

Rhode Island Atomic Energy Commission NUCLEAR SCIENCE CENTER 16 Reactor Road Narragansett, R.I. 02882-1165

July 27, 2001

Docket No. 50-193

Mr. Marvin Mendonca, Senior Project Manager Non-Power Reactors, Decommissioning and Environmental Project Directorate Division of Reactor Projects - III/IV/V U.S. Nuclear Regulatory Commission (NRC) Washington, D.C. 20555

Dear Mr. Mendonca,

This letter and enclosures constitute the annual report required by the RINSC Technical Specifications (Section 6.8.4). Enclosure 1 provides reactor operating statistics. Enclosure 2 provides information pertaining to inadvertent reactor shutdowns or scrams. Enclosure 3 discusses maintenance operations performed during the reporting period. Enclosure 4 describes changes to the facility carried out under the conditions of Section 50.59 of Chapter 10 of the Code of Federal Regulations. Lastly, Enclosure 5 summarizes the radiological controls information. If there are any questions regarding this information, please call me at 401-789-9391.

Sincerely,

Terry Tehan, Ph.D.

Director

TT:jd

Enclosures (5)

Copy to:

Craig Bassett, Region I Harry Knickle, Chairman NRSC Vincent Rose, Chairman RIAEC

\$030

Technical Specifications Section 6.8.4.a (00-01)

Month	Reactor Critical (hours)	Energy Generated (MWh)	Energy Generated (MWd)
Month Luly 00		19.90	0.83
July-00	1		1.47
August-00	II.	35.34	
September-00	37.10	63.97	2.67
October-00	23.22	40.90	1.70
November-00	21.50	39.87	1.66
December-00	23.10	42.74	1.78
January-01	26.22	49.04	2.04
February-01	20.03	36.90	1.54
March-01	28.77	53.12	2.21
April-01	29.80	51.73	2.16
May-01	11.87	21.85	0.91
June-01	8.75	16.22	0.68
2000-01 Totals	260.78	471.58	19.65
otal Energy Output since Ini	tial Criticality:	57,665.36	2,402.72

Technical Specifications Section 6.8.4.a (00-01)

NSC-78

Monthly Information Sheet

NSC-78

Month:	Jul-00		Revised	5/12/97	
		Cumulative MWH's		TOTAL	LEU
Start:	57,193.78		End:	57,213.68	7,515.67

*added HEU=49698.01

Run		Ave Pwr	Start	S/D	Operating	Todays	Stack	Ar-41 Re	leased
No.	Day	Level	Time	Time	Time	total	Monitor	Limit = 4E-4	uCi/cc
	(1-31)	(MW)	(hhmm)	(hhmm)	(hrs)	MWH	max CPM	uCi/cc	Ci/day
7290	6	1.85	0930	1126	1.93	3.58	10,000	3.04E-05	0.04_
7291	7	1.60	0907	1022	1.25	2.00	8,000	2.43E-05	0.02
7292	13	1.75	0939	1222	2.72	4.75	10,000	3.04E-05	0.06
7293	17	1.40	1047	1057	0.17	0.23	5,000	1.52E-05	0.00
7294	20	1.78	1033	1315	2.70	4.81	6,000	1.82E-05	0.04
7295	27	1.90	1049	1312	2.38	4.53	10,000	3.04E-05	0.05
		-							
	<u> </u>								
Totals:					11.15	19.90		1.49E-04	0.22

Operating	Max.	Actual		Max.	Actual
Hours	140.0	11.2	MWH's:	280.0	19.9
Percentage		8%			7%
Stack Releases	0.2 curies				

(Continued)

NSC-78 Monthly Information Sheet

NSC-78

Month:	Aug-00		Revised	5/12/97	
		Cumulative MWH's		TOTAL	LEU
Start:	57,213.68		End:	57,249.02	7,551.01

*added HEU=49698.01

Run		Ave Pwr	Start	S/D	Operating	Todays	Stack	Ar-41 Re	leased
No.	Day	Level	Time	Time	Time	total	Monitor	Limit = 4E-4	uCi/cc
	(1-31)	(MW)	(hhmm)	(hhmm)	(hrs)	MWH	max CPM	uCi/cc	Ci/day
7296	3	1.85	0930	1149	2.32	4.29	10,000	3.04E-05	0.05
7297	10	1.90	0905	1237	3.53	6.71	9,000	2.74E-05	0.07
7298	11	1.85	1034	1242	2.13	3.95	9,000	2.74E-05	0.04
7299	17	1.75	0922	1222	3.00	5.25	10,000	3.04E-05	0.07
7300	24	1.80	0944	1605	6.35	11.43	9,000	2.74E-05	0.13
7301	31	1.97	0931	0950	0.32	0.62	8,000	2.43E-05	0.01
7302	31	1.97	1024	1106	0.70	1.38	8,000	2.43E-05	0.01
7303	31	1.97	1145	1237	0.87	1.71	8,000	2.43E-05	0.02
								 	
									·
			<u> </u>			<u> </u>			
Totals:				<u> </u>	19.22	35.34		2.16E-04	0.40

Operating	Max.	Actual		Max.	Actual
Hours	140.0	19.2	MWH's:	280.0	35.3
Percentage		14%			13%
Stack Releases	0.4 curies				

(Continued)

NSC-78

Monthly Information Sheet

NSC-78

Month:	Sep-00		Revised	5/12/97	
		Cumulative MWH's		TOTAL	LEU
Start:	57,249.02		End:	57,312.99	7,614.98

*added HEU=49698.01

Run		Ave Pwr	Start	S/D	Operating	Todays	Stack	Ar-41 Re	leased
No.	Day	Level	Time	Time	Time	total	Monitor	Limit = 4E-4	uCi/cc
	(1-31)	(MW)	(hhmm)	(hhmm)	(hrs)	MWH	max CPM	uCi/cc	Ci/day
7304	7	1.95	1143	1420	2.62	5.10	9,300	2.83E-05	0.06
7305	11	1.85	0905	1550	6.75	12.49	10,000	3.04E-05	0.15
7306	12	1.55	0919	1512	5.88	9.12	8,000	2.43E-05	0.11
7307	13	1.55	0933	1345	4.20	6.51	8,000	2.43E-05	0.08
7308	14	1.60	0929	1440	5.18	8.29	8,000	2.43E-05	0.09
7309	19	1.79	1142	1710	5.47	9.79	9,000	2.74E-05	0.11
7310	21	1.75	1040	1100	0.33	0.58	7,000	2.13E-05	0.01
7311	21	1.72	1153	1413	2.33	4.01	8,000	2.43E-05	0.04
7312	26	1.90	1132	1420	2.80	5.32	8,000	2.43E-05	0.05
7313	28	1.80	0954	1126	1.53	2.76	8,000	2.43E-05	0.03
							-		· · · · · · · · · · · · · · · · · · ·
	···	i ·							
Totals:					37.10	63.97		2.53E-04	0.72

Operating	Max.	Actual		Max.	Actual
Hours	140.0	37.1	MWH's:	280.0	64.0
Percentage		27%			23%
Stack Releases	0.7 curies				

(Continued)

NSC-78

Monthly Information Sheet

NSC-78

Month:	Oct-00		Revised	5/12/97	
		Cumulative MWH's		TOTAL	LEU
Start:	57,312.99		End:	57,353.89	7,655.87

*added HEU=49698.01

Run		Ave Pwr	Start	S/D	Operating	Todays	Stack	Ar-41 Re	leased
No.	Day	Level	Time	Time	Time	total	Monitor	Limit = 4E-4	uCi/cc
	(1-31)	(MW)	(hhmm)	(hhmm)	(hrs)	MWH	max CPM	uCi/cc	Ci/day
7314	3	1.80	0930	1100	1.50	2.70	8,000	2.43E-05	0.03
7315	5	1.80	0904	1126	2.37	4.26	9,000	2.74E-05	0.05
7316	10	1.70	0948	1120	1.53	2.61	9,000	2.74E-05	0.03
7317	11	1.70	0900	1005	1.08	1.84	5,500	1.67E-05	0.01
7318	12	1.70	0859	1126	2.45	4.17	9,000	2.74E-05	0.05
7319	17	1.80	0935	1150	2.25	4.05	10,000	3.04E-05	0.05
7320	19	1.70	0848	1218	3.50	5.95	8,000	2.43E-05	0.06
7321	24	1.75	0924	1312	3.80	6.65	10,000	3.04E-05	0.09
7322	26	1.80	0930	1112	1.70	3.06	10,000	3.04E-05	0.04
7323	31	1.85	0911	1213	3.03	5.61	10,000	3.04E-05	0.07
			ļ		·	ļ	· · · · · · · · · · · · · · · · · · ·		·-·
		<u> </u>				<u> </u>			
				<u> </u>				 	
		-		<u> </u>	<u> </u>				<u> </u>
Totals:					23.22	40.90		2.69E-04	0.48

Operating	Max.	Actual		Max.	Actual
Hours	140.0	23.2	MWH's:	280.0	40.9
Percentage		17%			15%
Stack Releases	0.5 curies				

(Continued)

NSC-78

Monthly Information Sheet

NSC-78

Month:	Nov-00		Revised	5/12/97	
		Cumulative MWH's		TOTAL	LEU
Start:	57,353.89		End:	57,393.76	7,695.75

*added HEU=49698.01

Run		Ave Pwr	Start	S/D	Operating	Todays	Stack	Ar-41 Re	leased
No.	Day	Level	Time	Time	Time	total	Monitor	Limit = 4E-4	uCi/cc
	(1-31)	(MW)	(hhmm)	(hhmm)	(hrs)	MWH	max CPM	uCi/cc	Ci/day
7324	2	1.85	0927	1106	1.65	3.05	10,000	3.04E-05	0.04
7325	6	1.85	0900	1243	3.72	6.88	10,000	3.04E-05	0.08
7326	9	1.85	0910	1143	2.55	4.72	10,000	3.04E-05	0.06
7327	14	1.85	0958	1338	3.67	6.78	10,000	3.04E-05	0.08
7328	16	1.70	0912	1016	1.07	1.81	9,000	2.74E-05	0.02
7329	23	1.85	0919	1039	1.33	2.47	10,000	3.04E-05	0.03
7330	24	1.90	1144	1352	2.13	4.05	10,000	3.04E-05	0.05
7331	28	1.90	0922	1221	2.98	5.67	9,000	2.74E-05	0.06
7332	30	1.85	0915	1139	2.40	4.44	9,000	2.74E-05	0.05
Totals:					21.50	39.87		2.64E-04	0.47

Operating	Max.	Actual		Max.	Actual
Hours	140.0	21.5	MWH's:	280.0	39.9
Percentage		15%			14%
Stack Releases	0.5 curies				

(Continued)

NSC-78

Monthly Information Sheet

NSC-78

Month:	Dec-00		Revised	5/12/97	
		Cumulative MWH's		TOTAL	LEU
Start:	57,393.76		End:	57,436.50	7,738.49
		0.04			

*added HEU=49698.01

Run		Ave Pwr	Start	S/D	Operating	Todays	Stack	Ar-41 Re	leased
No.	Day	Level	Time	Time	Time	total	Monitor	Limit = 4E-4	uCi/cc
	(1-31)	(MW)	(hhmm)	(hhmm)	(hrs)	MWH	max CPM	uCi/cc	Ci/day
7333	5	1.85	0921	1121	2.00	3.70	10,000	3.04E-05	0.05
7334	7	1.85	0918	1148	2.50	4.63	10,000	3.04E-05	0.06
7335	12	1.85	0930	1125	1.92	3.55	7,000	2.13E-05	0.03
7336	14	1.85	0926	1300	3.57	6.60	8,000	2.43E-05	0.06
7337	19	1.85	1052	1316	2.40	4.44	10,000	3.04E-05	0.05
7338	21	1.85	0929	1315	3.77	6.97	10,000	3.04E-05	0.09
7339	27	1.85	1150	1507	3.28	6.07	11,000	3.34E-05	0.08
7340	29	1.85	0917	1257	3.67	6.78	11,000	3.34E-05	0.09
									,
Totals:					23.10	42.74	-	2.34E-04	0.51

Operating	Max.	Actual		Max.	Actual
Hours	140.0	23.1	MWH's:	280.0	42.7
Percentage		17%			15%
Stack Releases	0.5	curies			

(Continued)

NSC-78 Mo

Monthly Information Sheet

NSC-78

Month:	Jan-01		Revised	5/12/97	
		Cumulative MWH's		TOTAL	LEU
Start:	57,436.50		End:	57,485.54	7,787.53

*added HEU=49698.01

Run		Ave Pwr	Start	S/D	Operating	Todays	Stack	Ar-41 Re	leased
No.	Day	Level	Time	Time	Time	total	Monitor	Limit = 4E-4	uCi/cc
	(1-31)	(MW)	(hhmm)	(hhmm)	(hrs)	MWH	max CPM	uCi/cc	Ci/day
7341	2	1.90	0928	1311	3.72	7.06	11,000	3.34E-05	0.09
7342	4	1.85	0914	1103	1.82	3.36	11,000	3.34E-05	0.05
7343	8	1.85	0915	1046	1.52	2.81	11,000	3.34E-05	0.04
7344	12	1.85	0915	1058	1.72	3.18	11,000	3.34E-05	0.04
7345	16	1.95	0928	1258	3.50	6.83	11,000	3.34E-05	0.09
7346	18	1.85	0915	1046	1.52	2.81	11,000	3.34E-05	0.04
7347	18								
7348	19	1.85	0941	1204	2.38	4.41	11,000	3.34E-05	0.06
7349	23	1.85	0932	1230	2.97	5.49	11,000	3.34E-05	0.07
7350	25	1.85	0935	1225	2.83	5.24	11,000	3.34E-05	0.07
7351	30	1.85	0922	1337	4.25	7.86	11,000	3.34E-05	0.11
					<u> </u>				
			ļ. ———	ļ			<u> </u>		ļ
					<u> </u>				
Totals:					26.22	49.04		3.34E-04	0.65

		001111117 (11)			
Operating	Max.	Actual		Max.	Actual
Hours	140.0	26.2	MWH's:	280.0	49.0
Percentage		19%			18%
Stack Releases	0.7 curies				

(Continued)

NSC-78

Monthly Information Sheet

NSC-78

Month:	Feb-01		Revised	5/12/97	
		Cumulative MWH's		TOTAL	LEU
Start:	57,485.54		End:	57,522.44	7,824.43

*added HEU=49698.01

Run		Ave Pwr	Start	S/D	Operating	Todays	Stack	Ar-41 Re	leased
No.	Day	Level	Time	Time	Time	total	Monitor	Limit = 4E-4	uCi/cc
	(1-31)	(MW)	(hhmm)	(hhmm)	(hrs)	MWH	max CPM	uCi/cc	Ci/day
7352	1	1.85	0921	1045	1.40	2.59	11,000	3.34E-05	0.03
7353	8	1.90	0939	1149	2.17	4.12	11,000	3.34E-05	0.05
7354	13	1.90	0921	1225	3.07	5.83	11,000	3.34E-05	0.08
7355	15	1.85	0922	1054	1.53	2.84	10,000	3.04E-05	0.03
7356	16	rod worth							
7357	20	1.85	0926	1007	0.68	1.26	10,000	3.04E-05	0.02
7358	22	1.75	0928	1600	6.53	11.43	12,000	3.65E-05	0.18
7359	26	rod worth							
7360	27	1.90	0921	1400	4.65	8.84	11,000	3.34E-05	0.12

						<u></u>			
Totals:					20.03	36.90		2.31E-04	0.51

Operating	Max. Actual			Max.	Actual
Hours	140.0 20.0		MWH's:	280.0	36.9
Percentage	14%				13%
Stack Releases	0.5	curies			

(Continued)

NSC-78 Monthly Information Sheet

NSC-78

Month:	Mar-01		Revised	5/12/97	
		Cumulative MWH's		TOTAL	LEU
Start:	57,522.44		End:	57,575.56	7,877.55

*added HEU=49698.01

Run		Ave Pwr	Start	S/D	Operating	Todays	Stack	Ar-41 Re	leased
No.	Day	Level	Time	Time	Time	total	Monitor	Limit = 4E-4	uCi/cc
	(1-31)	(MW)	(hhmm)	(hhmm)	(hrs)	MWH	max CPM	uCi/cc	Ci/day
7361	1	1.85	0921	1400	4.65	8.60	11,000	3.34E-05	0.12
7362	8	1.95	0925	1200	2.58	5.04	11,000	3.34E-05	0.06
7363	13	1.90	0912	1255	3.72	7.06	10,000	3.04E-05	0.08
7364	15	1.85	0932	1412	4.67	8.63	10,000	3.04E-05	0.11
7365	20	1.90	0915	1243	3.47	6.59	10,000	3.04E-05	0.08
7366	21	1.80	0925	1411	4.77	8.58	10,000	3.04E-05	0.11
7367	22	1.70	0914	1044	1.50	2.55	9,000	2.74E-05	0.03
7368	27	1.70	0907	1114	2.12	3.60	10,000	3.04E-05	0.05
7369	29	1.90	0855	1013	1.30	2.47	11,000	3.34E-05	0.03
Totals:					28.77	53.12		2.80E-04	0.67

Operating	Max.	Max. Actual		Max.	Actual
Hours	140.0	28.8	MWH's:	280.0	53.1
Percentage		21%			19%
Stack Releases	0.7 curies				

(Continued)

NSC-78

Monthly Information Sheet

NSC-78

Month:	Apr-01		Revised	4/26/01	
		Cumulative MWH's		TOTAL	LEU
Start:	57,575.56		End:	57,627.29	7,929.28
	LUELL 100	00.04			

*added HEU=49698.01

Run		Ave Pwr	Start	S/D	Operating	Todays	Stack	Ar-41 Re	leased
No.	Day	Level	Time	Time	Time	total	Monitor	Limit = 4E-4	uCi/cc
	(1-31)	(MW)	(hhmm)	(hhmm)	(hrs)	MWH	max CPM	uCi/cc	Ci/day
7370	3	1.85	0915	1012	0.95	1.76	11,000	3.34E-05	0.02
7370	3	1.80	1105	1326	2.35	4.23	10,000	3.04E-05	0.05
7371	4	1.70	1007	1243	2.60	4.42	10,000	3.04E-05	0.06
7372	5	1.70	1015	1255	2.67	4.53	10,000	3.04E-05	0.06
7373	6		1007	1115	1.13				
7374	12	1.80	0851	1309	4.30	7.74	10,000	3.04E-05	0.10
7375	17	1.80	0930	1121	1.85	3.33	10,000	3.04E-05	0.04
7376	19	1.80	0902	1334	4.53	8.16	10,000	3.04E-05	0.10
7377	24	1.90	0910	1518	6.13	11.65	10,000	3.04E-05	0.14
7378	26	1.80	1213	1530	3.28	5.91	11,000	3.34E-05	0.08
7379	30	Rod Cal							
								,	
Totals:					29.80	51.73		2.80E-04	0.66

Operating	Max.	Actual		Max.	Actual
Hours	140.0	29.8	MWH's:	280.0	51.7
Percentage		21%			18%
Stack Releases	0.7	curies			

(Continued)

NSC-78

Monthly Information Sheet

NSC-78

Cumulative MWH's TOTAL LEU Start: 57,627,29 End: 57,649.14 7,951.1	Month:	May-01		Revised	5/15/01	
Start: 57,627,29 End: 57,649.14 7,951.1			Cumulative MWH's		TOTAL	LEU
Otalii 0: je=: i=0	Start:	57,627.29		End:	57,649.14	7,951.13

*added HEU=49698.01

Run		Ave Pwr	Start	S/D	Operating	Todays	Stack	Ar-41 Re	leased
No.	Day	Level	Time	Time	Time	total	Monitor	Limit = 4E-4	uCi/cc
	(1-31)	(MW)	(hhmm)	(hhmm)	(hrs)	MWH	max CPM	uCi/cc	Ci/day
7380	1	1.85	0906	1022	1.27	2.34	10,000	3.04E-05	0.03
7381	3	1.85	0914	0939	0.42	0.77	9,500	2.89E-05	0.01
7382	8	1.85	0918	1033	1.25	2.31	10,000	3.04E-05	0.03
7383	10	1.85	0926	1059	1.55	2.87	10,000	3.04E-05	0.04
7384	15	1.85	1005	1211	2.10	3.89	10,000	3.04E-05	0.05
7385	17	1.85	0908	1132	2.40	4.44	10,000	3.04E-05	0.05
7386	22	1.90	0933	0958	0.42	0.79	9,000	2.74E-05	0.01
7387	24	1.80	0921	1000	0.65	1.17	8,000	2.43E-05	0.01
7388	29	1.80	1111	1300	1.82	3.27	9,000	2.74E-05	0.04
					-				
Totals:					11.87	21.85		2.60E-04	0.26

Operating	Max. Actual			Max.	Actual
Hours	56.0 11.9		MWH's:	112.0	21.9
Percentage	21%				20%
Stack Releases	0.3 curies				

(Continued)

NSC-78

Monthly Information Sheet

NSC-78

Month:	Jun-01		Revised	5/15/01	
<u></u>		Cumulative MWH's		TOTAL	LEU
Start:	57,649.14		End:	57,665.36	7,967.35

*added HEU=49698.01

Run		Ave Pwr	Start	S/D	Operating	Todays	Stack	Ar-41 Re	leased
No.	Day	Level	Time	Time	Time	total	Monitor	Limit = 4E-4	uCi/cc
	(1-31)	(MW)	(hhmm)	(hhmm)	(hrs)	MWH	max CPM	uCi/cc	Ci/day
7389	5	1.85	0904	0954	0.83	1.54	8,000	2.43E-05	0.02
7390	7	1.85	0918	1138	2.33	4.32	8,500	2.58E-05	0.04
7391	12	1.85	0930	1034	1.07	1.97	8,500	2.58E-05	0.02
7392	14	1.90	0916	1059	1.72	3.26	8,500	2.58E-05	0.03
7393	21	1.85	0902	1000	0.97	1.79	8,000	2.43E-05	0.02
7394	26	1.85	0901	1018	1.28	2.37	8,000	2.43E-05	0.02
7395	28	1.75	0839	0912	0.55	0.96	7,000	2.13E-05	0.01
Totals:					8.75	16.22		1.72E-04	0.16

Operating	Max.	Actual		Max.	Actual
Hours	140.0	8.8	MWH's:	280.0	16.2
Percentage		6%			6%
Stack Releases	0.2	curies			

EMERGENCY SHUTDOWNS AND SCRAMS

The following is a listing of the emergency shutdowns and inadvertent scrams, including the reasons, which occurred during the 2000-2001 reporting period. This information is required by Technical Specification 6.8.4.b.

DATE	RUN#	LOGBOOK / PAGE	CAUSE		
8/31/00	7301	48 / 138	Reactor scram caused by trip of seismic scram		
			channel due to mis-adjustment of sensor.		
9/7/00	7/00 7304 48 / 140		Reactor scram caused by short period on the Log N		
,,,,,,			channel due to noise.		
9/26/00	7312	49 / 8	Reactor scram caused by short period on the Log N		
7,20,00	,,,,		channel due to noise.		
11/12/00	7327	49 / 31	Reactor scram caused by short period on the Log N		
11/12/00	7527	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	channel due to noise.		
11/16/00	7328	49 / 33	Reactor scram caused by short period on the Log N		
11/10/00	1320	1 477 33	channel due to noise.		
11/23/00	7329	49 / 34	Reactor scram caused by short period on the Log N		
11/23/00	1329	49/34	channel due to noise.		
11/00/00	7331	49 / 37	Reactor scram caused by short period on the Log N		
11/28/00	/331	49/3/	channel due to noise.		
	7006	49 / 47	Reactor scram caused by short period on the Log N		
12/14/00	7336	49 / 4 /	channel due to noise.		
		10.1.10	Channel due to noise.		
12/19/00	7337	49 / 49	Reactor scram caused by short period on the Log N		
			channel due to noise.		
12/27/00	7339	49 / 53	Reactor scram caused by short period on the Log N		
			channel due to noise.		
12/29/00	7340	49 / 56	Reactor scram caused by short period on the Log N		
			channel due to noise.		
1/2/01	7341	49 / 58	Reactor scram caused by short period on the Log N		
			channel due to noise.		
1/4/01	7342	49 / 60	Reactor scram caused by short period on the Log N		
			channel due to noise.		
1/16/01	7345	49 / 65	Reactor scram caused by short period on the Log N		
			channel due to noise.		
1/18/01	7347	49 / 68	Reactor scram caused by short period on the Log N		
			channel due to noise.		
1/23/01	7349	49 / 71	Reactor scram caused by short period on the Log N		
			channel due to noise.		
1/25/01	7350	49 / 73	Reactor scram caused by short period on the Log N		
2.20.7			channel due to noise.		
2/13/01	7354	49 / 80	Reactor scram caused by short period on the Log N		
2/15/01	, , , , ,	.,,	channel due to noise.		
2/15/01	7355	49 / 83	Reactor scram caused by short period on the Log N		
2/15/01	7333	1,5 7, 65	channel due to noise.		
2/20/01	7357	49 / 86	Reactor scram caused by short period on the Log N		
2/20/01	7557	1,57,55	channel due to noise.		
2/27/01	7360	49 / 90	Reactor scram caused by short period on the Log N		
2121101	, 500	1,7,70	channel due to noise.		
3/8/01	7362	49 / 93	Reactor scram caused by short period on the Log N		
3/0/01	1302	77/73	channel due to noise.		
2/12/01	7262	49 / 95	Reactor scram caused by short period on the Log N		
3/13/01	7363	49 / 93	channel due to noise.		
0.100.101	72/7	40 / 104	Reactor scram caused by short period on the Log N		
3/22/01	7367	49 / 104	channel due to noise.		
	l		channel due to noise.		

EMERGENCY SHUTDOWNS AND SCRAMS

3/29/01	7369	49 / 107	Reactor scram caused by spike on pool temperature display.
4/3/01	7370	49 / 108	Reactor scram caused by spike on pool temperature display.
4/4/01	7371	49 / 110	Reactor scram caused by spike on pool temperature display.
4/5/01	7372	49 / 112	Reactor scram caused by spike on pool temperature display.
5/10/01	7383	49 / 127	Reactor scram caused by short period on the Log N channel due to noise.
5/15/01	7384	49 / 128	Reactor scram caused by short period on the Log N channel due to noise.
5/22/01	7386	49 / 132	Reactor scram caused by short period on the Log N channel due to noise.
5/29/01	7388	49 / 134	Reactor scram caused by short period on the Log N channel due to noise.
6/12/01	7391	49 / 138	Reactor scram caused by short period on the Log N channel due to noise.

A reactor scram was caused by the trip of the seismic sensor. This was due to a mis-adjustment of the sensor. Almost all of the emergency scrams involved the Log N channel. New instrumentation for this channel has been received. We are in the process of replacing the old instrumentation with the new equipment. Several scrams were caused by a spike on the pool temperature display. The logic associated with the display was faulty. A new display was installed and the problem was resolved.

The following is a listing of the major maintenance operations performed in the 2000-2001 reporting period which includes impact upon the safe operation of the reactor and the reasons for corrective maintenance. This information is required by Technical Specification 6.8.4.c.

1. Disposal of Underground Storage Tanks

The underground tanks, originally installed for the purpose of holding pool water when the pool was being drained, were removed and placed in the north driveway for further decontamination last year. This year, the tanks were decontaminated and have been disposed as scrap metal.

2. Replacement of North Bunker Area Roof

The false roof structure that was on top of the cement slab roof of the north bunker was falling apart. It has been removed, and a new concrete slab has been poured on top of the bunker.

3. Secondary System Cooling Tower Relocation

As part of the roofing project mentioned above, the cooling tower for secondary loop # 2 had to be removed. The new location for this tower is near the loop # 1 tower. We are in the process of finishing the plumbing phase of this project.

4. Installation of sampling lines on the secondary sides of the heat exchangers

Technical Specification 4.3.B.2 requires that secondary coolant be analyzed weekly for Na-24, as an indication of the presence of a leak between the primary and secondary sides of the heat exchangers. In order to make sampling easier, new sampling lines have been installed.

5. Installation of Central Air Conditioning

A new central air conditioning system was installed for the reception area and the office wing of the facility.

6. Characterization of End Boxes

RINSC has been storing end boxes from fuel assemblies that have been shipped out in the past. The Health Physicist has measured the dose rate and determined the irradiation history of each end box, in order to characterize them for shipping.

FACILITY CHANGES - 10CFR50.59 REVIEW

The following is a listing and description of 10CFR50.59 evaluations conducted during the 2000-01 reporting period. This information is required by Technical Specification 6.8.4.d.

1. Proposed Core Configuration Change

Pursuant to 10CFR50.59, a committee was formed to evaluate a change in core configuration. The committee found that this change did not involve a change in the Technical Specifications, nor did it create an unreviewed safety question.

RADIOLOGICAL CONTROLS

1. Environmental Surveys Outside the Facility - Technical Specification 6.8.4.e

Quarterly OSL¹ badges are deployed outside the reactor building in three separate locations. The general public does not frequent these locations and therefore occupancy factors may be used to approximate annual dose. The allowable external dose rates must be below 50 mrem per year. The quarterly doses in units of mrem are shown in the table below.

LOCATION	3 RD QTR 2000	4 TH QTR 2000	1 ST QTR 2001	2 ND QTR 2001 ²
Northeast Wall	185	168	44	33
Demineralizer Door	50	50	67	39
Heat Exchanger Door	3	13	9	8

These areas are in locations where access is limited. Consequently, the general public will not frequent these areas, and appropriate occupancy factors can be used to approximate annual dose. Assuming that the maximum time that a member of the general public would be present in one of these locations is 15 minutes per day, an occupancy factor of 0.01 can be used to obtain the annual dose that would be received by a member of the general public, in any of these areas.

The dose rate in the Northeast Wall area is due to storage of RAM, and is present regardless of reactor operation. Applying the occupancy factor, the annual dose to an individual in this area would be 4.3 mrem over the course of last year. The annual dose rate at the Demineralizer and Heat Exchanger Doors is dependent on the operations schedule of the reactor. Ignoring the fact that the dose rate is not present 24 hours per day, and applying the occupancy factor of 0.01, the annual dose that would be received by an individual at the Demineralizer Door would be 2.06 mrem. Likewise the dose received at the Heat Exchanger Door would be 0.33 mrem.

2. Annual Exposures Exceeding 500 mrem - Technical Specification 6.8.4.f

There were no personnel exposures greater than 500 mrem.

- 3. Radioactive Effluents Technical Specification 6.8.4.g
 - A. Gaseous effluent concentrations are documented on the Monthly Information Sheets (Form NSC-78) enclosed. The gaseous effluents, primarily Argon-41, were less than 5% of the 10 CFR 20, Appendix B, Table 2, Column 1 effluent limits.
 - B. Liquid effluent concentrations released to the sewer are documented on the Sewer Disposal Record (Form NSC-52) and/or the Liquid Release Record (Form NSC-17). On December 6, 2000, the RINSC made a batch release of 490 gallons of aqueous waste containing a total of 1.10 E-4 μ Ci to the sewer. The release contained two radionuclides: Cs-137 (2.34E-11 μ Ci/ml) and Na-22 (3.62E-11 μ Ci/ml). Those concentrations were well less than the monthly sewer limit of 6E-5 μ Ci/ml. No other liquids were discharged during the reporting period.

¹ Optically Stimulated Luminescence

² Landauer reads the OSL dosimeters to 1 mrem.