Table 1A
Effluent and Waste Disposal Semiannual Report Year 1989
Gaseous Effluents - Summation of all Releases

	Unit	Qtr 1	Qtr 2	Est. Total Error,%
A. Fission and Activation Gases				
1. Total release	Ci	2.60E+02	3.92E+02	1.15E 02
2. Average release rate for period	uCi/sec	3.34E+01	4.99E+01	
3. Percent of technical specification limit	%	2.72E-02	6.60E-02	
B. Iodines				
1. Total I-131	Ci	7.26E-04	7.97E-03	7.00E 01
2. Average release rate for period	uCi/sec	9.34E-05	1.01E-03	
C. Particulates				
1. Total release	Ci	8.48E-03	1.46E-02	7.00E 01
2. Average release rate for period	uCi/sec	1.09E-03	1.85E-03	
3. Gross alpha	Ci	4.83E-06	5.31E-0:	
D. Tritium				
1. Total release	Ci	1.18E+00	1.36E+00	7.00E 01
2. Average release rate for period	uCi/sec	1.52E-01	1.73E-01	
E. Iodine-131, Iodine-133, Tritium and Particulates				
1. Tota Release	Ci	1.19E+00	1.42E+00	
2. Average release rate for period	uCi/sec	1.53E-01	1.81E-01	
3. Percent of technical specification limit	%	3.20E-02	2.81E-01	

AMENDMENT 1

AUGUST 1989

Table 1B
Effluent and Waste Disposal Semiannual Report Year 1989
Gaseous Effluents - Elevated Releases
Continuous Release

Nuclides Released	Unit	Qtr 1	Qtr 2
1. Fission Gases			
argon-41	Ci	< LLD	2.96E+00
krypton-85m	Ci	1.49E+01	2.44E+01
krypton-87	Ci	6.41E-01	2.79E+00
krypton-88	Ci	1.48E+01	1.21E+01
xenon-133	Ci	4.27E+01	1.09E+02
xenon-135m	Ci	1.09E+01	1.99E+01
xenon-135	Ci	1.29E+01	1.44E+01
xenon-137	Ci	4.73E+01	1.06E+02
xenon-138	Ci	1.23E+01	4.60E+01
total for period	Ci	1.56E+02	3.38E+02
2. Iodines			
iodine-131	Ci	4.60E-04	7.20E-03
iodine-132	Ci	5.83E-04	1.71E-02
iodine-133	Ci	2.51E-03	3.41E-02
iodine-134	Ci	< LLD	3.02E-04
iodine-135	Ci	1.11E-03	3.31E-02
total for period	Ci	4.66E-03	9.18E-02
3. Particulates			
chromium-51	Ci	2.75E-05	9.07E-04
manganese-54	Ci	1.70E-05	1.21E-05
cobalt-58	Ci	< LLD	1.41E-05
cobalt-60	Ci	4.18E-05	2.51E-05
strontium-89	Ci	1.00E-04	3.39E-04
strontium-90	Ci	4.57E-07	1.74E-05
cesium-134	Ci	< LLD	1.74E-05
cesium-137	Ci	1.01E-05	2.41E-05
barium-140	Ci	2.07E-05	4.44E-04
lanthanum-140	Ci	3.99E-06	3.21E-04
total for period	Ci	2.22E-04	2.11E-03
4. Tritium			
hydrogen-3	Ci	7.49E-01	6.76E-01

AMENDMENT 1

AUGUST 1989

Table 1C
Effluent and Waste Disposal Semiannual Report Year 1989
Gaseous Effluents - Ground Level Releases
Continuous Release

Nuclides Released	Unit	Qtr 1	Qtr 2
1. Fission Gases			
xenon-133	Ci	5.43E+01	3.64E+00
xenon-135m	Ci	< LLD	7.65E+00
xenon-135	Ci	4.99E+01	4.27E+01
total for period	Ci	1.04E+02	5.40E+01
2. Iodines			
iodine-131	Ci	2.66E-04	7.71E-04
iodine-132	Ci	< LLD	5.69E-03
iodine-133	Ci	2.19E-03	5.53E-03
iodine-134	Ci	< LLD	1.06E-03
iodine-135	Ci	6.18E-03	7.13E-03
total for period	Ci	8.64E-03	2.02E-02
3. Particulates			
chromium-51	Ci	5.59E-03	1.16E-02
maganese-54	Ci	6.87E-04	1.76E-04
cobalt-57	Ci	2.35E-07	2.76E-06
cobalt-58	Ci	1.92E-04	1.85E-04
cobalt-60	Ci	1.71E-03	3.93E-04
iron-59	Ci	1.63E-05	< LLD
strontium-89	Ci	8.02E-06	1.25E-05
strontium-90	Ci	< LLD	1.32E-06
niobium-95	Ci	5.37E-06	< LLD
ruthenium-103	Ci	6.27E-06	< LLD
cesium-134	Ci	9.11E-06	< LLD
cesium-137	Ci	4.01E-06	6.32E-07
barium-140	Ci	< LLD	4.77E-05
lanthanum-140	Ci	< LLD	3.50E-05
cerium-141	Ci	< LLD	1.51E-07
cerium-144	Ci	2.16E-05	< LLD
hafnium-181	Ci	1.10E-05	< LLD
total for period	Ci	8.26E-03	1.25E-02
4. Tritium			
hydrogen-3	Ci	4.31E-01	6.80E-01

AMENDMENT 1

AUGUST 1989

TABLE 2B
Effluent and Waste Disposal Semiannual Report Year 1989
Liquid Effluents - Batch Mode

Nuclides Released	Unit	Qtr 1	Qtr 2
1. Fission and activation products			
sodium-24	Ci	7.99E-03	2.98E-03
chromium-51	Ci	2.86E-01	5.62E-01
manganese-54	Ci	5.70E-02	3.92E-02
iron-55	Ci	2.50E-03	1.50E-03
manganese-56	Ci	4.70E-04	6.65E-04
cobalt-58	Ci	1.62E-02	1.25E-02
iron-59	Ci	3.62E-04	8.11E-04
cobalt-60	Ci	1.11E-01	5.44E-02
zinc-65	Ci	4.19E-04	6.77E-05
arsenic-76	Ci	9.82E-04	7.64E-04
strontium-89	Ci	9.10E-04	< LLD
strontium-90	Ci	2.30E-04	6.53E-05
yttrium-91m	Ci	< LLD	3.64E-03
yttrium-91	Ci	9.61E-04	< LLD
yttrium-92	Ci	< LLD	1.10E-04
strontium-92	Ci	< LLD	3.71E-05
niobium-95	Ci	1.02E-05	5.99E-06
molybdenum-99	Ci	1.06E-04	< LLD
technetium-99m	Ci	2.59E-02	2.22E-02
technetium-104	Ci	< LLD	6.70E-05
ruthenium-105	Ci	2.76E-04	3.61E-05
silver-110m	Ci	< LLD	6.84E-05
tellurium-129m	Ci	6.56E-05	< LLD
iodine-131	Ci	1.45E-03	5.39E-03
iodine-132	Ci	< LLD	5.11E-05
tellurium-132	Ci	2.08E-05	1.67E-04
iodine-133	Ci	2.60E-03	1.65E-03
cesium-134	Ci	5.63E-02	1.78E-02
iodine-135	Ci	7.51E-04	6.85E-04
cesium-136	Ci	< LLD	7.58E-04
cesium-137	Ci	5.38E-02	1.69E-02
cesium-138	Ci	4.50E-05	< LLD
cerium-144	Ci	1.38E-05	4.58E-05
hafnium-181	Ci	1.85E-05	< LLD
tungsten-187	Ci	4.61E-04	1.42E-03
neptunium-239	Ci	2.00E-04	1.35E-03
total for period	Ci	6.27E-01	7.44E-01
2. Gases			
argon-41	Ci	4.21E-05	< LLD
krypton-85m	Ci	< LLD	8.46E-06
xenon-133	Ci	1.10E-02	9.26E-03
xenon-135m	Ci	1.75E-04	5.58E-04
xenon-135	Ci	4.98E-02	4.66E-02
total for period	Ci	6.10E-02	5.64E-02

Lower Limits of Detection

January through July 1989

uCi/ml

1. Liquid Releases

Ar-41	2.86E-08
Kr-85m	1.30E-08
Sr-90	5.55E-09
Y-91m	2.59E-08
Y-91	3.64E-06
Sr-92	3.18E-08
Y-92	1.41E-07
Mo-99	1.12E-07
Tc-104	2.87E-08
Ag-110m	5.81E-08
Te-129m	4.60E-07
I-132	1.63E-08
Cs-136	1.74E-08
Cs-138	4.65E-08
Hf-181	1.69E-08
Alpha	2.24E-08

2. Gaseous Releases

Ar-41	1.08E-08
Xe-135m	4.72E-08

3. Iodines and Particulates

Co-58	3.45E-14
Fe-59	8.07E-14
Nb-95	3.27E-14
Ru-103	3.89E-14
I-132	2.94E-13
I-134 $T^{1/2}$	Too short
Cs-134	5.56E-14
Ba-140	1.50E-13
La-140	9.32E-14
Ce-141	3.77E-14
Ce-144	1.93E-13
Hf-181	4.06E-14
Sr-90	4.88E-16

NOTES

1: The above values represent typical "a priori" LLDs for isotopes where values of "<LLD" are indicated in Tables 1A, 1B, 1C, 2A, and 2B.

2: Where activity for any nuclide is reported as " Less than LLD", that nuclide is considered not present and the LLD activity listed is not considered in summary data.

AMENDMENT 1

AUGUST 1989