

REPORT CATEGORY  
 TYPE OF ACTIVITY  
 REPORTING PERIOD

	UNIT	QUARTER 3	QUARTER 4	EST. TOTAL
		HOURS	HOURS	ERROR %
TYPE OF EFFLUENT		14345-4552	14553-8760	

#### A. FISSION AND ACTIVATION PRODUCTS

1. TOTAL RELEASE (NOT INCLUDING TRITIUM, GASES, ALPHA)	CURIES	3.21E-01	1.03E 00	0.00E-01
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	UCI/ML	8.40E-10	3.79E-09	
3. PERCENT OF APPLICABLE LIMIT	%	2.83E-01	1.26E 00	

#### B. TRITIUM

1. TOTAL RELEASE	CURIES	4.18E 01	7.60E 01	0.00E-01
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	UCI/ML	1.10E-07	2.80E-07	
3. PERCENT OF APPLICABLE LIMIT	%	3.68E-03	9.33E-03	

#### C. DISSOLVED AND ENTRAINED GASES

1. TOTAL RELEASE	CURIES	2.29E 00	1.20E 00	0.00E-01
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	UCI/ML	8.06E-09	4.43E-09	
3. PERCENT OF APPLICABLE LIMIT	%	3.03E-03	2.22E-03	

#### D. GROSS ALPHA RADIOACTIVITY

1. TOTAL RELEASE	CURIES	0.00E-01	1.03E-03	0.00E-01
------------------	--------	----------	----------	----------

E. WASTE VOL RELEASED (PRE-DILUTION)	GAL	3.80E 06	3.03E 06	0.00E-01
--------------------------------------	-----	----------	----------	----------

F. VOLUME OF DILUTION WATER USED	GAL	1.00E 11	7.17E 10	0.00E-01
----------------------------------	-----	----------	----------	----------







REPORT CATEGORY  
 TYPE OF ACTIVITY  
 REPORTING PERIOD

	UNIT	QUARTER 3	QUARTER 4	EST. TOTAL
		HOURS	HOURS	ERROR %
TYPE OF EFFLUENT		4345-6552	6553-8760	

#### A. FISSION AND ACTIVATION GASES

1. TOTAL RELEASE	:CURIES	: 1.08E 01	: 2.75E 02	: 0.00E-01
2. AVERAGE RELEASE RATE FOR PERIOD	:UCI/SEC	: 1.38E 00	: 3.50E 01	:
3. PERCENT OF APPLICABLE LIMIT	: %	: 1.93E-02	: 4.89E-01	:

#### B. RADIOIODINES

1. TOTAL IODINE-131	:CURIES	: 7.87E-05	: 8.92E-05	: 0.00E-01
2. AVERAGE RELEASE RATE FOR PERIOD	:UCI/SEC	: 1.00E-05	: 1.13E-05	:
3. PERCENT OF APPLICABLE LIMIT	: %	: 2.80E-05	: 3.18E-05	:

#### C. PARTICULATES

1. PARTICULATES(HALF-LIVES>6 DAYS)	:CURIES	: 1.63E-05	: 1.80E-05	: 0.00E-01
2. AVERAGE RELEASE RATE FOR PERIOD	:UCI/SEC	: 2.07E-06	: 2.29E-06	:
3. PERCENT OF APPLICABLE LIMIT	: %	: 5.81E-06	: 6.41E-06	:
4. GROSS ALPHA RADIOACTIVITY	:CURIES	: 0.00E-01	: 0.00E-01	:

#### D. TRITIUM

1. TOTAL RELEASE	:CURIES	: 1.30E 00	: 1.41E 00	: 0.00E-01
2. AVERAGE RELEASE RATE FOR PERIOD	:UCI/SEC	: 1.65E-01	: 1.80E-01	:
3. PERCENT OF APPLICABLE LIMIT	: %	: 2.31E-04	: 2.51E-04	:

NUCLIDE	UNIT	ELEVATED		GROUND	
		BATCH	RELEASES	BATCH	RELEASES
		QUARTER 3 HOURS	QUARTER 4 HOURS	QUARTER 3 HOURS	QUARTER 4 HOURS
		14345-6552	14553-8760	14345-6552	14553-8760

## 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	2.08E-06	3.31E-00
KR-85	CURIES	0.00E-01	0.00E-01	5.77E-02	0.00E-01
KR-87	CURIES	0.00E-01	0.00E-01	0.00E-01	1.15E-00
KR-88	CURIES	0.00E-01	0.00E-01	0.00E-01	4.54E-00
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	2.46E-02	4.52E-01
XE-133M	CURIES	0.00E-01	0.00E-01	9.45E-04	3.40E-00
XE-133	CURIES	0.00E-01	0.00E-01	1.07E-01	1.96E-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	2.02E-05	6.01E-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	5.71E-00
OTHER	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01

TOTAL FOR PERIOD	CURIES	0.00E-01	0.00E-01	1.08E-01	2.75E-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	7.47E-05	8.92E-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	8.68E-06	6.39E-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	8.74E-05	9.55E-05
------------------	--------	----------	----------	----------	----------

## PARTICULATES

H-3	CURIES	0.00E-01	0.00E-01	1.30E-00	1.41E-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	4.43E-07
CO-60	CURIES	0.00E-01	0.00E-01	0.00E-01	3.77E-06
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		GROUND	
		BATCH	RELEASES	BATCH	RELEASES
		QUARTER 3 HOURS	QUARTER 4 HOURS	QUARTER 3 HOURS	QUARTER 4 HOURS
		14345-6552	16553-8760	14345-6552	16553-8760

## 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	6.06E-09
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	1.16E-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	0.00E-01	0.00E-01
MO-90	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
CO-109	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
CO-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	0.00E-01	0.00E-01
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	1.30E 00
					1.41E 00



REPORT CATEGORY  
 TYPE OF ACTIVITY  
 REPORTING PERIOD

	NET	QUARTER 3	QUARTER 4	EST. TOTAL
		HOURS	HOURS	ERROR %
TYPE OF EFFLUENT		14345-6552	16553-8760	

#### A. FISSION AND ACTIVATION PRODUCTS

1. TOTAL RELEASE (NOT INCLUDING TRITIUM, GASES, ALPHA)	CURIES	7.40E-01	2.07E-01	0.00E-01
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	UCI/ML	1.95E-09	7.62E-10	
3. PERCENT OF APPLICABLE LIMIT	%	6.51E-01	2.54E-01	

#### B. TRITIUM

1. TOTAL RELEASE	CURIES	1.76E-02	1.00E-02	0.00E-01
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	UCI/ML	4.65E-07	3.69E-07	
3. PERCENT OF APPLICABLE LIMIT	%	1.35E-02	1.23E-02	

#### C. DISSOLVED AND ENTRAINED GASES

1. TOTAL RELEASE	CURIES	3.65E-01	1.64E-00	0.00E-01
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	UCI/ML	9.64E-10	6.06E-09	
3. PERCENT OF APPLICABLE LIMIT	%	4.82E-04	3.03E-03	

#### D. GROSS ALPHA RADIOACTIVITY

1. TOTAL RELEASE	CURIES	0.00E-01	0.00E-01	0.00E-01
------------------	--------	----------	----------	----------

E. WASTE VOL RELEASED (PRE-DILUTION)	GAL	4.06E-05	3.65E-05	0.00E-01
--------------------------------------	-----	----------	----------	----------

F. VOLUME OF DILUTION WATER USED	GAL	1.00E-11	7.17E-10	0.00E-01
----------------------------------	-----	----------	----------	----------



: CONTINUOUS RELEASES : BATCH RELEASES :

NUCLIDE	UNIT	QUARTER 3 HOURS	QUARTER 4 HOURS	QUARTER 3 HOURS	QUARTER 4 HOURS
		4345-6552	6553-8760	4345-6552	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	2.08E-04	0.00E-01
I-130	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
I-131	CURIES	0.00E-01	0.00E-01	5.22E-03	8.72E-04
I-132	CURIES	0.00E-01	0.00E-01	2.24E-04	0.00E-01
I-133	CURIES	0.00E-01	0.00E-01	4.10E-04	7.86E-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	0.00E-01
CS-134	CURIES	0.00E-01	0.00E-01	5.81E-02	3.36E-02
CS-136	CURIES	0.00E-01	0.00E-01	1.33E-04	0.00E-01
CS-137	CURIES	0.00E-01	0.00E-01	1.50E-01	9.18E-02
CS-138	CURIES	0.00E-01	0.00E-01	3.50E-05	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	2.26E-03	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
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	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	1.90E-03	1.59E-02
XE-133M	CURIES	0.00E-01	0.00E-01	2.06E-03	1.55E-02
XE-133	CURIES	0.00E-01	0.00E-01	3.54E-01	1.60E-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	7.14E-03	6.98E-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	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	0.00E-01	0.00E-01
OTHER	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
DE-7	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
K-40	CURIES	0.00E-01	0.00E-01	1.04E-04	0.00E-01



REPORT CATEGORY  
 TYPE OF ACTIVITY  
 REPORTING PERIOD

TYPE OF EFFLUENT	UNIT	QUARTER 3	QUARTER 4	EST. TOTAL	ERROR %
		HOURS	HOURS		
		14345-6552	16553-8760		

#### A. FISSION AND ACTIVATION GASES

1. TOTAL RELEASE	:CURIES	: 4.94E-01	: 6.66E-01	: 0.00E-01
2. AVERAGE RELEASE RATE FOR PERIOD	:UCI/SEC	: 5.31E-00	: 8.48E-00	
3. PERCENT OF APPLICABLE LIMIT	: %	: 8.84E-02	: 1.19E-01	

#### B. RADIOIODINES

1. TOTAL IODINE-131	:CURIES	: 1.38E-05	: 4.32E-06	: 0.00E-01
2. AVERAGE RELEASE RATE FOR PERIOD	:UCI/SEC	: 1.76E-06	: 5.49E-07	
3. PERCENT OF APPLICABLE LIMIT	: %	: 4.93E-06	: 1.54E-06	

#### C. PARTICULATES

1. PARTICULATES(HALF-LIVES>8 DAYS)	:CURIES	: 4.99E-06	: 1.36E-05	: 0.00E-01
2. AVERAGE RELEASE RATE FOR PERIOD	:UCI/SEC	: 6.34E-07	: 1.73E-06	
3. PERCENT OF APPLICABLE LIMIT	: %	: 1.70E-06	: 4.85E-06	
4. GROSS ALPHA RADIOACTIVITY	:CURIES	: 0.00E-01	: 0.00E-01	

#### D. TRITIUM

1. TOTAL RELEASE	:CURIES	: 1.35E-00	: 8.44E-01	: 0.00E-01
2. AVERAGE RELEASE RATE FOR PERIOD	:UCI/SEC	: 1.71E-01	: 1.07E-01	
3. PERCENT OF APPLICABLE LIMIT	: %	: 2.40E-04	: 1.50E-04	





NUCLIDE	UNIT	ELEVATED		GROUND	
		BATCH	RELEASES	BATCH	RELEASES
		QUARTER 3 HOURS 14345-6552	QUARTER 4 HOURS 16553-8760	QUARTER 3 HOURS 14345-6552	QUARTER 4 HOURS 16553-8760
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	3.20E-06	5.73E-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	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	4.65E-07
CS-134	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
CS-137	CURIES	0.00E-01	0.00E-01	5.34E-07	2.62E-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

		ELEVATED		GROUND	
		BATCH	RELEASES	BATCH	RELEASES
NUCLIDE	UNIT	QUARTER 3	QUARTER 4	QUARTER 3	QUARTER 4
		HOURS	HOURS	HOURS	HOURS
		14345-6552	16553-8760	14345-6552	16553-8760

## PARTICULATES CONTINUED

FR-143	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
FR-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	1.67E-09
G ALPHA	CURIES	0.00E-01	0.00E-01	1.33E-07	9.57E-07
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	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	0.00E-01	0.00E-01
MO-90	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
CO-109	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
ED-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	0.00E-01	0.00E-01
RA-226	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
TH-228	CURIES	0.00E-01	0.00E-01	6.26E-07	2.46E-06
U-233	CURIES	0.00E-01	0.00E-01	0.00E-01	0.00E-01
TOTAL FOR PERIOD		CURIES	0.00E-01	0.00E-01	1.35E 00
					8.44E-01

## SOLID WASTE REPORT

(R.G. 1.21)

ARKANSAS NUCLEAR ONE  
DOCKET NUMBER 50-313

## EFFLUENT AND WASTE DISPOSAL REPORT

REPORT PERIOD: 7/1/87 - 12/31/87

REPORT GENERATION DATE: 12/31/87

## SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

A. SOLID WASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL  
(NOT IRRADIATED FUEL)

1. TYPE OF WASTE	UNIT	2.0 MONTH PER.	ERROR, %
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOM, ETC.	M**3 CI	1.31E+02 8.78E+02	2.00E+00
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIP., ETC.	M**3 CI	2.69E+02 17.635	2.00E+00

## 2. ESTIMATE OF MAJOR NUCLIDE COMPOSITION (BY TYPE OF WASTE)

A. Isotope	Curies	% ABN	B. Isotope	Curies	%ABN
Cs-137	4.244E+02	4.832E+01	C-14	0.235	1.333E+00
Cs-134	1.739E+02	1.980E+01	Co-58	0.638	3.618E+00
Co-58	1.239E+02	1.410E+01	Co-60	1.705	9.668E+00
Ni-63	4.988E+01	5.679E+00	Cs-134	1.569	8.897E+00
Co-60	3.404E+01	3.875E+00	Cs-137	6.797	3.854E+01
H-3	1.600E+01	1.822E+00	Fe-55	3.23	1.832E+01
Fe-55	2.981E+01	3.394E+00	I-129	0.01579	8.954E-02
Ag-110m	8.700E+00	9.905E-01	Ni-63	2.52	1.429E+01
Sb-125	6.350E+00	7.229E-01	Sr-90	0.251	1.423E+00
Sr-90	2.830E+00	3.222E-01	Tc-99	0.057	3.232E-01
Mn-54	2.410E+00	2.744E-01	Pu-241	0.613	3.476E+00
Pu-241	1.000E+00	1.138E-01	Pu-239	0.00158	8.959E-03
Co-57	8.400E-01	9.563E-02	Pu-238	0.00136	7.712E-03
Cr-51	7.990E-01	9.096E-02	Am-241	0.000792	4.491E-03
Te-125m	7.690E-01	8.755E-02	Cm-242	0.00068	3.856E-03
Tc-99	3.480E-03	3.962E-04			
Pu-239	3.380E-04	3.848E-05	TOTAL	17.635202	100
Pu-238	6.200E-04	7.058E-05			
I-133	2.190E-04	2.493E-05			
I-131	7.950E-01	9.051E-02			
I-129	2.390E-03	2.721E-04			
Cm-244	1.500E-04	1.708E-05			
Cm-242	5.230E-04	5.954E-05			
Ce-144	2.310E-01	2.630E-02			
C-14	6.310E-02	7.184E-03			
Be-7	1.670E+00	1.901E-01			
Am-241	1.730E-04	1.970E-05			
TOTAL	8.784E+02	100			

3. SOLID WASTE DISPOSITION

SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
15	UNSHIELDED VAN/TRUCK	HANFORD
22	CASK SHIPMENT (TYPE A)	HANFORD
1	CASK SHIPMENT (TYPE A)	BEATTY

B. IRRADIATED FUEL SHIPMENTS (DISPOSITION)

SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
NONE		

REG. GUIDE 1.21 (1987)

Totals for solid waste shipped offsite for burial or disposal over 12 month period.

Process Waste	1.702E+2 m3
	1.605E+3 ci

Dry Active Waste	3.52E+2 m3
	2.18E+1 ci

Shipments	Mode of Transportation	Destination
19	unshielded van/truck	Hanford
2	cask shipment (Type B)	Hanford
30	cask shipment (Type A)	Hanford
1	cask shipment (Type A)	Beatty

ØCANØ388Ø8  
Attachment 2

Changes to the Offsite Dose Calculation Manual and Process Control Program



There were no changes to the Offsite Dose Calculation Manual (ODCM) or the Process Control Program in 1987.

ØCANØ388Ø8  
Attachment 3

Unplanned Releases to Unrestricted Areas

There was one unplanned effluent release during the second half of 1987. This release occurred on July 20 and 21, 1987. The pressure in waste gas tank 2T-18C was noted to decrease from 233 psig at 2130 hours on July 20 to 165 psig at 1430 hours on July 21. Packing leakage was found on valves 2C-2447 and 2CV-2457. The packing was adjusted and the problem was discussed with mechanical maintenance supervisors and craftsmen. Training has also been requested to include this in the mechanical maintenance training. At the time of the leak, tank 2T-18C contained mostly nitrogen and the gaseous radiation monitoring system showed no increase in the exhaust stack activity. No release limits were exceeded.

Additionally, during a planned release of tank 2T18C on July 18, 1987 the local flow indication increased to greater than 10CFM. When the flowpath was isolated the indication did not change. When it was checked the flow monitor was found to be clogged from contaminants in the line. The instrument line was cleaned and engineering was requested to investigate the problem. No release limits were exceeded.

ØCANØ388Ø8  
Attachment 4

Meteorological Data

The 1987 hourly meteorological data will be retained for NRC review in lieu of including a summary in this report.

ØCANØ388Ø8  
Attachment 5

Radiation Doses Due to Radiological Effluent



ARKANSAS POWER AND LIGHT COMPANY  
ARKANSAS NUCLEAR ONE  
1988: 2: 0:11:14:53  
GASEOUS RADIOACTIVE WASTE DATA FILE  
CUMULATIVE DOSE DATA

\*\* UNIT 1 \*\* QUARTER 1 OF 1987 \*\*

DOSE FROM RADIOIODINES, PARTICULATES, AND TRITIUM  
AT CONTROLLING LOCATION:

TOTAL DOSE (MREM) FOR BONE	:	2.6825E-04
TOTAL DOSE (MREM) FOR LIVER	:	1.8702E-03
TOTAL DOSE (MREM) FOR TOTAL BODY	:	1.7006E-03
TOTAL DOSE (MREM) FOR THYROID	:	9.4430E-03
TOTAL DOSE (MREM) FOR KIDNEY	:	1.7484E-03
TOTAL DOSE (MREM) FOR LUNG	:	1.6730E-03
TOTAL DOSE (MREM) FOR GI-LLI	:	1.6594E-03
NOBLE GAS DOSE AT SITE BOUNDARY:		
TOTAL BODY DOSE TOTAL (MREM)	:	1.1307E-03
SKIN DOSE TOTAL (MREM)	:	2.6384E-03
NOBLE GAS AIRDOSE AT SITE BOUNDARY:		
TOTAL GAMMA AIRDOSE (MRAD)	:	1.3456E-03
TOTAL BETA AIRDOSE (MRAD)	:	3.8173E-03

\*\* UNIT 1 \*\* QUARTER 2 OF 1987 \*\*

DOSE FROM RADIOIODINES, PARTICULATES, AND TRITIUM  
AT CONTROLLING LOCATION:

TOTAL DOSE (MREM) FOR BONE	:	1.3290E-04
TOTAL DOSE (MREM) FOR LIVER	:	1.1217E-03
TOTAL DOSE (MREM) FOR TOTAL BODY	:	1.0352E-03
TOTAL DOSE (MREM) FOR THYROID	:	8.5769E-03
TOTAL DOSE (MREM) FOR KIDNEY	:	1.0753E-03
TOTAL DOSE (MREM) FOR LUNG	:	1.0192E-03
TOTAL DOSE (MREM) FOR GI-LLI	:	1.0130E-03
NOBLE GAS DOSE AT SITE BOUNDARY:		
TOTAL BODY DOSE TOTAL (MREM)	:	0.0000E-01
SKIN DOSE TOTAL (MREM)	:	0.0000E-01
NOBLE GAS AIRDOSE AT SITE BOUNDARY:		
TOTAL GAMMA AIRDOSE (MRAD)	:	0.0000E-01
TOTAL BETA AIRDOSE (MRAD)	:	0.0000E-01

\*\* UNIT 1 \*\* QUARTER 3 OF 1987 \*\*

DOSE FROM RADIOIODINES, PARTICULATES, AND TRITIUM  
AT CONTROLLING LOCATION:

TOTAL DOSE (MREM) FOR BONE	:	1.1258E-04
TOTAL DOSE (MREM) FOR LIVER	:	9.0347E-04
TOTAL DOSE (MREM) FOR TOTAL BODY	:	8.9105E-04
TOTAL DOSE (MREM) FOR THYROID	:	1.7814E-02
TOTAL DOSE (MREM) FOR KIDNEY	:	9.0410E-04
TOTAL DOSE (MREM) FOR LUNG	:	8.1017E-04
TOTAL DOSE (MREM) FOR GI-LLI	:	8.1102E-04
NOBLE GAS DOSE AT SITE BOUNDARY:		
TOTAL BODY DOSE TOTAL (MREM)	:	2.8045E-04
SKIN DOSE TOTAL (MREM)	:	6.7344E-04
NOBLE GAS AIRDOSE AT SITE BOUNDARY:		
TOTAL GAMMA AIRDOSE (MRAD)	:	3.3682E-04
TOTAL BETA AIRDOSE (MRAD)	:	1.0130E-03

\*\* UNIT 1 \*\* QUARTER 4 OF 1987 \*\*

DOSE FROM RADIOIODINES, PARTICULATES, AND TRITIUM  
AT CONTROLLING LOCATION:

TOTAL DOSE (MREM) FOR BONE	:	1.9570E-04
TOTAL DOSE (MREM) FOR LIVER	:	9.2540E-04
TOTAL DOSE (MREM) FOR TOTAL BODY	:	8.3590E-04
TOTAL DOSE (MREM) FOR THYROID	:	1.8345E-02
TOTAL DOSE (MREM) FOR KIDNEY	:	9.0327E-04
TOTAL DOSE (MREM) FOR LUNG	:	8.0285E-04
TOTAL DOSE (MREM) FOR GI-LLI	:	8.0504E-04
NOBLE GAS DOSE AT SITE BOUNDARY:		
TOTAL BODY DOSE TOTAL (MREM)	:	2.6194E-02
SKIN DOSE TOTAL (MREM)	:	5.0730E-02
NOBLE GAS AIRDOSE AT SITE BOUNDARY:		
TOTAL GAMMA AIRDOSE (MRAD)	:	2.8311E-02
TOTAL BETA AIRDOSE (MRAD)	:	3.6365E-02

\*\* UNIT 1 \*\* TOTALS FOR 1987 \*\*

DOSE FROM RADIOIODINES, PARTICULATES, AND TRITIUM  
AT CONTROLLING LOCATION:

TOTAL DOSE (MREM) FOR BONE	:	7.1359E-04
TOTAL DOSE (MREM) FOR LIVER	:	4.8203E-03
TOTAL DOSE (MREM) FOR TOTAL BODY	:	4.4128E-03
TOTAL DOSE (MREM) FOR THYROID	:	5.4179E-02
TOTAL DOSE (MREM) FOR KIDNEY	:	4.6311E-03
TOTAL DOSE (MREM) FOR LUNG	:	4.3060E-03
TOTAL DOSE (MREM) FOR GI-LLI	:	4.2884E-03
NOBLE GAS DOSE AT SITE BOUNDARY:		
TOTAL BODY DOSE TOTAL (MREM)	:	2.7605E-02
SKIN DOSE TOTAL (MREM)	:	5.4042E-02
NOBLE GAS AIRDOSE AT SITE BOUNDARY:		
TOTAL GAMMA AIRDOSE (MRAD)	:	2.9994E-02
TOTAL BETA AIRDOSE (MRAD)	:	4.1196E-02

-----  
ARKANSAS POWER AND LIGHT COMPANY  
ARKANSAS NUCLEAR ONE  
1988: 2: 8:11:15:33  
GASEOUS RADIOACTIVE WASTE DATA FILE  
CUMULATIVE DOSE DATA  
-----

\*\* UNIT 2 \*\* QUARTER 1 OF 1987 \*\*

DOSE FROM RADIOIODINES, PARTICULATES, AND TRITIUM  
AT CONTROLLING LOCATION:

TOTAL DOSE (MREM) FOR BONE	:	9.5258E-06
TOTAL DOSE (MREM) FOR LIVER	:	9.3173E-06
TOTAL DOSE (MREM) FOR TOTAL BODY	:	9.2831E-06
TOTAL DOSE (MREM) FOR THYROID	:	1.4814E-05
TOTAL DOSE (MREM) FOR KIDNEY	:	9.3284E-06
TOTAL DOSE (MREM) FOR LUNG	:	9.2749E-06
TOTAL DOSE (MREM) FOR GI-LL1	:	9.2796E-06
NOBLE GAS DOSE AT SITE BOUNDARY:		
TOTAL BODY DOSE TOTAL (MREM)	:	4.7717E-06
SKIN DOSE TOTAL (MREM)	:	9.6281E-06
NOBLE GAS AIRDOSE AT SITE BOUNDARY:		
TOTAL GAMMA AIRDOSE (MRAD)	:	4.7045E-06
TOTAL BETA AIRDOSE (MRAD)	:	8.5441E-06

\*\* UNIT 2 \*\* QUARTER 2 OF 1987 \*\*

DOSE FROM RADIOIODINES, PARTICULATES, AND TRITIUM  
AT CONTROLLING LOCATION:

TOTAL DOSE (MREM) FOR BONE	:	1.1288E-06
TOTAL DOSE (MREM) FOR LIVER	:	8.1161E-06
TOTAL DOSE (MREM) FOR TOTAL BODY	:	7.3528E-06
TOTAL DOSE (MREM) FOR THYROID	:	1.2186E-05
TOTAL DOSE (MREM) FOR KIDNEY	:	7.6616E-06
TOTAL DOSE (MREM) FOR LUNG	:	7.3051E-06
TOTAL DOSE (MREM) FOR GI-LL1	:	7.2127E-06
NOBLE GAS DOSE AT SITE BOUNDARY:		
TOTAL BODY DOSE TOTAL (MREM)	:	2.2501E-06
SKIN DOSE TOTAL (MREM)	:	7.6550E-06
NOBLE GAS AIRDOSE AT SITE BOUNDARY:		
TOTAL GAMMA AIRDOSE (MRAD)	:	2.7597E-06
TOTAL BETA AIRDOSE (MRAD)	:	7.2850E-06

\*\* UNIT 2 \*\* QUARTER 3 OF 1987 \*\*

DOSE FROM RADIOIODINES, PARTICULATES, AND TRITIUM  
AT CONTROLLING LOCATION:

TOTAL DOSE (MREM) FOR BONE	:	3.3371E-05
TOTAL DOSE (MREM) FOR LIVER	:	8.5584E-06
TOTAL DOSE (MREM) FOR TOTAL BODY	:	8.4164E-06
TOTAL DOSE (MREM) FOR THYROID	:	3.8193E-05
TOTAL DOSE (MREM) FOR KIDNEY	:	8.5737E-06
TOTAL DOSE (MREM) FOR LUNG	:	8.3598E-06
TOTAL DOSE (MREM) FOR GI-LL1	:	8.3720E-06
NOBLE GAS DOSE AT SITE BOUNDARY:		
TOTAL BODY DOSE TOTAL (MREM)	:	2.1249E-06
SKIN DOSE TOTAL (MREM)	:	1.8816E-06
NOBLE GAS AIRDOSE AT SITE BOUNDARY:		
TOTAL GAMMA AIRDOSE (MRAD)	:	2.4092E-06
TOTAL BETA AIRDOSE (MRAD)	:	5.3385E-06

\*\* UNIT 2 \*\* QUARTER 4 OF 1987 \*\*

DOSE FROM RADIOIODINES, PARTICULATES, AND TRITIUM  
AT CONTROLLING LOCATION:

TOTAL DOSE (MREM) FOR BONE	:	2.4000E-05
TOTAL DOSE (MREM) FOR LIVER	:	3.1272E-04
TOTAL DOSE (MREM) FOR TOTAL BODY	:	2.9490E-04
TOTAL DOSE (MREM) FOR THYROID	:	9.9356E-04
TOTAL DOSE (MREM) FOR KIDNEY	:	2.9762E-04
TOTAL DOSE (MREM) FOR LUNG	:	2.9274E-04
TOTAL DOSE (MREM) FOR GI-LLI	:	2.9255E-04
NOBLE GAS DOSE AT SITE BOUNDARY:		
TOTAL BODY DOSE TOTAL (MREM)	:	3.3856E-03
SKIN DOSE TOTAL (MREM)	:	7.6571E-03
NOBLE GAS AIRDOSE AT SITE BOUNDARY:		
TOTAL GAMMA AIRDOSE (MRAD)	:	3.7503E-03
TOTAL BETA AIRDOSE (MRAD)	:	7.1114E-03

\*\* UNIT 2 \*\* TOTALS FOR 1987 \*\*

DOSE FROM RADIOIODINES, PARTICULATES, AND TRITIUM  
AT CONTROLLING LOCATION:

TOTAL DOSE (MREM) FOR BONE	:	1.7970E-04
TOTAL DOSE (MREM) FOR LIVER	:	2.9119E-03
TOTAL DOSE (MREM) FOR TOTAL BODY	:	2.8005E-03
TOTAL DOSE (MREM) FOR THYROID	:	7.0120E-03
TOTAL DOSE (MREM) FOR KIDNEY	:	2.8540E-03
TOTAL DOSE (MREM) FOR LUNG	:	2.7866E-03
TOTAL DOSE (MREM) FOR GI-LLI	:	2.7791E-03
NOBLE GAS DOSE AT SITE BOUNDARY:		
TOTAL BODY DOSE TOTAL (MREM)	:	8.1880E-03
SKIN DOSE TOTAL (MREM)	:	2.1156E-02
NOBLE GAS AIRDOSE AT SITE BOUNDARY:		
TOTAL GAMMA AIRDOSE (MRAD)	:	9.3896E-03
TOTAL BETA AIRDOSE (MRAD)	:	2.2589E-02

ARKANSAS POWER AND LIGHT  
ARKANSAS NUCLEAR ONE  
1988: 2: 211110153  
LIQUID RADIOACTIVE WASTE DATA FILE  
CUMULATIVE DOSE DATA

\*\* UNIT 1 \*\* QUARTER 1 OF 1987 \*\*

TOTAL DOSE (MREM) FOR BONE	:	1.1703E-01
TOTAL DOSE (MREM) FOR LIVER	:	1.9209E-01
TOTAL DOSE (MREM) FOR TOTAL BODY	:	1.4099E-01
TOTAL DOSE (MREM) FOR THYROID	:	5.0294E-01
TOTAL DOSE (MREM) FOR KIDNEY	:	6.3827E-02
TOTAL DOSE (MREM) FOR LUNG	:	3.7826E-02
TOTAL DOSE (MREM) FOR GI-LLI	:	7.9270E-02

\*\* UNIT 1 \*\* QUARTER 2 OF 1987 \*\*

TOTAL DOSE (MREM) FOR BONE	:	3.9809E-02
TOTAL DOSE (MREM) FOR LIVER	:	5.9332E-02
TOTAL DOSE (MREM) FOR TOTAL BODY	:	4.3603E-02
TOTAL DOSE (MREM) FOR THYROID	:	5.7800E-01
TOTAL DOSE (MREM) FOR KIDNEY	:	1.9573E-02
TOTAL DOSE (MREM) FOR LUNG	:	7.8971E-03
TOTAL DOSE (MREM) FOR GI-LLI	:	6.8546E-03

\*\* UNIT 1 \*\* QUARTER 3 OF 1987 \*\*

TOTAL DOSE (MREM) FOR BONE	:	5.8596E-02
TOTAL DOSE (MREM) FOR LIVER	:	9.3689E-02
TOTAL DOSE (MREM) FOR TOTAL BODY	:	6.7763E-02
TOTAL DOSE (MREM) FOR THYROID	:	7.4164E-01
TOTAL DOSE (MREM) FOR KIDNEY	:	3.1211E-02
TOTAL DOSE (MREM) FOR LUNG	:	1.1267E-02
TOTAL DOSE (MREM) FOR GI-LLI	:	1.1729E-02

\*\* UNIT 1 \*\* QUARTER 4 OF 1987 \*\*

TOTAL DOSE (MREM) FOR BONE	:	1.1467E-01
TOTAL DOSE (MREM) FOR LIVER	:	1.8850E-01
TOTAL DOSE (MREM) FOR TOTAL BODY	:	1.3663E-01
TOTAL DOSE (MREM) FOR THYROID	:	3.1725E-02
TOTAL DOSE (MREM) FOR KIDNEY	:	6.2770E-02
TOTAL DOSE (MREM) FOR LUNG	:	2.8459E-02
TOTAL DOSE (MREM) FOR GI-LLI	:	6.9189E-02

\*\* UNIT 1 \*\* TOTALS FOR 1987 \*\*

TOTAL DOSE (MREM) FOR BONE	:	3.3011E-01
TOTAL DOSE (MREM) FOR LIVER	:	5.3361E-01
TOTAL DOSE (MREM) FOR TOTAL BODY	:	3.8899E-01
TOTAL DOSE (MREM) FOR THYROID	:	4.9950E-01
TOTAL DOSE (MREM) FOR KIDNEY	:	1.7739E-01
TOTAL DOSE (MREM) FOR LUNG	:	8.5249E-02
TOTAL DOSE (MREM) FOR GI-LLI	:	1.6304E-01

-----  
ARKANSAS POWER AND LIGHT  
ARKANSAS NUCLEAR ONE  
1908: 2: 8:11:11:15  
LIQUID RADIOACTIVE WASTE DATA FILE  
CUMULATIVE DOSE DATA  
-----

\*\* UNIT 2 \*\* QUARTER 1 OF 1987 \*\*

TOTAL DOSE (MREM) FOR BONE	:	5.3900E-02
TOTAL DOSE (MREM) FOR LIVER	:	8.5079E-02
TOTAL DOSE (MREM) FOR TOTAL BODY	:	6.1037E-02
TOTAL DOSE (MREM) FOR THYROID	:	1.6694E-02
TOTAL DOSE (MREM) FOR KIDNEY	:	2.8399E-02
TOTAL DOSE (MREM) FOR LUNG	:	1.0761E-02
TOTAL DOSE (MREM) FOR GI-LLI	:	1.7817E-02

\*\* UNIT 2 \*\* QUARTER 2 OF 1987 \*\*

TOTAL DOSE (MREM) FOR BONE	:	1.0604E-01
TOTAL DOSE (MREM) FOR LIVER	:	1.6893E-01
TOTAL DOSE (MREM) FOR TOTAL BODY	:	1.2040E-01
TOTAL DOSE (MREM) FOR THYROID	:	1.7811E-02
TOTAL DOSE (MREM) FOR KIDNEY	:	5.6364E-02
TOTAL DOSE (MREM) FOR LUNG	:	2.0314E-02
TOTAL DOSE (MREM) FOR GI-LLI	:	6.7575E-02

\*\* UNIT 2 \*\* QUARTER 3 OF 1987 \*\*

TOTAL DOSE (MREM) FOR BONE	:	8.6343E-02
TOTAL DOSE (MREM) FOR LIVER	:	1.3797E-01
TOTAL DOSE (MREM) FOR TOTAL BODY	:	9.8280E-02
TOTAL DOSE (MREM) FOR THYROID	:	2.3441E-02
TOTAL DOSE (MREM) FOR KIDNEY	:	4.6142E-02
TOTAL DOSE (MREM) FOR LUNG	:	1.6194E-02
TOTAL DOSE (MREM) FOR GI-LLI	:	1.2864E-01

\*\* UNIT 2 \*\* QUARTER 4 OF 1987 \*\*

TOTAL DOSE (MREM) FOR BONE	:	7.3616E-02
TOTAL DOSE (MREM) FOR LIVER	:	1.1724E-01
TOTAL DOSE (MREM) FOR TOTAL BODY	:	8.3151E-02
TOTAL DOSE (MREM) FOR THYROID	:	6.8738E-02
TOTAL DOSE (MREM) FOR KIDNEY	:	3.9259E-02
TOTAL DOSE (MREM) FOR LUNG	:	1.3703E-02
TOTAL DOSE (MREM) FOR GI-LLI	:	4.2190E-02

\*\* UNIT 2 \*\* TOTALS FOR 1987 \*\*

TOTAL DOSE (MREM) FOR BONE	:	3.1990E-01
TOTAL DOSE (MREM) FOR LIVER	:	5.0927E-01
TOTAL DOSE (MREM) FOR TOTAL BODY	:	3.6279E-01
TOTAL DOSE (MREM) FOR THYROID	:	6.4821E-02
TOTAL DOSE (MREM) FOR KIDNEY	:	1.7016E-01
TOTAL DOSE (MREM) FOR LUNG	:	6.0972E-02
TOTAL DOSE (MREM) FOR GI-LLI	:	2.1825E-01



ØCANØ388Ø8  
Attachment 6

Radiation Dose to the Public Due to Activities Inside the Site Boundary

ARKANSAS NUCLEAR ONE  
1987 CUMULATIVE DOSE DATA PUBLIC ACTIVITIES INSIDE THE SITE BOUNDARY  
(MREM)

	BONE	LIVER	TOT BODY	THYROID	KIDNEY	LUNG	GI-LLI	SKIN
UNIT-1:								
AIRBORNE RELEASES: I-131, PART. AND H-3 NOBLE GASES	3.1E-04	2.1E-03	1.9E-03 1.2E-02	2.4E-03	2.0E-03	1.9E-03	1.9E-03	2.3E-02
LIQUID RELEASES: FISH SEDIMENT	3.3E-01	5.3E-01	3.9E-01 6.2E-03	5.0E-02	1.8E-01	8.5E-02	1.6E-01	6.7E-03
UNIT-1 TOTAL	3.3E-01	5.3E-01	4.0E-01	5.2E-02	1.8E-01	8.7E-02	1.6E-01	2.3E-02
UNIT-2								
AIRBORNE RELEASES: I-131, PART. AND H-3 NOBLE GASES	7.6E-05	1.3E-03	1.2E-03 3.6E-03	3.1E-03	1.2E-03	1.2E-03	1.2E-03	9.2E-03
LIQUID RELEASES: FISH SEDIMENT	3.2E-01	5.1E-01	3.6E-01 4.6E-03	6.5E-03	1.2E-01	6.1E-02	2.2E-01	5.6E-03
UNIT-2 TOTAL	3.2E-01	5.1E-01	3.7E-01	9.6E-03	1.2E-01	6.2E-02	2.2E-01	1.5E-02
STATION TOTAL	6.5E-01	1.0E+00	7.7E-01	6.2E-02	3.0E-01	1.5E-01	3.8E-01	3.8E-02

ØCANØ388Ø8  
Attachment 7

Changes to the Radioactive Waste Systems

No major changes were made to the ANO liquid, gaseous a solid radwaste system during the calendar year of 1987.



ARKANSAS POWER & LIGHT COMPANY

POST OFFICE BOX 551 LITTLE ROCK, ARKANSAS 72203 (501) 377-4000

March 1, 1988

ØCANØ388Ø8

U. S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, D.C. 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 10CFR50.36a(a)(2), Arkansas Nuclear One Unit-1 Technical Specification 6.12.2.6, and Arkansas Nuclear One Unit-2 Technical Specification 6.9.3 enclosed is the Semiannual Radiological Effluent Release Report for the third and fourth quarters of 1987. In addition, the required yearly data is enclosed.

Very truly yours,

Dan R. Howard  
Manager, Licensing

DRH:MCS:mb

Enclosure:

IE48  
11

ØCANØ388Ø8  
Attachment 1

Summary of the Quantities of Radioactive Liquid and Gaseous Effluents  
and Solid Waste Release from ANO