EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT
SUPPLEMENTAL INFORMATION
1ST HALF 86

1. Regulatory Limits

a. Fission and Activation Gases:

(1) Instantaneous - Nuclide Dependant (all release points)

Shield Building
Auxiliary Building
Condenser Vacuum Exhaust
Service Building

NOTE: Total plant release rate limit per nuclide are established by TVA's Radiological Control, Radiation Protection Branch. These limits are further evaluated to each vent based on design flowrate. Technical Specification will not be exceeded until the sum of individual isotope release rate per release rate limit exceeds 1.0.

b. & c. Iodines and particulates, half-lives > 8 days

(1) Instantaneous - Nuclide Dependant

NOTE: Total plant release rate limit per nuclide are established by TVA's Radiological Control, Radiation Protection Branch. These limits are further evaluated to each vent based on design flowrate. Technical Specifications will not be exceeded until the sum of individual isotope release rate per release rate limit exceeds 1.0.

d. Liquid effluent: $\sum$ MPC $\leq$ 1.0 (reference 10CFR20, Appendix B, note 3C, Table II, column 2).

e. Tritium

(1) Liquid - $\leq$ 3.0E-3 µCi/ml (ref. 10CFR20, Table II, column 2)

(2) Airborne - (reference 10CFR20, Table II, column 1)

Shield Building	$\leq$ 3.138E+03 µCi/sec
Auxiliary Building	$\leq$ 2.555E+04 µCi/sec
Service Building	$\leq$ 1.165E+03 µCi/sec
Condenser Vacuum Exhaust	$\leq$ 5.043E+00 µCi/sec

NOTE: These limits are established by TVA based on each vents design flowrate.

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2. Maximum Permissible Concentrations

   a. Fission and Activation Gases: Not Applicable

   b. Iodines: Not Applicable

   c. Particulates, half-lives > 8 days: Not Applicable

   d. Liquid effluents: sum of indv. MPC ratios ≤ 1.0 (ref. 10CFR20, Appendix B, Note 1)

3. Average Energy - Not Applicable

4. Measurements and Approximations of Total Radioactivity

   a. Fission and Activation Gases

      Airborne effluent gaseous activity is continuously monitored and recorded. Additional grab samples from the shield, auxiliary, service and condenser vacuum exhausts are taken and analyzed at least monthly to determine the quantity of noble gas activity released for the month based on the average vent flowrates recorded for the sample period. Also, noble gas samples are collected and evaluated for the shield and auxiliary buildings following startup, shutdown or a rated thermal power change exceeding 15% within one hour. The vent flowrates for the shield auxiliary, service buildings, and condenser vacuum exhaust are determined and recorded once a shift.

      The quantity of noble gases released through the shield and auxiliary building due to purging or venting of containment and releases of waste gas decay tanks are also determined.

      The total noble gas activity released for the month is then determined by summing all of the activity released from each vent for all sampling periods, the activity released from purging or venting of containment, and the activity released from waste gas decay tank(s).

NOTE: Every effort is made to ensure that all effluents from Sequoyah are conducted such that all Technical Specification LLDs are met. Whenever an analysis does not identify a radioisotope, a "0.00E-01 Ci" is recorded for the release. This does not necessarily mean that no activity was released for that particular radioisotope but that the concentration was below the Technical Specification and analysis capability. Refer to Tables A and B for estimates of these typical values.

4. Measurements and Approximation of Total Radioactivity (continued)

When an analysis results in a non-Technical Specification radioisotope being identified in one quarter and not the other, a "N/A" is recorded for the quarter in which it was not identified. These radioisotopes will not be recorded in Tables A and B since they are not Technical Specifications.

b. & c. Iodines and Particulates

Iodine and particulate activity is continuously monitored and recorded. Charcoal and particulate samples are taken from the shield and auxiliary building exhausts and analyzed at least weekly to determine the total activity released from the plant based on the average vent flowrates recorded for sampling period.

Also, particulate and charcoal samples are taken from the auxiliary and shield buildings once per 24 hours for 2 days following startup, shutdown or a rated thermal power change exceeding 15% within one hour. The quantity of iodine and particulate released from each vent during each sampling period is then determined using the average vent flowrates recorded for the sampling period and activity concentration.

The vent flowrates from the shield and auxiliary buildings are recorded once a shift.

The total particulate and iodine activity released for the month is then determined by summing all of the activity released from the shield and auxiliary buildings for all sampling periods.

d. Liquid Effluents

(1) Batch (Radwaste and condensate regenerants to cooling tower blowdown)

Total gamma isotopic activity concentrations are determined on each batch of liquid effluent prior to release. The total curie content of a released batch is determined by summing each nuclide's concentration and multiplying by the total volume discharged. The total activity released during a month is then determined by summing the activity content of each batch discharged during the month.

(2) Continuous Releases and Periodic Continuous Releases (Condensate regenerants, turbine building sump and steam generator blowdown)

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4. Measurements and Approximation of Total Radioactivity (continued)

Total gamma isotopic activity concentration is determined daily on a composite sample from the condensate system and turbine building sump and weekly for steam generator blowdown. The total curie content of the continuous release is determined by summing each nuclide's concentration and multiplying by the total volume discharged. The total activity released during the month is then determined by summing the activity content of each daily and weekly composite for month.

5. Batch

	Value		Units
	Quarter 1st	Quarter 2nd	
a. Liquid			
1. Number of batches released (Radwaste only)	72	80	Each
2. Total time period for batch releases	10428	11698	Minutes
3. Maximum time period for a batch release	240	209	Minutes
4. Average time period for batch releases	145	146	Minutes
5. Minimum stream flow during periods of effluent into a flowing stream:	(a)	(a)	

(a) See Radiological Control Section's portion of semi-annual effluent release report.

b. Gaseous			
(1) Number of batches released	13	15	Each
(2) Total time period for batch releases	796	770	Minutes
(3) Maximum time period for a batch release	131	167	Minutes
(4) Average time period for batch releases	99	156	Minutes
(5) Minimum time period for a batch release	71	142	Minutes

6. Abnormal Releases

a. Liquid			
(1) Number of Releases	0	0	
(2) Total Activity Released	0.00E-01	0.00E-01	Ci
b. Gaseous			
(1) Number of Releases	0	0	
(2) Total Activity Released	0.00E-01	0.00E-01	Ci

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1st HALF 86
LIQUID EFFLUENTS - TOTAL PLANT DISCHARGE

		Unit	Quarter 1st	Total %Error	Quarter 2nd	Total %Error
A.	Fission and Activation Products					
1.	Total Releases	Curies	3.47E-02	±1.0E+01	2.16E-02	±1.0+01
2.	Average Diluted Cond. During Period of All Identified Isotopes	µCi/ml	3.88E-08		1.60E-08	
3.	Percent of Applicable Limit ($N \text{ MPC} \leq 1$) $\sum_{i=1}$	%	9.31E-02		5.02E-02	
B.	Tritium					
1.	Total Release	Curies	1.36E+02	±1.0E+01	3.53E+01	±1.0E+01
2.	Average Diluted Cond. During Period	µCi/ml	1.52E-04		2.61E-05	
3.	Percent of Applicable Limit (3.0E-03 µCi/ml)	%	5.07E+00		8.72E-01	
C.	Dissolved and Entrained Gases					
1.	Total Release	Curies	7.48E-04	±1.5E+01	1.34E-03	±1.5E+01
2.	Average Diluted Cond. During Period	µCi/ml	8.36E-10		9.93E-10	
3.	Percent of Applicable Limit (2.0E-04 µCi/ml)	%	4.18E-04		4.96E-04	
D.	Gross Alpha Radioactivity					
1.	Total Release	Curies	0.00E-01	±1.5E+01	0.00E-01	±1.5E+01
E.	Volume of Waste Release					
	(Before Dilution)	Liters	4.31E+08	±1.0E+01	5.14E+08	±1.0E+01
F.	Volume of Dilution Water for Period	Liters	4.64E+08	±1.0E+01	8.36E+08	±1.0E+01

NOTE: Percent of applicable limit is based on identified isotope concentration after dilution, related to their appropriate MPC concentration and sum of all the isotope fractions compared to 1.0.

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT
1st HALF 86
LIQUID EFFLUENTS - TOTAL PLANT DISCHARGE

G. Isotope Summary

Required by Technical Specifications/Others

Nuclide	Unit	Continuous Mode		Batch Mode	
		Quarter 1st	Quarter 2nd	Quarter 1st	Quarter 2nd
1. Strontium-89	Ci	0.00E-01	0.00E-01	0.00E-01	0.00E-01
2. Strontium-90	Ci	0.00E-01	0.00E-01	0.00E-01	0.00E-01
3. Iron-55	Ci	0.00E-01	0.00E-01	9.37E-03	4.48E-03
4. Manganese-54	Ci	5.29E-06	0.00E-01	1.75E-03	1.00E-03
5. Cobalt-58	Ci	3.22E-06	2.37E-05	4.30E-03	2.00E-03
6. Iron-59	Ci	0.00E-01	0.00E-01	0.00E-01	0.00E-01
7. Cobalt-60	Ci	4.06E-04	1.68E-05	1.09E-02	9.47E-03
8. Zinc-65	Ci	0.00E-01	0.00E-01	0.00E-01	0.00E-01
9. Molybdenum-99	Ci	0.00E-01	0.00E-01	0.00E-01	0.00E-01
10. Iodine-131	Ci	0.00E-01	0.00E-01	0.00E-01	0.00E-01
11. Cesium-134	Ci	2.13E-05	2.43E-04	9.67E-04	9.18E-04
12. Cesium-137	Ci	4.02E-05	7.03E-04	1.99E-03	1.87E-03
13. Cerium-141	Ci	0.00E-01	0.00E-01	3.83E-06	0.00E-01
14. Cerium-144	Ci	0.00E-01	5.13E-04	0.00E-01	0.00E-01
Others (Specify)					
15. Chronium-51	Ci	N/A	N/A	7.46E-05	4.24E-05
16. Niobium-95	Ci	N/A	N/A	5.08E-05	6.75E-06
17. Niobium-97	Ci	N/A	N/A	N/A	7.43E-09
18. Zinc-69m	Ci	N/A	N/A	3.36E-06	N/A
19. Tellurium-132m	Ci	N/A	N/A	N/A	3.00E-04
20. Ruthenium-103	Ci	N/A	N/A	3.56E-06	N/A
21. Yttrium-91	Ci	N/A	N/A	4.74E-03	N/A
22. Technicium-99m	Ci	N/A	N/A	3.05E-06	N/A
23. Ruthenium-106	Ci	N/A	N/A	9.04E-05	N/A
Total for Period	Ci	4.76E-04	1.50E-03	3.42E-02	2.01E-02

NOTE: Refer to Table A for values reported as 0.00E-01

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT
1st HALF 86
LIQUID EFFLUENTS - TOTAL PLANT DISCHARGE

G. Isotope Summary

Dissolved Gasses
Required by Technical Specifications/Others

Nuclide	Unit	Continuous Mode		Batch Mode	
		Quarter 1st	Quarter 2nd	Quarter 1st	Quarter 2nd
1. Krypton-87	Ci	0.00E-01	0.00E-01	0.00E-01	0.00E-01
2. Krypton-88	Ci	0.00E-01	0.00E-01	0.00E-01	0.00E-01
3. Xenon-133	Ci	0.00E-01	0.00E-01	0.00E-01	0.00E-01
4. Xenon-133m	Ci	0.00E-01	0.00E-01	0.00E-01	0.00E-01
5. Xenon-135	Ci	0.00E-01	0.00E-01	2.06E-06	0.00E-01
6. Xenon-138	Ci	0.00E-01	0.00E-01	0.00E-01	0.00E-01
Others (Specify)					
7. Krypton-85	Ci	N/A	N/A	7.46E-04	1.34E-03
Total for Period	Ci	0.00E-01	0.00E-01	7.48E-04	1.34E-03

NOTE: Refer to Table A for values reported as 0.00E-01

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT
1ST HALF 86
GASEOUS EFFLUENTS-SUMMATION OF ALL RELEASES
(GROUND LEVEL RELEASES)

	Unit	Continuous Mode		Batch Mode	
		Quarter 1st	Quarter 2nd	Quarter 1st	Quarter 2nd
E. Fission Gases					
Required by Technical Specifications					
1. Krypton-87	Ci	0.00E-01	0.00E-01	0.00E-01	0.00E-01
2. Krypton-88	Ci	0.00E-01	0.00E-01	0.00E-01	0.00E-01
3. Xenon-133	Ci	0.00E-01	0.00E-01	4.59E-05	1.24E-02
4. Xenon-133m	Ci	0.00E-01	0.00E-01	0.00E-01	0.00E-01
5. Xenon-135	Ci	0.00E-01	0.00E-01	0.00E-01	0.00E-01
6. Xenon-138	Ci	0.00E-01	0.00E-01	0.00E-01	0.00E-01
Others (Specify)					
7. Krypton-85	Ci	N/A	N/A	7.67E-01	4.31E-01
8. Xenon-131m	Ci	N/A	N/A	1.86E-03	N/A
Total for Period	Ci	0.00E-01	0.00E-01	7.69E-01	4.43E-01
F. Iodines					
Required by Technical Specifications					
1. Iodine-131	Ci	0.00E-01	2.69E-08		
Others (specify					
Total for Period	Ci	0.00E-01	2.69E-08		

NOTE: Refer to Table B for values reported as 0.00E-01.

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT
1ST HALF 86
GASEOUS EFFLUENTS-SUMMATION OF ALL RELEASES
(GROUND LEVEL RELEASES)

Summation of All Releases	Unit	Quarter 1st	Total %Error	Quarter 2nd	Total %Error
A. Fission and Activation Products					
1. Total Releases	Ci	7.69E-01	±1.0E+01	4.43E-01	±1.0E+01
2. Average Release Rate for Period	µCi/sec	9.89E-02		5.63E-02	
3. Percent of Techical Specification Limit	%	2.30E-05		1.32E-05	
B. Iodines					
1. Total Iodine-131	Ci	0.00E-01	±1.0E+01	2.69E-08	±1.0E+01
2. Average Release Rate for Period	µCi/sec	0.00E-01		3.42E-09	
3. Percent of Technical Specification Limit (1.60E-01 µCi/sec)	%	0.00E-01		2.14E.06	
C. Particulates					
1. Particulates with half-lives 8 days	Ci	2.48E-04	±1.5E+01	1.15E-03	±1.5E+01
2. Average Release Rate for Period	µCi/sec	3.19E.05		1.46E-04	
3. Percent of Technical Specification Limit	%	9.81E-04		5.73E-03	
4. Gross Alpha Radioactivity	Ci	0.00E-01	±1.5E+01	0.00E-01	±1.5E+01
D. Tritium					
1. Total Release	Ci	4.67E+00	±1.0E+01	5.98E+00	±1.0E+01
2. Average Release Rate for Period	µCi/sec	6.01E-01		7.61E-01	
3. Percent of Technical Specification Limit 3.3E+04 µCi/sec)	%	1.82E-03		2.31E-03	

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT
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GASEOUS EFFLUENTS-SUMMATION OF ALL RELEASES
(GROUND LEVEL RELEASES)

G. Particulates

Required by Technical Specifications/Others

Nuclide	Unit	Continuous Mode	
		Quarter 1st	Quarter 2nd
1. Strontium-89	Ci	0.00E-01	0.00E-01
2. Strontium-90	Ci	0.00E-01	0.00E-01
3. Manganese-54	Ci	0.00E-01	8.36E-06
4. Cobalt-58	Ci	1.21E-04	4.60E-04
5. Iron-59	Ci	0.00E-01	0.00E-01
6. Cobalt-60	Ci	1.21E-04	6.31E-04
7. Zinc-65	Ci	0.00E-01	0.00E-01
8. Molybdenum-99	Ci	0.00E-01	0.00E-01
9. Cesium-134	Ci	0.00E-01	2.17E-05
10. Cesium-137	Ci	0.00E-01	2.66E-05
11. Cerium-141	Ci	8.56E-07	0.00E-01
12. Cerium-144	Ci	0.00E-01	0.00E-01
Others (Specify)			
13. Tellurium-132	Ci	4.35E-06	N/A
14. Chronium-51	Ci	N/A	1.42E-14
15. Cobalt-57	Ci	N/A	3.55E-06
Total for Period	Ci	2.47E-04	1.15E-03

NOTE: Refer to Table B for values reported as 0.00E-01.

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT
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TABLE A
LIQUID "TYPICAL LLD" EVALUATION (2)

Nuclide	Tech. Spec. LLD	Δt (2) 15 min	30 min	1 hr	2 hr	3 hr
Fission and Activation Products						
Manganese-54	5.0E-07	9.73E-09	9.73E-09	9.73E-09	9.73E-09	9.73E-09
Cobalt-58	5.0E-07	1.22E-08	1.22E-08	1.22E-08	1.22E-08	1.22E-08
Iron-59	5.0E-07	1.74E-08	1.74E-08	1.74E-08	1.75E-08	1.75E-08
Cobalt-60	5.0E-07	1.55E-08	1.55E-08	1.55E-08	1.55E-08	1.55E-08
Zinc-65	5.0E-07	1.70E-08	1.70E-08	1.70E-08	1.70E-08	1.70E-08
Molybdenum-99	5.0E-07	7.99E-08	8.01E-08	8.06E-08	8.14E-08	8.23E-08
Cesium-134	5.0E-07	1.16E-08	1.16E-08	1.16E-08	1.16E-08	1.16E-08
Cesium-137	5.0E-07	1.33E-08	1.33E-08	1.33E-08	1.33E-08	1.33E-08
Cerium-141	5.0E-07	2.08E-08	2.08E-08	2.08E-08	2.08E-08	2.08E-08
Cerium-144	5.0E-07	8.94E-08	8.94E-08	8.94E-08	8.94E-08	8.94E-08
Iodine-131	5.0E-07	9.83E-09	9.84E-09	9.85E-09	9.89E-09	9.93E-09
Dissolved and Entrained Gases						
Krypton-87	1.0E-05	2.33E-08	2.67E-08	3.50E-08	6.04E-08	1.04E-07
Krypton-88	1.0E-05	3.90E-08	4.14E-08	4.68E-08	5.97E-08	7.62E-08
Xenon-133	1.0E-05	2.95E-08	2.96E-08	2.96E-08	2.98E-08	3.00E-08
Xenon-133m	1.0E-05	9.91E-08	9.94E-08	1.00E-07	1.01E-07	1.03E-07
Xenon-135	1.0E-05	1.02E-08	1.04E-08	1.08E-08	1.17E-08	1.26E-08
Xenon-138	1.0E-05	6.06E-08	1.26E-07	5.47E-07	1.03E-05	1.94E-04
Tritium (3)	1.0E-05					
Gross Alpha	1.0E-07					
Strontium-89(3)	5.0E-08					
Strontium-90(3)	5.0E-08					
Iron-55(3)	1.0E-06					

NOTES:

(1) All evaluations are µCi/ml. All analyses are performed to ensure that Technical Specifications are met, in addition to typical LLD values.

(2) Δt is the time between sample collection and counting time. This time is utilized to verify that Technical Specification LLDs are met.

(3) All these analyses are required to meet Tech. Spec. LLD limits and are individually evaluated to ensure compliance. However, the 2nd Quarter 1986 Sr-89 Radwaste composite and Condemin composite results exceeded Tech. Spec. LLDs by 4.2% and 53% respectively. Instrumentation malfunctions were incurred during the analysis period and all composite samples were expended before resolution of the matter.

Due to plant shutdown in August 1985, Sr-89 and Sr-90 has not been detected in releases since the 3rd Quarter 1985. No strontium activity was expected this quarter (nor was any apparently detected since the specific activity computer calculations resulted in negative Sr-89 quantities for both Radwaste and Condemin composites). The Sr-90 LLDs (and specific activities) were well below the 5E-08µCi/ml limit. Since the strontium analysis was performed much later than normal, we suspect that the longer decay time used in the LLD calculation may be a major contributor to the Sr-89 discrepancy.

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT
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TABLE B
GASEOUS "TYPICAL LLD" EVALUATION(1)

Nuclide	Tech. Spec. LLD	Δt (2) 15 min	30 min	1 hr	2 hr	3 hr
Noble Gas						
Krypton-87	1.0E-04	3.75E-07	4.30E-07	5.64E-07	9.73E-07	1.68E-06
Krypton-88	1.0E-04	5.86E-07	6.23E-07	7.04E-07	8.98E-07	1.15E-06
Xenon-133	1.0E-04	3.87E-07	3.87E-07	3.88E-07	3.90E-07	3.93E-07
Xenon-133M	1.0E-04	1.53E-06	1.53E-06	1.54E-06	1.56E-06	1.59E-06
Xenon-135	1.0E-04	1.59E-07	1.62E-07	1.68E-07	1.81E-07	1.96E-07
Xenon-138	1.0E-04	9.45E-07	1.97E-06	3.54E-06	1.61E-04	3.02E-03
Particulates						
Manganese-54	1.0E-10	3.65E-14	3.65E-14	3.65E-14	3.65E-14	3.65E-14
Cobalt-58	1.0E-10	4.53E-14	4.53E-14	4.54E-14	4.54E-14	4.54E-14
Iron-59	1.0E-10	6.83E-14	6.83E-14	6.84E-14	6.84E-14	6.84E-14
Cobalt-60	1.0E-10	6.26E-14	6.26E-14	6.26E-14	6.26E-14	6.26E-14
Zinc-65	1.0E-10	6.68E-14	6.68E-14	6.68E-14	6.68E-14	6.68E-14
Molybdenum-99	1.0E-10	2.95E-13	2.96E-13	2.98E-13	3.01E-13	3.04E-13
Cesium-134	1.0E-10	4.31E-14	4.31E-14	4.31E-14	4.31E-14	4.31E-14
Cesium-137	1.0E-10	4.87E-14	4.87E-14	4.87E-14	4.87E-14	4.87E-14
Cesium-141	1.0E-10	6.69E-14	6.70E-14	6.70E-14	6.70E-14	6.71E-14
Cerium-144	1.0E-10	2.81E-13	2.81E-13	2.81E-13	2.81E-13	2.81E-13
Iodine-131	1.0E-10	3.61E-14	3.61E-14	3.62E-14	3.63E-14	3.65E-14
Strontium-89	1.0E-11					
Strontium-90	1.0E-11					
Cross Alpha	1.0E-11					
Charcoal Sample						
Iodine-131	1.0E-11	5.02E-14	5.03E-14	5.03E-14	5.05E-14	5.07E-14
Tritium	1.0E-06					

NOTES: (2) All evaluations are in μCi/cc. All analyses are performed to ensure that Technical Specifications are met in addition to typical LLD values based on a ≥ 24 hour sample period. Alpha and beta emitters are counted to a set time of 20 minutes.

(2) Δt is the time from midpoint of sampling to analysis. This time is utilized to verify that Technical Specification LLDs are met.

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT
1st HALF 1986
SOLID WASTE (RADIOACTIVE) SHIPMENTS

A. Solid Waste Shipped Off-Site for Burial or Disposal (not Irradiated Fuel)

1. Type of Waste	Unit	6 Month Period	Est. Tol. Error %
a. Spent resins, filter sludges evaporator bottoms, etc.	m^3	7.90E+01	±1.50E+01
	Ci	1.51E+03	±1.50E+01
b. Dry Active Waste, Compressible Waste	m^3	2.08E+02	±1.50E+01
Contaminated equip., etc.	Ci	1.01E+02	±1.50E+01
c. Irradiated Components,	m^3	None	
Control Rods, etc.	Ci	None	N/A
d, Other (describe)	m^3	None	
	Ci	None	N/A

2. Estimate of major nuclide composition (by type of waste)

a. Spent resin, filter sludges, and evaporator bottoms, etc. (nuclides determined by measurement)

	Curies	Percent
1. Manganese-54	7.37E+01	4.87E+00
2. Cobalt-58	2.23E+02	1.47E+01
3. Iron-55 (by est.)	3.91E+02	2.58E+01
4. Cobalt-60	3.63E+02	2.40E+01
5. Strontium-90	4.62E-02	3.05E-03
6. Niobium-95	2.48E-02	1.64E-03
7. Cesium-134	1.43E+02	9.45E+00
8. Cesium-137	1.59E+02	1.05E+01
9. Other Nuclides	1.60E+02	1.06E+01

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2. Estimate of Major Nuclide Composition (by type of waste) (continued)

b. Dry Active Waste, dry compressible waste, contaminated equipment, etc,; (nuclides determined by estimate)

		Curies	Percent
1.	Tritium	9.17E-03	9.04E-03
2.	Carbon-14	2.35E-01	2.32E-01
3.	Chromium-51	1.25E+00	1.23E+00
4.	Manganese-54	7.60E-01	7.50E-01
5.	Iron-55	8.27E+01	8.16E+01
6.	Cobalt-58	8.09E+00	7.98E+00
7.	Iron-59	7.34E-01	7.24E-01
8.	Cobalt-60	4.07E+00	4.01E+00
9.	Strontium-90	1.06E-04	1.05E-04
10.	Zirconium-95	8.49E-02	8.37E-02
11.	Niobium-95	2.28E-01	2.25E-01
12.	Cesium-134	1.30E-02	1.28E-02
13.	Cesium-137	2.12E-02	2.09E-02
14.	Other Nuclides	3.16E+00	3.12E+00
c. Irradiated Components		N/A	N/A
d. Other (describe)		N/A	N/A

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SOLID WASTE (RADIOACTIVE) SHIPMENTS

3. Solid Waste Disposition

Number of Shipments	Type Quantity	Mode of Transportation	Destination
a) Resin, filter sludges, evaporator bottoms, etc.			
15	LSA	Motor Freight	Barnwell, South Carolina
Number of Shipments	**Type Quantity**	**Mode of Transportation**	**Destination**
b) Raw, dry active waste, compressible contaminated equipment, etc.			
3	LSA	Motor Freight	Richland, Washington
3	LSA	Motor Freight	Richland, Washington
Number of Shipments	**Type Quantity**	**Mode of Transportation**	**Destination**
c) Irradiated components, control rods, etc.			
None	N/A	N/A	N/A
Number of Shipments	**Type Quantity**	**Mode of Transportation**	**Destination**
d) Other (describe)			
None	N/A	N/A	N/A

4. Irradiated Fuel Shipments (Disposition)

Number of Shipments	Type Quantity	Mode of Transportation	Destination
None	N/A	N/A	N/A

5. Solidification of Waste

Was solidification performed? X Yes _____ No.

If yes, solidification media: Cement

6. Process Control Program (PCP)

PORC reviewed and accepted revisions were made to the PCP on 1/28/86 and 4/29/86. This PCP implements the solidification vendor's instructions into plant operating instructions. Changes were made at the direction of that vendor. Changes did not reduce the overall conformance of the solidified waste product to existing criteria for solid wastes.

7. Radioactive Waste Treatment Systems

No major changes were made to the radioactive waste treatment systems.

TENNESSEE VALLEY AUTHORITY

Sequoyah Nuclear Plant
Post Office Box 2000
Soddy-Daisy, Tennessee 37379

AUG 29 1986

U. S. Nuclear Regulatory Commission
Region II
Attn: Dr. J. Nelson Grace
Regional Administrator
101 Marietta Street, Suite 3100
Atlanta, Georgia 30303

Dear Sir:

In accordance with Sequoyah Nuclear Plant Technical Specification 6.9.1.9 for units 1 and 2, we are submitting the enclosed report of the radioactive discharges released from Sequoyah during the period of January 1, 1986 through June 30, 1986.

We are also submitting the most recent changes to the ODCM as specified in Technical Specification 6.14.2.1. These changes had been originally submitted in the Sequoyah Nuclear Plant Monthly Operating Report-June 1986.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

O.R. Wallace

P. R. Wallace
Plant Manager

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