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As a result of changes in Technical Specifications, sampling milk for ^{131}I was discontinued on September 21, 1973.

Thirty-nine (39) samples were obtained during the second quarter from the perimeter monitoring stations and were analyzed for alpha and beta activity. The alpha activity ranged from $1.38 (10^{-16})$ to $1.47 (10^{-15})$ $\mu\text{Ci/ml}$ for an average of $3.24 (10^{-16})$ $\mu\text{Ci/ml}$. The beta activity ranged from $5.33 (10^{-15})$ to $6.99 (10^{-14})$ $\mu\text{Ci/ml}$ with an average of $2.10 (10^{-14})$ $\mu\text{Ci/ml}$.

LOW LEVEL LIQUID EFFLUENTS

The amounts of radioactivity in liquid discharged from the plant during this period and their relationship to the maximum permissible concentration (MPC) in the Cattaraugus Creek are shown in Table 1.

GASEOUS EFFLUENTS

The amount of particulate radioactivity discharged via the plant stack and the relationship to the release limit in the Technical Specifications is shown in Table 2. Change 20 to the Technical Specifications discontinued the requirements of Krypton-85 and Iodine-131 monitoring while plant operations are suspended.

SURVEILLANCE TESTS

During this period, tests were performed in accordance with Section 6 of the Technical Specifications. The completion dates are shown in Tables 3 and 4.

LOW LEVEL LIQUID WASTE TREATMENT PLANT PERFORMANCE

During this period, the LLWT was in operation a total of 10 days and treated 1,097,000 gallons of water. Forty-eight (48) drums of concentrated sludge were removed, each having a radiation level of <10 mr/hr. Decontamination of waste water continues to be good. All water discharged has been below 2.0×10^{-5} $\mu\text{Ci Cs}^{137}/\text{ml}$. Average removal factors for this period are shown below.

<u>Isotope</u>	<u>AVERAGE REMOVAL FACTOR</u>	
	<u>Previous Quarter</u>	<u>This Quarter</u>
Cs-137	76.1	80.0
Sr-90	99.7	Not Yet Available
Ru-Rh-106	Below Detection Limits	Below Detection Limits
Gross Beta	95.3	97.7

No significant developments or modifications to the facility have occurred during the past quarter and operation has been routine.

Table 1
LIQUID EFFLUENTS--1980
 (Curies)

Month	Gross α	Gross β	Tritium	Sr ⁹⁰	I ¹²⁹	% MPC ^a Measured In Cattaraugus Creek
Jan	0.000001	0.00002	0.0010	0.00001	NR ^c	0.33
Feb	0.000001	0.00002	0.0007	0.00001	NR ^c	0.55
Mar	0.000001	0.00002	0.0006	0.00001	NR ^c	0.39
Apr	0.00013	0.019	1.37	0.0025	0.00006	0.29
May	0.000001	0.00003	0.0008	0.00001	NR ^c	0.49
Jun	0.000001	0.00003	0.0009	0.00001	NR ^c	0.88
Jul	0.000001	0.00004	0.0008	0.00001	NR ^c	0.33
Aug	0.000007	0.018	4.87	NA ^b	NA ^b	NA ^b
Sep	0.000001	0.00004	0.0005	NA ^b	NR ^c	NA ^b
1980	0.00021	0.037	6.25	0.0026 ^d	0.00006	0.46 ^e

^aMPC (β) = 3.0 (10^{-7}) μ Ci/ml when Sr⁹⁰ analyses are not available
 MPC (β) = 1.0 (10^{-5}) μ Ci/ml when Sr⁹⁰ analyses are included separately
 MPC (α) = 5.0 (10^{-6}) μ Ci/ml

^bNot yet available

^cNot required; there were no lagoon 3 effluent releases for the month

^dRelease through July 1980

^eMPC through July 1980

Table 2

PARTICULATE GASEOUS EFFLUENTS - 1980

<u>Month</u>	<u>Curies</u>	<u>% Monthly Limit</u>
January	.00012	0.04
February	.00010	0.04
March	.00008	0.03
April	.00010	0.04
May	.00005	0.02
June	.00004	0.02
July	.00005	0.02
August	.00004	0.01
September	.00005	0.02
1980	.00063	0.027

Table 3
SUPVEILLANCE TESTS

<u>Spec. #</u>	<u>Subject</u>	<u>Completed This Quarter</u>	<u>Comments</u>
6.1	Raschig Ring Tanks		Tanks are to be scheduled prior to next processing use
6.2	Sump Alarms and Eductors		
	XC-2	7-7, 7-29, 8-19, 9-9, 9-30	Satisfactory
	XC-3	7-8, 7-29, 8-19, 9-9, 9-30	Satisfactory
	PPC	7-9, 7-29, 8-19, 9-9, 9-30	Satisfactory
6.3	Waste Storage Tank Pan Instrumentation		
	8D-1, 8D-2	7-8, 7-30, 8-20, 9-8	Satisfactory
	8D-3, 8D-4	7-8, 7-30, 8-20, 9-8	Satisfactory
6.4	Emergency Utility Equipment		
	30T-1	7-1	Satisfactory
	31K-1	7-1	Satisfactory
	32G-4B	7-1	Satisfactory
	31G-2, 2A	8-12	Satisfactory
	31K-2, 2A	8-12	Satisfactory
	32G-2A, 2B	8-12	Satisfactory
	Diesel Fuel	7-7, 7-14, 7-21, 7-28, 8-4, 8-11, 8-25, 9-1, 9-8, 9-15, 9-22, 9-29	Satisfactory
	Propane Fuel	7-8, 7-14, 7-21, 7-28, 8-4, 8-11, 8-18, 8-25, 9-2, 9-8, 9-22, 9-29	Satisfactory
	15K-10A	7-1	Satisfactory
	15F-21	7-1	Satisfactory
6.5	Filters	7-10, 7-17, 7-25, 7-29, 8-8, 8-15, 8-22, 8-27, 9-5, 9-11, 9-17, 9-25	Satisfactory
6.6	Dilution Air	Not required this period	
6.7	Boric Acid	Not required this period	
6.8	Locking Out	Not required this period	
6.9	Water Activity Alarms	9-30	Satisfactory
6.10	Poisoned Dissolver Baskets	Not required this period	
6.11	Solvent Analysis	Not required this period	

Table 4

FILTER REPLACEMENT

The Waste Tank Farm filter 8T-1A was changed on 8-31-80.

PROCESSING SUMMARY

During this period there was no processing of fuel.

The periodic pumpdown of Waste Tank 8D-1 condensate continued until July 14, 1980 with an additional 56,456 gallons being treated and sent to Lagoon 1. The total volume of condensate which was treated and sent to Lagoon 1 during the pumpout amounted to 78,795 gallons. An additional 40,950 gallons of the 8D-1 condensate were transferred directly to Waste Tank 8D-2.

NUCLEAR FUEL SUMMARY

The following information is based upon nuclear material accountability records and indicates the disposition of nuclear material in fuel at the reprocessing plant.

A. INVENTORY

The total on-site inventory on September 30, 1980 was 166,759 kilograms of uranium and 1,037,634 grams of plutonium. An inventory description by source and material type is presented in Table 5.

B. RECEIPTS AND SHIPMENTS

During the quarter, there were no shipments or receipts of spent fuel assemblies at the West Valley site.

C. MEASURED WASTE AND ADJUSTMENTS

There was no loss of uranium or plutonium during the reporting period as measured waste.

No adjustments for uranium and plutonium to NFS Lot 27A were required.

D. LOSS ON DECAY

During the period 3/31/80 - 9/30/80 there was a reduction of 1,887 grams of plutonium in stored fuel due to the radioactive decay of the Pu-241 isotope.

Table 5

NUCLEAR FUEL STATUS AS OF SEPTEMBER 30, 1980

	Kilograms			Grams
	<u>Total U</u>	<u>U-235</u>	<u>U-233</u>	<u>Total Pu</u>
I. <u>INVENTORY</u> (7/1/80)				
NFS	3,271	8.01	--	306
Dresden-1	20,429	144.03	0.30	116,887
RG&E	46,156	722.48	--	285,787
Consumers	11,130	238.68	--	64,118
WEPCO	43,017	462.61	--	338,394
Jersey Central	42,756	463.42	--	234,335
TOTAL	166,759	2,039.23	0.30	1,039,827
II. <u>RECEIPTS</u> (7/1/80-9/30/80)	No receipts during this period.			
III. <u>REMOVALS</u> (7/1/80-9/30/80)				
A. Measured Waste Lot 27A	0	0	0	0
B. Adjustments Lot 27A	0	0	0	0
C. Loss on Decay	0	0	0	1,887
TOTAL	0	0	0	1,887
IV. <u>INVENTORY</u> (9/30/80)				
NFS	3,271	8.01	--	306
Dresden-1	20,429	144.03	0.30	116,658
RG&E	46,156	722.48	--	285,272
Consumers	11,130	238.68	--	64,039
WEPCO	43,017	462.61	--	337,652
Jersey Central	42,756	463.42	--	234,013
TOTAL	166,759	2,039.23	0.30	1,037,940

RADIOACTIVE WASTE

A. Solid Waste

The radioactive plant waste buried during this quarter consisted of 1488.79 cu. ft. containing 161.176 curies. This material was buried in the NRC-licensed burial area.

B. High Level Liquid Waste

As of September 30, 1980, the high level storage tank 8D-2 contained 571,100 gallons of neutralized waste with an activity of 4,296 μCi Cs-137/ml and 65 μCi Cs-134/ml.

FACILITY PERFORMANCE AND MODIFICATIONS

This section describes:

- 1.0 Major modifications that were either initiated or completed at the processing plant during the reporting period.

A device to detect small leaks by collecting and sampling water vapor condensate emanating from the waste tank 8D-2 vault vent was designed and fabricated, then installed on 9/19/80.

- 2.0 A description of malfunctions of any equipment listed in Appendices 5.2, 9.51, 9.53 and 9.56 of the Final Safety Analysis Report which are important to s²

- 2.1 At approximately 4:00 A.M. on Sunday, September 14, 1980, lightning struck the power supply for the lake pumps, putting them out of service. Repairs were effected on Monday, September 15, and the unit again became operable.

- 2.2 The motor on the Con-Ed scrubber pump 8G-3 burned out. The unit was replaced and put back into service.