Arkansas Power & Light Company
425 West Capitol
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Little Rock, AR 72203
Tel 501 377 4000

March 1, 1990

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

Subject: Arkansas Nuclear One - Units 1 & 2
Docket Nos. 50-313 and 50-368
License Nos. DPR-51 and NPF-6
Semiannual Radiological Effluent Release Report

Gentlemen:

In accordance with 10CFR50.36(a)(2), Arkansas Nuclear One, Unit 1 Technical Specification 6.12.2.6 and Arkansas Nuclear One, Unit 2 Technical Specification 6.9.1 attached is the Semiannual Radiological Effluent Release Report for the third and fourth quarters of 1989.

Very truly yours,

James J. Fisicaro

James J. Fisicaro
Manager, Licensing

JJF:TRP:lw

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SUMMARY OF THE QUANTITIES

OF

RADIOACTIVE LIQUID AND GASEOUS EFFLUENTS

AND

SOLID WASTE RELEASE REPORT FROM AND

: ARKANSAS POWER AND LIGHT COMPANY PAGE 1 OF 4
: ARKANSAS NUCLEAR ONE : UNIT 1
REPORT CATEGORY : SEMIANNUAL SUMMATION OF ALL RELEASES BY QUARTER
TYPE OF ACTIVITY : ALL LIQUID EFFLUENTS
REPORTING PERIOD : QUARTER # 3 AND QUARTER # 4 OF 1989

TYPE OF EFFLUENT	UNIT	QUARTER 3 HOURS 4345-6552	QUARTER 4 HOURS 6553-8760	EST.TOTAL ERROR %
A. FISSION AND ACTIVATION PRODUCTS				
1. TOTAL RELEASE(NOT INCLUDING TRITIUM, GASES, ALPHA)	CURIES	1.35E-01	1.29E 00	0.00E-01
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	UCI/ML	3.79E-10	4.33E-09	
3. PERCENT OF APPLICABLE LIMIT	%	1.26E-01	1.44E 00	
B. TRITIUM				
1. TOTAL RELEASE	CURIES	1.32E 02	5.55E 01	0.00E-01
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	UCI/ML	3.68E-07	1.87E-07	
3. PERCENT OF APPLICABLE LIMIT	%	1.23E-02	6.22E-03	
C. DISSOLVED AND ENTRAINED GASES				
1. TOTAL RELEASE	CURIES	1.14E 00	1.93E 01	0.00E-01
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	UCI/ML	3.19E-09	6.50E-08	
3. PERCENT OF APPLICABLE LIMIT	%	1.59E-03	3.25E-02	
D. GROSS ALPHA RADIOACTIVITY				
1. TOTAL RELEASE	CURIES	1.14E-03	1.95E-04	0.00E-01
E. WASTE VOL RELEASED(PRE-DILUTION)	GAL	3.06E 06	2.91E 06	0.00E-01
F. VOLUME OF DILUTION WATER USED	GAL	9.45E 10	7.85E 10	0.00E-01

NUCLIDE	UNIT	CONTINUOUS RELEASES QUARTER 3 HOURS 4345-6552	CONTINUOUS RELEASES QUARTER 4 HOURS 6553-8760	BATCH RELEASES QUARTER 3 HOURS 4345-6552	BATCH RELEASES QUARTER 4 HOURS 6553-8760
ALL NUCLIDES					
H-3	CURIES	0.00E-01	0.00E-01	1.32E 02	5.55E 01
C-14	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
NA-24	CURIES	0.00E-01	0.00E-01	3.58E-03	2.27E-03
P-32	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
CR-51	CURIES	0.00E-01	0.00E-01	0.00E-01	2.96E-02
MN-54	CURIES	0.00E-01	0.00E-01	4.00E-02	9.91E-02
MN-56	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
FE-55	CURIES	0.00E-01	0.00E-01	2.94E-02	6.97E-02
FE-59	CURIES	0.00E-01	0.00E-01	2.67E-04	3.22E-03
CO-58	CURIES	0.00E-01	0.00E-01	2.25E-02	2.37E-01
CO-60	CURIES	0.00E-01	0.00E-01	6.19E-03	6.24E-02
NI-63	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
NI-65	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
CU-64	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
ZN-65	CURIES	0.00E-01	0.00E-01	4.42E-04	2.69E-04
ZN-69	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
BR-83	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
BR-84	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
BR-85	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
RB-86	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
RB-88	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
RB-89	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
SR-89	CURIES	0.00E-01	0.00E-01	3.47E-04	1.30E-03
SR-91	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
SR-92	CURIES	0.00E-01	0.00E-01	4.37E-05	3.25E-03
Y-90	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
Y-91M	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
Y-91	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
Y-92	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
Y-93	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
ZR-95	CURIES	0.00E-01	0.00E-01	1.51E-04	8.28E-03
ZR-97	CURIES	0.00E-01	0.00E-01	2.94E-05	6.30E-04
NB-95	CURIES	0.00E-01	0.00E-01	2.54E-04	7.25E-03
MO-99	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
TC-99M	CURIES	0.00E-01	0.00E-01	0.00E-01	6.04E-04
TC-101	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
RU-103	CURIES	0.00E-01	0.00E-01	0.00E-01	4.17E-03
RU-105	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
RU-106	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
AG-110M	CURIES	0.00E-01	0.00E-01	2.64E-03	2.25E-01
TE-125M	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
TE-127M	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
TE-127	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
TE-129M	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
TE-129	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
TE-131M	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01

NUCLIDE	UNIT	CONTINUOUS RELEASES QUARTER 3 HOURS 4345-6552	CONTINUOUS RELEASES QUARTER 4 HOURS 6553-8760	BATCH RELEASES QUARTER 3 HOURS 4345-6552	BATCH RELEASES QUARTER 4 HOURS 6553-8760
ALL NUCLIDES CONTINUED					
TE-131	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
TE-132	CURIES	0.00E-01	0.00E-01	0.00E-01	7.05E-04
I-130	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
I-131	CURIES	0.00E-01	0.00E-01	3.78E-04	1.07E-01
I-132	CURIES	0.00E-01	0.00E-01	0.00E-01	7.94E-04
I-133	CURIES	0.00E-01	0.00E-01	5.27E-06	2.80E-05
I-134	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
I-135	CURIES	0.00E-01	0.00E-01	0.00E-01	1.08E-05
CS-134	CURIES	0.00E-01	0.00E-01	5.25E-03	5.84E-02
CS-136	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
CS-137	CURIES	0.00E-01	0.00E-01	1.27E-02	1.64E-01
CS-138	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
BA-139	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
BA-140	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
BA-141	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
BA-142	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
LA-140	CURIES	0.00E-01	0.00E-01	2.43E-04	4.14E-03
LA-142	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
CE-141	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
CE-143	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
CE-144	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
PR-143	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
PR-144	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
ND-147	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
W-187	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
NP-239	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
KR-83M	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
KR-85M	CURIES	0.00E-01	0.00E-01	0.00E-01	1.37E-04
KR-85	CURIES	0.00E-01	0.00E-01	2.66E-02	1.01E-01
KR-87	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
KR-88	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
KR-89	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
KR-90	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
XE-131M	CURIES	0.00E-01	0.00E-01	3.91E-02	2.53E-01
XE-133M	CURIES	0.00E-01	0.00E-01	1.17E-03	1.24E-01
XE-133	CURIES	0.00E-01	0.00E-01	1.07E 00	1.89E 01
XE-135M	CURIES	0.00E-01	0.00E-01	0.00E-01	1.11E-03
XE-135	CURIES	0.00E-01	0.00E-01	6.84E-05	2.99E-03
XE-137	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
XE-138	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
AR-41	CURIES	0.00E-01	0.00E-01	0.00E-01	8.65E-06
SR-90	CURIES	0.00E-01	0.00E-01	2.36E-04	2.95E-04
G ALPHA	CURIES	0.00E-01	0.00E-01	1.14E-03	1.95E-04
OTHER	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
BE-7	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
K-40	CURIES	0.00E-01	0.00E-01	0.00E-01	5.42E-05

NUCLIDE	UNIT	CONTINUOUS RELEASES QUARTER 3 HOURS 4345-6552	CONTINUOUS RELEASES QUARTER 4 HOURS 6553-8760	BATCH RELEASES QUARTER 3 HOURS 4345-6552	BATCH RELEASES QUARTER 4 HOURS 6553-8760
ALL NUCLIDES CONTINUED					
CO-56	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
CO-57	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
SE-75	CURIES	0.00E-01	0.00E-01	4.00E-05	0.00E-01
SR-85	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
Y-88	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
NB-94	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
NB-97	CURIES	0.00E-01	0.00E-01	2.78E-05	1.48E-04
MO-90	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
CD-109	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
CD-113M	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
SN-113	CURIES	0.00E-01	0.00E-01	0.00E-01	9.30E-04
SB-122	CURIES	0.00E-01	0.00E-01	3.87E-05	3.70E-03
SB-124	CURIES	0.00E-01	0.00E-01	3.65E-05	2.06E-02
SB-125	CURIES	0.00E-01	0.00E-01	1.06E-02	1.73E-01
SB-127	CURIES	0.00E-01	0.00E-01	0.00E-01	1.53E-04
BA-133	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
CE-139	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
EU-152	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
HG-203	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
PB-214	CURIES	0.00E-01	0.00E-01	0.00E-01	5.79E-08
BI-214	CURIES	0.00E-01	0.00E-01	0.00E-01	6.26E-08
RA-226	CURIES	0.00E-01	0.00E-01	0.00E-01	2.03E-08
TH-228	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
U-235	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
TOTAL FOR PERIOD	CURIES	0.00E-01	0.00E-01	1.33E 02	7.61E 01

: ARKANSAS NUCLEAR ONE : UNIT 1
REPORT CATEGORY : SEMIANNUAL SUMMATION OF ALL RELEASES BY QUARTER
TYPE OF ACTIVITY : ALL AIRBORNE EFFLUENTS
REPORTING PERIOD : QUARTER # 3 AND QUARTER # 4 OF 1989

TYPE OF EFFLUENT	UNIT	QUARTER 3 HOURS 4345-6552	QUARTER 4 HOURS 6553-8760	EST.TOTAL ERROR %
A. FISSION AND ACTIVATION GASES				
1. TOTAL RELEASE	CURIES	6.97E 01	2.74E 02	0.00E-01
2. AVERAGE RELEASE RATE FOR PERIOD	UCI/SEC	8.86E 00	3.48E 01	
3. PERCENT OF APPLICABLE LIMIT	%	1.24E-01	4.87E-01	
B. RADIOIODINES				
1. TOTAL IODINE-131	CURIES	2.23E-05	1.53E-04	0.00E-01
2. AVERAGE RELEASE RATE FOR PERIOD	UCI/SEC	2.84E-06	1.95E-05	
3. PERCENT OF APPLICABLE LIMIT	%	7.95E-06	5.45E-05	
C. PARTICULATES				
1. PARTICULATES(HALF-LIVES>8 DAYS)	CURIES	1.87E-05	2.13E-04	0.00E-01
2. AVERAGE RELEASE RATE FOR PERIOD	UCI/SEC	2.38E-06	2.71E-05	
3. PERCENT OF APPLICABLE LIMIT	%	6.67E-06	7.60E-05	
4. GROSS ALPHA RADIOACTIVITY	CURIES	0.00E-01	0.00E-01	
D. TRITIUM				
1. TOTAL RELEASE	CURIES	1.52E 00	9.20E 00	0.00E-01
2. AVERAGE RELEASE RATE FOR PERIOD	UCI/SEC	1.94E-01	1.17E 00	
3. PERCENT OF APPLICABLE LIMIT	%	2.71E-04	1.64E-03	

		ELEVATED		GROUND	
		BATCH RELEASES		BATCH RELEASES	
	UNIT	QUARTER 3 HOURS 4345-6552	QUARTER 4 HOURS 6553-8760	QUARTER 3 HOURS 4345-6552	QUARTER 4 HOURS 6553-8760
NUCLIDE					
FISSION GASES					
KR-83M	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
KR-85M	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
KR-85	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
KR-87	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
KR-88	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
KR-89	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
KR-90	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
XE-131M	CURIES	0.00E-01	0.00E-01	0.00E-01	4.24E 00
XE-133M	CURIES	0.00E-01	0.00E-01	0.00E-01	2.02E 00
XE-133	CURIES	0.00E-01	0.00E-01	6.82E 01	2.65E 02
XE-135M	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
XE-135	CURIES	0.00E-01	0.00E-01	1.46E 00	2.66E 00
XE-137	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
XE-138	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
AR-41	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
OTHER	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
TOTAL FOR PERIOD	CURIES	0.00E-01	0.00E-01	6.97E 01	2.74E 02
IODINES					
I-130	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
I-131	CURIES	0.00E-01	0.00E-01	2.23E-05	1.53E-04
I-132	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
I-133	CURIES	0.00E-01	0.00E-01	1.09E-06	1.33E-06
I-134	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
I-135	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
OTHER	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
TOTAL FOR PERIOD	CURIES	0.00E-01	0.00E-01	2.34E-05	1.54E-04
PARTICULATES					
H-3	CURIES	0.00E-01	0.00E-01	1.52E 00	9.20E 00
C-14	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
NA-24	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
P-32	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
CR-51	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
MN-54	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
MN-56	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
FE-55	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
FE-59	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
CO-58	CURIES	0.00E-01	0.00E-01	0.00E-01	1.14E-06
CO-60	CURIES	0.00E-01	0.00E-01	1.64E-06	3.29E-0
NI-63	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
NI-65	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
CU-64	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
ZN-65	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01

NUCLIDE	UNIT	ELEVATED BATCH RELEASES QUARTER 3 HOURS 4345-6552	ELEVATED BATCH RELEASES QUARTER 4 HOURS 6553-8760	GROUND BATCH RELEASES QUARTER 3 HOURS 4345-6552	GROUND BATCH RELEASES QUARTER 4 HOURS 6553-8760
PARTICULATES CONTINUED					
ZN-69	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
BR-83	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
BR-84	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
BR-85	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
RB-86	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
RB-88	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
RB-89	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
SR-89	CURIES	0.00E-01	0.00E-01	1.44E-07	1.36E-06
SR-91	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
SR-92	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
Y-90	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
Y-91M	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
Y-91	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
Y-92	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
Y-93	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
ZR-95	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
ZR-97	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
NB-95	CURIES	0.00E-01	0.00E-01	0.00E-01	3.57E-06
MO-99	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
TC-99M	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
TC-101	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
RU-103	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
RU-105	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
RU-106	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
AG-110M	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
TE-125M	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
TE-127M	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
TE-127	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
TE-129M	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
TE-129	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
TE-131M	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
TE-131	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
TE-132	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
CS-134	CURIES	0.00E-01	0.00E-01	0.00E-01	8.45E-06
CS-136	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
CS-137	CURIES	0.00E-01	0.00E-01	0.00E-01	6.56E-06
CS-138	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
BA-139	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
BA-140	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
BA-141	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
BA-142	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
LA-140	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
LA-142	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
CE-141	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
CE-143	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
CE-144	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01

NUCLIDE	UNIT	ELEVATED BATCH RELEASES QUARTER 3 HOURS 4345-6552	ELEVATED BATCH RELEASES QUARTER 4 HOURS 6553-8760	GROUND BATCH RELEASES QUARTER 3 HOURS 4345-6552	GROUND BATCH RELEASES QUARTER 4 HOURS 6553-8760
PARTICULATES CONTINUED					
PR-143	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
PR-144	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
ND-147	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
W-187	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
NP-239	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
SR-90	CURIES	0.00E-01	0.00E-01	1.18E-08	4.17E-07
G ALPHA	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
OTHER	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
BE-7	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
K-40	CURIES	0.00E-01	0.00E-01	1.89E-05	1.89E-04
CO-56	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
CO-57	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
SE-75	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
SR-85	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
Y-88	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
NB-94	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
NB-97	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
MO-90	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
CD-109	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
CD-113M	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
SN-113	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
SB-122	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
SB-124	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
SB-125	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
SB-127	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
BA-133	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
CE-139	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
EU-152	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
HG-203	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
PB-214	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
BI-214	CURIES	0.00E-01	0.00E-01	2.48E-06	4.43E-06
RA-226	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
TH-228	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
U-235	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
TOTAL FOR PERIOD	CURIES	0.00E-01	0.00E-01	1.52E 00	9.20E 00

: ARKANSAS POWER AND LIGHT COMPANY PAGE 1 OF 4
: ARKANSAS NUCLEAR ONE : UNIT 2
REPORT CATEGORY : SEMIANNUAL SUMMATION OF ALL RELEASES BY QUARTER
TYPE OF ACTIVITY : ALL AIRBORNE EFFLUENTS
REPORTING PERIOD : QUARTER # 3 AND QUARTER # 4 OF 1989

TYPE OF EFFLUENT	UNIT	QUARTER 3 HOURS 4345-6552	QUARTER 4 HOURS 6553-8760	EST. TOTAL ERROR %
A. FISSION AND ACTIVATION GASES				
1. TOTAL RELEASE	CURIES	8.22E 02	1.23E 02	0.00E-01
2. AVERAGE RELEASE RATE FOR PERIOD	UCI/SEC	1.04E 02	1.56E 01	
3. PERCENT OF APPLICABLE LIMIT	%	1.46E 00	2.18E-01	
B. RADIOIODINES				
1. TOTAL IODINE-131	CURIES	1.37E-04	9.51E-05	0.00E-01
2. AVERAGE RELEASE RATE FOR PERIOD	UCI/SEC	1.74E-05	1.21E-05	
3. PERCENT OF APPLICABLE LIMIT	%	4.87E-05	3.39E-05	
C. PARTICULATES				
1. PARTICULATES(HALF-LIVES>8 DAYS)	CURIES	4.76E-05	1.59E-05	0.00E-01
2. AVERAGE RELEASE RATE FOR PERIOD	UCI/SEC	6.05E-06	2.02E-06	
3. PERCENT OF APPLICABLE LIMIT	%	1.69E-05	5.64E-06	
4. GROSS ALPHA RADIOACTIVITY	CURIES	0.00E-01	0.00E-01	
D. TRITIUM				
1. TOTAL RELEASE	CURIES	2.85E 00	5.60E 00	0.00E-01
2. AVERAGE RELEASE RATE FOR PERIOD	UCI/SEC	3.62E-01	7.12E-01	
3. PERCENT OF APPLICABLE LIMIT	%	5.07E-04	9.97E-04	

NUCLIDE	UNIT	ELEVATED BATCH RELEASES QUARTER 3 HOURS 4345-6552	ELEVATED BATCH RELEASES QUARTER 4 HOURS 6553-8760	GROUND BATCH RELEASES QUARTER 3 HOURS 4345-6552	GROUND BATCH RELEASES QUARTER 4 HOURS 6553-8760
FISSION GASES					
KR-83M	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
KR-85M	CURIES	0.00E-01	0.00E-01	1.27E-04	0.00E-01
KR-85	CURIES	0.00E-01	0.00E-01	1.59E 00	1.76E-01
KR-87	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
KR-88	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
KR-89	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
KR-90	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
XE-131M	CURIES	0.00E-01	0.00E-01	1.58E-02	3.25E-01
XE-133M	CURIES	0.00E-01	0.00E-01	1.27E 00	3.22E-01
XE-133	CURIES	0.00E-01	0.00E-01	7.80E 02	1.21E 02
XE-135M	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
XE-135	CURIES	0.00E-01	0.00E-01	3.86E 01	1.17E 00
XE-137	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
XE-138	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
AR-41	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
OTHER	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
TOTAL FOR PERIOD	CURIES	0.00E-01	0.00E-01	8.22E 02	1.23E 02
IODINES					
I-130	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
I-131	CURIES	0.00E-01	0.00E-01	1.37E-04	9.51E-05
I-132	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
I-133	CURIES	0.00E-01	0.00E-01	9.19E-06	4.57E-07
I-134	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
I-135	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
OTHER	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
TOTAL FOR PERIOD	CURIES	0.00E-01	0.00E-01	1.46E-04	9.55E-05
PARTICULATES					
H-3	CURIES	0.00E-01	0.00E-01	2.85E 00	5.60E 00
C-14	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
NA-24	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
P-32	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
CR-51	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
MN-54	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
MN-56	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
FE-55	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
FE-59	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
CO-58	CURIES	0.00E-01	0.00E-01	1.18E-05	1.68E-06
CO-60	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
NI-63	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
NI-65	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
CU-64	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
ZN-65	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01

NUCLIDE	UNIT	ELEVATED BATCH RELEASES QUARTER 3 HOURS 4345-6552	ELEVATED BATCH RELEASES QUARTER 4 HOURS 6553-8760	GROUND BATCH RELEASES QUARTER 3 HOURS 4345-6552	GROUND BATCH RELEASES QUARTER 4 HOURS 6553-8760
PARTICULATES CONTINUED					
ZN-69	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
BR-83	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
BR-84	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
BR-85	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
RB-86	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
RB-88	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
RB-89	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
SR-89	CURIES	0.00E-01	0.00E-01	2.46E-07	3.09E-06
SR-91	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
SR-92	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
Y-90	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
Y-91M	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
Y-91	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
Y-92	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
Y-93	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
ZR-95	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
ZR-97	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
NB-95	CURIES	0.00E-01	0.00E-01	1.55E-06	0.00E-01
MO-99	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
TC-99M	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
TC-101	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
RU-103	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
RU-105	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
RU-106	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
AG-110M	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
TE-125M	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
TE-127M	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
TE-127	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
TE-129M	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
TE-129	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
TE-131M	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
TE-131	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
TE-132	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
CS-134	CURIES	0.00E-01	0.00E-01	0.00E-01	3.73E-06
CS-136	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
CS-137	CURIES	0.00E-01	0.00E-01	8.51E-06	4.67E-06
CS-138	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
BA-139	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
BA-140	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
BA-141	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
BA-142	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
LA-140	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
LA-142	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
CE-141	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
CE-143	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
CE-144	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01

NUCLIDE	UNIT	ELEVATED BATCH RELEASES QUARTER 3 HOURS 4345-6552	ELEVATED BATCH RELEASES QUARTER 4 HOURS 6553-8760	GROUND BATCH RELEASES QUARTER 3 HOURS 4345-6552	GROUND BATCH RELEASES QUARTER 4 HOURS 6553-8760
PARTICULATES CONTINUED					
PR-143	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
PR-144	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
ND-147	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
W-187	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
NP-239	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
SR-90	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
G ALPHA	CURIES	0.00E-01	0.00E-01	7.38E-07	0.00E-01
OTHER	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
BE-7	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
K-40	CURIES	0.00E-01	0.00E-01	1.44E-05	0.00E-01
CO-56	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
CO-57	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
SE-75	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
SR-85	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
Y-88	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
NB-94	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
NB-97	CURIES	0.00E-01	0.00E-01	9.97E-07	0.00E-01
MO-90	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
CD-109	CURIES	0.00E-01	0.00E-01	0.00E-01	2.68E-06
CD-113M	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
SN-113	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
SB-122	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
SB-124	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
SB-125	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
SB-127	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
BA-133	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
CE-139	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
EU-152	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
HG-203	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
PB-214	CURIES	0.00E-01	0.00E-01	4.97E-06	0.00E-01
BI-214	CURIES	0.00E-01	0.00E-01	3.95E-05	1.02E-04
RA-226	CURIES	0.00E-01	0.00E-01	4.02E-06	0.00E-01
TH-228	CURIES	0.00E-01	0.00E-01	6.31E-06	0.00E-01
U-235	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
TOTAL FOR PERIOD	CURIES	0.00E-01	0.00E-01	2.85E 00	5.60E 00

: ARKANSAS NUCLEAR ONE : UNIT 2
REPORT CATEGORY : SEMIANNUAL SUMMATION OF ALL RELEASES BY QUARTER
TYPE OF ACTIVITY : ALL LIQUID EFFLUENTS
REPORTING PERIOD : QUARTER # 3 AND QUARTER # 4 OF 1989

TYPE OF EFFLUENT	UNIT	QUARTER 3 HOURS 4345-6552	QUARTER 4 HOURS 6553-8760	EST.TOTAL ERROR %
A. FISSION AND ACTIVATION PRODUCTS				
1. TOTAL RELEASE(NOT INCLUDING TRITIUM, GASES, ALPHA)	CURIES	5.47E-01	9.90E-01	0.00E-01
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	UCI/ML	1.53E-09	3.33E-09	
3. PERCENT OF APPLICABLE LIMIT	%	5.10E-01	1.11E 00	
B. TRITIUM				
1. TOTAL RELEASE	CURIES	1.47E 02	7.38E 01	0.00E-01
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	UCI/ML	4.11E-07	2.48E-07	
3. PERCENT OF APPLICABLE LIMIT	%	1.37E-02	8.27E-03	
C. DISSOLVED AND ENTRAINED GASES				
1. TOTAL RELEASE	CURIES	1.32E 01	2.77E 00	0.00E-01
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	UCI/ML	3.69E-08	9.33E-09	
3. PERCENT OF APPLICABLE LIMIT	%	1.85E-02	4.66E-03	
D. GROSS ALPHA RADIOACTIVITY				
1. TOTAL RELEASE	CURIES	9.94E-05	1.09E-04	0.00E-01
E. WASTE VOL RELEASED(PRE-DILUTION)	GAL	6.89E 05	6.11E 05	0.00E-01
F. VOLUME OF DILUTION WATER USED	GAL	9.45E 10	7.85E 10	0.00E-01

NUCLIDE	UNIT	CONTINUOUS RELEASES QUARTER 3 HOURS 4345-6552	CONTINUOUS RELEASES QUARTER 4 HOURS 6553-8760	BATCH RELEASES QUARTER 3 HOURS 4345-6552	BATCH RELEASES QUARTER 4 HOURS 6553-8760
ALL NUCLIDES					
H-3	CURIES	0.00E-01	0.00E-01	1.47E 02	7.38E 01
C-14	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
NA-24	CURIES	0.00E-01	0.00E-01	1.19E-03	1.82E-04
P-32	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
CR-51	CURIES	0.00E-01	0.00E-01	1.70E-02	1.14E-02
MN-54	CURIES	0.00E-01	0.00E-01	5.88E-03	4.03E-03
MN-56	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
FE-55	CURIES	0.00E-01	0.00E-01	9.66E-03	5.61E-03
FE-59	CURIES	0.00E-01	0.00E-01	2.78E-03	1.14E-03
CO-58	CURIES	0.00E-01	0.00E-01	2.69E-01	1.34E-01
CO-60	CURIES	0.00E-01	0.00E-01	6.66E-03	4.66E-03
NI-63	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
NI-65	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
CU-64	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
ZN-65	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
ZN-69	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
BR-83	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
BR-84	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
BR-85	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
RB-86	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
RB-88	CURIES	0.00E-01	0.00E-01	2.90E-03	0.00E-01
RB-89	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
SR-89	CURIES	0.00E-01	0.00E-01	1.30E-03	2.96E-04
SR-91	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
SR-92	CURIES	0.00E-01	0.00E-01	8.33E-04	5.01E-04
Y-90	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
Y-91M	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
Y-91	CURIES	0.00E-01	0.00E-01	1.94E-03	0.00E-01
Y-92	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
Y-93	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
ZR-95	CURIES	0.00E-01	0.00E-01	4.51E-03	3.59E-03
ZR-97	CURIES	0.00E-01	0.00E-01	1.09E-04	3.75E-05
NB-95	CURIES	0.00E-01	0.00E-01	4.87E-03	1.94E-03
MO-99	CURIES	0.00E-01	0.00E-01	5.35E-03	4.73E-03
TC-99M	CURIES	0.00E-01	0.00E-01	6.07E-03	6.57E-03
TC-101	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
RU-103	CURIES	0.00E-01	0.00E-01	5.57E-04	7.87E-05
RU-105	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
RU-106	CURIES	0.00E-01	0.00E-01	4.01E-04	6.16E-04
AG-110M	CURIES	0.00E-01	0.00E-01	5.10E-02	7.24E-02
TE-125M	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
TE-127M	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
TE-127	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
TE-129M	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
TE-129	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
TE-131M	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01

NUCLIDE	UNIT	CONTINUOUS RELEASES QUARTER 3 HOURS 4345-6552	CONTINUOUS RELEASES QUARTER 4 HOURS 6553-8760	BATCH RELEASES QUARTER 3 HOURS 4345-6552	BATCH RELEASES QUARTER 4 HOURS 6553-8760
ALL NUCLIDES CONTINUED					
TE-131	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
TE-132	CURIES	0.00E-01	0.00E-01	0.00E-01	4.63E-03
I-130	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
I-131	CURIES	0.00E-01	0.00E-01	2.03E-02	1.73E-01
I-132	CURIES	0.00E-01	0.00E-01	0.00E-01	6.23E-03
I-133	CURIES	0.00E-01	0.00E-01	5.67E-04	0.00E-01
I-134	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
I-135	CURIES	0.00E-01	0.00E-01	1.34E-04	0.00E-01
CS-134	CURIES	0.00E-01	0.00E-01	2.17E-02	1.93E-02
CS-136	CURIES	0.00E-01	0.00E-01	0.00E-01	1.83E-04
CS-137	CURIES	0.00E-01	0.00E-01	6.41E-02	5.48E-02
CS-138	CURIES	0.00E-01	0.00E-01	0.00E-01	2.06E-03
BA-139	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
BA-140	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
BA-141	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
BA-142	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
LA-140	CURIES	0.00E-01	0.00E-01	8.91E-04	7.88E-04
LA-142	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
CE-141	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
CE-143	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
CE-144	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
PR-143	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
PR-144	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
ND-147	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
W-187	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
NP-239	CURIES	0.00E-01	0.00E-01	3.83E-04	0.00E-01
KR-83M	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
KR-85M	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
KR-85	CURIES	0.00E-01	0.00E-01	1.64E-03	0.00E-01
KR-87	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
KR-88	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
KR-89	CURIES	0.00E-01	0.00E-01	3.14E-04	0.00E-01
KR-90	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
XE-131M	CURIES	0.00E-01	0.00E-01	1.35E-01	3.46E-02
XE-133M	CURIES	0.00E-01	0.00E-01	1.30E-01	1.27E-02
XE-133	CURIES	0.00E-01	0.00E-01	1.29E 01	2.73E 00
XE-135M	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
XE-135	CURIES	0.00E-01	0.00E-01	5.18E-02	0.00E-01
XE-137	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
XE-138	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
AR-41	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
SR-90	CURIES	0.00E-01	0.00E-01	2.43E-04	2.57E-04
G ALPHA	CURIES	0.00E-01	0.00E-01	9.94E-05	1.09E-04
OTHER	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
BE-7	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
K-40	CURIES	0.00E-01	0.00E-01	2.84E-04	3.74E-04

NUCLIDE	UNIT	CONTINUOUS RELEASES QUARTER 3 HOURS 4345-6552	CONTINUOUS RELEASES QUARTER 4 HOURS 6553-8760	BATCH RELEASES QUARTER 3 HOURS 4345-6552	BATCH RELEASES QUARTER 4 HOURS 6553-8760
ALL NUCLIDES CONTINUED					
CO-56	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
CO-57	CURIES	0.00E-01	0.00E-01	1.96E-04	0.00E-01
SE-75	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
SR-85	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
Y-88	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
NB-94	CURIES	0.00E-01	0.00E-01	1.04E-05	0.00E-01
NB-97	CURIES	0.00E-01	0.00E-01	1.50E-05	7.43E-05
MO-90	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
CD-109	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
CD-113M	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
SN-113	CURIES	0.00E-01	0.00E-01	4.27E-04	1.27E-03
SB-122	CURIES	0.00E-01	0.00E-01	1.22E-04	1.49E-02
SB-124	CURIES	0.00E-01	0.00E-01	4.84E-03	1.34E-01
SB-125	CURIES	0.00E-01	0.00E-01	3.63E-02	3.25E-01
SB-127	CURIES	0.00E-01	0.00E-01	6.75E-04	1.35E-03
BA-133	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
CE-139	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
EU-152	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
HG-203	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
PB-214	CURIES	0.00E-01	0.00E-01	1.60E-04	0.00E-01
BI-214	CURIES	0.00E-01	0.00E-01	4.30E-03	0.00E-01
RA-226	CURIES	0.00E-01	0.00E-01	4.85E-05	0.00E-01
TH-228	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
U-235	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
TOTAL FOR PERIOD	CURIES	0.00E-01	0.00E-01	1.61E 02	7.75E 01

*** REGULATORY GUIDE 1.21 REPORT ***
ARKANSAS POWER AND LIGHT
ROUTE 3 BOX 137G
RUSSELLVILLE, AR 72801

START DATE 7/1/1989 END DATE 12/31/1989

PROCESSED WASTE	CUBIC METERS	1.83E+01	
	CURIES	2.83E+02	ERROR= 2.54E+00 %
DRY ACTIVE WASTE	CUBIC METERS	1.07E+02	
	CURIES	7.85E+00	ERROR= 1.31E+00 %
IRRADIATED COMP.	CUBIC METERS	0.00E+00	
	CURIES	0.00E+00	ERROR= 0.00E+00 %
OTHER (DESCRIBE)	CUBIC METERS	0.00E-00	
	CURIES	0.00E-00	ERROR= 0.00E+00 %

MAJOR NUCLIDES FOR PROCESS WASTE :

CS137	CURIES=	1.23E+02 +/-	5.33E+00 %
CS134	CURIES=	3.59E+01 +/-	5.33E+00 %
AG110M	CURIES=	3.27E+01 +/-	4.00E+00 %
CO58	CURIES=	2.53E+01 +/-	5.36E+00 %
NI63	CURIES=	1.82E+01 +/-	4.10E+00 %
FE55	CURIES=	1.36E+01 +/-	4.26E+00 %
CO60	CURIES=	1.22E+01 +/-	3.84E+00 %
SB125	CURIES=	1.21E+01 +/-	4.90E+00 %
MN54	CURIES=	4.76E+00 +/-	5.23E+00 %
TE125M	CURIES=	1.63E+00 +/-	5.04E+00 %

MAJOR NUCLIDES FOR DRY ACTIVE WASTE:

CS137	CURIES=	3.98E+00 +/-	1.95E+00 %
CS134	CURIES=	1.13E+00 +/-	1.98E+00 %
FE55	CURIES=	7.59E-01 +/-	1.92E+00 %
CO58	CURIES=	6.15E-01 +/-	1.98E+00 %
NI63	CURIES=	5.55E-01 +/-	1.92E+00 %
CO60	CURIES=	3.98E-01 +/-	1.92E+00 %
AG110M	CURIES=	2.49E-01 +/-	2.05E+00 %
NB95	CURIES=	7.57E-02 +/-	2.42E+00 %
ZR95	CURIES=	5.82E-02 +/-	2.42E+00 %
CR51	CURIES=	1.82E-02 +/-	2.00E+00 %

MAJOR NUCLIDES FOR IRRADIATED COMP.:
MAJOR NUCLIDES FOR OTHER (DESCRIBE):

SOLID WASTE DISPOSITION

SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
1	CASK SHIPMENT (TYPE A)	BARNWELL, SC
1	CASK SHIPMENT (TYPE B)	BARNWELL, SC
1	UNSHIELDED VAN/TRUCK	BEATTY, NV
1	UNSHIELDED VAN/TRUCK	PITTSBURGH, PA
1	UNSHIELDED VAN/TRUCK	WAMPUM, PA
10	UNSHIELDED VAN/TRUCK	OAK RIDGE, TN

*** REGULATORY GUIDE 1.21 REPORT ***
ARKANSAS POWER AND LIGHT
ROUTE 3 BOX 137G
RUSSELLVILLE, AR 72801

START DATE 1/1/1989 END DATE 12/31/1989

PROCESSED WASTE	CUBIC METERS	1.83E+01	
	CURIES	2.83E+02	ERROR= 2.54E+00 %
DRY ACTIVE WASTE	CUBIC METERS	2.03E+02	
	CURIES	1.26E+01	ERROR= 1.66E+00 %
IRRADIATED COMP.	CUBIC METERS	0.00E+00	
	CURIES	0.00E+00	ERROR= 0.00E+00 %
OTHER (DESCRIBE)	CUBIC METERS	0.00E-00	
	CURIES	0.00E-00	ERROR= 0.00E+00 %

SOLID WASTE DISPOSITION

SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
1	CASK SHIPMENT (TYPE A)	BARNWELL, SC
1	CASK SHIPMENT (TYPE B)	BARNWELL, SC
1	UNSHIELDED VAN/TRUCK	BEATTY, NV
16	UNSHIELDED VAN/TRUCK	PITTSBURGH, PA
1	UNSHIELDED VAN/TRUCK	WAMPUM, PA
12	UNSHIELDED VAN/TRUCK	OAK RIDGE, TN

CHANGES TO THE OFFSITE DOSE CALCULATION MANUAL

AND

PROCESS CONTROL PROGRAM

Proposed changes to the Offsite Dose Calculation Manual during the third and fourth quarters of 1989 are currently pending ANO Safety Review Committee approval. No changes to the Process Control Program were made during the third and fourth quarters of 1989.

UNPLANNED RELEASES

TO

UNRESTRICTED AREAS

There were four unplanned releases during the second half of 1989:

1. On November 10, 1989, Arkansas Nuclear One, Unit 1 tripped, when an Instrument and Control Technician performing a surveillance test inadvertently grounded the power supply for the "B" reactor protection system cabinet creating a transient causing a high pressure reactor scram. During this trip the main steam safety valves lifted, releasing steam from the secondary plant system. The secondary system contains a small amount of radioactive material, some of which was released when the main steam safety valves lifted. The activity of the radioactive material released was very small (less than the quarterly Technical Specification limit), and no adverse consequences are expected.

2. On November 15, 1989, Arkansas Nuclear One, Unit 1 tripped when the inadvertent closure of a main feedwater isolation valve resulted in automatic actuation of the reactor protection system on high reactor coolant system pressure. During this trip the main steam safety valves lifted, releasing steam from the secondary plant system. The secondary system contains a small amount of radioactive material, some of which was released when the main steam safety valves lifted. The activity of the radioactive material released was very small (less than the quarterly Technical Specification limit), and no adverse consequences are expected.

3. On December 28, 1989, Arkansas Nuclear One, Unit 1, an automatic reactor trip and actuation of the Emergency Feedwater System occurred as a result of the loss of all main feedwater flow caused by the inadvertent tripping of a main feedwater pump. During this trip the main steam safety and the Emergency Feedwater Turbine Exhaust valves lifted to relieve system pressure, releasing steam from the secondary plant system. Since the activity of the radioactive material released was very low there were no release limits exceeded, and no adverse consequences are expected.

4. On December 31, 1989, Arkansas Nuclear One, Unit 2, a reactor trip occurred when 'B' Steam Generator water level reached a high level setpoint, and the Reactor Protective System generated a reactor trip signal. During this trip, steam from the secondary plant system was released via the emergency feedwater turbine exhaust. Since the secondary system contains a small amount of radioactive material, analyses indicated that the activity of the released material was well below required limits.

RADIATION DOSES DUE

TO

RADIOLOGICAL EFFLUENT

ARKANSAS POWER AND LIGHT
ARKANSAS NUCLEAR ONE
1990: 1:10:12:31:25
LIQUID RADIOACTIVE WASTE DATA FILE
CUMULATIVE DOSE DATA

** UNIT 1 ** QUARTER 1 OF 1989 **		TS LIMIT	%LIMIT
TOTAL DOSE (MREM) FOR BONE	: 1.8703E-02	5.0	0.374%
TOTAL DOSE (MREM) FOR LIVER	: 2.9158E-02	5.0	0.583%
TOTAL DOSE (MREM) FOR TOTAL BODY	: 2.0211E-02	1.5	1.347%
TOTAL DOSE (MREM) FOR THYROID	: 3.4099E-02	5.0	0.682%
TOTAL DOSE (MREM) FOR KIDNEY	: 9.9352E-03	5.0	0.199%
TOTAL DOSE (MREM) FOR LUNG	: 4.8955E-03	5.0	0.098%
TOTAL DOSE (MREM) FOR GI-LLI	: 5.5277E-03	5.0	0.105%

** UNIT 1 ** QUARTER 2 OF 1989 **		TS LIMIT	%LIMIT
TOTAL DOSE (MREM) FOR BONE	: 2.3097E-02	5.0	0.462%
TOTAL DOSE (MREM) FOR LIVER	: 3.6110E-02	5.0	0.722%
TOTAL DOSE (MREM) FOR TOTAL BODY	: 2.6091E-02	1.5	1.741%
TOTAL DOSE (MREM) FOR THYROID	: 2.5912E-02	5.0	0.518%
TOTAL DOSE (MREM) FOR KIDNEY	: 1.2437E-02	5.0	0.249%
TOTAL DOSE (MREM) FOR LUNG	: 5.6448E-03	5.0	0.113%
TOTAL DOSE (MREM) FOR GI-LLI	: 9.0164E-03	5.0	0.180%

** UNIT 1 ** QUARTER 3 OF 1989 **		TS LIMIT	%LIMIT
TOTAL DOSE (MREM) FOR BONE	: 8.4750E-03	5.0	0.170%
TOTAL DOSE (MREM) FOR LIVER	: 1.2592E-02	5.0	0.252%
TOTAL DOSE (MREM) FOR TOTAL BODY	: 9.1546E-03	1.5	0.610%
TOTAL DOSE (MREM) FOR THYROID	: 3.3583E-04	5.0	0.007%
TOTAL DOSE (MREM) FOR KIDNEY	: 4.3543E-03	5.0	0.087%
TOTAL DOSE (MREM) FOR LUNG	: 1.9143E-03	5.0	0.038%
TOTAL DOSE (MREM) FOR GI-LLI	: 3.2717E-03	5.0	0.065%

** UNIT 1 ** QUARTER 4 OF 1989 **		TS LIMIT	%LIMIT
TOTAL DOSE (MREM) FOR BONE	: 9.6709E-02	5.0	1.934%
TOTAL DOSE (MREM) FOR LIVER	: 1.5189E-01	5.0	3.038%
TOTAL DOSE (MREM) FOR TOTAL BODY	: 1.0809E-01	1.5	7.206%
TOTAL DOSE (MREM) FOR THYROID	: 5.0511E-02	5.0	1.010%
TOTAL DOSE (MREM) FOR KIDNEY	: 5.0988E-02	5.0	1.020%
TOTAL DOSE (MREM) FOR LUNG	: 2.3329E-02	5.0	0.467%
TOTAL DOSE (MREM) FOR GI-LLI	: 8.0831E-02	5.0	1.617%

** UNIT 1 ** TOTALS FOR 1989 **		TS LIMIT	%LIMIT
TOTAL DOSE (MREM) FOR BONE	: 1.4698E-01	10.0	1.470%
TOTAL DOSE (MREM) FOR LIVER	: 2.2975E-01	10.0	2.298%
TOTAL DOSE (MREM) FOR TOTAL BODY	: 1.6355E-01	3.0	5.452%
TOTAL DOSE (MREM) FOR THYROID	: 1.1086E-01	10.0	1.109%
TOTAL DOSE (MREM) FOR KIDNEY	: 7.7715E-02	10.0	0.777%
TOTAL DOSE (MREM) FOR LUNG	: 3.5784E-02	10.0	0.358%
TOTAL DOSE (MREM) FOR GI-LLI	: 9.8647E-02	10.0	0.986%

ARKANSAS POWER AND LIGHT
ARKANSAS NUCLEAR ONE
1990: 1:[illegible]12:31:47
LIQUID RADIOACTIVE WASTE DATA FILE
CUMULATIVE DOSE DATA

		TS LIMIT	%LIMIT
** UNIT 2 ** QUARTER 1 OF 1989 **			
TOTAL DOSE (MREM) FOR BONE	: 8.8152E-03	5.0	0.176%
TOTAL DOSE (MREM) FOR LIVER	: 1.2409E-02	5.0	0.248%
TOTAL DOSE (MREM) FOR TOTAL BODY	: 8.7260E-03	1.5	0.582%
TOTAL DOSE (MREM) FOR THYROID	: 4.6136E-02	5.0	0.923%
TOTAL DOSE (MREM) FOR KIDNEY	: 4.5167E-03	5.0	0.090%
TOTAL DOSE (MREM) FOR LUNG	: 6.6312E-03	5.0	0.133%
TOTAL DOSE (MREM) FOR GI-LLI	: 6.7805E-02	5.0	1.356%

		TS LIMIT	%LIMIT
** UNIT 2 ** QUARTER 2 OF 1989 **			
TOTAL DOSE (MREM) FOR BONE	: 9.0422E-03	5.0	0.181%
TOTAL DOSE (MREM) FOR LIVER	: 8.3534E-03	5.0	0.167%
TOTAL DOSE (MREM) FOR TOTAL BODY	: 5.9682E-03	1.5	0.398%
TOTAL DOSE (MREM) FOR THYROID	: 1.3138E-02	5.0	0.263%
TOTAL DOSE (MREM) FOR KIDNEY	: 2.5810E-03	5.0	0.052%
TOTAL DOSE (MREM) FOR LUNG	: 2.9551E-03	5.0	0.059%
TOTAL DOSE (MREM) FOR GI-LLI	: 5.2097E-02	5.0	1.042%

		TS LIMIT	%LIMIT
** UNIT 2 ** QUARTER 3 OF 1989 **			
TOTAL DOSE (MREM) FOR BONE	: 4.7514E-02	5.0	0.950%
TOTAL DOSE (MREM) FOR LIVER	: 5.7643E-02	5.0	1.153%
TOTAL DOSE (MREM) FOR TOTAL BODY	: 4.8595E-02	1.5	3.240%
TOTAL DOSE (MREM) FOR THYROID	: 8.4183E-03	5.0	0.168%
TOTAL DOSE (MREM) FOR KIDNEY	: 1.9389E-02	5.0	0.388%
TOTAL DOSE (MREM) FOR LUNG	: 7.7439E-03	5.0	0.155%
TOTAL DOSE (MREM) FOR GI-LLI	: 4.6905E-02	5.0	0.938%

		TS LIMIT	%LIMIT
** UNIT 2 ** QUARTER 4 OF 1989 **			
TOTAL DOSE (MREM) FOR BONE	: 2.9276E-02	5.0	0.586%
TOTAL DOSE (MREM) FOR LIVER	: 4.4909E-02	5.0	0.898%
TOTAL DOSE (MREM) FOR TOTAL BODY	: 3.2116E-02	1.5	2.141%
TOTAL DOSE (MREM) FOR THYROID	: 6.8646E-02	5.0	1.373%
TOTAL DOSE (MREM) FOR KIDNEY	: 1.5733E-02	5.0	0.315%
TOTAL DOSE (MREM) FOR LUNG	: 1.5631E-02	5.0	0.313%
TOTAL DOSE (MREM) FOR GI-LLI	: 2.4590E-02	5.0	0.492%

		TS LIMIT	%LIMIT
** UNIT 2 ** TOTALS FOR 1989 **			
TOTAL DOSE (MREM) FOR BONE	: 9.4647E-02	10.0	0.946%
TOTAL DOSE (MREM) FOR LIVER	: 1.2332E-01	10.0	1.233%
TOTAL DOSE (MREM) FOR TOTAL BODY	: 9.5405E-02	3.0	3.180%
TOTAL DOSE (MREM) FOR THYROID	: 1.3634E-01	10.0	1.363%
TOTAL DOSE (MREM) FOR KIDNEY	: 4.2220E-02	10.0	0.422%
TOTAL DOSE (MREM) FOR LUNG	: 3.2962E-02	10.0	0.330%
TOTAL DOSE (MREM) FOR GI-LLI	: 1.9140E-01	10.0	1.914%

ARKANSAS POWER AND LIGHT COMPANY
ARKANSAS NUCLEAR ONE
1990: 1:10:12:32:57
GASEOUS RADIOACTIVE WASTE DATA FILE
CUMULATIVE DOSE DATA

** UNIT 1 ** QUARTER 1 OF 1989 **

DOSE FROM RADIOIODINES, PARTICULATES, AND TRITIUM AT CONTROLLING LOCATION:		TS LIMIT	%LIMIT
TOTAL DOSE (MREM) FOR BONE	: 4.8968E-04	7.5	0.007%
TOTAL DOSE (MREM) FOR LIVER	: 3.5524E-03	7.5	0.047%
TOTAL DOSE (MREM) FOR TOTAL BODY	: 3.2788E-03	7.5	0.044%
TOTAL DOSE (MREM) FOR THYROID	: 6.5372E-02	7.5	0.872%
TOTAL DOSE (MREM) FOR KIDNEY	: 3.5173E-03	7.5	0.047%
TOTAL DOSE (MREM) FOR LUNG	: 3.1625E-03	7.5	0.042%
TOTAL DOSE (MREM) FOR GI-LLI	: 3.1564E-03	7.5	0.042%
NOBLE GAS AIRDOSE AT SITE BOUNDARY:			
TOTAL GAMMA AIRDOSE (MRAD)	: 6.8656E-03	5.0	0.137%
TOTAL BETA AIRDOSE (MRAD)	: 2.0304E-02	10.0	0.203%

** UNIT 1 ** QUARTER 2 OF 1989 **

DOSE FROM RADIOIODINES, PARTICULATES, AND TRITIUM AT CONTROLLING LOCATION:		TS LIMIT	%LIMIT
TOTAL DOSE (MREM) FOR BONE	: 1.9311E-04	7.5	0.003%
TOTAL DOSE (MREM) FOR LIVER	: 3.0247E-03	7.5	0.040%
TOTAL DOSE (MREM) FOR TOTAL BODY	: 2.9055E-03	7.5	0.039%
TOTAL DOSE (MREM) FOR THYROID	: 2.0972E-02	7.5	0.280%
TOTAL DOSE (MREM) FOR KIDNEY	: 2.9842E-03	7.5	0.040%
TOTAL DOSE (MREM) FOR LUNG	: 2.8709E-03	7.5	0.038%
TOTAL DOSE (MREM) FOR GI-LLI	: 2.8634E-03	7.5	0.038%
NOBLE GAS AIRDOSE AT SITE BOUNDARY:			
TOTAL GAMMA AIRDOSE (MRAD)	: 4.9080E-03	5.0	0.098%
TOTAL BETA AIRDOSE (MRAD)	: 3.0176E-01	10.0	3.018%

** UNIT 1 ** QUARTER 3 OF 1989 **

DOSE FROM RADIOIODINES, PARTICULATES, AND TRITIUM AT CONTROLLING LOCATION:		TS LIMIT	%LIMIT
TOTAL DOSE (MREM) FOR BONE	: 2.8293E-05	7.5	0.001%
TOTAL DOSE (MREM) FOR LIVER	: 8.9388E-04	7.5	0.012%
TOTAL DOSE (MREM) FOR TOTAL BODY	: 8.8915E-04	7.5	0.012%
TOTAL DOSE (MREM) FOR THYROID	: 5.0188E-03	7.5	0.067%
TOTAL DOSE (MREM) FOR KIDNEY	: 9.0158E-04	7.5	0.012%
TOTAL DOSE (MREM) FOR LUNG	: 8.8208E-04	7.5	0.012%
TOTAL DOSE (MREM) FOR GI-LLI	: 8.8408E-04	7.5	0.012%
NOBLE GAS AIRDOSE AT SITE BOUNDARY:			
TOTAL GAMMA AIRDOSE (MRAD)	: 2.3857E-03	5.0	0.048%
TOTAL BETA AIRDOSE (MRAD)	: 6.6754E-03	10.0	0.067%

ARKANSAS POWER AND LIGHT COMPANY
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CUMULATIVE DOSE DATA

** UNIT 1 ** QUARTER 4 OF 1989 **

DOSE FROM RADIOIODINES, PARTICULATES, AND TRITIUM AT CONTROLLING LOCATION:		TS LIMIT	%LIMIT
TOTAL DOSE (MREM) FOR BONE	: 7.8889E-04	7.5	0.011%
TOTAL DOSE (MREM) FOR LIVER	: 6.5583E-03	7.5	0.087%
TOTAL DOSE (MREM) FOR TOTAL BODY	: 6.2427E-03	7.5	0.083%
TOTAL DOSE (MREM) FOR THYROID	: 3.9789E-02	7.5	0.531%
TOTAL DOSE (MREM) FOR KIDNEY	: 6.3360E-03	7.5	0.084%
TOTAL DOSE (MREM) FOR LUNG	: 6.0867E-03	7.5	0.081%
TOTAL DOSE (MREM) FOR GI-LLI	: 6.0579E-03	7.5	0.081%
NOBLE GAS AIRDOSE AT SITE BOUNDARY:			
TOTAL GAMMA AIRDOSE (MRAD)	: 8.8625E-03	5.0	0.177%
TOTAL BETA AIRDOSE (MRAD)	: 2.5928E-02	10.0	0.259%

** UNIT 1 ** TOTALS FOR 1989 **

DOSE FROM RADIOIODINES, PARTICULATES, AND TRITIUM AT CONTROLLING LOCATION:		TS LIMIT	%LIMIT
TOTAL DOSE (MREM) FOR BONE	: 1.5000E-03	15.0	0.010%
TOTAL DOSE (MREM) FOR LIVER	: 1.4029E-02	15.0	0.094%
TOTAL DOSE (MREM) FOR TOTAL BODY	: 1.3316E-02	15.0	0.089%
TOTAL DOSE (MREM) FOR THYROID	: 1.3115E-01	15.0	0.874%
TOTAL DOSE (MREM) FOR KIDNEY	: 1.3739E-02	15.0	0.092%
TOTAL DOSE (MREM) FOR LUNG	: 1.3002E-02	15.0	0.087%
TOTAL DOSE (MREM) FOR GI-LLI	: 1.2962E-02	15.0	0.086%
NOBLE GAS AIRDOSE AT SITE BOUNDARY:			
TOTAL GAMMA AIRDOSE (MRAD)	: 2.3022E-02	10.0	0.230%
TOTAL BETA AIRDOSE (MRAD)	: 3.5467E-01	20.0	1.773%

ARKANSAS POWER AND LIGHT COMPANY
ARKANSAS NUCLEAR ONE
1990: 1:10:12:33:35
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** UNIT 2 ** QUARTER 1 OF 1989 **

DOSE FROM RADIOIODINES, PARTICULATES, AND TRITIUM AT CONTROLLING LOCATION:		TS LIMIT	%LIMIT
TOTAL DOSE (MREM) FOR BONE	2.0852E-04	7.5	0.003%
TOTAL DOSE (MREM) FOR LIVER	1.9029E-03	7.5	0.026%
TOTAL DOSE (MREM) FOR TOTAL BODY	1.8509E-03	7.5	0.025%
TOTAL DOSE (MREM) FOR THYROID	1.1492E-02	7.5	0.153%
TOTAL DOSE (MREM) FOR KIDNEY	1.9068E-03	7.5	0.025%
TOTAL DOSE (MREM) FOR LUNG	1.8299E-03	7.5	0.024%
TOTAL DOSE (MREM) FOR GI-LLI	1.8174E-03	7.5	0.024%
NOBLE GAS AIRDOSE AT SITE BOUNDARY:			
TOTAL GAMMA AIRDOSE (MRAD)	4.2783E-02	5.0	0.856%
TOTAL BETA AIRDOSE (MRAD)	1.0188E-01	10.0	1.019%

** UNIT 2 ** QUARTER 2 OF 1989 **

DOSE FROM RADIOIODINES, PARTICULATES, AND TRITIUM AT CONTROLLING LOCATION:		TS LIMIT	%LIMIT
TOTAL DOSE (MREM) FOR BONE	4.0103E-04	7.5	0.005%
TOTAL DOSE (MREM) FOR LIVER	1.1579E-03	7.5	0.015%
TOTAL DOSE (MREM) FOR TOTAL BODY	9.2911E-04	7.5	0.012%
TOTAL DOSE (MREM) FOR THYROID	3.6552E-02	7.5	0.487%
TOTAL DOSE (MREM) FOR KIDNEY	1.1111E-03	7.5	0.015%
TOTAL DOSE (MREM) FOR LUNG	8.5683E-04	7.5	0.011%
TOTAL DOSE (MREM) FOR GI-LLI	8.4477E-04	7.5	0.011%
NOBLE GAS AIRDOSE AT SITE BOUNDARY:			
TOTAL GAMMA AIRDOSE (MRAD)	3.5493E-02	5.0	0.710%
TOTAL BETA AIRDOSE (MRAD)	8.8672E-02	10.0	0.887%

** UNIT 2 ** QUARTER 3 OF 1989 **

DOSE FROM RADIOIODINES, PARTICULATES, AND TRITIUM AT CONTROLLING LOCATION:		TS LIMIT	%LIMIT
TOTAL DOSE (MREM) FOR BONE	4.1632E-04	7.5	0.006%
TOTAL DOSE (MREM) FOR LIVER	2.2239E-03	7.5	0.030%
TOTAL DOSE (MREM) FOR TOTAL BODY	2.0030E-03	7.5	0.027%
TOTAL DOSE (MREM) FOR THYROID	4.2528E-02	7.5	0.567%
TOTAL DOSE (MREM) FOR KIDNEY	2.2627E-03	7.5	0.030%
TOTAL DOSE (MREM) FOR LUNG	1.9270E-03	7.5	0.026%
TOTAL DOSE (MREM) FOR GI-LLI	1.9184E-03	7.5	0.026%
NOBLE GAS AIRDOSE AT SITE BOUNDARY:			
TOTAL GAMMA AIRDOSE (MRAD)	3.2494E-02	5.0	0.650%
TOTAL BETA AIRDOSE (MRAD)	8.5835E-02	10.0	0.858%

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** UNIT 2 ** QUARTER 4 OF 1989 **

DOSE FROM RADIOIODINES, PARTICULATES, AND TRITIUM AT CONTROLLING LOCATION:		TS LIMIT	%LIMIT
TOTAL DOSE (MREM) FOR BONE	: 2.6383E-04	7.5	0.004%
TOTAL DOSE (MREM) FOR LIVER	: 3.7524E-03	7.5	0.050%
TOTAL DOSE (MREM) FOR TOTAL BODY	: 3.5524E-03	7.5	0.047%
TOTAL DOSE (MREM) FOR THYROID	: 1.7793E-02	7.5	0.237%
TOTAL DOSE (MREM) FOR KIDNEY	: 3.6289E-03	7.5	0.048%
TOTAL DOSE (MREM) FOR LUNG	: 3.5134E-03	7.5	0.047%
TOTAL DOSE (MREM) FOR GI-LLI	: 3.4952E-03	7.5	0.047%
NOBLE GAS AIRDOSE AT SITE BOUNDARY:			
TOTAL GAMMA AIRDOSE (MRAD)	: 1.9032E-03	5.0	0.038%
TOTAL BETA AIRDOSE (MRAD)	: 5.3860E-03	10.0	0.054%

** UNIT 2 ** TOTALS FOR 1989 **

DOSE FROM RADIOIODINES, PARTICULATES, AND TRITIUM AT CONTROLLING LOCATION:		TS LIMIT	%LIMIT
TOTAL DOSE (MREM) FOR BONE	: 1.2897E-03	15.0	0.009%
TOTAL DOSE (MREM) FOR LIVER	: 9.1171E-03	15.0	0.061%
TOTAL DOSE (MREM) FOR TOTAL BODY	: 8.3354E-03	15.0	0.056%
TOTAL DOSE (MREM) FOR THYROID	: 1.0836E-01	15.0	0.722%
TOTAL DOSE (MREM) FOR KIDNEY	: 8.9095E-03	15.0	0.059%
TOTAL DOSE (MREM) FOR LUNG	: 8.1272E-03	15.0	0.054%
TOTAL DOSE (MREM) FOR GI-LLI	: 8.0757E-03	15.0	0.054%
NOBLE GAS AIRDOSE AT SITE BOUNDARY:			
TOTAL GAMMA AIRDOSE (MRAD)	: 1.1267E-01	10.0	1.127%
TOTAL BETA AIRDOSE (MRAD)	: 2.8177E-01	20.0	1.409%

CHANGES

TO THE

RADIOACTIVE WASTE SYSTEMS

No major changes were made to the Unit 1 or 2 liquid, gaseous or solid effluent systems during 1989.

METEOROLOGICAL DATA

FOR

1989

In accordance with ANO Technical Specifications, in lieu of including a summary of meteorological data in this report, the 1989 data is retained at ANO and available for NRC review.