ENCLOSURE 1

RADIOACTIVE EFFLUENT RELEASE REPORT FOR JANUARY 1 – DECEMBER 31, 2011

25 pages follow

NUCLEAR MANAGEMENT COMPANY
MONTICELLO NUCLEAR GENERATING PLANT
License No. DPR-22

RADIOACTIVE EFFLUENT RELEASE REPORT
Period : Jan - Dec 2011

Supplemental Information

1. Regulatory Limits - Quarterly levels requiring reporting to Nuclear Regulatory Commission

   A. Noble Gases :

      5 mrad/quarter gamma radiation
      10 mrad/quarter beta radiation

   B. Long Lived Iodines, Particulates, and Tritium :

      7.5 mrem/quarter dose to any organ

   C. Liquid Effluents :

      1.5 mrem/quarter dose to the total body
      5.0 mrem/quarter dose to any organ

2. Maximum Permissible Concentrations

   A. Noble Gases :

      10 CFR Part 20, Appendix B, Table II, Column 1

   B. Long Lived Iodines, Particulates, and Tritium :

      10 CFR Part 20, Appendix B, Table II, Column 1

   C. Liquid Effluents :

      10 CFR Part 20, Appendix B, Table II, Column 2
      2.0 E-4 uci/ml for dissolved and entrained gases

3. Average Energy

      (Not Applicable)

RADIOACTIVE EFFLUENT RELEASE REPORT
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Supplemental Information (continued)

4. Measurements and Approximations of Total Radioactivity

A. Noble Gases :

Continuous gross activity monitors in Reactor Building Vent and Plant Stack exhaust streams. Weekly isotopic analysis of exhaust streams.

B. Iodines in Gaseous Effluent :

Continuous monitoring with charcoal cartridges in Reactor Building Vent and Plant Stack exhaust streams with weekly analysis.

C. Particulates in Gaseous Effluent :

Continuous monitoring with particulate filters in Reactor Building Vent and Plant Stack exhaust streams with weekly analysis.

D. Tritium in Gaseous Effluent :

Monthly grab samples from Reactor Building Vent and Plant Stack exhaust streams.

E. Liquid Effluents :

Tank sample analyzed prior to each planned release and continuous monitoring of gross activity during planned release.

5. Batch Releases

A. Liquid :

1. Number of Batch Releases	0	
2. Total Time Period for Batch Releases	0.0	min
3. Maximum Time Period for a Batch Release	0.0	min
4. Average Time Period for a Batch Release	0.0	min
5. Minimum Time Period for a Batch Release	0.0	min
6. Average River Flow During Release	0.0	cf/sec

B. Gaseous :

1. Number of Batch Releases	8	
2. Total Time Period for Batch Releases	5899.0	min
3. Maximum Time Period for a Batch Release	1224.0	min
4. Average Time Period for a Batch Release	737.4	min
5. Minimum Time Period for a Batch Release	378.0	min

RADIOACTIVE EFFLUENT RELEASE REPORT
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Supplemental Information (continued)

6. Abnormal Releases

A. Liquid :

1. Number of Releases	0	
2. Total Activity Released	0.0	Ci

B. Gaseous :

1. Number of Releases	0	
2. Total Activity Released	0.0	Ci

RADIOACTIVE EFFLUENT RELEASE REPORT
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Table 1A Gaseous Effluents - Summation of all Releases

	Units	1st Qtr	2nd Qtr	Est. Total Error, %
A. Fission & Activation gases				
1. Total Release	Ci	2.80E+02	1.82E+02	2.00E+01
2. Average Release Rate	uci/sec	3.57E+01	2.32E+01	
3. Percent Tech Spec Qtrly Reporting Level				
Gamma Radiation	%	1.13E-01	1.14E-01	
Beta Radiation	%	3.04E-02	4.89E-02	
B. Iodines				
1. Total I-131 Release	Ci	3.83E-03	1.24E-03	1.00E+01
2. Average I-131 Release Rate	uci/sec	4.87E-04	1.58E-04	
C. Particulates				
1. Total Particulates	Ci	4.40E-04	5.97E-04	3.00E+01
2. Average Release Rate	uci/sec	5.60E-05	7.59E-05	
3. Gross Alpha Radioactivity	Ci	9.35E-07	8.27E-07	
D. Tritium				
1. Total Release	Ci	3.61E+00	3.56E+00	1.00E+01
2. Average Release Rate	uci/sec	4.59E-01	4.52E-01	
E. Carbon-14				
1. Total Release	Ci	1.20E+00	5.00E-01	1.00E+01
2. Average Release Rate	uci/sec	1.50E-01	6.00E-02	
F. Percent Qtrly Tech Spec Reporting Levels				
1. Iodines, Particulates, and Tritium	%	8.13E-01	2.70E-01	

RADIOACTIVE EFFLUENT RELEASE REPORT
Period : Jan - Dec 2011

Table 1A Gaseous Effluents - Summation of all Releases

	Units	3rd Qtr	4th Qtr	Est. Total Error, %
A. Fission & Activation gases				
1. Total Release	Ci	2.81E+02	2.15E+02	2.00E+01
2. Average Release Rate	uci/sec	3.53E+01	2.70E+01	
3. Percent Tech Spec Qtrly Reporting Level				
Gamma Radiation	%	1.30E-01	1.08E-01	
Beta Radiation	%	1.61E-01	2.69E-02	
B. Iodines				
1. Total I-131 Release	Ci	2.20E-03	2.39E-03	1.00E+01
2. Average I-131 Release Rate	uci/sec	2.76E-04	3.00E-04	
C. Particulates				
1. Total Particulates	Ci	8.40E-04	3.67E-04	3.00E+01
2. Average Release Rate	uci/sec	1.06E-04	4.62E-05	
3. Gross Alpha Radioactivity	Ci	5.59E-07	7.20E-07	
D. Tritium				
1. Total Release	Ci	4.23E+00	5.12E+00	1.00E+01
2. Average Release Rate	uci/sec	5.33E-01	6.44E-01	
E. Carbon-14				
1. Total Release	Ci	1.70E+00	1.20E+00	1.00E+01
2. Average Release Rate	uci/sec	2.10E-01	1.50E-01	
F. Percent Qtrly Tech Spec Reporting Levels				
1. Iodines, Particulates, and Tritium	%	4.57E-01	4.82E-01	

RADIOACTIVE EFFLUENT RELEASE REPORT
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Table 1B Gaseous Effluents - Elevated Releases

Nuclides Released	Unit	Continuous Mode 1st Qtr	Continuous Mode 2nd Qtr	Batch Mode 1st Qtr	Batch Mode 2nd Qtr
1. Fission Gases					
KR-85M	Ci	7.41E-01	6.92E+00	0.00E+00	0.00E+00
KR-87	Ci	2.04E+00	8.13E+00	0.00E+00	0.00E+00
KR-88	Ci	1.92E+00	1.64E+01	0.00E+00	0.00E+00
KR-89	Ci	1.41E+01	2.11E+00	0.00E+00	0.00E+00
XE-133	Ci	9.51E+01	5.54E+00	2.49E-02	6.67E-03
XE-133M	Ci	2.37E+00	3.09E-01	0.00E+00	0.00E+00
XE-135	Ci	1.20E+01	5.11E+01	3.22E-02	7.28E-03
XE-135M	Ci	1.87E+01	8.16E+00	0.00E+00	0.00E+00
XE-137	Ci	9.01E+01	5.16E+01	0.00E+00	0.00E+00
XE-138	Ci	3.77E+01	2.84E+01	0.00E+00	0.00E+00
AR-41	Ci	0.00E+00	1.28E-01	3.57E-03	1.40E-02
Total for Period	Ci	2.75E+02	1.79E+02	6.06E-02	2.79E-02
2. Iodines					
I-131	Ci	2.51E-03	1.08E-03	2.89E-08	0.00E+00
I-133	Ci	1.56E-02	5.75E-03	1.13E-07	1.47E-07
I-135	Ci	2.30E-02	6.66E-03	0.00E+00	0.00E+00
Total for Period	Ci	4.10E-02	1.35E-02	1.42E-07	1.47E-07
3. Particulates					
CO-60	Ci	9.29E-07	2.05E-06	0.00E+00	0.00E+00
CS-137	Ci	1.94E-06	1.51E-05	0.00E+00	0.00E+00
BA-140	Ci	1.62E-04	6.55E-05	0.00E+00	0.00E+00
CE-141	Ci	9.95E-08	0.00E+00	0.00E+00	0.00E+00
SR-89	Ci	5.02E-05	4.45E-04	0.00E+00	0.00E+00
SR-90	Ci	1.94E-07	2.87E-07	0.00E+00	0.00E+00
Total for Period	Ci	2.16E-04	5.28E-04	0.00E+00	0.00E+00

RADIOACTIVE EFFLUENT RELEASE REPORT
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Table 1B Gaseous Effluents - Elevated Releases

Nuclides Released	Unit	Continuous Mode 3rd Qtr	Continuous Mode 4th Qtr	Batch Mode 3rd Qtr	Batch Mode 4th Qtr
1. Fission Gases					
KR-85M	Ci	9.65E-01	4.81E+00	0.00E+00	0.00E+00
KR-87	Ci	2.53E+00	5.63E+00	0.00E+00	0.00E+00
KR-88	Ci	2.72E+00	1.11E+01	0.00E+00	0.00E+00
KR-89	Ci	1.65E+01	6.72E+00	0.00E+00	0.00E+00
XE-133	Ci	9.83E+01	3.63E+01	1.58E-04	9.51E-03
XE-133M	Ci	2.42E+00	1.01E+00	0.00E+00	0.00E+00
XE-135	Ci	1.02E+01	4.33E+01	0.00E+00	9.52E-03
XE-135M	Ci	1.79E+01	1.16E+01	0.00E+00	0.00E+00
XE-137	Ci	7.80E+01	6.35E+01	0.00E+00	0.00E+00
XE-138	Ci	4.21E+01	2.46E+01	0.00E+00	0.00E+00
AR-41	Ci	5.14E-02	1.02E-02	7.14E-04	0.00E+00
Total for Period	Ci	2.72E+02	2.08E+02	8.72E-04	1.90E-02
2. Iodines					
I-131	Ci	1.68E-03	1.92E-03	0.00E+00	4.46E-08
I-133	Ci	1.03E-02	7.90E-03	0.00E+00	1.17E-07
I-135	Ci	1.46E-02	7.16E-03	0.00E+00	6.65E-08
Total for Period	Ci	2.66E-02	1.70E-02	0.00E+00	2.28E-07
3. Particulates					
CO-60	Ci	1.00E-06	1.03E-06	0.00E+00	2.01E-08
CS-137	Ci	1.75E-05	5.93E-06	0.00E+00	0.00E+00
BA-140	Ci	2.02E-04	1.28E-04	0.00E+00	0.00E+00
CE-141	Ci	7.98E-08	0.00E+00	0.00E+00	0.00E+00
SR-89	Ci	5.37E-04	1.27E-04	0.00E+00	0.00E+00
SR-90	Ci	3.65E-07	2.09E-07	0.00E+00	0.00E+00
Total for Period	Ci	7.59E-04	2.62E-04	0.00E+00	2.01E-08

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Table 1C Gaseous Effluents - Building Vent Releases

Nuclides Released	Unit	Continuous Mode 1st Qtr	Continuous Mode 2nd Qtr	Batch Mode 1st Qtr	Batch Mode 2nd Qtr
1. Fission Gases					
KR-85M	Ci	0.00E+00	5.78E-01	0.00E+00	0.00E+00
XE-133	Ci	3.06E-01	3.95E-01	0.00E+00	0.00E+00
XE-135	Ci	1.89E+00	1.77E+00	0.00E+00	0.00E+00
XE-135M	Ci	3.27E+00	2.43E-01	0.00E+00	0.00E+00
XE-138	Ci	0.00E+00	5.38E-01	0.00E+00	0.00E+00
Total for Period	Ci	5.47E+00	3.53E+00	0.00E+00	0.00E+00
2. Iodines					
I-131	Ci	1.31E-03	1.61E-04	0.00E+00	0.00E+00
I-133	Ci	5.61E-03	1.03E-03	0.00E+00	0.00E+00
I-135	Ci	1.11E-02	0.00E+00	0.00E+00	0.00E+00
Total for Period	Ci	1.81E-02	1.19E-03	0.00E+00	0.00E+00
3. Particulates					
MN-54	Ci	0.00E+00	7.01E-07	0.00E+00	0.00E+00
CO-60	Ci	6.22E-05	6.26E-05	0.00E+00	0.00E+00
CS-137	Ci	5.89E-05	4.64E-06	0.00E+00	0.00E+00
BA-140	Ci	6.44E-05	0.00E+00	0.00E+00	0.00E+00
SR-89	Ci	3.93E-05	8.57E-07	0.00E+00	0.00E+00
Total for Period	Ci	2.25E-04	6.88E-05	0.00E+00	0.00E+00

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Table 1C Gaseous Effluents - Building Vent Releases

Nuclides Released	Unit	Continuous Mode 3rd Qtr	Continuous Mode 4th Qtr	Batch Mode 3rd Qtr	Batch Mode 4th Qtr
1. Fission Gases					
XE-131M	Ci	0.00E+00	3.58E-01	0.00E+00	0.00E+00
XE-133	Ci	4.30E-01	5.50E-01	0.00E+00	0.00E+00
XE-135	Ci	6.43E+00	2.25E+00	0.00E+00	0.00E+00
XE-135M	Ci	1.87E+00	2.87E+00	0.00E+00	0.00E+00
Total for Period	Ci	8.73E+00	6.02E+00	0.00E+00	0.00E+00
2. Iodines					
I-131	Ci	5.15E-04	4.66E-04	0.00E+00	0.00E+00
I-133	Ci	5.07E-03	3.61E-03	0.00E+00	0.00E+00
I-135	Ci	7.16E-03	2.56E-03	0.00E+00	0.00E+00
Total for Period	Ci	1.27E-02	6.64E-03	0.00E+00	0.00E+00
3. Particulates					
CR-51	Ci	3.28E-06	0.00E+00	0.00E+00	0.00E+00
CO-60	Ci	5.94E-05	6.89E-05	0.00E+00	0.00E+00
CS-137	Ci	0.00E+00	3.25E-05	0.00E+00	0.00E+00
BA-140	Ci	2.85E-06	3.11E-06	0.00E+00	0.00E+00
CE-144	Ci	2.90E-06	0.00E+00	0.00E+00	0.00E+00
SR-89	Ci	1.29E-05	1.43E-07	0.00E+00	0.00E+00
Total for Period	Ci	8.13E-05	1.05E-04	0.00E+00	0.00E+00

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Table 2A Liquid Effluents - Summation of all Releases

	Units	1st Qtr	2nd Qtr	Est. Total Error, %
A. Fission & Activation products				
1. Total Release (not including tritium, gases, alpha)	Ci	0.00E+00	0.00E+00	0.00E+00
2. Avg Diluted Concentration	uci/ml	0.00E+00	0.00E+00	
B. Tritium				
1. Total Release	Ci	0.00E+00	0.00E+00	0.00E+00
2. Avg Diluted Concentration	uci/ml	0.00E+00	0.00E+00	
C. Dissolved and Entrained Gases				
1. Total Release	Ci	0.00E+00	0.00E+00	0.00E+00
2. Avg Diluted Concentration	uci/ml	0.00E+00	0.00E+00	
D. Percent Qtrly Tech Spec Reporting Level				
1. Whole Body Dose	%	0.00E+00	0.00E+00	
2. Organ Dose	%	0.00E+00	0.00E+00	
E. Gross Alpha Radioactivity				
1. Total Release	Ci	0.00E+00	0.00E+00	0.00E+00
F. Volume of Waste Released	Liters	0.00E+00	0.00E+00	0.00E+00
F. Volume of Dilution Water Used	Liters	0.00E+00	0.00E+00	0.00E+00

Table 2B Liquid Effluents

Nuclides Released	Unit	Continuous Mode		Batch Mode	
		1st Qtr	2nd Qtr	1st Qtr	2nd Qtr

None Released This Period

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Table 2A Liquid Effluents - Summation of all Releases

	Units	3rd Qtr	4th Qtr	Est. Total Error, %
A. Fission & Activation products				
1. Total Release (not including tritium, gases, alpha)	Ci	0.00E+00	0.00E+00	0.00E+00
2. Avg Diluted Concentration	uci/ml	0.00E+00	0.00E+00	
B. Tritium				
1. Total Release	Ci	0.00E+00	0.00E+00	0.00E+00
2. Avg Diluted Concentration	uci/ml	0.00E+00	0.00E+00	
C. Dissolved and Entrained Gases				
1. Total Release	Ci	0.00E+00	0.00E+00	0.00E+00
2. Avg Diluted Concentration	uci/ml	0.00E+00	0.00E+00	
D. Percent Qtrly Tech Spec Reporting Level				
1. Whole Body Dose	%	0.00E+00	0.00E+00	
2. Organ Dose	%	0.00E+00	0.00E+00	
E. Gross Alpha Radioactivity				
1. Total Release	Ci	0.00E+00	0.00E+00	0.00E+00
F. Volume of Waste Released	Liters	0.00E+00	0.00E+00	0.00E+00
F. Volume of Dilution Water Used	Liters	0.00E+00	0.00E+00	0.00E+00

Table 2B Liquid Effluents

Nuclides Released	Unit	Continuous Mode		Batch Mode	
		3rd Qtr	4th Qtr	3rd Qtr	4th Qtr

None Released This Period

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Table 3 Solid Waste and Irradiated Fuel Shipments

* S E E A T T A C H E D R E P O R T S *

NRC Regulatory Guide 1.21 Reports

Report Date : 2/9/2012

Solid Waste Shipped Offsite for Disposal and Estimates of Major Nuclides by Waste Class and Stream
During Period From 01/01/2011 to 12/31/2011 Percent Cutoff: 0

Waste Stream : Resins, Filters, and Evap Bottoms
PR-D-NA 120 PRD-NA 215 T34A Shield Plugs PR-D-NA-T34B

Waste Class	Volume Ft^3	Volume M^3	Curies Shipped	% Error (Ci)
A	9.84E+02	2.79E+01	4.53E+00	+/- 25%
B	9.90E+01	2.80E+00	6.26E+01	+/- 25%
C	0.00E+00	0.00E+00	0.00E+00	+/- 25%
All	1.08E+03	3.07E+01	6.72E+01	+/- 25%

Waste Stream : Dry Active Waste
DAW-U-NA DAW-U-NA Cond Demin Elem Shielded B-25
Condensate Pump Lead Waste EPU Metal Waste B25 Box
Shielded B25 Box C-Van FW Heater Legs

Waste Class	Volume Ft^3	Volume M^3	Curies Shipped	%Error (Ci)
A	4.51E+04	1.28E+03	3.51E+00	+/-25%
B	0.00E+00	0.00E+00	0.00E+00	+/-25%
C	0.00E+00	0.00E+00	0.00E+00	+/-25%
All	4.51E+04	1.28E+03	3.51E+00	+/-25%

Waste Stream : Irradiated Components

Waste Class	Volume Ft^3	Volume M^3	Curies Shipped	% Error (Ci)
A	0.00E+00	0.00E+00	0.00E+00	+/-25%
B	0.00E+00	0.00E+00	0.00E+00	+/-25%
C	0.00E+00	0.00E+00	0.00E+00	+/-25%
All	0.00E+00	0.00E+00	0.00E+00	+/-25%

NRC Regulatory Guide 1.21 Reports

Report Date : 2/9/2012

Solid Waste Shipped Offsite for Disposal and Estimates of Major Nuclides by Waste Class and Stream
During Period From 01/01/2011 to 12/31/2011 Percent Cutoff: 0

Waste Stream : Other Waste

Combined Packages S-40 TB Sump Water/ST-19 Water/Sludge Old Hot Shop
Hotwell Sump Concrete Cutting SlurryS-44 Water/Muck Waste Oil
Grease 15 FW Heater 15B FW Heater 14 FW Heater

Waste Class	Volume Ft^3	Volume M^3	Curies Shipped	% Error (Ci)
A	4.87E+03	1.38E+02	1.02E+00	+/-25%
B	0.00E+00	0.00E+00	0.00E+00	+/-25%
C	0.00E+00	0.00E+00	0.00E+00	+/-25%
All	4.87E+03	1.38E+02	1.02E+00	+/-25%

Waste Stream : Sum of All 4 Categories

Combined Packages DAW-U-NA DAW-U-NA PR-D-NA 120
PRD-NA 215 T34A Cond Demin Elem Shielded B-25 Condensate Pump
S-40 TB Sump Water/ST-19 Water/Sludge Old Hot Shop Hotwell Sump

Waste Class	Volume Ft^3	Volume M^3	Curies Shipped	% Error (Ci)
A	5.10E+04	1.44E+03	9.06E+00	+/-25%
B	9.90E+01	2.80E+00	6.26E+01	+/-25%
C	0.00E+00	0.00E+00	0.00E+00	+/-25%
All	5.11E+04	1.45E+03	7.17E+01	+/-25%

-Combined Waste Type Shipment, Major Volume Waste Type Shown

NRC Regulatory Guide 1.21 Reports

Report Date : 2/9/2012

Solid Waste Shipped Offsite for Disposal and Estimates of Major Nuclides by Waste Class and Stream
During Period From 01/01/2011 to 12/31/2011

Number of Shipments	Mode of Transportation	Destination
7	Hittman Transport	EnergySolutions LLC.
15	Xcel Energy Trucking	EnergySolutions LLC.
1	Xcel Energy Trucking	IMPACT Services, Inc.
1	Xcel Energy Trucking	Perma-Fix of Florida
1	Hittman Transport	Studsvik Processing Facility LLC Erwin
2	Hittman Transport	Studsvik Processing Facility Memphis
1	R&R Trucking	Studsvik Processing Facility Memphis
25	Xcel Energy Trucking	Studsvik Processing Facility Memphis

NRC Regulatory Guide 1.21 Reports

Report Date : 2/9/2012

Solid Waste Shipped Offsite for Disposal and Estimates of Major Nuclides by Waste Class and Stream
During Period From 01/01/2011 to 12/31/2011 Percent Cutoff: 0

Resins, Filters, and Evap Bottom		
Waste Class A		
Nuclide Name	Percent Abundance	Curies
H-3	0.312%	1.41E-02
C-14	1.177%	5.33E-02
Cr-51	0.119%	5.41E-03
Mn-54	3.310%	1.50E-01
Fe-55	15.420%	6.99E-01
Fe-59	0.021%	9.36E-04
Co-58	0.669%	3.03E-02
Co-60	40.565%	1.84E+00
Ni-63	2.133%	9.66E-02
Zn-65	3.713%	1.68E-01
Sr-90	1.911%	8.66E-02
Zr-95	0.005%	2.04E-04
Nb-95	0.016%	7.06E-04
Nb-97	0.000%	1.76E-52
Tc-99	0.001%	4.84E-05
Ru-103	0.002%	8.49E-05
Sb-124	0.002%	8.53E-05
I-129	0.004%	1.75E-04
I-131	0.531%	2.41E-02
Cs-134	0.034%	1.54E-03
Cs-137	29.438%	1.33E+00
Ba-140	0.385%	1.74E-02
La-140	0.011%	5.09E-04
Ce-141	0.113%	5.12E-03
Ce-144	0.075%	3.41E-03
Pu-238	0.004%	1.82E-04
Pu-239	0.001%	6.20E-05
Pu-240	0.001%	5.98E-05
Pu-241	0.005%	2.24E-04
Am-241	0.004%	1.81E-04
Am-243	0.013%	5.76E-04
Cm-242	0.001%	4.10E-05
Cm-243	0.001%	5.35E-05
Cm-244	0.001%	3.79E-05
Resins, Filters, and Evap Bottom		
Waste Class B		
Nuclide Name	Percent Abundance	Curies
H-3	12.464%	7.81E+00
C-14	0.002%	1.15E-03
Mn-54	5.654%	3.54E+00
Fe-55	21.775%	1.36E+01
Co-58	2.029%	1.27E+00
Co-60	46.199%	2.89E+01
Ni-63	0.993%	6.22E-01
Zn-65	8.804%	5.51E+00
Sr-89	0.169%	1.06E-01

Solid Waste Shipped Offsite for Disposal and Estimates of Major Nuclides by Waste Class and Stream
During Period From 01/01/2011 to 12/31/2011 Percent Cutoff: 0

Sr-90	0.290%	1.82E-01
Tc-99	0.001%	4.63E-04
Ag-110m	0.211%	1.32E-01
Cs-134	0.131%	8.22E-02
Cs-137	1.105%	6.92E-01
Ce-144	0.040%	2.51E-02
Pu-238	0.001%	3.93E-04
Pu-239	0.000%	2.38E-04
Pu-240	0.000%	2.38E-04
Pu-241	0.132%	8.29E-02
Pu-242	0.000%	8.74E-06
Am-241	0.001%	5.10E-04
Cm-242	0.000%	2.11E-04
Cm-243	0.000%	1.38E-04
Cm-244	0.000%	8.45E-05
Resins, Filters, and Evap Bottom		
Waste Class All		
Nuclide Name	Percent Abundance	Curies
H-3	11.644%	7.82E+00
C-14	0.081%	5.45E-02
Cr-51	0.008%	5.41E-03
Mn-54	5.496%	3.69E+00
Fe-55	21.346%	1.43E+01
Fe-59	0.001%	9.36E-04
Co-58	1.937%	1.30E+00
Co-60	45.819%	3.08E+01
Ni-63	1.070%	7.18E-01
Zn-65	8.460%	5.68E+00
Sr-89	0.157%	1.06E-01
Sr-90	0.399%	2.68E-01
Zr-95	0.000%	2.04E-04
Nb-95	0.001%	7.06E-04
Nb-97	0.000%	1.76E-52
Tc-99	0.001%	5.11E-04
Ru-103	0.000%	8.49E-05
Ag-110m	0.197%	1.32E-01
Sb-124	0.000%	8.53E-05
I-129	0.000%	1.75E-04
I-131	0.036%	2.41E-02
Cs-134	0.125%	8.37E-02
Cs-137	3.016%	2.03E+00
Ba-140	0.026%	1.74E-02
La-140	0.001%	5.09E-04
Ce-141	0.008%	5.12E-03
Ce-144	0.042%	2.85E-02
Pu-238	0.001%	5.75E-04
Pu-239	0.000%	3.00E-04
Pu-240	0.000%	2.98E-04
Pu-241	0.124%	8.31E-02
Pu-242	0.000%	8.74E-06

Solid Waste Shipped Offsite for Disposal and Estimates of Major Nuclides by Waste Class and Stream
During Period From 01/01/2011 to 12/31/2011 Percent Cutoff: 0

Am-241	0.001%	6.91E-04
Am-243	0.001%	5.76E-04
Cm-242	0.000%	2.52E-04
Cm-243	0.000%	1.92E-04
Cm-244	0.000%	1.22E-04
Dry Active Waste		
Waste Class A		
Nuclide Name	Percent Abundance	Curies
H-3	0.131%	4.62E-03
C-14	0.163%	5.71E-03
Cr-51	1.476%	5.19E-02
Mn-54	3.239%	1.14E-01
Fe-55	51.099%	1.80E+00
Fe-59	0.314%	1.10E-02
Co-57	0.002%	8.21E-05
Co-58	0.545%	1.92E-02
Co-60	30.788%	1.08E+00
Ni-63	0.668%	2.35E-02
Zn-65	1.938%	6.81E-02
Sr-89	0.952%	3.34E-02
Sr-90	0.077%	2.69E-03
Zr-95	0.065%	2.29E-03
Nb-95	0.126%	4.43E-03
Tc-99	0.030%	1.06E-03
Ru-103	0.027%	9.48E-04
Ag-110m	0.068%	2.38E-03
Sb-124	0.027%	9.55E-04
I-129	0.000%	1.39E-05
I-131	1.096%	3.85E-02
Cs-134	0.041%	1.44E-03
Cs-137	5.747%	2.02E-01
Ba-140	0.708%	2.49E-02
La-140	0.209%	7.35E-03
Ce-141	0.260%	9.15E-03
Ce-144	0.119%	4.19E-03
Pu-238	0.002%	5.53E-05
Pu-239	0.001%	3.25E-05
Pu-240	0.000%	4.92E-08
Pu-241	0.075%	2.63E-03
Am-241	0.006%	2.23E-04
Cm-242	0.000%	3.14E-06
Cm-243	0.000%	4.38E-06
Cm-244	0.000%	1.06E-07
Dry Active Waste		
Waste Class All		
Nuclide Name	Percent Abundance	Curies
H-3	0.131%	4.62E-03
C-14	0.163%	5.71E-03
Cr-51	1.476%	5.19E-02

Solid Waste Shipped Offsite for Disposal and Estimates of Major Nuclides by Waste Class and Stream
During Period From 01/01/2011 to 12/31/2011 Percent Cutoff: 0

Mn-54	3.239%	1.14E-01
Fe-55	51.099%	1.80E+00
Fe-59	0.314%	1.10E-02
Co-57	0.002%	8.21E-05
Co-58	0.545%	1.92E-02
Co-60	30.788%	1.08E+00
Ni-63	0.668%	2.35E-02
Zn-65	1.938%	6.81E-02
Sr-89	0.952%	3.34E-02
Sr-90	0.077%	2.69E-03
Zr-95	0.065%	2.29E-03
Nb-95	0.126%	4.43E-03
Tc-99	0.030%	1.06E-03
Ru-103	0.027%	9.48E-04
Ag-110m	0.068%	2.38E-03
Sb-124	0.027%	9.55E-04
I-129	0.000%	1.39E-05
I-131	1.096%	3.85E-02
Cs-134	0.041%	1.44E-03
Cs-137	5.747%	2.02E-01
Ba-140	0.708%	2.49E-02
La-140	0.209%	7.35E-03
Ce-141	0.260%	9.15E-03
Ce-144	0.119%	4.19E-03
Pu-238	0.002%	5.53E-05
Pu-239	0.001%	3.25E-05
Pu-240	0.000%	4.92E-08
Pu-241	0.075%	2.63E-03
Am-241	0.006%	2.23E-04
Cm-242	0.000%	3.14E-06
Cm-243	0.000%	4.38E-06
Cm-244	0.000%	1.06E-07
Other Waste		
Waste Class A		
Nuclide Name	Percent Abundance	Curies
H-3	0.268%	2.72E-03
C-14	0.290%	2.95E-03
Cr-51	2.807%	2.85E-02
Mn-54	4.766%	4.85E-02
Fe-55	35.709%	3.63E-01
Fe-59	0.614%	6.24E-03
Co-57	0.005%	5.35E-05
Co-58	1.015%	1.03E-02
Co-60	34.063%	3.46E-01
Ni-63	1.488%	1.51E-02
Zn-65	3.647%	3.71E-02
Sr-85	0.000%	7.23E-10
Sr-89	1.544%	1.57E-02
Sr-90	0.153%	1.56E-03
Y-88	0.000%	1.10E-07

Solid Waste Shipped Offsite for Disposal and Estimates of Major Nuclides by Waste Class and Stream
During Period From 01/01/2011 to 12/31/2011 Percent Cutoff: 0

Zr-95	0.133%	1.35E-03
Nb-95	0.239%	2.43E-03
Tc-99	0.054%	5.54E-04
Ru-103	0.053%	5.38E-04
Ag-110m	0.246%	2.50E-03
Cd-109	0.002%	1.83E-05
Sn-113	0.000%	4.64E-08
Sb-124	0.055%	5.60E-04
I-129	0.001%	6.79E-06
I-131	1.062%	1.08E-02
Cs-134	0.089%	9.02E-04
Cs-137	10.132%	1.03E-01
Ba-140	0.796%	8.09E-03
La-140	0.094%	9.52E-04
Ce-139	0.000%	5.13E-08
Ce-141	0.298%	3.03E-03
Ce-144	0.146%	1.49E-03
Hg-203	0.000%	2.12E-10
Pu-238	0.003%	3.55E-05
Pu-239	0.002%	2.01E-05
Pu-240	0.000%	3.38E-07
Pu-241	0.207%	2.10E-03
Pu-242	0.000%	1.78E-08
Am-241	0.014%	1.47E-04
Cm-242	0.000%	1.81E-06
Cm-243	0.000%	2.98E-06
Cm-244	0.000%	7.72E-07
Other Waste		
Waste Class All		
Nuclide Name	Percent Abundance	Curies
H-3	0.268%	2.72E-03
C-14	0.290%	2.95E-03
Cr-51	2.807%	2.85E-02
Mn-54	4.766%	4.85E-02
Fe-55	35.709%	3.63E-01
Fe-59	0.614%	6.24E-03
Co-57	0.005%	5.35E-05
Co-58	1.015%	1.03E-02
Co-60	34.063%	3.46E-01
Ni-63	1.488%	1.51E-02
Zn-65	3.647%	3.71E-02
Sr-85	0.000%	7.23E-10
Sr-89	1.544%	1.57E-02
Sr-90	0.153%	1.56E-03
Y-88	0.000%	1.10E-07
Zr-95	0.133%	1.35E-03
Nb-95	0.239%	2.43E-03
Tc-99	0.054%	5.54E-04
Ru-103	0.053%	5.38E-04
Ag-110m	0.246%	2.50E-03

Solid Waste Shipped Offsite for Disposal and Estimates of Major Nuclides by Waste Class and Stream
During Period From 01/01/2011 to 12/31/2011 Percent Cutoff: 0

Cd-109	0.002%	1.83E-05
Sn-113	0.000%	4.64E-08
Sb-124	0.055%	5.60E-04
I-129	0.001%	6.79E-06
I-131	1.062%	1.08E-02
Cs-134	0.089%	9.02E-04
Cs-137	10.132%	1.03E-01
Ba-140	0.796%	8.09E-03
La-140	0.094%	9.52E-04
Ce-139	0.000%	5.13E-08
Ce-141	0.298%	3.03E-03
Ce-144	0.146%	1.49E-03
Hg-203	0.000%	2.12E-10
Pu-238	0.003%	3.55E-05
Pu-239	0.002%	2.01E-05
Pu-240	0.000%	3.38E-07
Pu-241	0.207%	2.10E-03
Pu-242	0.000%	1.78E-08
Am-241	0.014%	1.47E-04
Cm-242	0.000%	1.81E-06
Cm-243	0.000%	2.98E-06
Cm-244	0.000%	7.72E-07
Sum of All 4 Categories		
Waste Class A		
Nuclide Name	Percent Abundance	Curies
H-3	0.237%	2.15E-02
C-14	0.684%	6.20E-02
Cr-51	0.947%	8.58E-02
Mn-54	3.446%	3.12E-01
Fe-55	31.533%	2.86E+00
Fe-59	0.201%	1.82E-02
Co-57	0.001%	1.36E-04
Co-58	0.660%	5.98E-02
Co-60	36.044%	3.27E+00
Ni-63	1.493%	1.35E-01
Zn-65	3.017%	2.73E-01
Sr-85	0.000%	7.23E-10
Sr-89	0.542%	4.91E-02
Sr-90	1.002%	9.08E-02
Y-88	0.000%	1.10E-07
Zr-95	0.042%	3.84E-03
Nb-95	0.084%	7.57E-03
Nb-97	0.000%	1.76E-52
Tc-99	0.018%	1.66E-03
Ru-103	0.017%	1.57E-03
Ag-110m	0.054%	4.88E-03
Cd-109	0.000%	1.83E-05
Sn-113	0.000%	4.64E-08
Sb-124	0.018%	1.60E-03
I-129	0.002%	1.96E-04

Solid Waste Shipped Offsite for Disposal and Estimates of Major Nuclides by Waste Class and Stream
During Period From 01/01/2011 to 12/31/2011 Percent Cutoff: 0

I-131	0.810%	7.34E-02
Cs-134	0.043%	3.88E-03
Cs-137	18.085%	1.64E+00
Ba-140	0.556%	5.04E-02
La-140	0.097%	8.82E-03
Ce-139	0.000%	5.13E-08
Ce-141	0.191%	1.73E-02
Ce-144	0.100%	9.09E-03
Hg-203	0.000%	2.12E-10
Pu-238	0.003%	2.73E-04
Pu-239	0.001%	1.15E-04
Pu-240	0.001%	6.02E-05
Pu-241	0.055%	4.96E-03
Pu-242	0.000%	1.78E-08
Am-241	0.006%	5.51E-04
Am-243	0.006%	5.76E-04
Cm-242	0.001%	4.59E-05
Cm-243	0.001%	6.08E-05
Cm-244	0.000%	3.88E-05
Sum of All 4 Categories		
Waste Class B		
Nuclide Name	Percent Abundance	Curies
H-3	12.464%	7.81E+00
C-14	0.002%	1.15E-03
Mn-54	5.654%	3.54E+00
Fe-55	21.775%	1.36E+01
Co-58	2.029%	1.27E+00
Co-60	46.199%	2.89E+01
Ni-63	0.993%	6.22E-01
Zn-65	8.804%	5.51E+00
Sr-89	0.169%	1.06E-01
Sr-90	0.290%	1.82E-01
Tc-99	0.001%	4.63E-04
Ag-110m	0.211%	1.32E-01
Cs-134	0.131%	8.22E-02
Cs-137	1.105%	6.92E-01
Ce-144	0.040%	2.51E-02
Pu-238	0.001%	3.93E-04
Pu-239	0.000%	2.38E-04
Pu-240	0.000%	2.38E-04
Pu-241	0.132%	8.29E-02
Pu-242	0.000%	8.74E-06
Am-241	0.001%	5.10E-04
Cm-242	0.000%	2.11E-04
Cm-243	0.000%	1.38E-04
Cm-244	0.000%	8.45E-05
Sum of All 4 Categories		
Waste Class All		
Nuclide Name	Percent Abundance	Curies

Solid Waste Shipped Offsite for Disposal and Estimates of Major Nuclides by Waste Class and Stream
During Period From 01/01/2011 to 12/31/2011 Percent Cutoff: 0

H-3	10.919%	7.83E+00
C-14	0.088%	6.31E-02
Cr-51	0.120%	8.58E-02
Mn-54	5.375%	3.85E+00
Fe-55	23.008%	1.65E+01
Fe-59	0.025%	1.82E-02
Co-57	0.000%	1.36E-04
Co-58	1.856%	1.33E+00
Co-60	44.916%	3.22E+01
Ni-63	1.056%	7.57E-01
Zn-65	8.072%	5.79E+00
Sr-85	0.000%	7.23E-10
Sr-89	0.216%	1.55E-01
Sr-90	0.380%	2.72E-01
Y-88	0.000%	1.10E-07
Zr-95	0.005%	3.84E-03
Nb-95	0.011%	7.57E-03
Nb-97	0.000%	1.76E-52
Tc-99	0.003%	2.12E-03
Ru-103	0.002%	1.57E-03
Ag-110m	0.191%	1.37E-01
Cd-109	0.000%	1.83E-05
Sn-113	0.000%	4.64E-08
Sb-124	0.002%	1.60E-03
I-129	0.000%	1.96E-04
I-131	0.102%	7.34E-02
Cs-134	0.120%	8.61E-02
Cs-137	3.250%	2.33E+00
Ba-140	0.070%	5.04E-02
La-140	0.012%	8.82E-03
Ce-139	0.000%	5.13E-08
Ce-141	0.024%	1.73E-02
Ce-144	0.048%	3.42E-02
Hg-203	0.000%	2.12E-10
Pu-238	0.001%	6.66E-04
Pu-239	0.000%	3.53E-04
Pu-240	0.000%	2.98E-04
Pu-241	0.123%	8.78E-02
Pu-242	0.000%	8.75E-06
Am-241	0.001%	1.06E-03
Am-243	0.001%	5.76E-04
Cm-242	0.000%	2.57E-04
Cm-243	0.000%	1.99E-04
Cm-244	0.000%	1.23E-04

NRC Regulatory Guide 1.21 Reports

Report Date : 2/9/2012

Solid Waste Shipped Offsite for Disposal and Estimates of Major Nuclides by Waste Class and Stream
During Period From 01/01/2011 to 12/31/2011

Manifest Number	Date Shipped	Waste Volume Used	Burial volume Used
11-172	12/28/2011	Yes	
11-169	12/15/2011	Yes	
11-170	12/13/2011	Yes	
11-164	12/13/2011	Yes	
11-168	12/8/2011	Yes	
11-165	11/30/2011	Yes	
11-151	11/14/2011	Yes	
11-143	8/25/2011	Yes	
11-141	8/18/2011	Yes	
11-139	8/9/2011	Yes	
11-138	7/29/2011	Yes	
11-132	7/26/2011	Yes	
11-131	7/26/2011	Yes	
11-127	7/11/2011	Yes	
11-126	7/11/2011	Yes	
11-125	7/5/2011	Yes	
11-124	7/5/2011	Yes	
11-123	7/5/2011	Yes	
11-120	6/28/2011	Yes	
11-112	6/20/2011	Yes	
11-117	6/20/2011	Yes	
11-116	6/20/2011	Yes	
11-115	6/20/2011	Yes	
11-109	6/13/2011	Yes	
11-114	6/13/2011	Yes	
11-113	6/13/2011	Yes	
11-108	6/7/2011	Yes	
11-106	6/7/2011	Yes	
11-104	5/31/2011	Yes	
11-88	5/16/2011	Yes	
11-91	5/16/2011	Yes	
11-80	5/6/2011	Yes	
11-74	4/29/2011	Yes	
11-73	4/29/2011	Yes	
11-69	4/29/2011	Yes	
11-67	4/25/2011	Yes	
11-62	4/18/2011	Yes	

NRC Regulatory Guide 1.21 Reports

Report Date : 2/9/2012

Solid Waste Shipped Offsite for Disposal and Estimates of Major Nuclides by Waste Class and Stream
During Period From 01/01/2011 to 12/31/2011

Manifest Number	Date Shipped	Waste Volume Used	Burial volume Used
11-53	4/8/2011	Yes	
11-49	4/8/2011	Yes	
11-46	4/4/2011	Yes	
11-41	3/29/2011	Yes	
11-39	3/25/2011	Yes	
11-38	3/25/2011	Yes	
11-37	3/25/2011	Yes	
11-36	3/24/2011	Yes	
11-32	3/21/2011	Yes	
11-29	3/17/2011	Yes	
11-28	3/17/2011	Yes	
11-25	3/16/2011	Yes	
11-20	3/5/2011	Yes	
11-18	2/21/2011	Yes	
11-12	2/14/2011	Yes	
11-05	1/17/2011	Yes	

ENCLOSURE 2

OFF-SITE RADIATION DOSE ASSESSMENT FOR JANUARY 1 – DECEMBER 31, 2011

6 pages follow

MONTICELLO NUCLEAR GENERATING PLANT

Offsite Radiation Dose Assessment
for January 1, - December 31, 2011

An assessment of radiation dose due to releases from the Monticello Nuclear Generating Plant during 2011 was performed in accordance with the Offsite Dose Calculation Manual (ODCM)., Computed doses were well below the 40 CFR 190 Standards and 10 CFR Part 50, Appendix I Guidelines.

Offsite dose calculation formulas and meteorological data from the Offsite Dose Calculation Manual were used in making this assessment. Source terms were obtained from the Radioactive Effluent Release Report for 2011.

Offsite Dose from Gaseous Releases (ODCM –08.01 section 2.1.3)

Computed dose due to gaseous releases are reported in Table 1. Critical receptor location and pathways for organ dose are reported in Table 2. Whole body and organ dose due to gaseous releases are a small percentage of Appendix I Guidelines.

Offsite Dose From Liquid Releases (ODCM –08.01 section 2.1.3)

Dose from liquid releases are listed in Table 1.

There were no liquid releases in 2011.

Dose to Individuals Due to Their Activities Inside the Site Boundary (ODCM –08.01 section 2.1.3)

Computed dose to the whole body, skin and organ (thyroid), are reported in Table 1. There are several groups of concern, Security Officers training at the rifle range at the old EPA station, cleaning contractors at the Receiving Warehouse and XCEL Energy Company transmission and distribution crews working in the substation. Use of a very conservative assumption of 40 hours/week spent inside the site boundary by these groups would conservatively represent the most exposed individual. The annual whole body, skin and organ dose was computed using plant stack and reactor building vent X/Q and D/Q values for the Substation (a bounding location due to predominant wind direction and nearness to the release points) as input to the GASPAR code. This computed dose was reduced by the factor of 40/168 to account for limited occupancy.

Dose to the Likely Most Exposed Member of the General Public from Reactor Releases and Other Nearby Uranium Fuel Cycle Sources (ODCM –08.01 section 2.1.4)

There are no other uranium fuel facilities in the vicinity of the Monticello site. The only artificial source of exposure to the general public in addition to the plant effluent releases is from direct radiation of the reactor and the steam turbines.

An Independent Spent Fuel Storage Facility (ISFSI) was constructed west of the plant in 2007. The initial loading campaign was completed in 2008 with 10 HCM's loaded with spent fuel. Neutron and Gamma monitoring results at the site boundary show no significant differences between these TLD's and the control TLD's.

Environmental TLD's were used to provide data on direct and skyshine radiation dose and the GASPAR code was used to provide data on dose from airborne pathways.

TLD results from the area of the site boundary and the 5 mile ring show no significant differences between these TLD's and the control TLD's.

Therefore, the likely most exposed member of the general public will not receive an annual radiation dose from reactor effluent releases and all other fuel cycle activities in excess of 40 CFR 190 standards of 25 millirem to the whole body, 75 millirem to the thyroid and 25 millirem to any other organ.

REMP samples obtained from all 5 air sample stations and both goat milk producers during 2011 identified detectable concentrations of isotopes that could be related to operation of the Monticello Nuclear Generating Station. Given the following facts, the detectable concentrations are not a result of Monticello Nuclear Generating Station operation:

1) The quantities of radioactive airborne effluents for Monticello Nuclear Generating Station during 2011 did not increase significantly compared to year 2010.
2) REMP sample results have not detected the presence of these isotopes in airborne or milk samples prior to March 23, 2011 and after May 13, 2011.
3) The concentrations being detected in the indicator samples were also identified in the control samples from Monticello Nuclear Generating Station.

As such, the atypical detection of these radionuclides in both indicator and control samples is credibly attributed to the trans-Pacific transport of airborne releases from Dai-Ichi, Fukushima following the March 11, 2011 Tohoku earthquake and is not related to the operations of Monticello Nuclear Generating Station.

Changes in Land Use and Non Obtainable Milk or Vegetable Samples

(ODCM –08.01 sections 2.1.8 and 2.1.9)

There were several changes in land use resulting in increases in calculated doses. A residence obtaining Goat Milk for retail sale was identified during performance of the Annual Land Use Census and was added to the program (M-16, Kitzman Residence). Additionally a Control Goat Milk residence was added to the program (M-17, Greniger Residence). The goat farms were added to the program in October of 2010. Both goat farms are seasonal and only obtain milk samples from March to November. As a result there were no goat milk samples obtained after November 24th for M-16 and October 28th for the control location (M-17). One onsite monitoring well (M-52) was added to the program in the fourth quarter of 2010 and analyzed for tritium and gamma-emitting isotopes. There were no vegetable samples that could not be obtained during this reporting period.

Table 1

Offsite Radiation Dose Assessment - Monticello

PERIOD: January 1, through December 31, 2011

GASEOUS RELEASES	DOSE	10CFR50 Appendix I Guidelines
Maximum Site Boundary Gamma Air Dose (mrad/year)	0.0118	10
Maximum Site Boundary Beta Air Dose (mrad/year)	0.0124	20
Maximum Off-Site Dose to Any Organ (mrem/year)	0.1250	15
Maximum Dose to the Likely Most Exposed Member of the General Public (mrem/year)		
Whole Body	0.0359	5
Skin	0.0530	15
Max Organ (Thyroid)	0.1250	15
LIQUID RELEASES		
Maximum Off-Site Dose (mrem)		
Whole Body	0	3
Max Organ (All except bone)	0	10
GASEOUS RELEASES	**DOSE**	**40 CFR 190 LIMITS**
Maximum Dose to Individuals due to their Activities Inside the Site Boundary (mrem)		
Whole Body	0.0242	25
Thyroid	0.0310	75
Max Other Organ (Skin)	0.0300	25

Table 2

Offsite Radiation Dose Assessment - Monticello
Supplemental Information

PERIOD: January 1, through December 31, 2011

GASEOUS RELEASES		
Maximum Site Boundary Dose Location (from Reactor Building Vents)		
Sector	SSE	
Distance (miles)	0.40	
Substation		
Sector	S	
Distance from Plant Stack (miles)	0.2	
Distance from Reactor Building Vents	0.2	
Critical Receptor Location		
Sector	SSE	
Distance from Reactor Building Vents (miles)	3.0	
Pathways	Plume, Ground, Inhalation, Goat Milk	
Age Group	INFANT	
Organ	THYROID	
LIQUID RELEASES		
St. Paul Drinking Water Intake Location		
Pathways	Drinking Water	Drinking Water, Fish
Age Group	Infant	Adult
Organ	Whole Body	GI Tract
Dilution Factor (drinking water)	7:1	7:1

Bases for Radiation Dose Statements

Thermoluminescent dosimeters (TLD) are stationed around MNGP to measure the ambient gamma radiation field. Monitoring stations are placed near the site boundary and approximately five (5) miles from the reactor, in locations representing sixteen (16) compass sectors. Other locations are chosen to measure the radiation field at places of special interest such as nearby residences, meeting places and population centers. Control sites are located further than ten (10) miles from the site, in areas that should not be affected by plant operations. The results from the TLD's are reported in the Annual Radiological Environmental Monitoring Report (REMP). The results from this effort indicated no excess dose to offsite areas.

Additionally, NUREG-0543, METHODS FOR DEMONSTRATING LWR COMPLIANCE WITH THE EPA URANIUM FUEL CYCLE STANDARD (40 CFR PART 190) states in section IV, "As long as a nuclear plant site operates at a level below the Appendix I reporting requirements, no extra analysis is required to demonstrate compliance with 40 CFR Part 190". The organ and whole body doses reported in Table 1 are determined using 10 CFR 50 Appendix I methodology. The doses reported are well below the limits of Appendix I.