MAINE YANKEE ATOMIC POWER COMPANY

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT

January - December 1999

1.0 INTRODUCTION

Tables 1 and 2 summarize the quantity of radioactive gaseous and liquid effluents, respectively, for each quarter of 1999. Table 3 summarizes the solid waste shipped off-site for burial or disposal during 1999. Table 4 contains supplementary information.

Appendices A through D indicate the status of reportable items per the requirements of ODCM sections 2.1.5, 2.2.6, 2.3.3, 2.3.4, 2.5 and Appendix C.

Revisions of the ODCM made during 1999 are summarized at Appendix E. Pursuant to Technical Specification 5.6.2, a complete copy of the revised manual is also included with this report.

TABLE 1A

Maine Yankee Atomic Power Station
Effluent and Waste Disposal Annual Report
First and Second Quarters, 1999
Gaseous Effluents - Summation of All Releases

	Unit	1st Quarter	2nd Quarter	Est. Total Error, %
A. Fission and Activation Gases				
1. Total release	Ci	N/D*	N/D*	2.50 E+01
2. Average release rate for period	µCi/sec	N/D*	N/D*	
3. Percent of regulatory limit	%	N/D*	N/D*	
B. Iodines				
1. Total Iodine-131	Ci	N/A*	N/A*	2.50 E+01
2. Average release rate for period	µCi/sec	N/A*	N/A*	
3. Percent of regulatory limit	%	N/A*	N/A*	
C. Particulates				
1. Particulates with T-1/2 > 8 days	Ci	N/D*	N/D*	3.50 E+01
2. Average release rate for period	µCi/sec	N/D*	N/D*	
3. Percent of regulatory limit	%	N/D*	N/D*	
4. Gross alpha radioactivity	Ci	N/D*	N/D*	
D. Tritium				
1. Total release	Ci	5.49E-01	7.66E-01	2.50 E+01
2. Average release rate for period	µCi/sec	6.98E-02	9.74E-02	
3. Percent of regulatory limit	%	2.98E-03	4.83E-03	

N/D* = Not Detected

N/A* = Not Applicable

TABLE 1A

Maine Yankee Atomic Power Station
Effluent and Waste Disposal Annual Report
Third and Fourth Quarters, 1999
Gaseous Effluents - Summation of All Releases

	Unit	3rd Quarter	4th Quarter	Est. Total Error, %
A. Fission and Activation Gases				
1. Total release	Ci	N/D*	N/D*	2.50 E+01
2. Average release rate for period	µCi/sec	N/D*	N/D*	
3. Percent of regulatory limit	%	N/D*	N/D*	
B. Iodines				
1. Total Iodine-131	Ci	N/A*	N/A*	2.50 E+01
2. Average release rate for period	µCi/sec	N/A*	N/A*	
3. Percent of regulatory limit	%	N/A*	N/A*	
C. Particulates				
1. Particulates with T-1/2 > 8 days	Ci	N/D*	N/D*	3.50 E+01
2. Average release rate for period	µCi/sec	N/D*	N/D*	
3. Percent of regulatory limit	%	N/D*	N/D*	
4. Gross alpha radioactivity	Ci	N/D*	N/D*	
D. Tritium				
1. Total release	Ci	7.78E-01	5.03E-01	2.50 E+01
2. Average release rate for period	µCi/sec	9.90E-02	6.40E-02	
3. Percent of regulatory limit	%	5.70E-03	2.65E-03	

N/D* = Not Detected

N/A* = Not Applicable

TABLE 1B
Maine Yankee Atomic Power Station
Effluent and Waste Disposal Annual Report
First and Second Quarters, 1999
Gaseous Effluents - Elevated Release

		Continuous Mode		Batch Mode	
Nuclides Released	**Unit**	**1st Quarter**	**2nd Quarter**	**1st Quarter**	**2nd Quarter**
1. Fission Gases					
Krypton-85	Ci	N/D*	N/D*	N/A*	N/A*
Krypton-85m	Ci	N/D*	N/D*	N/A*	N/A*
Krypton-87	Ci	N/D*	N/D*	N/A*	N/A*
Krypton-88	Ci	N/D*	N/D*	N/A*	N/A*
Xenon-131m	Ci	N/D*	N/D*	N/A*	N/A*
Xenon-133	Ci	N/D*	N/D*	N/A*	N/A*
Xenon-133m	Ci	N/D*	N/D*	N/A*	N/A*
Xenon-135	Ci	N/D*	N/D*	N/A*	N/A*
Xenon-135m	Ci	N/D*	N/D*	N/A*	N/A*
Xenon-138	Ci	N/D*	N/D*	N/A*	N/A*
Argon-41	Ci	N/D*	N/D*	N/A*	N/A*
Unidentified	Ci	N/D*	N/D*	N/A*	N/A*
Total for period	Ci	N/D*	N/D*	N/A*	N/A*
2. Iodines					
Iodine-131	Ci	N/A*	N/A*	N/A*	N/A*
Iodine-133	Ci	N/A*	N/A*	N/A*	N/A*
Iodine-135	Ci	N/A*	N/A*	N/A*	N/A*
Total for period	Ci	N/A*	N/A*	N/A*	N/A*
3. Particulates					
Strontium-89	Ci	N/D*	N/D*	N/A*	N/A*
Strontium-90	Ci	N/D*	N/D*	N/A*	N/A*
Cesium-134	Ci	N/D*	N/D*	N/A*	N/A*
Cesium-137	Ci	N/D*	N/D*	N/A*	N/A*
Barium-Lanthanum-140	Ci	N/D*	N/D*	N/A*	N/A*
Zinc-65	Ci	N/D*	N/D*	N/A*	N/A*
Cobalt-58	Ci	N/D*	N/D*	N/A*	N/A*
Cobalt-60	Ci	N/D*	N/D*	N/A*	N/A*
Others-	Ci	N/D*	N/D*	N/A*	N/A*

N/D* = Not Detected

N/A* = Not Applicable

TABLE 1B
Maine Yankee Atomic Power Station
Effluent and Waste Disposal Annual Report
Third and Fourth Quarters, 1999
Gaseous Effluents - Elevated Release

Nuclides Released	Unit	Continuous Mode		Batch Mode	
		3rd Quarter	4th Quarter	3rd Quarter	4th Quarter
1. Fission Gases					
Krypton-85	Ci	N/D*	N/D*	N/A*	N/A*
Krypton-85m	Ci	N/D*	N/D*	N/A*	N/A*
Krypton-87	Ci	N/D*	N/D*	N/A*	N/A*
Krypton-88	Ci	N/D*	N/D*	N/A*	N/A*
Xenon-131m	Ci	N/D*	N/D*	N/A*	N/A*
Xenon-133	Ci	N/D*	N/D*	N/A*	N/A*
Xenon-133m	Ci	N/D*	N/D*	N/A*	N/A*
Xenon-135	Ci	N/D*	N/D*	N/A*	N/A*
Xenon-135m	Ci	N/D*	N/D*	N/A*	N/A*
Xenon-138	Ci	N/D*	N/D*	N/A*	N/A*
Argon-41	Ci	N/D*	N/D*	N/A*	N/A*
Unidentified	Ci	N/D*	N/D*	N/A*	N/A*
Total for period	Ci	N/D*	N/D*	N/A*	N/A*
2. Iodines					
Iodine-131	Ci	N/A*	N/A*	N/A*	N/A*
Iodine-133	Ci	N/A*	N/A*	N/A*	N/A*
Iodine-135	Ci	N/A*	N/A*	N/A*	N/A*
Total for period	Ci	N/A*	N/A*	N/A*	N/A*
3. Particulates					
Strontium-89	Ci	N/D*	N/D*	N/A*	N/A*
Strontium-90	Ci	N/D*	N/D*	N/A*	N/A*
Cesium-134	Ci	N/D*	N/D*	N/A*	N/A*
Cesium-137	Ci	N/D*	N/D*	N/A*	N/A*
Barium-Lanthanum-140	Ci	N/D*	N/D*	N/A*	N/A*
Zinc-65	Ci	N/D*	N/D*	N/A*	N/A*
Cobalt-58	Ci	N/D*	N/D*	N/A*	N/A*
Cobalt-60	Ci	N/D*	N/D*	N/A*	N/A*
Others-	Ci	N/D*	N/D*	N/A*	N/A*

N/D* = Not Detected
N/A* = Not Applicable

TABLE 1C

Maine Yankee Atomic Power Station
Effluent and Waste Disposal Annual Report
January - December, 1999
Gaseous Effluents - Ground Level Releases

There were no routine measured ground level continuous or batch mode gaseous releases during1999.

TABLE 2A

Maine Yankee Atomic Power Station
Effluent and Waste Disposal Annual Report
First and Second Quarters, 1999
Liquid Effluents - Summation of All Releases

	Unit	1st Quarter	2nd Quarter	Est. Total Error, %
A. Fission and Activation Products				
1. Total release (not including tritium, gases, alpha)	Ci	N//A*	1.68E-03	1.50 E+01
2. Average diluted concentration during period	µCi/ml	N/A*	2.75E-09	
3. Percent of applicable limit	%	N/A*	1.08E-01	
B. Tritium				
1. Total Release	Ci	N/A*	6.35E-02	1.50 E+01
2. Average diluted concentration during period	µCi/ml	N/A*	1.04E-07	
3. Percent of applicable limit	%	N/A*	1.04E-02	
C. Dissolved and Entrained Gases				
1. Total Release	Ci	N/A*	N/D*	1.50 E+01
2. Average diluted concentration during period	µCi/ml	N/A*	N/D*	
3. Percent of applicable limit	%	N/A*	N/D*	
D. Gross Alpha Radioactivity				
1. Total release	Ci	N/A*	5.31E-08	1.50 E+01
2. Average diluted concentration during period	µCi/ml	N/A*	8.66E-14	
E. Volume of waste released (prior to dilution)	liters	N/A*	2.72E+04	1.00 E+01
F. Volume of dilution water used during period	liters	N/A*	6.13E+08	1.00 E+01

N/D* = Not Detected

N/A* = Not Applicable

TABLE 2A

Maine Yankee Atomic Power Station
Effluent and Waste Disposal Annual Report
Third and Fourth Quarters, 1999
Liquid Effluents - Summation of All Releases

	Unit	3rd Quarter	4th Quarter	Est. Total Error, %
A. Fission and Activation Products				
1. Total release (not including tritium, gases, alpha)	Ci	3.27E-04	5.84E-04	1.50 E+01
2. Average diluted concentration during period	µCi/ml	5.32E-10	9.52E-10	
3. Percent of applicable limit	%	8.54E-03	1.18E-02	
B. Tritium				
1. Total Release	Ci	4.93E-02	9.59E-03	1.50 E+01
2. Average diluted concentration during period	µCi/ml	8.04E-08	1.56E-08	
3. Percent of applicable limit	%	8.04E-03	1.56E-03	
C. Dissolved and Entrained Gases				
1. Total Release	Ci	N/D*	N/D*	1.50 E+01
2. Average diluted concentration during period	µCi/ml	N/D*	N/D*	
3. Percent of applicable limit	%	N/D*	N/D*	
D. Gross Alpha Radioactivity				
1. Total release	Ci	6.25E-07	7.46E-08	1.50 E+01
2. Average diluted concentration during period	µCi/ml	1.02E-12	1.22E-13	
E. Volume of waste released (prior to dilution)	liters	2.19E+04	3.26E+04	1.00 E+01
F. Volume of dilution water used during period	liters	6.13E+08	6.13E+08	1.00 E+01

N/D* = Not Detected

N/A* = Not Applicable

TABLE 2B

Maine Yankee Atomic Power Station
Effluent and Waste Disposal Annual Report
First and Second Quarters, 1999
Liquid Effluents

		Continuous Mode		Batch Mode	
Nuclides Released	**Unit**	**1st Quarter**	**2nd Quarter**	**1st Quarter**	**2nd Quarter**
Strontium-89	Ci	N/A*	N/A*	N/A*	N/D*
Strontium-90	Ci	N/A*	N/A*	N/A*	N/D*
Cesium-134	Ci	N/A*	N/A*	N/A*	7.01E-06
Cesium-137	Ci	N/A*	N/A*	N/A*	2.16E-04
Iodine-131	Ci	N/A*	N/A*	N/A*	N/D*
Cobalt-58	Ci	N/A*	N/A*	N/A*	N/D*
Cobalt-60	Ci	N/A*	N/A*	N/A*	1.30E-03
Iron-59	Ci	N/A*	N/A*	N/A*	N/D*
Zinc-65	Ci	N/A*	N/A*	N/A*	N/D*
Manganese-54	Ci	N/A*	N/A*	N/A*	N/D*
Chromium-51	Ci	N/A*	N/A*	N/A*	N/D*
Zirconium-Niobium-95	Ci	N/A*	N/A*	N/A*	N/D*
Molybdenum-99	Ci	N/A*	N/A*	N/A*	N/D*
Technetium-99m	Ci	N/A*	N/A*	N/A*	N/D*
Barium-Lanthanum-140	Ci	N/A*	N/A*	N/A*	N/D*
Cerium-141	Ci	N/A*	N/A*	N/A*	N/D*
Others - Iron-55	Ci	N/A*	N/A*	N/A*	2.09E-05
Antimony-125	Ci	N/A*	N/A*	N/A*	1.40E-04
Unidentified	Ci	N/A*	N/A*	N/A*	N/D*
Total for period (above)	Ci	N/A*	N/A*	N/A*	1.68E-03

Xenon-133	Ci	N/A*	N/A*	N/A*	N/D*
Xenon-135	Ci	N/A*	N/A*	N/A*	N/D*

N/D* = Not Detected

N/A* = Not Applicable

TABLE 2B

Maine Yankee Atomic Power Station
Effluent and Waste Disposal Annual Report
Third and Fourth Quarters, 1999
Liquid Effluents

		Continuous Mode		Batch Mode	
Nuclides Released	**Unit**	**3rd Quarter**	**4th Quarter**	**3rd Quarter**	**4th Quarter**
Strontium-89	Ci	N/A*	N/A*	N/D*	N/D*
Strontium-90	Ci	N/A*	N/A*	N/D*	N/D*
Cesium-134	Ci	N/A*	N/A*	N/D*	9.02E-087
Cesium-137	Ci	N/A*	N/A*	7.88E-06	1.24E-05
Iodine-131	Ci	N/A*	N/A*	N/D*	N/D*
Cobalt-58	Ci	N/A*	N/A*	N/D*	N/D*
Cobalt-60	Ci	N/A*	N/A*	1.25E-04	1.66E-04
Iron-59	Ci	N/A*	N/A*	N/D*	N/D*
Zinc-65	Ci	N/A*	N/A*	N/D*	N/D*
Manganese-54	Ci	N/A*	N/A*	N/D*	N/D*
Chromium-51	Ci	N/A*	N/A*	N/D*	N/D*
Zirconium-Niobium-95	Ci	N/A*	N/A*	N/D*	N/D*
Molybdenum-99	Ci	N/A*	N/A*	N/D*	N/D*
Technetium-99m	Ci	N/A*	N/A*	N/D*	N/D*
Barium-Lanthanum-140	Ci	N/A*	N/A*	N/D*	N/D*
Cerium-141	Ci	N/A*	N/A*	N/D*	N/D*
Others - Iron-55	Ci	N/A*	N/A*	1.52E-04	3.91E-04
Antimony-125	Ci	N/A*	N/A*	4.09E-05	1.33E-05
Silver-110m	Ci	N/A*	N/A*	1.71E-06	9.42E-07
Cerium-144	Ci	N/A*	N/A*	N/D*	3.12E-07
Unidentified	Ci	N/A*	N/A*	N/D*	N/D*
Total for period (above)	Ci	N/A*	N/A*	3.27E-04	5.84E-04
Xenon-133	Ci	N/A*	N/A*	N/D*	N/D*
Xenon-135	Ci	N/A*	N/A*	N/D*	N/D*

N/D* = Not Detected
N/A* = Not Applicable

TABLE 3
Maine Yankee Atomic Power Station
Effluent and Waste Disposal Annual Report
First Half, 1999
Solid Waste and Irradiated Fuel Shipments

A. Solid Waste Shipped Off-Site for Burial or Disposal (Not Irradiated Fuel).

1. Type of Waste	Unit	6-Month Period	Est. Total Error, %
a. Spent resins, filter sludges, etc.	Cu. M.	8.40	
	Ci.	2.34E+01	+/-25
b. Dry compressible waste, contaminated equipment, DAW, cement.	Cu. M.	649	
	Ci.	4.51E+00	+/-25
c. Irradiated Hardware	Cu. M.	2.42	
	Ci.	1.04E+02	+/-25
d. Other Waste	Cu. M.	104.0	
	Ci.	7.38E-02	+/-25

2. Estimate of major nuclide composition (by type of waste).

a.	Co-60	56.59%	1.32E+01
	Ni-63	31.76%	7.43E+00
	Fe-55	9.71%	2.27E+00
	Cs-137	1.26%	2.95E-01
b.	Co-60	38.30%	1.73E+00
	Fe-55	25.02%	1.13E+00
	Ni-63	21.30%	9.61E-01
	Cs-137	6.52%	2.94E-01
	Ce-144	5.42%	2.45E-01
	Co-58	1.71%	7.73E-02

Table 3
(Continued)

2. Estimate of major nuclide composition (by type of waste). (Continued)

c.	Co-60	59.78%	6.22E+01
	Fe-55	31.42%	3.27E+01
	Ni-63	8.39%	8.73E+00
d.	H-3	80.36%	5.93E-02
	Co-60	6.37%	4.70E-03
	Cs-137	6.06%	4.47E-03
	Fe-55	2.51%	1.85E-03
	Ni-63	2.07%	1.53E-03

3. Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
6	Trucking over Highway	Chem-Nuclear, Barnwell, SC
16	Trucking over Highway	F.W.Hake, Memphis, TN
4	Trucking over Highway	GTS-Duratek, Oak Ridge, TN

B. Irradiated Fuel Shippments (Disposition): None Shipped.

Additional ODCM, Appendix C Requirements

Solid Waste Class	Volume (Cu. M..)	Est. Activity (Ci.)	Est. Total Error
A	8.22E+02	1.40E+01	+/-25%
B	2.91E+00	1.91E+01	+/-25%
C	4.47E+00	9.84E+01	+/-25%

Table 3
(Continued)

Additional ODCM, Appendix C Requirements: (Continued)

Container	Type	Package Volume (Cu. M.)
B-25 Box	Strong Tight Container	2.9
20-foot Sealand	Strong Tight Container	38.2
40-foot Sealand	Strong Tight Container	76.5
NUHIC-55	High Integrity Container	0.5
CNSI Medium Overpack	High Integrity Container	1.1
Steel Box	Strong Tight Container	1.4
Steel Tank	Strong Tight Container	19.7
Steel Box	Strong Tight Container	4.4
55-gallon Steel Drum	Strong Tight Container	0.2
Steel Liner	Strong Tight Container	2.7
Steel Box	Strong Tight Container	0.9

TABLE 3
Maine Yankee Atomic Power Station
Effluent and Waste Disposal Annual Report
Second Half, 1999
Solid Waste and Irradiated Fuel Shipments

A. Solid Waste Shipped Off-Site for Burial or Disposal (Not Irradiated Fuel).

1. Type of Waste	Unit	6-Month Period	Est. Total Error, %
a. Spent resins, filter sludges, etc.	Cu. M.	2.24	
	Ci.	2.59E+01	+/-25
b. Dry compressible waste, contaminated equipment, DAW, cement.	Cu. M.	1940	
	Ci.	4.67E+01	+/-25
d. Other Waste	Cu. M.	8.89	
	Ci.	2.85E-03	+/-25

2. Estimate of major nuclide composition (by type of waste).

a.	Co-60	54.01%	1.40E+01
	Ni-63	27.52%	7.13E+00
	Fe-55	16.38%	4.24E+00
	H-3	1.08%	2.80E-01
b.	Co-60	43.65%	2.04E+01
	Ni-63	32.11%	1.50E+01
	Fe-55	12.09%	5.64E+00
	Cs-137	8.45%	3.95E+00
	Ce-144	2.69%	1.25E+00

Table 3
(Continued)

2. Estimate of major nuclide composition (by type of waste). (Continued)

d.	Ni-63	45.02%	1.28E-03
	Co-60	32.81%	9.35E-04
	Cs-137	11.88%	3.38E-04
	Fe-55	8.15%	2.32E-04
	Ce-144	1.49%	4.24E-05

3. Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
12	Trucking over Highway	Chem-Nuclear, Barnwell, SC
34	Trucking over Highway	GTS-Duratek, Oak Ridge, TN
1	Trucking over Highway	F.W.Hake, Memphis, TN
1	Trucking over Highway	Envirocare of Utah, Clive, UT
2	Railway	Envirocare of Utah, Clive, UT

B. Irradiated Fuel Shippments (Disposition): None Shipped.

Additional ODCM, Appendix C Requirements

Solid Waste Class	Volume (Cu.. M.)	Est. Activity (Ci.)	Est. Total Error
A	1.95E+03	4.67E+01	+/-25%
B	1.45E+00	5.28E+00	+/-25%
C	7.93E-01	2.06E+01	+/-25%

Table 3
(Contiuued)

Additional ODCM, Appendix C Requirements: (Continued)

Container	Type	Package Volume (Cu. M.)
EL-50	High Integrity Container	1.5
20-foot Sealand	Strong Tight Container	38.3
CNSI Small Overpack	High Integrity Container	0.8
B-25 Steel Box	Strong Tight Container	2.9
RADLOC-195	High Integrity Container	5.5
Steel Box	Strong Tight Container	4.4
Steel Box	Strong Tight Container	1.1
Steel Box	Strong Tight Container	3.7
40-foot Sealand	Strong Tight Container	76.5
Steel Container	Strong Tight Container	15.7
Shrink Wrap	Strong Tight Container	19.5
Shrink Wrap	Strong Tight Container	11

TABLE 4

Supplemental Information

1. Regulatory Limits

   Effluent Concentration

a.	Fission and activation gases:	10CFR20; Appendix B, Table 2, Column 1
b.	Iodines:	10CFR20; Appendix B, Table 2, Column 1
c.	Particulates, (with half lives greater than 8 days)	10CFR20; Appendix B, Table 2, Column 1
d.	Liquid effluents:	10CFR20; Appendix B, Table 2, Column 2
e.	Total noble gas concentration:	2E-04 μCi/ml

2. Average Energy - Not Applicable

3. Measurements and Approximations of Radioactivity

   a. Fission and Activation Gases

   Continuous Discharge - Primary Vent Stack and Fuel Building Exhaust Vent samples are analyzed monthly. Activity levels determined are assumed constant for the surveillance interval. The continuous Fuel Building Exhaust Vent monitor reading is used as a basis for increasing periodic sample frequency.

   Batch Discharges - The waste gas hold-up drums were purged and removed from service in 1997 in preparation for decommissioning. With the permanent cessation of power operations and the removal of the nuclear fuel, containment purging operations are no longer required. Containment ventilation is directed to the Primary Vent Stack, and sampled as described above.

   b. Iodines

   Iodine surveillance no longer applies due to the elapsed time since final plant shutdown from power operations.

   c. Particulates

   Primary Vent Stack and Fuel Building Exhaust Vent particulate totals are taken from a minimum of weekly measurements of continuously collected in-line particulate filters. The estimate total error for the particulate measurement has been increased to 35%. This estimated error is based on a detailed evaluation of sampling uncertainties with the particulate samplers. In the decommissioning configuration, credit is not taken for HEPA filtration. Without verification testing of the filters, it must be assumed that sample line plate-out may increase by up to a factor of three. There was no detected particulate or alpha activity during the year and, therefore, no adjustments were required to account for this possibility.

   d. Liquid Effluents

   There are no continuous liquid discharges in the decommissioning mode.

   Each batch of potentially radioactive liquid is analyzed for gross alpha, tritium, dissolved gases, and gamma emitting isotopes prior to discharge.

TABLE 4

(Continued)

Composite samples are made of liquid effluents for a quarterly analysis of Strontium-90, Strontium-89, and Iron-55.

4. Batch Releases

a. Liquids

1. Number of batch releases: 14
2. Total time period for batch releases: 9 hours
3. Maximum time period for a batch release: 2 hours, 35 minutes
4. Average time period for batch releases: 39 minutes
5. Minimum time period for a batch release: 15 minutes
6. Average stream flow during periods of release of effluents into a flowing stream: N/A
7. Maximum gross release concentration (μCi/ml): 1.62E-06

b. Gaseous

1. Number of batch releases: 0
2. Total time period for batch releases: Not applicable
3. Maximum time period for a batch release: Not applicable
4. Average time period for batch releases: Not applicable
5. Minimum time period for a batch release: Not applicable
6. Maximum gross release rate (μCi/sec): Not applicable

5. Unplanned Releases

a. Liquid

There were no abnormal liquid releases during the reporting period.

b. Gaseous

There were no abnormal gaseous releases during the reporting period.

APPENDIX A

Radioactive Effluent Monitoring Instrumentation

Requirement: Radioactive effluent monitoring instrumentation channels are required to be operable in accordance with ODCM Sections 2.3.3 and 2.3.4. With less than the minimum number of channels operable and reasonable efforts to return the instrument(s) to operable status within 30 days being unsuccessful, ODCM Sections 2.3.3 and 2.3.4 requires an explanation for the delay in correcting the inoperability in the next Annual Effluent Release Report.

Response: No radioactive effluent monitoring instrumentation was out of service for greater than 30 days during the reporting period.

APPENDIX B

Liquid Radwaste Treatment System

Requirement: With radioactive liquid waste being discharged without treatment with estimated doses in excess of the limits in ODCM Section 2.1.5, a report must be submitted to the Commission in the Annual Effluent Release Report for the period.

Response: The requirements of ODCM Section 2.1.5 were met during this period and, therefore, no report is required.

APPENDIX C

Gaseous Radwaste Treatment System

Requirement: With radioactive gaseous waste being discharged without treatment with doses in excess of the limits in ODCM Section 2.2.6, a report must be submitted to the Commission in the Annual Effluent Release Report for the period.

Response: The requirements of ODCM Section 2.2.6 were met during this period and, therefore, no report is required.

APPENDIX D

Lower Limit of Detection for Radiological Analyses

Requirement: ODCM Section 2.5 requires that when unusual circumstances result in LLD's higher than required, the reasons shall be documented in the Annual Radioactive Effluent Release Report.

Response: All samples were counted in such a manner as to satisfy the specified a priori lower limits of detection.

APPENDIX E

Summary of Off-Site Dose Calculation Manual Revisions

Revision 12, approved February 17, 1999

Incorporated changes in the liquid effluent monitoring requirements, set point calculations and the Liquid Radwaste System description necessary for releases to be discharged to the Forebay with zero Circulating/Service Water flow.

Revised the Radiological Environmental Monitoring Program (REMP) by deleting TM-15 as a milk station, decreasing the number of milk stations from three to two, and eliminating I-131 analysis in milk and food products.

Revised the REMP by deleting the airborne radioiodine surveillance, and decreasing the air particulate sampling frequency from weekly to bi-weekly.

Revision 13, approved November 18, 1999

Revised Section 6.1.2 to allow, where appropriate, operator monitoring and response action as an acceptable alternative to an external RMS set point.

Added surveillance testing requirements for liquid and gaseous monitoring instrumentation to a new section of the ODCM, section 2.3.5. This change ensures compliance with Technical Specification 5.6.3 by describing the surveillance testing associated with the process monitors.