NINE MILE POINT NUCLEAR STATION - UNIT 1

SEMI-ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT

JANUARY - JUNE 1998

NIAGARA MOHAWK POWER CORPORATION

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SUPPLEMENTAL INFORMATION

Facility: Nine Mile Point Unit #1 **Licensee:** Niagara Mohawk Power Corporation

1. TECHNICAL SPECIFICATION LIMITS

A) FISSION AND ACTIVATION GASES

1. The dose rate limit of noble gases released in gaseous effluents from the site to areas at and beyond the site boundary shall be less than or equal to 500 mrem/year to the total body and less than or equal to 3000 mrem/year to the skin.

2. The air dose due to noble gases released in gaseous effluents from Nine Mile Point Unit 1 to areas at and beyond the site boundary shall be limited during any calendar quarter to less than or equal to 5 milliroentgen for gamma radiation and less than or equal to 10 mrad for beta radiation, and during any calendar year to less than or equal to 10 milliroentgen for gamma radiation and less than or equal to 20 mrad for beta radiation.

B&C) TRITIUM, IODINES AND PARTICULATES, HALF LIVES > 8 DAYS

1. The dose rate limit of Iodine-131, Iodine-133, Tritium and all radionuclides in particulate form with half-lives greater than eight days, released in gaseous effluents from the site to areas at and beyond the site boundary shall be less than or equal to 1500 mrem/year to any organ.

2. The dose to a member of the public from Iodine-131, Iodine-133, Tritium and all radionuclides in particulate form with half-lives greater than eight days in gaseous effluents released from Nine Mile Point Unit 1 to areas at and beyond the site boundary shall be limited during any calendar quarter to less than or equal to 7.5 mrem to any organ and, during any calendar year to less than or equal to 15 mrem to any organ.

D) LIQUID EFFLUENTS

1. The concentration of radioactive material released in liquid effluents to unrestricted areas shall be limited to the concentrations specified in 10 CFR Part 20, Appendix B, Table II, Column 2 for radionuclides other than dissolved or entrained noble gases. For dissolved or entrained noble gases, the concentration shall be limited to 2E-04 microcuries/ml total activity.

2. The dose or dose commitment to a member of the public from radioactive materials in liquid effluents released from Nine Mile Point Unit 1 to unrestricted areas shall be limited during any calendar quarter to less than or equal to 1.5 mrem to the total body and to less than or equal to 5 mrem to any organ, and during any calendar year to less than or equal to 3 mrem to the total body and to less than or equal to 10 mrem to any organ.

2. MEASUREMENTS AND APPROXIMATIONS OF TOTAL RADIOACTIVITY

Described below are the methods used to measure or approximate the total radioactivity and radionuclide composition in effluents.

A) FISSION AND ACTIVATION GASES

Noble gas effluent activity is determined by on-line gamma spectroscopic monitoring (intrinsic germanium crystal) or gross activity monitoring (calibrated against gamma isotopic analysis of a 4.0L Marinelli grab sample) of an isokinetic stack sample stream.

B) IODINES

Iodine effluent activity is determined by gamma spectroscopic analysis (at least weekly) of charcoal cartridges sampled from an isokinetic stack sample stream.

C) PARTICULATES

Activity released from the main stack is determined by gamma spectroscopic analysis (at least weekly) of particulate filters sampled from an isokinetic sample stream and composite analysis of the filters for non-gamma emitters.

D) TRITIUM

Tritium effluent activity is measured by liquid scintillation or gas proportional counting of monthly samples taken with an air sparging/water trap apparatus.

E) EMERGENCY CONDENSER VENT EFFLUENTS

The effluent curie quantities are estimated based on the isotopic distribution in the Condensate Storage Tank water and the Emergency Condenser shell water. Actual isotopic concentrations are found via gamma spectroscopy. Initial release rates of Sr-89, Sr-90 and Fe-55 are estimated by applying scaling factors to release rates of gamma emitters and actual release rates are determined from post offsite analysis results. The activity of fission and activation gases released due to tube leaks is based on reactor steam leak rates using offgas isotopic analyses.

F) LIQUID EFFLUENTS

Isotopic contents of liquid effluents are determined by isotopic analysis of a representative sample of each batch and composite analysis of non-gamma emitters.

G) SOLID EFFLUENTS

Isotopic contents of waste shipments are determined by gamma spectroscopy analysis of a representative sample of each batch. Scaling factors established from primary composite sample analyses conducted off-site are applied, where appropriate, to find estimated concentration of non-gamma emitters. For low activity trash shipments, curie content is estimated by dose rate measurement and application of appropriate scaling factors.

ATTACHMENT 1
Summary Data

Unit 1 X Unit 2 __ Reporting Period January - June 1998

Liquid Effluents:

10CFR20, Appendix B, Table II, Column 2

Average MPC - uCi/ml (Qtr. 1) = N/A
Average MPC - uCi/ml (Qtr. 2) = N/A

Average Energy (Fission and Activation gases - Mev):

Qtr. 1 : $\bar{E}\gamma$ = 2.47E-01 $\bar{E}\beta$ = 3.17E-01
Qtr. 2 : $\bar{E}\gamma$ = N/A $\bar{E}\beta$ = N/A

Liquid: There were no batch liquid releases during the reporting period.

Number of batch releases	:	0
Total time period for batch releases (hrs)	:	N/A
Maximum time period for a batch release (hrs)	:	N/A
Average time period for a batch release (hrs)	:	N/A
Minimum time period for a batch release (hrs)	:	N/A
Total volume of water used to dilute the liquid effluent during release period (L)	:	N/A
Total volume of water used to dilute the liquid effluent during reporting period (L)	:	2.52E+11

Gaseous (Emergency Condenser Vent): There were no releases from the operation of the Emergency Condenser Vent.

Number of batch releases	:	0
Total time period for batch releases (hrs)	:	N/A
Maximum time period for a batch release (hrs)	:	N/A
Average time period for a batch release (hrs)	:	N/A
Minimum time period for a batch release (hrs)	:	N/A

Gaseous (Primary Containment Purge):

Number of batch releases	:	1
Total time period for batch releases (hrs)	:	1.52E+01
Maximum time period for a batch release (hrs)	:	1.52E+01
Average time period for a batch release (hrs)	:	1.52E+01
Minimum time period for a batch release (hrs)	:	1.52E+01

ATTACHMENT 1
Summary Data

Unit 1 X Unit 2 _	Reporting Period January - June 1998
Abnormal Releases: There were no abnormal releases during the reporting period.	
A. Liquids:	
Number of releases	0
Total activity released	N/A Ci
B. Gaseous:	
Number of releases	0
Total activity released	N/A Ci

ATTACHMENT 2

Unit 1 X Unit 2 _ Reporting Period January - June 1998

GASEOUS EFFLUENTS - SUMMATION OF ALL RELEASES, ELEVATED AND GROUND LEVEL

			1st QUARTER	2nd QUARTER	EST. TOTAL ERROR, %
A.	Fission & Activation gases[1]				
	1. Total release	Ci	2.54E-02	**	5.00E+01
	2. Average release rate	µCi/sec	3.27E-03	**	
B.	Iodines				
	1. Total Iodine-131	Ci	4.66E-06	2.94E-05	3.00E+01
	2. Average release rate for period	µCi/sec	5.99E-07	3.96E-06	
C.	Particulates[2]				
	1. Particulates with half-lives >8 days	Ci	2.73E-04	5.44E-04	3.00E+01
	2. Average release rate for period	µCi/sec	3.52E-05	7.32E-05	
	3. Gross alpha radioactivity	Ci	3.27E-05	5.37E-05	2.50E+01
D.	Tritium[2]				
	1. Total release	Ci	1.42E+01	3.36E+01	5.00E+01
	2. Average release rate for period	µCi/sec	1.82E+00	4.53E+00	
E.	Percent of Tech. Spec. Limits				
	Fission and Activation Gases				
	Percent of Quarterly Gamma Air Dose Limit (5 mR)	%	1.21E-04	**	
	Percent of Quarterly Beta Air Dose Limit (10 mrad)	%	5.25E-05	**	
	Percent of Annual Gamma Air Dose Limit to Date (10 mR)	%	6.07E-05	6.07E-05	
	Percent of Annual Beta Air Dose Limit to Date (20 mrad)	%	2.62E-05	2.62E-05	
	Percent of Whole Body Dose Rate Limit (500 mrem/yr)	%	3.26E-06	**	
	Percent of Skin Dose Rate Limit (3000 mrem/yr)	%	1.18E-06	**	
	Tritium, Iodines, and Particulates[2] (with half-lives greater than 8 days)				
	Percent of Quarterly Dose Limit (7.5 mrem)	%	1.49E-01	1.81E-01	
	Percent of Annual Dose Limit (15 mrem)	%	7.50E-02	2.04E-01	
	Percent of Organ Dose Rate Limit (1500 mrem/yr)	%	3.02E-03	3.85E-03	

[1] Concentrations less than the lower limit of detection of the counting system used are indicated with a double asterisk.

[2] Tritium, Iron-55, and Strontium results for the second quarter were not received from the off-site vendor at the time of this report. These numbers include estimates, and actual numbers will be provided in the next Semi-Annual Report.

ATTACHMENT 3

Unit 1 X Unit 2 _ Reporting Period January - June 1998

GASEOUS EFFLUENTS - ELEVATED RELEASE

Nuclides Released		CONTINUOUS MODE[3] 1st QUARTER	2nd QUARTER
1. Fission Gases[1]			
Argon-41	Ci	**	**
Krypton-85	Ci	**	**
Krypton-85m	Ci	**	**
Krypton-87	Ci	**	**
Krypton-88	Ci	**	**
Xenon-127	Ci	**	**
Xenon-133	Ci	**	**
Xenon-133m	Ci	**	**
Xenon-135	Ci	2.40E-02	**
Xenon-135m	Ci	**	**
Xenon-137	Ci	**	**
Xenon-138	Ci	**	**
2. Iodines[1]			
Iodine-131	Ci	4.66E-06	2.94E-05
Iodine-133	Ci	8.30E-04	4.54E-04
Iodine-135	Ci	**	**
3. Particulates[1,2]			
Strontium-89	Ci	1.76E-05	2.92E-04
Strontium-90	Ci	**	3.65E-05
Cesium-134	Ci	**	**
Cesium-137	Ci	9.95E-06	**
Cobalt-60	Ci	2.18E-04	8.24E-05
Cobalt-58	Ci	**	**
Manganese-54	Ci	4.97E-06	**
Barium-Lanthanum-140	Ci	**	**
Antimony-125	Ci	**	**
Niobium-95	Ci	**	**
Cerium-141	Ci	**	**
Cerium-144	Ci	**	**
Iron-59	Ci	**	**
Cesium-136	Ci	**	**
Chromium-51	Ci	**	**
Zinc-65	Ci	**	**
Iron-55	Ci	2.03E-05	1.30E-04
Molybdenum-99	Ci	**	**
4. Tritium[2]	Ci	1.91E+00	2.07E+01

1 Concentrations less than the lower limit of detection of the counting system used are indicated with a double asterisk. A lower limit of detection of 1.00E-04 μCi/ml for required noble gases, 1.00E-11 μCi/ml for required particulates, 1.00E-12 μCi/ml for required Iodines, and 1.00E-06 μCi/ml for Tritium, as required by Technical Specifications, has been verified.

2 Tritium, Iron-55, and Strontium results for the second quarter were not received from the off-site vendor at the time of this report. These numbers include estimates and actual numbers will be included in the next Semi-Annual Report.

3 Contributions from purges are included.

ATTACHMENT 4

Unit 1 X Unit 2 _ Reporting Period January - June 1998

GASEOUS EFFLUENTS - GROUND LEVEL RELEASES

Ground level releases are determined in accordance with the Off-Site Dose Calculation Manual and Chemistry procedures.

			CONTINUOUS MODE		BATCH MODE There were no batch releases during the reporting period.	
			1st QUARTER	2nd QUARTER	1st QUARTER	2nd QUARTER
1.	Fission Gases[1]					
	Argon-41	Ci	**	**		
	Krypton-85	Ci	**	**		
	Krypton-85m	Ci	**	**		
	Krypton-87	Ci	**	**		
	Krypton-88	Ci	**	**		
	Xenon-133	Ci	**	**		
	Xenon-133m	Ci	**	**		
	Xenon-135	Ci	1.45E-03	**		
	Xenon-135m	Ci	**	**		
	Xenon-137	Ci	**	**		
	Xenon-138	Ci	**	**		
	Xenon-127	Ci	**	**		
2.	Iodines[1]					
	Iodine-131	Ci	**	**		
	Iodine-133	Ci	**	**		
	Iodine-135	Ci	**	**		
3.	Particulates[1,2]					
	Strontium-89	Ci	**	2.96E-07		
	Strontium-90	Ci	**	3.56E-08		
	Cesium-134	Ci	**	**		
	Cesium-137	Ci	**	**		
	Cobalt-60	Ci	1.98E-06	1.29E-06		
	Cobalt-58	Ci	6.94E-08	**		
	Manganese-54	Ci	6.13E-07	2.61E-07		
	Barium-Lanthanum-140	Ci	**	**		
	Antimony-125	Ci	**	**		
	Niobium-95	Ci	**	**		
	Cerium-141	Ci	**	**		
	Cerium-144	Ci	**	**		
	Iron-59	Ci	**	**		
	Cesium-136	Ci	**	**		
	Chromium-51	Ci	**	**		
	Zinc-65	Ci	**	**		
	Iron-55	Ci	**	9.05E-07		
	Molybdenum-99	Ci	**	**		
4.	Tritium	Ci	1.23E+01	1.29E+01		

1 Concentrations less than the lower limit of detection of the counting system used are indicated with a double asterisk.
2 Tritium, Iron-55, and Strontium results for the second quarter were not received from the off-site vendor at the time of this report. These numbers include estimates and actual numbers will be included in the next Semi-Annual Report.

Unit 1 X Unit 2 __ Reporting Period January - June 1998

LIQUID EFFLUENTS - SUMMATION OF ALL RELEASES

		1st QUARTER	2nd QUARTER	EST. TOTAL ERROR, %
A. Fission & Activation Products				
1. Total release (not including Tritium, gases, alpha)	Ci	No Releases	No Releases	5.00E+01
2. Average diluted concentration during reporting period	µCi/ml	No Releases	No Releases	
B. Tritium				
1. Total release	Ci	No Releases	No Releases	5.00E+01
2. Average diluted concentration during reporting period	µCi/ml	No Releases	No Releases	
C. Dissolved and Entrained Gases				
1. Total release	Ci	No Releases	No Releases	5.00E+01
2. Average diluted concentration during reporting period	µCi/ml	No Releases	No Releases	
D. Gross Alpha Radioactivity				
1. Total release	Ci	No Releases	No Releases	5.00E+01
E. Volumes				
1. Prior to dilution	Liters	No Releases	No Releases	5.00E+01
2. Volume of dilution water used during release period	Liters	No Releases	No Releases	5.00E+01
3. Volume of dilution water available during reporting period:	Liters	1.30E+11	1.22E+11	5.00E+01
F. Percent of Technical Specification Limits				
Percent of Quarterly Whole Body Dose Limit (1.5 mrem)	%	No Releases	No Releases	
Percent of Quarterly Organ Dose Limit (5 mrem)	%	No Releases	No Releases	
Percent of Annual Whole Body Dose Limit to Date (3 mrem)	%	No Releases	No Releases	
Percent of Annual Organ Dose Limit to Date (10 mrem)	%	No Releases	No Releases	
Percent of 10CFR20 Concentration Limit	%	No Releases	No Releases	
Percent of Dissolved or Entrained Noble Gas Limit (2.00E-04 µCi/ml)	%	No Releases	No Releases	

Unit 1 X Unit 2 _ Reporting Period January - June 1998

LIQUID EFFLUENTS RELEASED

Nuclides Released		BATCH MODE[1] 1st QUARTER	2nd QUARTER
Strontium-89	Ci	No Releases	No Releases
Strontium-90	Ci	No Releases	No Releases
Cesium-134	Ci	No Releases	No Releases
Cesium-137	Ci	No Releases	No Releases
Iodine-131	Ci	No Releases	No Releases
Cobalt-58	Ci	No Releases	No Releases
Cobalt-60	Ci	No Releases	No Releases
Iron-59	Ci	No Releases	No Releases
Zinc-65	Ci	No Releases	No Releases
Manganese-54	Ci	No Releases	No Releases
Chromium-51	Ci	No Releases	No Releases
Zirconium-Niobium-95	Ci	No Releases	No Releases
Molybdenum-99	Ci	No Releases	No Releases
Technetium-99m	Ci	No Releases	No Releases
Barium-Lanthanum-140	Ci	No Releases	No Releases
Cerium-141	Ci	No Releases	No Releases
Tungsten-187	Ci	No Releases	No Releases
Arsenic-76	Ci	No Releases	No Releases
Iodine-133	Ci	No Releases	No Releases
Iron-55	Ci	No Releases	No Releases
Neptunium-239	Ci	No Releases	No Releases
Praseodymium-144	Ci	No Releases	No Releases
Iodine-135	Ci	No Releases	No Releases
Dissolved or Entrained Gases	Ci	No Releases	No Releases
Tritium	Ci	No Releases	No Releases

[1] No continuous mode release occurred during the report period.

Unit 1 X Unit 2 __ Reporting Period January - June 1998

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

A.1 TYPE	Volume (m^3) Class			Activity[1] (Ci) Class		
	A	B	C	A	B	C
1. Spent Resins, Filter Sludges, Concentrated Waste, Evaporator Bottoms, etc.[2,3] (Dewatered)	0	1.12E+01	0	0	1.33E+02	0
2. Dry Compressible Waste, Dry Non-Compressible Waste (Contaminated Equipment)	0	0	0	0	0	0
3. Irradiated Components (Non-Combustible Solid)	0	0	4.88E+00	0	0	5.06E+04
4. Other: Irradiated Components (solid), Filters (dewatered) and non-compactible trash	0	0	3.41E+00	0	0	1.84E+02

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[1] The estimated total error is 5.00E+01%.

[2] Three Unit 1 steel encased high integrity containers of waste Class A bead resin were added to interim storage at Nine Mile Point during the reporting period. The total activity was 7.13E+00 curies and the waste volume was 1.40E+01m^3.

[3] There was one Unit 1 steel encased high integrity container of waste Class B powdered resin and bead resin mix placed in interim storage at Nine Mile Point during the reporting period. The total activity was 5.12E+01 curies and the waste volume was 4.67E+00m^3.

Unit 1 X Unit 2 __ Reporting Period January - June 1998

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

A.1 TYPE	Container	Package	Solidification Agent
1. Spent Resins, Filter Sludges, Concentrated Waste, Evaporator Bottoms, etc. (Dewatered)	HIC HIC	Type A Type A	None None
2. Dry Compressible Waste, Dry Non-Compressible Waste (Contaminated Equipment)	N/A	N/A	N/A
3. Irradiated Components (Non-Combustible Solid)	Steel Liner Steel Liner Steel Liner	Type B Type B Type B	None None None
4. Other: Irradiated Components (Solid), Filters (Dewatered) and Dry Non-Compactible Trash	HIC	Type B	None

Unit 1 X Unit 2 __ Reporting Period January - June 1998

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

A.2 ESTIMATE OF MAJOR NUCLIDE COMPOSITION (BY TYPE OF WASTE)

a. Spent Resins, Filter Sludges, Concentrated Waste:

Nuclide	Percent
(1) Co-60	3.53E+01
(2) Cs-137	2.71E+01
(3) Fe-55	2.48E+01
(4) Mn-54	1.15E+01
(5) Other	1.30E+00

b. Dry Compressible Waste, Dry Non-Compressible Waste (Contaminated Equipment): There were no shipments.

Nuclide	Percent

c. Irradiated Components:

Nuclide	Percent
(1) Co-60	6.21E+01
(2) Fe-55	3.39E+01
(3) Ni-63	2.51E+00
(4) Mn-54	1.44E+00
(5) Other	5.00E-02

d. Other: Irradiated Components, Filters and Dry Non-Compactible trash

Nuclide	Percent
(1) Co-60	4.90E+01
(2) Fe-55	4.41E+01
(3) Ni-63	3.30E+00
(4) Mn-54	2.13E+00
(5) Cs-137	1.06E+00
(6) Other	4.10E-01

Unit 1 X Unit 2 __ Reporting Period January - June 1998

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

A.3. SOLID WASTE DISPOSITION:

Number of Shipments	Mode of Transportation	Destination
6	Truck	Barnwell, SC

B. IRRADIATED FUEL SHIPMENTS (DISPOSITION): There were no shipments.

Number of Shipments	Mode of Transportation	Destination
0	N/A	N/A

Unit 1 X Unit 2 __ Reporting Period January - June 1998

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

C. SOLID WASTE SHIPPED OFF-SITE TO VENDORS FOR PROCESSING AND SUBSEQUENT BURIAL

Below is a summary of NMP-1 radwaste buried by vendor facilities during January - June 1998. These totals were reported separately from "10CFR61 Solid Waste Shipped for Burial" since (a) waste classification and burial was performed by the vendors, and (b) Technical Specification 6.9.1 requires reporting of "information for each class of solid waste (as defined by 10CFR61) shipped off-site during the reporting period." The following data represents the actual shipments made from the off-site vendors of our radwaste (e.g., non-compacted trash, dry non-compressible waste, high conductivity waste water) that was processed and commingled prior to burial.

C.1. TYPE OF WASTE - Noncompacted trash, and/or dry non-compressible waste processed by vendor facilities prior to burial.

Burial Volume (m^3)	Activity (Ci)	Est. Total Error, %
5.91E+00	3.40E+00	5.00+01

C.2. ESTIMATE OF MAJOR NUCLIDE COMPOSITION

Nuclide	Percent
(1) Co-60	6.10E+01
(2) Cs-137	1.67E+01
(3) Mn-54	1.63E+01
(4) Fe-55	2.68E+00
(5) Ce-144	1.21E+00
(6) Other	2.11E+00

C.3. SOLID WASTE DISPOSITION[1]

Number of Shipments	Mode of Transportation	Destination
4	Truck	Barnwell, SC
2	Truck	Clive, UT

[1] Note: During the report period eleven shipments of NMP-1 radwaste were sent to offsite processors. This material will be processed by the vendor and can be commingled with other licensees' waste for burial. However, the vendor performs an analysis of each shipment to determine the volume and activity buried under each utilities' license, and prepares a separate report for each licensee. This information is provided in the Semi-Annual Radioactive Effluent Release Report for the period in which the material is buried.

Unit 1 X Unit 2 ___ Reporting Period January - June 1998

.SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

D. SEWAGE WASTES SHIPPED TO A TREATMENT FACILITY FOR PROCESSING AND BURIAL

There were no shipments of sewage sludge with detectable quantities of plant-related nuclides from NMP to the treatment facility during the reporting period.

ATTACHMENT 7

Unit 1 X Unit 2 __ Reporting Period January - June 1998

SUMMARY OF CHANGES TO THE OFF-SITE DOSE CALCULATION MANUAL

There were no changes to the Unit 1 Off-Site Dose Calculation Manual during the reporting period.

ATTACHMENT 7

Unit 1 X Unit 2 __	Reporting Period January - June 1998
SUMMARY OF CHANGES TO THE OFF-SITE DOSE CALCULATION MANUAL	
There were no changes to the Unit 1 Off-Site Dose Calculation Manual during the reporting period.	

Unit 1 X Unit 2 __ Reporting Period January - June 1998

SUMMARY OF CHANGES TO THE PROCESS CONTROL PROGRAM

The Unit 1 Process Control Program (PCP) revision 4 was implemented in February 1998. An administrative change regarding PCP responsibilities, editorial changes and grammatical corrections were made. The PCP changes do not reduce the overall conformance of the solidified waste product to existing criteria for solid wastes in accordance with Technical Specifications. A copy of the PCP, revision 4 is attached and below is a summary of the changes accepted by the Station Operations Review Committee in February 1998.

Old Page #	New Page #	New/Amended Section #	Change	Reason for Change
I	N/A	N/A	List of Effected Pages was omitted.	Administrative change. The List of Effective Pages is only used with technical procedures per station procedure.
II	I	Table of Contents	Reference to Sections 9 and 10 are deleted from the Table of Contents.	Editorial correction. There are no Sections 9 or 10 in the PCP.
1	1	2.2	Change responsibility from the Manager Operations to the Manager Radiation Protection.	Administrative change reflecting the current reporting structure of Unit 1 Radwaste Operations.
10	11	Attachment 1 (Sheet 2)	Changed the word "Cash" to "Cask" under the section on Radiation Protection Procedures.	Editorial correction.
10	11	Attachment 1 (Sheet 2)	Changed the word "Procedure" to "the plural under the sections on Chemistry procedures and on Quality Assurance".	Editorial correction.
12	13	Attachment 2 Section 8.0	Changed the wording of the first sentence to indicate that waste is drained "in the" thickener tanks rather than "to the" tanks.	Editorial for clarification.
12 & 13	13 &14	Attachment 2 Sections 8.0, 9.0, and 13.2	Capitalize the word "bay" in the noun "Radwaste Truck Bay".	Corrects grammatical errors.

Unit 1 X Unit 2 __ Reporting Period January - June 1998

SUMMARY OF CHANGES TO THE PROCESS CONTROL PROGRAM

The following typographical errors have been identified in revision 4 of the PCP. These changes will be corrected in future revisions.

Old Page #	New Page #	New/Amended Section #	Change	Reason for Change
5	5	4.4.2.c	Changed the word "documented" to "documents".	"Typographical error".
5	5	4.4.2.d	Changed the word "reviews" to "review".	"Typographical error".
7	8	6.2.6	Changed the word "shipments" to "shipment".	"Typographical error".
11	12	Attachment 2 Section 3.2	Changed the word "resins" to "resin" in the second half of the sentence.	"Typographical error".

ATTACHMENT 9

Unit 1 X Unit 2	Reporting Period January - June 1998
SUMMARY OF INOPERABLE MONITORS	
There were no inoperable monitors for a period greater than 30 days during the reporting period.	

ATTACHMENT 10

Update of Actual Data for the Fourth Quarter 1997

Unit 1 X Unit 2 __ Reporting Period July - December 1997

UPDATE OF RELEASE AND DOSE DATA FOR GASEOUS (ELEVATED AND GROUND LEVEL) AND LIQUID EFFLUENTS

Update of data using actual results from the off-site vendors for Strontium, Tritium, and Iron-55 for the fourth quarter 1997.

Nuclide[1]	GASEOUS 4th QUARTER 1997 Activity (Ci)	LIQUID 4th QUARTER 1997 Activity (Ci)
Sr-89	1.11E-05	**
Sr-90	**	**
H-3	4.24E+00	1.29E-02
Fe-55	4.88E-05	**

			GASEOUS	LIQUID
Particulates	1. Particulates with half-lives >8 days	Ci	2.50E-04	1.62E-06
	2. Average release rate for period	µCi/sec (gaseous) µCi/ml (liquid)	3.15E-05	6.45E-10
Tritium	1. Total release	Ci	4.24E+00	1.29E-02
	2. Average release rate for period	µCi/sec (gaseous) µCi/ml (liquid)	5.33E-01	5.14E-06

Tritium, Iodines, and Particulates (with half-lives greater than 8 days)		GASEOUS	LIQUID
1. Percent of Quarterly Dose Limit[2]	%	8.79E-02 (Quarterly)	2.38E-01 (Quarterly)
2. Percent of Annual Dose Limit to Date[2]	%	4.56E-01 (Annual)	1.19E-01 (Annual)
3. Percent of Organ - Dose Rate Limit (Gaseous)(Quarterly) - Dose Limit (Liquid) (Annual & Quarterly)	%	1.75E-03 (Quarterly) N/A (Annual)	2.56E-01 (Quarterly) 1.28E-01 (Annual)
4. Percent of 10CFR20 Concentration Limit[3] (Liquid)	%	N/A	1.73E-01
5. Percent of Dissolved or Entrained Noble Gas (Liquid)	%	N/A	**

[1] Concentrations less than the lower limit of detection, as required by Technical Specifications or station procedures are indicated with a double asterisk.

[2] The dose is to the whole body for liquid effluents and to the maximally exposed organ for gaseous effluents.

[3] The percent of the 10CFR20 concentration limit is based on the average concentration during the quarter.

Unit 1 X Unit 2 __ Reporting Period January - June 1998

SUMMARY OF CHANGES TO THE PROCESS CONTROL PROGRAM

The Unit 1 Process Control Program (PCP) revision 4 was implemented in February 1998. An administrative change regarding PCP responsibilities, editorial changes and grammatical corrections were made. The PCP changes do not reduce the overall conformance of the solidified waste product to existing criteria for solid wastes in accordance with Technical Specifications. A copy of the PCP, revision 4 is attached and below is a summary of the changes accepted by the Station Operations Review Committee in February 1998.

Old Page #	New Page #	New/Amended Section #	Change	Reason for Change
I	N/A	N/A	List of Effected Pages was omitted.	Administrative change. The List of Effective Pages is only used with technical procedures per station procedure.
II	I	Table of Contents	Reference to Sections 9 and 10 are deleted from the Table of Contents.	Editorial correction. There are no Sections 9 or 10 in the PCP.
1	1	2.2	Change responsibility from the Manager Operations to the Manager Radiation Protection.	Administrative change reflecting the current reporting structure of Unit 1 Radwaste Operations.
10	11	Attachment 1 (Sheet 2)	Changed the word "Cash" to "Cask" under the section on Radiation Protection Procedures.	Editorial correction.
10	11	Attachment 1 (Sheet 2)	Changed the word "Procedure" to "the plural under the sections on Chemistry procedures and on Quality Assurance".	Editorial correction.
12	13	Attachment 2 Section 8.0	Changed the wording of the first sentence to indicate that waste is drained "in the" thickener tanks rather than "to the" tanks.	Editorial for clarification.
12 & 13	13 &14	Attachment 2 Sections 8.0, 9.0, and 13.2	Capitalize the word "bay" in the noun "Radwaste Truck Bay".	Corrects grammatical errors.

Unit 1 X Unit 2 ___ Reporting Period January - June 1998

SUMMARY OF CHANGES TO THE PROCESS CONTROL PROGRAM

The following typographical errors have been identified in revision 4 of the PCP. These changes will be corrected in future revisions.

Old Page #	New Page #	New/Amended Section #	Change	Reason for Change
5	5	4.4.2.c	Changed the word "documented" to "documents".	"Typographical error".
5	5	4.4.2.d	Changed the word "reviews" to "review".	"Typographical error".
7	8	6.2.6	Changed the word "shipments" to "shipment".	"Typographical error".
11	12	Attachment 2 Section 3.2	Changed the word "resins" to "resin" in the second half of the sentence.	"Typographical error".

ATTACHMENT 9

Unit 1 X Unit 2 ___ Reporting Period January - June 1998

SUMMARY OF INOPERABLE MONITORS

There were no inoperable monitors for a period greater than 30 days during the reporting period.

ATTACHMENT 10

Update of Actual Data for the Fourth Quarter 1997

Unit 1 X Unit 2 _ Reporting Period July - December 1997

UPDATE OF RELEASE AND DOSE DATA FOR GASEOUS (ELEVATED AND GROUND LEVEL) AND LIQUID EFFLUENTS

Update of data using actual results from the off-site vendors for Strontium, Tritium, and Iron-55 for the fourth quarter 1997.

Nuclide[1]	GASEOUS 4th QUARTER 1997 Activity (Ci)	LIQUID 4th QUARTER 1997 Activity (Ci)
Sr-89	1.11E-05	**
Sr-90	**	**
H-3	4.24E+00	1.29E-02
Fe-55	4.88E-05	**

			GASEOUS	LIQUID
Particulates	1. Particulates with half-lives >8 days	Ci	2.50E-04	1.62E-06
	2. Average release rate for period	µCi/sec (gaseous) µCi/ml (liquid)	3.15E-05	6.45E-10
Tritium	1. Total release	Ci	4.24E+00	1.29E-02
	2. Average release rate for period	µCi/sec (gaseous) µCi/ml (liquid)	5.33E-01	5.14E-06

Tritium, Iodines, and Particulates (with half-lives greater than 8 days)		GASEOUS	LIQUID
1. Percent of Quarterly Dose Limit[2]	%	8.79E-02 (Quarterly)	2.38E-01 (Quarterly)
2. Percent of Annual Dose Limit to Date[2]	%	4.56E-01 (Annual)	1.19E-01 (Annual)
3. Percent of Organ - Dose Rate Limit (Gaseous)(Quarterly) - Dose Limit (Liquid) (Annual & Quarterly)	%	1.75E-03 (Quarterly) N/A (Annual)	2.56E-01 (Quarterly) 1.28E-01 (Annual)
4. Percent of 10CFR20 Concentration Limit[3] (Liquid)	%	N/A	1.73E-01
5. Percent of Dissolved or Entrained Noble Gas (Liquid)	%	N/A	**

[1] Concentrations less than the lower limit of detection, as required by Technical Specifications or station procedures are indicated with a double asterisk.

[2] The dose is to the whole body for liquid effluents and to the maximally exposed organ for gaseous effluents.

[3] The percent of the 10CFR20 concentration limit is based on the average concentration during the quarter.

TABLE OF CONTENTS

1.0 PURPOSE

To describe the methods for processing, packaging, transporting, and storing low-level radioactive waste and provide assurance of complete stabilization of various radioactive wastes in accordance with applicable NRC & DOT regulations and guidelines.

2.0 RESPONSIBILITIES

2.1 The Plant Manager is responsible for:

2.1.1 Ensuring the Unit 1 Radwaste Process Control Program provides for the health and safety of the general public as it applies to Radwaste Management.

2.1.2 Reviewing and approving changes to the Unit 1 Radwaste Process Control Program in accordance with the applicable Technical Specification.

2.2 The Radiation Protection Manager is responsible for the content and maintenance of this program.

2.3 The General Supervisor Radwaste is responsible for overall implementation of the Radwaste Process Control Program.

3.0 PROGRAM

3.1 System Description

3.1.1 General

a. The Solid Waste Management System (SWMS) implemented by the procedures identified in the Unit 1 Radwaste Process Control Program Implementing Procedures (Attachment 1) collects, reduces the volume, dewaters and packages wet and dry types of radioactive waste in preparation for shipment off-site for further processing or disposal at a licensed burial site. The processing and storage methods used for interim storage are consistent with the present waste form stability requirements.

b. Types of solid waste sources are identified in Solid Waste Sources (Attachment 2).

3.1.1 (Cont)

c. Bead resins, powered resins and charcoal are dewatered using approved vendor equipment in:

1. Vendor certified polyethylene containers, or

2. Carbon steel liners, or a

3. High Integrity Container (HIC)

d. Concentrated wastes are processed off-site to dryness by an approved vendor.

e. Evaporator bottoms are transferred to a liner in the Radwaste Truck Bay for off-site processing by an approved vendor.

f. Dry solid trash is collected in the Radwaste Facility, sorted, and set off-site for further separation and processing.

3.1.2 Ventilation Systems

a. The Radwaste Building Ventilation System provides filtered, conditioned outside air to various areas of the Radwaste Building and exhausts the air to the atmosphere through the Turbine Building stack. (The system maintains the building at a pressure below atmospheric to help prevent any unmonitored air leakage to the environment.)

b. The Radwaste Solidification and Storage Building (RSSB) Ventilation System provides filtered, conditioned outside air to selected areas in the RSSB. Recirculation fans continuously filter and condition the air, and exhaust fans, taking a suction on the truck bays, exhaust the air to the Turbine Building stack. (The system maintains the building at a pressure below atmospheric to help prevent any unmonitored air leakage to the environment.)

3.1.3 Crane

a. All liner movements are completed using a remote controlled/operated crane. The movements are facilitated by the use of remote controlled cameras and monitors.

3.1.3 (Cont)

b. Liners are moved when required using a ceiling grid coordinated system for placement of the liner.

c. When liners stored in the RSSB storage area are to be shipped, the liners scheduled for shipment are moved to the East-West Truck Bay and then loaded for transportation.

4.0 RADIOACTIVE WASTES

4.1 Waste Processing System

The General Supervisor Radwaste shall ensure:

4.1.1 Radioactive waste is processed using approved equipment with approved procedures.

4.1.2 Radioactive waste may be processed using approved vendor equipment and procedures.

4.1.3 Radioactive wastes are disposed of in the applicable approved containers.

4.1.4 Radioactive waste is transferred into shipping casks in accordance with N1-LWPP-4, Waste Transfers to a Shipping Cask and N1-WHP-4, Cask Loading Procedure.

4.1.5 Waste is transferred between units and placed in interim storage in accordance with approved procedures.

4.2 Solid Dry Radioactive Wastes (SDRW)

The General Supervisor Radwaste shall ensure:

4.2.1 Low Specific Activity (LSA) Solid Dry Radioactive Waste (SDRW) is collected and prepared in accordance with the applicable procedure, meeting 10CFR61, Sub Part D, Technical Requirements for Land Disposal Facilities and Final Waste Classification and Waste Form Technical Position Papers requirements.

4.2.2 SDRW is examined for liquids or items that could compromise the integrity of the package or violate the burial site license and/or criteria are removed or separated.

4.2.3 SDRW is shipped in containers meeting the transport requirements of 49CFR173.427, Transport Requirements for Low Specific Activity (LSA) Radioactive Materials.

4.2.4 Waste precluded from disposal in LSA boxes or drums, due to radiation limits, is disposed of in the applicable containers.

4.2.5 Waste segregation and volume reduction processing techniques are used for waste generated during operation, maintenance, and modifications.

4.2.6 Scrap metal is separated from waste, when possible, for on-site or off-site decontamination.

NOTE: **Vendor services may be sued for waste segregation and further volume reduction processes.**

4.2.7 Waste is placed in interim storage in accordance with approved procedures.

4.3 Waste Classification/Characterization

4.3.1 The General Supervisor Radwaste shall ensure:

a. The minimum waste classification/characteristic requirements identified in 10CFR61.56, Waste Characteristics, are satisfied.

b. The radionuclide concentration determination methods and frequency are conducted in accordance with approved procedures.

4.3.2 The Manager Chemistry shall ensure the chemical and radionuclide content of waste is determined in accordance with the applicable Chemistry procedures.

4.3.3 The Manager Radiation Protection shall ensure classification of waste is performed in accordance with applicable Radiation Protection procedures for the packaging and transportation of radioactive material.

4.4. Administrative Controls

4.4.1 The General Supervisor Radwaste is responsible for overall administrative control of the Radwaste Process Control Program, ensuring:

4.4.1 a. Changes to the Unit 1 Radwaste Process Control Program are submitted to the NRC in the Semiannual Radioactive Effluent Release Report for the period in which the change(s) was made, and contain the information required by the applicable Technical Specification.

b. Shipping manifests are completed and tracked to satisfy the requirements of 10CFR20.2006, Transfer for Disposal and Manifests, in accordance with Waste Handling Procedures.

c. Temporary storage of solid radioactive material awaiting shipment in an area other than a designated area is done in accordance with the applicable radioactive material storage area.

d. Interim storage of low level waste is performed in accordance with approved procedures.

4.4.2 The Nuclear Division Quality Assurance Program assures effective implementation of the Process Control Program, as follows:

NOTE: The Manager, Nuclear QA, Operations has the authority to stop work when significant conditions adverse to quality exist and require corrective action.

a. Under the cognizance of the Safety Review and Audit Board (SRAB), the Process Control Program and implementing procedures for processing and packaging of radioactive waste are audited at least once every 24 months as required by the applicable Unit 1 Technical Specification.

b. QA audits waste classification records to ensure compliance with 10CFR20.2006, Transfer for Disposal and Manifests.

c. QA Inspectors performing Radwaste inspections receive documents training in Department of Transportation and NRC Radwaste Regulatory requirements.

d. Management review results of QA audits.

4.4.3 The Nuclear Division Training Program assures personnel responsible for implementation of the Process Control Program are effectively trained in accordance with the applicable training procedures as follows:

a. Qualification as a Radwaste Operator requires satisfactory completion of the Radwaste Operations Unit 1 Initial Training Program and participation in continued training, this includes:

1. Demonstrating an acceptable level of skill and familiarity associated with Radwaste operations by achieving an average grade of 80 percent or above on written examinations.

2. Receiving on-the-job training in accordance with applicable training procedures.

3. Continued training conducted on a cyclical basis and includes a fundamental review of system modifications, revisions or changes to procedures, and changes or experiences in the nuclear industry.

4. Individuals that demonstrate a significant deficiency in a given area of knowledge and/or proficiency (as identified during continued training) are placed in a remedial training program as directed by approved training procedures.

4.4.4 Training records and Waste Management records are maintained in accordance with applicable Quality Assurance procedures.

5.0 DEFINITIONS

5.1 The applicable Radwaste packaging, processing, and transportation definitions will be used in accordance with 49CFR171 and 49CFR Sub Part I.

6.0 REFERENCES

6.1 Licensee Documentation

6.1.1 Unit 1 Technical Specifications

a. System 3.6.16.c, Radioactive Effluent Treatment Systems

b. Section 4.6.16.c, Radioactive Effluent Treatment Systems

c. Section 6.5.2.11, Technical Review and Control

d. Section 6.5.3.8.k, Audits of Facility Activities

e. Section 6.9.1.e, Semiannual Radioactive Effluent Release Report

6.1.2 Unit 1 Radiological Effluent Technical Specifications, Amendment No. 66

6.1.3 Nine Mile Point Unit 1 Operating License No. DPR-63 (Docket No. 50-220)

6.1.4 QATR-1, Quality Assurance Program Topical Report for Nine Mile Point Nuclear Station Operations, Section 17.0, Quality Assurance Records

6.1.5 UFSAR, Section XII.A, Radioactive Wastes

6.1.6 UFSAR, Section III.I, RSSB

6.1.7 Safety Evaluation 92-049, Rev. 04, Interim Storage

6.2 Standards, Regulations, and Codes

6.2.1 10CFR20, Standards for Protection Against Radiation

6.2.2 10CFR61, Sub Part D, Technical Requirements for Land Disposal Facilities and Final Waste Classification and Waste Form Technical Position Papers

6.2.3 10CFR61.55, Waste Classification

6.2.4 10CFR61.56, Waste Characteristics

6.2.5 10CFR71, Packaging and Transportation of Radioactive Material, (Refer to applicable S-RPIPs for the packaging and transportation of radioactive material)

6.2.6 49CFR173, Shippers - General Requirements for Shipment and Packagings, (Refer to applicable S-RPIPs for the packaging and transportation of radioactive material)

6.2.7 49CFR173.427, Transport Requirements for Low Specific Activity (LSA) Radioactive Materials

6.2.8 NUREG-0133, Section 3.5, Preparation of Radiological Effluent Technical Specifications for Nuclear Power Plants

6.2.9 NUREG-0473, Sections 3.11.3 and 6.14, Draft Radiological Effluent Technical Specifications for Boiling Water Reactors

6.2.10 NUREG-0800, Section 11.4, Standard Review Plan for Solid Waste Management Systems

6.3 Policies, Programs, and Procedures

6.3.1 NDD-LPP, Licenses, Plans, and Programs

6.3.2 NDD-OPS, Operations

6.3.3 NDD-RMP, Radioactive Material Processing, Transport, and Disposal

6.3.4 NIP-ECA-01, Deviation/Event Report

6.3.5 NIP-PRO-03, Preparation and Review of Technical Procedures

6.3.6 NIP-RMG-01, Records Management

6.3.7 NIP-TQS-01, Qualification and Certification

6.3.8 GAP-ALA-01, Site ALARA Program

6.3.9 GAP-INV-02, Control of Material Storage Areas

6.3.10 GAP-OPS-01, Administration of Operations

6.3.11 GAP-RPP-01, Radiation Protection Program

6.3.12 GAP-RPP-02, Radiation Work Permit

6.4 Supplemental References

6.4.1 Chem Nuclear Systems, Inc. Training and Requalification Procedure

6.4.2 Nuclear Regulatory Commission's Branch Technical Position of Waste Classification and Waste Form, May 1983

6.4.3 DER 1-94-00549

6.4.4 Structural Calculation S.2.3-R5252-Tank 01

6.4.5 Modification N1-91-033

6.4.6 Procedure N1-MFT-30

ATTACHMENT 1: UNIT 1 RADWASTE PROCESS CONTROL PROGRAM IMPLEMENTING PROCEDURES (Sheet 1 of 2)

Waste Handling Procedures (WHPs)

N1-WHP-01	Technical Information Governing Packaging and Shipping of Radioactive Waste
N1-WHP-02	Required Documents for Radioactive Waste Shipments
N1-WHP-03	Cask Handling Procedure
N1-WHP-04	Cask Loading Procedure
N1-WHP-06	Van Handling Procedure
N1-WHP-07	Van Loading Procedure
N1-WHP-08	Sludge Removal and Decontamination Procedure
N1-WHP-09	Cement Solidification Procedure
N1-WHP-10	Removal of a Loaded Cask Liner
N1-WHP-12	Solid Dry Radioactive Waste Collection and Processing
N1-WHP-13	RSSB SECO Crane
S-WHP-1	Waste Transfer for Interim Storage

Liquid Waste Processing Procedures (LWPPs)

N1-LWPP-01	Liquid Waste Low Conductivity System
N1-LWPP-02	Liquid Waste High Conductivity System
N1-LWPP-03	Liquid Waste Discharge
N1-LWPP-04	Waste Transfers to a Shipping Cask
N1-LWPP-05	#12 Waste Concentrator System
N1-LWPP-06	Filter Sludge Processing System
N1-LWPP-07	Concentrated Waste Transfer System
N1-LWPP-08	Chemical Addition System
N1-LWPP-09	Fluidized Transfer Demineralization System (FTDS)

Liquid Waste Processing Procedures (LWPPs) (Cont'd)

N1-LWPP-11	Liquid Waste #12 Electric Boiler System
N1-LWPP-12	Radwaste Building Heating and Ventilation System
N1-LWPP-13	RSSB Heating, Ventilation & Air Conditioning System
N1-LWPP-14	Sump and Tank Cleaning Procedure

Radiation Protection Procedures (S-RPIPs)

S-RPIP-7.1	Movement and Storage of Radioactive Material on Site
S-RPIP-7.2	Receipt of Radioactive Material
S-RPIP-7.3	Determination of Shipment Type
S-RPIP-7.4	Cask Shipments
S-RPIP-7.5	Van and Flatbed Shipments
S-RPIP-7.7	Non-Waste Radioactive Shipments
S-RPIP-7.8	Shipping Documents

Chemistry Procedures (CSP)

N1-CTP-V400	Radioactive Solid Waste Analysis and Documentation
N1-CTP-V402	Radioactive Solid Waste Composites

Quality Assurance Procedures (QAPs)

QAP-ASU-18.20	Quality Assurance Surveillance Program
QAP-INS-10.30	Nuclear Quality Assurance Department Inspection Activities
QAP-ASU-18.10	Nuclear Audit Program

Training Procedures (NTPs)

NTP-TQS-108	Training for Chemistry Technicians, Radiation Protection Technicians, and Radwaste Operators

ATTACHMENT 2: SOLID WASTE SOURCES
(Sheet 1 of 3)

1.0 RADWASTE FILTERS

1.1 Mechanical Radwaste filters filter resin and crud (backwash material) from the Waste Collector Sub-System.

1.2 When a filter reaches a pre-determined differential pressure, the filter is backwashed into the filter sludge tank, which is then processed via the clarifier to the thickener tanks.

2.0 RADWASTE DEMINERALIZER

2.1 The Radwaste Demineralizer is used as anionic exchange media for processing high quality water from the Waste Collector Tanks.

2.2 When determined the resin can NO longer be used, the depleted resin is pumped to the Spent Resin Tank.

3.0 CONDENSATE DEMINERALIZERS

3.1 The Condensate Demineralizers remove soluble and insoluble impurities from the condensate water to maintain reactor feedwater purity.

3.2 After it is determined these resins can NO longer be used, the depleted resin are pumped to the Radwaste Demineralizer or Spent Resin Tank.

4.0 THERMEX SYSTEM

4.1 Concentrated waste will be pumped to the Spent Resin Tank and dewatered or stored in a liner and eventually pumped to a transport liner in the Radwaste Truck Bay for off-site processing.

4.2 Exhausted resin and charcoal are sluiced to the Spent Resin Tank, mixed to a homogenous mixture and then transferred to a liner in the truck bay for dewatering.

4.3 Exhausted Reverse Osmosis membranes will be processed as DAW.

5.0 FUEL POOL FILTER SLUDGE TANK

This tank receives the exhausted powdered filter media (resins) from the Fuel Pool Cleanup System, which is subsequently pumped to the Filter Sludge Tank for processing.

6.0 CLEANUP FILTER SLUDGE TANK

This tank receives the exhausted powdered filter media (resins) from the Reactor Cleanup System, which is subsequently pumped to the Filter Sludge Tank, Clarifier, or directly to a liner in the Radwaste Truck Bay for processing.

7.0 FILTER SLUDGE STORAGE TANK

This tank receives waste from the Radwaste filters, Fuel Pool and Cleanup Sludge Tanks, Clarifier and Thickener Tank overflows, and Radwaste Floor Drain Sump #11. Tank discharge is to the Clarifier (Filter Sludge Thickener System) or directly to a liner in the Radwaste Truck Bay for processing.

8.0 FILTER SLUDGE THICKENER TANKS (CLARIFIER)

Waste from the Filter Sludge Storage Tank or the Cleanup Filter Sludge Tank is pumped to the Clarifier, mixed with a flocculent and drained in the Thickener Tanks. The Thickener Tanks are pumped to a liner in the Radwaste Truck Bay for processing.

9.0 SPENT RESIN STORAGE TANK

Exhausted resin from the Condensate Demineralizers, Radwaste Demineralizer, and THERMEX System are sluiced to the Spent Resin Tank. The tank is subsequently pumped to a liner in the Radwaste Truck Bay for dewatering and further processing.

10.0 CONTAMINATED OIL

Oil from sources within Unit 1 that become contaminated is stored in containers to be shipped off-site for incineration.

ORIGINAL

CONTROLLED

NIAGARA MOHAWK POWER CORPORATION

NINE MILE POINT NUCLEAR STATION UNIT 1

RPCP

REVISION 04

UNIT 1 RADWASTE PROCESS CONTROL PROGRAM

TECHNICAL SPECIFICATION REQUIRED

Approved by:
R. B. Abbott

RB Abbott
Plant Manager - Unit 1

2/26/98
Date

THIS IS A FULL REVISION