



ARKANSAS POWER & LIGHT COMPANY
POST OFFICE BOX 551 LITTLE ROCK, ARKANSAS 72203 (501) 371-4000

November 28, 1978

1-118-11

Director of Nuclear Reactor Regulation
ATTN: Mr. R. W. Reid, Chief
Operating Reactor Branch #4
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Subject: Arkansas Nuclear One - Unit 1
Docket No. 50-313
License No. DPR-51
Intake Impingement Data
(File: 0520.2)

Gentlemen:

Enclosed are the results of impingement monitoring at the intake of Arkansas Nuclear One - Unit 1 during the month of October 1978. This is being submitted per Environmental Technical Specification 4.1.2.a(2).

Very truly yours,

Daniel H. Williams
Manager, Licensing

DHW:REI:jaj

Enclosures: (3) Copies of report
(1) Set of computer cards

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CARDS ADVANCED
DIRECTLY TO
BRANCH
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ARKANSAS POWER & LIGHT COMPANY
AND SCREEN MONITORING

RUN DATE: 11/27/78

SAMPLE TAKEN: 10-20-78		INLET WATERPROX		NUMBER OF CIRCULATING		24 HOUR TOTAL		24 HOUR TOTAL *	
INCLUSIVE TIME		TEMPERATURE: 65 F		PUMPS IN OPERATION: 4		SAMPLE COUNT: 970		SAMPLE WEIGHT: 31.1 LBS	
OF SAMPLE: 24 HRS									
SPECIES NAME	SPECIES 24 HR TOTAL WEIGHT(LBS)	SPECIES 24 HR TOTAL COUNT	MAXIMUM LENGTH(MM)	MODAL LENGTH(MM)	#	#	MODAL WEIGHT(GR)	#	#
GLAZARD SHAD	17.94	815.	176	50 TO 120	24	734	5 TO 10	24	734
FRESHWATER DRUM	8.88	83.	296	120 TO 150	5	193	15 TO 20	4	158
WHITE BASS	2.43	18.	340	120 TO 150	4	443	15 TO 20	5	283
TOPEAOFIN SHAD	0.09	23.	85	30 TO 60	14	613	0 TO 5	22	963
WHITE CRAPPIE	0.99	7.	285	90 TO 120	2	298	5 TO 10	2	298
BLUEGILL SUNFISH	0.03	2.	77	60 TO 90	2	1004	5 TO 10	1	1008
CHANNEL CATFISH	0.38	10.	224	90 TO 120	4	403	0 TO 5	4	403
BUFF CATFISH	0.04	3.	105	90 TO 120	2	674	5 TO 10	3	1003
MISSISSIPPI SILVERSIDE	0.10	9.	109	90 TO 120	6	673	0 TO 5	7	783

* TOTAL SAMPLE WT. INCLUDES 0.0 LBS OF DEBRIS ACCUMULATION.

ARKANSAS POWER & LIGHT COMPANY
AND SCREEN MONITORING

RUN DATE: 11/27/78

SAMPLE TAKEN: 10-24-78									
INCLUSIVE TIME OF SAMPLE: 24 HRS		INLET WATERBOX TEMPERATURE: 65 F		# SCREENS WASHED: 8		NUMBER OF CIRCULATING PUMPS IN OPERATION: 4		24 HOUR TOTAL SAMPLE COUNT:	
								2940	
								24 HOUR TOTAL SAMPLE WEIGHT:	
								68.9 LBS	
SPECIES NAME	SPECIES 24 HR TOTAL WEIGHT (LBS)	SPECIES 24 HR TOTAL COUNT	MAXIMUM LENGTH (MM)	MODAL LENGTH (MM)	#	MODAL WEIGHT (GR)	#		
Gizzard SHAD	48.19	2602.	206	90 TO 120	43	5 TO 10	45	88%	
THUNDERFIN SHAD	1.07	206.	92	60 TO 90	15	0 TO 5	24	89%	
WHITE BASS	8.50	45.	347	90 TO 120	10	10 TO 15	7	27%	
CHANNEL CATFISH	0.50	6.	262	60 TO 90	1	0 TO 5	1	17%	
BLUE CATFISH	2.01	9.	470	60 TO 90	4	0 TO 5	3	33%	
WHITE CRAPPIE	1.45	5.	350	90 TO 120	3	5 TO 10	3	60%	
FLATHEAD CATFISH	0.06	2.	120	90 TO 120	2	10 TO 15	2	100%	
STRIPED BASS	0.01	1.	82	60 TO 90	1	5 TO 10	1	100%	
BLUEGILL SUNFISH	0.04	2.	89	60 TO 90	2	0 TO 5	1	50%	
CHESTNUT LAMPREY	0.03	1.	216	210 TO 240	1	10 TO 15	1	100%	
MISSISSIPPI SILVERSHAD	0.13	10.	104	90 TO 120	8	5 TO 10	8	80%	
GREEN SUNFISH	0.01	1.	56	30 TO 60	1	0 TO 5	1	100%	
EMERALD SHINER	0.01	1.	70	60 TO 90	1	0 TO 5	1	100%	

CONTINUED ON NEXT PAGE:

ARKANSAS POWER & LIGHT COMPANY
AND SCREEN MONITORING

RUN DATE: 11/27/78

SAMPLE TAKEN: Id-24-7A CONTINUED:

SPECIES NAME	SPECIES 24 HR TOTAL WEIGHT (LBS)	SPECIES 24 HR TOTAL COUNT	MAXIMUM LENGTH (MM)	MODAL LENGTH (MM)	#	%	MODAL WEIGHT (GR)	#	%
FRESHWATER DRUM	6.88	49.	344	150 TO 180	8	31%	25 TO 30	6	23%

* TOTAL SAMPLE WT. INCLUDES 0.0 LBS OF DEBRIS ACCUMULATION.

ARKANSAS POWER & LIGHT COMPANY
AND SCREEN MONITORING

RUN DATE: 11/27/78

SAMPLE TAKEN: 10-25-78									
INCLUSIVE TIME OF SAMPLE: 24 HRS		INLET WATERBOX TEMPERATURE: 65 F		# SCREENS WASHED: 8		NUMBER OF CIRCULATING PUMPS IN OPERATION: 4		24 HOUR TOTAL SAMPLE COUNT: 2333	
SPECIES NAME	SPECIES 24 HR TOTAL WEIGHT (LBS)	SPECIES 24 HR TOTAL COUNT	MAXIMUM LENGTH (MM)	MODAL LENGTH (MM)	#	MODAL WEIGHT (GR)	#	24 HOUR TOTAL SAMPLE WEIGHT: 64.9 LBS	
GILTED SHAD	40.56	1947.	160	90 TO 120	28	62%	5 TO 10	33	73%
THUNDERBOLT SHAD	1.06	204.	100	60 TO 90	13	48%	0 TO 5	25	93%
FRESHWATER DRUM	9.21	80.	330	150 TO 180	6	23%	5 TO 10	3	12%
WHITE BASS	8.50	56.	355	90 TO 120	10	28%	10 TO 15	6	23%
CHANNEL CATFISH	2.63	10.	397	60 TO 90	2	20%	0 TO 5	3	30%
BLUE CATFISH	1.67	11.	346	90 TO 120	4	36%	5 TO 10	5	45%
WHITE CRAPPIE	0.70	7.	225	150 TO 180	3	43%	35 TO 40	3	43%
MISSISSIPPI SILVERSIDE	0.15	15.	105	90 TO 120	13	81%	0 TO 5	14	68%

* TOTAL SAMPLE WT. INCLUDES 0.0 LBS OF DEBRIS ACCUMULATION.

ARKANSAS POWER & LIGHT COMPANY
AND SCREEN MONITORING

RUN DATE: 11/27/78

SAMPLE TAKEN: 11-27-78									
INLET WATERBOX		NUMBER OF CIRCULATING		24 HOUR TOTAL		24 HOUR TOTAL		40.0 LBS	
INCLUSIVE TIME		PUMPS IN OPERATION: 4		SAMPLE COUNT:		SAMPLE WEIGHT:			
OF SAMPLE: 24 HRS		WASHER: 8		1205					
TEMPERATURE: 64 F		SPECIES 24 HR		TOTAL COUNT		MODAL		MODAL	
		TOTAL WEIGHT (LBS)				LENGTH (MM)		WEIGHT (GR)	
SPECIES NAME									
GI77ADD SHAD		20.13		756.		223		5 TO 10	
THREADFIN SHAD		0.88		203.		77		0 TO 5	
FRESHWATER DRUM		6.25		110.		286		0 TO 5	
WHITE BASS		10.00		91.		347		10 TO 15	
WHITE CRAPPIE		1.70		8.		325		5 TO 10	
CHANNEL CATFISH		0.22		10.		189		0 TO 5	
BLUE CATFISH		0.61		6.		316		5 TO 10	
BLUEGILL SUNFISH		0.01		3.		46		0 TO 5	
MISSISSIPPI SILVERSIDE		0.17		15.		163		0 TO 5	
BROOK SILVERSIDE		0.01		1.		72		0 TO 5	
EMERALD SHINER		0.01		1.		72		0 TO 5	
GOLDEN SHINER		0.01		1.		70		0 TO 5	

* TOTAL SAMPLE WT. INCLUDES 0.0 LBS OF DEBRIS ACCUMULATION.

ARKANSAS POWER & LIGHT COMPANY
AND SCREEN MONITORING

RUN DATE: 11/27/78

SAMPLE TAKEN: 10-31-78

INLET WATERPROX TEMPERATURE: 64 F

SCREENS WASHED: 8

NUMBER OF CIRCULATING PUMPS IN OPERATION: 4

24 HOUR TOTAL SAMPLE COUNT:

798

24 HOUR TOTAL SAMPLE WEIGHT:

37.1 LBS

SPECIES NAME	SPECIES 24 HR TOTAL WEIGHT(LBS)	SPECIES 24 HR TOTAL COUNT	MAXIMUM LENGTH(MM)	MODAL LENGTH(MM)	#	MODAL WEIGHT(GR)	#
GILTBIRD SHAD	11.44	467.	195	90 TO 120	20	5 TO 10	20
THORFADIN SHAD	0.50	100.	88	30 TO 60	14	0 TO 5	25
FRESHWATER DRUM	9.63	81.	272	150 TO 180	8	0 TO 5	3
WHITE BASS	14.44	110.	322	90 TO 120	8	10 TO 15	5
CHANNEL CATFISH	0.12	5.	165	60 TO 90	4	0 TO 5	3
WHITE CRAPPIE	0.57	6.	247	90 TO 120	2	10 TO 15	2
LONGEAR SUNFISH	0.14	2.	142	90 TO 120	1	15 TO 20	1
BLUEGILL SUNFISH	0.21	2.	163	30 TO 60	1	0 TO 5	1
MISSISSIPPI SILVERSIDE	0.08	7.	100	90 TO 120	5	0 TO 5	5

* TOTAL SAMPLE WT. INCLUDES 0.0 LBS OF DEBRIS ACCUMULATION.

ARKANSAS POWER & LIGHT COMPANY
AND SCREEN MONITORING

RUN DATE: 11/27/78

SAMPLE TAKEN: 10-03-78

INLET WATERBOX
OF SAMPLE: 24 HRS
TEMPERATURE: 76 F

SCREENS
WASHED: 8
NUMBER OF CIRCULATING
PUMPS IN OPERATION: 4
24 HOUR TOTAL
SAMPLE COUNT:

162

21.6 LBS

SPECIES NAME	SPECIES 24 HR TOTAL WEIGHT (LBS)	SPECIES 24 HR TOTAL COUNT	MAXIMUM LENGTH (MM)	MODAL LENGTH (MM)	#	MODAL WEIGHT (GR)	#	%
FRESHWATER CRAB	6.38	87.	242	60 TO 90	8	0 TO 5	9	35%
GILTBARK SHAD	2.56	54.	202	120 TO 150	11	5 TO 10	10	38%
WHITE BASS	5.31	14.	355	120 TO 150	5	10 TO 15	5	36%
BLUEGILL SUNFISH	0.75	6.	144	120 TO 150	2	60 TO 65	2	33%
WHITE CRAPPIE	1.14	2.	270	150 TO 180	1	205 TO 210	1	50%
BLUE CATFISH	1.56	4.	393	90 TO 120	1	5 TO 10	1	25%
CHANNEL CATFISH	0.41	7.	238	90 TO 120	2	5 TO 10	2	29%
MISSISSIPPI SILVERSIDE	0.33	5.	90	60 TO 90	5	0 TO 5	5	100%
SMALL MOUTH BUFFALO	2.44	1.	390	360 TO 390	1	1105 TO 1110	1	100%
THUNDERBOLT SHAD	0.01	2.	70	60 TO 90	2	0 TO 5	2	100%

* TOTAL SAMPLE WT. INCLUDES 0.0 LBS OF DEBRIS ACCUMULATION.

ARKANSAS POWER & LIGHT COMPANY
AND SCREEN MONITORING

RUN DATE: 11/27/78

SAMPLE TAKEN: 10-04-78									
INLET WATERBOX		# SCREENS		NUMBER OF CIRCULATING		24 HOUR TOTAL		24 HOUR TOTAL *	
TEMPERATURE: 74 F		WASHER: B		PUMPS IN OPERATION: 4		SAMPLE COUNT: 292		SAMPLE WEIGHT: 14.9 LBS	
INCLUSIVE TIME		SPECIES 24 HR		TOTAL COUNT		MAXIMUM		MODAL	
OF SAMPLE: 24 HRS		TOTAL WEIGHT (LBS)				LENGTH (MM)		WEIGHT (GR)	

ARKANSAS POWER & LIGHT COMPANY
AND SCREEN MONITORING

RUN DATE: 11/27/78

SAMPLE TAKEN: 10-06-78
INCLUSIVE TIME INLET WATERBOX # SCREENS 24 HOUR TOTAL *
OF SAMPLE: 24 HRS TEMPERATURE: 72 F WASHED: 8 PUMPS IN OPERATION: 4 SAMPLE COUNT: 234 SAMPLE WEIGHT: 18.3 LBS

SPECIES NAME	SPECIES 24 HR TOTAL WEIGHT(LBS)	SPECIES 24 HR TOTAL COUNT	MAXIMUM LENGTH(MM)	MODAL LENGTH(MM)	#	%	MODAL WEIGHT(GR)	#	%
FRESHWATER DRUM	6.69	110.	295	60 TO 90	12	44%	0 TO 5	12	44%
GITTAPO SHAD	3.50	75.	234	90 TO 120	14	54%	5 TO 10	9	35%
WHITE BASS	6.54	12.	355	330 TO 260	4	33%	505 TO 510	2	17%
THREEDFIN SHAD	0.04	14.	77	30 TO 60	11	79%	0 TO 5	14	100%
LONGFIN SUNFISH	0.22	2.	140	90 TO 120	1	50%	25 TO 30	1	50%
BLUEGILL SUNFISH	0.03	3.	84	30 TO 60	2	67%	0 TO 5	2	67%
WHITE CRAPPIE	0.02	1.	102	90 TO 120	1	100%	5 TO 10	1	100%
CHANNEL CATFISH	1.19	12.	242	60 TO 90	3	25%	0 TO 5	3	25%
BLUE CATFISH	0.07	1.	175	150 TO 180	1	100%	30 TO 35	1	100%
MISSISSIPPI SILVERSIDE	0.02	3.	45	60 TO 90	3	100%	0 TO 5	3	100%
EMERALD SHINER	0.01	1.	60	30 TO 60	1	100%	0 TO 5	1	100%

* TOTAL SAMPLE WT. INCLUDES 0.0 LBS OF DEBRIS ACCUMULATION.

ARKANSAS POWER & LIGHT COMPANY
AND SCREEN MONITORING

RUN DATE: 11/27/78

SAMPLE TAKEN: 10-10-78		INLET WATERBOX		# SCREENS WASHED: R	NUMBER OF CIRCULATING PUMPS IN OPERATION: 4	24 HOUR TOTAL		24 HOUR TOTAL	
INCLUSIVE TIME		TEMPERATURE: 69 F				SAMPLE COUNT:		SAMPLE WEIGHT:	
OF SAMPLE: 24 HRS						410		17.4 LBS	
SPECIES NAME	SPECIES 24 HR TOTAL WEIGHT (LBS)	SPECIES 24 HR TOTAL COUNT	MAXIMUM LENGTH (MM)	MODAL LENGTH (MM)	#	%	MODAL WEIGHT (G)	#	%
FRESHWATER DRUM	7.25	134.	339	60 TO 90	9	33%	0 TO 5	7	26%
GILTARD SHAD	4.88	156.	205	90 TO 120	16	59%	5 TO 10	15	56%
WHITE BASS	0.01	14.	320	90 TO 120	6	43%	10 TO 15	5	36%
THREADFIN SHAD	0.16	45.	69	30 TO 60	20	77%	0 TO 5	26	100%
STRIPED BASS	0.04	2.	103	90 TO 120	2	100%	5 TO 10	2	100%
WHITE CRAPPIE	0.22	4.	144	90 TO 120	3	75%	10 TO 15	3	75%
BLUEGILL SUNFISH	0.21	19.	147	30 TO 60	16	84%	0 TO 5	17	89%
BLUE CATFISH	0.89	7.	339	90 TO 120	3	43%	5 TO 10	3	43%
CHANNEL CATFISH	0.69	17.	145	90 TO 120	6	35%	5 TO 10	5	29%
EUROPEAN CARP	0.65	1.	350	330 TO 360	1	100%	290 TO 295	1	100%
MISSISSIPPI SILVERSIDE	0.09	9.	100	90 TO 120	6	67%	0 TO 5	8	89%
EMERALD SHINER	0.01	1.	75	60 TO 90	1	100%	0 TO 5	1	100%
BLACK BULLHEAD	0.14	1.	222	210 TO 240	1	100%	60 TO 65	1	100%

* TOTAL SAMPLE WT. INCLUDES 0.0 LBS OF DEBRIS ACCUMULATION.

ARKANSAS POWER & LIGHT COMPANY
AND SCREEN MONITORING

RUN DATE: 11/27/78

SAMPLE TAG#: 10-11-78

INCLUSIVE TIME
OF SAMPLE: 24 HRS

INLET WATERBOX
TEMPERATURE: 69 F

SCREENS
WASHED: 8

NUMBER OF CIRCULATING
PUMPS IN OPERATION: 4

24 HOUR TOTAL
SAMPLE COUNT: 249

24 HOUR TOTAL *
SAMPLE WEIGHT: 15.1 LBS

SPECIES NAME	SPECIES 24 HR TOTAL WEIGHT (LBS)	SPECIES 24 HR TOTAL COUNT	MAXIMUM LENGTH (MM)	MODAL LENGTH (MM)	#	%	MODAL WEIGHT (GR)	#	%
FRESHWATER DRUM	5.75	83.	317	60 TO 90	11	42%	0 TO 5	8	31%
GILTARD SHAD	3.00	42.	210	90 TO 120	12	46%	5 TO 10	13	50%
WHITE BASS	2.24	7.	369	150 TO 180	3	43%	20 TO 25	1	14%
THREESPIN SHAD	0.14	34.	72	30 TO 60	21	81%	0 TO 5	26	100%
WHITE CRAPPIE	1.86	6.	310	90 TO 120	2	33%	5 TO 10	2	33%
BLUEGILL SUNFISH	0.25	5.	175	30 TO 60	3	60%	0 TO 5	3	60%
CHANNEL CATFISH	0.88	12.	250	60 TO 90	4	33%	0 TO 5	4	33%
BLUE CATFISH	0.93	6.	310	90 TO 120	3	50%	10 TO 15	2	33%
MISSISSIPPI SILVERSIDE	0.03	2.	100	90 TO 120	2	100%	5 TO 10	2	100%
EMERALD SHINER	0.01	1.	75	60 TO 90	1	100%	0 TO 5	1	100%
STRIPED BASS	0.02	1.	100	90 TO 120	1	100%	5 TO 10	1	100%

* TOTAL SAMPLE WT. INCLUDES 0.0 LBS OF DEBRIS ACCUMULATION.

ARKANSAS POWER & LIGHT COMPANY
AND SCREEN MONITORING

RUN DATE: 11/27/78

SAMPLE TAKEN: 10-13-78

INLET WATERBOX TEMPERATURE: 70 F

NUMBER OF CIRCULATING PUMPS IN OPERATION: 4

24 HOUR TOTAL SAMPLE COUNT: 374

24 HOUR TOTAL SAMPLE WEIGHT: 14.6 LBS

SPECIES NAME	SPECIES 24 HR TOTAL WEIGHT(LBS)	SPECIES 24 HR TOTAL COUNT	MAXIMUM LENGTH(MM)	MODAL LENGTH(MM)	#	%	MODAL WEIGHT(GR)	#	%
FRESHWATER DRUM	5.00	37.	328	180 TO 210	7	27%	5 TO 10	3	12%
GILTBAD SHAD	1.69	64.	170	90 TO 120	15	58%	5 TO 10	18	69%
THUNDERBOLT SHAD	1.13	244.	92	60 TO 90	19	68%	0 TO 5	25	89%
WHITE BASS	4.30	9.	346	210 TO 240	3	38%	480 TO 485	2	25%
CHANNEL CATFISH	0.35	6.	198	180 TO 210	3	50%	0 TO 5	1	17%
BLOB CATFISH	2.27	5.	377	300 TO 330	2	40%	5 TO 10	1	20%
WHITE CRAPPIE	0.99	4.	267	120 TO 150	1	25%	25 TO 30	1	25%
BLUEGILL SUNFISH	0.08	4.	121	30 TO 60	3	75%	0 TO 5	3	75%
MISSISSIPPI SILVERSIDE	0.03	2.	110	90 TO 120	2	100%	5 TO 10	2	100%

* TOTAL SAMPLE WT. INCLUDES 0.0 LBS OF DEBRIS ACCUMULATION.

ARKANSAS POWER & LIGHT COMPANY
AND SCREEN MONITORING

RUN DATE: 11/27/78

SAMPLE TAKEN: 10-18-78

INLET WATERBOX
TEMPERATURE: 66 F

NUMBER OF CIRCULATING
PUMPS IN OPERATION: 4

24 HOUR TOTAL
SAMPLE WEIGHT: 51.7 LBS

2183

24 HOUR TOTAL
SAMPLE WEIGHT: 51.7 LBS

SPECIES NAME	SPECIES 24 HR TOTAL WEIGHT (LBS)	SPECIES 24 HR TOTAL COUNT	MAXIMUM LENGTH (MM)	MODAL LENGTH (MM)	#	MODAL WEIGHT (GR)	#
GIZZARD CHAD	38.06	1941.	212	90 TO 120	42	5 TO 10	42
FRESHWATER DRUM	6.06	64.	290	150 TO 180	8	5 TO 10	5
WHITE BASS	4.54	10.	345	300 TO 330	3	15 TO 20	2
THEBROFIN SHAD	0.66	141.	87	60 TO 90	14	0 TO 5	26
WHITE CRAPPIE	1.21	2.	324	60 TO 90	1	5 TO 10	1
BLOFGILL SUNFISH	0.15	2.	157	30 TO 60	1	0 TO 5	1
BLUE CATFISH	0.78	5.	352	60 TO 90	3	0 TO 5	3
CHANNEL CATFISH	0.03	2.	102	60 TO 90	1	0 TO 5	1
MISSISSIPPI SILVERSIDE	0.17	12.	107	90 TO 120	11	5 TO 10	9
EMERALD SHINER	0.01	2.	69	60 TO 90	2	0 TO 5	2
GOLDEN SHINER	0.01	1.	77	60 TO 90	1	0 TO 5	1
LONGFAR SUNFISH	0.01	1.	41	30 TO 60	1	0 TO 5	1

* TOTAL SAMPLE WT. INCLUDES 0.0 LBS OF DEBRIS ACCUMULATION.