



Northern States Power Company

Monticello Nuclear Generating Plant
2807 West Hwy 75
Monticello, Minnesota 55362-9637

August 29, 1996

Technical Specification
6.7.A.4

US Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

MONTICELLO NUCLEAR GENERATING PLANT
Docket No. 50-263 License No. DPR-22

Effluent and Waste Disposal
Semi-Annual Report for January Through June 1996

In accordance with the Monticello Technical Specifications Section 6.7.A.4, we are submitting the Effluent and Waste Disposal Semi-Annual Report for the period of January-June 1996 as Attachment A.

In addition, the Effluent and Waste Disposal Semi-Annual Report for the period of July-December 1995 has been updated and is submitted as Attachment B. The reason for the update is that during routine periodic interlaboratory QC checks it was found that one of the HpGe detectors in the counting laboratory was improperly calibrated. An investigation determined that this miscalibration resulted in gaseous iodine values being conservatively analyzed and reported in our original submittal. One of the follow-up actions from the investigation was to revise the July-December 1995 report and resubmit it. For convenience, the affected iodine values are side-barred in the updated report. It is noted that there may be insignificant changes to some of the other values as a result of the updating process.

There were no changes to the Offsite Dose Calculation Manual (ODCM) or the Process Control Program (PCP) Manual during the reporting period. Also, there were no milk and vegetable sampling deviations or changes to the Radiation Environmental Monitoring Program during this reporting period.

This letter contains no new NRC commitments, nor does it modify any prior commitments. Please contact Mel Opstad at (612) 295-1653 if you require further information.

William J Hill
Plant Manager
Monticello Nuclear Generating Plant

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USNRC
August 29, 1996
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NORTHERN STATES POWER COMPANY

c: Regional Administrator - III, NRC
NRR Project Manager, NRC
Sr Resident Inspector, NRC
State of Minnesota
Attn: Kris Sanda
J Silberg

Attachment A Effluent and Waste Disposal Semi-Annual Report,
Period January-June 1996

Attachment B Effluent and Waste Disposal Semi-Annual Report,
Period July-December 1995 (Updated 8/29/96)

Attachment A

Effluent and Waste Disposal Semi-Annual Report,
Period January-June 1996

(The attached Report contains 9 pages.)

NORTHERN STATES POWER COMPANY
MONTICELLO NUCLEAR GENERATING PLANT
License No. DPR-22

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT
Period : Jan - Jun 1996

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)

EFFLUENT AND WASTE DISPOSAL SEMI-ANNUAL REPORT
Period : Jan - Jun 1996

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 :

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

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	2	
2. Total Time Period for Batch Releases	2617.0	min
3. Maximum Time Period for a Batch Release	2240.0	min
4. Average Time Period for a Batch Release	1308.5	min
5. Minimum Time Period for a Batch Release	377.0	min

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT
Period : Jan - Jun 1996

Supplemental Information (continued)

6. Abnormal Releases

A. Liquid :

1. Number of Releases	1	
2. Total Activity Released	6.80E-07	Ci

B. Gaseous :

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

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT
Period : Jan - Jun 1996

Table 1A Gaseous Effluents - Summation of all Releases

	Units	1st Qtr	2nd Qtr	Est. Total Error, %
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A. Fission & Activation gases

1. Total Release	Ci	1.07E+02	5.24E+01	2.00E+01
2. Average Release Rate	uci/sec	1.37E+01	6.67E+00	
3. Percent Tech Spec Qtrly Reporting Level				
Gamma Radiation	%	7.00E-02	2.89E-02	
Beta Radiation	%	2.82E-02	8.81E-03	

B. Iodines

1. Total I-131 Release	Ci	1.66E-03	2.34E-03	1.00E+01
2. Average I-131 Release Rate	uci/sec	2.14E-04	2.97E-04	

C. Particulates

1. Total Particulates	Ci	3.70E-04	4.33E-04	3.00E+01
2. Average Release Rate	uci/sec	4.75E-05	5.51E-05	
3. Gross Alpha Radioactivity	Ci	2.30E-06	5.05E-06	

D. Tritium

1. Total Release	Ci	7.45E+00	5.43E+00	1.00E+01
2. Average Release Rate	uci/sec	9.58E-01	6.91E-01	

E. Percent Qtrly Tech Spec Reporting Levels

1. Iodines, Particulates, and Tritium	%	3.37E-01	2.59E-01	
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EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT
Period : Jan - Jun 1996

Table 1B Gaseous Effluents - Elevated Releases

Nuclides Released	Unit	Continuous Mode		Batch Mode	
		1st Qtr	2nd Qtr	1st Qtr	2nd Qtr
1. Fission Gases					
KR-85M	Ci	0.00E+00	2.25E-01	0.00E+00	0.00E+00
KR-87	Ci	7.95E-01	7.10E-01	0.00E+00	0.00E+00
KR-88	Ci	4.34E-01	7.38E-01	0.00E+00	0.00E+00
KR-89	Ci	2.24E+00	1.16E+00	0.00E+00	0.00E+00
XE-133	Ci	1.97E+01	8.05E+00	0.00E+00	7.08E-03
XE-133M	Ci	7.43E-02	0.00E+00	0.00E+00	0.00E+00
XE-135	Ci	2.66E+00	3.59E+00	0.00E+00	8.75E-03
XE-135M	Ci	7.08E+00	4.71E+00	0.00E+00	0.00E+00
XE-137	Ci	4.87E+01	2.07E+01	0.00E+00	0.00E+00
XE-138	Ci	1.89E+01	9.66E+00	0.00E+00	0.00E+00
AR-41	Ci	0.00E+00	0.00E+00	0.00E+00	1.18E-02
Total for Period	Ci	1.01E+02	4.96E+01	0.00E+00	2.76E-02
2. Iodines					
I-131	Ci	1.71E-04	1.01E-03	0.00E+00	0.00E+00
I-133	Ci	1.03E-03	4.44E-03	0.00E+00	0.00E+00
I-135	Ci	1.52E-03	6.87E-03	0.00E+00	0.00E+00
Total for Period	Ci	2.72E-03	1.23E-02	0.00E+00	0.00E+00
3. Particulates					
CR-51	Ci	0.00E+00	7.32E-07	0.00E+00	0.00E+00
MN-54	Ci	0.00E+00	4.64E-07	0.00E+00	0.00E+00
CO-58	Ci	0.00E+00	8.73E-08	0.00E+00	0.00E+00
FE-59	Ci	0.00E+00	2.39E-07	0.00E+00	0.00E+00
CO-60	Ci	3.10E-06	4.65E-06	0.00E+00	0.00E+00
ZN-65	Ci	8.84E-07	3.21E-06	0.00E+00	0.00E+00
SE-75	Ci	0.00E+00	4.49E-07	0.00E+00	0.00E+00
CS-137	Ci	2.30E-05	9.31E-07	0.00E+00	0.00E+00
BA-140	Ci	1.05E-04	4.95E-05	0.00E+00	0.00E+00
SR-89	Ci	4.27E-05	0.00E+00	0.00E+00	0.00E+00
SR-90	Ci	2.30E-07	0.00E+00	0.00E+00	0.00E+00
Total for Period	Ci	1.75E-04	6.02E-05	0.00E+00	0.00E+00

Analysis of Sr-89 & 90 for the 2nd Qtr was not completed in time for this report, results will be included with the next semiannual report.

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT
Period : Jan - Jun 1996

Table 1C Gaseous Effluents - Building Vent Releases

Nuclides Released	Unit	Continuous Mode		Batch Mode	
		1st Qtr	2nd Qtr	1st Qtr	2nd Qtr
1. Fission Gases					
XE-135	Ci	4.33E+00	2.10E+00	0.00E+00	0.00E+00
XE-135M	Ci	1.70E+00	7.57E-01	0.00E+00	0.00E+00
Total for Period	Ci	6.03E+00	2.86E+00	0.00E+00	0.00E+00
2. Iodines					
I-131	Ci	1.49E-03	1.33E-03	0.00E+00	0.00E+00
I-133	Ci	1.29E-02	3.49E-03	0.00E+00	0.00E+00
I-135	Ci	3.12E-02	4.02E-03	0.00E+00	0.00E+00
Total for Period	Ci	4.56E-02	8.84E-03	0.00E+00	0.00E+00
3. Particulates					
MN-54	Ci	0.00E+00	9.76E-06	0.00E+00	0.00E+00
CO-60	Ci	1.23E-04	1.49E-04	0.00E+00	0.00E+00
ZN-65	Ci	1.03E-05	2.03E-04	0.00E+00	0.00E+00
CS-137	Ci	1.78E-05	1.15E-05	0.00E+00	0.00E+00
BA-140	Ci	3.43E-05	0.00E+00	0.00E+00	0.00E+00
SR-89	Ci	1.01E-05	0.00E+00	0.00E+00	0.00E+00
Total for Period	Ci	1.95E-04	3.74E-04	0.00E+00	0.00E+00

Analysis of Sr-89 & 90 for the 2nd Qtr was not completed in time for this report, results will be included with the next semiannual report.

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT
Period : Jan - Jun 1996

Table 2A Liquid Effluents - Summation of all Releases

	Units	1st Qtr	2nd Qtr	Est. Total Error, %
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A. Fission & Activation products

1. Total Release (not including tritium, gases, alpha)	Ci	0.00E+00	6.80E-07	0.00E+00
2. Avg Diluted Concentration	uci/ml	0.00E+00	9.91E-12	

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
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F. Volume of Waste Released	Liters	0.00E+00	4.25E+03	0.00E+00
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F. Volume of Dilution Water Used	Liters	0.00E+00	6.86E+07	0.00E+00
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Table 2B Liquid Effluents

Nuclides Released	Unit	Continuous Mode		Batch Mode	
		1st Qtr	2nd Qtr	1st Qtr	2nd Qtr
F-18	Ci	0.00E+00	6.80E-07	0.00E+00	0.00E+00

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT
Period : Jan - Jun 1996

Table 3 Solid Waste and Irradiated Fuel Shipments
A. Solid Waste Shipped Offsite for Burial or Disposal (not irradiated fuel)

1. Type of Waste	Units	6-month Period	Est. Total Error, %
a. Spent resins, filter sludges, evaporator bottoms, etc.	Cu. Meter Ci	0.00E+00 0.00E+00	0.00E+00
b. Dry compressible waste, contaminated equipment, etc.	Cu. Meter Ci	8.01E+00 2.87E-01	3.50E+01
c. Irradiated components, control rods, etc.	Cu. Meter Ci	0.00E+00 0.00E+00	0.00E+00
d. Other (describe)	Cu. Meter Ci	0.00E+00 0.00E+00	0.00E+00

2. Estimate of major nuclide composition (by type of waste)				
Nuclide	Type A percent	Type B percent	Type C percent	Type D percent
H-3		2.58E-01		
C-14		3.85E-02		
Mn-54		4.57E+00		
Fe-55		5.16E+01		
Co-57		1.47E-01		
Co-58		2.19E-01		
Fe-59		5.97E-01		
Co-60		2.33E+01		
Ni-63		1.56E+00		
Zn-65		1.56E+01		
Sr-89		1.94E-02		
Sr-90		3.57E-02		
Tc-99		2.16E-03		
Sb-125		3.41E-02		
I-129		6.15E-03		
Cs-134		7.34E-02		
Cs-137		1.53E+00		
Ce-144		6.44E-02		
Pu-238		5.55E-02		
Pu-239		3.00E-02		
Am-241		2.36E-02		
Pu-241		1.44E-01		
Cm-242		1.29E-02		
Pu-242		5.98E-02		
Cm-243		8.02E-03		

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT
Period : Jan - Jun 1996

Table 3 Solid Waste and Irradiated Fuel Shipments

3. Solid waste disposal

Number of Shipments	Mode of Transportation	Destination
25	Truck	Chem-Nuc Inc., Barnwell, SC.

E. Irradiated Fuel Shipments

1. Disposition

Number of Shipments	Mode of Transportation	Destination
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None This Period

C. Shipping Container and Solidification Method

No.	Volume M3	Activity Ci	Type of Waste	Container Code	Solidification Code
9464f	6.51E-01	1.26E-03	B	L	N
9464g	2.83E-03	8.91E-04	B	L	N
9602a	1.67E-01	2.45E-03	B	L	N
9602b	2.38E-01	3.72E-03	B	L	N
9602c	9.63E-02	2.59E-03	B	L	N
9602d	3.96E-02	1.14E-03	B	L	N
9602e	3.68E-02	1.47E-03	B	L	N
9602f	1.42E-02	1.18E-02	B	L	N
9602g	1.70E-02	2.02E-02	B	L	N
9602h	2.83E-02	5.92E-03	B	L	N
9605a	3.14E-01	9.36E-03	B	L	N
9605b	6.51E-02	2.40E-03	B	L	N
9605c	8.50E-03	4.93E-02	B	L	N
9605d	9.06E-01	2.60E-02	B	L	N
9627a	2.27E-01	2.88E-03	B	L	N
9627b	2.44E-01	2.91E-03	B	L	N
9627c	8.58E-01	9.74E-03	B	L	N
9627d	3.68E-01	2.99E-03	B	L	N
9627e	1.04E+00	7.71E-03	B	L	N
9627f	1.42E-01	1.37E-03	B	L	N
9638a	4.93E-01	1.83E-02	B	L	N
9638b	7.84E-01	3.97E-02	B	L	N
9638c	8.95E-01	5.66E-02	B	L	N
9642a	3.79E-01	6.14E-03	B	L	N
9464h	2.83E-03	2.67E-04	B	L	N

Container Codes :

L - LSA
A - Type A
B - Type B
Q - Large Quantity

Solidification Codes :

C - Cement
U - Urea Formaldehyde
D - Dewatering
N - Not Applicable

Attachment B

Effluent and Waste Disposal Semi-Annual Report,
Period July-December 1995 (Updated 8/29/96)

(The attached Report contains 10 pages.)

NORTHERN STATES POWER COMPANY
MONTICELLO NUCLEAR GENERATING PLANT
License No. DPR-22

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT
Period : Jul - Dec 1995

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)

EFFLUENT AND WASTE DISPOSAL SEMI-ANNUAL REPORT
Period : Jul - Dec 1995

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 :

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

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	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

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT
Period : Jul - Dec 1995

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

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT
Period : Jul - Dec 1995

Table 1A Gaseous Effluents - Summation of all Releases

	Units	3rd Qtr	4th Qtr	Est. Total Error, %
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A. Fission & Activation gases

1. Total Release	Ci	1.27E+02	1.08E+02	2.00E+01
2. Average Release Rate	uci/sec	1.60E+01	1.36E+01	
3. Percent Tech Spec Qtrly Reporting Level				
Gamma Radiation	%	7.88E-02	7.80E-02	
Beta Radiation	%	3.25E-02	2.80E-02	

B. Iodines

1. Total I-131 Release	Ci	8.66E-04	9.21E-04	1.00E+01
2. Average I-131 Release Rate	uci/sec	1.09E-04	1.16E-04	

C. Particulates

1. Total Particulates	Ci	4.82E-04	3.66E-04	3.00E+01
2. Average Release Rate	uci/sec	6.07E-05	4.60E-05	
3. Gross Alpha Radioactivity	Ci	7.08E-06	3.20E-06	

D. Tritium

1. Total Release	Ci	1.16E+01	6.96E+00	1.00E+01
2. Average Release Rate	uci/sec	1.46E+00	8.76E-01	

E. Percent Qtrly Tech Spec Reporting Levels

1. Iodines, Particulates, and Tritium	%	1.83E-01	2.33E-01	
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EFFLUENT AND WASTE DISPOSAL SEMI-ANNUAL REPORT
Period : Jul - Dec 1995

Table 1B Gaseous Effluents - Elevated Releases

Nuclides Released	Unit	Continuous Mode		Batch Mode	
		3rd Qtr	4th Qtr	3rd Qtr	4th Qtr
1. Fission Gases					
KR-85M	Ci	1.15E+00	8.31E-01	0.00E+00	0.00E+00
KR-87	Ci	1.70E+00	1.08E+00	0.00E+00	0.00E+00
KR-88	Ci	2.79E+00	1.44E+00	0.00E+00	0.00E+00
XE-133	Ci	2.61E+01	2.80E+01	0.00E+00	0.00E+00
XE-133M	Ci	1.69E-01	2.03E-01	0.00E+00	0.00E+00
XE-135	Ci	1.61E+01	1.34E+01	0.00E+00	0.00E+00
XE-135M	Ci	7.55E+00	5.31E+00	0.00E+00	0.00E+00
XE-137	Ci	4.24E+01	3.41E+01	0.00E+00	0.00E+00
XE-138	Ci	2.15E+01	1.53E+01	0.00E+00	0.00E+00
AR-41	Ci	6.66E-02	8.62E-02	0.00E+00	0.00E+00
Total for Period	Ci	1.19E+02	9.97E+01	0.00E+00	0.00E+00
2. Iodines					
I-131	Ci	2.75E-04	1.79E-04	0.00E+00	0.00E+00
I-133	Ci	1.72E-03	1.03E-03	0.00E+00	0.00E+00
I-135	Ci	2.51E-03	1.55E-03	0.00E+00	0.00E+00
Total for Period	Ci	4.50E-03	2.77E-03	0.00E+00	0.00E+00
3. Particulates					
MN-54	Ci	0.00E+00	3.79E-08	0.00E+00	0.00E+00
CO-60	Ci	3.26E-06	2.62E-06	0.00E+00	0.00E+00
CS-137	Ci	2.73E-06	1.37E-06	0.00E+00	0.00E+00
BA-140	Ci	1.37E-04	1.03E-04	0.00E+00	0.00E+00
SR-89	Ci	1.17E-04	7.62E-06	0.00E+00	0.00E+00
SR-90	Ci	2.58E-07	2.66E-07	0.00E+00	0.00E+00
Total for Period	Ci	2.60E-04	1.15E-04	0.00E+00	0.00E+00

SR-89 results decreased due to lower results for 1st quarter of 1996 which includes the last two weeks of this reporting period.

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT
Period : Jul - Dec 1995

Table 1C Gaseous Effluents - Building Vent Releases

Nuclides Released	Unit	Continuous Mode		Batch Mode	
		3rd Qtr	4th Qtr	3rd Qtr	4th Qtr
1. Fission Gases					
XE-135	Ci	7.01E+00	5.36E+00	0.00E+00	0.00E+00
XE-135M	Ci	8.55E-01	3.17E+00	0.00E+00	0.00E+00
Total for Period	Ci	7.86E+00	8.53E+00	0.00E+00	0.00E+00
2. Iodines					
I-131	Ci	5.92E-04	7.42E-04	0.00E+00	0.00E+00
I-133	Ci	4.63E-03	6.18E-03	0.00E+00	0.00E+00
I-135	Ci	5.95E-03	1.09E-02	0.00E+00	0.00E+00
Total for Period	Ci	1.12E-02	1.78E-02	0.00E+00	0.00E+00
3. Particulates					
MN-54	Ci	3.36E-06	0.00E+00	0.00E+00	0.00E+00
CO-60	Ci	1.54E-04	1.94E-04	0.00E+00	0.00E+00
ZN-65	Ci	2.29E-05	3.44E-06	0.00E+00	0.00E+00
CS-137	Ci	3.20E-05	1.21E-05	0.00E+00	0.00E+00
BA-140	Ci	0.00E+00	3.07E-05	0.00E+00	0.00E+00
SR-89	Ci	1.01E-05	9.82E-06	0.00E+00	0.00E+00
Total for Period	Ci	2.22E-04	2.51E-04	0.00E+00	0.00E+00

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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

A. Solid Waste Shipped Offsite for Burial or Disposal (not irradiated fuel)

1. Type of Waste	Units	6-month Period	Est. Total Error, %
a. Spent resins, filter sludges, evaporator bottoms, etc.	Cu. Meter Ci	5.25E+01 3.16E+02	3.70E+01
b. Dry compressible waste, contaminated equipment, etc.	Cu. Meter Ci	9.63E+00 5.46E-01	3.50E+01
c. Irradiated components, control rods, etc.	Cu. Meter Ci	0.00E+00 0.00E+00	0.00E+00
d. Other (describe)	Cu. Meter Ci	0.00E+00 0.00E+00	0.00E+00

2. Estimate of major nuclide composition (by type of waste)				
Nuclide	Type A percent	Type B percent	Type C percent	Type D percent
E-3	5.03E-02	2.66E-01		
C-14	7.57E-02	4.92E-02		
Mn-54	1.44E+00	5.29E+00		
Fe-55	1.48E+01	4.92E+01		
Co-58	1.36E-01	3.58E-01		
Fe-59		2.03E+00		
Ni-59	4.81E-03			
Co-60	1.58E+01	1.80E+01		
Ni-63	4.28E-01	4.27E+00		
Zn-65	5.88E+01	1.92E+01		
Sr-89	9.17E-02	1.79E-02		
Sr-90	1.90E-02	3.50E-02		
Nb-94		3.42E-06		
Tc-99	6.37E-08	1.17E-06		
Cd-109		1.69E-08		
I-129	7.84E-07	3.92E-06		
I-131	2.85E-01			
Cs-134	7.34E-02	3.74E-02		
Cs-137	7.73E+00	4.98E-01		
Ba-140	1.02E-01			
La-140		7.76E-11		
Ce-141	9.15E-02	1.38E-10		
Ce-144	1.27E-02	3.39E-02		
Eu-154		3.39E-08		
Pu-238	3.93E-04	2.65E-01		
Pu-239	1.85E-04	1.28E-01		
Am-241	1.71E-03	1.48E-02		
Pu-241	1.38E-02	7.02E-02		
Cm-242	1.27E-03	4.57E-02		
Pu-242		2.08E-01		
Cm-243	1.12E-03	4.14E-03		

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Table 3 Solid Waste and Irradiated Fuel Shipments

3. Solid waste disposal

Number of Shipments	Mode of Transportation	Destination
30	Truck	Chem-Nuc Inc., Barnwell, SC.

B. Irradiated Fuel Shipments

1. Disposition

Number of Shipments	Mode of Transportation	Destination
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None This Period

C. Shipping Container and Solidification Method

No.	Volume M3	Activity Ci	Type of Waste	Container Code	Solidification Code
95-15	5.83E+00	1.86E+01	A	A	D
95-16	5.83E+00	6.74E+01	A	A	D
95-18	5.83E+00	6.64E+01	A	A	D
95-21	5.83E+00	4.61E+01	A	A	D
95-22	5.83E+00	2.77E+01	A	A	D
95-23	5.83E+00	1.71E+01	A	A	D
95-20	5.83E+00	2.09E+01	A	A	D
95-24	5.83E+00	4.72E+01	A	A	D
95-37	5.83E+00	4.51E+00	A	A	D
9378a	5.04E-01	7.90E-06	B	L	N
9378b	3.96E-01	1.06E-05	B	L	N
9379a	1.35E+00	1.03E-05	B	L	N
9379b	7.50E-01	9.60E-06	B	L	N
9410a	1.70E-02	4.69E-05	B	L	N
9446a	5.15E-01	2.02E-03	B	L	N
9446b	8.78E-02	9.23E-02	B	L	N
9446c	1.09E+00	3.94E-02	B	L	N
9446d	3.26E-01	3.37E-03	B	L	N
9446e	5.10E-01	1.02E-03	B	L	N
9464a	9.63E-01	7.37E-02	B	L	N
9464b	4.11E-01	2.04E-01	B	L	N
9464c	1.56E-01	2.07E-04	B	L	N
9464d	5.38E-02	1.37E-02	B	L	N
9464e	2.83E-03	2.59E-04	B	L	N
9471a	8.55E-01	3.11E-02	B	L	N
9471b	1.27E-01	5.16E-02	B	L	N
9471c	2.69E-01	1.25E-03	B	L	N
9471d	8.16E-01	1.82E-02	B	L	N

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C. Shipping Container and Solidification Method (Cont.)

No.	Volume M3	Activity Ci	Type of Waste	Container Code	Solidification Code
9471e	1.70E-01	6.24E-03	B	L	N
9471f	2.61E-01	8.05E-03	B	L	N

Container Codes :

L - LSA
A - Type A
B - Type B
Q - Large Quantity

Solidification Codes :

C - Cement
U - Urea Formaldehyde
D - Dewatering
N - Not Applicable