and DSN020, Liquid Radwaste System, Unit 1 and 2, respectively.

Enclosure 4

US EPA Form 2F

Farley Nuclear Plant
AL0024619

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

EPA

United States Environmental Protection Agency
Washington, DC 20460

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

Paperwork Reduction Act Notice

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

I. Outfall Location

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

A. Outfall Number (list)	B. Latitude	C. Longitude	D. Receiving Water (name)
	SEE 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.

 Continue on Page 2

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 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		5-2-00

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 Farley Nuclear Plant in the last three (3) years.

 Continue on Page 3

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

Continued from Page 2

VII. Discharge Information

A,B,C, & D: See instructions before proceeding. Complete one set of tables for each outfall. Annotate the outfall number in the space provided. Tables VII-A, VII-B, and VII-C are included on separate sheets numbered VII-1 and VII-2.

E: Potential discharges not covered by analysis - is any toxic pollutant listed in table 2F-2, 2F-3 or 2F-4, a substance or a componant 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 Section IX)*

N/A

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)* ☐ No *(go to Section IX)*

Annual biomonitoring as required by existing NPDES permit on the Main Combined Facility Discharge (DSN001).

IX. Contract Analysis Information

Were any of the analysis reported in item VII 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 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) 664-6194	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) 992-5086
C. Signature	**D. Date Signed**
J D Woodard	5-2-00

EPA Form 3510-2E (Rev. 1-92)

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 20 Minutes	Flow-weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-weighted Composite		
Oil and Grease		N/A				
Biological Oxygen Demand (BOD5)		SEE ATTACHED CHEMICAL ANALYSIS REPORTS				
Chemical Oxygen Demand (COD)						
Total Suspended Solids (TSS)						
Total Nitrogen						
Total Phosphorus						
pH	Minimum	Maximum	Minimum	Maximum		

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

Pollutant and CAS Number (if available)	Maximum Values (include units)		Average Values (include units)		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-weighted Composite		
		SEE ATTACHED CHEMICAL ANALYSIS REPORTS				

Continue on Reverse

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 20 Minutes	Flow-weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-weighted Composite		
	SEE ATTACHED CHEMICAL ANALYSIS REPORTS					

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

1. Date of Storm Event	2. Duration of Storm Event (in minutes)	3. Total rainfall during storm event (in inches)	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event (gallons/minute or specify units)	6. Total flow from rain event (gallons or specify units)
4/24, 2000	210 min	0.2 inches	> 72 hours	150 gpm	9,356 gal

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

SEE ATTACHED

Attachment to US EPA Form 2F

Section I. Outfall Locations

Farley Nuclear Plant
AL0024619

Form 2F, Section I – Outfall Locations
for Farley Nuclear Plant

The following outfalls located on the FNP 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 provided below. DSN024, DSN025, and DSN029 discharge indirectly to the Chattahoochee River (31° 12' 52" Latitude, 85° 05' 55" Longitude) via unnamed tributaries on the site. DSN026, DSN027, and DSN028 discharge to Wilson Creek (31° 13' 45" Latitude, 85° 06' 45" Longitude).

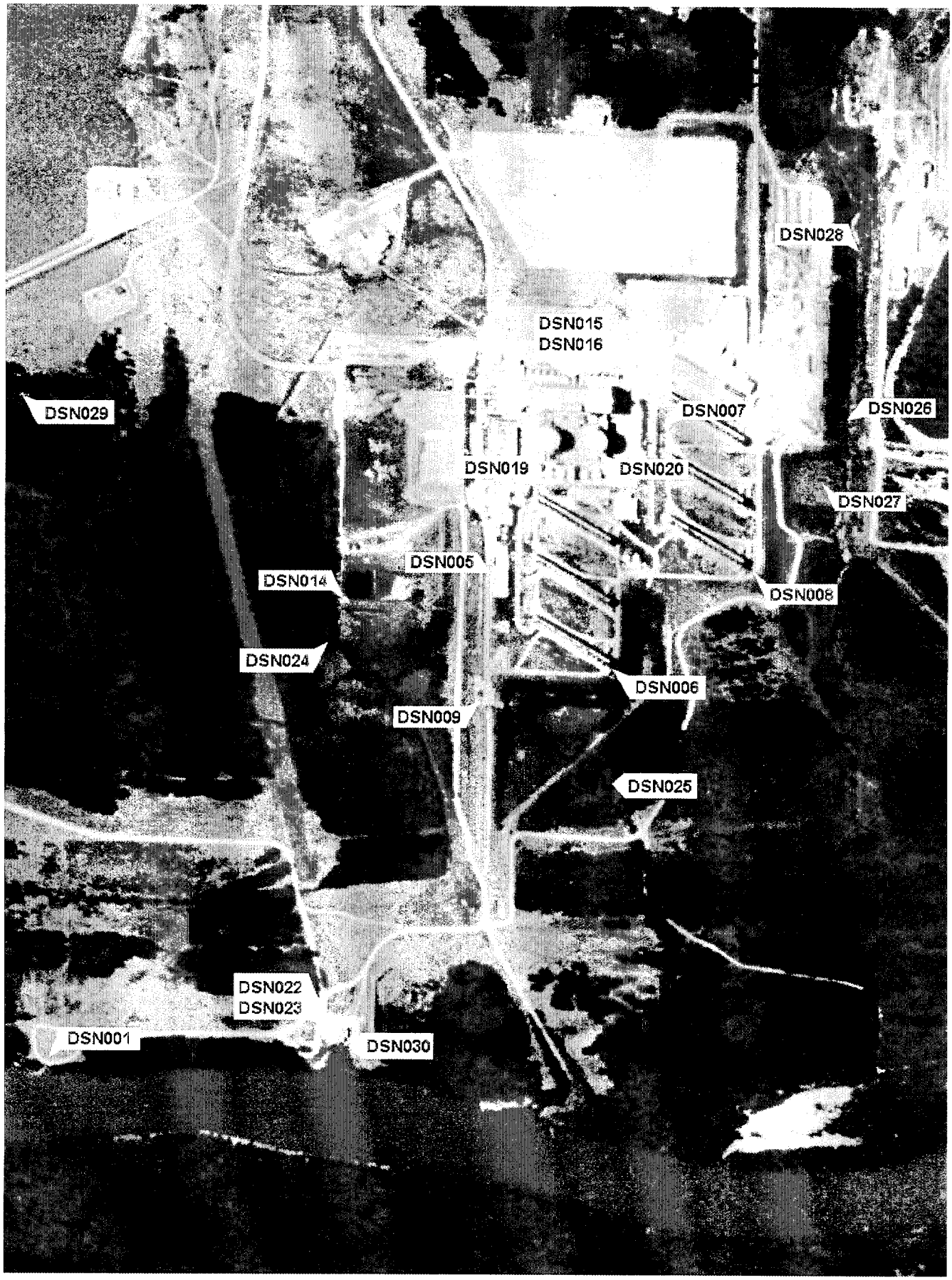
Description	**Discharge Serial Number (DSN)**
Southeast Yard Drainage	DSN024
East Yard Drainage	DSN025
Northwest Yard Drainage	DSN026
Northcentral Yard Drainage	DSN027
West Yard Drainage	DSN028
Southwest Yard Drainage	DSN029

Attachment to US EPA Form 2F

Section III. Site Drainage Map

Farley Nuclear Plant
AL0024619

Farley Nuclear Plant - NPDES Permit AL0024619



NOTE: DSN012 and DSN013 are permitted as treatment processes and do not have specific outfall locations.

Attachment to US EPA Form 2F

Section IVA. Description of Stormwater Outfalls

Farley Nuclear Plant
AL0024619

Form 2F, Section IV(A) – Stormwater Outfall Description for Farley Nuclear Plant

The following outfalls are utilized to convey stormwater associated with industrial activity at FNP 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.
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 US EPA Form 2F

Section IVB. Materials Management Practices

Farley Nuclear Plant
AL0024619

Form 2F, Section IV(B) – Materials Management Practices for Farley Nuclear Plant

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There have been no significant quantities of hazardous materials at FNP over the past three (3) years which have been treated, stored, or disposed in a manner which would result in exposure to stormwater and / or contamination of stormwater runoff. The following FNP 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-SHP-26
FNP-0-SHP-26	Chemical Product Control and 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 stormwater 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 US EPA Form 2F

Section IVC. Structural Control Measures

Farley Nuclear Plant
AL0024619

Form 2F, Section IV(C) – Description of Structural Controls for Farley Nuclear Plant

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Structural control methods utilized at FNP to control contact of stormwater with pollutants include:

Containments

Concrete containments are utilized around tanks and drum storage areas contain 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 distrurbed areas are promptly vegetated to prevent soil contamination of runoff.

Attachment to US EPA Form 2F

Section VB. Description of Sample Point

Farley Nuclear Plant
AL0024619

Form 2F, Section V(B) – Description of Sample Location for Farley Nuclear Plant

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The stormwater sample was obtained from a drain near the bulk hydrogen storage area during a 0.2 inch rainfall event which occurred on April 24, 2000. This point is located in the power block and is representative of the quality of stormwater runoff associated with industrial activity at Farley Nuclear Plant. Both manual grab and 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 is 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 US EPA Form 2F

Section VIIA & B. Discharge Information Chemical Analysis Reports

Farley Nuclear Plant
AL0024619

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

ALABAMA POWER
A SOUTHERN COMPANY

CERTIFICATE OF ANALYSIS

To: Mr. Jim Porlier
Farley Nuclear Plant

Customer Account : NFNPGRAB
Sample Date : 25-Apr-00
Customer ID : AL-0024619
Delivery Date : 25-Apr-00

Description: FNP - Stormwater Grab
Repermitting

Laboratory ID Number: AE13206

Name	Analyst	Test Date	Reference	Vio Spec	MDL	Results	Units
General Characteristics							
Maximum Flow	FLD	4/24/00	Field Test		0	150.	GPM
Precipitation Duration	FLD	4/24/00			0.	3.5	Hours
Precipitation	FLD	4/24/00			0.	0.2	inches
Field pH	FLD	4/24/00	EPA 150.1		0.	6.2	SU
Biochemical Oxygen Demand, 5 Day	BDW	5/1/00	SM 5210B		1.	15	mg/l
Chemical Oxygen Demand	BDW	5/2/00	EPA 410.1		1.	65	mg/l
Solids - Suspended	JS	4/28/00	EPA 160.2		1.	2	mg/l
Nitrogen, Nitrate/Nitrite	EMH	5/1/00	EPA 353.2		0.02	0.98	mg/l
Oil and Grease	FKK	5/1/00	EPA 1664		1.0	2.7	mg/l
Phosphorus, Total	ACP	4/27/00	EPA 365.2		0.001	0.342	mg/l as P
Nitrogen, Total Kjeldahl	EMH	5/1/00	EPA 351.2		0.01	1.46	mg/l
Nitrogen, Total	EMH	5/1/00	SM4500		0.01	2.44	mg/l

This Certificate is for the physical and/or chemical characteristics of the sample as submitted.

Comments:

cc: Mr. Greg Elmore
Southern Nuclear

Quality Control _____ **Supervision** _____ **Date:** 02-May-00

smk/NC

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

ALABAMA POWER
A SOUTHERN COMPANY

CERTIFICATE OF ANALYSIS

To: Mr. Jim Porlier
Farley Nuclear Plant

Customer Account : NFNPCOMP
Sample Date : 25-Apr-00
Customer ID : AL-0024619
Delivery Date : 25-Apr-00

Description: FNP - Stormwater Composite
Repermitting

Laboratory ID Number: AE13207

Name	Analyst	Test Date	Reference	Vio Spec	MDL	Results	Units
General Characteristics							
Maximum Flow	FLD	4/24/00	Field Test		0	150.	GPM
Precipitation Duration	FLD	4/24/00			0.	3.5	Hours
Precipitation	FLD	4/24/00			0.	0.2	inches
Biochemical Oxygen Demand, 5 Day	BDW	5/1/00	SM 5210B		1.	7	mg/l
Chemical Oxygen Demand	BDW	5/2/00	EPA 410.1		1.	34	mg/l
Solids - Suspended	JS	4/28/00	EPA 160.2		1.	30	mg/l
Nitrogen, Nitrate/Nitrite	EMH	5/1/00	EPA 353.2		0.02	0.84	mg/l
Phosphorus, Total	ACP	4/27/00	EPA 365.2		0.001	0.201	mg/l as P
Nitrogen, Total Kjeldahl	EMH	5/1/00	EPA 351.2		0.01	0.54	mg/l
Nitrogen, Total	EMH	5/1/00	SM4500		0.01	1.38	mg/l

This Certificate is for the physical and/or chemical characteristics of the sample as submitted.

Comments:

cc: Mr. Greg Elmore
Southern Nuclear

Quality Control _____ **Supervision** _____ **Date:** 02-May-00

smk/NC

Attachment to US EPA Form 2F

Section VIID. Description of Sampling/Flow Measurement Methodology

Farley Nuclear Plant
AL0024619

Form 2F, Section VII(D) – Description of Sampling/Flow Measurement Methodology for Farley Nuclear Plant

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The collection of the sample 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 thirty (30) minutes of the discharge as required. For all other parameters, both a grab sample collected during the first thirty (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 (0.2 inches total rainfall).

Flow rate was determined by estimating the velocity of the storm water in the discharge and measuring the wetted cross-sectional area. Based on repeated measurements conducted over the duration of the sampling event, the maximum observed flow rate was 150 gallons per minute.