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ENVIRONMENTAL MONITORING

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 $7.79 (10^{-16})$ $\mu\text{Ci/ml}$ for an average of $2.99 (10^{-16})$ $\mu\text{Ci/ml}$. The beta activity ranged from $5.64 (10^{-15})$ to $3.46 (10^{-14})$ $\mu\text{Ci/ml}$ with an average of $1.75 (10^{-14})$ $\mu\text{Ci/ml}$.

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 22 days and treated 1,790,000 gallons of water. Eighty-three (83) 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.

AVERAGE REMOVAL FACTOR

<u>Isotope</u>	<u>Previous Quarter</u>	<u>This Quarter</u>
Cs-137	93.7	82.6
Sr-90	99.5	Not Yet Available
Ru-Rh-106	Below Detection Limits	Below Detection Limits
Gross Beta	97.4	95.7

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

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Table 1
LIQUID EFFLUENTS--1979
(Curies)

<u>Month</u>	<u>Gross α</u>	<u>Gross β</u>	<u>Tritium</u>	<u>Sr⁹⁰</u>	<u>I¹²⁹</u>	<u>% MPC^a Measured In Cattaraugus Creek</u>
Jan	0.000001	0.00004	0.0007	0.00001	NR ^c	0.41
Feb	0.000001	0.00001	0.0004	0.00001	NR ^c	0.38
Mar	0.00013	0.016	3.3	0.0027	0.00010	0.25
Apr	0.000001	0.00003	0.0004	0.0001	NR ^c	0.39
May	0.000001	0.00002	0.0001	NA ^b	NR ^c	NA ^b
Jun	0.000001	0.00003	0.0008	NA ^b	NR ^c	NA ^b
1979	0.00013	0.016	3.3	0.0028 ^e	0.00010	0.36 ^d

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

^bNot yet available

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

^dMPC through April 1979

^eRelease through April 1979

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Table 2

PARTICULATE GASEOUS EFFLUENTS

<u>Month</u>	<u>Curies</u>	<u>% Monthly Limit</u>
January	.00008	0.03
February	.00008	0.03
March	.00004	0.01
April	.00016	0.07
May	.00007	0.03
June	.00007	0.02
1979	.00050	0.032

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Table 3
SURVEILLANCE 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	4-3, 4-26, 5-15, 6-5, 6-26	Satisfactory
	XC-3	4-3, 4-26, 5-15, 6-5, 6-26	Satisfactory
	PPC	4-3, 4-26, 5-15, 6-5, 6-26	Satisfactory
6.3	Waste Storage Tank Pan Instrumentation		
	8D-1, 8D-2	4-3, 4-27, 5-18, 6-6, 6-29	Satisfactory
	8D-3, 8D-4	4-3, 4-27, 5-18, 6-6, 6-29	Satisfactory
6.4	Emergency Utility Equipment		
	30T-1	4-4	Satisfactory
	31K-1	4-4	Satisfactory
	32G-4B	4-4	Satisfactory
	31G-2, 2A	4-12, 6-12	Satisfactory
	31K-2, 2A	4-12, 6-12	Satisfactory
	32G-2A, 2B	4-12, 6-12	Satisfactory
	Diesel Fuel	4-2, 4-9, 4-16, 4-23, 4-30, 5-7, 5-14, 5-21, 5-28, 6-4, 6-11, 6-18, 6-25	Satisfactory
	Propane Fuel	4-2, 4-4, 4-6, 4-9, 4-23, 4-30, 5-7, 5-10, 5-15, 5-23, 5-29, 6-4, 6-11, 6-19, 6-25	Satisfactory
	15K-10A	4-4	Satisfactory
	15F-21	4-4	Satisfactory
6.5	Filters	4-2, 4-9, 4-16, 4-23, 4-30, 5-7, 5-14, 5-21, 6-1, 6-6, 6-13, 6-21, 6-29	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	6-29	Satisfactory
6.10	Poisoned Dissolver Baskets	Not required this period	
6.11	Solvent Analysis	Not required this period	

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Table 4

FILTER REPLACEMENT

There were no filter changes during this reporting period.

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PROCESSING SUMMARY

During this period there was no processing of fuel.

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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 June 30, 1979 was 166,759 kilograms of uranium and 1,043,739 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.

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Table 5

NUCLEAR FUEL STATUS AS OF JUNE 30, 1979

	<u>Kilograms</u>			<u>Grams</u>
	<u>Total U</u>	<u>U-235</u>	<u>U-233</u>	<u>Total Pu</u>
I. <u>INVENTORY</u> <u>(4/1/79)</u>				
NFS	3,271	8.01	--	306
Dresden-1	20,429	144.03	0.30	117,362
RG&E	46,156	722.48	--	286,856
Consumers	11,130	238.68	--	64,282
WEPCO	43,017	462.61	--	339,932
Jersey Central	42,756	463.43	--	235,001
TOTAL	166,759	2,039.24	0.30	1,043,739
II. <u>RECEIPTS</u> <u>(4/1/79-6/30/79)</u>	No receipts during this period.			
III. <u>REMOVALS</u> <u>(4/1/79-6/30/79)</u>				
A. Measured Waste Lot 27A	<1	<.01	0	3
B. Adjustments Lot 27A	(<1)	(<.01)	0	(3)
TOTAL	0	0	0	0
IV. <u>INVENTORY</u> <u>(6/30/79)</u>				
NFS	3,271	8.01	--	306
Dresden-1	20,429	144.03	0.30	117,362
RG&E	46,156	722.48	--	286,856
Consumers	11,130	238.68	--	64,282
WEPCO	43,017	462.61	--	339,932
Jersey Central	42,756	463.42	--	235,001
TOTAL	166,759	2,039.23	0.30	1,043,739

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RADIOACTIVE WASTE

A. Solid Waste

The radioactive plant waste buried during this quarter consisted of 1614.62 cu ft containing 39.512 curies. This material was buried in the NRC-licensed burial area.

B. High Level Liquid Waste

As of June 30, 1979, the high level storage tank 8D-2 contained 573,200 gallons of neutralized waste with an activity of 4,545 μ Ci Cs-137/ml and 103 μ Ci Cs-134/ml.

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FACILITY PERFORMANCE AND MODIFICATIONS

This section describes:

1. Major modifications that were either initiated or completed at the processing plant during the reporting period.
 - 1.1 The vault eductor piping and the level monitoring probes in the 8D-1 and 8D-2 vaults were lengthened 12 inches.
 - 1.2 New Taylor transmitters for measuring the vault and pan levels of 8D-1 and 8D-2 were installed.
 - 1.3 Instrument enclosures were constructed and installed near the 8D-1 and 8D-2 vault eductor penetrations.
2. 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 safety.

There were no malfunctions during the reporting period.

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