

50-313 ARKANSAS #1

RADIOACTIVE EFFLUENT RELEASE REPORTS

THIS DOCUMENT CONTAINS  
POOR QUALITY PAGES

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DEADLINE RETURN DATE

50-313  
ENVIRO

RECORDS FACILITY BRANCH

8004230607 R

REPORTING PARAMETERS		UNITS	JUL	AUG	SEP	QTRLY TOT/SEMI TOT
1. GROSS BETA + GAMMA						
A. TOTAL RELEASED	CURIES		3.24E-02	0.28	1.44E-02	0.33
B. AVE CON RELEASED	UCI/ML		2.51E-10	2.44E-09	1.13E-10	2.80E-09
C. MAX CON RELEASED	UCI/ML		8.29E-09	1.16E-07	2.96E-09	1.27E-07
2. TRITIUM						
A. TOTAL RELEASED	CURIES		3.7	15.	26.	45.
B. AVE CON RELEASED	UCI/ML		2.85E-08	1.32E-07	2.84E-07	3.65E-07
3. DISS NOBLE GASES						
A. TOTAL RELEASED	CURIES		0.92	0.62	1.9	3.5
B. AVE CON RELEASED	UCI/ML		7.16E-09	5.31E-09	1.52E-08	2.77E-08
4. GROSS ALPHA						
A. TOTAL RELEASED	CURIES		0.00	0.00	0.00	0.00
B. AVE CON RELEASED	UCI/ML		0.00	0.00	0.00	0.00
5. RADWASTE RELEASED						
	LITERS		7.58E 05	1.58E 06	9.28E 05	3.26E 06
6. DILUTION WATER						
	LITERS		1.29E 11	1.16E 11	1.27E 11	3.72E 11
7. ISOTOPE CONC. CURIES						
AG-110M			5.86E-04	6.00E-03	2.44E-04	6.83E-03
BA-133			9.09E-06	0.00	0.00	9.09E-06
BA-140			0.00	2.26E-03	1.99E-06	2.26E-03
BE-7			4.08E-07	2.79E-06	0.00	3.20E-06
CE-144			0.00	2.77E-04	7.64E-06	2.85E-04
CO-57			6.36E-05	5.34E-04	4.78E-06	6.02E-04
CO-58			1.35E-02	8.67E-02	4.44E-03	0.10
CO-60			7.20E-03	0.11	4.07E-03	0.12
CR-51			1.29E-03	1.55E-02	1.48E-04	1.70E-02
CS-134			2.63E-03	1.07E-02	1.14E-03	1.45E-02
CS-136			0.00	0.00	0.00	0.00
CS-137			5.12E-03	1.71E-02	2.13E-03	2.43E-02
CS-138			0.00	0.00	3.88E-04	3.88E-04
CU-64			0.00	0.00	0.00	0.00
EU-152			0.00	0.00	0.00	0.00
FE-59			2.30E-05	1.12E-03	0.00	1.14E-03
I-131			1.71E-04	4.23E-03	6.36E-04	5.03E-03
I-132			0.00	1.02E-05	0.00	1.02E-05
I-133			5.74E-07	1.86E-06	1.68E-05	1.93E-05
I-134			0.00	0.00	0.00	0.00
I-135			0.00	1.34E-05	0.00	1.34E-05
LA-140			0.00	2.81E-04	1.32E-04	4.12E-04
MN-54			8.91E-04	8.54E-03	3.46E-04	9.78E-03
MN-56			0.00	0.00	0.00	0.00
MO-99			0.00	2.66E-04	0.00	2.66E-04
NA-24			1.96E-06	4.10E-05	5.42E-07	4.35E-05
NB-95			5.94E-04	1.13E-02	9.41E-05	1.20E-02
NB-97			7.23E-05	6.08E-04	6.16E-05	7.41E-04
NI-65			0.00	0.00	0.00	0.00
NP-239			0.00	5.80E-07	0.00	5.80E-07
RU-106			0.00	4.64E-04	0.00	4.64E-04
RU-103			5.57E-07	2.14E-04	0.00	2.14E-04
SE-75			0.00	1.13E-05	0.00	1.13E-05
SR-89			0.00	0.00	5.13E-04	5.13E-04
SR-90			0.00	0.00	0.00	0.00
SR-91			0.00	1.91E-05	0.00	1.91E-05
SR-92			3.83E-06	1.05E-04	2.32E-05	1.32E-04
W-187			0.00	0.00	0.00	0.00
ZN-65			0.00	1.14E-04	0.00	1.14E-04
ZR-95			2.13E-04	5.61E-03	0.00	5.82E-03
ZR-97			0.00	0.00	0.00	0.00
KR-85			0.00	0.00	0.00	0.00
KR-85M			0.00	1.42E-05	7.28E-05	8.70E-05
KR-87			0.00	0.00	0.00	0.00
KR-88			0.00	0.00	3.00E-06	3.00E-06
XE-131M			4.25E-04	1.15E-02	3.90E-03	1.58E-02
XE-133			0.92	0.59	1.9	3.4
XE-133M			6.35E-03	4.43E-03	6.24E-03	1.70E-02
XE-135			3.54E-04	5.85E-03	2.20E-03	8.41E-03
8. % OF LIMIT (BASED ON 10 CURIES/QTR.)						
	%		0.32	2.8	0.14	3.3

0.00 = N  
 SR-89 ANAL -90 VALUES FOR QUARTERLY ANALYSIS.  
 REM

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 REPORTING PARAMETERS /UNITS / OCT / NOV / DEC /QTRLY TOT/SEMI TOTL/  
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REPORTING PARAMETERS	UNITS	OCT	NOV	DEC	QTRLY TOT	SEMI TOTL
1. GROSS BETA + GAMMA						
A. TOTAL RELEASED	CURIES	2.48E-02	0.35	0.24	0.61	0.94
B. AVE CON RELEASED	UCI/ML	2.27E-10	3.88E-09	1.88E-09	5.99E-09	8.79E-09
C. MAX CON RELEASED	UCI/ML	1.81E-08	1.71E-07	1.59E-07	3.48E-07	4.67E-07
2. TRITIUM						
A. TOTAL RELEASED	CURIES	50.	22.	22.	94.	1.39E 02
B. AVE CON RELEASED	UCI/ML	4.56E-07	2.45E-07	1.73E-07	8.74E-07	1.24E-06
3. DISS NOBLE GASES						
A. TOTAL RELEASED	CURIES	1.27E 02	12.	6.9	1.46E 02	1.49E 02
B. AVE CON RELEASED	UCI/ML	1.16E-06	1.39E-07	5.31E-08	1.35E-06	1.38E-06
4. GROSS ALPHA						
A. TOTAL RELEASED	CURIES	0.00	0.00	0.00	0.00	0.00
B. AVE CON RELEASED	UCI/ML	0.00	0.00	0.00	0.00	0.00
5. RADWAST. RELEASED	LITERS	1.21E 06	7.37E 05	6.60E 05	2.61E 06	5.87E 06
6. DILUTION WATER	LITERS	1.09E 11	8.93E 10	1.29E 11	3.27E 11	6.99E 11
7. ISOTOPE CONC.	CURIES					
AG-110M		5.54E-05	1.75E-03	2.65E-03	4.45E-03	1.13E-02
BA-133		7.48E-05	0.00	0.00	7.48E-05	8.39E-05
BA-140		0.00	0.00	0.00	0.00	2.26E-03
BE-7		0.00	0.00	0.00	0.00	3.20E-06
CE-144		0.00	1.80E-06	0.00	1.80E-06	2.86E-04
CO-57		0.00	2.51E-04	2.61E-04	5.13E-04	1.12E-03
CO-58		4.85E-03	0.17	0.12	0.29	0.39
CO-60		3.67E-03	4.85E-02	5.86E-02	0.11	0.23
CR-51		2.01E-04	1.36E-02	5.93E-03	1.97E-02	3.67E-02
CS-134		1.23E-03	2.94E-03	5.28E-03	9.45E-03	2.40E-02
CS-136		0.00	0.00	0.00	0.00	0.00
CS-137		2.31E-03	6.32E-03	9.75E-03	1.34E-02	4.27E-02
CS-138		2.20E-05	0.00	0.00	2.20E-05	4.10E-04
CU-64		0.00	0.00	0.00	0.00	0.00
EU-152		0.00	0.00	0.00	0.00	0.00
FE-59		1.92E-05	2.96E-03	2.74E-03	5.72E-03	6.86E-03
I-131		1.17E-02	9.28E-02	3.15E-02	0.14	0.14
I-132		0.00	0.00	0.00	0.00	1.02E-05
I-133		2.03E-04	2.00E-05	2.88E-06	2.26E-04	2.45E-04
I-134		0.00	0.00	0.00	0.00	0.00
I-135		0.00	0.00	0.00	0.00	1.34E-05
LA-140		0.00	1.92E-03	5.98E-04	2.52E-03	2.93E-03
MN-54		1.34E-04	2.99E-03	3.48E-03	6.61E-03	1.64E-02
MN-56		0.00	0.00	0.00	0.00	0.00
MO-99		0.00	0.00	0.00	0.00	2.66E-04
NA-24		0.00	7.11E-06	0.00	7.11E-06	5.06E-05
NB-95		7.85E-05	7.52E-03	2.33E-03	5.94E-03	1.79E-02
NB-97		5.95E-06	4.13E-04	1.09E-04	5.28E-04	1.27E-03
NI-65		0.00	0.00	0.00	0.00	0.00
NP-239		0.00	0.00	0.00	0.00	5.80E-07
RU-106		1.57E-04	0.00	0.00	1.57E-04	6.21E-04
RU-103		0.00	1.60E-04	0.00	1.60E-04	3.75E-04
SE-75		0.00	4.00E-05	0.00	4.00E-05	5.13E-05
SR-89		0.00	0.00	3.18E-04	3.18E-04	8.31E-04
SR-90		0.00	0.00	0.00	0.00	0.00
SR-91		0.00	0.00	0.00	0.00	1.91E-05
SR-92		7.89E-08	2.67E-04	2.20E-05	2.89E-04	4.22E-04
W-187		0.00	0.00	0.00	0.00	0.00
ZN-65		0.00	8.52E-05	0.00	8.52E-05	1.99E-04
ZR-95		4.88E-05	1.47E-03	1.03E-03	2.55E-03	8.37E-03
ZR-97		0.00	1.38E-05	6.90E-05	8.28E-05	8.28E-05
KR-85		1.15E-02	0.00	0.00	1.15E-02	1.15E-02
KR-84M		2.18E-06	0.00	0.00	2.18E-06	8.92E-05
KR-87		1.89E-05	0.00	0.00	1.89E-05	1.89E-05
KR-88		4.27E-06	0.00	0.00	4.27E-06	7.27E-06
XE-131M		3.23E-03	1.7	7.41E-02	1.8	1.8
XE-133		1.26E 02	11.	6.7	1.43E 02	1.47E 02
XE-133M		0.51	5.92E-04	3.52E-02	0.54	0.56
XE-135		7.41E-02	1.20E-03	3.87E-03	7.92E-02	8.76E-02
3. % OF LIMIT (BASED ON 10 CURIES/QTR.)	%	0.25	3.5	2.4	6.1	

0.00 = N/C  
 SR-89 C/MC  
 REM :  
 -90 VALUES FOR QUARTERLY ANALYSIS.

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REPORTING PARAMETERS	/UNITS /	JUL	/	AUG	/	SEP	/QTRLY TOT/SEMI TOTL/
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1. GROSS BETA + GAMMA							
A. TOTAL RELEASED	CURIES	4.78E-02		9.55E-02		0.34	0.48
B. AVE CON RELEASED	UCI/ML	3.71E-10		8.23E-10		2.64E-09	3.84E-09
C. MAX CON RELEASED	UCI/ML	3.22E-08		2.59E-08		6.30E-08	1.21E-07
2. TRITIUM							
A. TOTAL RELEASED	CURIES	2.6		15.		22.	40.
B. AVE CON RELEASED	UCI/ML	2.00E-08		1.32E-07		1.71E-07	3.23E-07
3. DISS NOBLE GASES							
A. TOTAL RELEASED	CURIES	2.26E-02		0.55		0.18	0.75
B. AVE CON RELEASED	UCI/ML	1.75E-10		4.73E-09		1.45E-09	6.35E-09
4. GROSS ALPHA							
A. TOTAL RELEASED	CURIES	0.00		0.00		0.00	0.00
B. AVE CON RELEASED	UCI/ML	0.00		0.00		0.00	0.00
5. RADWASTE RELEASED	LITERS	5.83E 05		6.97E 05		1.54E 06	2.82E 06
6. DILUTION WATER	LITERS	1.29E 11		1.16E 11		1.27E 11	3.72E 11
7. ISOTOPE CONC.	CURIES						
AG-110M		3.08E-05		1.01E-05		7.57E-04	7.50E-04
BA-133		0.00		0.00		0.00	0.00
BA-140		0.00		1.30E-04		2.08E-04	3.19E-04
BE-7		0.00		0.00		0.00	0.00
CE-144		0.00		0.00		0.00	0.00
CO-57		0.00		1.69E-05		6.39E-05	8.08E-05
CO-58		9.64E-04		4.16E-03		0.23	0.23
CO-60		2.67E-04		8.71E-04		5.31E-03	6.44E-03
CR-51		0.00		1.38E-04		7.88E-03	8.01E-03
CS-134		5.69E-05		1.49E-04		2.39E-04	4.45E-04
CS-136		0.00		1.02E-04		0.00	1.02E-04
CS-137		1.25E-04		1.61E-03		5.08E-03	6.01E-03
CS-138		0.00		0.00		1.20E-04	1.20E-04
CU-64		0.00		0.00		0.00	0.00
EU-152		0.00		0.00		0.00	0.00
FE-59		0.00		0.00		5.20E-03	5.20E-03
I-131		4.32E-02		7.97E-02		3.55E-02	0.16
I-132		0.00		0.00		7.61E-05	7.61E-05
I-133		2.97E-03		4.41E-03		1.49E-02	2.23E-02
I-134		0.00		0.00		0.00	0.00
I-135		0.00		2.64E-04		2.14E-03	2.41E-03
LA-140		0.00		1.52E-04		5.04E-04	6.57E-04
MN-54		1.68E-04		9.39E-04		9.11E-03	1.02E-02
MN-56		0.00		0.00		0.00	0.00
MO-99		0.00		0.00		0.00	0.00
NA-24		0.00		2.16E-03		1.60E-02	1.82E-02
NB-95		0.00		1.49E-05		2.59E-04	2.74E-04
NB-97		0.00		1.63E-05		2.55E-04	2.71E-04
NI-65		0.00		0.00		3.43E-05	3.43E-05
NP-239		0.00		0.00		0.00	0.00
RU-106		0.00		0.00		0.00	0.00
RU-103		0.00		1.54E-05		1.22E-04	1.38E-04
SE-75		0.00		0.00		0.00	0.00
SR-89		0.00		0.00		5.90E-03	5.90E-03
SR-90		0.00		0.00		0.00	0.00
SR-91		0.00		0.00		0.00	0.00
SR-92		0.00		0.00		1.42E-05	1.42E-05
W-187		0.00		6.68E-04		5.02E-04	1.17E-03
ZN-65		0.00		0.00		0.00	0.00
ZR-95		0.00		1.32E-05		1.68E-04	1.81E-04
ZR-97		0.00		0.00		0.00	0.00
KR-85		8.61E-04		0.00		0.00	8.61E-04
KR-85M		0.00		0.00		3.29E-05	3.29E-05
KR-87		0.00		0.00		0.00	0.00
KR-88		0.00		0.00		2.03E-05	2.03E-05
XE-131M		0.00		1.13E-03		8.84E-04	2.01E-03
XE-133		2.13E-02		0.54		0.18	0.75
XE-133M		1.64E-04		2.23E-03		0.00	2.39E-03
XE-135		1.94E-04		1.17E-03		2.80E-03	4.16E-03

0.00 = SR-89 I. SR-90 VALLIS FOR QUARTERLY ANALYSIS.  
 K RKS:

8. % OF LIMIT (BASED ON 10 CURIES/QTR.)      %      0.48      0.95      3.4      4.8



REPORTING PARAMETERS	UNITS	OCT	NOV	DEC	QTRLY TOT	SEMI TOTL
ROSS BETA + GAMMA						
A. TOTAL RELEASED	CURIES	0.30	3.59E-02	6.26E-02	0.40	0.88
B. AVE CON RELEASED	UCI/ML	2.79E-09	4.03E-10	4.85E-10	3.68E-09	7.52E-09
C. MAX CON RELEASED	UCI/ML	2.83E-07	4.49E-08	1.35E-08	3.46E-07	4.67E-07
2. TRITIUM						
A. TOTAL RELEASED	CURIES	0.68	0.50	3.9	5.0	45.
B. AVE CON RELEASED	UCI/ML	6.21E-09	5.55E-09	3.00E-08	4.17E-08	3.65E-07
3. DISS NOBLE GASES						
A. TOTAL RELEASED	CURIES	8.18E-02	2.13E-03	9.78E-02	0.18	0.94
B. AVE CON RELEASED	UCI/ML	7.50E-10	2.39E-11	7.58E-10	1.53E-09	7.88E-09
4. GROSS ALPHA						
A. TOTAL RELEASED	CURIES	0.00	0.00	0.00	0.00	0.00
B. AVE CON RELEASED	UCI/ML	0.00	0.00	0.00	0.00	0.00
5. RADWASTE RELEASED	LITERS	5.46E 05	3.24E 05	4.53E 05	1.32E 06	4.14E 06
6. DILUTION WATER	LITERS	1.09E 11	8.93E 10	1.29E 11	3.27E 11	6.99E 11
7. ISOTOPE CONC. CURIES						
AG-110M		3.54E-04	2.09E-04	2.77E-04	0.40E-04	1.64E-03
BA-133		0.00	0.00	0.00	0.00	0.00
BA-140		0.00	0.00	0.00	0.00	3.39E-04
BE-7		0.00	0.00	0.00	0.00	0.00
CE-144		0.00	0.00	0.00	0.00	0.00
CO-57		1.26E-04	0.00	2.33E-05	1.49E-04	2.30E-04
CO-58		0.28	3.08E-02	3.21E-02	0.34	0.57
CO-60		3.26E-03	6.91E-04	1.29E-03	5.25E-03	1.17E-02
CR-51		5.31E-03	2.09E-03	1.77E-03	9.17E-03	1.72E-02
CS-134		2.52E-04	0.00	7.52E-04	1.00E-03	1.45E-03
CS-136		1.17E-04	0.00	0.00	1.17E-04	2.18E-04
CS-137		4.65E-03	2.51E-04	1.24E-02	1.73E-02	2.41E-02
CS-138		0.00	0.00	0.00	0.00	1.20E-04
CU-64		0.00	0.00	0.00	0.00	0.00
EU-152		0.00	0.00	0.00	0.00	0.00
FE-59		1.60E-03	6.64E-04	2.82E-03	5.09E-03	1.03E-02
I-131		2.50E-03	4.68E-04	8.91E-03	1.19E-02	0.17
I-132		0.00	0.00	0.00	0.00	7.61E-05
I-133		0.00	0.00	6.99E-05	6.99E-05	2.23E-02
I-134		0.00	0.00	0.00	0.00	0.00
I-135		0.00	0.00	0.00	0.00	2.41E-03
LA-140		8.29E-05	0.00	1.51E-05	9.80E-05	7.55E-04
MN-54		3.44E-03	3.35E-04	1.19E-03	4.96E-03	1.52E-02
MN-56		0.00	0.00	0.00	0.00	0.00
MO-99		0.00	0.00	0.00	0.00	0.00
NA-24		7.66E-05	0.00	7.87E-05	1.55E-04	1.83E-02
NB-95		4.08E-04	2.58E-04	2.97E-04	9.63E-04	1.24E-03
NB-97		5.29E-05	0.00	2.55E-04	3.08E-04	5.80E-04
NI-65		0.00	0.00	0.00	0.00	3.43E-05
NP-239		0.00	0.00	0.00	0.00	0.00
RU-106		0.00	0.00	0.00	0.00	0.00
RU-103		0.00	0.00	0.00	0.00	1.38E-04
SE-75		0.00	0.00	0.00	0.00	0.00
SR-89		0.00	0.00	1.76E-04	1.76E-04	6.07E-03
SR-90		0.00	0.00	0.00	0.00	0.00
SR-91		0.00	0.00	5.03E-05	5.03E-05	5.03E-05
SR-92		8.29E-06	3.27E-05	1.67E-05	5.77E-05	7.19E-05
W-187		0.00	0.00	0.00	0.00	1.17E-03
ZN-65		3.64E-05	0.00	0.00	3.64E-05	3.64E-05
ZR-95		3.50E-04	1.50E-04	1.72E-04	6.72E-04	8.54E-04
ZR-97		0.00	0.00	0.00	0.00	0.00
KR-85		0.00	0.00	0.00	0.00	8.61E-04
KR-85M		0.00	0.00	0.00	0.00	3.29E-05
KR-87		0.00	0.00	0.00	0.00	0.00
KR-88		0.00	0.00	0.00	0.00	2.03E-05
XE-131M		0.00	0.00	0.00	0.00	2.01E-03
XE-133		8.11E-02	2.13E-03	9.73E-02	0.18	0.93
XE-133M		3.76E-05	0.00	3.99E-04	4.37E-04	2.83E-03
XE-135		6.01E-04	0.00	3.76E-05	6.39E-04	4.80E-03
8. % OF LIMIT (BASED ON 10 CURIES/QTR.)						
	%	3.0	0.36	0.63	4.0	

0.00 SR-89 D. SR-90 VALUES FOR QUARTERLY ANALYSIS.

ARKANSAS POWER AND LIGHT COMPANY  
 ARKANSAS NUCLEAR ONE, UNIT ONE  
 REPORT ON RADIOACTIVE GASEOUS EFFLUENTS  
 APPENDIX "A" DOCKET 50-313 YEAR: 1979

PARTICULATE PARAMETERS / UNITS / JUL / AUG / SEP / YEARLY TOT /

PARAMETER	UNITS	JUL	AUG	SEP	YEARLY TOT
GASES	CURIES	42.	14.	1.16E 03	6.79E 03
HALOGENS	CURIES	7.40E-06	7.04E-06	1.48E-04	0.15
DELETED					
H-3	CURIES	0.26	0.49	0.22	2.0
ALPHA	CURIES	0.00	0.00	0.00	0.00
MAXIMUM GAS RELEASE RATE	UCI/SEC	9.77E 03	23.	5.36E 03	NA
# OF APPLICABLE LIMIT FOR:					
A. GASES	x			7.4	NA
B. DELETED					
C. PART. + I-131	x			1.95E-02	NA
ISOTOPIC CONC.	CURIES				
PARTICULATES:					
CS-137		2.15E-06	6.30E-07	2.20E-06	1.02E-05
BA-140		0.00	0.00	0.00	0.00
LA-140		0.00	0.00	0.00	0.00
SR-90		0.00	0.00	0.00	1.43E-12
CS-134		4.57E-07	6.69E-07	0.00	5.96E-06
SR-89		4.06E-11	4.06E-11	4.06E-11	1.22E-10
HALOGENS:					
I-131		7.40E-06	6.70E-06	9.06E-05	0.15
I-133		0.00	1.06E-06	4.97E-05	1.22E-03
I-135		0.00	0.00	0.00	0.00
GASES:					
KR-85		0.00	0.00	0.00	11.
XE-133		32.	12.	9.52E 02	6.53E 03
KR-80		0.00	0.00	10.	10.
VT-07		0.00	0.00	0.00	0.00
RP-85M		2.3	0.00	27.	29.
XE-130		0.00	0.00	0.00	0.00
XE-133M		0.19	0.00	0.00	19.
XE-135		0.1	2.1	1.61E 02	1.73E 02
AR-41		0.00	0.00	0.00	0.00
OTHERS:					
XE-131M		0.00	0.00	0.00	9.9
XE-135M		0.00	0.00	0.00	0.00
F-18		0.00	0.00	0.00	0.00
BE-7		0.00	0.00	0.00	0.00
K-40		0.00	0.00	0.00	0.00
CR-51		0.00	0.00	0.00	0.00
MN-54		0.00	0.00	0.00	7.97E-07
CO-57		0.00	0.00	1.20E-11	1.20E-11
CO-58		4.36E-07	6.30E-07	2.46E-06	1.06E-05
FE-59		0.00	0.00	0.00	0.00
CO-60		1.17E-06	1.04E-06	1.05E-06	2.03E-05
NI-65		0.00	0.00	0.00	0.00
ZN-65		0.00	0.00	0.00	0.00
SE-75		0.00	0.00	0.00	0.00
SP-85		0.00	0.00	0.00	0.00
Y-88		0.00	0.00	0.00	0.00
RB-94		0.00	0.00	0.00	0.00
HG-95		0.00	0.00	0.00	0.00
ZR-95		0.00	0.00	0.00	0.00
RU-103		0.00	0.00	0.00	0.00
RU-106		0.00	0.00	0.00	0.00
CD-109		0.00	0.00	0.00	0.00
AG-110M		0.00	0.00	0.00	5.00E-05
SH-113		0.00	0.00	0.00	0.00
CD-113M		0.00	0.00	0.00	0.00
SB-125		0.00	0.00	0.00	0.00
BH-133		0.00	0.00	0.00	0.00
CS-136		0.00	0.00	0.00	0.00
CE-139		0.00	0.00	0.00	0.00
CE-144		0.00	0.00	0.00	0.00
EU-152		0.00	0.00	0.00	0.00
HG-203		0.00	0.00	0.00	0.00
U-235		0.00	0.00	0.00	0.00
RA-226		0.00	0.00	0.00	0.00
SB-124		0.00	0.00	0.00	0.00
TH-228		0.00	0.00	0.00	0.00
NA-24		0.00	0.00	0.00	0.00
LA-206		0.00	0.00	0.00	0.00
CU-64		0.00	0.00	0.00	0.00
BR-84		0.00	0.00	0.00	0.00
PB-80		0.00	0.00	0.00	0.00
RD-89		0.00	0.00	0.00	0.00
MO-99		0.00	0.00	0.00	0.00
SR-91		0.00	0.00	0.00	0.00
Y-91M		0.00	0.00	0.00	0.00
CF-102		0.00	0.00	0.00	0.00
Y-92		0.00	0.00	0.00	0.00
HO-117		0.00	0.00	0.00	0.00
ZP-97		0.00	0.00	0.00	0.00
PB-212		0.00	0.00	0.00	0.00
TC-99M		0.00	0.00	0.00	0.00
SB-122		0.00	0.00	0.00	0.00
I-132		0.00	0.00	0.00	0.00

I-134	0.00	0.00	0.00	0.00
CS-138	0.00	0.00	0.00	0.00
BA-139	0.00	0.00	0.00	0.00
U-167	0.00	0.00	0.00	0.00
BI-214	0.00	0.00	0.00	0.00
PB-214	0.00	0.00	0.00	0.00
RE-210	0.00	0.00	0.00	0.00

ARKANSAS POWER AND LIGHT COMPANY  
 ARKANSAS NUCLEAR ONE, UNIT ONE  
 REPORT ON RADIOACTIVE GASEOUS EFFLUENTS  
 APPENDIX "A" DOCKET 58-013 YEAR: 1979

REPORTING PARAMETERS / UNITS / OCT / NOV / DEC / YEARLY TOT /

1. GASES	CURIES	3.14E-03	1.09E-03	0.9	1.11E-04
2. HALOGENS	CURIES	1.21E-03	4.05E-04	1.06E-04	0.15
3. DELETED					
4. H-3	CURIES	10.	0.20	0.13	12.
5. ALPHA	CURIES	0.56	0.56	0.56	1.7
6. MAXIMUM GAS RELEASE RATE	UCI/SEC	2.12E-04	1.08E-05	1.08E-03	NA
7. % OF APPLICABLE LIMIT FOR:					
A. GASES	x			15.	NA
B. DELETED					
C. PART. + I-131	x			0.28	NA
8. ISOTOPIC CONC.	CURIES				

PARTICULATES:

CS-137	6.46E-06	2.72E-10	9.82E-07	1.77E-05
BA-140	0.00	0.00	0.00	0.00
LA-140	0.00	0.00	0.00	0.00
SR-90	0.00	0.00	0.00	1.43E-12
CS-134	0.00	0.00	1.71E-07	6.16E-06
SR-89	1.52E-06	1.52E-06	1.52E-06	4.55E-06
HALOGENS:				
I-131	1.14E-03	4.85E-04	9.95E-05	0.15
I-133	7.48E-05	0.00	6.42E-05	1.30E-03
I-135	0.00	0.00	0.00	0.00
GASES:				
KR-85	0.00	0.00	5.4	16.
XE-133	2.04E-03	1.89E-03	26.	1.05E-04
KR-88	2.0	0.00	0.00	20.
KR-87	0.00	0.00	0.00	0.00
KR-85M	46.	0.00	0.00	75.
XE-139	0.00	0.00	0.00	0.00
XE-133M	43.	0.32	0.00	63.
XE-135	2.15E-02	0.00	6.3	3.94E-02
AR-41	0.00	0.00	4.46E-05	4.46E-05

OTHERS:

XE-131M	0.00	0.00	1.7	12.
XE-135M	0.00	0.00	0.00	0.00
F-18	0.00	0.00	0.00	0.00
BE-7	0.00	0.00	0.00	0.00
K-40	0.00	0.00	0.00	0.00
CR-51	0.00	0.00	0.00	0.00
TM-54	0.00	0.00	0.00	7.97E-07
CO-57	0.00	0.00	0.00	1.20E-11
CO58	3.96E-06	1.27E-06	2.91E-06	2.40E-05
FE-59	0.00	0.00	0.00	0.00
CO-60	1.51E-05	2.35E-06	2.39E-06	4.02E-05
NI-65	0.00	0.00	0.00	0.00
ZN-65	0.00	0.00	0.00	0.00
SE-75	0.00	0.00	0.00	0.00
SR-85	6.00	0.00	0.00	0.00
Y-88	0.00	0.00	0.00	0.00
NB-94	0.00	0.00	0.00	0.00
NB-95	0.00	0.00	0.00	0.00
ZR-95	0.00	0.00	0.00	0.00
RU-103	0.00	0.00	0.00	0.00
RU-106	0.00	0.00	0.00	0.00
CD-109	0.00	0.00	0.00	0.00
AG-110M	0.00	0.00	0.00	5.80E-06
SN-113	0.00	0.00	0.00	0.00
CD-113M	0.00	0.00	0.00	0.00
SB-125	0.00	1.00	0.00	0.00
BA-133	0.00	0.00	0.00	0.00
CS-136	0.00	0.00	0.00	0.00
CE-139	0.00	0.00	0.00	0.00
CE-144	0.00	0.00	0.00	0.00
EU-152	0.00	0.00	0.00	0.00
HG-203	0.00	0.00	0.00	0.00
U-235	0.00	0.00	0.00	0.00
RA-226	0.00	0.00	0.00	0.00
SB-124	0.00	0.00	0.00	0.00
TH-228	0.00	0.00	0.00	0.00
HA-24	0.00	0.00	0.00	0.00
HA-56	0.00	0.00	0.00	0.00
CU-64	0.00	0.00	0.00	0.00
BR-84	0.00	0.00	0.00	0.00
RB-88	0.00	0.00	0.00	0.00
RB-89	0.00	0.00	0.00	0.00
MO-99	0.00	0.00	0.00	0.00
SR-91	0.00	0.00	0.00	0.00
Y-91M	0.00	0.00	0.00	0.00
SR-92	0.00	0.00	0.00	0.00
Y-92	0.00	0.00	0.00	0.00
NO-97	0.00	0.00	0.00	0.00
ZR-97	0.00	0.00	0.00	0.00
PS-212	0.00	0.00	0.00	0.00
TC-99M	0.00	0.00	0.00	0.00
SB-122	0.00	0.00	0.00	0.00
I-132	0.00	0.00	0.00	0.00

I-134	0.00	0.00	0.00	0.00
CS-138	0.00	0.00	0.00	0.00
BA-139	0.00	0.00	0.00	0.00
W-187	0.00	0.00	0.00	0.00
BI-214	0.00	0.00	0.00	0.00
PB-214	0.00	0.00	0.00	0.00
NP-239	0.00	0.00	0.00	0.00
TE-132	0.00	0.00	0.00	0.00

REMARKS:  
0.00 = MDA

ARKANSAS POWER AND LIGHT COMPANY  
 ARKANSAS NUCLEAR ONE, UNIT TWO  
 REPORT ON RADIOACTIVE GASEOUS EFFLUENTS  
 APPENDIX "A" DUCNET 50-300 YEAR: 1979

REPORTING PARAMETERS / UNITS / JUL / AUG / SEP / YEARLY TOT /

GASES	CURIES	0.53	2.43E 02	1.15E 03	1.41E 03
HALOGENS	CURIES	2.57E-06	1.56E-04	3.03E-05	2.77E-04
DELETED					
H-3	CURIES	0.22	2.9	0.53	3.7
ALPHA	CURIES	0.00	0.00	0.00	0.00
MAXIMUM GAS RELEASE RATE	UCI/SEC	1.01E 02	2.50E 02	4.41E 03	NA

N OF APPLICABLE LIMIT FOR:					
A. GASES	*			9.9	NA
B. DELETED					
C. PART. + I-131	*			3.21E-02	NA

ISOTOPIC CONC. CURIES

PARTICULATES:					
CS-137	0.00	6.12E-10	6.02E-07	2.75E-06	
BA-140	0.00	0.00	0.00	0.00	
LA-140	0.00	0.00	0.00	0.00	
SR-90	0.00	0.00	0.00	0.00	
CS-134	0.00	2.61E-07	0.00	1.64E-06	
SR-89	4.00E-11	4.00E-11	4.00E-11	1.46E-10	
HALOGENS:					
I-131	2.57E-06	1.55E-04	2.33E-05	2.60E-04	
I-133	0.00	1.06E-06	7.00E-06	9.69E-06	
I-135	0.00	0.00	0.00	0.00	
GASES:					
KR-85	0.00	0.00	0.00	0.00	
XE-133	0.53	90.	1.07E 03	1.10E 03	
KR-86	0.00	0.00	0.00	0.00	
LD-07	0.00	0.00	0.00	0.00	
KR-85M	0.00	0.00	0.00	0.00	
XE-130	0.00	0.00	0.00	0.00	
XE-133M	1.94E-03	0.00	0.00	1.94E-03	
XE-135	0.00	11.	03.	94.	
AR-41	0.00	1.42E 02	0.00	1.42E 02	

OTHERS:					
XE-131M	0.00	0.00	0.00	0.00	
XE-135M	0.00	0.00	0.00	0.00	
F-18	0.00	3.00	0.00	0.00	
BE-7	0.00	0.00	0.00	0.00	
K-40	0.00	0.00	0.00	0.00	
CF-51	0.00	0.00	0.00	0.00	
PH-54	0.00	0.00	0.00	0.00	
CO-57	0.00	0.00	0.00	0.00	
CO-58	0.00	2.16E-07	3.12E-07	1.06E-06	
FE-55	0.00	0.00	0.00	0.00	
CO-60	0.00	0.00	2.39E-07	2.39E-07	
NI-65	0.00	0.00	0.00	0.00	
ZH-65	0.00	0.00	0.00	0.00	
SE-75	0.00	0.00	0.00	0.00	
SR-85	0.00	0.00	0.00	0.00	
Y-88	0.00	0.00	0.00	0.00	
NB-94	0.00	0.00	0.00	0.00	
NB-95	0.00	0.00	0.00	0.00	
ZR-95	0.00	0.00	0.00	0.00	
RU-103	0.00	0.00	0.00	0.00	
RU-106	0.00	0.00	0.00	3.00E-06	
CD-109	0.00	0.00	0.00	0.00	
AG-110M	0.00	0.00	0.00	0.00	
SH-113	0.00	0.00	0.00	0.00	
CD-113M	0.00	0.00	0.00	0.00	
SB-125	0.00	0.00	0.00	0.00	
BA-133	0.00	0.00	0.00	0.00	
CS-136	0.00	0.00	0.00	0.00	
CE-139	0.00	0.00	0.00	0.00	
CE-144	0.00	0.00	0.00	0.00	
EU-152	0.00	0.00	0.00	0.00	
HG-203	0.00	0.00	0.00	0.00	
U-235	0.00	0.00	0.00	0.00	
RA-226	0.00	1.21E-05	0.00	1.21E-05	
SB-124	0.00	0.00	0.00	0.00	
TH-228	0.00	0.00	0.00	0.00	
HA-24	0.00	0.00	0.00	0.00	
HA-56	0.00	0.00	0.00	0.00	
CU-64	0.00	0.00	0.00	0.00	
BR-84	0.00	0.00	0.00	0.00	
RB-88	0.00	0.00	0.00	0.00	
PB-89	0.00	0.00	0.00	0.00	
MO-99	0.00	0.00	0.00	0.00	
SR-91	0.00	0.00	0.00	0.00	
Y-91M	0.00	0.00	0.00	0.00	
SR-92	0.00	0.00	0.00	0.00	
Y-92	0.00	0.00	0.00	0.00	
NB-97	0.00	0.00	0.00	0.00	
ZR-97	0.00	0.00	0.00	0.00	
PB-212	0.00	0.00	0.00	0.00	
TC-99M	0.00	0.00	0.00	0.00	
SB-122	0.00	0.00	0.00	0.00	
I-133	0.00	0.00	0.00	0.00	

I-134	0.00	0.00	0.00	0.00
CS-138	0.00	0.00	0.00	0.00
BA-139	0.00	0.00	0.00	0.00
W-187	0.00	0.00	0.00	0.00
BI-214	0.00	0.00	0.00	0.00
PB-214	0.00	0.00	0.00	0.00
NO-239	0.00	0.00	0.00	0.00
TE-132	0.00	0.00	0.00	0.00

REMARKS:  
0.00 = <MDA

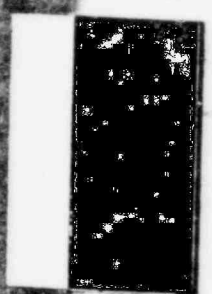
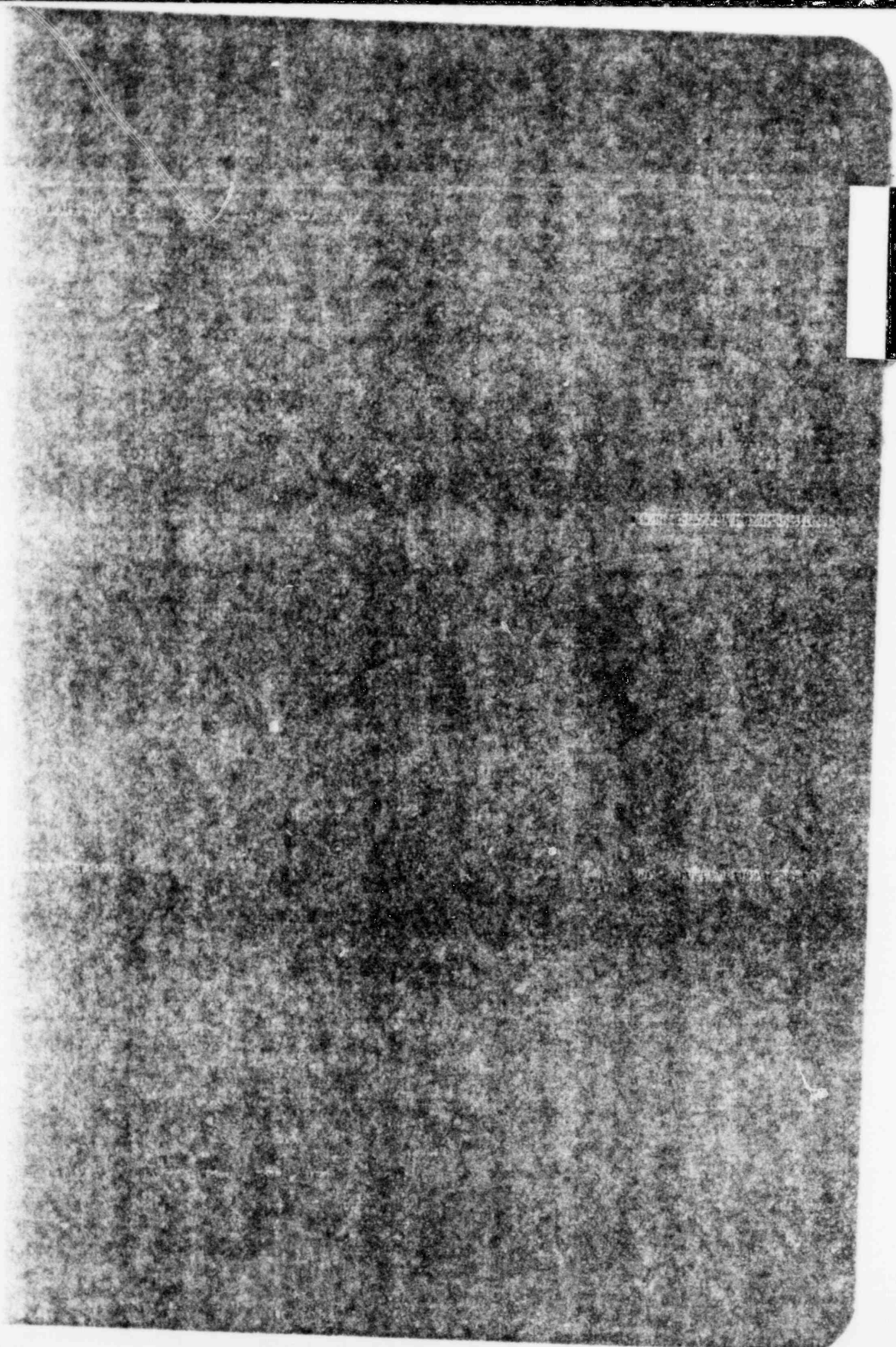


ARKANSAS POWER AND LIGHT COMPANY  
 ARKANSAS NUCLEAR ONE, UNIT TWO  
 REPORT ON RADIOACTIVE GASEOUS EFFLUENTS  
 APPENDIX "H"      SOCKET 50-368      YEAR: 1979

REPORTING PARAMETERS / UNITS	OCT	NOV	DEC	YEARLY TOT
GASES	CURIES 3.02E-03	1.01E-02	0.00	4.53E-03
HALOGENS	CURIES 2.29E-05	6.57E-05	4.25E-03	4.56E-03
DELETED				
H-3	CURIES 5.26E-03	6.02E-02	6.91E-03	3.8
ALPHA	CURIES 0.62	0.62	0.62	1.9
MAXIMUM GAS RELEASE RATE	UCI/SEC 2.63E-03	1.66E-02	1.12E-02	NA
% OF APPLICABLE LIMIT FOR:				
A. GASES	X		16.	NA
B. DELETED				
C. PART. + I-131	X		0.71	NA
ISOTOPIC CONC.	CURIES			
PARTICULATES:				
CS-137	6.05E-07	9.44E-08	0.00	3.45E-06
BA-140	0.00	0.00	0.00	0.00
LA-140	0.00	0.00	0.00	0.00
SR-90	0.00	0.00	0.00	0.00
CS-134	4.40E-07	2.72E-07	0.00	2.35E-06
ST-99	1.14E-07	1.14E-07	1.14E-07	3.41E-07
HALOGENS:				
I-131	2.29E-05	6.57E-05	4.25E-03	4.55E-03
I-133	0.00	0.00	0.00	9.69E-06
I-135	0.00	0.00	0.00	0.00
GASES:				
KR-85	0.00	0.00	0.00	0.00
XE-133	2.59E-03	1.01E-02	0.00	3.87E-03
KR-88	0.00	0.00	0.00	0.00
FR-07	0.00	0.00	0.00	0.00
KR-85M	11.	0.00	0.00	11.
XE-130	0.00	0.00	0.00	0.00
XE-133M	1.40E-03	0.00	0.00	3.42E-03
XE-135	4.21E-02	3.10E-04	0.00	5.15E-02
AR-41	0.00	0.00	0.00	1.42E-02
OTHERS:				
XE-131M	2.06E-02	1.77E-03	0.00	3.04E-02
XE-135M	0.00	0.00	0.00	0.00
F-10	0.00	0.00	0.00	0.00
BE-7	0.00	0.00	0.00	0.00
K-40	0.00	0.00	0.00	0.00
CF-51	0.00	0.00	0.00	0.00
MH-54	0.00	0.00	0.00	0.00
CO-57	0.00	0.00	0.00	0.00
CO-56	1.04E-06	4.94E-07	0.00	2.60E-06
FE-59	0.00	0.00	0.00	0.00
CO-60	2.07E-06	4.19E-07	0.00	3.53E-06
NI-65	0.00	0.00	0.00	0.00
ZN-65	0.00	0.00	0.00	0.00
SR-75	0.00	0.00	0.00	0.00
SR-85	0.00	0.00	0.00	0.00
Y-88	0.00	0.00	0.00	0.00
NB-94	0.00	0.00	0.00	0.00
NB-95	0.00	0.00	0.00	0.00
ZR-95	0.00	0.00	0.00	0.00
RU-103	0.00	0.00	0.00	0.00
RU-106	0.00	0.00	0.00	3.00E-06
CD-109	0.00	0.00	0.00	0.00
HG-110M	0.00	0.00	0.00	0.00
SN-113	0.00	0.00	0.00	0.00
CD-113M	0.00	0.00	0.00	0.00
SB-125	0.00	0.00	0.00	0.00
BA-133	0.00	0.00	0.00	0.00
CS-136	0.00	0.00	0.00	0.00
CE-139	0.00	0.00	0.00	0.00
CE-144	0.00	0.00	0.00	0.00
EU-152	0.00	0.00	0.00	0.00
HG-203	0.00	0.00	0.00	0.00
U-235	0.00	0.00	0.00	0.00
RA-226	0.00	0.00	0.00	1.21E-05
SB-124	0.00	0.00	0.00	0.00
TH-228	0.00	0.00	0.00	0.00
NA-24	0.00	0.00	0.00	0.00
TH-56	0.00	0.00	0.00	0.00
CU-64	0.00	0.00	0.00	0.00
BR-84	0.00	0.00	0.00	0.00
RB-88	0.00	0.00	0.00	0.00
RB-89	0.00	0.00	0.00	0.00
MO-99	0.00	0.00	0.00	0.00
SR-91	0.00	0.00	0.00	0.00
Y-91M	0.00	0.00	0.00	0.00
SR-92	0.00	0.00	0.00	0.00
Y-92	0.00	0.00	0.00	0.00
NB-97	0.00	0.00	0.00	0.00
ZR-97	0.00	0.00	0.00	0.00
PB-7	0.00	0.00	0.00	0.00
TC-1	0.00	0.00	0.00	0.00
SB-	0.00	0.00	0.00	0.00
I-	0.00	0.00	0.00	0.00
I-	0.00	0.00	0.00	0.00

CS-136      0.00      0.00      0.00      0.00  
 BA-139      0.00      0.00      0.00      0.00  
 U-187      0.00      0.00      0.00      0.00  
 BI-214      0.00      0.00      0.00      0.00  
 PB-214      0.00      0.00      0.00      0.00  
 NA-220      0.00      0.00      0.00      0.00  
 TE-132      0.00      0.00      0.00      0.00

REMARKS:  
 0.00 = <MDA



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