

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
DISCHARGE MONITORING REPORT  
Tennessee Valley Authority  
BROWNS FERRY NUCLEAR PLANT

DSN 101 - Diffuser Discharge  
Structure

MONTH September 1988

NPDES # AL0022080

PARAM	FLOW	pH	Amb. River Temperature	Downstream River Temp.	D.S. River Temp. >92.0	Downstream River Temp.	Temperature Rise
AVG	-	6.0	24hr Av Max	24hr Av Max	---	Hourly Max	24hr Av Max
MAX	-	9.0	---	90.0	6 Hrly Rdgs	93.0	10.0
UNITS	MGD	s.u.	---	°	# Rdgs >6	°	°
FREQ.	Cont.	1/wk	Continuous	Continuous	Hourly	Continuous	Continuous
1	633.6		81.0	81.8	0	81.3	0.9
2	633.6		80.0	79.9	0	79.9	0.0
3	633.6		80.1	79.9	0	79.8	-0.1
4	633.6		79.8	79.1	0	79.2	-0.6
5	633.6		79.8	78.9	0	79.2	-0.2
6	633.6	8.2	78.7	79.0	0	78.3	0.2
7	633.6		77.9	77.7	0	77.0	0.4
8	633.6		76.8	76.5	0	76.6	0.2
9	633.6		77.6	77.0	0	77.8	0.1
10	633.6		77.6	77.1	0	77.4	-0.1
11	633.6		77.1	76.7	0	76.7	-0.2
12	633.6		77.5	76.7	0	78.0	-0.7
13	633.6	8.1	78.3	78.7	0	80.3	0.3
14	633.6		78.9	79.1	0	80.3	0.4
15	633.6		78.8	78.9	0	79.5	0.1
16	633.6		78.8	78.6	0	78.4	0.0
17	633.6		78.0	77.3	0	78.3	-0.5
18	633.6		78.0	77.5	0	78.2	-0.3
19	633.6		78.0	77.7	0	77.8	0.0
20	633.6	8.2	78.0	77.8	0	78.6	0.2
21	633.6		78.0	77.9	0	78.5	0.3
22	633.6		78.9	78.9	0	79.4	0.4
23	633.6		78.5	78.7	0	80.0	0.3
24	633.6		79.0	79.1	0	79.3	0.2
25	633.6		79.0	78.8	0	79.8	-0.1
26	633.6		79.0	78.8	0	78.9	0.3
27	633.6	8.3	78.0	78.2	0	78.1	0.4
28	633.6		77.4	77.7	0	77.2	0.4
29	633.6		76.3	77.1	0	76.1	1.7
30	633.6		78.1	78.2	0	78.8	0.1
MAX	633.6	8.3	81.0	81.8	0	81.3	1.7
AVG	633.6		78.4	78.3	0	78.6	0.1
MIN		8.1					

I certify under penalty of law that this document and all attachments were prepared under the 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.

Signature of Responsible Official Original Signed By  
M. Paul Schmierbach

Date: OCT 26 1988

8811010240 880930  
PDR ADOCK 05000259  
R PIC

*IK25*  
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ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
DISCHARGE MONITORING REPORT  
Tennessee Valley Authority  
BROWNS FERRY NUCLEAR PLANT

DSN 102 - Sedimentation Pond

MONTH September 1988

NPDES # AL0022080

PARAM	FLOW	pH	O&G	TSS	COMMENTS
AVG	----	MIN. 6.0	15	30	
MAX	----	9.0	20	100	
UNITS	MGD	s.u.	mg/l	mg/l	
FREQ.	1/RELEASE	1/RELEASE	1/RELEASE	2/RELEASE	
1					POND OUT OF SERVICE FOR REPAIR 11-2-87.
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
MAX					
AVG					
MIN					
TOTAL	NO DISCHARGE				

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Signature of Responsible Official \_\_\_\_\_

Date: \_\_\_\_\_



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ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
DISCHARGE MONITORING REPORT  
Tennessee Valley Authority  
BROWNS FERRY NUCLEAR PLANT

DSN 103 - Unit 1,2,3 Turbine  
Station Sump

MONTH September 1988

NPDES # AL0022080

PARAM	FLOW	O&G	TSS	COMMENTS
AVG	----	15	30	
MAX	----	20	100	
UNITS	MGD	mg/l	mg/l	
FREQ.	1/WEEK	1/WEEK	1/WEEK	
1				
2	0.121000	< 5	10	
3				
4				
5				
6				
7				
8				
9	0.060000	< 5	6	
10				
11				
12				
13				
14				
15				
16	0.124000	< 5	10	REPLICATES O&G <5 TSS 9
17				
18				
19				
20				
21				
22				
23	0.054000	< 5	7	
24				
25				
26				
27				
28				
29				
30	0.086400	< 5	11	
MAX	0.124000	< 5	11	
AVG	0.089080	< 5	9	

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Date: \_\_\_\_\_



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ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
DISCHARGE MONITORING REPORT  
Tennessee Valley Authority  
BROWNS FERRY NUCLEAR PLANT

DSN 104 - Liquid Radwaste

MONTH September 1988

NPDES # AL0022080

PARAM	FLOW	O&G	TSS	LDT/O&G	LDT/TSS	Copper	Iron
AVG		15	30	15	30		
MAX		20	100	20	100	1.0	1.0
UNITS	MGD	mg/L	mg/L	mg/L	mg/L	mg/L -	mg/L
FREQ.	1/BATCH	2/wk	2/wk	1/BATCH	1/BATCH	1/BATCH	1/BATCH
1	0.055221	< 5	< 1			(1) NA	(1) NA
2	0.031495						
3	0.062863						
4	0.069305						
5	0.031284	< 5	< 1				
6	0.029130						
7	0.023984						
8	0.061711	< 5	< 1				
9	0.031061						
10	0.014829						
11	0.089159						
12	0.021371	< 5	< 1				
13	0.030705						
14	0.031661						
15	0.062122	< 5	11	6	16		
16	0.040970						
17	0.031752						
18	0.030271						
19	0.061871	< 5	< 1				
20	0.031061						
21	0.031061						
22	0.022880	< 5	< 1				
23	0.060502						
24	0.060495						
25	0.030709						
26	NO DISCHARGE						
27	0.058421	< 5	< 1				
28	0.030882						
29	0.030458	< 5	< 1				
30	0.062166						
MAX	0.089159	< 5	11	6	16		
AVG	0.042393	< 5	< 2	6	16		

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Date: \_\_\_\_\_

(1) No chemical metal cleaning solutions used this month.



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Small mark in the middle left area.

Small mark in the middle center area.

Small mark in the middle right area.

Small mark on the left side.

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Small mark in the bottom center area.

Small mark on the right side.

Small mark at the bottom left corner.

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
DISCHARGE MONITORING REPORT  
Tennessee Valley Authority  
BROWNS FERRY NUCLEAR PLANT

DSN 105 - Residual Heat Removal  
Service Water

MONTH September 1988

NPDES # AL0022080

PARAM	FLOW	TEMP	COMMENTS
AVG	----		
MAX	----		
UNITS	MGD	°F	
FREQ.	1/WEEK	1/WEEK	
1			
2	*		NO DISCHARGE ENTIRE WEEK
3			
4			
5			
6			
7			
8			
9	*		NO DISCHARGE ENTIRE WEEK
10			
11			
12			
13			
14			
15			
16	*		NO DISCHARGE ENTIRE WEEK
17			
18			
19			
20			
21			
22			
23	*		NO DISCHARGE ENTIRE WEEK
24			
25			
26			
27			
28			
29			
30	* —		NO DISCHARGE ENTIRE WEEK
MAX			
AVG	*		NO DISCHARGE ENTIRE MONTH

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Signature of Responsible Official \_\_\_\_\_

Date: \_\_\_\_\_



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Small cluster of dots in the lower right quadrant.

Small vertical mark at the bottom center.

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
DISCHARGE MONITORING REPORT  
Tennessee Valley Authority  
BROWNS FERRY NUCLEAR PLANT

DSN 106 - Condenser Cooling Water  
Station Sump

MONTH September 1988

NPDES # AL0022080

PARAM	FLOW	O&G	TSS	COMMENTS
AVG	----	15	30	
MAX	----	20	100	
UNITS	MGD	mg/l	mg/l	
FREQ.	1/WEEK	1/WEEK	1/WEEK	
1	0.000000			DISCHARGE ROUTED TO LINED POND FOR ENTIRE REPORTING PERIOD.
2				
3				
4				
5				
6				
7				
8	0.000000			
9				
10				
11				
12				
13				
14				
15	0.000000			
16				
17				
18				
19				
20				
21				
22	0.000000			
23				
24				
25				
26				
27				
28				
29	0.000000			
30				
MAX	0.000000			
AVG	0.000000			

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ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
DISCHARGE MONITORING REPORT  
Tennessee Valley Authority  
BROWNS FERRY NUCLEAR PLANT

DSN 107 - Unit 3 Control Bldg.  
Drain

MONTH September 1988 NPDES # AL0022080

PARAM	FLOW	O&G	TSS	-COMMENTS
AVG	----	15	30	
MAX	----	20	100	
UNITS	MGD	mg/l	mg/l	
FREQ.	1/WEEK	1/WEEK	1/WEEK	
1				
2				
3				
4				
5				
6				
7	0.001112	< 5	11	
8				
9				
10				
11				
12				
13				
14	0.003000	< 5	7	REPLICATES O&G <5 TSS 7
15				
16				
17				
18				
19				
20				
21	0.002800	< 5	9	
22				
23				
24				
25				
26				
27				
28	0.003000	< 5	14	
29				
30				
MAX	0.003000	< 5	14	
AVG	0.002478	< 5	10	

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ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
DISCHARGE MONITORING REPORT  
Tennessee Valley Authority  
BROWNS FERRY NUCLEAR PLANT

DSN 108 - Diesel Bldg. Sump  
Units 1 & 2

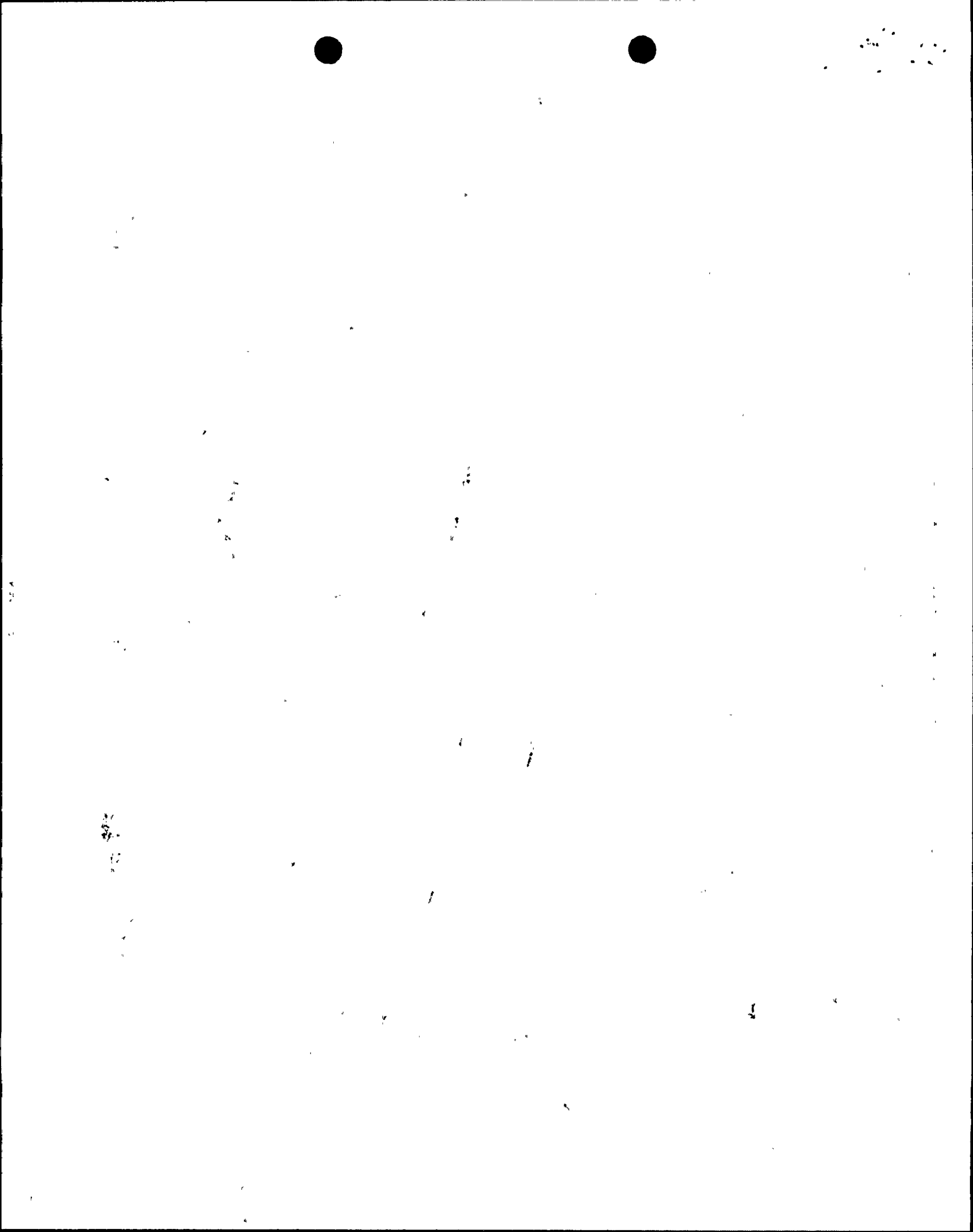
MONTH September 1988

NPDES # AL0022080

PARAM	FLOW	Q&G	TSS	COMMENTS
AVG	----	15	30	
MAX	----	20	100	
UNITS	MGD	mg/l	mg/l	
FREQ.	1/WEEK	1/WEEK	1/WEEK	
1	*			NO DISCHARGE ENTIRE WEEK
2				
3				
4				
5				
6				
7				
8	*			NO DISCHARGE ENTIRE WEEK
9				
10				
11				
12				
13				
14				
15	*			NO DISCHARGE ENTIRE WEEK
16				
17				
18				
19				
20				
21				
22	*			NO DISCHARGE ENTIRE WEEK
23				
24				
25				
26				
27				
28				
29	*			NO DISCHARGE ENTIRE WEEK
30				
MAX				
AVG	*			NO DISCHARGE ENTIRE MONTH

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DISCHARGE MONITORING REPORT  
Tennessee Valley Authority  
BROWNS FERRY NUCLEAR PLANT

DSN 109 - Diesel Bldg. Sump  
Unit 3

MONTH September 1988

NPDES # AL0022080

PARAM	FLOW	O&G	TSS	COMMENTS
AVG	----	15	30	
MAX	----	20	100	
UNITS	MGD	mg/l	mg/l	
FREQ.	1/WEEK	1/WEEK	1/WEEK	
1	*			NO DISCHARGE ENTIRE WEEK
2				
3				
4				
5				
6				
7				
8	*			NO DISCHARGE ENTIRE WEEK
9				
10				
11				
12				
13				
14				
15	*			NO DISCHARGE ENTIRE WEEK
16				
17				
18				
19				
20				
21				
22	*			NO DISCHARGE ENTIRE WEEK
23				
24				
25				
26				
27				
28				
29	*			NO DISCHARGE ENTIRE WEEK
30				
MAX				
AVG	*			NO DISCHARGE ENTIRE MONTH

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Signature of Responsible Official \_\_\_\_\_

Date: \_\_\_\_\_



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ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
DISCHARGE MONITORING REPORT  
Tennessee Valley Authority  
BROWNS FERRY NUCLEAR PLANT

DSN 110 - Unit 1 & 2 Office  
Bldg. Drain

MONTH September 1988

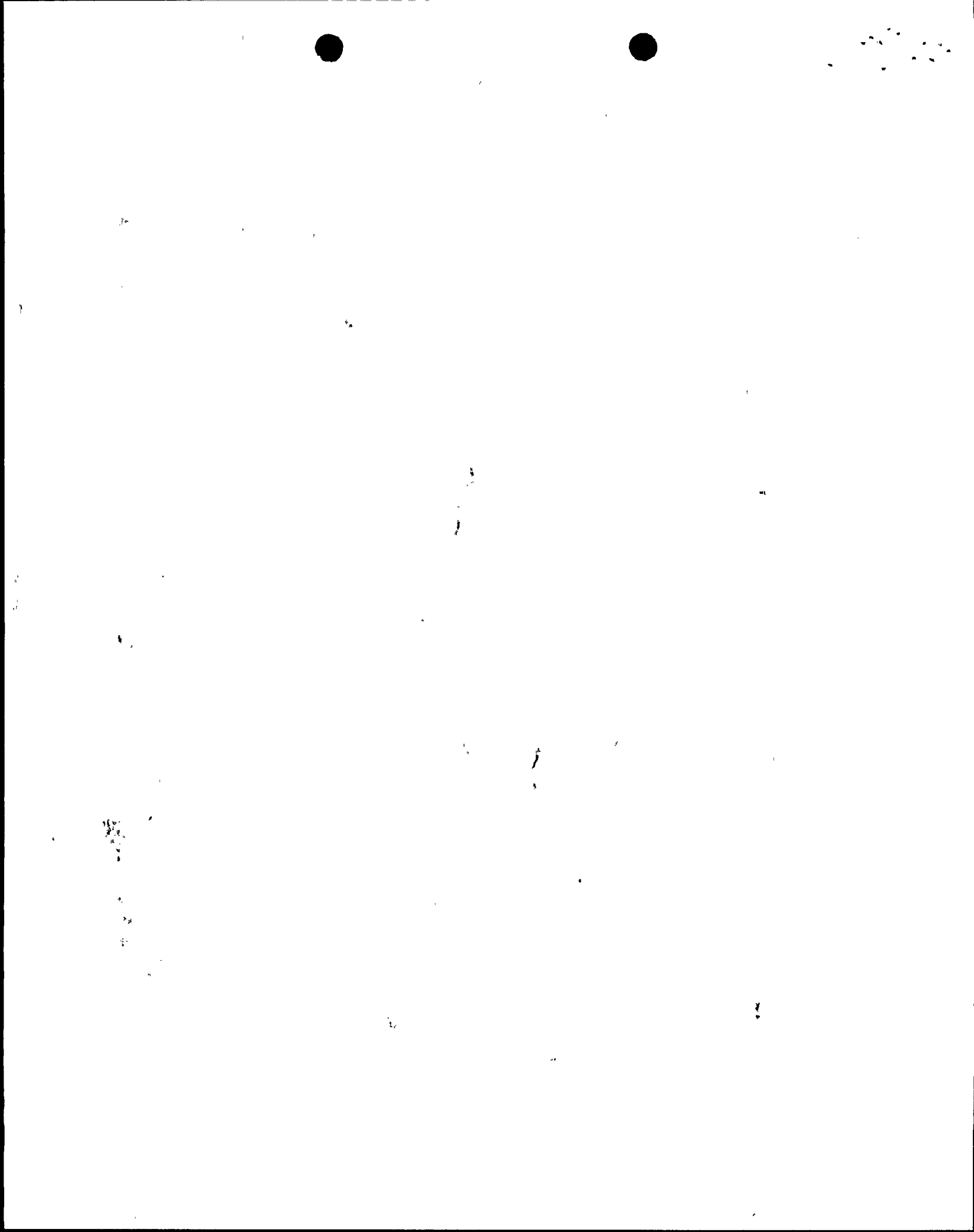
NPDES # AL0022080

PARAM	FLOW	O&G	TSS	COMMENTS
AVG	----	15	30	
MAX	----	20	100	
UNITS	MGD	mq/l	mq/l	
FREQ.	1/WEEK	1/WEEK	1/WEEK	
1				
2				
3				
4				
5				
6				
7	0.000020	< 5	4	
8				
9				
10				
11				
12				
13				
14	0.001000	< 5	4	REPLICATES O&G <5 TSS 28
15			4	TSS REPLICATE RESAMPLE
16				
17				
18				
19				
20				
21	0.001800	< 5	11	
22				
23				
24				
25				
26				
27				
28	0.003000	< 5	70	
29				
30				
MAX	0.003000	< 5	70	
AVG	0.001455	< 5	20	

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ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
DISCHARGE MONITORING REPORT  
Tennessee Valley Authority  
BROWNS FERRY NUCLEAR PLANT

DSN 111 - Sewage Treatment Lagoon

MONTH September 1988

NPDES # AL0022080

PARAM	FLOW	TSS	BOD5	COMMENTS
AVG	-----	90	30	
MAX	-----	-----	45	
UNITS	MGD	mg/l	mg/l	
FREQ.	5/WEEK	2/MONTH	2/MONTH	
1	0.003154			
2	0.003154			
3				
4				
5	0.005515			
6	0.005515	61	19	
7	0.003154			
8	0.003154			
9	0.003154			
10				
11				
12	0.008712			
13	0.005515	64	14	
14	0.003154			
15	0.005515			
16	0.024048			
17				
18				
19	0.039600	63	13	
20	0.031248			
21	0.024048			
22	0.031248			
23	0.024048			
24				
25				
26	0.017856	60	12	
27	0.031248		1	
28	0.039600			
29	0.049248			
30	0.049248			
MAX	0.049248	64	19	
AVG	0.018688	62	15	

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Date: \_\_\_\_\_

Description of Discharge - DSN 111 - Sewage Treatment System - Sewage overflowed two manholes and discharged to the intake forebay via the yard drainage system. It is estimated that approximately 10,000 gallons of sewage was discharged during the event on September 27, 1988. No samples were taken.

Cause and Period of Noncompliance - While performing excavation work, construction personnel broke a water line resulting in a loss of pressure and an excessive amount of grit in the water main. The grit caused valves on the laboratory fixtures to remain open after water pressure was established. The excessive water flow overwhelmed the sewage air lift pumps causing sewage to back up and overflow the manholes. The period of noncompliance was two hours.

Steps Taken to Reduce, Eliminate, and Prevent Recurrence of Noncomplying Discharge - Upon notification of the discharge environmental personnel installed a portable pump at the manhole in front of the air lift station to assist in relieving the excess flow. The plant drilling, digging and chipping permit will be revised to include approval by environmental engineering. The installation of a sewage overflow monitoring system at the lift station is being studied.