

TABLE 1A - REG GUIDE 1.21
CALVERT CLIFFS NUCLEAR POWER PLANT
EFFLUENT AND WASTE DISPOSAL SEMI-ANNUAL REPORT
FIRST HALF - 1984

GASEOUS EFFLUENTS - SUMMATION OF ALL RELEASES

A. Fission and activation gases		Units	1st Quarter	2nd Quarter	Est. Total Error, %
1.	Total Release	Ci	1.57E+03	8.44E+02	2.15E+01
2.	Average release rate for period	uCi/sec	2.00E+02	1.07E+02	
3.	Percent of tech. spec. limit (1)	%	1.17E+00	6.57E-01	
4.	Percent of tech. spec. limit (2)	%	2.53E+00	2.46E+00	
B. Iodines					
1.	Total iodine - 131	Ci	1.47E-02	2.26E-02	1.84E+01
2.	Average release rate for period	uCi/sec	1.87E-03	2.87E-03	
3.	Percent of tech. spec. limit (3)	%	1.17E+00	1.80E+00	
4.	Percent of tech. spec. limit (4)	%	4.21E+00	4.07E+00	
C. Particulates					
1.	Particulates with half lives greater than 8 days	Ci	6.64E-06	4.51E-05	1.84E+01
2.	Average release rate for period	uCi/sec	8.45E-07	5.74E-06	
3.	Percent of tech. spec. limit (3)	%	5.28E-04	3.59E-03	
4.	Percent of tech. spec. limit (4)	%	2.88E-01	7.70E-03	
5.	Gross alpha radioactivity	Ci	< 2.74E-06	< 1.22E-05	
D. Tritium					
1.	Total Release	Ci	4.02E-01	6.09E-01	2.18E+01
2.	Average release rate for period	uCi/sec	5.11E-02	7.75E-02	
3.	Percent of tech. spec. limit (1)	%	4.15E-04	6.29E-04	

- (1) Percent of I.A.2 for each quarter
(2) Percent of I.A.3 for previous 12 months
(3) Percent of I.B.2 for each quarter
(4) Percent of I.B.3 for previous 12 months

TABLE 1C REG GUIDE 1.21 (CONT'D)
CALVERT CLIFFS NUCLEAR POWER PLANT
FIRST HALF - 1984

GASEOUS EFFLUENTS - GROUND LEVEL RELEASES

3.	Particulates	Units	Continuous Mode		Batch Mode	
			1st Quarter	2nd Quarter	1st Quarter	2nd Quarter
	strontium - 89	Ci	<1.10E-06	<2.32E-06		
	strontium - 90	Ci	6.76E-07	6.16E-07		
	rubidium - 88*	Ci			1.29E-02	1.20E-02
	cobalt - 58	Ci		8.94E-06		1.12E-05
	cesium - 138*	Ci			9.94E-05	3.29E-05
	cesium - 134	Ci			4.04E-07	4.64E-06
	cesium - 137	Ci			4.46E-06	1.74E-05
	Total For Period	Ci	1.78E-06	1.19E-05	1.30E-02	1.21E-02

* Particulates with half lives less than eight days.

TABLE 2B REG GUIDE 1.21

CALVERT CLIFFS NUCLEAR POWER PLANT

EFFLUENT AND WASTE DISPOSAL SEMI-ANNUAL REPORT

FIRST HALF - 1984

LIQUID EFFLUENTS

Nuclides Released		Units	Continuous Mode (1)		Batch Mode	
			1st Quarter	2nd Quarter	1st Quarter	2nd Quarter
strontium	- 89	Ci			5.46E-03	1.21E-02
strontium	- 90	Ci			7.40E-04	7.16E-04
cesium	- 134	Ci			5.51E-02	4.18E-02
cesium	- 137	Ci			1.28E-01	8.60E-02
iodine	- 131	Ci			2.97E-02	3.28E-02
cobalt	- 58	Ci			2.79E-02	2.47E-01
cobalt	- 60	Ci			1.36E-02	4.67E-02
iodine	- 132	Ci				7.85E-04
manganese	- 54	Ci			1.29E-03	9.77E-03
chromium	- 51	Ci				8.62E-02
zirconium	- 95	Ci			8.55E-04	2.10E-02
niobium	- 95	Ci			1.96E-03	3.48E-02
molybdenum	- 99	Ci			6.36E-06	1.08E-03
barium	- 140	Ci			2.89E-05	
antimony	- 124	Ci				2.07E-03
iodine	- 133	Ci			4.64E-03	2.51E-02
antimony	- 125	Ci			6.67E-03	2.48E-02
cobalt	- 57	Ci			6.51E-05	3.66E-05
silver	- 110m	Ci			4.05E-03	3.89E-02
lanthanum	- 140	Ci				2.10E-04
tin	- 113	Ci			3.16E-05	1.39E-03
ruthenium	- 103	Ci				4.30E-03
niobium	- 97	Ci			1.35E-03	1.95E-02
iron	- 59	Ci				7.09E-04

TABLE 2B REG GUIDE 1.21 (CONT'D)

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EFFLUENT AND WASTE DISPOSAL SEMI-ANNUAL REPORT

FIRST HALF - 1984

LIQUID EFFLUENTS

Nuclides Released	Units	Continuous Mode (1)		Batch Mode	
		1st Quarter	2nd Quarter	1st Quarter	2nd Quarter
zirconium - 97	Ci				1.05E-03
tellurium - 132	Ci				4.26E-04
cerium - 141	Ci				1.35E-03
cerium - 144	Ci				6.28E-03
unidentified	Ci			< 4.02E-03	< 3.77E-03
Total For Period	Ci			2.85E-01	7.50E-01

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FIRST HALF - 1981
GASEOUS EFFLUENTS - GROUND LEVEL RELEASES

		Continuous Mode		Batch Mode		
		1st	2nd	1st	2nd	
		Unit	Quarter	Quarter	Quarter	Quarter
Fission and activation gases						
krypton	- 85m	Ci			5.86E-02	3.30E-02
krypton	- 88	Ci			9.80E-03	4.10E-03
xenon	- 131m	Ci			3.60E-03	1.00E+00
xenon	- 133	Ci	2.13E+02	3.30E+02	7.70E+01	1.60E+00
xenon	- 133m	Ci	-	-	8.40E-02	2.20E-01
xenon	- 135	Ci			1.90E+00	2.20E+00
argon	- 41	Ci			4.90E-03	2.60E-02
total for period		Ci	2.13E+02	3.30E+02	7.91E+01	1.63E+02
Halogens						
iodine	- 131	Ci	5.51E-03	1.81E-02	4.39E-03	1.40E-03
iodine	- 132	Ci			1.10E-06	1.20E-03
iodine	- 133	Ci	2.66E-03	4.72E-03	8.40E-03	
iodine	- 135	Ci				8.20E-06
bromine	- 82	Ci			1.20E-05	3.30E-05
total for period		Ci	8.17E-03	2.28E-02	5.24E-03	2.60E-03
Particulates						
strontium	- 89	Ci	5.71E-05	7.75E-05		
strontium	- 90	Ci	2.00E-05	4.05E-05		
cerium	- 141	Ci	5.40E-08	5.30E-07		
ruthenium	- 103	Ci				
rubidium	- 88	Ci			5.80E-04	1.00E-03
cobalt	- 60	Ci			3.00E-04	
cesium	- 138	Ci			5.80E-06	3.70E-06
cobalt	- 58	Ci	9.80E-07			
total for period		Ci	7.81E-05	1.19E-04	8.86E-04	1.00E-03

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LIQUID EFFLUENTS - SUMMATION OF ALL RELEASES

		Units	1st Quarter	2nd Quarter	Est. Total Error, %
A. Fission and activation products					
1.	Total release (not including tritium, gases, alpha)	Ci	1.27E+00	4.31E-01	2.16E+01
2.	Average diluted concentration during period	uCi/ml	2.41E-09	7.52E-10	
3.	Percent of applicable limit	%	2.41E+00	7.52E-01	
B. Tritium					
1.	Total release	Ci	1.67E+02	2.41E+02	1.81E+01
2.	Average diluted concentration during period	uCi/ml	2.82E-07	4.21E-07	
3.	Percent of applicable limit	%	9.40E-03	1.40E-03	
C. Dissolved and entrained gases					
1.	Total release	Ci	2.69E-01	1.12E+00	2.00E+01
2.	Average diluted concentration during period	uCi/ml	4.54E-10	1.95E-09	
3.	Percent of applicable limit	%	5.73E-02	6.52E-02	
D. Gross alpha radioactivity					
1.	Total release	Ci	4.81E-04	1.21E-03	3.00E+00
E. Volume of Waste Releases (prior to dilution)					
		liters	1.13E+07	9.23E+06	3.00E+00
F. Volume of dilution water used during period					
		liters	5.93E+11	5.73E+11	1.40E+01