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Gentlemen:

Donald C. Cook Nuclear Plant Units 1 and 2
ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT
JANUARY 1, 1995 TO DECEMBER 31, 1995

Enclosed herewith are six copies of the Annual Radioactive Effluent Release Report for Donald C. Cook Nuclear Plant Units 1 and 2, corresponding to the period from January 1, 1995 to December 31, 1995. This report was prepared in accordance with Section 6.9.1.7 of the plant's "Appendix A Technical Specification."

Sincerely,

for W. E. Fitzpatrick
E. E. Fitzpatrick
Vice President

blb

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Donald C. Cook Nuclear Plant • Units 1 & 2

Annual Radioactive Effluent Release Report

January 1 through December 31, 1995

Indiana Michigan Power Company
Bridgman, Michigan

Docket Nos. 50-315 & 50-316
License Nos. DPR-58 & DPR-74

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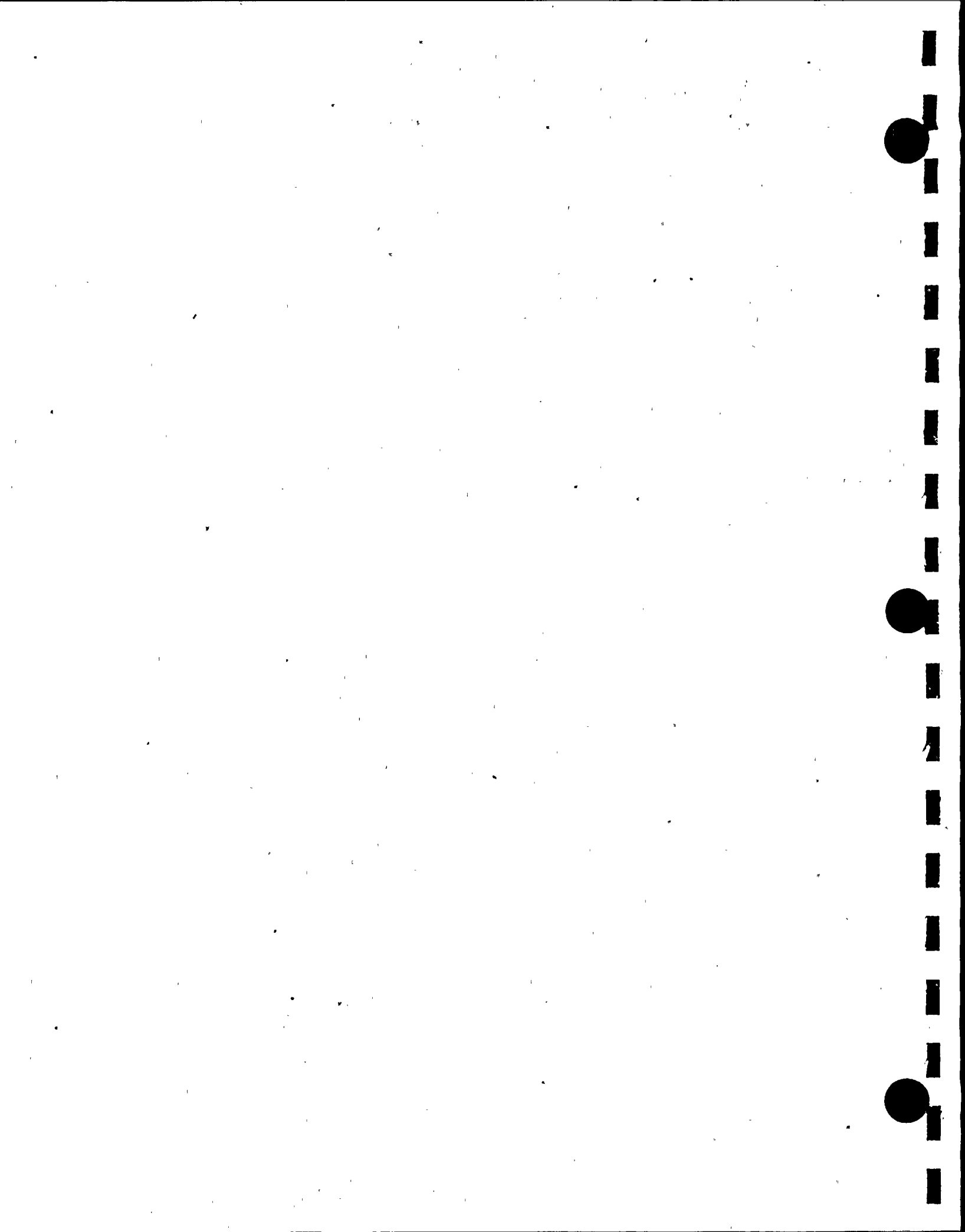


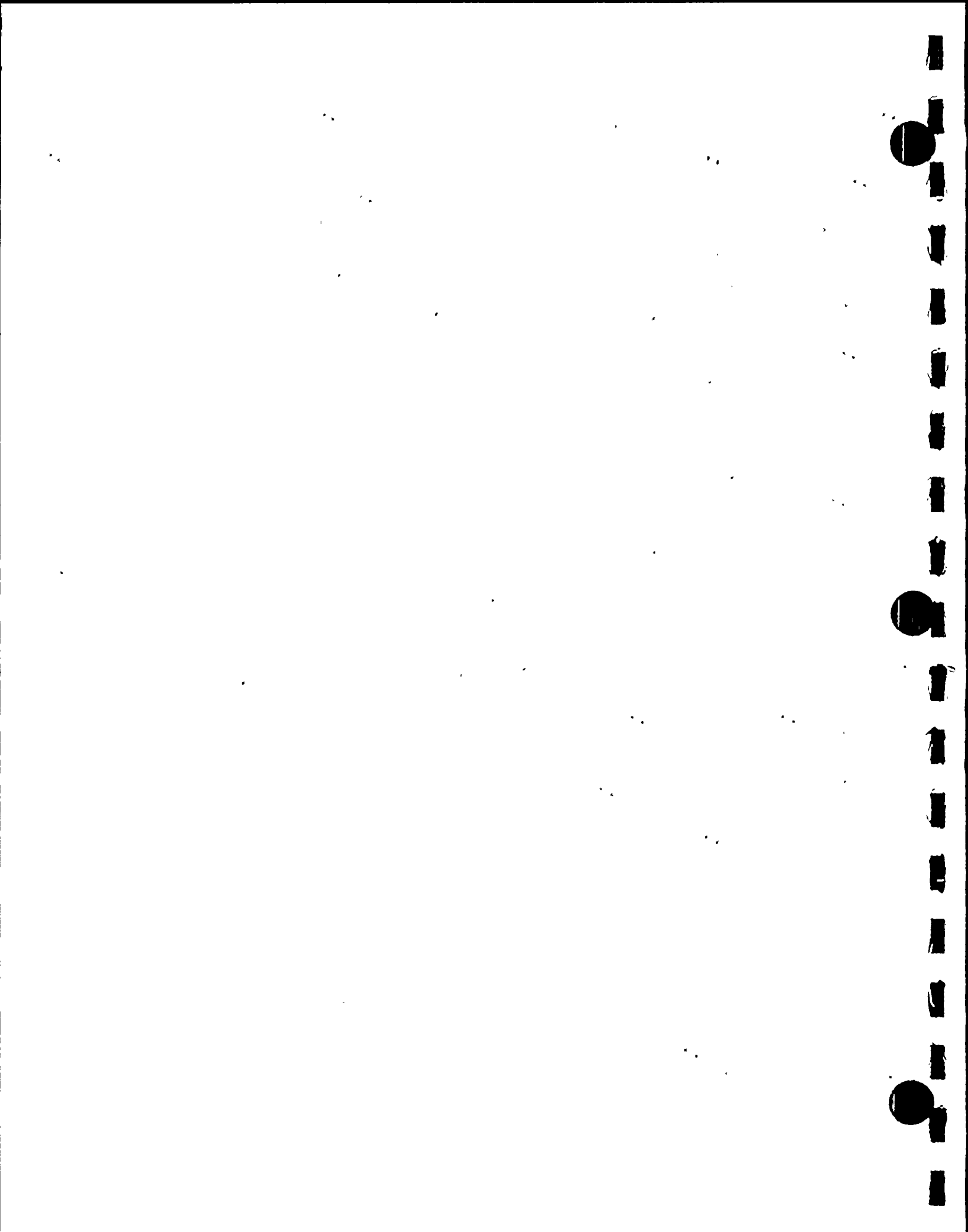
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I. INTRODUCTION

This report discusses the radioactive discharges from unit 1 and unit 2 of the Donald C. Cook Nuclear Plant during 1995. This is in accordance with the requirements of technical specification 6.9.1.7.

The table below summarizes the pertinent statistics concerning the plant's operation during the period from January 1, to December 31, 1995. The data in this table and the descriptive information on plant operation are based upon the respective unit's Monthly Operating Reports for 1995.

<u>Parameter</u>	<u>Unit 1</u>	<u>Unit 2</u>
Gross Electrical Energy Generation (MWH)	5,606,930	8,899,370
Unit Service Factor (%)	66.3	94.4
Unit Capacity Factor - MDC* Net (%)	61.6	92.6
* Maximum Dependable Capacity		

Unit 1 entered the reporting period at 100% rated thermal power (RTP). On January 14, reactor power was stabilized at 55% RTP for the west main feed pump water box cleanup. Unit 1 returned to 100% RTP on January 16. On February 10, reactor power was stabilized at 92% for main turbine and feed pump valve testing. Power was restored to 99.9% on February 11. On March 17, reactor power was stabilized at 92% for main turbine and feed pump valve testing. Reactor power was restored to 100% on March 18. On April 25-27, reactor power was reduced to 95% for moderator temperature coefficient testing, then to 92% for main turbine and feed pump valve testing before being returned to 100% RTP. On May 6, power was reduced to 92% for #3 main turbine control valve testing, then returned to 100% RTP. On May 19, power was reduced to 92% after an unusual event was declared due to emergency core cooling system operability concerns. The event was exited after an evaluation by Nuclear Safety and Licensing. Before power was restored to 100% on May 20, main turbine control valve testing was performed. On June 2, reactor power was reduced to 92% to conduct main turbine control valve testing, then restored to 100% on June 3. On June 16, power was reduced to 55% for a planned west main feed pump outage. On July 10, the unit was restored to 100% RTP. On July 14, a reactor trip occurred due to a low condenser vacuum turbine trip. On July 16, mode 1 was entered, but the main turbine tripped. On August 15, the unit entered mode 6 in preparation for the cycle 14 to 15 maintenance and refueling outage. On August 20, an unusual event was declared for 50 minutes due to an explosion in the main transformer. On August 22, another unusual event was declared then immediately terminated due to a fire on the auxiliary building roof. On October 23, mode 1 was entered for the first time in fuel cycle 15. On October 24, the reactor trip breakers opened. Mode 3 was entered to balance reactor coolant pump #12. Mode 1 was entered again on October 25. Main turbine overspeed testing was performed at 29% power on October 26. After testing was performed, the reactor was tripped manually to perform placement of balancing weight. On October 27, mode 1 was entered, but the reactor was manually tripped on October 28 due to increased concentrations of sodium in the steam generators. Mode 1 was entered on November 7. On November 10, power was stabilized at 60% to remove zebra mussel fouling of the east main feed pump condenser water box. From November 10 to December 19, power level varied due to main turbine valve testing (November 17), main transformer repairs (November 20,

22, and 28) and storm debris on traveling screens (December 11). The unit exited the reporting period at 100% RTP.

Unit 2 entered the reporting period at 100% RTP. On February 23, a reactor trip occurred due to a failed closed main feedwater regulating valve. Mode 1 was entered on March 1. Power was decreased to 55% on April 19 and April 29 for east main feed pump condenser cleaning and testing. Power was restored to 100% on May 2. On August 24, power was decreased to 80% to remove #21 circulating water pump from service to support diving operations on unit 1. On August 25, power was returned to 100% RTP. On September 1, cooldown was commenced to resolve problems with reactor coolant system solenoid valves and power operated relief valve limit switches. Power was returned to 100% on September 8. However, a reactor trip occurred on September 9 due to misoperation of reactor trip breaker A during surveillance testing. Power was returned to 100% on September 17 after clamtrol treatment of the service water systems on September 15. On October 18, power was decreased to 94% to meet technical specification 3.5.2 requirements for removal of 4 loop injection from the safety injection system. On October 19, power was returned to 100% RTP. On November 17 and December 8, power was decreased to 95% to place moisture separator reheaters in service. Power was returned to 100% RTP on December 9. On December 10, power was decreased to 55% to perform main feed pump condenser cleaning. Power was returned to 100% RTP on December 11. Note that the unusual events described above for unit 1 also affected unit 2.

II. RADIOACTIVE RELEASES AND RADIOLOGICAL IMPACT UPON MAN

Since a number of release points are common to both units, the release data from both units are combined to form this two-unit, Annual Radioactive Effluent Release Report. Appendix 1 of this report presents the information in accordance with technical specification 6.9.1.9.

The "MIDAS System" by Pickard, Lowe and Garrick, Inc., is a computer code that calculates doses for all isotopes that were released by the Donald C. Cook Nuclear Plant.

All liquid and gaseous releases were well within technical specifications limits.

There were no abnormal liquid or gaseous releases during 1995.

Liquid Releases

During the first quarter of 1995 there were 20 liquid batch releases. There were 23 during the second quarter, 34 in the third quarter, and 28 in the fourth quarter.

There were no abnormal liquid releases during 1995.

For the purpose of dose assessment, batch releases were treated as continuous releases. Estimated doses (in millirem) to maximally exposed individuals via the liquid release pathway are given in appendices 1.2, 1.3, 1.4, and 1.5 of this report.

Gaseous Releases

During the first quarter of 1995 there were 162 gaseous batch releases, 170 in the second quarter, 105 in the third quarter, and 189 in the fourth quarter.

Containment pressure reliefs (CPR) are listed as batch releases in accordance with NRC inspections 50-315/89016 (DRSS) and 50-316/89017 (DRSS). There were 606 CPRs during 1995.

There were 15 waste gas decay tank releases and 2 releases from CVCS HUTs during 1995.

In calculating the dose consequences for continuous and batch gaseous releases during 1995, the meteorological data measured at the time of release were used.

The estimated doses (in millirem) to maximally exposed individuals via the gaseous release pathway are given in appendices 1.2, 1.3, 1.4, and 1.5 of this report.

Solid Waste Disposition

There were 38 shipments of radioactive waste in 1995.

III. METEOROLOGICAL

Appendices 2.1, 2.2, 2.3, and 2.4 of this report contain the cumulative joint frequency distributions of wind speed and wind direction, corresponding to the various atmospheric stability classes for the first, second, third and fourth quarters of 1995. Hourly meteorological data are available for review and/or inspection upon request.

IV. OFFSITE DOSE CALCULATION MANUAL (ODCM) CHANGES

The Offsite Dose Calculation Manual, PMP 6010.OSD.001, was changed during the report period. The reasons for the changes and the PNSRC approval are documented on the procedure cover sheet. These changes did not reduce the accuracy or reliability of dose calculations or setpoint determinations. Appendix 3.0 contains the revised ODCM with changes indicated by marginal bars.

V. TOTAL DOSE

Section 4.2.5 of the ODCM requires that the dose or dose commitment to a real individual from all uranium fuel cycle sources be limited to no more than twenty-five (25) millirem to the total body or any organ over a period of twelve (12) consecutive months to show conformance with the requirements of 40 CFR Part 190. The maximum cumulative dose to an individual from liquid and gaseous effluents during 1995 was well within the ODCM limits. Measurements using thermoluminescent dosimeters at ten (10) offsite background stations indicate that the dose due to direct radiation is negligible.

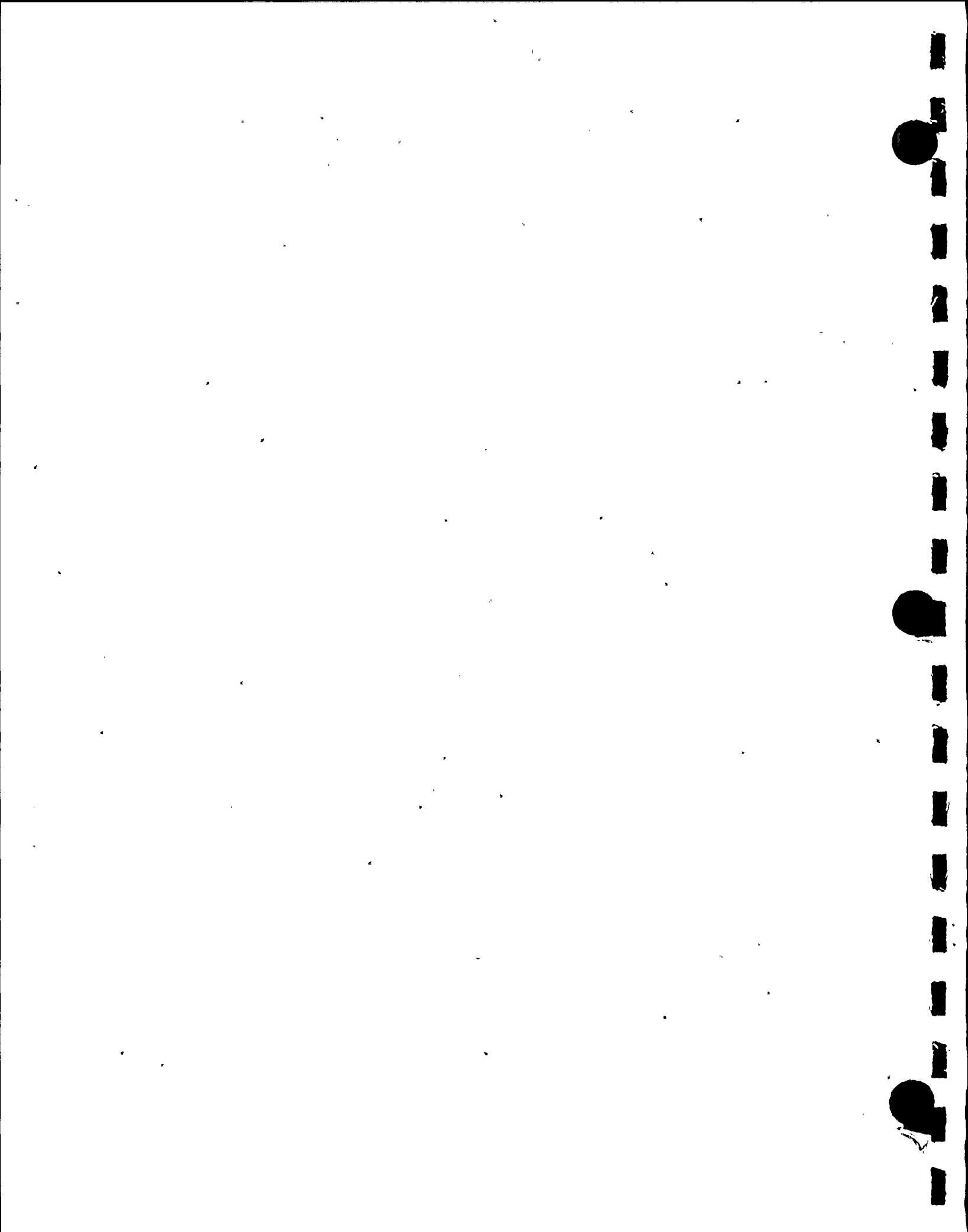
An assessment showed that radiation doses from radioactive liquid and gaseous effluents to members of the public due to their activities inside the site boundary are also negligible.

VI. CONCLUSION

Based on the information presented in this report, it is concluded that the Donald C. Cook Nuclear Plant Units 1 and 2 performed their intended design function with no demonstrable adverse affect on the health and safety of the general public.

APPENDIX 1.1

Radioactive Release Data
January 1 - December 31, 1995



1995 EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT

Supplemental Information

Facility: Donald C. Cook Plant
Licensee: Indiana Michigan Power Company

1. Regulatory Limits

A. Noble Gases

The air dose in unrestricted areas due to noble gases released in gaseous effluents shall be limited to the following:

1. During any calendar quarter, to ≤ 5 mrad for gamma radiation and ≤ 10 mrad for beta radiation;
2. During any calendar year, to ≤ 10 mrad for gamma radiation and ≤ 20 mrad for beta radiation.

B. Iodines - Particulates

The dose to a member of the public from radioiodines, radioactive materials in particulate form, and radionuclides other than noble gases with half-lives greater than 8 days in gaseous effluents released to unrestricted areas shall be limited to the following:

1. During any calendar quarter to ≤ 7.5 mrem to any organ;
2. During any calendar year to ≤ 15 mrem to any organ.

C. Liquid Effluents

The dose or dose commitment to an individual from radioactive material in liquid effluents released to unrestricted areas shall be limited:

1. During any calendar quarter to ≤ 1.5 mrem to the total body and to ≤ 5 mrem to any organ;
2. During any calendar year to ≤ 3 mrem to the total body and to ≤ 10 mrem to any organ.

D. Total Dose

The dose or dose commitment to a real individual from all uranium fuel cycle sources is limited to ≤ 25 mrem to the total body or any organ (except the thyroid, which is limited to ≤ 75 mrem) over a period of 12 consecutive months.

2. Maximum Permissible Concentrations

A. Gaseous Effluents

The dose rate due to radioactive materials released in gaseous effluents from the site shall be limited to the following:

1. For noble gases: ≤ 500 mrem/yr to the total body and ≤ 3000 mrem/yr to the skin;
2. For all radioiodines and for all radioactive materials in particulate form and radionuclides (other than noble gases) with half-lives greater than 8 days: ≤ 1500 mrem/yr to any organ.

The above limits are provided to insure that radioactive material discharged in gaseous effluents will not result in the exposure of an individual in an unrestricted area to annual average concentrations exceeding the limits in 10 CFR Part 20, Appendix B, Table 2.

B. Liquid Effluents

The concentration of radioactive material released at any time from the site to unrestricted areas shall be limited to the concentrations specified in 10 CFR Part 20, Appendix B, Table 2, Column 2, for radionuclides other than dissolved or entrained noble gases. For dissolved or entrained noble gases, the concentration shall be limited to 2×10^{-4} $\mu\text{Ci/ml}$ total activity.

3. Average Energy

The average energy (\bar{E}) of the radionuclide mixture in releases of fission and activation gases as defined in Regulatory Guide 1.21 Appendix B Section A.3 is not applicable because the limits used for gaseous releases are based on calculated dose to members of the public.

4. Measurements and Approximations of Total Radioactivity

A. Fission and Activation Gases

Sampled and analyzed on a 4096 channel analyzer and HpGe detector.

B. Iodines

Sampled on iodine adsorbing media and analyzed on a 4096 channel analyzer and HpGe detector.

C. Particulates

Sampled on a glass filter and analyzed on a 4096 channel analyzer and HpGe detector.

D. Liquid Effluents

Sampled and analyzed on a 4096 channel analyzer and HpGe detector.

5. Batch Releases

A. Liquid

1. Number of batch releases:

20 releases in the 1st quarter, 1995
23 releases in the 2nd quarter, 1995
34 releases in the 3rd quarter, 1995
28 releases in the 4th quarter, 1995

2. Total time period for batch releases:

23,600 minutes

3. Maximum time for a batch release:

697 minutes

4. Average time period for batch release:

224 minutes

5. Minimum time period for a batch release:

9 minutes

6. Average stream flow during periods of release of effluent into a flowing stream:

776,000 gpm circulating water

B. Gaseous

1. Number of batch releases:

162 in the 1st quarter, 1995
170 in the 2nd quarter, 1995
105 in the 3rd quarter, 1995
189 in the 4th quarter, 1995

2. Total time period of batch releases:

17,400 minutes

3. Maximum time period for a batch release:

2,890 minutes

4. Average time period for batch releases:

27.2 minutes

5. Minimum time period for a batch release:

10.0 minutes

6. Abnormal Releases

A. Liquid

1. Number of Releases:

1 st <u>Quarter</u>	2 nd <u>Quarter</u>	3 rd <u>Quarter</u>	4 th <u>Quarter</u>
0	0	0	0

2. Total activity released (Ci):

1 st <u>Quarter</u>	2 nd <u>Quarter</u>	3 rd <u>Quarter</u>	4 th <u>Quarter</u>
0	0	0	0

B. Gaseous

1. Number of Releases:

1 st <u>Quarter</u>	2 nd <u>Quarter</u>	3 rd <u>Quarter</u>	4 th <u>Quarter</u>
0	0	0	0

2. Total activity released (Ci):

1 st <u>Quarter</u>	2 nd <u>Quarter</u>	3 rd <u>Quarter</u>	4 th <u>Quarter</u>
0	0	0	0

1995 EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT
GASEOUS EFFLUENTS - GROUND-LEVEL RELEASES

CONTINUOUS MODE

Nuclides released	Unit	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
1. FISSION GASES					
Krypton-85	CI				
Krypton-85m	CI	4.35E-2	4.33E-1	2.04E-2	8.05E-4
Krypton-87	CI	4.62E-2	4.94E-2	2.69E-2	1.92E-3
Xenon-131m	CI				
Xenon-133	CI	2.64E+1	3.20E+1	2.94E+1	3.04E-3
Xenon-135	CI	1.60E+0	3.57E+0	1.43E+0	8.96E-3
Xenon-135m	CI	5.70E-2	2.07E-1	4.21E-2	1.40E-2
Ar-41	CI	1.19E+0	3.05E-2	9.11E-3	8.28E-3
Krypton-88	CI	7.97E-2	8.07E-2	4.02E-2	2.23E-3
Xenon-133m	CI	3.11E-2	3.23E-2	1.03E-2	
Xenon-138	CI	3.96E-2	6.50E-2	3.52E-2	5.93E-3
Total for Period	CI	2.95E+1	3.65E+1	3.10E+1	4.54E-2
2. IODINES I-132					
I-131	CI	8.55E-5	9.12E-4	3.33E-3	5.19E-5
I-133	CI	1.05E-4	1.33E-3	1.30E-3	2.98E-4
I-135	CI	5.97E-5	5.38E-4	8.73E-5	
I-134	CI	7.11E-6	2.95E-5		9.12E-6
Total for Period	CI	2.72E-4	3.00E-3	5.21E-3	5.30E-4
3. PARTICULATES					
Strontium-89	CI				
Strontium-90	CI				
Cesium-134	CI	4.29E-6	2.07E-5	8.04E-4	1.57E-4
Cesium-137	CI	2.97E-5	9.10E-5	7.96E-4	6.14E-4
Cobalt-58	CI	2.78E-6		2.05E-6	2.53E-4
Cobalt-60	CI	1.93E-5	2.05E-7		3.43E-5
Manganese-54	CI	7.30E-7			2.87E-6
Zinc-65	CI	1.43E-7		Mo99 1.94E-6	Na24 2.97E-5
Zirconium/Niobium-95	CI	2.22E-7		Tc99m 1.89E-6	F18 9.62E-4
Cesium-138	CI		2.29E-5	Cs136 1.49E-4	
Silver-110m	CI	2.26E-6			1.90E-8
Cobalt-57	CI	1.31E-7			
Antimony-125	CI	1.20E-6			
Total for Period	CI	6.08E-5	1.35E-4	1.76E-3	2.05E-3

1995 EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT
GASEOUS EFFLUENTS - GROUND-LEVEL RELEASES

BATCH MODE

Nuclides released	Unit	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
1. FISSION GASES					
Krypton-85	CI	4.45E+0	3.62E+0	1.24E+0	7.67E+0
Krypton-85m	CI	8.44E-3	5.06E-3	1.58E-3	7.63E-4
Krypton-87	CI	9.43E-4			
Xenon-131m	CI	7.51E-2	9.70E-2	2.26E-1	1.21E-1
Xenon-133	CI	4.36E+0	5.52E+0	7.54E+0	1.44E+0
Xenon-135	CI	8.88E-2	7.85E-2	3.50E-2	3.90E-2
Xenon-135m	CI				
Ar-41	CI	2.35E-1	8.91E-1	3.39E-1	4.71E-1
Krypton-88	CI	8.34E-3	6.20E-3	1.94E-3	9.80E-4
Xenon-133m	CI	2.93E-2	3.85E-2	2.40E-2	8.39E-3
Xenon-138	CI				
Total for Period	CI	9.26E+0	1.04E+1	9.41E+0	9.75E+0
2. IODINES					
I-131	CI			8.44E-5	
I-133	CI				
I-135	CI				
	CI				
Total for Period	CI			8.44E-5	
3. PARTICULATES					
Strontium-89	CI				
Strontium-90	CI				
Cesium-134	CI			1.89E-5	
Cesium-137	CI		2.59E-8	1.80E-5	3.44E-8
Cobalt-58	CI				5.32E-7
Cobalt-60	CI			7.20E-7	1.75E-7
Cesium-136	CI			2.12E-6	
	CI				
	CI				
	CI				
	CI				
	CI				
Total for Period	CI		2.59E-8	3.98E-5	7.41E-7

1995 EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT
GASEOUS EFFLUENTS - SUMMATION OF ALL RELEASES

		Units	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Est. Total Error, %
A.	FISSION AND ACTIVATION GASES						
1.	Total release.	Ci	3.88E+1	4.69E+1	4.04E+1	9.80E+0	19.8
2.	Average release rate for period.	$\mu\text{Ci/sec}$	4.99E+0	5.97E+0	5.08E+0	1.23E+0	
3.	Percent of applicable limit.	% γ β	9.26E-2 9.75E-2	1.30E-1 1.18E-1	2.76E-1 3.00E-1	2.04E-2 1.03E-1	
B.	IODINES						
1.	Total I-131.	Ci	8.55E-5	9.12E-4	3.42E-3	5.19E-5	12.4
2.	Average release rate for period.	$\mu\text{Ci/sec}$	1.10E-5	1.16E-4	4.30E-4	6.53E-6	
3.	Percent of applicable limit.	%	1.20E-1	4.12E-1	2.53E+0	5.40E-1	
C.	PARTICULATES						
1.	Particulates with half lives > 8 days.	Ci	6.08E-5	1.12E-4	1.79E-3	1.06E-3	12.7
2.	Average release rate for period.	$\mu\text{Ci/sec}$	7.82E-6	1.42E-5	2.25E-4	1.33E-4	
3.	Percent of applicable limit.	%	1.20E-1	4.12E-1	2.53E+0	5.40E-1	
4.	Gross alpha radioactivity.	Ci	<2.41E-6	<3.82E-6	<3.67E-6	<4.03E-6	
D.	Tritium						
1.	Total release	Ci	6.73E+0	7.28E+0	1.03E+1	2.29E+1	10.1
2.	Average release rate for period.	$\mu\text{Ci/sec}$	8.65E-1	9.26E-1	1.30E+0	2.88E+0	
3.	Percent of applicable limit.	%	12.9	13.1	18.2	37.3	

1995 EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT
LIQUID EFFLUENTS

BATCH MODE

Nuclides released	Unit	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Strontium-89	ci				
Strontium-90	ci				
Cesium-134	ci	3.95E-5	2.36E-5	1.97E-3	7.21E-4
Cesium-137	ci	7.45E-5	9.88E-5	2.48E-3	1.28E-3
Cobalt-58	ci	1.91E-2	2.15E-3	8.19E-2	9.60E-2
Cobalt-60	ci	1.29E-2	3.28E-3	2.56E-2	1.05E-2
Manganese-54	ci	5.27E-3	1.22E-3	6.30E-3	1.60E-3
Iodine-131	ci	2.72E-4	5.55E-6	3.08E-5	
Iodine-132	ci				
Iodine-133	ci				
Iodine-135	ci				
Sodium-24	ci			2.08E-4	3.89E-5
Iron-55	ci	1.77E-2	4.35E-3	6.62E-3	5.26E-3
Chromium-51	ci	3.22E-4		2.36E-3	2.28E-3
Zinc-65	ci	1.50E-4	2.06E-5	4.92E-4	
Zirconium/Niobium-95	ci	6.60E-4	1.29E-4	1.40E-6	4.29E-3
Silver-110m	ci	3.78E-3	7.12E-4	1.46E-2	9.16E-3
Cobalt-57	ci	2.56E-4	4.66E-5	3.87E-4	4.56E-4
Antimony-124	ci	3.88E-4	4.02E-5	1.01E-2	2.54E-3
Antimony-125	ci	3.62E-3	6.82E-4	1.17E-2	7.76E-3
Iron-59	ci		3.57E-5		3.94E-4
Lanthanum-140	ci	7.16E-6	1.97E-6	1.70E-4	
Ruthenium-103	ci				1.43E-4
Cesium-136	ci			1.31E-5	
Cerium-141	ci			1.16E-4	
Cerium-144	ci			2.24E-4	8.92E-4
Silver-108m	ci			7.10E-5	
Tin-113	ci				4.70E-4
Krypton-85	ci		1.07E-3	3.82E-3	6.76E-4
Xenon-133m	ci	2.21E-5	1.53E-3	1.42E-4	
Xenon-131m	ci	5.02E-5	2.24E-3	1.28E-3	
Xenon-133	ci	4.32E-3	1.69E-1	4.55E-2	1.34E-4
Xenon-135	ci	1.19E-5	4.17E-4	1.45E-6	1.79E-5
Xenon-135m	ci				
Argon-41	ci				

1995 EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT
LIQUID EFFLUENTS - SUMMATION OF ALL RELEASES

CONTINUOUS

		Units	Quarter 1st	Quarter 2nd	Quarter 3rd	Quarter 4th	Est. Total Error, %
A.	FISSION AND ACTIVATION PRODUCTS						
1.	Total Release.	Ci	2.86E-2	5.16E-2	4.55E-2	1.84E-2	18.4
2.	Average diluted concentration during period.	µCi/ml	3.89E-11	6.35E-11	7.39E-11	2.41E-11	
3.	Percent of applicable limit.	%	1.18E-3	1.87E-3	4.70E-3	4.88E-4	
B.	TRITIUM						
1.	Total Release	Ci	1.21E+0	1.33E+0	6.28E-1	8.90E-1	11.0
2.	Average diluted concentration during period.	µCi/ml	1.64E-9	1.64E-9	1.02E-9	1.16E-9	
3.	Percent of applicable limit.	%	1.64E-4	1.64E-4	1.02E-4	1.16E-4	
C.	DISSOLVED AND ENTRAINED GASES						
1.	Total Release	Ci	3.38E-4	8.05E-4	1.16E-3	3.58E-4	24.2
2.	Average diluted concentration during period.	µCi/ml	4.59E-13	9.90E-13	1.88E-12	4.68E-13	
3.	Percent of applicable limit.	%	2.30E-7	4.95E-7	9.38E-7	2.34E-7	

1995 EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT
LIQUID EFFLUENTS - SUMMATION OF ALL RELEASES

BATCH

		Units	Quarter 1st	Quarter 2nd	Quarter 3rd	Quarter 4th	Est. Total Error, %
A.	FISSION AND ACTIVATION PRODUCTS						
1.	Total Release.	Ci	6.45E-2	1.28E-2	1.65E-1	1.44E-1	14.9
2.	Average diluted concentration during period.	µCi/ml	6.08E-9	8.71E-10	6.27E-9	7.42E-9	
3.	Percent of applicable limit.	%	6.48E-2	1.07E-2	8.40E-2	6.80E-2	
B.	TRITIUM						
1.	Total Release	Ci	1.60E+2	4.64E+2	5.24E+2	1.74E+2	10.1
2.	Average diluted concentration during period.	µCi/ml	1.51E-5	3.16E-5	1.99E-5	8.97E-6	
3.	Percent of applicable limit.	%	1.51E+0	3.16E+0	1.99E+0	8.97E-1	
C.	DISSOLVED AND ENTRAINED GASES						
1.	Total Release	Ci	4.40E-3	1.74E-1	5.07E-2	8.28E-4	13.6
2.	Average diluted concentration during period.	µCi/ml	4.15E-10	1.18E-8	1.93E-9	4.27E-11	
3.	Percent of applicable limit.	%	2.08E-4	5.93E-3	9.65E-4	2.13E-5	

1995 EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT
LIQUID EFFLUENTS

CONTINUOUS

		Unit	Quarter 1st	Quarter 2nd	Quarter 3rd	Quarter 4th	Est. Total Error, %
D.	Gross Alpha Radioactivity Total Release	Ci	<1.11E-2	<1.25E-2	<7.78E-3	<1.32E-2	N/A
E.	Volume of Waste Released	Liters	1.11E+8	1.38E+8	8.58E+7	1.45E+8	2.00
F.	Volume of Dilution Water used During Period	Liters	7.36E+11	8.13E+11	6.16E+11	7.65E+11	3.48

BATCH

		Unit	Quarter 1st	Quarter 2nd	Quarter 3rd	Quarter 4th	Est. Total Error, %
D.	Gross Alpha Radioactivity Total Release	Ci	<9.30E-5	<1.18E-4	<1.77E-4	<1.89E-4	N/A
E.	Volume of Waste Released	Liters	1.11E+6	1.28E+6	2.11E+6	2.09E+6	2.00
F.	Volume of Dilution Water used During Period	Liters	1.06E+10	1.47E+10	2.63E+10	1.94E+10	3.48

1995 EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

Solid Waste Shipped Offsite for Burial or Disposal

1. Type of Waste	Unit	Estimated Amount	Estimated Total Error, %
a. Spent resins, filter sludges, evaporator bottoms, etc.	m ³ Ci		
b. Dry compressible waste, contaminated equipment, etc.	m ³ Ci	2.63E+1 1.37E+0	1.00 20.0
c. Irradiated components, control rods, etc.	m ³ Ci		
d. Other	m ³ Ci		

2. Estimate of Principle Radionuclide Composition

a.	Cs-137	%		%
	Cs-134	%		%
	Co-58	%		%
	Co-60	%		%
b.	Cs-137	11.0 %	Fe-55	54.0 %
	Cs-134	2.00 %	H-3	2.00 %
	Co-60	12.0 %	Ni-63	11.0 %
	Co-58	5.00 %	Pu-241	2.00 %

3. Solid Waste Disposition

No. of Shipments	Mode of Transportation	Destination
48	Truck	Barnwell, SC

4. Type of Containers Used for Shipment

Containers used are strong, tight metal boxes and metal drums.

5. Solidification Agent

There were no solidifications done during this report period.

1995 EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT

YEARLY RELEASE RATES

Gases		
Fission and Activation Gases	Total Release	1.36E+2 Ci
	Average Release Rate	4.31E+0 μ Ci/sec
	% of Applicable Limits γ β	2.60E-1 % 3.09E-1 %
Iodines	Total Iodine-131 Release	4.47e-3 Ci
	Average Release Rate	1.42E-4 μ Ci/sec
	% of Applicable Limit	1.80E+0 %
Particulates	Total Release	3.02E-3 Ci
	Average Release Rate	9.59E-5 μ Ci/sec
	% of Applicable Limit	1.80E+0 %
Liquid		
Fission and Activation Products	Total Release	5.31E-1 Ci
	Average Diluted Concentration	7.47E-9 μ Ci/ml
	% of Applicable Limits <u>Organ</u> <u>Total Body</u>	9.32E-1 % 2.07E+0 %

The following distances were used in the calculation of the maximum individual doses:

<u>Sector</u>	<u>Direction</u>	<u>Boundary (Meters)</u>	<u>Nearest Residence (Meters)</u>
A	N	651	659
B	NNE	617	660
C	NE	789	943
D	ENE	1497	1747
E	E	1274	1716
F	ESE	972	1643
G	SE	629	1136
H	SSE	594	1507
J	S	594	1026
K	SSW	629	942

Release Number	Start/Stop date	Start/Stop Time	Xe131m	Xe133	Xe135	Ar41	Xe133m	Kr85	Kr85m	Kr88	Kr87	H3	Cs137	Co58
*G-95-1	1 Jan - 1 Jan	2222 - 2311		5.18E-01	6.50E-02	8.21E-04	1.01E-02	8.92E-01	7.60E-03	7.61E-03	9.42E-04	4.48E-05		
*G-95-2	25 Jan - 25 Jan	0432 - 0519	2.06E-03	7.94E-03				7.64E-01				2.64E-05		
*G-95-3	2 Feb - 2 Feb	0528 - 0605	4.89E-03	8.19E-03	4.67E-05			1.01E+00				5.57E-05		
*G-95-5	21 Mar - 21 Mar	2157 - 2234	4.89E-04	2.26E-04				1.01E+00				3.90E-05		
*G-95-6	16 Apr - 16 Apr	0205 - 0245	1.37E-03	2.09E-02				6.87E-01				3.20E-05		
*G-95-7	25 May - 25 May	1958 - 2038		3.13E-03				6.20E-01				2.02E-05		
*G-95-8	5 Jun - 6 Jun	2340 - 0028		5.71E-04				9.03E-01				3.53E-05		
#G-95-9	7 Jun - 8 Jun	2340 - 0400	8.68E-04	5.18E-02	9.57E-06		2.84E-04	6.29E-02				7.64E-05	2.59E-08	
*G-95-10	16 Jun - 16 Jun	1336 - 1420	2.81E-04	8.75E-04				9.19E-01				2.91E-05		
G-95-11	29 Jun - 29 Jun	1137 - 1503	1.94E-01	5.76E+00			1.20E-02	6.95E-01	I131 8.35E-05	Cs134 1.89E-05	Cs136 2.12E-06	3.93E-01	1.80E-05	
G-95-13	2 Sep - 2 Sep	0733 - 1059		5.58E-02		Co60 7.19E-07			I131 7.86E-07			5.02E-01		
#G-95-14	28 Sep - 30 Sep	0950 - 1000	1.89E-03	3.39E-04				4.82E-01				1.59E-04		
*G-95-15	29 Oct - 29 Oct	0522 - 0551	3.29E-04	1.72E-04				9.42E-01				3.10E-05		1.59E-08
*G-95-16	29 Oct - 29 Oct	1651 - 1730						9.40E-01				1.84E-05		
G-95-17	29 Oct - 29 Oct	1028 - 1211			1.09E-03							5.61E-02		
*G-95-18	30 Oct - 30 Oct	1600 - 1636		1.13E-04	2.13E-05			1.11E+00				3.51E-05		
*G-95-19	1 Nov - 1 Nov	0355 - 0433	2.33E-03	7.98E-04				1.57E+00				7.59E-06		
*G-95-20	8 Nov - 8 Nov	0300 - 0347	1.37E-03	3.17E-03				1.39E+00				2.90E-05		
*G-95-21	21 Nov - 21 Nov	1551 - 1632		1.96E-03		Co60 1.75E-07		5.65E-01				9.74E-06	3.44E-08	3.78E-07
*G-95-22	7 Dec - 7 Dec	2238 - 2321		8.19E-05				1.09E+00				2.06E-05		1.37E-07
	* Gas Decay Tank		# Chemical Volume Control System Holdup Tank											

Release Number	Start/Stop date	Start/Stop Time	Xe131m	Xe133	Xe135	Ar41	Xe133m	Kr85	Kr85m	Kr88
1-CPR-95-1	5 Jan - 5 Jan	1943 - 2010	1.26E-03	6.51E-02	3.19E-04	4.17E-04	3.72E-04	8.38E-03	1.52E-05	1.52E-05
1-CPR-95-2	6 Jan - 6 Jan	0106 - 0122	8.98E-04	4.64E-02	2.27E-04	2.98E-04	2.65E-04	5.97E-03	1.08E-05	1.08E-05
1-CPR-95-3	6 Jan - 6 Jan	1406 - 1424	1.12E-03	5.79E-02	2.84E-04	3.71E-04	3.31E-04	7.45E-03	1.35E-05	1.35E-05
1-CPR-95-4	10 Jan - 10 Jan	0950 - 1008	9.51E-04	4.92E-02	2.41E-04	3.15E-04	2.81E-04	6.33E-03	1.15E-05	1.15E-05
1-CPR-95-5	11 Jan - 11 Jan	0459 - 0520	1.42E-03	7.36E-02	3.60E-04	4.72E-04	4.20E-04	9.47E-03	1.72E-05	1.72E-05
1-CPR-95-6	12 Jan - 12 Jan	0039 - 0102	1.60E-03	8.25E-02	4.04E-04	5.29E-04	4.71E-04	1.06E-02	1.92E-05	1.92E-05
1-CPR-95-7	14 Jan - 14 Jan	0017 - 0039	1.78E-03	9.18E-02	4.49E-04	5.89E-04	5.24E-04	1.18E-02	2.14E-05	2.14E-05
1-CPR-95-8	17 Jan - 17 Jan	0051 - 0112	2.34E-03	1.21E-01	5.92E-04	7.76E-04	6.91E-04	1.56E-02	2.82E-05	2.82E-05
1-CPR-95-9	18 Jan - 18 Jan	2256 - 2324	2.67E-03	1.38E-01	6.76E-04	8.86E-04	7.89E-04	1.78E-02	3.22E-05	3.22E-05
1-CPR-95-10	19 Jan - 19 Jan	1156 - 1214	2.62E-03	1.36E-01	6.64E-04	8.69E-04	7.74E-04	1.74E-02	3.16E-05	3.16E-05
1-CPR-95-11	21 Jan - 21 Jan	1211 - 1229	1.73E-03	8.92E-02	4.37E-04	5.72E-04	5.10E-04	1.15E-02	2.08E-05	2.08E-05
1-CPR-95-12	26 Jan - 26 Jan	0150 - 0209	1.79E-03	9.27E-02	4.54E-04	5.94E-04	5.29E-04	1.19E-02	2.16E-05	2.16E-05
1-CPR-95-13	27 Jan - 27 Jan	0700 - 0718	1.71E-03	8.84E-02	4.33E-04	5.67E-04	5.05E-04	1.14E-02	2.06E-05	2.06E-05
1-CPR-95-14	29 Jan - 29 Jan	1649 - 1712	2.03E-03	1.05E-01	5.12E-04	6.71E-04	5.98E-04	1.35E-02	2.44E-05	2.44E-05
1-CPR-95-15	30 Jan - 30 Jan	2205 - 2228	5.28E-04	2.73E-02	1.34E-04	1.75E-04	1.56E-04	3.51E-03	6.36E-06	6.36E-06
1-CPR-95-16	31 Jan - 31 Jan	1825 - 1852	2.34E-03	1.21E-01	5.92E-04	7.76E-04	6.91E-04	1.56E-02	2.82E-05	2.82E-05
1-CPR-95-17	3 Feb - 3 Feb	1306 - 1328	1.76E-03	9.09E-02	4.45E-04	5.83E-04	5.19E-04	1.17E-02	2.12E-05	2.12E-05
1-CPR-95-18	6 Feb - 6 Feb	0404 - 0420	1.14E-03	5.87E-02	2.87E-04	3.76E-04	3.35E-04	7.55E-03	1.37E-05	1.37E-05
1-CPR-95-19	8 Feb - 8 Feb	2328 - 2342	9.61E-04	4.97E-02	2.43E-04	3.18E-04	2.84E-04	6.39E-03	1.16E-05	1.16E-05
1-CPR-95-20	9 Feb - 9 Feb	0938 - 0953	8.68E-04	4.49E-02	2.20E-04	2.88E-04	2.56E-04	5.77E-03	1.05E-05	1.05E-05
1-CPR-95-21	10 Feb - 10 Feb	0340 - 0354	5.94E-04	3.07E-02	1.50E-04	1.97E-04	1.75E-04	3.95E-03	7.16E-06	7.16E-06
1-CPR-95-22	14 Feb - 14 Feb	1607 - 1619	6.27E-04	3.24E-02	1.59E-04	2.08E-04	1.85E-04	4.17E-03	7.56E-06	7.56E-06
1-CPR-95-23	14 Feb - 14 Feb	2340 - 2357	9.81E-04	5.07E-02	2.48E-04	3.25E-04	2.90E-04	6.52E-03	1.18E-05	1.18E-05
1-CPR-95-24	15 Feb - 15 Feb	0725 - 0743	9.88E-04	5.11E-02	2.50E-04	3.27E-04	2.92E-04	6.57E-03	1.19E-05	1.19E-05
1-CPR-95-25	18 Feb - 18 Feb	1304 - 1322	9.00E-04	4.65E-02	2.28E-04	2.98E-04	2.66E-04	5.98E-03	1.08E-05	1.08E-05
1-CPR-95-26	19 Feb - 20 Feb	2353 - 0014	9.18E-04	4.74E-02	2.32E-04	3.04E-04	2.71E-04	6.11E-03	1.11E-05	1.11E-05
1-CPR-95-27	20 Feb - 20 Feb	1022 - 1038	8.20E-04	4.24E-02	2.07E-04	2.72E-04	2.42E-04	5.45E-03	9.88E-06	9.88E-06
1-CPR-95-28	22 Feb - 22 Feb	0656 - 0712	9.15E-04	4.73E-02	2.31E-04	3.03E-04	2.70E-04	6.08E-03	1.10E-05	1.10E-05
1-CPR-95-29	23 Feb - 23 Feb	1557 - 1619	1.19E-03	6.13E-02	3.00E-04	3.93E-04	3.50E-04	7.88E-03	1.43E-05	1.43E-05
1-CPR-95-30	27 Feb - 27 Feb	0105 - 0123	9.28E-04	4.80E-02	2.35E-04	3.07E-04	2.74E-04	6.17E-03	1.12E-05	1.12E-05
1-CPR-95-31	2 Mar - 2 Mar	1347 - 1405	9.78E-04	5.05E-02	2.47E-04	3.24E-04	2.89E-04	6.50E-03	1.18E-05	1.18E-05
1-CPR-95-32	3 Mar - 3 Mar	1420 - 1440	1.19E-03	6.16E-02	3.02E-04	3.95E-04	3.52E-04	7.93E-03	1.44E-05	1.44E-05

Release Number	Start/Stop date	Start/Stop Time	Xe131m	Xe133	Xe135	Ar41	Xe133m	Kr85	Kr85m	Kr88
1-CPR-95-33	4 Mar - 4 Mar	2328 - 2352	1.28E-03	6.61E-02	3.23E-04	4.24E-04	3.77E-04	8.50E-03	1.54E-05	1.54E-05
1-CPR-95-34	5 Mar - 5 Mar	1049 - 1109	1.12E-03	5.78E-02	2.83E-04	3.71E-04	3.30E-04	7.44E-03	1.35E-05	1.35E-05
1-CPR-95-35	6 Mar - 7 Mar	2348 - 0011	1.20E-03	6.19E-02	3.03E-04	3.97E-04	3.53E-04	7.96E-03	1.44E-05	1.44E-05
1-CPR-95-36	10 Mar - 10 Mar	0521 - 0543	1.15E-03	5.96E-02	2.92E-04	3.82E-04	3.41E-04	7.67E-03	1.39E-05	1.39E-05
1-CPR-95-37	11 Mar - 11 Mar	1428 - 1447	1.30E-03	6.74E-02	3.30E-04	4.32E-04	3.85E-04	8.67E-03	1.57E-05	1.57E-05
1-CPR-95-38	12 Mar - 12 Mar	1340 - 1412	1.71E-03	8.84E-02	4.33E-04	5.67E-04	5.05E-04	1.14E-02	2.06E-05	2.06E-05
1-CPR-95-39	14 Mar - 14 Mar	1408 - 1427		2.21E-02						
1-CPR-95-40	15 Mar - 15 Mar	0123 - 0240		8.76E-02						
1-CPR-95-41	15 Mar - 15 Mar	1730 - 1926		9.12E-02						
1-CPR-95-42	16 Mar - 16 Mar	1723 - 1739	9.50E-04	4.91E-02	2.40E-04	3.15E-04	2.80E-04	6.31E-03	1.14E-05	1.14E-05
1-CPR-95-43	18 Mar - 18 Mar	1139 - 1156	8.90E-04	4.60E-02	2.25E-04	2.95E-04	2.63E-04	5.92E-03	1.07E-05	1.07E-05
1-CPR-95-44	18 Mar - 18 Mar	2145 - 2206	1.10E-03	5.66E-02	2.77E-04	3.63E-04	3.23E-04	7.29E-03	1.32E-05	1.32E-05
1-CPR-95-45	20 Mar - 20 Mar	0027 - 0046	1.12E-03	5.77E-02	2.82E-04	3.70E-04	3.29E-04	7.42E-03	1.34E-05	1.34E-05
1-CPR-95-46	20 Mar - 20 Mar	1154 - 1216	1.44E-03	7.46E-02	3.65E-04	4.78E-04	4.26E-04	9.59E-03	1.74E-05	1.74E-05
1-CPR-95-47	23 Mar - 23 Mar	0239 - 0255	1.03E-03	5.31E-02	2.60E-04	3.40E-04	3.03E-04	6.83E-03	1.24E-05	1.24E-05
1-CPR-95-48	26 Mar - 26 Mar	0147 - 0206	1.05E-03	5.45E-02	2.67E-04	3.49E-04	3.11E-04	7.01E-03	1.27E-05	1.27E-05
1-CPR-95-49	27 Mar - 27 Mar	0430 - 0450	1.18E-03	6.07E-02	2.97E-04	3.89E-04	3.47E-04	7.82E-03	1.42E-05	1.42E-05
1-CPR-95-50	29 Mar - 29 Mar	1831 - 1848	9.28E-04	4.80E-02	2.35E-04	3.07E-04	2.74E-04	6.17E-03	1.12E-05	1.12E-05
1-CPR-95-51	31 Mar - 31 Mar	1405 - 1422	1.03E-03	5.35E-02	2.62E-04	3.43E-04	3.05E-04	6.88E-03	1.25E-05	1.25E-05
1-CPR-95-52	1 Apr - 1 Apr	1600 - 1617	8.33E-04	4.54E-02	7.39E-04	4.12E-04	3.37E-04	1.80E-03	4.46E-05	5.46E-05
1-CPR-95-53	2 Apr - 3 Apr	2351 - 0010	1.28E-03	6.98E-02	1.14E-03	6.33E-04	5.19E-04	2.76E-03	6.87E-05	8.39E-05
1-CPR-95-54	3 Apr - 3 Apr	2243 - 2303	1.27E-03	6.89E-02	1.12E-03	6.25E-04	5.12E-04	2.73E-03	6.78E-05	8.28E-05
1-CPR-95-55	5 Apr - 5 Apr	1908 - 1929	2.02E-03	1.10E-01	1.79E-03	9.96E-04	8.16E-04	4.34E-03	1.08E-04	1.32E-04
1-CPR-95-56	7 Apr - 7 Apr	1807 - 1835	2.37E-03	1.29E-01	2.10E-03	1.17E-03	9.59E-04	5.10E-03	1.27E-04	1.55E-04
1-CPR-95-57	9 Apr - 9 Apr	0422 - 0438	1.10E-03	6.00E-02	9.77E-04	5.44E-04	4.46E-04	2.37E-03	5.90E-05	7.22E-05
1-CPR-95-58	11 Apr - 11 Apr	0453 - 0511	1.45E-03	7.92E-02	1.29E-03	7.19E-04	5.89E-04	3.13E-03	7.79E-05	9.53E-05
1-CPR-95-59	11 Apr - 11 Apr	1738 - 1756	1.23E-03	6.71E-02	1.09E-03	6.08E-04	4.98E-04	2.65E-03	6.60E-05	8.06E-05
1-CPR-95-60	15 Apr - 15 Apr	0142 - 0210	1.92E-03	1.04E-01	1.70E-03	9.46E-04	7.75E-04	4.13E-03	1.03E-04	1.25E-04
1-CPR-95-61	16 Apr - 16 Apr	0817 - 0835	1.51E-03	8.22E-02	1.34E-03	7.45E-04	6.11E-04	3.25E-03	8.08E-05	9.88E-05
1-CPR-95-62	18 Apr - 18 Apr	0158 - 0217	1.14E-03	6.20E-02	1.01E-03	5.63E-04	4.61E-04	2.45E-03	6.10E-05	7.46E-05
1-CPR-95-63	18 Apr - 18 Apr	1040 - 1105	1.68E-03	9.15E-02	1.49E-03	8.30E-04	6.80E-04	3.62E-03	9.00E-05	1.10E-04
1-CPR-95-64	20 Apr - 20 Apr	1830 - 1849	1.13E-03	6.16E-02	1.00E-03	5.59E-04	4.58E-04	2.44E-03	6.06E-05	7.40E-05

Release Number	Start/Stop date	Start/Stop Time	Xe131m	Xe133	Xe135	Ar41	Xe133m	Kr85	Kr85m	Kr88
1-CPR-95-65	23 Apr - 23 Apr	0934 - 0955	1.55E-03	8.45E-02	1.38E-03	7.66E-04	6.28E-04	3.34E-03	8.31E-05	1.02E-04
1-CPR-95-66	24 Apr - 24 Apr	1525 - 1542	7.04E-04	3.83E-02	6.24E-04	3.48E-04	2.85E-04	1.52E-03	3.77E-05	4.61E-05
1-CPR-95-67	26 Apr - 26 Apr	0916 - 0936	9.39E-04	5.12E-02	8.33E-04	4.64E-04	3.80E-04	2.02E-03	5.03E-05	6.15E-05
1-CPR-95-68	27 Apr - 27 Apr	0225 - 0243	9.07E-04	4.94E-02	8.05E-04	4.48E-04	3.67E-04	1.95E-03	4.86E-05	5.94E-05
1-CPR-95-69	1 May - 1 May	1206 - 1218	6.08E-04	3.31E-02	5.39E-04	3.00E-04	2.46E-04	1.31E-03	3.26E-05	3.98E-05
1-CPR-95-70	3 May - 3 May	1650 - 1713	1.07E-03	5.81E-02	9.46E-04	5.27E-04	4.32E-04	2.30E-03	5.72E-05	6.99E-05
1-CPR-95-71	5 May - 5 May	1740 - 1753	7.34E-04	4.00E-02	6.51E-04	3.63E-04	2.97E-04	1.58E-03	3.93E-05	4.81E-05
1-CPR-95-72	6 May - 6 May	1711 - 1728	3.54E-03	1.93E-01	3.14E-03	1.75E-03	1.43E-03	7.64E-03	1.90E-04	2.32E-04
1-CPR-95-73	7 May - 7 May	1321 - 1337	7.78E-04	4.24E-02	6.90E-04	3.84E-04	3.15E-04	1.68E-03	4.17E-05	5.09E-05
1-CPR-95-74	8 May - 8 May	1610 - 1635	1.34E-03	7.29E-02	1.19E-03	6.62E-04	5.42E-04	2.89E-03	7.17E-05	8.77E-05
1-CPR-95-75	9 May - 9 May	0350 - 0405	8.11E-04	4.42E-02	7.20E-04	4.01E-04	3.28E-04	1.75E-03	4.35E-05	5.31E-05
1-CPR-95-76	9 May - 9 May	1834 - 1850	9.17E-04	5.00E-02	8.14E-04	4.53E-04	3.71E-04	1.98E-03	4.91E-05	6.01E-05
1-CPR-95-77	10 May - 10 May	1317 - 1333	8.84E-04	4.81E-02	7.84E-04	4.37E-04	3.58E-04	1.90E-03	4.73E-05	5.79E-05
1-CPR-95-78	12 May - 12 May	1312 - 1328	7.29E-04	3.97E-02	6.47E-04	3.60E-04	2.95E-04	1.57E-03	3.91E-05	4.77E-05
1-CPR-95-79	13 May - 13 May	0859 - 0916	9.79E-04	5.34E-02	8.69E-04	4.84E-04	3.96E-04	2.11E-03	5.25E-05	6.41E-05
1-CPR-95-80	14 May - 14 May	0705 - 0724	9.27E-04	5.05E-02	8.22E-04	4.58E-04	3.75E-04	2.00E-03	4.97E-05	6.07E-05
1-CPR-95-81	16 May - 16 May	0220 - 0235	8.15E-04	4.44E-02	7.23E-04	4.03E-04	3.30E-04	1.76E-03	4.37E-05	5.34E-05
1-CPR-95-82	16 May - 16 May	1404 - 1419	1.18E-03	6.44E-02	1.05E-03	5.84E-04	4.79E-04	2.55E-03	6.34E-05	7.74E-05
1-CPR-95-83	17 May - 17 May	0021 - 0039	9.46E-04	5.15E-02	8.39E-04	4.67E-04	3.83E-04	2.04E-03	5.07E-05	6.19E-05
1-CPR-95-84	18 May - 18 May	1548 - 1606	1.04E-03	5.66E-02	9.22E-04	5.14E-04	4.21E-04	2.24E-03	5.57E-05	6.81E-05
1-CPR-95-85	20 May - 20 May	0353 - 0411	8.92E-04	4.86E-02	7.91E-04	4.41E-04	3.61E-04	1.92E-03	4.78E-05	5.84E-05
1-CPR-95-86	21 May - 21 May	0729 - 0752	1.39E-03	7.59E-02	1.24E-03	6.88E-04	5.64E-04	3.00E-03	7.46E-05	9.12E-05
1-CPR-95-87	22 May - 22 May	2030 - 2048	9.42E-04	5.13E-02	8.36E-04	4.66E-04	3.81E-04	2.03E-03	5.05E-05	6.17E-05
1-CPR-95-88	23 May - 23 May	1408 - 1428	1.15E-03	6.25E-02	1.02E-03	5.67E-04	4.64E-04	2.47E-03	6.15E-05	7.51E-05
1-CPR-95-89	25 May - 25 May	0145 - 0204	1.07E-03	5.80E-02	9.45E-04	5.26E-04	4.31E-04	2.30E-03	5.71E-05	6.97E-05
1-CPR-95-90	26 May - 26 May	1305 - 1321	9.51E-04	5.18E-02	8.43E-04	4.70E-04	3.85E-04	2.05E-03	5.09E-05	6.23E-05
1-CPR-95-91	27 May - 27 May	1006 - 1025	9.71E-04	5.29E-02	8.61E-04	4.80E-04	3.93E-04	2.09E-03	5.20E-05	6.36E-05
1-CPR-95-92	27 May - 27 May	2027 - 2045	9.24E-04	5.03E-02	8.20E-04	4.57E-04	3.74E-04	1.99E-03	4.95E-05	6.05E-05
1-CPR-95-93	28 May - 28 May	0646 - 0708	1.32E-03	7.17E-02	1.17E-03	6.50E-04	5.32E-04	2.83E-03	7.05E-05	8.61E-05
1-CPR-95-94	30 May - 30 May	0300 - 0319	1.16E-03	6.31E-02	1.03E-03	5.72E-04	4.69E-04	2.49E-03	6.20E-05	7.58E-05
1-CPR-95-95	30 May - 31 May	2348 - 0006	1.14E-03	6.20E-02	1.01E-03	5.62E-04	4.60E-04	2.45E-03	6.09E-05	7.45E-05
1-CPR-95-96	31 May - 31 May	1646 - 1705	1.03E-03	5.61E-02	9.13E-04	5.09E-04	4.17E-04	2.22E-03	5.52E-05	6.74E-05

Release Number	Start/Stop date	Start/Stop Time	Xe131m	Xe133	Xe135	Ar41	Xe133m	Kr85	Kr85m	Kr88
1-CPR-95-97	1 Jun - 1 Jun	1119 - 1140	1.29E-03	7.03E-02	1.14E-03	6.37E-04	5.22E-04	2.78E-03	6.91E-05	8.45E-05
1-CPR-95-98	2 Jun - 2 Jun	1048 - 1108	1.17E-03	6.39E-02	1.04E-03	5.79E-04	4.75E-04	2.53E-03	6.28E-05	7.68E-05
1-CPR-95-99	4 Jun - 4 Jun	0748 - 0808	1.10E-03	6.01E-02	9.79E-04	5.45E-04	4.47E-04	2.38E-03	5.91E-05	7.23E-05
1-CPR-95-100	5 Jun - 5 Jun	0228 - 0245	1.01E-03	5.49E-02	8.94E-04	4.98E-04	4.08E-04	2.17E-03	5.40E-05	6.60E-05
1-CPR-95-101	5 Jun - 5 Jun	1433 - 1453	9.98E-04	5.44E-02	8.85E-04	4.93E-04	4.04E-04	2.15E-03	5.35E-05	6.53E-05
1-CPR-95-102	6 Jun - 6 Jun	0455 - 0512	9.27E-04	5.05E-02	8.22E-04	4.58E-04	3.75E-04	2.00E-03	4.97E-05	6.07E-05
1-CPR-95-103	6 Jun - 6 Jun	1511 - 1527	6.65E-04	3.62E-02	5.90E-04	3.29E-04	2.69E-04	1.43E-03	3.56E-05	4.36E-05
1-CPR-95-104	7 Jun - 7 Jun	0315 - 0329	8.67E-04	4.72E-02	7.69E-04	4.28E-04	3.51E-04	1.87E-03	4.64E-05	5.68E-05
1-CPR-95-105	7 Jun - 7 Jun	1703 - 1719	8.75E-04	4.77E-02	7.76E-04	4.32E-04	3.54E-04	1.89E-03	4.69E-05	5.73E-05
1-CPR-95-106	9 Jun - 9 Jun	1907 - 1921	9.41E-04	5.12E-02	8.34E-04	4.65E-04	3.81E-04	2.03E-03	5.04E-05	6.16E-05
1-CPR-95-107	10 Jun - 10 Jun	0802 - 0817	8.57E-04	4.67E-02	7.60E-04	4.23E-04	3.47E-04	1.85E-03	4.59E-05	5.61E-05
1-CPR-95-108	10 Jun - 10 Jun	1936 - 1953	9.91E-04	5.40E-02	8.79E-04	4.90E-04	4.01E-04	2.14E-03	5.31E-05	6.49E-05
1-CPR-95-109	11 Jun - 11 Jun	1246 - 1303	9.07E-04	4.94E-02	8.05E-04	4.48E-04	3.67E-04	1.95E-03	4.86E-05	5.94E-05
1-CPR-95-110	12 Jun - 12 Jun	1552 - 1612	1.78E-03	9.70E-02	1.58E-03	8.80E-04	7.21E-04	3.84E-03	9.54E-05	1.17E-04
1-CPR-95-111	13 Jun - 13 Jun	1600 - 1621	1.11E-03	6.03E-02	9.82E-04	5.47E-04	4.48E-04	2.39E-03	5.93E-05	7.25E-05
1-CPR-95-112	14 Jun - 14 Jun	1625 - 1643	1.18E-03	6.44E-02	1.05E-03	5.84E-04	4.79E-04	2.55E-03	6.34E-05	7.74E-05
1-CPR-95-113	15 Jun - 15 Jun	1802 - 1820	9.39E-04	5.12E-02	8.33E-04	4.64E-04	3.80E-04	2.02E-03	5.03E-05	6.15E-05
1-CPR-95-114	16 Jun - 16 Jun	1726 - 1745	1.04E-03	5.66E-02	9.22E-04	5.14E-04	4.21E-04	2.24E-03	5.57E-05	6.81E-05
1-CPR-95-115	17 Jun - 17 Jun	1510 - 1528	1.12E-03	6.11E-02	9.95E-04	5.54E-04	4.54E-04	2.42E-03	6.01E-05	7.35E-05
1-CPR-95-116	18 Jun - 18 Jun	1111 - 1128	9.83E-04	5.35E-02	8.72E-04	4.86E-04	3.98E-04	2.12E-03	5.27E-05	6.44E-05
1-CPR-95-117	19 Jun - 19 Jun	0012 - 0032	1.29E-03	7.03E-02	1.14E-03	6.37E-04	5.22E-04	2.78E-03	6.91E-05	8.45E-05
1-CPR-95-118	19 Jun - 19 Jun	1613 - 1632	1.23E-03	6.72E-02	1.09E-03	6.09E-04	4.99E-04	2.66E-03	6.61E-05	8.07E-05
1-CPR-95-119	20 Jun - 20 Jun	1151 - 1229	2.32E-03	1.26E-01	2.06E-03	1.15E-03	9.38E-04	5.00E-03	1.24E-04	1.52E-04
1-CPR-95-120	22 Jun - 22 Jun	1526 - 1543	1.07E-03	5.82E-02	9.48E-04	5.28E-04	4.32E-04	2.30E-03	5.72E-05	7.00E-05
1-CPR-95-121	23 Jun - 23 Jun	1311 - 1332	1.23E-03	6.69E-02	1.09E-03	6.07E-04	4.97E-04	2.65E-03	6.58E-05	8.04E-05
1-CPR-95-122	24 Jun - 24 Jun	0941 - 1005	1.37E-03	7.45E-02	1.21E-03	6.76E-04	5.54E-04	2.95E-03	7.33E-05	8.95E-05
1-CPR-95-123	24 Jun - 24 Jun	2026 - 2057	6.32E-03	3.44E-01	5.60E-03	3.12E-03	2.56E-03	1.36E-02	3.38E-04	4.14E-04
1-CPR-95-124	26 Jun - 26 Jun	1549 - 1607	1.43E-03	7.81E-02	1.27E-03	7.08E-04	5.80E-04	3.09E-03	7.68E-05	9.38E-05
1-CPR-95-125	27 Jun - 27 Jun	1351 - 1410	9.54E-04	5.20E-02	8.46E-04	4.71E-04	3.86E-04	2.06E-03	5.11E-05	6.25E-05
1-CPR-95-126	28 Jun - 28 Jun	1515 - 1534	1.17E-03	6.38E-02	1.04E-03	5.79E-04	4.74E-04	2.52E-03	6.27E-05	7.67E-05
1-CPR-95-127	29 Jun - 29 Jun	1111 - 1135	1.61E-03	8.77E-02	1.43E-03	7.95E-04	6.51E-04	3.47E-03	8.62E-05	1.05E-04
1-CPR-95-128	30 Jun - 30 Jun	0924 - 0940	7.41E-04	4.04E-02	6.57E-04	3.66E-04	3.00E-04	1.60E-03	3.97E-05	4.85E-05

Release Number	Start/Stop date	Start/Stop Time	Xe131m	Xe133	Xe135	Ar41	Xe133m	Kr85	Kr85m	Kr88
1-CPR-95-129	2 Jul - 2 Jul	0405 - 0421	9.90E-04	5.39E-02	8.78E-04	3.42E-04	4.01E-04	2.13E-03	5.30E-05	6.48E-05
1-CPR-95-130	2 Jul - 2 Jul	1854 - 1912	1.11E-03	6.04E-02	9.83E-04	3.83E-04	4.49E-04	2.39E-03	5.94E-05	7.26E-05
1-CPR-95-131	3 Jul - 3 Jul	1219 - 1236	1.14E-03	6.22E-02	1.01E-03	3.94E-04	4.62E-04	2.46E-03	6.12E-05	7.48E-05
1-CPR-95-132	4 Jul - 4 Jul	0437 - 0454	9.73E-04	5.30E-02	8.63E-04	3.36E-04	3.94E-04	2.10E-03	5.21E-05	6.37E-05
1-CPR-95-133	5 Jul - 5 Jul	0247 - 0310	1.25E-03	6.79E-02	1.11E-03	4.30E-04	5.05E-04	2.69E-03	6.68E-05	8.16E-05
1-CPR-95-134	6 Jul - 6 Jul	1222 - 1240	9.24E-04	5.03E-02	8.20E-04	3.19E-04	3.74E-04	1.99E-03	4.95E-05	6.05E-05
1-CPR-95-135	8 Jul - 8 Jul	0246 - 0310	1.29E-03	7.02E-02	1.14E-03	4.45E-04	5.22E-04	2.78E-03	6.90E-05	8.44E-05
1-CPR-95-136	9 Jul - 9 Jul	0052 - 0114	9.61E-04	5.23E-02	8.52E-04	3.32E-04	3.89E-04	2.07E-03	5.15E-05	6.29E-05
1-CPR-95-137	10 Jul - 10 Jul	0527 - 0548	1.06E-03	5.77E-02	9.40E-04	3.66E-04	4.29E-04	2.28E-03	5.68E-05	6.94E-05
1-CPR-95-138	11 Jul - 11 Jul	0529 - 0548	9.42E-04	5.13E-02	8.36E-04	3.25E-04	3.81E-04	2.03E-03	5.05E-05	6.17E-05
1-CPR-95-139	12 Jul - 12 Jul	1012 - 1030	8.28E-04	4.51E-02	7.35E-04	2.86E-04	3.35E-04	1.78E-03	4.44E-05	5.42E-05
1-CPR-95-140	13 Jul - 13 Jul	0236 - 0257	1.16E-03	6.32E-02	1.03E-03	4.01E-04	4.70E-04	2.50E-03	6.22E-05	7.60E-05
1-CPR-95-141	13 Jul - 13 Jul	2055 - 2115	5.12E-04	2.79E-02	4.54E-04	1.77E-04	2.07E-04	1.10E-03	2.75E-05	3.36E-05
1-CPR-95-142	14 Jul - 14 Jul	1826 - 1844	9.98E-04	5.44E-02	8.85E-04	3.45E-04	4.04E-04	2.15E-03	5.35E-05	6.53E-05
1-CPR-95-143	15 Jul - 15 Jul	1449 - 1511	1.24E-03	6.77E-02	1.10E-03	4.29E-04	5.03E-04	2.68E-03	6.66E-05	8.14E-05
1-CPR-95-144	16 Jul - 16 Jul	1253 - 1314	1.19E-03	6.49E-02	1.06E-03	4.11E-04	4.82E-04	2.57E-03	6.38E-05	7.80E-05
1-CPR-95-145	17 Jul - 17 Jul	1230 - 1249	1.45E-03	7.89E-02	1.28E-03	5.00E-04	5.86E-04	3.12E-03	7.76E-05	9.48E-05
1-CPR-95-146	18 Jul - 18 Jul	2127 - 2143	1.03E-03	5.59E-02	9.10E-04	3.54E-04	4.15E-04	2.21E-03	5.50E-05	6.72E-05
1-CPR-95-147	19 Jul - 19 Jul	1840 - 1859	1.27E-03	6.89E-02	1.12E-03	4.37E-04	5.12E-04	2.73E-03	6.78E-05	8.28E-05
1-CPR-95-148	21 Jul - 21 Jul	0344 - 0409	1.58E-03	8.61E-02	1.40E-03	5.46E-04	6.40E-04	3.41E-03	8.47E-05	1.04E-04
1-CPR-95-149	22 Jul - 22 Jul	0915 - 0935	1.35E-03	7.38E-02	1.20E-03	4.67E-04	5.48E-04	2.92E-03	7.25E-05	8.87E-05
1-CPR-95-150	23 Jul - 23 Jul	0439 - 0500	1.48E-03	8.05E-02	1.31E-03	5.10E-04	5.98E-04	3.19E-03	7.92E-05	9.68E-05
1-CPR-95-151	24 Jul - 24 Jul	1515 - 1530	9.86E-04	5.37E-02	8.75E-04	3.40E-04	3.99E-04	2.12E-03	5.28E-05	6.46E-05
1-CPR-95-152	25 Jul - 25 Jul	1725 - 1743	1.23E-03	6.72E-02	1.09E-03	4.26E-04	4.99E-04	2.66E-03	6.61E-05	8.07E-05
1-CPR-95-153	26 Jul - 26 Jul	1836 - 1855	1.46E-03	7.95E-02	1.29E-03	5.04E-04	5.91E-04	3.15E-03	7.82E-05	9.56E-05
1-CPR-95-154	28 Jul - 28 Jul	0338 - 0352	1.11E-03	6.03E-02	9.82E-04	3.82E-04	4.48E-04	2.39E-03	5.93E-05	7.25E-05
1-CPR-95-155	16 Oct - 16 Oct	1704 - 1723	9.13E-04	6.98E-03	1.02E-04	4.93E-05	6.55E-05	3.74E-04	5.95E-06	7.65E-06
1-CPR-95-156	17 Oct - 17 Oct	0913 - 0935	1.74E-03	1.33E-02	1.94E-04	9.40E-05	1.25E-04	7.13E-04	1.13E-05	1.46E-05
1-CPR-95-157	17 Oct - 17 Oct	1905 - 1923	1.57E-03	1.20E-02	1.75E-04	8.47E-05	1.12E-04	6.42E-04	1.02E-05	1.31E-05
1-CPR-95-158	18 Oct - 18 Oct	1205 - 1221	1.20E-03	9.20E-03	1.34E-04	6.50E-05	8.62E-05	4.93E-04	7.84E-06	1.01E-05
1-CPR-95-159	18 Oct - 18 Oct	2303 - 2331	2.76E-03	2.11E-02	3.08E-04	1.49E-04	1.98E-04	1.13E-03	1.80E-05	2.31E-05
1-CPR-95-160	19 Oct - 19 Oct	1542 - 1602	1.69E-03	1.29E-02	1.88E-04	9.11E-05	1.21E-04	6.91E-04	1.10E-05	1.41E-05

Release Number	Start/Stop date	Start/Stop Time	Xe131m	Xe133	Xe135	Ar41	Xe133m	Kr85	Kr85m	Kr88
1-CPR-95-161	20 Oct - 20 Oct	0215 - 0235	1.70E-03	1.30E-02	1.90E-04	9.16E-05	1.22E-04	6.95E-04	1.11E-05	1.42E-05
1-CPR-95-162	23 Oct - 23 Oct	1312 - 1331	1.47E-03	1.13E-02	1.64E-04	7.95E-05	1.05E-04	6.03E-04	9.59E-06	1.23E-05
1-CPR-95-163	25 Oct - 25 Oct	1545 - 1605	1.70E-03	1.30E-02	1.90E-04	9.16E-05	1.22E-04	6.95E-04	1.11E-05	1.42E-05
1-CPR-95-164	26 Oct - 26 Oct	0819 - 0837	1.88E-03	1.44E-02	2.10E-04	1.02E-04	1.35E-04	7.70E-04	1.23E-05	1.58E-05
1-CPR-95-165	26 Oct - 26 Oct	2135 - 2148	1.18E-03	9.04E-03	1.32E-04	6.38E-05	8.47E-05	4.84E-04	7.70E-06	9.90E-06
1-CPR-95-166	27 Oct - 27 Oct	0417 - 0437	1.27E-03	9.69E-03	1.42E-04	6.84E-05	9.09E-05	5.19E-04	8.26E-06	1.06E-05
1-CPR-95-167	5 Nov - 5 Nov	1026 - 1038	1.02E-03	7.78E-03	1.14E-04	5.49E-05	7.29E-05	4.17E-04	6.63E-06	8.52E-06
1-CPR-95-168	5 Nov - 5 Nov	1710 - 1724	1.06E-03	8.12E-03	1.19E-04	5.73E-05	7.61E-05	4.35E-04	6.92E-06	8.89E-06
1-CPR-95-169	6 Nov - 6 Nov	0126 - 0141	1.29E-03	9.86E-03	1.44E-04	6.96E-05	9.24E-05	5.28E-04	8.40E-06	1.08E-05
1-CPR-95-170	6 Nov - 6 Nov	0658 - 0710	8.77E-04	6.71E-03	9.80E-05	4.74E-05	6.29E-05	3.59E-04	5.72E-06	7.35E-06
1-CPR-95-171	6 Nov - 6 Nov	1405 - 1433	2.82E-03	2.16E-02	3.16E-04	1.53E-04	2.03E-04	1.16E-03	1.84E-05	2.37E-05
1-CPR-95-172	9 Nov - 9 Nov	0514 - 0531	1.36E-03	1.04E-02	1.52E-04	7.37E-05	9.78E-05	5.59E-04	8.89E-06	1.14E-05
1-CPR-95-173	9 Nov - 9 Nov	1547 - 1606	1.85E-03	1.41E-02	2.06E-04	9.98E-05	1.32E-04	7.57E-04	1.20E-05	1.55E-05
1-CPR-95-174	10 Nov - 10 Nov	0547 - 0604	1.41E-03	1.08E-02	1.57E-04	7.60E-05	1.01E-04	5.76E-04	9.17E-06	1.18E-05
1-CPR-95-175	10 Nov - 10 Nov	1745 - 1802	1.90E-03	1.45E-02	2.12E-04	1.03E-04	1.36E-04	7.79E-04	1.24E-05	1.59E-05
1-CPR-95-176	13 Nov - 13 Nov	0009 - 0025	1.41E-03	1.08E-02	1.57E-04	7.60E-05	1.01E-04	5.76E-04	9.17E-06	1.18E-05
1-CPR-95-177	14 Nov - 14 Nov	1354 - 1415	1.35E-03	1.04E-02	1.51E-04	7.31E-05	9.70E-05	5.54E-04	8.82E-06	1.13E-05
1-CPR-95-178	15 Nov - 15 Nov	0935 - 0950	1.03E-03	7.89E-03	1.15E-04	5.57E-05	7.39E-05	4.22E-04	6.72E-06	8.64E-06
1-CPR-95-179	17 Nov - 17 Nov	0706 - 0722	7.26E-04	5.55E-03	8.11E-05	3.92E-05	5.21E-05	2.97E-04	4.73E-06	6.08E-06
1-CPR-95-180	17 Nov - 17 Nov	2138 - 2159	2.16E-03	1.65E-02	2.41E-04	1.17E-04	1.55E-04	8.84E-04	1.41E-05	1.81E-05
1-CPR-95-181	19 Nov - 19 Nov	0922 - 0937	1.30E-03	9.94E-03	1.45E-04	7.02E-05	9.32E-05	5.32E-04	8.47E-06	1.09E-05
1-CPR-95-182	19 Nov - 20 Nov	2358 - 0014	6.98E-04	5.34E-03	7.80E-05	3.77E-05	5.01E-05	2.86E-04	4.55E-06	5.85E-06
1-CPR-95-183	20 Nov - 20 Nov	1625 - 1640	9.50E-04	7.27E-03	1.06E-04	5.13E-05	6.81E-05	3.89E-04	6.20E-06	7.97E-06
1-CPR-95-184	21 Nov - 21 Nov	2147 - 2202	1.08E-03	8.30E-03	1.21E-04	5.86E-05	7.78E-05	4.44E-04	7.07E-06	9.09E-06
1-CPR-95-184A	22 Nov - 22 Nov	1538 - 1555	8.43E-04	6.45E-03	9.42E-05	4.55E-05	6.04E-05	3.45E-04	5.50E-06	7.07E-06
1-CPR-95-185	24 Nov - 24 Nov	1445 - 1513	2.87E-03	2.19E-02	3.20E-04	1.55E-04	2.06E-04	1.17E-03	1.87E-05	2.40E-05
1-CPR-95-186	25 Nov - 25 Nov	1320 - 1338	1.17E-03	8.96E-03	1.31E-04	6.32E-05	8.39E-05	4.80E-04	7.63E-06	9.81E-06
1-CPR-95-187	26 Nov - 26 Nov	0243 - 0303	1.36E-03	1.04E-02	1.52E-04	7.37E-05	9.78E-05	5.59E-04	8.89E-06	1.14E-05
1-CPR-95-188	26 Nov - 26 Nov	1303 - 1326	1.63E-03	1.25E-02	1.82E-04	8.82E-05	1.17E-04	6.69E-04	1.06E-05	1.37E-05
1-CPR-95-189	27 Nov - 27 Nov	0508 - 0523	1.19E-03	9.12E-03	1.33E-04	6.44E-05	8.55E-05	4.88E-04	7.77E-06	9.99E-06
1-CPR-95-191	30 Nov - 30 Nov	0141 - 0200	1.45E-03	1.11E-02	1.62E-04	7.83E-05	1.04E-04	5.94E-04	9.45E-06	1.22E-05
1-CPR-95-192	30 Nov - 30 Nov	1242 - 1305	2.12E-03	1.62E-02	2.36E-04	1.14E-04	1.52E-04	8.67E-04	1.38E-05	1.77E-05
1-CPR-95-193	30 Nov - 1 Dec	2344 - 0002	1.42E-03	1.08E-02	1.58E-04	7.66E-05	1.02E-04	5.81E-04	9.24E-06	1.19E-05

Release Number	Start/Stop date	Start/Stop Time	Xe131m	Xe133	Xe135	Ar41	Xe133m	Kr85	Kr85m	Kr86
1-CPR-95-194	2 Dec - 2 Dec	1341 - 1402	1.11E-03	8.46E-03	1.24E-04	5.97E-05	7.93E-05	4.53E-04	7.21E-06	9.27E-06
1-CPR-95-195	3 Dec - 3 Dec	1312 - 1330	1.72E-03	1.31E-02	1.92E-04	9.28E-05	1.23E-04	7.04E-04	1.12E-05	1.44E-05
1-CPR-95-196	4 Dec - 4 Dec	2210 - 2228	1.28E-03	9.78E-03	1.43E-04	6.90E-05	9.16E-05	5.24E-04	8.33E-06	1.07E-05
1-CPR-95-197	5 Dec - 5 Dec	0713 - 0728	1.03E-03	7.85E-03	1.15E-04	5.54E-05	7.35E-05	4.20E-04	6.69E-06	8.60E-06
1-CPR-95-198	8 Dec - 8 Dec	0527 - 0542	1.14E-03	8.71E-03	1.27E-04	6.15E-05	8.16E-05	4.66E-04	7.42E-06	9.54E-06
1-CPR-95-199	8 Dec - 8 Dec	1545 - 1610	1.84E-03	1.40E-02	2.05E-04	9.92E-05	1.32E-04	7.52E-04	1.20E-05	1.54E-05
1-CPR-95-200	10 Dec - 10 Dec	0837 - 0859	2.12E-03	1.62E-02	2.36E-04	1.14E-04	1.52E-04	8.67E-04	1.38E-05	1.77E-05
1-CPR-95-201	11 Dec - 11 Dec	1750 - 1806	2.27E-03	1.73E-02	2.53E-04	1.22E-04	1.62E-04	9.28E-04	1.48E-05	1.90E-05
1-CPR-95-202	12 Dec - 12 Dec	0913 - 0929	2.23E-03	1.71E-02	2.50E-04	1.21E-04	1.60E-04	9.15E-04	1.46E-05	1.87E-05
1-CPR-95-203	13 Dec - 13 Dec	0137 - 0152	2.19E-03	1.68E-02	2.45E-04	1.18E-04	1.57E-04	8.98E-04	1.43E-05	1.84E-05
1-CPR-95-204	13 Dec - 13 Dec	1655 - 1712	2.82E-03	2.16E-02	3.16E-04	1.53E-04	2.03E-04	1.16E-03	1.84E-05	2.37E-05
1-CPR-95-205	14 Dec - 14 Dec	0058 - 0115	2.61E-03	2.00E-02	2.92E-04	1.41E-04	1.87E-04	1.07E-03	1.70E-05	2.19E-05
1-CPR-95-206	17 Dec - 17 Dec	1002 - 1015	1.60E-03	1.22E-02	1.79E-04	8.64E-05	1.15E-04	6.56E-04	1.04E-05	1.34E-05
1-CPR-95-207	18 Dec - 18 Dec	0210 - 0228	2.44E-03	1.87E-02	2.72E-04	1.32E-04	1.75E-04	9.99E-04	1.59E-05	2.04E-05
1-CPR-95-208	19 Dec - 19 Dec	0010 - 0033	4.58E-03	3.50E-02	5.11E-04	2.47E-04	3.28E-04	1.87E-03	2.98E-05	3.83E-05
1-CPR-95-209	20 Dec - 20 Dec	1112 - 1130	2.65E-03	2.03E-02	2.96E-04	1.43E-04	1.90E-04	1.09E-03	1.73E-05	2.22E-05
1-CPR-95-210	21 Dec - 21 Dec	0448 - 0515	4.55E-03	3.48E-02	5.09E-04	2.46E-04	3.26E-04	1.87E-03	2.97E-05	3.82E-05
1-CPR-95-211	23 Dec - 23 Dec	1341 - 1359	2.64E-03	2.02E-02	2.95E-04	1.43E-04	1.89E-04	1.08E-03	1.72E-05	2.21E-05
1-CPR-95-212	24 Dec - 24 Dec	1108 - 1122	2.23E-03	1.71E-02	2.50E-04	1.21E-04	1.60E-04	9.15E-04	1.46E-05	1.87E-05
1-CPR-95-213	26 Dec - 26 Dec	0215 - 0231	2.85E-03	2.18E-02	3.18E-04	1.54E-04	2.04E-04	1.17E-03	1.86E-05	2.39E-05
1-CPR-95-214	28 Dec - 28 Dec	1830 - 1850	3.67E-03	2.81E-02	4.10E-04	1.98E-04	2.63E-04	1.50E-03	2.39E-05	3.08E-05
1-CPR-95-215	29 Dec - 29 Dec	1847 - 1903	2.32E-03	1.77E-02	2.59E-04	1.25E-04	1.66E-04	9.50E-04	1.51E-05	1.94E-05
1-CPR-95-216	30 Dec - 30 Dec	1335 - 1355	3.52E-03	2.69E-02	3.94E-04	1.90E-04	2.53E-04	1.44E-03	2.30E-05	2.95E-05
1-CPR-95-217	31 Dec - 31 Dec	0730 - 0752	4.11E-03	3.15E-02	4.60E-04	2.22E-04	2.95E-04	1.69E-03	2.68E-05	3.45E-05
2-CPR-95-1	1 Jan - 1 Jan	0155 - 0215	7.50E-05	5.25E-03	9.16E-05	2.40E-03	1.31E-05	4.07E-03	1.19E-06	
2-CPR-95-2	1 Jan - 1 Jan	1450 - 1505	2.91E-05	2.04E-03	3.56E-05	9.31E-04	5.08E-06	1.58E-03	4.62E-07	
2-CPR-95-3	2 Jan - 2 Jan	2111 - 2129	5.23E-05	3.66E-03	6.39E-05	1.67E-03	9.13E-06	2.84E-03	8.30E-07	
2-CPR-95-4	3 Jan - 3 Jan	1405 - 1429	6.15E-05	4.30E-03	7.52E-05	1.97E-03	1.07E-05	3.34E-03	9.76E-07	
2-CPR-95-5	4 Jan - 4 Jan	2305 - 2329	5.68E-05	3.97E-03	6.94E-05	1.82E-03	9.91E-06	3.08E-03	9.01E-07	
2-CPR-95-6	5 Jan - 5 Jan	1211 - 1234	6.49E-05	4.54E-03	7.93E-05	2.08E-03	1.13E-05	3.52E-03	1.03E-06	
2-CPR-95-7	5 Jan - 5 Jan	1959 - 2021	4.10E-05	2.87E-03	5.01E-05	1.31E-03	7.16E-06	2.23E-03	6.51E-07	
2-CPR-95-8	6 Jan - 6 Jan	0339 - 0402	5.12E-05	3.58E-03	6.25E-05	1.64E-03	8.93E-06	2.78E-03	8.12E-07	
2-CPR-95-9	6 Jan - 6 Jan	1128 - 1150	4.51E-05	3.16E-03	5.51E-05	1.44E-03	7.88E-06	2.45E-03	7.16E-07	

Release Number	Start/Stop Date	Start/Stop Time	Xe131m	Xe133	Xe135	Ar41	Xe133m	Kr85	Kr85m	Kr88
2-CPR-95-10	6 Jan - 6 Jan	2142 - 2201	5.42E-05	3.79E-03	6.62E-05	1.73E-03	9.46E-06	2.94E-03	8.60E-07	
2-CPR-95-11	8 Jan - 8 Jan	1354 - 1413	4.69E-05	3.28E-03	5.73E-05	1.50E-03	8.18E-06	2.55E-03	7.44E-07	
2-CPR-95-12	9 Jan - 9 Jan	1336 - 1357	6.05E-05	4.23E-03	7.39E-05	1.94E-03	1.06E-05	3.29E-03	9.60E-07	
2-CPR-95-13	10 Jan - 10 Jan	0505 - 0525	5.60E-05	3.92E-03	6.85E-05	1.79E-03	9.78E-06	3.04E-03	8.89E-07	
2-CPR-95-14	10 Jan - 10 Jan	1816 - 1836	6.29E-05	4.40E-03	7.69E-05	2.01E-03	1.10E-05	3.42E-03	9.99E-07	
2-CPR-95-15	11 Jan - 11 Jan	0931 - 0952	4.06E-05	2.84E-03	4.97E-05	1.30E-03	7.10E-06	2.21E-03	6.45E-07	
2-CPR-95-16	11 Jan - 11 Jan	1930 - 1951	7.43E-05	5.20E-03	9.09E-05	2.38E-03	1.30E-05	4.04E-03	1.18E-06	
2-CPR-95-17	12 Jan - 12 Jan	0934 - 0952	5.85E-05	4.09E-03	7.15E-05	1.87E-03	1.02E-05	3.18E-03	9.28E-07	
2-CPR-95-18	13 Jan - 13 Jan	1232 - 1305	1.61E-04	1.13E-02	1.97E-04	5.16E-03	2.82E-05	8.76E-03	2.56E-06	
2-CPR-95-19	14 Jan - 14 Jan	0532 - 0551	6.02E-05	4.22E-03	7.36E-05	1.93E-03	1.05E-05	3.27E-03	9.56E-07	
2-CPR-95-20	15 Jan - 15 Jan	1145 - 1204	5.39E-05	3.77E-03	6.59E-05	1.73E-03	9.42E-06	2.93E-03	8.56E-07	
2-CPR-95-21	16 Jan - 16 Jan	0913 - 0932	5.57E-05	3.90E-03	6.81E-05	1.78E-03	9.72E-06	3.03E-03	8.84E-07	
2-CPR-95-22	17 Jan - 17 Jan	0228 - 0257	1.37E-04	9.57E-03	1.67E-04	4.37E-03	2.39E-05	7.43E-03	2.17E-06	
2-CPR-95-23	17 Jan - 17 Jan	2223 - 2243	5.60E-05	3.92E-03	6.85E-05	1.79E-03	9.78E-06	3.04E-03	8.89E-07	
2-CPR-95-24	18 Jan - 18 Jan	2007 - 2027	8.25E-05	5.78E-03	1.01E-04	2.64E-03	1.44E-05	4.48E-03	1.31E-06	
2-CPR-95-25	19 Jan - 19 Jan	0527 - 0547	1.12E-04	7.85E-03	1.37E-04	3.59E-03	1.96E-05	6.09E-03	1.78E-06	
2-CPR-95-26	19 Jan - 19 Jan	1334 - 1355	9.20E-05	6.44E-03	1.12E-04	2.94E-03	1.61E-05	5.00E-03	1.46E-06	
2-CPR-95-27	20 Jan - 20 Jan	1305 - 1328	9.07E-05	6.35E-03	1.11E-04	2.90E-03	1.58E-05	4.93E-03	1.44E-06	
2-CPR-95-28	21 Jan - 21 Jan	1011 - 1031	9.83E-05	6.88E-03	1.20E-04	3.14E-03	1.72E-05	5.34E-03	1.56E-06	
2-CPR-95-29	22 Jan - 22 Jan	0800 - 0820	1.12E-04	7.85E-03	1.37E-04	3.59E-03	1.96E-05	6.09E-03	1.78E-06	
2-CPR-95-30	23 Jan - 23 Jan	1100 - 1118	9.64E-05	6.75E-03	1.18E-04	3.08E-03	1.68E-05	5.24E-03	1.53E-06	
2-CPR-95-31	24 Jan - 24 Jan	1703 - 1720	8.25E-05	5.78E-03	1.01E-04	2.64E-03	1.44E-05	4.48E-03	1.31E-06	
2-CPR-95-32	25 Jan - 25 Jan	1141 - 1200	9.95E-05	6.97E-03	1.22E-04	3.19E-03	1.74E-05	5.41E-03	1.58E-06	
2-CPR-95-33	26 Jan - 26 Jan	0155 - 0216	1.05E-04	7.36E-03	1.29E-04	3.37E-03	1.84E-05	5.71E-03	1.67E-06	
2-CPR-95-34	26 Jan - 26 Jan	1845 - 1904	1.05E-04	7.32E-03	1.28E-04	3.35E-03	1.83E-05	5.68E-03	1.66E-06	
2-CPR-95-35	27 Jan - 27 Jan	0616 - 0633	7.81E-05	5.47E-03	9.55E-05	2.50E-03	1.36E-05	4.24E-03	1.24E-06	
2-CPR-95-36	27 Jan - 27 Jan	1505 - 1522	8.69E-05	6.08E-03	1.06E-04	2.78E-03	1.52E-05	4.72E-03	1.38E-06	
2-CPR-95-37	28 Jan - 28 Jan	0706 - 0723	1.13E-04	7.94E-03	1.39E-04	3.63E-03	1.98E-05	6.16E-03	1.80E-06	
2-CPR-95-38	29 Jan - 29 Jan	0635 - 0653	6.99E-05	4.89E-03	8.55E-05	2.24E-03	1.22E-05	3.80E-03	1.11E-06	
2-CPR-95-39	29 Jan - 29 Jan	2228 - 2247	9.32E-05	6.53E-03	1.14E-04	2.98E-03	1.63E-05	5.06E-03	1.48E-06	
2-CPR-95-40	30 Jan - 30 Jan	1310 - 1320	5.66E-05	3.96E-03	6.91E-05	1.81E-03	9.88E-06	3.07E-03	8.98E-07	
2-CPR-95-41	31 Jan - 31 Jan	0146 - 0210	1.39E-04	9.74E-03	1.70E-04	4.46E-03	2.43E-05	7.56E-03	2.21E-06	

Release Number	Start/Stop date	Start/Stop Time	Xe131m	Xe133	Xe135	Ar41	Xe133m	Kr85	Kr85m	Kr88
2-CPR-95-42	31 Jan - 31 Jan	1340 - 1400	1.37E-04	9.57E-03	1.67E-04	4.37E-03	2.39E-05	7.43E-03	2.17E-06	
2-CPR-95-43	1 Feb - 1 Feb	0323 - 0353	1.68E-04	1.18E-02	2.06E-04	5.38E-03	2.94E-05	9.14E-03	2.67E-06	
2-CPR-95-44	2 Feb - 2 Feb	2337 - 2355	1.21E-04	8.47E-03	1.48E-04	3.87E-03	2.11E-05	6.57E-03	1.92E-06	
2-CPR-95-45	3 Feb - 3 Feb	1227 - 1247	1.44E-04	1.01E-02	1.76E-04	4.62E-03	2.52E-05	7.84E-03	2.29E-06	
2-CPR-95-46	4 Feb - 4 Feb	0015 - 0036	1.34E-04	9.39E-03	1.64E-04	4.29E-03	2.34E-05	7.29E-03	2.13E-06	
2-CPR-95-47	5 Feb - 5 Feb	1053 - 1112	1.04E-04	7.27E-03	1.27E-04	3.33E-03	1.82E-05	5.65E-03	1.65E-06	
2-CPR-95-48	6 Feb - 6 Feb	0255 - 0317	9.77E-05	6.83E-03	1.19E-04	3.12E-03	1.71E-05	5.30E-03	1.55E-06	
2-CPR-95-49	6 Feb - 6 Feb	2022 - 2044	1.00E-04	7.01E-03	1.22E-04	3.21E-03	1.75E-05	5.44E-03	1.59E-06	
2-CPR-95-50	7 Feb - 7 Feb	1048 - 1110	8.95E-04	6.26E-02	1.09E-03	2.86E-02	1.56E-04	4.86E-02	1.42E-05	
2-CPR-95-51	8 Feb - 8 Feb	2049 - 2113	8.44E-05	5.91E-03	1.03E-04	2.70E-03	1.47E-05	4.59E-03	1.34E-06	
2-CPR-95-52	9 Feb - 9 Feb	0555 - 0623	1.43E-04	1.00E-02	1.75E-04	4.58E-03	2.50E-05	7.77E-03	2.27E-06	
2-CPR-95-53	9 Feb - 9 Feb	2124 - 2141	2.87E-05	2.01E-03	3.51E-05	9.19E-04	5.02E-06	1.56E-03	4.56E-07	
2-CPR-95-54	10 Feb - 10 Feb	0510 - 0530	4.15E-05	2.90E-03	5.07E-05	1.33E-03	7.24E-06	2.25E-03	6.58E-07	
2-CPR-95-55	12 Feb - 12 Feb	1323 - 1347	3.76E-05	2.63E-03	4.60E-05	1.20E-03	6.57E-06	2.04E-03	5.97E-07	
2-CPR-95-56	13 Feb - 13 Feb	1200 - 1226	4.11E-05	2.88E-03	5.03E-05	1.32E-03	7.18E-06	2.23E-03	6.53E-07	
2-CPR-95-57	14 Feb - 14 Feb	1253 - 1313	2.12E-05	1.49E-03	2.59E-05	6.79E-04	3.71E-06	1.15E-03	3.37E-07	
2-CPR-95-58	14 Feb - 14 Feb	2105 - 2125	1.18E-05	8.29E-04	1.45E-05	3.79E-04	2.07E-06	6.43E-04	1.88E-07	
2-CPR-95-59	15 Feb - 15 Feb	0324 - 0353	5.72E-05	4.00E-03	6.99E-05	1.83E-03	9.99E-06	3.11E-03	9.08E-07	
2-CPR-95-60	17 Feb - 17 Feb	1015 - 1031	1.52E-05	1.06E-03	1.86E-05	4.86E-04	2.65E-06	8.25E-04	2.41E-07	
2-CPR-95-61	17 Feb - 17 Feb	2300 - 2320	3.96E-05	2.77E-03	4.84E-05	1.27E-03	6.91E-06	2.15E-03	6.28E-07	
2-CPR-95-62	18 Feb - 18 Feb	1337 - 1358	1.77E-05	1.24E-03	2.16E-05	5.66E-04	3.09E-06	9.62E-04	2.81E-07	
2-CPR-95-63	19 Feb - 19 Feb	0448 - 0510	4.85E-05	3.39E-03	5.93E-05	1.55E-03	8.47E-06	2.63E-03	7.70E-07	
2-CPR-95-64	19 Feb - 19 Feb	2327 - 2349	3.40E-05	2.38E-03	4.16E-05	1.09E-03	5.94E-06	1.85E-03	5.40E-07	
2-CPR-95-65	20 Feb - 20 Feb	0747 - 0808	3.27E-05	2.29E-03	4.00E-05	1.05E-03	5.71E-06	1.78E-03	5.19E-07	
2-CPR-95-66	21 Feb - 21 Feb	2020 - 2042	2.84E-05	1.99E-03	3.47E-05	9.09E-04	4.96E-06	1.54E-03	4.51E-07	
2-CPR-95-67	22 Feb - 22 Feb	0741 - 0806	2.95E-05	2.07E-03	3.61E-05	9.46E-04	5.16E-06	1.60E-03	4.69E-07	
2-CPR-95-68	22 Feb - 22 Feb	2330 - 2352	2.28E-05	1.60E-03	2.79E-05	7.30E-04	3.98E-06	1.24E-03	3.62E-07	
2-CPR-95-69	24 Feb - 24 Feb	2152 - 2213	1.87E-05	1.31E-03	2.29E-05	5.99E-04	3.27E-06	1.02E-03	2.97E-07	
2-CPR-95-70	25 Feb - 25 Feb	0949 - 1010	4.67E-05	3.27E-03	5.71E-05	1.49E-03	8.15E-06	2.54E-03	7.41E-07	
2-CPR-95-71	26 Feb - 26 Feb	1220 - 1242	4.16E-05	2.91E-03	5.09E-05	1.33E-03	7.27E-06	2.26E-03	6.61E-07	
2-CPR-95-72	27 Feb - 27 Feb	0419 - 0438	3.66E-05	2.56E-03	4.47E-05	1.17E-03	6.39E-06	1.99E-03	5.81E-07	
2-CPR-95-73	28 Feb - 28 Feb	1508 - 1542	5.07E-05	3.54E-03	6.19E-05	1.62E-03	8.84E-06	2.75E-03	8.04E-07	

Release Number	Start/Stop date	Start/Stop Time	Xe131m	Xe133	Xe135	Ar41	Xe133m	Kr85	Kr85m	Kr88
2-CPR-95-74	2 Mar - 2 Mar	0648 - 0707	3.13E-05	2.19E-03	3.83E-05	1.00E-03	5.47E-06	1.70E-03	4.97E-07	
2-CPR-95-75	3 Mar - 3 Mar	0027 - 0047	3.23E-05	2.26E-03	3.94E-05	1.03E-03	5.63E-06	1.75E-03	5.12E-07	
2-CPR-95-76	3 Mar - 3 Mar	1639 - 1659	1.30E-05	9.13E-04	1.59E-05	4.17E-04	2.28E-06	7.08E-04	2.07E-07	
2-CPR-95-77	4 Mar - 4 Mar	1557 - 1618	3.55E-05	2.48E-03	4.34E-05	1.14E-03	6.19E-06	1.93E-03	5.63E-07	
2-CPR-95-78	5 Mar - 5 Mar	0115 - 0135	3.41E-05	2.39E-03	4.17E-05	1.09E-03	5.95E-06	1.85E-03	5.41E-07	
2-CPR-95-79	5 Mar - 5 Mar	0812 - 0836	4.17E-06	2.92E-04	5.10E-06	1.33E-04	7.28E-07	2.27E-04	6.62E-08	
2-CPR-95-80	6 Mar - 6 Mar	1212 - 1234	4.00E-05	2.80E-03	4.89E-05	1.28E-03	6.99E-06	2.17E-03	6.35E-07	
2-CPR-95-81	6 Mar - 6 Mar	2045 - 2105	1.96E-05	1.37E-03	2.39E-05	6.27E-04	3.42E-06	1.06E-03	3.11E-07	
2-CPR-95-82	7 Mar - 7 Mar	0318 - 0344	1.09E-05	7.63E-04	1.33E-05	3.49E-04	1.90E-06	5.92E-04	1.73E-07	
2-CPR-95-83	8 Mar - 8 Mar	1214 - 1236	3.86E-06	2.70E-04	4.71E-06	1.23E-04	6.73E-07	2.09E-04	6.12E-08	
2-CPR-95-84	9 Mar - 9 Mar	0613 - 0638	3.72E-05	2.60E-03	4.54E-05	1.19E-03	6.49E-06	2.02E-03	5.90E-07	
2-CPR-95-85	9 Mar - 9 Mar	1855 - 1916	2.23E-05	1.56E-03	2.73E-05	7.14E-04	3.89E-06	1.21E-03	3.54E-07	
2-CPR-95-86	10 Mar - 10 Mar	0426 - 0448	3.16E-05	2.21E-03	3.87E-05	1.01E-03	5.52E-06	1.72E-03	5.02E-07	
2-CPR-95-87	10 Mar - 10 Mar	1448 - 1507	3.25E-06	2.28E-04	3.97E-06	1.04E-04	5.68E-07	1.77E-04	5.16E-08	
2-CPR-95-88	11 Mar - 11 Mar	0207 - 0226	2.75E-05	1.93E-03	3.36E-05	8.81E-04	4.81E-06	1.50E-03	4.37E-07	
2-CPR-95-89	11 Mar - 11 Mar	1420 - 1442	1.61E-05	1.12E-03	1.96E-05	5.14E-04	2.81E-06	8.73E-04	2.55E-07	
2-CPR-95-90	12 Mar - 12 Mar	0930 - 1014	4.98E-05	3.49E-03	6.09E-05	1.59E-03	8.70E-06	2.71E-03	7.91E-07	
2-CPR-95-91	14 Mar - 14 Mar	0047 - 0109	1.78E-05	1.24E-03	2.17E-05	5.69E-04	3.10E-06	9.65E-04	2.82E-07	
2-CPR-95-92	14 Mar - 14 Mar	2149 - 2208	4.96E-06	3.47E-04	6.06E-06	1.59E-04	8.66E-07	2.69E-04	7.87E-08	
2-CPR-95-93	15 Mar - 15 Mar	1509 - 1530	1.85E-05	1.30E-03	2.26E-05	5.93E-04	3.23E-06	1.01E-03	2.94E-07	
2-CPR-95-94	16 Mar - 16 Mar	1129 - 1148	1.65E-05	1.16E-03	2.02E-05	5.28E-04	2.88E-06	8.97E-04	2.62E-07	
2-CPR-95-95	17 Mar - 17 Mar	1129 - 1150	1.20E-05	8.42E-04	1.47E-05	3.85E-04	2.10E-06	6.54E-04	1.91E-07	
2-CPR-95-96	18 Mar - 18 Mar	0836 - 0854	2.61E-05	1.83E-03	3.19E-05	8.35E-04	4.55E-06	1.42E-03	4.14E-07	
2-CPR-95-97	18 Mar - 18 Mar	1638 - 1656	2.99E-05	2.09E-03	3.66E-05	9.58E-04	5.23E-06	1.63E-03	4.75E-07	
2-CPR-95-98	19 Mar - 19 Mar	0454 - 0519	3.06E-05	2.14E-03	3.73E-05	9.78E-04	5.34E-06	1.66E-03	4.85E-07	
2-CPR-95-99	20 Mar - 20 Mar	0119 - 0146	3.37E-05	2.36E-03	4.12E-05	1.08E-03	5.89E-06	1.83E-03	5.35E-07	
2-CPR-95-100	20 Mar - 20 Mar	1236 - 1257	3.00E-05	2.10E-03	3.67E-05	9.60E-04	5.24E-06	1.63E-03	4.76E-07	
2-CPR-95-101	22 Mar - 22 Mar	0315 - 0337	5.48E-06	3.84E-04	6.70E-06	1.75E-04	9.57E-07	2.98E-04	8.70E-08	
2-CPR-95-102	23 Mar - 23 Mar	0038 - 0100	1.76E-05	1.23E-03	2.16E-05	5.64E-04	3.08E-06	9.58E-04	2.80E-07	
2-CPR-95-103	25 Mar - 25 Mar	1235 - 1300	3.59E-05	2.51E-03	4.39E-05	1.15E-03	6.27E-06	1.95E-03	5.70E-07	
2-CPR-95-104	26 Mar - 26 Mar	1123 - 1148	4.42E-05	3.09E-03	5.40E-05	1.41E-03	7.71E-06	2.40E-03	7.01E-07	
2-CPR-95-105	27 Mar - 27 Mar	0524 - 0546	2.10E-05	1.47E-03	2.56E-05	6.71E-04	3.66E-06	1.14E-03	3.33E-07	

Release Number	Start/Stop Date	Start/Stop Time	Xe131m	Xe133	Xe135	Ar41	Xe133m	Kr85	Kr85m	Kr88
2-CPR-95-108	30 Mar - 30 Mar	0308 - 0331	1.62E-05	1.13E-03	1.98E-05	5.18E-04	2.83E-06	8.79E-04	2.57E-07	
2-CPR-95-109	31 Mar - 31 Mar	0429 - 0448	2.28E-05	1.60E-03	2.79E-05	7.30E-04	3.98E-06	1.24E-03	3.62E-07	
2-CPR-95-110	1 Apr - 1 Apr	0209 - 0231		1.71E-03	1.32E-04	4.92E-03				
2-CPR-95-111	1 Apr - 1 Apr	2004 - 2022		9.86E-04	7.62E-05	2.83E-03				
2-CPR-95-112	2 Apr - 2 Apr	2019 - 2037		7.50E-04	5.80E-05	2.15E-03				
2-CPR-95-113	3 Apr - 3 Apr	1419 - 1436		6.56E-04	5.08E-05	1.88E-03				
2-CPR-95-114	5 Apr - 5 Apr	0023 - 0042		4.41E-04	3.41E-05	1.27E-03				
2-CPR-95-115	5 Apr - 5 Apr	1455 - 1515		1.98E-04	1.53E-05	5.68E-04				
2-CPR-95-116	6 Apr - 6 Apr	0040 - 0100		9.50E-04	7.35E-05	2.73E-03				
2-CPR-95-117	7 Apr - 7 Apr	1203 - 1223		1.50E-03	1.16E-04	4.30E-03				
2-CPR-95-118	7 Apr - 7 Apr	2333 - 2353		1.61E-03	1.25E-04	4.63E-03				
2-CPR-95-119	9 Apr - 9 Apr	0008 - 0029		1.25E-03	9.64E-05	3.58E-03				
2-CPR-95-120	10 Apr - 10 Apr	1628 - 1646		1.04E-03	8.04E-05	2.98E-03				
2-CPR-95-121	11 Apr - 11 Apr	0409 - 0430		7.15E-04	5.53E-05	2.05E-03				
2-CPR-95-122	11 Apr - 11 Apr	1712 - 1732		1.40E-03	1.08E-04	4.02E-03				
2-CPR-95-123	13 Apr - 13 Apr	0123 - 0143		6.34E-04	4.90E-05	1.82E-03				
2-CPR-95-124	14 Apr - 14 Apr	1247 - 1310		9.58E-04	7.41E-05	2.75E-03				
2-CPR-95-125	15 Apr - 15 Apr	0543 - 0603		3.24E-04	2.51E-05	9.31E-04				
2-CPR-95-126	15 Apr - 15 Apr	1925 - 1945		1.92E-03	1.48E-04	5.50E-03				
2-CPR-95-127	16 Apr - 16 Apr	1314 - 1340		1.22E-03	9.47E-05	3.51E-03				
2-CPR-95-128	17 Apr - 17 Apr	2025 - 2045		1.14E-03	8.82E-05	3.27E-03				
2-CPR-95-129	18 Apr - 18 Apr	0711 - 0738		1.15E-03	8.92E-05	3.31E-03				
2-CPR-95-130	18 Apr - 18 Apr	1344 - 1403		1.28E-03	9.90E-05	3.67E-03				
2-CPR-95-131	20 Apr - 20 Apr	1056 - 1120		1.25E-03	9.64E-05	3.58E-03				
2-CPR-95-132	21 Apr - 21 Apr	0008 - 0029		1.61E-03	1.25E-04	4.63E-03				
2-CPR-95-133	22 Apr - 22 Apr	2210 - 2230		1.12E-03	8.68E-05	3.22E-03				
2-CPR-95-134	23 Apr - 23 Apr	1041 - 1100		7.70E-04	5.96E-05	2.21E-03				
2-CPR-95-135	24 Apr - 24 Apr	0458 - 0518		1.42E-03	1.10E-04	4.08E-03				
2-CPR-95-136	24 Apr - 24 Apr	2050 - 2111		3.62E-03	2.80E-04	1.04E-02				
2-CPR-95-137	26 Apr - 26 Apr	0119 - 0140		9.88E-02	7.64E-03	2.84E-01				
2-CPR-95-138	26 Apr - 26 Apr	1646 - 1708		5.78E-04	4.47E-05	1.66E-03				
2-CPR-95-139	27 Apr - 27 Apr	0450 - 0513		2.94E-03	2.27E-04	8.43E-03				

Release Number	Start/Stop Date	Start/Stop Time	Xe131m	Xe133	Xe135	Ar41	Xe133m	Kr85	Kr85m	Kr88
2-CPR-95-140	28 Apr - 28 Apr	1843 - 1903		1.25E-03	9.70E-05	3.60E-03				
2-CPR-95-141	29 Apr - 29 Apr	1652 - 1713		1.57E-03	1.21E-04	4.50E-03				
2-CPR-95-142	30 Apr - 30 Apr	1447 - 1504		2.42E-03	1.87E-04	6.94E-03				
2-CPR-95-143	1 May - 1 May	1044 - 1105		7.93E-04	6.13E-05	2.28E-03				
2-CPR-95-144	2 May - 2 May	0229 - 0252		1.22E-03	9.43E-05	3.50E-03				
2-CPR-95-145	3 May - 3 May	1145 - 1205		2.64E-03	2.04E-04	7.56E-03				
2-CPR-95-146	4 May - 4 May	0426 - 0445		1.09E-03	8.47E-05	3.14E-03				
2-CPR-95-147	5 May - 5 May	0252 - 0315		1.31E-03	1.02E-04	3.77E-03				
2-CPR-95-148	6 May - 6 May	1125 - 1146		3.65E-03	2.82E-04	1.05E-02				
2-CPR-95-149	7 May - 7 May	0255 - 0316		4.87E-03	3.76E-04	1.40E-02				
2-CPR-95-150	8 May - 8 May	0019 - 0048		5.04E-03	3.90E-04	1.45E-02				
2-CPR-95-151	8 May - 8 May	2058 - 2119		1.89E-03	1.46E-04	5.42E-03				
2-CPR-95-152	9 May - 9 May	0923 - 0943		2.04E-03	1.58E-04	5.85E-03				
2-CPR-95-153	10 May - 10 May	0137 - 0200		1.53E-03	1.18E-04	4.38E-03				
2-CPR-95-154	11 May - 11 May	0539 - 0600		2.58E-03	2.00E-04	7.42E-03				
2-CPR-95-155	12 May - 12 May	1335 - 1405		1.25E-03	9.64E-05	3.58E-03				
2-CPR-95-156	13 May - 13 May	1346 - 1409		4.11E-03	3.18E-04	1.18E-02				
2-CPR-95-157	14 May - 14 May	1157 - 1223		2.76E-03	2.14E-04	7.93E-03				
2-CPR-95-158	16 May - 16 May	0832 - 0854		1.92E-03	1.48E-04	5.50E-03				
2-CPR-95-159	16 May - 16 May	1955 - 2016		1.74E-03	1.34E-04	4.98E-03				
2-CPR-95-160	18 May - 18 May	0427 - 0447		1.22E-03	9.47E-05	3.51E-03				
2-CPR-95-161	19 May - 19 May	1658 - 1718		1.15E-03	8.92E-05	3.31E-03				
2-CPR-95-162	20 May - 20 May	1431 - 1452		3.50E-03	2.70E-04	1.00E-02				
2-CPR-95-163	22 May - 22 May	0808 - 0827		2.11E-03	1.63E-04	6.06E-03				
2-CPR-95-164	23 May - 23 May	0057 - 0118		2.64E-03	2.04E-04	7.56E-03				
2-CPR-95-165	23 May - 23 May	1728 - 1748		1.93E-03	1.49E-04	5.53E-03				
2-CPR-95-166	25 May - 25 May	1535 - 1555		1.88E-03	1.45E-04	5.38E-03				
2-CPR-95-167	26 May - 26 May	2156 - 2217		2.14E-03	1.66E-04	6.14E-03				
2-CPR-95-168	27 May - 27 May	1440 - 1501		1.84E-03	1.42E-04	5.27E-03				
2-CPR-95-169	28 May - 28 May	0230 - 0253		2.38E-03	1.84E-04	6.82E-03				
2-CPR-95-170	28 May - 28 May	1514 - 1531		2.35E-03	1.82E-04	6.74E-03				
2-CPR-95-171	30 May - 30 May	1612 - 1634		1.71E-03	1.32E-04	4.92E-03				

Release Number	Start/Stop Date	Start/Stop Time	Xe131m	Xe133	Xe135	Ar41	Xe133m	Kr85	Kr85m	Kr88
2-CPR-95-172	31 May - 31 May	1536 - 1559		1.44E-03	1.12E-04	4.14E-03				
2-CPR-95-173	1 Jun - 1 Jun	1245 - 1307		6.77E-04	5.23E-05	1.94E-03				
2-CPR-95-174	2 Jun - 2 Jun	1200 - 1223		1.32E-03	1.02E-04	3.78E-03				
2-CPR-95-175	4 Jun - 4 Jun	0935 - 0955		1.55E-03	1.20E-04	4.44E-03				
2-CPR-95-176	5 Jun - 5 Jun	0725 - 0750		2.28E-03	1.77E-04	6.55E-03				
2-CPR-95-177	5 Jun - 5 Jun	2320 - 2340		3.02E-02	2.33E-03	8.65E-02				
2-CPR-95-178	6 Jun - 6 Jun	1434 - 1503		1.31E-03	1.01E-04	3.76E-03				
2-CPR-95-179	7 Jun - 7 Jun	2042 - 2104		2.99E-03	2.31E-04	8.58E-03				
2-CPR-95-180	10 Jun - 10 Jun	0256 - 0318		5.68E-04	4.39E-05	1.63E-03				
2-CPR-95-181	10 Jun - 10 Jun	1807 - 1834		9.55E-04	7.39E-05	2.74E-03				
2-CPR-95-182	12 Jun - 12 Jun	0447 - 0508		1.29E-03	1.00E-04	3.71E-03				
2-CPR-95-183	13 Jun - 13 Jun	1453 - 1515		1.72E-03	1.33E-04	4.92E-03				
2-CPR-95-184	14 Jun - 14 Jun	1739 - 1759		1.43E-03	1.10E-04	4.09E-03				
2-CPR-95-185	16 Jun - 16 Jun	1445 - 1505		1.20E-03	9.27E-05	3.44E-03				
2-CPR-95-186	17 Jun - 17 Jun	1458 - 1517		2.86E-03	2.21E-04	8.22E-03				
2-CPR-95-187	18 Jun - 18 Jun	0745 - 0804		3.72E-03	2.88E-04	1.07E-02				
2-CPR-95-188	19 Jun - 19 Jun	0411 - 0430		4.00E-03	3.10E-04	1.15E-02				
2-CPR-95-189	19 Jun - 19 Jun	2134 - 2157		2.69E-03	2.08E-04	7.71E-03				
2-CPR-95-190	22 Jun - 22 Jun	1001 - 1058		4.48E-03						
2-CPR-95-191	23 Jun - 23 Jun	1143 - 1205		2.40E-03	1.86E-04	6.89E-03				
2-CPR-95-192	24 Jun - 24 Jun	1035 - 1055		3.75E-04	2.90E-05	1.08E-03				
2-CPR-95-193	25 Jun - 25 Jun	0505 - 0523		3.19E-03	2.47E-04	9.16E-03				
2-CPR-95-194	26 Jun - 26 Jun	1424 - 1506		4.92E-03	3.80E-04	1.41E-02				
2-CPR-95-195	28 Jun - 28 Jun	1048 - 1108		4.11E-03	3.18E-04	1.18E-02				
2-CPR-95-196	29 Jun - 29 Jun	1127 - 1147		1.99E-03	1.54E-04	5.72E-03				
2-CPR-95-197	30 Jun - 30 Jun	1338 - 1402		2.30E-03	1.78E-04	6.60E-03				
2-CPR-95-198	2 Jul - 2 Jul	1356 - 1420		5.70E-04	4.41E-05	1.64E-03				
2-CPR-95-199	3 Jul - 3 Jul	1149 - 1210		1.57E-03	1.21E-04	4.50E-03				
2-CPR-95-200	4 Jul - 4 Jul	0932 - 0957		2.84E-03	2.20E-04	8.14E-03				
2-CPR-95-201	5 Jul - 5 Jul	1621 - 1640		1.09E-03	8.45E-05	3.13E-03				
2-CPR-95-202	7 Jul - 7 Jul	1702 - 1721		2.11E-03	1.63E-04	6.06E-03				
2-CPR-95-203	8 Jul - 8 Jul	1824 - 1844		1.16E-03	9.00E-05	3.34E-03				

Release Number	Start/Stop Date	Start/Stop Time	Xe131m	Xe133	Xe135	Ar41	Xe133m	Kr85	Kr85m	Kr88
2-CPR-95-204	9 Jul - 9 Jul	0929 - 0946		1.59E-03	1.23E-04	4.56E-03				
2-CPR-95-205	10 Jul - 10 Jul	1813 - 1831		1.65E-03	1.28E-04	4.73E-03				
2-CPR-95-206	12 Jul - 12 Jul	0909 - 0932		4.79E-03	3.70E-04	1.37E-02				
2-CPR-95-207	13 Jul - 13 Jul	1405 - 1434		5.07E-03	3.92E-04	1.45E-02				
2-CPR-95-208	14 Jul - 14 Jul	2157 - 2219		1.70E-03	1.32E-04	4.88E-03				
2-CPR-95-209	16 Jul - 16 Jul	0434 - 0455		4.66E-03	3.61E-04	1.34E-02				
2-CPR-95-210	17 Jul - 17 Jul	1144 - 1205		3.37E-03	2.61E-04	9.67E-03				
2-CPR-95-211	19 Jul - 19 Jul	0349 - 0408		5.98E-04	4.63E-05	1.72E-03				
2-CPR-95-212	20 Jul - 20 Jul	0205 - 0233		3.24E-03	2.51E-04	9.31E-03				
2-CPR-95-213	22 Jul - 22 Jul	0315 - 0336		3.02E-03	2.33E-04	8.65E-03				
2-CPR-95-214	23 Jul - 23 Jul	0134 - 0159		1.97E-03	1.53E-04	5.66E-03				
2-CPR-95-215	24 Jul - 24 Jul	1936 - 1956		2.46E-03	1.90E-04	7.06E-03				
2-CPR-95-216	26 Jul - 26 Jul	0314 - 0337		1.69E-03	1.30E-04	4.84E-03				
2-CPR-95-217	27 Jul - 27 Jul	1342 - 1405		4.28E-03	3.31E-04	1.23E-02				
2-CPR-95-218	29 Jul - 29 Jul	1324 - 1343		1.94E-03	1.50E-04	5.56E-03				
2-CPR-95-219	30 Jul - 30 Jul	0830 - 0910		4.79E-03	3.70E-04	1.37E-02				
2-CPR-95-220	31 Jul - 31 Jul	1432 - 1455		1.78E-03	1.38E-04	5.10E-03				
2-CPR-95-221	2 Aug - 2 Aug	1717 - 1738		1.26E-03	9.78E-05	3.63E-03				
2-CPR-95-222	3 Aug - 3 Aug	1624 - 1644		9.58E-04	7.41E-05	2.75E-03				
2-CPR-95-223	4 Aug - 4 Aug	1658 - 1719		2.13E-03	1.65E-04	6.12E-03				
2-CPR-95-224	5 Aug - 5 Aug	1238 - 1305		2.16E-03	1.67E-04	6.21E-03				
2-CPR-95-225	7 Aug - 7 Aug	1622 - 1642		1.37E-03	1.06E-04	3.93E-03				
2-CPR-95-226	9 Aug - 9 Aug	0701 - 0723		1.65E-03	1.27E-04	4.73E-03				
2-CPR-95-227	10 Aug - 10 Aug	0200 - 0217		1.11E-03	8.62E-05	3.20E-03				
2-CPR-95-228	11 Aug - 11 Aug	0438 - 0456		9.30E-04	7.19E-05	2.67E-03				
2-CPR-95-229	11 Aug - 11 Aug	2030 - 2050		4.31E-04	3.33E-05	1.24E-03				
2-CPR-95-230	12 Aug - 12 Aug	1810 - 1832		2.18E-03	1.69E-04	6.25E-03				
2-CPR-95-231	13 Aug - 13 Aug	1258 - 1317		1.09E-03	8.41E-05	3.12E-03				
2-CPR-95-232	14 Aug - 14 Aug	1342 - 1402		7.78E-04	6.02E-05	2.23E-03				
2-CPR-95-233	15 Aug - 15 Aug	1937 - 2000		1.01E-03	7.84E-05	2.91E-03				
2-CPR-95-234	17 Aug - 17 Aug	0225 - 0245		1.55E-03	1.20E-04	4.46E-03				
2-CPR-95-235	18 Aug - 18 Aug	1425 - 1444		4.05E-04	3.14E-05	1.16E-03				
2-CPR-95-236	21 Aug - 21 Aug	1747 - 1809		1.36E-03	1.05E-04	3.90E-03				

Release Number	Start/Stop Date	Start/Stop Time	Xe131m	Xe133	Xe135	Ar41	Xe133m	Kr85	Kr85m	Kr88
2-CPR-95-237	22 Aug - 22 Aug	1330 - 1350		5.42E-04	4.19E-05	1.56E-03				
2-CPR-95-238	23 Aug - 23 Aug	1051 - 1114		6.51E-04	5.04E-05	1.87E-03				
2-CPR-95-239	24 Aug - 24 Aug	0349 - 0407		5.02E-04	3.88E-05	1.44E-03				
2-CPR-95-240	25 Aug - 25 Aug	1318 - 1337		7.27E-04	5.63E-05	2.09E-03				
2-CPR-95-241	26 Aug - 26 Aug	1230 - 1248		4.51E-04	3.49E-05	1.29E-03				
2-CPR-95-242	27 Aug - 27 Aug	0854 - 0912		1.58E-03	1.22E-04	4.52E-03				
2-CPR-95-243	28 Aug - 28 Aug	1418 - 1439		9.25E-04	7.15E-05	2.65E-03				
2-CPR-95-244	29 Aug - 29 Aug	1800 - 1822		6.59E-04	5.10E-05	1.89E-03				
2-CPR-95-245	30 Aug - 30 Aug	1550 - 1611		4.00E-04	3.10E-05	1.15E-03				
2-CPR-95-246	31 Aug - 31 Aug	0647 - 0702		4.03E-04	3.12E-05	1.16E-03				
2-CPR-95-247	4 Sep - 4 Sep	2105 - 2127		2.38E-03	1.84E-04	6.83E-03				
2-CPR-95-248	5 Sep - 5 Sep	1338 - 1403		4.46E-04	3.45E-05	1.28E-03				
2-CPR-95-249	6 Sep - 6 Sep	0748 - 0808		4.21E-04	3.25E-05	1.21E-03				
2-CPR-95-250	6 Sep - 6 Sep	1919 - 1940		8.46E-04	6.55E-05	2.43E-03				
2-CPR-95-251	9 Sep - 9 Sep	0034 - 0054		7.40E-04	5.72E-05	2.12E-03				
2-CPR-95-252	10 Sep - 10 Sep	1303 - 1321		1.13E-03	8.70E-05	3.23E-03				
2-CPR-95-253	11 Sep - 11 Sep	1011 - 1027		6.72E-04	5.19E-05	1.93E-03				
2-CPR-95-254	11 Sep - 11 Sep	1840 - 1857		5.83E-04	4.51E-05	1.67E-03				
2-CPR-95-255	12 Sep - 12 Sep	0948 - 1009		1.17E-03	9.06E-05	3.36E-03				
2-CPR-95-256	13 Sep - 13 Sep	0028 - 0048		1.01E-03	7.80E-05	2.89E-03				
2-CPR-95-257	13 Sep - 13 Sep	1817 - 1838		1.46E-03	1.13E-04	4.18E-03				
2-CPR-95-258	15 Sep - 15 Sep	1537 - 1557		1.09E-03	8.43E-05	3.13E-03				
2-CPR-95-259	16 Sep - 16 Sep	0458 - 0518		6.18E-04	4.78E-05	1.77E-03				
2-CPR-95-260	16 Sep - 16 Sep	1716 - 1733		1.48E-03	1.14E-04	4.25E-03				
2-CPR-95-261	18 Sep - 18 Sep	1542 - 1603		9.98E-04	7.72E-05	2.86E-03				
2-CPR-95-262	19 Sep - 19 Sep	1028 - 1050		7.70E-04	5.96E-05	2.21E-03				
2-CPR-95-263	20 Sep - 20 Sep	0250 - 0312		1.43E-03	1.11E-04	4.12E-03				
2-CPR-95-264	21 Sep - 21 Sep	1844 - 1905		8.77E-04	6.78E-05	2.52E-03				
2-CPR-95-265	23 Sep - 23 Sep	0657 - 0716		1.22E-03	9.45E-05	3.50E-03				
2-CPR-95-266	24 Sep - 24 Sep	0517 - 0547		1.42E-03	1.10E-04	4.09E-03				
2-CPR-95-267	25 Sep - 25 Sep	0327 - 0348		1.15E-03	8.86E-05	3.29E-03				
2-CPR-95-268	25 Sep - 25 Sep	1706 - 1725		7.55E-04	5.84E-05	2.17E-03				

Release Number	Start/Stop Date	Start/Stop Time	Xe131m	Xe133	Xe135	Ar41	Xe133m	Kr85	Kr85m	Kr88
2-CPR-95-269	26 Sep - 26 Sep	1439 - 1459		6.74E-04	5.21E-05	1.93E-03				
2-CPR-95-270	27 Sep - 27 Sep	1627 - 1644		7.68E-04	5.94E-05	2.20E-03				
2-CPR-95-271	28 Sep - 28 Sep	2127 - 2148		4.56E-04	3.53E-05	1.31E-03				
2-CPR-95-272	29 Sep - 29 Sep	1738 - 1758		1.41E-03	1.09E-04	4.06E-03				
2-CPR-95-273	30 Sep - 30 Sep	1342 - 1409		1.87E-03	1.45E-04	5.37E-03				
2-CPR-95-274	1 Oct - 1 Oct	1320 - 1355		4.83E-03	2.26E-04	4.23E-03				
2-CPR-95-275	3 Oct - 3 Oct	1038 - 1056		2.21E-03	1.03E-04	1.94E-03				
2-CPR-95-276	4 Oct - 4 Oct	1450 - 1512		1.25E-03	5.86E-05	1.10E-03				
2-CPR-95-277	5 Oct - 5 Oct	0843 - 0903		2.77E-03	1.30E-04	2.43E-03				
2-CPR-95-278	6 Oct - 6 Oct	0438 - 0458		2.50E-03	1.17E-04	2.19E-03				
2-CPR-95-279	8 Oct - 8 Oct	0955 - 1033		3.90E-03	1.82E-04	3.41E-03				
2-CPR-95-280	9 Oct - 9 Oct	1030 - 1038		2.47E-03	1.15E-04	2.16E-03				
2-CPR-95-281	10 Oct - 10 Oct	1340 - 1400		1.42E-03	6.63E-05	1.24E-03				
2-CPR-95-282	11 Oct - 11 Oct	1353 - 1411		3.05E-03	1.43E-04	2.67E-03				
2-CPR-95-283	12 Oct - 12 Oct	0953 - 1013		1.95E-03	9.11E-05	1.71E-03				
2-CPR-95-284	12 Oct - 13 Oct	2342 - 0001		2.16E-03	1.01E-04	1.89E-03				
2-CPR-95-285	13 Oct - 13 Oct	1409 - 1430		8.79E-04	4.11E-05	7.70E-04				
2-CPR-95-286	14 Oct - 14 Oct	1048 - 1109		4.74E-03	2.21E-04	4.15E-03				
2-CPR-95-287	15 Oct - 15 Oct	1659 - 1713		1.08E-03	5.03E-05	9.43E-04				
2-CPR-95-288	17 Oct - 17 Oct	1104 - 1124		2.10E-03	9.82E-05	1.84E-03				
2-CPR-95-289	18 Oct - 18 Oct	0447 - 0506		2.96E-03	1.38E-04	2.59E-03				
2-CPR-95-290	19 Oct - 19 Oct	0615 - 0634		2.13E-03	9.94E-05	1.86E-03				
2-CPR-95-291	19 Oct - 19 Oct	1513 - 1531		2.37E-03	1.11E-04	2.08E-03				
2-CPR-95-292	20 Oct - 20 Oct	0535 - 0603		3.09E-03	1.44E-04	2.70E-03				
2-CPR-95-293	21 Oct - 21 Oct	1056 - 1117		6.30E-03	2.94E-04	5.51E-03				
2-CPR-95-294	23 Oct - 23 Oct	1055 - 1115		1.71E-03	7.99E-05	1.50E-03				
2-CPR-95-295	23 Oct - 23 Oct	2058 - 2120		5.72E-03	2.67E-04	5.01E-03				
2-CPR-95-296	25 Oct - 25 Oct	1540 - 1600		4.06E-03	1.90E-04	3.56E-03				
2-CPR-95-297	26 Oct - 26 Oct	0624 - 0646		2.62E-03	1.22E-04	2.29E-03				
2-CPR-95-298	26 Oct - 26 Oct	2036 - 2058		2.88E-03	1.34E-04	2.52E-03				
2-CPR-95-299	27 Oct - 27 Oct	0407 - 0428		2.70E-03	1.26E-04	2.36E-03				
2-CPR-95-300	30 Oct - 30 Oct	1136 - 1157		2.29E-03	1.07E-04	2.01E-03				

Release Number	Start/Stop Date	Start/Stop Time	Xe131m	Xe133	Xe135	Ar41	Xe133m	Kr85	Kr85m	Kr88
2-CPR-95-301	31 Oct - 31 Oct	0509 - 0528		1.88E-03	8.80E-05	1.65E-03				
2-CPR-95-302	31 Oct - 31 Oct	2245 - 2306		3.65E-03	1.71E-04	3.20E-03				
2-CPR-95-303	1 Nov - 1 Nov	1350 - 1412		4.92E-03	2.30E-04	4.31E-03				
2-CPR-95-304	2 Nov - 2 Nov	0418 - 0449		4.43E-03	2.07E-04	3.88E-03				
2-CPR-95-305	4 Nov - 4 Nov	1837 - 1855		3.06E-03	1.43E-04	2.68E-03				
2-CPR-95-306	5 Nov - 5 Nov	1222 - 1300		7.65E-03	3.57E-04	6.69E-03				
2-CPR-95-307	6 Nov - 6 Nov	0825 - 0905		7.28E-03	3.40E-04	6.38E-03				
2-CPR-95-308	6 Nov - 6 Nov	2220 - 2236		1.94E-03	9.04E-05	1.69E-03				
2-CPR-95-309	8 Nov - 8 Nov	1702 - 1730		3.30E-03	1.54E-04	2.89E-03				
2-CPR-95-310	9 Nov - 9 Nov	1258 - 1318		5.93E-03	2.77E-04	5.19E-03				
2-CPR-95-311	9 Nov - 9 Nov	1924 - 1945		4.96E-03	2.32E-04	4.34E-03				
2-CPR-95-312	10 Nov - 10 Nov	1414 - 1433		2.52E-03	1.18E-04	2.21E-03				
2-CPR-95-313	10 Nov - 10 Nov	2320 - 2338		2.44E-03	1.14E-04	2.13E-03				
2-CPR-95-314	12 Nov - 12 Nov	2224 - 2246		2.77E-03	1.29E-04	2.42E-03				
2-CPR-95-315	14 Nov - 14 Nov	0318 - 0340		5.36E-03	2.50E-04	4.69E-03				
2-CPR-95-316	15 Nov - 15 Nov	0002 - 0025		5.31E-03	2.48E-04	4.65E-03				
2-CPR-95-317	15 Nov - 15 Nov	2210 - 2228		2.65E-03	1.24E-04	2.32E-03				
2-CPR-95-318	17 Nov - 17 Nov	0137 - 0156		3.99E-03	1.86E-04	3.49E-03				
2-CPR-95-319	17 Nov - 17 Nov	1418 - 1436		3.40E-03	1.59E-04	2.97E-03				
2-CPR-95-320	18 Nov - 18 Nov	1406 - 1428		6.14E-03	2.87E-04	5.37E-03				
2-CPR-95-321	19 Nov - 19 Nov	1255 - 1312		1.45E-03	6.76E-05	1.27E-03				
2-CPR-95-322	20 Nov - 20 Nov	0040 - 0108		6.56E-03	3.06E-04	5.74E-03				
2-CPR-95-323	20 Nov - 20 Nov	2120 - 2143		3.66E-03	1.71E-04	3.21E-03				
2-CPR-95-324	22 Nov - 22 Nov	0245 - 0310		5.78E-03	2.70E-04	5.05E-03				
2-CPR-95-325	22 Nov - 22 Nov	1425 - 1444		3.80E-03	1.77E-04	3.32E-03				
2-CPR-95-326	23 Nov - 23 Nov	2030 - 2052		6.14E-03	2.87E-04	5.37E-03				
2-CPR-95-327	24 Nov - 24 Nov	1218 - 1240		3.60E-03	1.68E-04	3.15E-03				
2-CPR-95-328	24 Nov - 24 Nov	2250 - 2315		4.82E-03	2.25E-04	4.22E-03				
2-CPR-95-329	25 Nov - 25 Nov	1328 - 1347		1.61E-03	7.53E-05	1.41E-03				
2-CPR-95-330	26 Nov - 26 Nov	0210 - 0240		6.97E-03	3.26E-04	6.10E-03				
2-CPR-95-331	26 Nov - 26 Nov	1251 - 1310		6.97E-03	3.26E-04	6.10E-03				
2-CPR-95-332	27 Nov - 27 Nov	0138 - 0213		8.79E-03	4.11E-04	7.70E-03				

Release Number	Start/Stop Date	Start/Stop Time	Xe131m	Xe133	Xe135	Ar41	Xe133m	Kr85	Kr85m	Kr88
2-CPR-95-333	27 Nov - 27 Nov	1550 - 1610		4.55E-03	2.12E-04	3.98E-03				
2-CPR-95-334	29 Nov - 29 Nov	2216 - 2235		7.49E-03	3.50E-04	6.56E-03				
2-CPR-95-335	30 Nov - 30 Nov	0938 - 0958		4.50E-03	2.10E-04	3.94E-03				
2-CPR-95-336	30 Nov - 30 Nov	1636 - 1704		3.58E-03	1.67E-04	3.14E-03				
2-CPR-95-337	2 Dec - 2 Dec	1008 - 1027		4.29E-03	2.00E-04	3.76E-03				
2-CPR-95-338	2 Dec - 2 Dec	1716 - 1738		6.35E-03	2.96E-04	5.56E-03				
2-CPR-95-339	3 Dec - 3 Dec	1418 - 1440		6.24E-03	2.92E-04	5.46E-03				
2-CPR-95-340	4 Dec - 4 Dec	1947 - 2009		3.51E-03	1.64E-04	3.07E-03				
2-CPR-95-341	5 Dec - 5 Dec	0640 - 0703		3.14E-03	1.47E-04	2.75E-03				
2-CPR-95-342	6 Dec - 6 Dec	1153 - 1214		5.88E-03	2.75E-04	5.15E-03				
2-CPR-95-343	6 Dec - 6 Dec	2247 - 2310		3.93E-03	1.84E-04	3.44E-03				
2-CPR-95-344	7 Dec - 7 Dec	1451 - 1512		5.62E-03	2.62E-04	4.92E-03				
2-CPR-95-345	8 Dec - 8 Dec	0302 - 0324		4.24E-03	1.98E-04	3.71E-03				
2-CPR-95-346	8 Dec - 8 Dec	1244 - 1309		4.80E-03	2.24E-04	4.20E-03				
2-CPR-95-347	8 Dec - 8 Dec	2044 - 2105		3.81E-03	1.78E-04	3.33E-03				
2-CPR-95-348	9 Dec - 9 Dec	1110 - 1138		7.28E-03	3.40E-04	6.38E-03				
2-CPR-95-349	10 Dec - 10 Dec	0336 - 0400		5.31E-03	2.48E-04	4.65E-03				
2-CPR-95-350	10 Dec - 10 Dec	1417 - 1437		2.13E-03	9.96E-05	1.87E-03				
2-CPR-95-351	10 Dec - 10 Dec	2016 - 2038		3.20E-03	1.49E-04	2.80E-03				
2-CPR-95-352	11 Dec - 11 Dec	0307 - 0335		7.08E-03	3.30E-04	6.19E-03				
2-CPR-95-353	11 Dec - 11 Dec	1200 - 1222		4.98E-03	2.33E-04	4.36E-03				
2-CPR-95-354	11 Dec - 11 Dec	2254 - 2320		6.87E-03	3.21E-04	6.01E-03				
2-CPR-95-355	12 Dec - 12 Dec	1125 - 1150		7.39E-03	3.45E-04	6.47E-03				
2-CPR-95-356	13 Dec - 13 Dec	0045 - 0105		7.44E-03	3.47E-04	6.51E-03				
2-CPR-95-357	13 Dec - 13 Dec	1258 - 1317		5.20E-03	2.43E-04	4.55E-03				
2-CPR-95-358	13 Dec - 13 Dec	2003 - 2027		4.97E-03	2.32E-04	4.35E-03				
2-CPR-95-359	14 Dec - 14 Dec	0145 - 0215		7.02E-03	3.28E-04	6.15E-03				
2-CPR-95-360	15 Dec - 15 Dec	0720 - 0742		8.53E-03	3.99E-04	7.47E-03				
2-CPR-95-361	15 Dec - 15 Dec	2258 - 2317		2.24E-03	1.05E-04	1.96E-03				
2-CPR-95-362	16 Dec - 16 Dec	1423 - 1443		4.53E-03	2.12E-04	3.97E-03				
2-CPR-95-363	17 Dec - 17 Dec	0318 - 0336		4.81E-03	2.25E-04	4.21E-03				
2-CPR-95-364	17 Dec - 17 Dec	1254 - 1318		3.63E-03	1.70E-04	3.18E-03				

Release Number	Start/Stop Date	Start/Stop Time	Xe131m	Xe133	Xe135	Ar41	Xe133m	Kr85	Kr85m	Kr88
2-CPR-95-365	18 Dec - 18 Dec	0101 - 0123		2.81E-03	1.31E-04	2.46E-03				
2-CPR-95-366	18 Dec - 18 Dec	0958 - 1023		5.17E-03	2.41E-04	4.52E-03				
2-CPR-95-367	18 Dec - 18 Dec	1846 - 1913		4.44E-03	2.08E-04	3.89E-03				
2-CPR-95-368	19 Dec - 19 Dec	0416 - 0434		2.63E-03	1.23E-04	2.30E-03				
2-CPR-95-369	19 Dec - 19 Dec	1117 - 1143		8.12E-03	3.79E-04	7.10E-03				
2-CPR-95-370	19 Dec - 19 Dec	2017 - 2050		7.65E-03	3.57E-04	6.69E-03				
2-CPR-95-371	20 Dec - 20 Dec	0915 - 0955		9.63E-03	4.50E-04	8.42E-03				
2-CPR-95-372	20 Dec - 20 Dec	2318 - 2352		9.47E-03	4.42E-04	8.29E-03				
2-CPR-95-373	21 Dec - 21 Dec	2141 - 2207		5.78E-03	2.70E-04	5.05E-03				
2-CPR-95-374	22 Dec - 22 Dec	1504 - 1523		2.65E-03	1.24E-04	2.32E-03				
2-CPR-95-375	23 Dec - 23 Dec	0449 - 0509		5.00E-03	2.34E-04	4.38E-03				
2-CPR-95-376	23 Dec - 23 Dec	1417 - 1436		3.98E-03	1.86E-04	3.48E-03				
2-CPR-95-377	24 Dec - 24 Dec	0128 - 0146		4.44E-03	2.07E-04	3.88E-03				
2-CPR-95-378	24 Dec - 24 Dec	1237 - 1303		8.64E-03	4.03E-04	7.56E-03				
2-CPR-95-379	24 Dec - 24 Dec	2229 - 2249		3.62E-03	1.69E-04	3.17E-03				
2-CPR-95-380	25 Dec - 25 Dec	0758 - 0836		5.31E-03	2.48E-04	4.65E-03				
2-CPR-95-381	26 Dec - 26 Dec	0228 - 0251		5.88E-03	2.75E-04	5.15E-03				
2-CPR-95-382	26 Dec - 26 Dec	1213 - 1236		2.92E-03	1.37E-04	2.56E-03				
2-CPR-95-383	27 Dec - 27 Dec	0143 - 0213		5.67E-03	2.65E-04	4.96E-03				
2-CPR-95-384	28 Dec - 28 Dec	0157 - 0216		5.98E-03	2.79E-04	5.24E-03				
2-CPR-95-385	28 Dec - 28 Dec	1411 - 1431		5.88E-03	2.75E-04	5.15E-03				
2-CPR-95-386	29 Dec - 29 Dec	0501 - 0520		5.88E-03	2.75E-04	5.15E-03				
2-CPR-95-387	29 Dec - 29 Dec	1528 - 1547		7.70E-03	3.60E-04	6.74E-03				
2-CPR-95-388	30 Dec - 30 Dec	0446 - 0505		3.69E-03	1.73E-04	3.23E-03				
2-CPR-95-389	30 Dec - 30 Dec	1435 - 1458		4.88E-03	2.28E-04	4.27E-03				
2-CPR-95-390	31 Dec - 31 Dec	0244 - 0302		3.47E-03	1.62E-04	3.03E-03				
2-CPR-95-391	31 Dec - 31 Dec	1410 - 1430		5.12E-03	2.39E-04	4.48E-03				



APPENDIX 1.2

Summary of Maximum Individual Doses
First Quarter, 1995



SUMMARY OF MAXIMUM INDIVIDUAL DOSES

1st Quarter 1995

EFFLUENT	APPLICABLE ORGAN	ESTIMATED DOSE (mrem)	AGE GROUP	LOCATION DIST DIR (M) (Toward)	% OF APPLICABLE LIMIT	LIMIT (mrem) QTR
Liquid	Total Body	4.74E-3	Adult	Receptor 1	3.16E-1	1.5E+0
Liquid	GI-Tract	8.10E-3	Adult	Receptor 1	1.62E-1	5.0E+0
Noble Gas	Air Dose (Gamma-mrad)	4.63E-3		651 N	9.26E-2	5.0E+0
Noble Gas	Air dose (Beta-mrad)	9.75E-3		651 N	9.75E-2	1.0E+1
Iodines and Particulates	Thyroid	9.01E-3	Child	659 N	1.20E-1	7.5E+0

FOR RECEPTOR NUMBER 1

LAST LIQUID DOSE ACCUMULATIONS (MREM)									
START DATE 95 1 1 1		END DATE 95 33124							
	BONE	LIVER	T.BODY	THYRD	KIDNEY	LUNG	GI-LLI	SKIN	
WATER									
ADULT	2.3E-05	3.0E-03	3.0E-03	4.2E-03	3.0E-03	3.0E-03	3.2E-03	0.0E+00	
TEEN	2.2E-05	2.1E-03	2.1E-03	3.1E-03	2.1E-03	2.1E-03	2.2E-03	0.0E+00	
CHILD	6.5E-05	4.1E-03	4.0E-03	6.6E-03	4.0E-03	4.0E-03	4.1E-03	0.0E+00	
INFANT	6.4E-05	4.0E-03	4.0E-03	8.0E-03	3.9E-03	3.9E-03	4.0E-03	0.0E+00	
SHORE									
ADULT	3.7E-05	3.7E-05	3.7E-05	3.7E-05	3.7E-05	3.7E-05	3.7E-05	4.3E-05	
TEEN	2.1E-04	2.1E-04	2.1E-04	2.1E-04	2.1E-04	2.1E-04	2.1E-04	2.4E-04	
CHILD	4.3E-05	4.3E-05	4.3E-05	4.3E-05	4.3E-05	4.3E-05	4.3E-05	5.1E-05	
INFANT	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	
FW SPT FISH									
ADULT	1.5E-03	2.5E-03	1.7E-03	1.4E-03	9.8E-04	4.6E-04	4.9E-03	0.0E+00	
TEEN	1.6E-03	2.6E-03	1.1E-03	1.3E-03	9.6E-04	4.6E-04	3.4E-03	0.0E+00	
CHILD	2.0E-03	2.3E-03	5.6E-04	1.4E-03	8.2E-04	3.8E-04	1.3E-03	0.0E+00	
INFANT	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	
TOTAL									
ADULT	1.6E-03	5.6E-03	4.7E-03	5.7E-03	4.0E-03	3.5E-03	8.1E-03	4.3E-05	
TEEN	1.8E-03	4.9E-03	3.4E-03	4.7E-03	3.3E-03	2.8E-03	5.9E-03	2.4E-04	
CHILD	2.1E-03	6.4E-03	4.7E-03	8.0E-03	4.9E-03	4.4E-03	5.4E-03	5.1E-05	
INFANT	6.4E-05	4.0E-03	4.0E-03	8.0E-03	3.9E-03	3.9E-03	4.0E-03	0.0E+00	

DATES OF LAST AIR DOSE ACCUMULATION ARE FROM 95 1 1 1 0 TO 95 33124 0
DOSE ACCUMULATION FOR GAMMA MRAD

FOR RELEASE POINT 1

**DIRECTION FROM N

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM NNE

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM NE

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM ENE

3.2441E-03	4.5364E-04	2.0640E-04	1.1858E-04	8.3429E-05
4.2438E-05	1.6430E-05	8.0982E-06	5.1619E-06	3.2188E-06

**DIRECTION FROM E

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM ESE

1.0814E-03	1.3912E-04	7.1582E-05	4.5190E-05	3.2029E-05
1.6154E-05	6.6115E-06	3.3951E-06	2.2193E-06	1.4160E-06

**DIRECTION FROM SE

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM SSE

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM S

3.5779E-05	4.6983E-06	2.3479E-06	1.4520E-06	1.0276E-06
5.1927E-07	2.1013E-07	1.0704E-07	6.9632E-08	4.4239E-08

**DIRECTION FROM SSW

7.2100E-06	8.3421E-07	3.6666E-07	2.0768E-07	1.3997E-07
6.4016E-08	2.1685E-08	9.8745E-09	5.9261E-09	3.3646E-09

**DIRECTION FROM SW

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM WSW

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM W

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM WNW

2.1585E-05	3.0230E-06	1.3758E-06	7.9046E-07	5.5631E-07
2.8317E-07	1.0971E-07	5.4098E-08	3.4493E-08	2.1517E-08

**DIRECTION FROM NW

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM NNW

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

DISTANCES USED IN CALCULATIONS

594.0	2416.0	4020.0	5630.0	7240.0
12067.0	24135.0	40225.0	56315.0	80500.0

DATES OF LAST AIR DOSE ACCUMULATION ARE FROM 95 1 1 1 0 TO 95 33124 0
DOSE ACCUMULATION FOR GAMMA MRAD

FOR RELEASE POINT 2

**DIRECTION FROM N

3.7772E-03	4.2725E-04	1.9388E-04	1.1253E-04	7.7672E-05
3.7584E-05	1.3920E-05	6.7325E-06	4.2396E-06	2.6062E-06

**DIRECTION FROM NNE

1.4256E-03	1.7333E-04	7.7178E-05	4.4002E-05	3.0182E-05
1.4456E-05	5.2253E-06	2.4879E-06	1.5494E-06	9.3220E-07

**DIRECTION FROM NE

2.1130E-03	2.6207E-04	1.2067E-04	7.0508E-05	4.8991E-05
2.4041E-05	9.0771E-06	4.4259E-06	2.7963E-06	1.7192E-06

**DIRECTION FROM ENE

2.4551E-03	2.9960E-04	1.3742E-04	8.0156E-05	5.5658E-05
2.7299E-05	1.0303E-05	5.0317E-06	3.1865E-06	1.9650E-06

**DIRECTION FROM E

3.1787E-03	3.3907E-04	1.6598E-04	1.0144E-04	7.1911E-05
3.6467E-05	1.4471E-05	7.1458E-06	4.5383E-06	2.8840E-06

**DIRECTION FROM ESE

4.1864E-03	4.8784E-04	2.3219E-04	1.3924E-04	9.7519E-05
4.8394E-05	1.8760E-05	9.2585E-06	5.8928E-06	3.6864E-06

**DIRECTION FROM SE

4.2147E-03	4.6881E-04	2.2873E-04	1.3940E-04	9.8741E-05
5.0054E-05	1.9887E-05	9.8689E-06	6.2928E-06	3.9922E-06

**DIRECTION FROM SSE

6.1392E-03	6.9250E-04	3.4357E-04	2.1162E-04	1.5034E-04
7.6504E-05	3.0697E-05	1.5313E-05	9.7938E-06	6.2305E-06

**DIRECTION FROM S

5.2931E-03	6.0758E-04	3.0035E-04	1.8442E-04	1.3119E-04
6.7054E-05	2.6996E-05	1.3509E-05	8.6658E-06	5.5273E-06

**DIRECTION FROM SSW

2.5440E-03	3.1013E-04	1.4291E-04	8.3624E-05	5.7953E-05
2.8237E-05	1.0589E-05	5.1423E-06	3.2396E-06	1.9849E-06

**DIRECTION FROM SW

2.0053E-03	2.4319E-04	1.1101E-04	6.4499E-05	4.4539E-05
2.1548E-05	7.9713E-06	3.8362E-06	2.4012E-06	1.4592E-06

**DIRECTION FROM WSW

1.2130E-03	1.3284E-04	5.8639E-05	3.3478E-05	2.2755E-05
1.0644E-05	3.7594E-06	1.7793E-06	1.1040E-06	6.5807E-07

**DIRECTION FROM W

3.9534E-03	4.4400E-04	1.9725E-04	1.1291E-04	7.6880E-05
3.6096E-05	1.2813E-05	6.0675E-06	3.7671E-06	2.2527E-06

**DIRECTION FROM WNW

4.5447E-03	5.3313E-04	2.4050E-04	1.3886E-04	9.5172E-05
4.5283E-05	1.6400E-05	7.8266E-06	4.8755E-06	2.9331E-06

**DIRECTION FROM NW

4.7249E-03	5.4095E-04	2.5389E-04	1.5057E-04	1.0541E-04
5.2367E-05	2.0085E-05	9.7901E-06	6.1701E-06	3.8390E-06

**DIRECTION FROM NNW

3.4241E-03	3.9857E-04	1.8005E-04	1.0396E-04	7.1742E-05
3.4738E-05	1.2810E-05	6.1648E-06	3.8642E-06	2.3594E-06

DISTANCES USED IN CALCULATIONS

594.0	2416.0	4020.0	5630.0	7240.0
12067.0	24135.0	40225.0	56315.0	80500.0

DATES OF LAST AIR DOSE ACCUMULATION ARE FROM 95 1 1 1 0 TO 95 33124 0
DOSE ACCUMULATION FOR BETA MRAD

FOR RELEASE POINT 1

**DIRECTION FROM N

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM NNE

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM NE

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM ENE

2.0011E-02	2.7373E-03	1.2410E-03	7.1188E-04	4.9872E-04
2.5117E-04	9.6155E-05	4.7110E-05	2.9900E-05	1.8529E-05

**DIRECTION FROM E

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM ESE

5.8294E-03	7.4999E-04	3.8589E-04	2.4361E-04	1.7266E-04
8.7083E-05	3.5642E-05	1.8302E-05	1.1964E-05	7.6335E-06

**DIRECTION FROM SE

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM SSE

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM S

3.3002E-03	4.3337E-04	2.1656E-04	1.3393E-04	9.4782E-05
4.7897E-05	1.9382E-05	9.8732E-06	6.4227E-06	4.0805E-06

**DIRECTION FROM SSW

6.6503E-04	7.6945E-05	3.3820E-05	1.9156E-05	1.2911E-05
5.9047E-06	2.0002E-06	9.1080E-07	5.4661E-07	3.1035E-07

**DIRECTION FROM SW

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM WSW

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM W

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM WNW

2.4269E-03	3.3988E-04	1.5468E-04	8.8872E-05	6.2547E-05
3.1838E-05	1.2335E-05	6.0823E-06	3.8781E-06	2.4192E-06

**DIRECTION FROM NW

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM NNW

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

DISTANCES USED IN CALCULATIONS

594.0	2416.0	4020.0	5630.0	7240.0
12067.0	24135.0	40225.0	56315.0	80500.0

DATES OF LAST AIR DOSE ACCUMULATION ARE FROM 95 1 1 1 0 TO 95 33124 0
DOSE ACCUMULATION FOR BETA MRAD

FOR RELEASE POINT 2

**DIRECTION FROM N

5.7189E-03	6.4924E-04	2.9327E-04	1.6965E-04	1.1689E-04
5.6362E-05	2.0754E-05	1.0010E-05	6.2915E-06	3.8514E-06

**DIRECTION FROM NNE

2.1393E-03	2.5797E-04	1.1476E-04	6.5417E-05	4.4853E-05
2.1466E-05	7.7564E-06	3.6965E-06	2.3051E-06	1.3891E-06

**DIRECTION FROM NE

2.7490E-03	3.4069E-04	1.5704E-04	9.1816E-05	6.3851E-05
3.1391E-05	1.1877E-05	5.7951E-06	3.6629E-06	2.2553E-06

**DIRECTION FROM ENE

3.4684E-03	4.1735E-04	1.9080E-04	1.1111E-04	7.6962E-05
3.7533E-05	1.4059E-05	6.8349E-06	4.3141E-06	2.6492E-06

**DIRECTION FROM E

4.3209E-03	4.6333E-04	2.2477E-04	1.3661E-04	9.6533E-05
4.8673E-05	1.9172E-05	9.4469E-06	5.9937E-06	3.7954E-06

**DIRECTION FROM ESE

5.5402E-03	6.4379E-04	3.0548E-04	1.8283E-04	1.2796E-04
6.3442E-05	2.4540E-05	1.2097E-05	7.6945E-06	4.8094E-06

**DIRECTION FROM SE

5.7480E-03	6.3904E-04	3.1190E-04	1.9019E-04	1.3466E-04
6.8192E-05	2.7091E-05	1.3456E-05	8.5873E-06	5.4486E-06

**DIRECTION FROM SSE

8.7700E-03	9.9606E-04	4.9169E-04	3.0185E-04	2.1415E-04
1.0875E-04	4.3499E-05	2.1682E-05	1.3863E-05	8.8054E-06

**DIRECTION FROM S

7.9002E-03	9.0633E-04	4.4792E-04	2.7503E-04	1.9561E-04
9.9954E-05	4.0241E-05	2.0146E-05	1.2928E-05	8.2462E-06

**DIRECTION FROM SSW

3.7750E-03	4.5772E-04	2.1186E-04	1.2441E-04	8.6332E-05
4.2155E-05	1.5876E-05	7.7259E-06	4.8729E-06	2.9929E-06

**DIRECTION FROM SW

3.2745E-03	4.0105E-04	1.8438E-04	1.0766E-04	7.4604E-05
3.6366E-05	1.3616E-05	6.6019E-06	4.1544E-06	2.5429E-06

**DIRECTION FROM WSW

1.8595E-03	2.0540E-04	9.0956E-05	5.2024E-05	3.5463E-05
1.6705E-05	5.9565E-06	2.8338E-06	1.7639E-06	1.0567E-06

**DIRECTION FROM W

5.8061E-03	6.5561E-04	2.9267E-04	1.6809E-04	1.1470E-04
5.4089E-05	1.9347E-05	9.1996E-06	5.7256E-06	3.4361E-06

**DIRECTION FROM WNW

6.5777E-03	7.6895E-04	3.4638E-04	1.9981E-04	1.3699E-04
6.5271E-05	2.3659E-05	1.1297E-05	7.0414E-06	4.2414E-06

**DIRECTION FROM NW

6.6459E-03	7.6295E-04	3.5557E-04	2.0989E-04	1.4644E-04
7.2262E-05	2.7467E-05	1.3340E-05	8.3898E-06	5.1944E-06

**DIRECTION FROM NNW

5.3328E-03	6.1560E-04	2.7835E-04	1.6092E-04	1.1108E-04
5.3792E-05	1.9856E-05	9.5611E-06	5.9936E-06	3.6610E-06

DISTANCES USED IN CALCULATIONS

594.0	2416.0	4020.0	5630.0	7240.0
12067.0	24135.0	40225.0	56315.0	80500.0

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT

FOR DATES 95 1 1 1 THRU 95 33124

T.BODY GI-TRCT BONE LIVER KIDNEY THYRD LUNG SKIN

PLUME PATHWAY, DIST GP= 1, 659. METERS WINDS TOWARD N
 ADULT 2.8E-03 2.8E-03 2.8E-03 2.8E-03 2.8E-03 2.8E-03 2.9E-03 8.1E-03
 TEEN 2.8E-03 2.8E-03 2.8E-03 2.8E-03 2.8E-03 2.8E-03 2.9E-03 8.1E-03
 CHILD 2.8E-03 2.8E-03 2.8E-03 2.8E-03 2.8E-03 2.8E-03 2.9E-03 8.1E-03
 INFNT 2.8E-03 2.8E-03 2.8E-03 2.8E-03 2.8E-03 2.8E-03 2.9E-03 8.1E-03

GROUND PATHWAY, DIST GP= 1, 659. METERS WINDS TOWARD N
 ADULT 4.6E-04 4.6E-04 4.6E-04 4.6E-04 4.6E-04 4.6E-04 4.6E-04 5.4E-04
 TEEN 4.6E-04 4.6E-04 4.6E-04 4.6E-04 4.6E-04 4.6E-04 4.6E-04 5.4E-04
 CHILD 4.6E-04 4.6E-04 4.6E-04 4.6E-04 4.6E-04 4.6E-04 4.6E-04 5.4E-04
 INFNT 4.6E-04 4.6E-04 4.6E-04 4.6E-04 4.6E-04 4.6E-04 4.6E-04 5.4E-04

VEGET PATHWAY, DIST GP= 1, 8045. METERS WINDS TOWARD N
 ADULT 6.5E-05 6.3E-05 2.0E-06 6.6E-05 6.4E-05 7.7E-05 6.3E-05 0.0E+00
 TEEN 7.3E-05 7.2E-05 3.1E-06 7.6E-05 7.3E-05 8.3E-05 7.2E-05 0.0E+00
 CHILD 1.1E-04 1.1E-04 7.2E-06 1.2E-04 1.1E-04 1.3E-04 1.1E-04 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

MEAT PATHWAY, DIST GP= 1, 8045. METERS WINDS TOWARD N
 ADULT 9.2E-06 9.2E-06 2.0E-07 9.3E-06 9.1E-06 1.1E-05 9.0E-06 0.0E+00
 TEEN 5.5E-06 5.5E-06 1.6E-07 5.6E-06 5.5E-06 6.6E-06 5.4E-06 0.0E+00
 CHILD 6.6E-06 6.5E-06 3.0E-07 6.8E-06 6.6E-06 8.3E-06 6.5E-06 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

COW PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD N
 ADULT 6.0E-05 5.4E-05 6.0E-06 6.3E-05 5.7E-05 2.2E-04 5.5E-05 0.0E+00
 TEEN 7.6E-05 7.1E-05 1.1E-05 8.5E-05 7.6E-05 3.3E-04 7.2E-05 0.0E+00
 CHILD 1.2E-04 1.1E-04 2.6E-05 1.4E-04 1.2E-04 6.2E-04 1.1E-04 0.0E+00
 INFNT 1.7E-04 1.7E-04 4.2E-05 2.2E-04 1.9E-04 1.4E-03 1.7E-04 0.0E+00

GOAT PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD N
 ADULT 1.3E-04 1.1E-04 1.7E-05 1.4E-04 1.2E-04 3.1E-04 1.1E-04 0.0E+00
 TEEN 1.6E-04 1.4E-04 3.1E-05 1.9E-04 1.6E-04 4.5E-04 1.5E-04 0.0E+00
 CHILD 2.4E-04 2.3E-04 7.5E-05 3.0E-04 2.5E-04 8.4E-04 2.3E-04 0.0E+00
 INFNT 3.6E-04 3.4E-04 1.2E-04 4.9E-04 3.9E-04 1.8E-03 3.6E-04 0.0E+00

INHAL PATHWAY, DIST GP= 1, 659. METERS WINDS TOWARD N
 ADULT 1.4E-03 1.4E-03 3.1E-06 1.4E-03 1.4E-03 1.6E-03 1.4E-03 0.0E+00
 TEEN 1.4E-03 1.4E-03 4.4E-06 1.4E-03 1.4E-03 1.6E-03 1.4E-03 0.0E+00
 CHILD 1.2E-03 1.2E-03 5.9E-06 1.2E-03 1.2E-03 1.5E-03 1.2E-03 0.0E+00
 INFNT 7.0E-04 7.0E-04 3.7E-06 7.0E-04 7.0E-04 9.5E-04 7.2E-04 0.0E+00

SUBTOTALS (NO PLUME)
 ADULT 2.1E-03 2.1E-03 4.9E-04 2.1E-03 2.1E-03 2.6E-03 2.1E-03 5.4E-04
 TEEN 2.2E-03 2.1E-03 5.1E-04 2.2E-03 2.2E-03 2.9E-03 2.2E-03 5.4E-04
 CHILD 2.2E-03 2.1E-03 5.8E-04 2.2E-03 2.2E-03 3.6E-03 2.2E-03 5.4E-04
 INFNT 1.7E-03 1.7E-03 6.3E-04 1.9E-03 1.7E-03 4.7E-03 1.7E-03 5.4E-04

TOTALS
 ADULT 4.9E-03 4.8E-03 3.3E-03 4.9E-03 4.9E-03 5.4E-03 4.9E-03 8.6E-03
 TEEN 4.9E-03 4.9E-03 3.3E-03 5.0E-03 4.9E-03 5.7E-03 5.0E-03 8.6E-03
 CHILD 4.9E-03 4.9E-03 3.3E-03 5.0E-03 4.9E-03 6.3E-03 5.0E-03 8.6E-03
 INFNT 4.5E-03 4.4E-03 3.4E-03 4.6E-03 4.5E-03 7.4E-03 4.6E-03 8.6E-03

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT
FOR DATES 95 1 1 1 THRU 95 33124

T.BODY GI-TRCT BONE LIVER KIDNEY THYRD LUNG SKIN

PLUME PATHWAY, DIST GP= 1, 660. METERS WINDS TOWARD NNE
ADULT 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.4E-03 3.4E-03
TEEN 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.4E-03 3.4E-03
CHILD 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.4E-03 3.4E-03
INFNT 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.4E-03 3.4E-03

GROUND PATHWAY, DIST GP= 1, 660. METERS WINDS TOWARD NNE
ADULT 3.7E-04 3.7E-04 3.7E-04 3.7E-04 3.7E-04 3.7E-04 3.7E-04 4.3E-04
TEEN 3.7E-04 3.7E-04 3.7E-04 3.7E-04 3.7E-04 3.7E-04 3.7E-04 4.3E-04
CHILD 3.7E-04 3.7E-04 3.7E-04 3.7E-04 3.7E-04 3.7E-04 3.7E-04 4.3E-04
INFNT 3.7E-04 3.7E-04 3.7E-04 3.7E-04 3.7E-04 3.7E-04 3.7E-04 4.3E-04

VEGET PATHWAY, DIST GP= 1, 814. METERS WINDS TOWARD NNE
ADULT 9.2E-04 8.7E-04 7.4E-05 9.5E-04 8.8E-04 1.4E-03 8.5E-04 0.0E+00
TEEN 1.0E-03 9.9E-04 1.2E-04 1.1E-03 1.0E-03 1.4E-03 9.8E-04 0.0E+00
CHILD 1.5E-03 1.5E-03 2.7E-04 1.8E-03 1.6E-03 2.1E-03 1.5E-03 0.0E+00
INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

MEAT PATHWAY, DIST GP= 1, 7725. METERS WINDS TOWARD NNE
ADULT 4.3E-06 4.3E-06 1.6E-07 4.4E-06 4.2E-06 5.5E-06 4.1E-06 0.0E+00
TEEN 2.5E-06 2.5E-06 1.4E-07 2.6E-06 2.5E-06 3.5E-06 2.5E-06 0.0E+00
CHILD 3.0E-06 3.0E-06 2.5E-07 3.2E-06 3.0E-06 4.5E-06 3.0E-06 0.0E+00
INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

COW PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD NNE
ADULT 3.0E-05 2.5E-05 4.7E-06 3.2E-05 2.8E-05 1.5E-04 2.6E-05 0.0E+00
TEEN 3.7E-05 3.3E-05 8.5E-06 4.5E-05 3.8E-05 2.3E-04 3.4E-05 0.0E+00
CHILD 5.5E-05 5.2E-05 2.0E-05 7.2E-05 6.0E-05 4.4E-04 5.4E-05 0.0E+00
INFNT 8.2E-05 7.8E-05 3.3E-05 1.2E-04 9.1E-05 1.0E-03 8.2E-05 0.0E+00

GOAT PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD NNE
ADULT 6.4E-05 5.1E-05 1.4E-05 7.1E-05 5.8E-05 2.0E-04 5.3E-05 0.0E+00
TEEN 7.9E-05 6.7E-05 2.4E-05 1.0E-04 7.9E-05 3.0E-04 7.1E-05 0.0E+00
CHILD 1.1E-04 1.0E-04 5.9E-05 1.6E-04 1.3E-04 5.7E-04 1.1E-04 0.0E+00
INFNT 1.7E-04 1.6E-04 9.5E-05 2.8E-04 1.9E-04 1.3E-03 1.7E-04 0.0E+00

INHAL PATHWAY, DIST GP= 1, 660. METERS WINDS TOWARD NNE
ADULT 6.4E-04 6.4E-04 1.4E-06 6.4E-04 6.4E-04 7.3E-04 6.5E-04 0.0E+00
TEEN 6.4E-04 6.4E-04 1.9E-06 6.5E-04 6.5E-04 7.6E-04 6.6E-04 0.0E+00
CHILD 5.7E-04 5.7E-04 2.6E-06 5.7E-04 5.7E-04 7.0E-04 5.8E-04 0.0E+00
INFNT 3.3E-04 3.3E-04 1.7E-06 3.3E-04 3.3E-04 4.5E-04 3.3E-04 0.0E+00

SUBTOTALS (NO PLUME)

ADULT 2.0E-03 2.0E-03 4.6E-04 2.1E-03 2.0E-03 2.8E-03 2.0E-03 4.3E-04
TEEN 2.2E-03 2.1E-03 5.2E-04 2.3E-03 2.2E-03 3.1E-03 2.1E-03 4.3E-04
CHILD 2.7E-03 2.6E-03 7.3E-04 3.0E-03 2.7E-03 4.2E-03 2.6E-03 4.3E-04
INFNT 9.5E-04 9.4E-04 5.0E-04 1.1E-03 9.8E-04 3.1E-03 9.6E-04 4.3E-04

TOTALS

ADULT 3.4E-03 3.3E-03 1.8E-03 3.4E-03 3.3E-03 4.2E-03 3.3E-03 3.8E-03
TEEN 3.5E-03 3.4E-03 1.9E-03 3.6E-03 3.5E-03 4.4E-03 3.5E-03 3.8E-03
CHILD 4.0E-03 3.9E-03 2.1E-03 4.3E-03 4.1E-03 5.6E-03 4.0E-03 3.8E-03
INFNT 2.3E-03 2.3E-03 1.8E-03 2.4E-03 2.3E-03 4.5E-03 2.3E-03 3.8E-03

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT

FOR DATES 95 1 1 1 THRU 95 33124

T.BODY GI-TRCT BONE LIVER KIDNEY THYRD LUNG SKIN

PLUME PATHWAY, DIST GP= 1, 943. METERS WINDS TOWARD NE
 ADULT 6.0E-04 6.0E-04 6.0E-04 6.0E-04 6.0E-04 6.0E-04 6.2E-04 1.4E-03
 TEEN 6.0E-04 6.0E-04 6.0E-04 6.0E-04 6.0E-04 6.0E-04 6.2E-04 1.4E-03
 CHILD 6.0E-04 6.0E-04 6.0E-04 6.0E-04 6.0E-04 6.0E-04 6.2E-04 1.4E-03
 INFNT 6.0E-04 6.0E-04 6.0E-04 6.0E-04 6.0E-04 6.0E-04 6.2E-04 1.4E-03

GROUND PATHWAY, DIST GP= 1, 943. METERS WINDS TOWARD NE
 ADULT 1.1E-04 1.1E-04 1.1E-04 1.1E-04 1.1E-04 1.1E-04 1.1E-04 1.3E-04
 TEEN 1.1E-04 1.1E-04 1.1E-04 1.1E-04 1.1E-04 1.1E-04 1.1E-04 1.3E-04
 CHILD 1.1E-04 1.1E-04 1.1E-04 1.1E-04 1.1E-04 1.1E-04 1.1E-04 1.3E-04
 INFNT 1.1E-04 1.1E-04 1.1E-04 1.1E-04 1.1E-04 1.1E-04 1.1E-04 1.3E-04

VEGET PATHWAY, DIST GP= 1, 1052. METERS WINDS TOWARD NE
 ADULT 5.2E-04 4.9E-04 3.1E-05 5.3E-04 5.0E-04 7.7E-04 4.9E-04 0.0E+00
 TEEN 5.8E-04 5.6E-04 4.8E-05 6.2E-04 5.8E-04 7.9E-04 5.7E-04 0.0E+00
 CHILD 8.8E-04 8.7E-04 1.1E-04 9.7E-04 9.0E-04 1.2E-03 8.7E-04 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

MEAT PATHWAY, DIST GP= 1, 7725. METERS WINDS TOWARD NE
 ADULT 3.6E-06 3.5E-06 1.0E-07 3.6E-06 3.5E-06 4.6E-06 3.5E-06 0.0E+00
 TEEN 2.1E-06 2.1E-06 8.6E-08 2.2E-06 2.1E-06 2.9E-06 2.1E-06 0.0E+00
 CHILD 2.5E-06 2.5E-06 1.6E-07 2.7E-06 2.5E-06 3.7E-06 2.5E-06 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

COW PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD NE
 ADULT 2.4E-05 2.1E-05 3.0E-06 2.5E-05 2.3E-05 1.2E-04 2.1E-05 0.0E+00
 TEEN 3.0E-05 2.8E-05 5.4E-06 3.5E-05 3.1E-05 1.9E-04 2.8E-05 0.0E+00
 CHILD 4.6E-05 4.4E-05 1.3E-05 5.6E-05 4.9E-05 3.7E-04 4.5E-05 0.0E+00
 INFNT 6.9E-05 6.6E-05 2.1E-05 9.2E-05 7.5E-05 8.5E-04 6.8E-05 0.0E+00

GOAT PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD NE
 ADULT 5.1E-05 4.3E-05 8.6E-06 5.5E-05 4.8E-05 1.7E-04 4.4E-05 0.0E+00
 TEEN 6.4E-05 5.6E-05 1.6E-05 7.8E-05 6.4E-05 2.5E-04 5.9E-05 0.0E+00
 CHILD 9.4E-05 8.8E-05 3.7E-05 1.3E-04 1.0E-04 4.8E-04 9.2E-05 0.0E+00
 INFNT 1.4E-04 1.3E-04 6.0E-05 2.1E-04 1.6E-04 1.1E-03 1.4E-04 0.0E+00

INHAL PATHWAY, DIST GP= 1, 943. METERS WINDS TOWARD NE
 ADULT 3.2E-04 3.2E-04 7.8E-07 3.2E-04 3.2E-04 3.7E-04 3.2E-04 0.0E+00
 TEEN 3.2E-04 3.2E-04 1.1E-06 3.2E-04 3.2E-04 3.9E-04 3.3E-04 0.0E+00
 CHILD 2.8E-04 2.8E-04 1.5E-06 2.8E-04 2.8E-04 3.6E-04 2.9E-04 0.0E+00
 INFNT 1.6E-04 1.6E-04 9.4E-07 1.6E-04 1.6E-04 2.4E-04 1.7E-04 0.0E+00

SUBTOTALS (NO PLUME)
 ADULT 1.0E-03 9.9E-04 1.5E-04 1.0E-03 1.0E-03 1.5E-03 9.9E-04 1.3E-04
 TEEN 1.1E-03 1.1E-03 1.8E-04 1.2E-03 1.1E-03 1.7E-03 1.1E-03 1.3E-04
 CHILD 1.4E-03 1.4E-03 2.7E-04 1.6E-03 1.4E-03 2.5E-03 1.4E-03 1.3E-04
 INFNT 4.8E-04 4.7E-04 1.9E-04 5.7E-04 5.0E-04 2.3E-03 4.8E-04 1.3E-04

TOTALS
 ADULT 1.6E-03 1.6E-03 7.6E-04 1.6E-03 1.6E-03 2.1E-03 1.6E-03 1.5E-03
 TEEN 1.7E-03 1.7E-03 7.8E-04 1.8E-03 1.7E-03 2.3E-03 1.7E-03 1.5E-03
 CHILD 2.0E-03 2.0E-03 8.8E-04 2.2E-03 2.0E-03 3.1E-03 2.0E-03 1.5E-03
 INFNT 1.1E-03 1.1E-03 7.9E-04 1.2E-03 1.1E-03 2.9E-03 1.1E-03 1.5E-03

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT

FOR DATES 95 1 1 1 THRU 95 33124

T.BODY GI-TRCT BONE LIVER KIDNEY THYRD LUNG SKIN

PLUME PATHWAY, DIST GP= 1, 1747. METERS WINDS TOWARD ENE
 ADULT 1.3E-04 1.3E-04 1.3E-04 1.3E-04 1.3E-04 1.3E-04 1.4E-04 3.0E-04
 TEEN 1.3E-04 1.3E-04 1.3E-04 1.3E-04 1.3E-04 1.3E-04 1.4E-04 3.0E-04
 CHILD 1.3E-04 1.3E-04 1.3E-04 1.3E-04 1.3E-04 1.3E-04 1.4E-04 3.0E-04
 INFNT 1.3E-04 1.3E-04 1.3E-04 1.3E-04 1.3E-04 1.3E-04 1.4E-04 3.0E-04

GROUND PATHWAY, DIST GP= 1, 1747. METERS WINDS TOWARD ENE
 ADULT 4.9E-05 4.9E-05 4.9E-05 4.9E-05 4.9E-05 4.9E-05 4.9E-05 5.7E-05
 TEEN 4.9E-05 4.9E-05 4.9E-05 4.9E-05 4.9E-05 4.9E-05 4.9E-05 5.7E-05
 CHILD 4.9E-05 4.9E-05 4.9E-05 4.9E-05 4.9E-05 4.9E-05 4.9E-05 5.7E-05
 INFNT 4.9E-05 4.9E-05 4.9E-05 4.9E-05 4.9E-05 4.9E-05 4.9E-05 5.7E-05

VEGET PATHWAY, DIST GP= 1, 1852. METERS WINDS TOWARD ENE
 ADULT 1.2E-04 1.1E-04 1.4E-05 1.3E-04 1.2E-04 2.3E-04 1.1E-04 0.0E+00
 TEEN 1.4E-04 1.3E-04 2.2E-05 1.6E-04 1.3E-04 2.2E-04 1.3E-04 0.0E+00
 CHILD 2.0E-04 1.9E-04 5.2E-05 2.4E-04 2.1E-04 3.4E-04 2.0E-04 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

MEAT PATHWAY, DIST GP= 1, 3862. METERS WINDS TOWARD ENE
 ADULT 5.4E-06 5.3E-06 4.4E-07 5.6E-06 5.1E-06 9.3E-06 5.0E-06 0.0E+00
 TEEN 3.1E-06 3.1E-06 3.6E-07 3.5E-06 3.1E-06 6.1E-06 3.0E-06 0.0E+00
 CHILD 3.7E-06 3.6E-06 6.6E-07 4.2E-06 3.8E-06 8.3E-06 3.6E-06 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

COW PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD ENE
 ADULT 1.4E-05 1.1E-05 3.5E-06 1.6E-05 1.3E-05 1.2E-04 1.1E-05 0.0E+00
 TEEN 1.7E-05 1.4E-05 6.4E-06 2.3E-05 1.8E-05 1.9E-04 1.5E-05 0.0E+00
 CHILD 2.4E-05 2.2E-05 1.5E-05 3.7E-05 2.8E-05 3.7E-04 2.3E-05 0.0E+00
 INFNT 3.6E-05 3.3E-05 2.5E-05 6.3E-05 4.3E-05 8.8E-04 3.6E-05 0.0E+00

GOAT PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD ENE
 ADULT 3.1E-05 2.2E-05 1.0E-05 3.6E-05 2.7E-05 1.5E-04 2.3E-05 0.0E+00
 TEEN 3.8E-05 2.8E-05 1.8E-05 5.4E-05 3.8E-05 2.4E-04 3.1E-05 0.0E+00
 CHILD 5.1E-05 4.4E-05 4.4E-05 8.9E-05 6.0E-05 4.6E-04 4.9E-05 0.0E+00
 INFNT 7.5E-05 6.7E-05 7.1E-05 1.5E-04 9.3E-05 1.1E-03 7.6E-05 0.0E+00

INHAL PATHWAY, DIST GP= 1, 1747. METERS WINDS TOWARD ENE
 ADULT 6.6E-05 6.6E-05 1.4E-07 6.6E-05 6.6E-05 7.5E-05 6.6E-05 0.0E+00
 TEEN 6.6E-05 6.6E-05 1.9E-07 6.6E-05 6.6E-05 7.8E-05 6.7E-05 0.0E+00
 CHILD 5.9E-05 5.8E-05 2.6E-07 5.9E-05 5.9E-05 7.2E-05 5.9E-05 0.0E+00
 INFNT 3.4E-05 3.4E-05 1.6E-07 3.4E-05 3.4E-05 4.6E-05 3.4E-05 0.0E+00

SUBTOTALS (NO PLUME)

ADULT 2.9E-04 2.6E-04 7.7E-05 3.0E-04 2.8E-04 6.4E-04 2.6E-04 5.7E-05
 TEEN 3.1E-04 2.9E-04 9.6E-05 3.5E-04 3.1E-04 7.8E-04 2.9E-04 5.7E-05
 CHILD 3.9E-04 3.7E-04 1.6E-04 4.8E-04 4.1E-04 1.3E-03 3.8E-04 5.7E-05
 INFNT 1.9E-04 1.8E-04 1.4E-04 3.0E-04 2.2E-04 2.1E-03 2.0E-04 5.7E-05

TOTALS

ADULT 4.2E-04 4.0E-04 2.1E-04 4.3E-04 4.1E-04 7.7E-04 4.0E-04 3.6E-04
 TEEN 4.4E-04 4.2E-04 2.3E-04 4.8E-04 4.4E-04 9.2E-04 4.3E-04 3.6E-04
 CHILD 5.2E-04 5.0E-04 2.9E-04 6.1E-04 5.4E-04 1.4E-03 5.2E-04 3.6E-04
 INFNT 3.3E-04 3.2E-04 2.8E-04 4.3E-04 3.5E-04 2.2E-03 3.3E-04 3.6E-04

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT

FOR DATES 95 1 1 1 THRU 95 33124

T.BODY GI-TRCT BONE LIVER KIDNEY THYRD LUNG SKIN

PLUME PATHWAY, DIST GP= 1, 1716. METERS WINDS TOWARD E
 ADULT 4.5E-04 4.5E-04 4.5E-04 4.5E-04 4.5E-04 4.5E-04 4.6E-04 1.0E-03
 TEEN 4.5E-04 4.5E-04 4.5E-04 4.5E-04 4.5E-04 4.5E-04 4.6E-04 1.0E-03
 CHILD 4.5E-04 4.5E-04 4.5E-04 4.5E-04 4.5E-04 4.5E-04 4.6E-04 1.0E-03
 INFNT 4.5E-04 4.5E-04 4.5E-04 4.5E-04 4.5E-04 4.5E-04 4.6E-04 1.0E-03

GROUND PATHWAY, DIST GP= 1, 1716. METERS WINDS TOWARD E
 ADULT 9.5E-05 9.5E-05 9.5E-05 9.5E-05 9.5E-05 9.5E-05 9.5E-05 1.1E-04
 TEEN 9.5E-05 9.5E-05 9.5E-05 9.5E-05 9.5E-05 9.5E-05 9.5E-05 1.1E-04
 CHILD 9.5E-05 9.5E-05 9.5E-05 9.5E-05 9.5E-05 9.5E-05 9.5E-05 1.1E-04
 INFNT 9.5E-05 9.5E-05 9.5E-05 9.5E-05 9.5E-05 9.5E-05 9.5E-05 1.1E-04

VEGET PATHWAY, DIST GP= 1, 1705. METERS WINDS TOWARD E
 ADULT 4.2E-04 4.0E-04 3.4E-05 4.4E-04 4.1E-04 7.2E-04 3.9E-04 0.0E+00
 TEEN 4.7E-04 4.5E-04 5.3E-05 5.2E-04 4.7E-04 7.2E-04 4.5E-04 0.0E+00
 CHILD 7.1E-04 6.9E-04 1.2E-04 8.1E-04 7.3E-04 1.1E-03 7.0E-04 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

MEAT PATHWAY, DIST GP= 1, 6810. METERS WINDS TOWARD E
 ADULT 6.7E-06 6.6E-06 3.2E-07 6.8E-06 6.5E-06 1.0E-05 6.4E-06 0.0E+00
 TEEN 3.9E-06 3.9E-06 2.6E-07 4.2E-06 3.9E-06 6.5E-06 3.8E-06 0.0E+00
 CHILD 4.7E-06 4.6E-06 4.8E-07 5.1E-06 4.7E-06 8.6E-06 4.6E-06 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

COW PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD E
 ADULT 4.1E-05 3.4E-05 7.4E-06 4.4E-05 3.8E-05 3.0E-04 3.4E-05 0.0E+00
 TEEN 5.1E-05 4.4E-05 1.3E-05 6.2E-05 5.2E-05 4.7E-04 4.6E-05 0.0E+00
 CHILD 7.5E-05 6.9E-05 3.2E-05 1.0E-04 8.3E-05 9.1E-04 7.2E-05 0.0E+00
 INFNT 1.1E-04 1.0E-04 5.3E-05 1.7E-04 1.3E-04 2.1E-03 1.1E-04 0.0E+00

GOAT PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD E
 ADULT 8.9E-05 6.9E-05 2.1E-05 9.9E-05 8.0E-05 3.9E-04 7.1E-05 0.0E+00
 TEEN 1.1E-04 9.0E-05 3.8E-05 1.4E-04 1.1E-04 6.0E-04 9.6E-05 0.0E+00
 CHILD 1.6E-04 1.4E-04 9.2E-05 2.3E-04 1.7E-04 1.1E-03 1.5E-04 0.0E+00
 INFNT 2.3E-04 2.1E-04 1.5E-04 4.0E-04 2.7E-04 2.7E-03 2.3E-04 0.0E+00

INHAL PATHWAY, DIST GP= 1, 1716. METERS WINDS TOWARD E
 ADULT 2.1E-04 2.1E-04 4.0E-07 2.1E-04 2.1E-04 2.4E-04 2.2E-04 0.0E+00
 TEEN 2.1E-04 2.1E-04 5.5E-07 2.2E-04 2.1E-04 2.5E-04 2.2E-04 0.0E+00
 CHILD 1.9E-04 1.9E-04 7.4E-07 1.9E-04 1.9E-04 2.3E-04 1.9E-04 0.0E+00
 INFNT 1.1E-04 1.1E-04 4.8E-07 1.1E-04 1.1E-04 1.5E-04 1.1E-04 0.0E+00

SUBTOTALS (NO PLUME)
 ADULT 8.7E-04 8.1E-04 1.6E-04 9.0E-04 8.4E-04 1.8E-03 8.2E-04 1.1E-04
 TEEN 9.5E-04 9.0E-04 2.0E-04 1.0E-03 9.5E-04 2.1E-03 9.1E-04 1.1E-04
 CHILD 1.2E-03 1.2E-03 3.4E-04 1.4E-03 1.3E-03 3.5E-03 1.2E-03 1.1E-04
 INFNT 5.5E-04 5.2E-04 3.0E-04 7.7E-04 6.0E-04 5.0E-03 5.5E-04 1.1E-04

TOTALS
 ADULT 1.3E-03 1.3E-03 6.1E-04 1.4E-03 1.3E-03 2.2E-03 1.3E-03 1.1E-03
 TEEN 1.4E-03 1.4E-03 6.6E-04 1.5E-03 1.4E-03 2.6E-03 1.4E-03 1.1E-03
 CHILD 1.7E-03 1.6E-03 8.0E-04 1.9E-03 1.7E-03 3.9E-03 1.7E-03 1.1E-03
 INFNT 1.0E-03 9.8E-04 7.5E-04 1.2E-03 1.1E-03 5.5E-03 1.0E-03 1.1E-03

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT

FOR DATES 95 1 1 1 THRU 95 33124

T.BODY GI-TRCT BONE LIVER KIDNEY THYRD LUNG SKIN

PLUME PATHWAY, DIST GP= 1, 1643. METERS WINDS TOWARD ESE

ADULT	5.7E-04	5.7E-04	5.7E-04	5.7E-04	5.7E-04	5.7E-04	5.9E-04	1.7E-03
TEEN	5.7E-04	5.7E-04	5.7E-04	5.7E-04	5.7E-04	5.7E-04	5.9E-04	1.7E-03
CHILD	5.7E-04	5.7E-04	5.7E-04	5.7E-04	5.7E-04	5.7E-04	5.9E-04	1.7E-03
INFNT	5.7E-04	5.7E-04	5.7E-04	5.7E-04	5.7E-04	5.7E-04	5.9E-04	1.7E-03

GROUND PATHWAY, DIST GP= 1, 1643. METERS WINDS TOWARD ESE

ADULT	1.0E-04	1.0E-04	1.0E-04	1.0E-04	1.0E-04	1.0E-04	1.0E-04	1.2E-04
TEEN	1.0E-04	1.0E-04	1.0E-04	1.0E-04	1.0E-04	1.0E-04	1.0E-04	1.2E-04
CHILD	1.0E-04	1.0E-04	1.0E-04	1.0E-04	1.0E-04	1.0E-04	1.0E-04	1.2E-04
INFNT	1.0E-04	1.0E-04	1.0E-04	1.0E-04	1.0E-04	1.0E-04	1.0E-04	1.2E-04

VEGET PATHWAY, DIST GP= 1, 1628. METERS WINDS TOWARD ESE

ADULT	5.4E-04	5.1E-04	3.6E-05	5.5E-04	5.2E-04	8.4E-04	5.1E-04	0.0E+00
TEEN	6.0E-04	5.8E-04	5.7E-05	6.5E-04	6.0E-04	8.6E-04	5.8E-04	0.0E+00
CHILD	9.1E-04	8.9E-04	1.3E-04	1.0E-03	9.3E-04	1.3E-03	9.0E-04	0.0E+00
INFNT	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

MEAT PATHWAY, DIST GP= 1, 2434. METERS WINDS TOWARD ESE

ADULT	4.1E-05	4.0E-05	1.9E-06	4.2E-05	4.0E-05	6.0E-05	3.9E-05	0.0E+00
TEEN	2.4E-05	2.4E-05	1.5E-06	2.5E-05	2.4E-05	3.8E-05	2.3E-05	0.0E+00
CHILD	2.9E-05	2.8E-05	2.8E-06	3.1E-05	2.9E-05	5.1E-05	2.8E-05	0.0E+00
INFNT	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

COW PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD ESE

ADULT	4.8E-05	4.1E-05	7.4E-06	5.2E-05	4.6E-05	3.0E-04	4.2E-05	0.0E+00
TEEN	6.0E-05	5.4E-05	1.3E-05	7.2E-05	6.2E-05	4.6E-04	5.6E-05	0.0E+00
CHILD	9.0E-05	8.5E-05	3.2E-05	1.2E-04	9.8E-05	8.9E-04	8.8E-05	0.0E+00
INFNT	1.3E-04	1.3E-04	5.2E-05	1.9E-04	1.5E-04	2.1E-03	1.3E-04	0.0E+00

GOAT PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD ESE

ADULT	1.0E-04	8.4E-05	2.1E-05	1.1E-04	9.5E-05	3.9E-04	8.7E-05	0.0E+00
TEEN	1.3E-04	1.1E-04	3.8E-05	1.6E-04	1.3E-04	6.0E-04	1.2E-04	0.0E+00
CHILD	1.9E-04	1.7E-04	9.2E-05	2.6E-04	2.0E-04	1.1E-03	1.8E-04	0.0E+00
INFNT	2.8E-04	2.6E-04	1.5E-04	4.4E-04	3.2E-04	2.6E-03	2.8E-04	0.0E+00

INHAL PATHWAY, DIST GP= 1, 1643. METERS WINDS TOWARD ESE

ADULT	2.7E-04	2.7E-04	5.2E-07	2.7E-04	2.7E-04	3.1E-04	2.8E-04	0.0E+00
TEEN	2.7E-04	2.7E-04	7.2E-07	2.8E-04	2.8E-04	3.2E-04	2.8E-04	0.0E+00
CHILD	2.4E-04	2.4E-04	9.7E-07	2.4E-04	2.4E-04	2.9E-04	2.5E-04	0.0E+00
INFNT	1.4E-04	1.4E-04	6.2E-07	1.4E-04	1.4E-04	1.8E-04	1.4E-04	0.0E+00

SUBTOTALS (NO PLUME)

ADULT	1.1E-03	1.1E-03	1.7E-04	1.1E-03	1.1E-03	2.0E-03	1.1E-03	1.2E-04
TEEN	1.2E-03	1.1E-03	2.2E-04	1.3E-03	1.2E-03	2.4E-03	1.2E-03	1.2E-04
CHILD	1.6E-03	1.5E-03	3.7E-04	1.8E-03	1.6E-03	3.8E-03	1.5E-03	1.2E-04
INFNT	6.6E-04	6.3E-04	3.1E-04	8.8E-04	7.1E-04	5.0E-03	6.6E-04	1.2E-04

TOTALS

ADULT	1.7E-03	1.6E-03	7.4E-04	1.7E-03	1.6E-03	2.6E-03	1.6E-03	1.8E-03
TEEN	1.8E-03	1.7E-03	7.9E-04	1.9E-03	1.8E-03	2.9E-03	1.8E-03	1.8E-03
CHILD	2.1E-03	2.1E-03	9.4E-04	2.4E-03	2.2E-03	4.4E-03	2.1E-03	1.8E-03
INFNT	1.2E-03	1.2E-03	8.8E-04	1.5E-03	1.3E-03	5.6E-03	1.3E-03	1.8E-03

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT

FOR DATES 95 1 1 1 THRU 95 33124

T.BODY GI-TRCT BONE LIVER KIDNEY THYRD LUNG SKIN

PLUME PATHWAY, DIST GP= 1, 1136. METERS WINDS TOWARD SE
 ADULT 1.0E-03 1.0E-03 1.0E-03 1.0E-03 1.0E-03 1.0E-03 1.0E-03 2.2E-03
 TEEN 1.0E-03 1.0E-03 1.0E-03 1.0E-03 1.0E-03 1.0E-03 1.0E-03 2.2E-03
 CHILD 1.0E-03 1.0E-03 1.0E-03 1.0E-03 1.0E-03 1.0E-03 1.0E-03 2.2E-03
 INFNT 1.0E-03 1.0E-03 1.0E-03 1.0E-03 1.0E-03 1.0E-03 1.0E-03 2.2E-03

GROUND PATHWAY, DIST GP= 1, 1136. METERS WINDS TOWARD SE
 ADULT 1.8E-04 1.8E-04 1.8E-04 1.8E-04 1.8E-04 1.8E-04 1.8E-04 2.1E-04
 TEEN 1.8E-04 1.8E-04 1.8E-04 1.8E-04 1.8E-04 1.8E-04 1.8E-04 2.1E-04
 CHILD 1.8E-04 1.8E-04 1.8E-04 1.8E-04 1.8E-04 1.8E-04 1.8E-04 2.1E-04
 INFNT 1.8E-04 1.8E-04 1.8E-04 1.8E-04 1.8E-04 1.8E-04 1.8E-04 2.1E-04

VEGET PATHWAY, DIST GP= 1, 914. METERS WINDS TOWARD SE
 ADULT 1.4E-03 1.3E-03 7.6E-05 1.4E-03 1.3E-03 1.8E-03 1.3E-03 0.0E+00
 TEEN 1.5E-03 1.5E-03 1.2E-04 1.6E-03 1.5E-03 1.9E-03 1.5E-03 0.0E+00
 CHILD 2.3E-03 2.3E-03 2.8E-04 2.6E-03 2.4E-03 3.0E-03 2.3E-03 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

MEAT PATHWAY, DIST GP= 1, 4354. METERS WINDS TOWARD SE
 ADULT 1.8E-05 1.8E-05 5.9E-07 1.8E-05 1.7E-05 2.2E-05 1.7E-05 0.0E+00
 TEEN 1.0E-05 1.1E-05 4.8E-07 1.1E-05 1.0E-05 1.4E-05 1.0E-05 0.0E+00
 CHILD 1.3E-05 1.2E-05 8.9E-07 1.3E-05 1.3E-05 1.8E-05 1.2E-05 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

COW PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD SE
 ADULT 5.0E-05 4.5E-05 5.8E-06 5.3E-05 4.8E-05 2.0E-04 4.5E-05 0.0E+00
 TEEN 6.3E-05 5.8E-05 1.1E-05 7.3E-05 6.4E-05 3.1E-04 5.9E-05 0.0E+00
 CHILD 9.6E-05 9.1E-05 2.5E-05 1.2E-04 1.0E-04 5.9E-04 9.4E-05 0.0E+00
 INFNT 1.4E-04 1.4E-04 4.1E-05 1.9E-04 1.5E-04 1.3E-03 1.4E-04 0.0E+00

GOAT PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD SE
 ADULT 1.1E-04 9.1E-05 1.7E-05 1.1E-04 9.9E-05 2.8E-04 9.3E-05 0.0E+00
 TEEN 1.3E-04 1.2E-04 3.0E-05 1.6E-04 1.3E-04 4.2E-04 1.2E-04 0.0E+00
 CHILD 2.0E-04 1.9E-04 7.3E-05 2.6E-04 2.1E-04 7.8E-04 1.9E-04 0.0E+00
 INFNT 2.9E-04 2.8E-04 1.2E-04 4.3E-04 3.2E-04 1.7E-03 3.0E-04 0.0E+00

INHAL PATHWAY, DIST GP= 1, 1136. METERS WINDS TOWARD SE
 ADULT 5.1E-04 5.1E-04 1.0E-06 5.1E-04 5.1E-04 5.7E-04 5.2E-04 0.0E+00
 TEEN 5.1E-04 5.1E-04 1.5E-06 5.1E-04 5.1E-04 5.8E-04 5.2E-04 0.0E+00
 CHILD 4.5E-04 4.5E-04 2.0E-06 4.5E-04 4.5E-04 5.4E-04 4.6E-04 0.0E+00
 INFNT 2.6E-04 2.6E-04 1.2E-06 2.6E-04 2.6E-04 3.4E-04 2.7E-04 0.0E+00

SUBTOTALS (NO PLUME)

ADULT 2.2E-03 2.2E-03 2.8E-04 2.3E-03 2.2E-03 3.1E-03 2.1E-03 2.1E-04
 TEEN 2.4E-03 2.4E-03 3.4E-04 2.6E-03 2.4E-03 3.4E-03 2.4E-03 2.1E-04
 CHILD 3.3E-03 3.2E-03 5.6E-04 3.6E-03 3.3E-03 5.1E-03 3.2E-03 2.1E-04
 INFNT 8.8E-04 8.6E-04 3.4E-04 1.1E-03 9.2E-04 3.6E-03 8.9E-04 2.1E-04

TOTALS

ADULT 3.2E-03 3.2E-03 1.3E-03 3.3E-03 3.2E-03 4.1E-03 3.2E-03 2.5E-03
 TEEN 3.5E-03 3.4E-03 1.4E-03 3.6E-03 3.4E-03 4.5E-03 3.4E-03 2.5E-03
 CHILD 4.3E-03 4.2E-03 1.6E-03 4.6E-03 4.3E-03 6.1E-03 4.3E-03 2.5E-03
 INFNT 1.9E-03 1.9E-03 1.4E-03 2.1E-03 1.9E-03 4.6E-03 1.9E-03 2.5E-03

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT

FOR DATES 95 1 1 1 THRU 95 33124

T.BODY GI-TRCT BONE LIVER KIDNEY THYRD LUNG SKIN

PLUME PATHWAY, DIST GP= 1, 1507. METERS WINDS TOWARD SSE
 ADULT 4.8E-04 4.8E-04 4.8E-04 4.8E-04 4.8E-04 4.8E-04 4.9E-04 1.1E-03
 TEEN 4.8E-04 4.8E-04 4.8E-04 4.8E-04 4.8E-04 4.8E-04 4.9E-04 1.1E-03
 CHILD 4.8E-04 4.8E-04 4.8E-04 4.8E-04 4.8E-04 4.8E-04 4.9E-04 1.1E-03
 INFNT 4.8E-04 4.8E-04 4.8E-04 4.8E-04 4.8E-04 4.8E-04 4.9E-04 1.1E-03

GROUND PATHWAY, DIST GP= 1, 1507. METERS WINDS TOWARD SSE
 ADULT 1.9E-04 1.9E-04 1.9E-04 1.9E-04 1.9E-04 1.9E-04 1.9E-04 2.2E-04
 TEEN 1.9E-04 1.9E-04 1.9E-04 1.9E-04 1.9E-04 1.9E-04 1.9E-04 2.2E-04
 CHILD 1.9E-04 1.9E-04 1.9E-04 1.9E-04 1.9E-04 1.9E-04 1.9E-04 2.2E-04
 INFNT 1.9E-04 1.9E-04 1.9E-04 1.9E-04 1.9E-04 1.9E-04 1.9E-04 2.2E-04

VEGET PATHWAY, DIST GP= 1, 1093. METERS WINDS TOWARD SSE
 ADULT 9.6E-04 8.9E-04 9.3E-05 1.0E-03 9.1E-04 1.5E-03 8.8E-04 0.0E+00
 TEEN 1.1E-03 1.0E-03 1.5E-04 1.2E-03 1.1E-03 1.5E-03 1.0E-03 0.0E+00
 CHILD 1.6E-03 1.5E-03 3.4E-04 1.9E-03 1.6E-03 2.3E-03 1.6E-03 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

MEAT PATHWAY, DIST GP= 1, 1093. METERS WINDS TOWARD SSE
 ADULT 1.3E-04 1.3E-04 9.3E-06 1.4E-04 1.3E-04 2.0E-04 1.3E-04 0.0E+00
 TEEN 7.9E-05 7.9E-05 7.7E-06 8.5E-05 7.8E-05 1.3E-04 7.5E-05 0.0E+00
 CHILD 9.3E-05 9.2E-05 1.4E-05 1.0E-04 9.4E-05 1.7E-04 9.1E-05 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

COW PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD SSE
 ADULT 4.8E-05 3.9E-05 9.6E-06 5.3E-05 4.4E-05 2.9E-04 4.0E-05 0.0E+00
 TEEN 6.0E-05 5.1E-05 1.7E-05 7.5E-05 6.0E-05 4.5E-04 5.3E-05 0.0E+00
 CHILD 8.7E-05 8.0E-05 4.1E-05 1.2E-04 9.6E-05 8.6E-04 8.4E-05 0.0E+00
 INFNT 1.3E-04 1.2E-04 6.7E-05 2.0E-04 1.5E-04 2.0E-03 1.3E-04 0.0E+00

GOAT PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD SSE
 ADULT 1.1E-04 8.0E-05 2.8E-05 1.2E-04 9.4E-05 3.8E-04 8.3E-05 0.0E+00
 TEEN 1.3E-04 1.0E-04 5.0E-05 1.7E-04 1.3E-04 5.8E-04 1.1E-04 0.0E+00
 CHILD 1.8E-04 1.6E-04 1.2E-04 2.8E-04 2.0E-04 1.1E-03 1.7E-04 0.0E+00
 INFNT 2.7E-04 2.5E-04 1.9E-04 4.8E-04 3.2E-04 2.5E-03 2.7E-04 0.0E+00

INHAL PATHWAY, DIST GP= 1, 1507. METERS WINDS TOWARD SSE
 ADULT 2.9E-04 2.9E-04 8.0E-07 2.9E-04 2.9E-04 3.3E-04 3.0E-04 0.0E+00
 TEEN 2.9E-04 2.9E-04 1.1E-06 2.9E-04 2.9E-04 3.4E-04 3.0E-04 0.0E+00
 CHILD 2.6E-04 2.6E-04 1.5E-06 2.6E-04 2.6E-04 3.2E-04 2.7E-04 0.0E+00
 INFNT 1.5E-04 1.5E-04 9.4E-07 1.5E-04 1.5E-04 2.0E-04 1.5E-04 0.0E+00

SUBTOTALS (NO PLUME)

ADULT 1.7E-03 1.6E-03 3.3E-04 1.8E-03 1.7E-03 2.9E-03 1.6E-03 2.2E-04
 TEEN 1.8E-03 1.7E-03 4.1E-04 2.0E-03 1.8E-03 3.2E-03 1.7E-03 2.2E-04
 CHILD 2.4E-03 2.3E-03 7.1E-04 2.8E-03 2.5E-03 5.0E-03 2.4E-03 2.2E-04
 INFNT 7.4E-04 7.1E-04 4.5E-04 1.0E-03 8.0E-04 4.9E-03 7.4E-04 2.2E-04

TOTALS

ADULT 2.2E-03 2.1E-03 8.1E-04 2.3E-03 2.1E-03 3.4E-03 2.1E-03 1.3E-03
 TEEN 2.3E-03 2.2E-03 8.9E-04 2.5E-03 2.3E-03 3.7E-03 2.2E-03 1.3E-03
 CHILD 2.9E-03 2.8E-03 1.2E-03 3.3E-03 3.0E-03 5.5E-03 2.9E-03 1.3E-03
 INFNT 1.2E-03 1.2E-03 9.3E-04 1.5E-03 1.3E-03 5.4E-03 1.2E-03 1.3E-03

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT

FOR DATES 95 1 1 1 THRU 95 33124

T.BODY GI-TRCT BONE LIVER KIDNEY THYRD LUNG SKIN

PLUME PATHWAY, DIST GP= 1, 1026. METERS WINDS TOWARD S
 ADULT 9.7E-04 9.7E-04 9.7E-04 9.7E-04 9.7E-04 9.7E-04 9.9E-04 2.2E-03
 TEEN 9.7E-04 9.7E-04 9.7E-04 9.7E-04 9.7E-04 9.7E-04 9.9E-04 2.2E-03
 CHILD 9.7E-04 9.7E-04 9.7E-04 9.7E-04 9.7E-04 9.7E-04 9.9E-04 2.2E-03
 INFNT 9.7E-04 9.7E-04 9.7E-04 9.7E-04 9.7E-04 9.7E-04 9.9E-04 2.2E-03

GROUND PATHWAY, DIST GP= 1, 1026. METERS WINDS TOWARD S
 ADULT 2.7E-04 2.7E-04 2.7E-04 2.7E-04 2.7E-04 2.7E-04 2.7E-04 3.1E-04
 TEEN 2.7E-04 2.7E-04 2.7E-04 2.7E-04 2.7E-04 2.7E-04 2.7E-04 3.1E-04
 CHILD 2.7E-04 2.7E-04 2.7E-04 2.7E-04 2.7E-04 2.7E-04 2.7E-04 3.1E-04
 INFNT 2.7E-04 2.7E-04 2.7E-04 2.7E-04 2.7E-04 2.7E-04 2.7E-04 3.1E-04

VEGET PATHWAY, DIST GP= 1, 863. METERS WINDS TOWARD S
 ADULT 1.2E-03 1.1E-03 1.1E-04 1.3E-03 1.2E-03 2.0E-03 1.1E-03 0.0E+00
 TEEN 1.4E-03 1.3E-03 1.7E-04 1.5E-03 1.4E-03 2.0E-03 1.3E-03 0.0E+00
 CHILD 2.0E-03 2.0E-03 4.1E-04 2.4E-03 2.1E-03 3.1E-03 2.0E-03 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

MEAT PATHWAY, DIST GP= 1, 6115. METERS WINDS TOWARD S
 ADULT 8.0E-06 7.9E-06 4.1E-07 8.2E-06 7.8E-06 1.2E-05 7.6E-06 0.0E+00
 TEEN 4.7E-06 4.7E-06 3.4E-07 5.0E-06 4.7E-06 7.4E-06 4.6E-06 0.0E+00
 CHILD 5.6E-06 5.5E-06 6.2E-07 6.1E-06 5.7E-06 9.8E-06 5.5E-06 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

COW PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD S
 ADULT 4.1E-05 3.4E-05 7.8E-06 4.5E-05 3.8E-05 2.7E-04 3.5E-05 0.0E+00
 TEEN 5.1E-05 4.5E-05 1.4E-05 6.4E-05 5.2E-05 4.2E-04 4.6E-05 0.0E+00
 CHILD 7.6E-05 7.0E-05 3.4E-05 1.0E-04 8.3E-05 8.1E-04 7.3E-05 0.0E+00
 INFNT 1.1E-04 1.1E-04 5.5E-05 1.7E-04 1.3E-04 1.9E-03 1.1E-04 0.0E+00

GOAT PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD S
 ADULT 9.1E-05 7.0E-05 2.2E-05 1.0E-04 8.1E-05 3.5E-04 7.2E-05 0.0E+00
 TEEN 1.1E-04 9.1E-05 4.0E-05 1.5E-04 1.1E-04 5.4E-04 9.7E-05 0.0E+00
 CHILD 1.6E-04 1.4E-04 9.7E-05 2.4E-04 1.8E-04 1.0E-03 1.5E-04 0.0E+00
 INFNT 2.3E-04 2.2E-04 1.6E-04 4.1E-04 2.7E-04 2.4E-03 2.4E-04 0.0E+00

INHAL PATHWAY, DIST GP= 1, 1026. METERS WINDS TOWARD S
 ADULT 4.7E-04 4.7E-04 9.7E-07 4.7E-04 4.7E-04 5.4E-04 4.8E-04 0.0E+00
 TEEN 4.7E-04 4.7E-04 1.4E-06 4.7E-04 4.7E-04 5.6E-04 4.8E-04 0.0E+00
 CHILD 4.2E-04 4.2E-04 1.8E-06 4.2E-04 4.2E-04 5.2E-04 4.3E-04 0.0E+00
 INFNT 2.4E-04 2.4E-04 1.2E-06 2.4E-04 2.4E-04 3.3E-04 2.4E-04 0.0E+00

SUBTOTALS (NO PLUME)
 ADULT 2.1E-03 2.0E-03 4.1E-04 2.2E-03 2.0E-03 3.5E-03 2.0E-03 3.1E-04
 TEEN 2.3E-03 2.2E-03 5.0E-04 2.5E-03 2.3E-03 3.8E-03 2.2E-03 3.1E-04
 CHILD 3.0E-03 2.9E-03 8.1E-04 3.4E-03 3.1E-03 5.7E-03 2.9E-03 3.1E-04
 INFNT 8.5E-04 8.3E-04 4.8E-04 1.1E-03 9.1E-04 4.9E-03 8.6E-04 3.1E-04

TOTALS
 ADULT 3.1E-03 3.0E-03 1.4E-03 3.1E-03 3.0E-03 4.4E-03 3.0E-03 2.5E-03
 TEEN 3.2E-03 3.2E-03 1.5E-03 3.4E-03 3.2E-03 4.8E-03 3.2E-03 2.5E-03
 CHILD 3.9E-03 3.9E-03 1.8E-03 4.4E-03 4.0E-03 6.7E-03 3.9E-03 2.5E-03
 INFNT 1.8E-03 1.8E-03 1.5E-03 2.1E-03 1.9E-03 5.9E-03 1.9E-03 2.5E-03

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT

FOR DATES 95 1 1 1 THRU 95 33124

T.BODY GI-TRCT BONE LIVER KIDNEY THYRD LUNG SKIN

PLUME PATHWAY, DIST GP= 1, 942. METERS WINDS TOWARD SSW
 ADULT 4.3E-04 4.3E-04 4.3E-04 4.3E-04 4.3E-04 4.3E-04 4.4E-04 9.6E-04
 TEEN 4.3E-04 4.3E-04 4.3E-04 4.3E-04 4.3E-04 4.3E-04 4.4E-04 9.6E-04
 CHILD 4.3E-04 4.3E-04 4.3E-04 4.3E-04 4.3E-04 4.3E-04 4.4E-04 9.6E-04
 INFNT 4.3E-04 4.3E-04 4.3E-04 4.3E-04 4.3E-04 4.3E-04 4.4E-04 9.6E-04

GROUND PATHWAY, DIST GP= 1, 942. METERS WINDS TOWARD SSW
 ADULT 6.8E-05 6.8E-05 6.8E-05 6.8E-05 6.8E-05 6.8E-05 6.8E-05 7.9E-05
 TEEN 6.8E-05 6.8E-05 6.8E-05 6.8E-05 6.8E-05 6.8E-05 6.8E-05 7.9E-05
 CHILD 6.8E-05 6.8E-05 6.8E-05 6.8E-05 6.8E-05 6.8E-05 6.8E-05 7.9E-05
 INFNT 6.8E-05 6.8E-05 6.8E-05 6.8E-05 6.8E-05 6.8E-05 6.8E-05 7.9E-05

VEGET PATHWAY, DIST GP= 1, 770. METERS WINDS TOWARD SSW
 ADULT 5.3E-04 5.1E-04 3.3E-05 5.5E-04 5.2E-04 8.2E-04 5.0E-04 0.0E+00
 TEEN 6.0E-04 5.8E-04 5.2E-05 6.5E-04 6.0E-04 8.4E-04 5.8E-04 0.0E+00
 CHILD 9.1E-04 8.9E-04 1.2E-04 1.0E-03 9.3E-04 1.3E-03 9.0E-04 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

MEAT PATHWAY, DIST GP= 1, 8045. METERS WINDS TOWARD SSW
 ADULT 2.0E-06 2.0E-06 6.3E-08 2.0E-06 2.0E-06 2.7E-06 1.9E-06 0.0E+00
 TEEN 1.2E-06 1.2E-06 5.2E-08 1.2E-06 1.2E-06 1.7E-06 1.2E-06 0.0E+00
 CHILD 1.4E-06 1.4E-06 9.5E-08 1.5E-06 1.4E-06 2.2E-06 1.4E-06 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

COW PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD SSW
 ADULT 1.5E-05 1.3E-05 1.9E-06 1.6E-05 1.4E-05 8.2E-05 1.3E-05 0.0E+00
 TEEN 1.9E-05 1.7E-05 3.5E-06 2.2E-05 1.9E-05 1.3E-04 1.8E-05 0.0E+00
 CHILD 2.9E-05 2.7E-05 8.4E-06 3.6E-05 3.1E-05 2.4E-04 2.8E-05 0.0E+00
 INFNT 4.3E-05 4.1E-05 1.4E-05 5.8E-05 4.7E-05 5.7E-04 4.3E-05 0.0E+00

GOAT PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD SSW
 ADULT 3.2E-05 2.7E-05 5.5E-06 3.5E-05 3.0E-05 1.1E-04 2.8E-05 0.0E+00
 TEEN 4.0E-05 3.5E-05 1.0E-05 4.9E-05 4.0E-05 1.7E-04 3.7E-05 0.0E+00
 CHILD 5.9E-05 5.5E-05 2.4E-05 7.9E-05 6.4E-05 3.1E-04 5.8E-05 0.0E+00
 INFNT 8.8E-05 8.4E-05 3.9E-05 1.3E-04 9.8E-05 7.2E-04 8.9E-05 0.0E+00

INHAL PATHWAY, DIST GP= 1, 942. METERS WINDS TOWARD SSW
 ADULT 2.0E-04 2.0E-04 4.1E-07 2.0E-04 2.0E-04 2.3E-04 2.1E-04 0.0E+00
 TEEN 2.1E-04 2.1E-04 5.7E-07 2.1E-04 2.1E-04 2.4E-04 2.1E-04 0.0E+00
 CHILD 1.8E-04 1.8E-04 7.7E-07 1.8E-04 1.8E-04 2.2E-04 1.8E-04 0.0E+00
 INFNT 1.0E-04 1.0E-04 4.9E-07 1.0E-04 1.0E-04 1.4E-04 1.1E-04 0.0E+00

SUBTOTALS (NO PLUME)

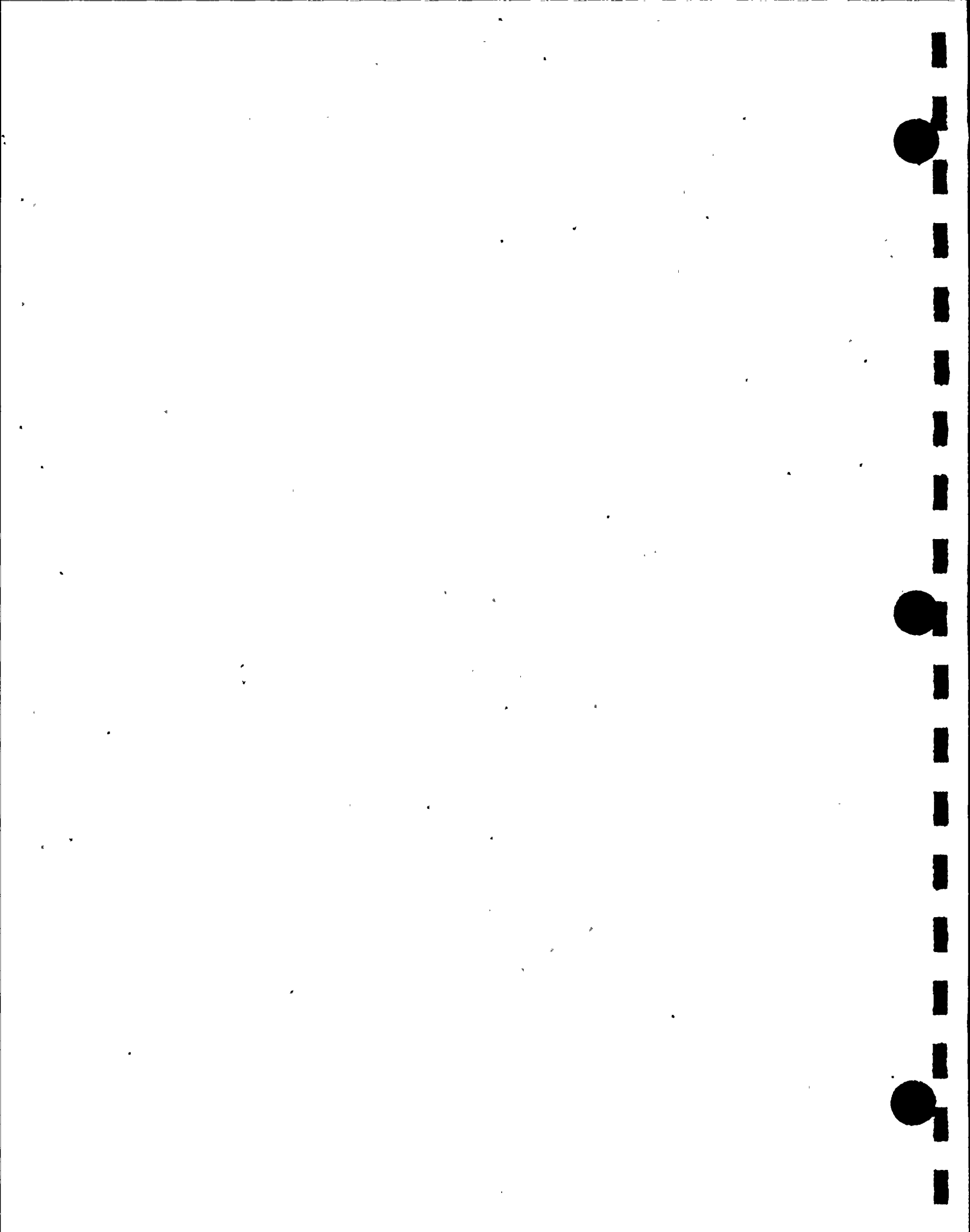
ADULT 8.5E-04 8.2E-04 1.1E-04 8.7E-04 8.3E-04 1.3E-03 8.2E-04 7.9E-05
 TEEN 9.3E-04 9.1E-04 1.3E-04 9.9E-04 9.3E-04 1.4E-03 9.1E-04 7.9E-05
 CHILD 1.2E-03 1.2E-03 2.2E-04 1.4E-03 1.3E-03 2.1E-03 1.2E-03 7.9E-05
 INFNT 3.0E-04 3.0E-04 1.2E-04 3.6E-04 3.2E-04 1.5E-03 3.1E-04 7.9E-05

TOTALS

ADULT 1.3E-03 1.3E-03 5.4E-04 1.3E-03 1.3E-03 1.7E-03 1.3E-03 1.0E-03
 TEEN 1.4E-03 1.3E-03 5.7E-04 1.4E-03 1.4E-03 1.9E-03 1.4E-03 1.0E-03
 CHILD 1.7E-03 1.7E-03 6.6E-04 1.8E-03 1.7E-03 2.6E-03 1.7E-03 1.0E-03
 INFNT 7.4E-04 7.3E-04 5.5E-04 7.9E-04 7.5E-04 1.9E-03 7.5E-04 1.0E-03

APPENDIX 1.3

Summary of Maximum Individual Doses
Second Quarter, 1995



SUMMARY OF MAXIMUM INDIVIDUAL DOSES

2nd Quarter 1995

EFFLUENT	APPLICABLE ORGAN	ESTIMATED DOSE (mrem)	AGE GROUP	LOCATION DIST DIR (M) (Toward)	% OF APPLICABLE LIMIT	LIMIT (mrem) QTR
Liquid	Total Body	1.04E-2	Child	Receptor 1	6.93E-1	1.5E+0
Liquid	Thyroid	1.66E-2	Child	Receptor 1	3.32E-1	5.0E+0
Noble Gas	Air Dose (Gamma-mrad)	6.50E-3		651 N	1.30E-1	5.0E+0
Noble Gas	Air dose (Beta-mrad)	1.18E-2		594 S	1.18E-1	1.0E+1
Iodines and Particulates	Thyroid	3.09E-2	Child	659 N	4.12E-1	7.5E+0

FOR RECEPTOR NUMBER 1

LAST LIQUID DOSE ACCUMULATIONS (MREM)
 START DATE 95 4 1 1 END DATE 95 63024

	BONE	LIVER	T.BODY	THYRD	KIDNEY	LUNG	GI-LLI	SKIN
WATER								
ADULT	1.8E-05	7.2E-03	7.2E-03	9.3E-03	7.2E-03	7.2E-03	7.2E-03	0.0E+00
TEEN	1.7E-05	5.1E-03	5.1E-03	6.9E-03	5.1E-03	5.1E-03	5.1E-03	0.0E+00
CHILD	5.1E-05	9.8E-03	9.7E-03	1.4E-02	9.8E-03	9.7E-03	9.7E-03	0.0E+00
INFANT	5.6E-05	9.6E-03	9.6E-03	1.7E-02	9.6E-03	9.6E-03	9.6E-03	0.0E+00
SHORE								
ADULT	8.2E-06	8.2E-06	8.2E-06	8.2E-06	8.2E-06	8.2E-06	8.2E-06	9.6E-06
TEEN	4.6E-05	4.6E-05	4.6E-05	4.6E-05	4.6E-05	4.6E-05	4.6E-05	5.4E-05
CHILD	9.6E-06	9.6E-06	9.6E-06	9.6E-06	9.6E-06	9.6E-06	9.6E-06	1.1E-05
INFANT	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
FW SPT FISH								
ADULT	1.6E-03	2.9E-03	2.2E-03	2.6E-03	1.3E-03	7.6E-04	1.4E-03	0.0E+00
TEEN	1.7E-03	2.9E-03	1.3E-03	2.4E-03	1.2E-03	7.0E-04	1.0E-03	0.0E+00
CHILD	2.1E-03	2.6E-03	6.9E-04	2.4E-03	1.0E-03	5.7E-04	5.4E-04	0.0E+00
INFANT	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
TOTAL								
ADULT	1.6E-03	1.0E-02	9.4E-03	1.2E-02	8.5E-03	8.0E-03	8.7E-03	9.6E-06
TEEN	1.8E-03	8.1E-03	6.5E-03	9.3E-03	6.4E-03	5.8E-03	6.2E-03	5.4E-05
CHILD	2.2E-03	1.2E-02	1.0E-02	1.7E-02	1.1E-02	1.0E-02	1.0E-02	1.1E-05
INFANT	5.6E-05	9.6E-03	9.6E-03	1.7E-02	9.6E-03	9.6E-03	9.6E-03	0.0E+00

DATES OF LAST AIR DOSE ACCUMULATION ARE FROM 95 4 1 1 0 TO 95 63024 0
DOSE ACCUMULATION FOR GAMMA MRAD

FOR RELEASE POINT 1

**DIRECTION FROM N

3.5236E-05	4.2685E-06	1.8933E-06	1.0765E-06	7.3412E-07
3.4623E-07	1.2231E-07	5.7205E-08	3.5070E-08	2.0617E-08

**DIRECTION FROM NNE

4.4818E-06	5.1855E-07	2.2792E-07	1.2910E-07	8.7008E-08
3.9793E-08	1.3479E-08	6.1381E-09	3.6837E-09	2.0915E-09

**DIRECTION FROM NE

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM ENE

2.7183E-04	2.6981E-05	1.4492E-05	9.3537E-06	6.8357E-06
3.6536E-06	1.5477E-06	7.8142E-07	5.0197E-07	3.2834E-07

**DIRECTION FROM E

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM ESE

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM SE

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM SSE

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM S

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM SSW

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM SW

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM WSW

1.3666E-05	1.5812E-06	6.9499E-07	3.9365E-07	2.6531E-07
1.2134E-07	4.1103E-08	1.8717E-08	1.1233E-08	6.3775E-09

**DIRECTION FROM W

3.8016E-06	1.8508E-07	1.1123E-07	7.9425E-08	6.1763E-08
3.7057E-08	1.8528E-08	1.1117E-08	7.9404E-09	5.5548E-09

**DIRECTION FROM WNW

1.1711E-05	1.6401E-06	7.4640E-07	4.2884E-07	3.0181E-07
1.5363E-07	5.9521E-08	2.9350E-08	1.8713E-08	1.1674E-08

**DIRECTION FROM NW

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM NNW

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

DISTANCES USED IN CALCULATIONS

594.0	2416.0	4020.0	5630.0	7240.0
12067.0	24135.0	40225.0	56315.0	80500.0

DATES OF LAST AIR DOSE ACCUMULATION ARE FROM 95 4 1 1 0 TO 95 63024 0
DOSE ACCUMULATION FOR GAMMA MRAD.

FOR RELEASE POINT 2

**DIRECTION FROM N

5.6107E-03	6.5115E-04	3.0175E-04	1.7751E-04	1.2402E-04
6.1566E-05	2.3613E-05	1.1620E-05	7.3914E-06	4.6150E-06

**DIRECTION FROM NNE

3.1750E-03	4.0870E-04	1.9072E-04	1.1239E-04	7.8624E-05
3.9154E-05	1.5128E-05	7.4903E-06	4.7856E-06	2.9794E-06

**DIRECTION FROM NE

4.4155E-03	5.1439E-04	2.5196E-04	1.5373E-04	1.0898E-04
5.5340E-05	2.2072E-05	1.0995E-05	7.0296E-06	4.4563E-06

**DIRECTION FROM ENE

6.9388E-03	7.5591E-04	3.8184E-04	2.3764E-04	1.7051E-04
8.8475E-05	3.6188E-05	1.8141E-05	1.1632E-05	7.4859E-06

**DIRECTION FROM E

9.7306E-03	1.0895E-03	5.5403E-04	3.4620E-04	2.4855E-04
1.2905E-04	5.3036E-05	2.6718E-05	1.7191E-05	1.1066E-05

**DIRECTION FROM ESE

9.4559E-03	1.0682E-03	5.3345E-04	3.2983E-04	2.3537E-04
1.2095E-04	4.9094E-05	2.4656E-05	1.5851E-05	1.0155E-05

**DIRECTION FROM SE

9.4579E-03	1.0554E-03	5.3677E-04	3.3572E-04	2.4060E-04
1.2442E-04	5.1017E-05	2.5702E-05	1.6540E-05	1.0633E-05

**DIRECTION FROM SSE

1.2551E-02	1.3355E-03	6.9645E-04	4.4202E-04	3.1985E-04
1.6823E-04	7.0188E-05	3.5454E-05	2.2824E-05	1.4807E-05

**DIRECTION FROM S

7.5065E-03	8.2415E-04	4.1828E-04	2.6129E-04	1.8759E-04
9.7447E-05	4.0062E-05	2.0191E-05	1.3001E-05	8.3847E-06

**DIRECTION FROM SSW

5.4101E-03	5.8494E-04	2.9941E-04	1.8787E-04	1.3522E-04
7.0498E-05	2.9051E-05	1.4597E-05	9.3697E-06	6.0473E-06

**DIRECTION FROM SW

4.1396E-03	5.1115E-04	2.4459E-04	1.4695E-04	1.0314E-04
5.1467E-05	2.0137E-05	1.0024E-05	6.4208E-06	4.0270E-06

**DIRECTION FROM WSW

4.0170E-03	4.7963E-04	2.2604E-04	1.3432E-04	9.4395E-05
4.7379E-05	1.8471E-05	9.1524E-06	5.8448E-06	3.6725E-06

**DIRECTION FROM W

4.8128E-03	5.5673E-04	2.6625E-04	1.6047E-04	1.1273E-04
5.6348E-05	2.2170E-05	1.1115E-05	7.1596E-06	4.5234E-06

**DIRECTION FROM WNW

4.4646E-03	5.2798E-04	2.5154E-04	1.5111E-04	1.0577E-04
5.2463E-05	2.0450E-05	1.0206E-05	6.5526E-06	4.1122E-06

**DIRECTION FROM NW

4.7947E-03	5.5153E-04	2.6742E-04	1.6255E-04	1.1480E-04
5.7931E-05	2.3056E-05	1.1582E-05	7.4600E-06	4.7335E-06

**DIRECTION FROM NNW

4.2984E-03	5.0184E-04	2.2995E-04	1.3421E-04	9.3499E-05
4.6225E-05	1.7602E-05	8.6615E-06	5.5131E-06	3.4296E-06

DISTANCES USED IN CALCULATIONS

594.0	2416.0	4020.0	5630.0	7240.0
12067.0	24135.0	40225.0	56315.0	80500.0

DATES OF LAST AIR DOSE ACCUMULATION ARE FROM 95 4 1 1 0 TO 95 63024 0
DOSE ACCUMULATION FOR BETA MRAD

FOR RELEASE POINT 1

**DIRECTION FROM N

2.2486E-03	2.6191E-04	1.1528E-04	6.5331E-05	4.4110E-05
2.0269E-05	6.9115E-06	3.1610E-06	1.9038E-06	1.0873E-06

**DIRECTION FROM NNE

4.0751E-05	4.7150E-06	2.0724E-06	1.1738E-06	7.9113E-07
3.6182E-07	1.2256E-07	5.5811E-08	3.3495E-08	1.9017E-08

**DIRECTION FROM NE

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM ENE

2.9258E-02	2.8559E-03	1.5475E-03	1.0042E-03	7.3501E-04
3.9364E-04	1.6731E-04	8.4543E-05	5.4322E-05	3.5590E-05

**DIRECTION FROM E

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM ESE

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM SE

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM SSE

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM S

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM SSW

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM SW

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM WSW

9.6020E-04	1.1110E-04	4.8831E-05	2.7658E-05	1.8641E-05
8.5255E-06	2.8879E-06	1.3151E-06	7.8922E-07	4.4809E-07

**DIRECTION FROM W

4.2194E-04	2.0543E-05	1.2346E-05	8.8154E-06	6.8551E-06
4.1129E-06	2.0564E-06	1.2338E-06	8.8131E-07	6.1653E-07

**DIRECTION FROM WNW

1.0648E-04	1.4912E-05	6.7867E-06	3.8993E-06	2.7443E-06
1.3969E-06	5.4120E-07	2.6686E-07	1.7015E-07	1.0614E-07

**DIRECTION FROM NW

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM NNW

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

DISTANCES USED IN CALCULATIONS

594.0	2416.0	4020.0	5630.0	7240.0
12067.0	24135.0	40225.0	56315.0	80500.0

DATES OF LAST AIR DOSE ACCUMULATION ARE FROM 95 4 1 1' 0 TO 95 63024 0
DOSE ACCUMULATION FOR BETA MRAD

FOR RELEASE POINT 2

**DIRECTION FROM N

9.5957E-03	1.1114E-03	5.1537E-04	3.0332E-04	2.1198E-04
1.0529E-04	4.0406E-05	1.9877E-05	1.2641E-05	7.8958E-06

**DIRECTION FROM NNE

5.6264E-03	7.2808E-04	3.4136E-04	2.0183E-04	1.4134E-04
7.0507E-05	2.7347E-05	1.3568E-05	8.6800E-06	5.4123E-06

**DIRECTION FROM NE

7.5296E-03	8.7089E-04	4.2659E-04	2.6027E-04	1.8456E-04
9.3773E-05	3.7390E-05	1.8604E-05	1.1883E-05	7.5341E-06

**DIRECTION FROM ENE

1.1359E-02	1.2271E-03	6.2152E-04	3.8751E-04	2.7821E-04
1.4447E-04	5.9151E-05	2.9647E-05	1.9003E-05	1.2237E-05

**DIRECTION FROM E

1.5219E-02	1.7032E-03	8.6883E-04	5.4396E-04	3.9085E-04
2.0323E-04	8.3700E-05	4.2206E-05	2.7171E-05	1.7504E-05

**DIRECTION FROM ESE

1.4387E-02	1.6301E-03	8.1024E-04	4.9947E-04	3.5594E-04
1.8251E-04	7.3849E-05	3.7055E-05	2.3817E-05	1.5244E-05

**DIRECTION FROM SE

1.5282E-02	1.7123E-03	8.7202E-04	5.4596E-04	3.9109E-04
2.0200E-04	8.2847E-05	4.1781E-05	2.6908E-05	1.7295E-05

**DIRECTION FROM SSE

2.0890E-02	2.2200E-03	1.1602E-03	7.3728E-04	5.3375E-04
2.8091E-04	1.1734E-04	5.9308E-05	3.8192E-05	2.4788E-05

**DIRECTION FROM S

1.1334E-02	1.2325E-03	6.2662E-04	3.9197E-04	2.8161E-04
1.4644E-04	6.0287E-05	3.0395E-05	1.9574E-05	1.2636E-05

**DIRECTION FROM SSW

8.8922E-03	9.4797E-04	4.8812E-04	3.0744E-04	2.2168E-04
1.1589E-04	4.7920E-05	2.4091E-05	1.5465E-05	1.0000E-05

**DIRECTION FROM SW

7.4001E-03	9.2277E-04	4.4152E-04	2.6516E-04	1.8614E-04
9.2915E-05	3.6370E-05	1.8113E-05	1.1607E-05	7.2772E-06

**DIRECTION FROM WSW

6.8901E-03	8.3334E-04	3.9099E-04	2.3148E-04	1.6255E-04
8.1521E-05	3.1696E-05	1.5688E-05	1.0014E-05	6.2812E-06

**DIRECTION FROM W

8.1769E-03	9.4949E-04	4.5629E-04	2.7591E-04	1.9395E-04
9.7019E-05	3.8287E-05	1.9233E-05	1.2406E-05	7.8478E-06

**DIRECTION FROM WNW

7.6076E-03	9.0311E-04	4.2696E-04	2.5511E-04	1.7815E-04
8.8001E-05	3.4072E-05	1.6959E-05	1.0874E-05	6.8034E-06

**DIRECTION FROM NW

8.4368E-03	9.7709E-04	4.7451E-04	2.8867E-04	2.0391E-04
1.0292E-04	4.0989E-05	2.0591E-05	1.3262E-05	8.4131E-06

**DIRECTION FROM NNW

6.9637E-03	8.1667E-04	3.7342E-04	2.1762E-04	1.5135E-04
7.4568E-05	2.8283E-05	1.3902E-05	8.8451E-06	5.4909E-06

DISTANCES USED IN CALCULATIONS

594.0	2416.0	4020.0	5630.0	7240.0
12067.0	24135.0	40225.0	56315.0	80500.0

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT

FOR DATES 95 4 1 1 THRU 95 63024

T.BODY GI-TRCT BONE LIVER KIDNEY THYRD LUNG SKIN

PLUME PATHWAY, DIST GP= 1, 659. METERS WINDS TOWARD N
 ADULT 3.8E-03 3.8E-03 3.8E-03 3.8E-03 3.8E-03 3.8E-03 3.9E-03 8.5E-03
 TEEN 3.8E-03 3.8E-03 3.8E-03 3.8E-03 3.8E-03 3.8E-03 3.9E-03 8.5E-03
 CHILD 3.8E-03 3.8E-03 3.8E-03 3.8E-03 3.8E-03 3.8E-03 3.9E-03 8.5E-03
 INFNT 3.8E-03 3.8E-03 3.8E-03 3.8E-03 3.8E-03 3.8E-03 3.9E-03 8.5E-03

GROUND PATHWAY, DIST GP= 1, 659. METERS WINDS TOWARD N
 ADULT 5.0E-04 5.0E-04 5.0E-04 5.0E-04 5.0E-04 5.0E-04 5.0E-04 5.9E-04
 TEEN 5.0E-04 5.0E-04 5.0E-04 5.0E-04 5.0E-04 5.0E-04 5.0E-04 5.9E-04
 CHILD 5.0E-04 5.0E-04 5.0E-04 5.0E-04 5.0E-04 5.0E-04 5.0E-04 5.9E-04
 INFNT 5.0E-04 5.0E-04 5.0E-04 5.0E-04 5.0E-04 5.0E-04 5.0E-04 5.9E-04

VEGET PATHWAY, DIST GP= 1, 8045. METERS WINDS TOWARD N
 ADULT 7.0E-05 6.5E-05 5.0E-06 7.2E-05 6.8E-05 2.1E-04 6.5E-05 0.0E+00
 TEEN 7.8E-05 7.4E-05 7.7E-06 8.5E-05 7.8E-05 2.0E-04 7.5E-05 0.0E+00
 CHILD 1.2E-04 1.1E-04 1.8E-05 1.3E-04 1.2E-04 3.0E-04 1.2E-04 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

MEAT PATHWAY, DIST GP= 1, 8045. METERS WINDS TOWARD N
 ADULT 9.8E-06 9.3E-06 5.1E-07 1.0E-05 9.6E-06 2.7E-05 9.4E-06 0.0E+00
 TEEN 5.8E-06 5.6E-06 4.2E-07 6.2E-06 5.8E-06 1.8E-05 5.6E-06 0.0E+00
 CHILD 6.9E-06 6.7E-06 7.7E-07 7.5E-06 7.0E-06 2.6E-05 6.8E-06 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

COW PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD N
 ADULT 7.2E-05 5.6E-05 1.7E-05 8.1E-05 7.1E-05 1.8E-03 5.7E-05 0.0E+00
 TEEN 9.0E-05 7.4E-05 3.2E-05 1.2E-04 1.0E-04 2.8E-03 7.6E-05 0.0E+00
 CHILD 1.3E-04 1.1E-04 7.6E-05 1.9E-04 1.6E-04 5.4E-03 1.2E-04 0.0E+00
 INFNT 2.0E-04 1.7E-04 1.3E-04 3.3E-04 2.5E-04 1.3E-02 1.8E-04 0.0E+00

GOAT PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD N
 ADULT 1.6E-04 1.1E-04 4.6E-05 1.8E-04 1.4E-04 2.2E-03 1.2E-04 0.0E+00
 TEEN 1.9E-04 1.5E-04 8.3E-05 2.7E-04 2.0E-04 3.4E-03 1.6E-04 0.0E+00
 CHILD 2.7E-04 2.3E-04 2.0E-04 4.4E-04 3.2E-04 6.6E-03 2.5E-04 0.0E+00
 INFNT 4.0E-04 3.5E-04 3.3E-04 7.6E-04 5.0E-04 1.6E-02 3.9E-04 0.0E+00

INHAL PATHWAY, DIST GP= 1, 659. METERS WINDS TOWARD N
 ADULT 1.4E-03 1.4E-03 2.1E-05 1.4E-03 1.4E-03 5.5E-03 1.4E-03 0.0E+00
 TEEN 1.4E-03 1.4E-03 2.9E-05 1.5E-03 1.5E-03 6.5E-03 1.4E-03 0.0E+00
 CHILD 1.3E-03 1.3E-03 3.9E-05 1.3E-03 1.3E-03 7.1E-03 1.3E-03 0.0E+00
 INFNT 7.3E-04 7.2E-04 2.7E-05 7.5E-04 7.4E-04 6.1E-03 7.2E-04 0.0E+00

SUBTOTALS (NO PLUME)

ADULT 2.2E-03 2.2E-03 5.9E-04 2.3E-03 2.2E-03 1.0E-02 2.2E-03 5.9E-04
 TEEN 2.3E-03 2.2E-03 6.6E-04 2.4E-03 2.3E-03 1.3E-02 2.2E-03 5.9E-04
 CHILD 2.3E-03 2.2E-03 8.4E-04 2.6E-03 2.4E-03 2.0E-02 2.2E-03 5.9E-04
 INFNT 1.8E-03 1.7E-03 9.9E-04 2.3E-03 2.0E-03 3.6E-02 1.8E-03 5.9E-04

TOTALS

ADULT 6.0E-03 5.9E-03 4.4E-03 6.0E-03 6.0E-03 1.4E-02 6.0E-03 9.1E-03
 TEEN 6.1E-03 6.0E-03 4.4E-03 6.2E-03 6.1E-03 1.7E-02 6.1E-03 9.1E-03
 CHILD 6.1E-03 6.0E-03 4.6E-03 6.3E-03 6.2E-03 2.4E-02 6.1E-03 9.1E-03
 INFNT 5.6E-03 5.5E-03 4.8E-03 6.1E-03 5.8E-03 3.9E-02 5.6E-03 9.1E-03

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT

FOR DATES 95 4 1 1 THRU 95 63024

T.BODY GI-TRCT BONE LIVER KIDNEY THYRD LUNG SKIN

PLUME PATHWAY, DIST GP= 1, 660. METERS WINDS TOWARD NNE
 ADULT 2.6E-03 2.6E-03 2.6E-03 2.6E-03 2.6E-03 2.6E-03 2.7E-03 6.2E-03
 TEEN 2.6E-03 2.6E-03 2.6E-03 2.6E-03 2.6E-03 2.6E-03 2.7E-03 6.2E-03
 CHILD 2.6E-03 2.6E-03 2.6E-03 2.6E-03 2.6E-03 2.6E-03 2.7E-03 6.2E-03
 INFNT 2.6E-03 2.6E-03 2.6E-03 2.6E-03 2.6E-03 2.6E-03 2.7E-03 6.2E-03

GROUND PATHWAY, DIST GP= 1, 660. METERS WINDS TOWARD NNE
 ADULT 3.1E-04 3.1E-04 3.1E-04 3.1E-04 3.1E-04 3.1E-04 3.1E-04 3.6E-04
 TEEN 3.1E-04 3.1E-04 3.1E-04 3.1E-04 3.1E-04 3.1E-04 3.1E-04 3.6E-04
 CHILD 3.1E-04 3.1E-04 3.1E-04 3.1E-04 3.1E-04 3.1E-04 3.1E-04 3.6E-04
 INFNT 3.1E-04 3.1E-04 3.1E-04 3.1E-04 3.1E-04 3.1E-04 3.1E-04 3.6E-04

VEGET PATHWAY, DIST GP= 1, 814. METERS WINDS TOWARD NNE
 ADULT 1.5E-03 1.4E-03 1.5E-04 1.6E-03 1.5E-03 5.4E-03 1.4E-03 0.0E+00
 TEEN 1.7E-03 1.6E-03 2.3E-04 1.9E-03 1.7E-03 4.9E-03 1.6E-03 0.0E+00
 CHILD 2.5E-03 2.4E-03 5.3E-04 3.0E-03 2.6E-03 7.5E-03 2.5E-03 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

MEAT PATHWAY, DIST GP= 1, 7725. METERS WINDS TOWARD NNE
 ADULT 7.8E-06 7.5E-06 3.3E-07 8.0E-06 7.7E-06 1.8E-05 7.6E-06 0.0E+00
 TEEN 4.6E-06 4.5E-06 2.7E-07 4.9E-06 4.6E-06 1.2E-05 4.5E-06 0.0E+00
 CHILD 5.5E-06 5.4E-06 5.0E-07 5.9E-06 5.6E-06 1.7E-05 5.5E-06 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

COW PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD NNE
 ADULT 5.2E-05 4.2E-05 1.0E-05 5.7E-05 5.1E-05 1.0E-03 4.3E-05 0.0E+00
 TEEN 6.5E-05 5.5E-05 1.9E-05 8.2E-05 7.1E-05 1.6E-03 5.7E-05 0.0E+00
 CHILD 9.7E-05 8.6E-05 4.5E-05 1.3E-04 1.1E-04 3.1E-03 9.0E-05 0.0E+00
 INFNT 1.4E-04 1.3E-04 7.7E-05 2.3E-04 1.8E-04 7.5E-03 1.4E-04 0.0E+00

GOAT PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD NNE
 ADULT 1.1E-04 8.6E-05 2.8E-05 1.3E-04 1.0E-04 1.2E-03 8.9E-05 0.0E+00
 TEEN 1.4E-04 1.1E-04 5.0E-05 1.8E-04 1.4E-04 1.9E-03 1.2E-04 0.0E+00
 CHILD 2.0E-04 1.7E-04 1.2E-04 3.0E-04 2.3E-04 3.8E-03 1.9E-04 0.0E+00
 INFNT 2.9E-04 2.7E-04 2.0E-04 5.1E-04 3.5E-04 9.1E-03 2.9E-04 0.0E+00

INHAL PATHWAY, DIST GP= 1, 660. METERS WINDS TOWARD NNE
 ADULT 1.1E-03 1.1E-03 1.3E-05 1.1E-03 1.1E-03 3.3E-03 1.1E-03 0.0E+00
 TEEN 1.1E-03 1.1E-03 1.8E-05 1.1E-03 1.1E-03 3.9E-03 1.1E-03 0.0E+00
 CHILD 9.6E-04 9.5E-04 2.4E-05 9.7E-04 9.7E-04 4.3E-03 9.5E-04 0.0E+00
 INFNT 5.5E-04 5.5E-04 1.6E-05 5.7E-04 5.6E-04 3.6E-03 5.5E-04 0.0E+00

SUBTOTALS (NO PLUME)

ADULT 3.1E-03 2.9E-03 5.0E-04 3.2E-03 3.0E-03 1.1E-02 2.9E-03 3.6E-04
 TEEN 3.3E-03 3.1E-03 6.2E-04 3.6E-03 3.3E-03 1.3E-02 3.2E-03 3.6E-04
 CHILD 4.1E-03 4.0E-03 1.0E-03 4.7E-03 4.3E-03 1.9E-02 4.0E-03 3.6E-04
 INFNT 1.3E-03 1.2E-03 6.0E-04 1.6E-03 1.4E-03 2.0E-02 1.3E-03 3.6E-04

TOTALS

ADULT 5.7E-03 5.5E-03 3.1E-03 5.8E-03 5.7E-03 1.4E-02 5.6E-03 6.5E-03
 TEEN 5.9E-03 5.8E-03 3.3E-03 6.2E-03 6.0E-03 1.5E-02 5.9E-03 6.5E-03
 CHILD 6.7E-03 6.6E-03 3.7E-03 7.3E-03 6.9E-03 2.2E-02 6.7E-03 6.5E-03
 INFNT 3.9E-03 3.9E-03 3.2E-03 4.2E-03 4.0E-03 2.3E-02 4.0E-03 6.5E-03

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT

FOR DATES 95 4 1 1 THRU 95 63024

T.BODY GI-TRCT BONE LIVER KIDNEY THYRD LUNG SKIN

PLUME PATHWAY, DIST GP= 1, 943. METERS WINDS TOWARD NE
 ADULT 1.1E-03 1.1E-03 1.1E-03 1.1E-03 1.1E-03 1.1E-03 1.2E-03 2.8E-03
 TEEN 1.1E-03 1.1E-03 1.1E-03 1.1E-03 1.1E-03 1.1E-03 1.2E-03 2.8E-03
 CHILD 1.1E-03 1.1E-03 1.1E-03 1.1E-03 1.1E-03 1.1E-03 1.2E-03 2.8E-03
 INFNT 1.1E-03 1.1E-03 1.1E-03 1.1E-03 1.1E-03 1.1E-03 1.2E-03 2.8E-03

GROUND PATHWAY, DIST GP= 1, 943. METERS WINDS TOWARD NE
 ADULT 2.3E-04 2.3E-04 2.3E-04 2.3E-04 2.3E-04 2.3E-04 2.3E-04 2.6E-04
 TEEN 2.3E-04 2.3E-04 2.3E-04 2.3E-04 2.3E-04 2.3E-04 2.3E-04 2.6E-04
 CHILD 2.3E-04 2.3E-04 2.3E-04 2.3E-04 2.3E-04 2.3E-04 2.3E-04 2.6E-04
 INFNT 2.3E-04 2.3E-04 2.3E-04 2.3E-04 2.3E-04 2.3E-04 2.3E-04 2.6E-04

VEGET PATHWAY, DIST GP= 1, 1052. METERS WINDS TOWARD NE
 ADULT 9.3E-04 8.0E-04 1.3E-04 9.9E-04 8.7E-04 3.7E-03 8.2E-04 0.0E+00
 TEEN 1.0E-03 9.2E-04 2.0E-04 1.2E-03 1.0E-03 3.3E-03 9.5E-04 0.0E+00
 CHILD 1.5E-03 1.4E-03 4.6E-04 1.9E-03 1.6E-03 5.1E-03 1.5E-03 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

MEAT PATHWAY, DIST GP= 1, 7725. METERS WINDS TOWARD NE
 ADULT 6.6E-06 6.2E-06 4.4E-07 6.8E-06 6.4E-06 1.8E-05 6.2E-06 0.0E+00
 TEEN 3.9E-06 3.7E-06 3.6E-07 4.2E-06 3.9E-06 1.2E-05 3.7E-06 0.0E+00
 CHILD 4.5E-06 4.4E-06 6.6E-07 5.1E-06 4.7E-06 1.7E-05 4.5E-06 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

COW PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD NE
 ADULT 5.0E-05 3.7E-05 1.4E-05 5.6E-05 4.7E-05 1.1E-03 3.8E-05 0.0E+00
 TEEN 6.1E-05 4.9E-05 2.4E-05 8.3E-05 6.7E-05 1.7E-03 5.1E-05 0.0E+00
 CHILD 8.8E-05 7.6E-05 5.9E-05 1.4E-04 1.1E-04 3.4E-03 8.0E-05 0.0E+00
 INFNT 1.3E-04 1.1E-04 9.8E-05 2.4E-04 1.7E-04 8.2E-03 1.2E-04 0.0E+00

GOAT PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD NE
 ADULT 1.1E-04 7.6E-05 3.6E-05 1.3E-04 9.8E-05 1.3E-03 7.9E-05 0.0E+00
 TEEN 1.3E-04 9.9E-05 6.6E-05 1.9E-04 1.4E-04 2.1E-03 1.1E-04 0.0E+00
 CHILD 1.8E-04 1.5E-04 1.6E-04 3.2E-04 2.2E-04 4.1E-03 1.7E-04 0.0E+00
 INFNT 2.7E-04 2.3E-04 2.6E-04 5.6E-04 3.4E-04 9.9E-03 2.6E-04 0.0E+00

INHAL PATHWAY, DIST GP= 1, 943. METERS WINDS TOWARD NE
 ADULT 5.2E-04 5.2E-04 4.3E-06 5.3E-04 5.3E-04 1.2E-03 5.2E-04 0.0E+00
 TEEN 5.3E-04 5.2E-04 6.0E-06 5.3E-04 5.3E-04 1.4E-03 5.2E-04 0.0E+00
 CHILD 4.7E-04 4.6E-04 8.1E-06 4.7E-04 4.7E-04 1.4E-03 4.6E-04 0.0E+00
 INFNT 2.7E-04 2.7E-04 5.5E-06 2.7E-04 2.7E-04 1.1E-03 2.7E-04 0.0E+00

SUBTOTALS (NO PLUME)
 ADULT 1.8E-03 1.7E-03 4.1E-04 1.9E-03 1.8E-03 7.6E-03 1.7E-03 2.6E-04
 TEEN 2.0E-03 1.8E-03 5.2E-04 2.2E-03 2.0E-03 8.7E-03 1.9E-03 2.6E-04
 CHILD 2.5E-03 2.3E-03 9.1E-04 3.0E-03 2.6E-03 1.4E-02 2.4E-03 2.6E-04
 INFNT 8.9E-04 8.4E-04 5.9E-04 1.3E-03 1.0E-03 1.9E-02 8.8E-04 2.6E-04

TOTALS
 ADULT 3.0E-03 2.8E-03 1.6E-03 3.1E-03 2.9E-03 8.7E-03 2.9E-03 3.1E-03
 TEEN 3.1E-03 3.0E-03 1.7E-03 3.4E-03 3.1E-03 9.9E-03 3.0E-03 3.1E-03
 CHILD 3.6E-03 3.5E-03 2.1E-03 4.2E-03 3.8E-03 1.5E-02 3.6E-03 3.1E-03
 INFNT 2.0E-03 2.0E-03 1.7E-03 2.4E-03 2.2E-03 2.1E-02 2.1E-03 3.1E-03

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT
FOR DATES 95 4 1 1 THRU 95 63024

T.BODY GI-TRCT BONE LIVER KIDNEY THYRD LUNG SKIN

PLUME PATHWAY, DIST GP= 1, 1747. METERS WINDS TOWARD ENE
ADULT 4.5E-04 4.5E-04 4.5E-04 4.5E-04 4.5E-04 4.5E-04 4.6E-04 1.2E-03
TEEN 4.5E-04 4.5E-04 4.5E-04 4.5E-04 4.5E-04 4.5E-04 4.6E-04 1.2E-03
CHILD 4.5E-04 4.5E-04 4.5E-04 4.5E-04 4.5E-04 4.5E-04 4.6E-04 1.2E-03
INFNT 4.5E-04 4.5E-04 4.5E-04 4.5E-04 4.5E-04 4.5E-04 4.6E-04 1.2E-03

GROUND PATHWAY, DIST GP= 1, 1747. METERS WINDS TOWARD ENE
ADULT 1.4E-04 1.4E-04 1.4E-04 1.4E-04 1.4E-04 1.4E-04 1.4E-04 1.7E-04
TEEN 1.4E-04 1.4E-04 1.4E-04 1.4E-04 1.4E-04 1.4E-04 1.4E-04 1.7E-04
CHILD 1.4E-04 1.4E-04 1.4E-04 1.4E-04 1.4E-04 1.4E-04 1.4E-04 1.7E-04
INFNT 1.4E-04 1.4E-04 1.4E-04 1.4E-04 1.4E-04 1.4E-04 1.4E-04 1.7E-04

VEGET PATHWAY, DIST GP= 1, 1852. METERS WINDS TOWARD ENE
ADULT 4.1E-04 3.3E-04 8.7E-05 4.5E-04 3.8E-04 2.2E-03 3.4E-04 0.0E+00
TEEN 4.4E-04 3.7E-04 1.4E-04 5.7E-04 4.4E-04 1.9E-03 4.0E-04 0.0E+00
CHILD 6.3E-04 5.8E-04 3.2E-04 9.0E-04 6.9E-04 2.9E-03 6.1E-04 0.0E+00
INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

MEAT PATHWAY, DIST GP= 1, 3862. METERS WINDS TOWARD ENE
ADULT 1.8E-05 1.6E-05 2.7E-06 2.0E-05 1.7E-05 8.5E-05 1.6E-05 0.0E+00
TEEN 1.0E-05 9.3E-06 2.3E-06 1.2E-05 1.1E-05 6.0E-05 9.6E-06 0.0E+00
CHILD 1.2E-05 1.1E-05 4.1E-06 1.5E-05 1.3E-05 8.7E-05 1.2E-05 0.0E+00
INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

COW PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD ENE
ADULT 5.7E-05 3.5E-05 2.4E-05 6.9E-05 5.3E-05 1.8E-03 3.7E-05 0.0E+00
TEEN 6.8E-05 4.6E-05 4.3E-05 1.1E-04 7.8E-05 2.8E-03 5.0E-05 0.0E+00
CHILD 9.2E-05 7.0E-05 1.0E-04 1.7E-04 1.3E-04 5.6E-03 7.9E-05 0.0E+00
INFNT 1.3E-04 1.1E-04 1.7E-04 3.2E-04 2.0E-04 1.4E-02 1.2E-04 0.0E+00

GOAT PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD ENE
ADULT 1.3E-04 7.1E-05 6.4E-05 1.6E-04 1.1E-04 2.2E-03 7.8E-05 0.0E+00
TEEN 1.5E-04 9.3E-05 1.2E-04 2.6E-04 1.6E-04 3.4E-03 1.1E-04 0.0E+00
CHILD 1.9E-04 1.4E-04 2.8E-04 4.3E-04 2.6E-04 6.8E-03 1.7E-04 0.0E+00
INFNT 2.7E-04 2.2E-04 4.5E-04 7.8E-04 4.1E-04 1.6E-02 2.7E-04 0.0E+00

INHAL PATHWAY, DIST GP= 1, 1747. METERS WINDS TOWARD ENE
ADULT 2.0E-04 2.0E-04 1.8E-06 2.0E-04 2.0E-04 5.0E-04 2.0E-04 0.0E+00
TEEN 2.0E-04 2.0E-04 2.5E-06 2.0E-04 2.0E-04 5.7E-04 2.0E-04 0.0E+00
CHILD 1.8E-04 1.7E-04 3.4E-06 1.8E-04 1.8E-04 6.1E-04 1.7E-04 0.0E+00
INFNT 1.0E-04 1.0E-04 2.3E-06 1.0E-04 1.0E-04 5.0E-04 1.0E-04 0.0E+00

SUBTOTALS (NO PLUME)

ADULT 9.6E-04 7.9E-04 3.2E-04 1.0E-03 9.0E-04 6.9E-03 8.1E-04 1.7E-04
TEEN 1.0E-03 8.6E-04 4.4E-04 1.3E-03 1.0E-03 9.0E-03 9.0E-04 1.7E-04
CHILD 1.2E-03 1.1E-03 8.5E-04 1.8E-03 1.4E-03 1.6E-02 1.2E-03 1.7E-04
INFNT 6.5E-04 5.7E-04 7.7E-04 1.3E-03 8.5E-04 3.1E-02 6.3E-04 1.7E-04

TOTALS

ADULT 1.4E-03 1.2E-03 7.7E-04 1.5E-03 1.3E-03 7.4E-03 1.3E-03 1.4E-03
TEEN 1.5E-03 1.3E-03 8.9E-04 1.7E-03 1.5E-03 9.4E-03 1.4E-03 1.4E-03
CHILD 1.7E-03 1.6E-03 1.3E-03 2.3E-03 1.9E-03 1.7E-02 1.6E-03 1.4E-03
INFNT 1.1E-03 1.0E-03 1.2E-03 1.8E-03 1.3E-03 3.1E-02 1.1E-03 1.4E-03

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT

FOR DATES 95 4 1 1 THRU 95 63024

T.BODY GI-TRCT BONE LIVER KIDNEY THYRD LUNG SKIN

PLUME PATHWAY, DIST GP= 1, 1716. METERS WINDS TOWARD E
 ADULT 5.4E-04 5.4E-04 5.4E-04 5.4E-04 5.4E-04 5.4E-04 5.6E-04 1.3E-03
 TEEN 5.4E-04 5.4E-04 5.4E-04 5.4E-04 5.4E-04 5.4E-04 5.6E-04 1.3E-03
 CHILD 5.4E-04 5.4E-04 5.4E-04 5.4E-04 5.4E-04 5.4E-04 5.6E-04 1.3E-03
 INFNT 5.4E-04 5.4E-04 5.4E-04 5.4E-04 5.4E-04 5.4E-04 5.6E-04 1.3E-03

GROUND PATHWAY, DIST GP= 1, 1716. METERS WINDS TOWARD E
 ADULT 1.5E-04 1.5E-04 1.5E-04 1.5E-04 1.5E-04 1.5E-04 1.5E-04 1.8E-04
 TEEN 1.5E-04 1.5E-04 1.5E-04 1.5E-04 1.5E-04 1.5E-04 1.5E-04 1.8E-04
 CHILD 1.5E-04 1.5E-04 1.5E-04 1.5E-04 1.5E-04 1.5E-04 1.5E-04 1.8E-04
 INFNT 1.5E-04 1.5E-04 1.5E-04 1.5E-04 1.5E-04 1.5E-04 1.5E-04 1.8E-04

VEGET PATHWAY, DIST GP= 1, 1705. METERS WINDS TOWARD E
 ADULT 5.5E-04 4.5E-04 1.0E-04 6.0E-04 5.0E-04 2.7E-03 4.6E-04 0.0E+00
 TEEN 5.9E-04 5.1E-04 1.6E-04 7.4E-04 5.9E-04 2.4E-03 5.4E-04 0.0E+00
 CHILD 8.5E-04 7.9E-04 3.7E-04 1.2E-03 9.2E-04 3.6E-03 8.3E-04 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

MEAT PATHWAY, DIST GP= 1, 6810. METERS WINDS TOWARD E
 ADULT 9.1E-06 8.2E-06 9.8E-07 9.6E-06 8.7E-06 3.3E-05 8.3E-06 0.0E+00
 TEEN 5.3E-06 4.9E-06 8.1E-07 6.0E-06 5.3E-06 2.3E-05 5.0E-06 0.0E+00
 CHILD 6.1E-06 5.9E-06 1.5E-06 7.4E-06 6.5E-06 3.3E-05 6.0E-06 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

COW PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD E
 ADULT 6.5E-05 4.3E-05 2.4E-05 7.7E-05 6.1E-05 1.9E-03 4.4E-05 0.0E+00
 TEEN 7.8E-05 5.6E-05 4.4E-05 1.2E-04 8.8E-05 2.9E-03 6.0E-05 0.0E+00
 CHILD 1.1E-04 8.6E-05 1.1E-04 1.9E-04 1.4E-04 5.8E-03 9.4E-05 0.0E+00
 INFNT 1.6E-04 1.3E-04 1.8E-04 3.5E-04 2.2E-04 1.4E-02 1.5E-04 0.0E+00

GOAT PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD E
 ADULT 1.5E-04 8.7E-05 6.6E-05 1.8E-04 1.3E-04 2.3E-03 9.3E-05 0.0E+00
 TEEN 1.7E-04 1.1E-04 1.2E-04 2.8E-04 1.8E-04 3.6E-03 1.3E-04 0.0E+00
 CHILD 2.3E-04 1.7E-04 2.8E-04 4.7E-04 2.9E-04 7.0E-03 2.0E-04 0.0E+00
 INFNT 3.2E-04 2.6E-04 4.6E-04 8.4E-04 4.6E-04 1.7E-02 3.2E-04 0.0E+00

INHAL PATHWAY, DIST GP= 1, 1716. METERS WINDS TOWARD E
 ADULT 2.5E-04 2.4E-04 2.2E-06 2.5E-04 2.5E-04 6.2E-04 2.4E-04 0.0E+00
 TEEN 2.5E-04 2.5E-04 3.1E-06 2.5E-04 2.5E-04 7.2E-04 2.4E-04 0.0E+00
 CHILD 2.2E-04 2.2E-04 4.2E-06 2.2E-04 2.2E-04 7.6E-04 2.2E-04 0.0E+00
 INFNT 1.3E-04 1.2E-04 2.9E-06 1.3E-04 1.3E-04 6.2E-04 1.2E-04 0.0E+00

SUBTOTALS (NO PLUME)
 ADULT 1.2E-03 9.8E-04 3.5E-04 1.3E-03 1.1E-03 7.6E-03 1.0E-03 1.8E-04
 TEEN 1.2E-03 1.1E-03 4.8E-04 1.5E-03 1.3E-03 9.8E-03 1.1E-03 1.8E-04
 CHILD 1.6E-03 1.4E-03 9.2E-04 2.2E-03 1.7E-03 1.7E-02 1.5E-03 1.8E-04
 INFNT 7.6E-04 6.7E-04 8.0E-04 1.5E-03 9.6E-04 3.2E-02 7.4E-04 1.8E-04

TOTALS
 ADULT 1.7E-03 1.5E-03 8.9E-04 1.8E-03 1.6E-03 8.2E-03 1.6E-03 1.5E-03
 TEEN 1.8E-03 1.6E-03 1.0E-03 2.1E-03 1.8E-03 1.0E-02 1.7E-03 1.5E-03
 CHILD 2.1E-03 2.0E-03 1.5E-03 2.7E-03 2.3E-03 1.8E-02 2.1E-03 1.5E-03
 INFNT 1.3E-03 1.2E-03 1.3E-03 2.0E-03 1.5E-03 3.2E-02 1.3E-03 1.5E-03

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT

FOR DATES 95 4 1 1 THRU 95 63024

T.BODY GI-TRCT BONE LIVER KIDNEY THYRD LUNG SKIN

PLUME PATHWAY, DIST GP= 1, 1643. METERS WINDS TOWARD ESE
 ADULT 5.5E-04 5.5E-04 5.5E-04 5.5E-04 5.5E-04 5.5E-04 5.7E-04 1.3E-03
 TEEN 5.5E-04 5.5E-04 5.5E-04 5.5E-04 5.5E-04 5.5E-04 5.7E-04 1.3E-03
 CHILD 5.5E-04 5.5E-04 5.5E-04 5.5E-04 5.5E-04 5.5E-04 5.7E-04 1.3E-03
 INFNT 5.5E-04 5.5E-04 5.5E-04 5.5E-04 5.5E-04 5.5E-04 5.7E-04 1.3E-03

GROUND PATHWAY, DIST GP= 1, 1643. METERS WINDS TOWARD ESE
 ADULT 1.3E-04 1.3E-04 1.3E-04 1.3E-04 1.3E-04 1.3E-04 1.3E-04 1.5E-04
 TEEN 1.3E-04 1.3E-04 1.3E-04 1.3E-04 1.3E-04 1.3E-04 1.3E-04 1.5E-04
 CHILD 1.3E-04 1.3E-04 1.3E-04 1.3E-04 1.3E-04 1.3E-04 1.3E-04 1.5E-04
 INFNT 1.3E-04 1.3E-04 1.3E-04 1.3E-04 1.3E-04 1.3E-04 1.3E-04 1.5E-04

VEGET PATHWAY, DIST GP= 1, 1628. METERS WINDS TOWARD ESE
 ADULT 5.3E-04 4.5E-04 8.9E-05 5.7E-04 4.9E-04 2.4E-03 4.6E-04 0.0E+00
 TEEN 5.8E-04 5.1E-04 1.4E-04 7.1E-04 5.8E-04 2.1E-03 5.3E-04 0.0E+00
 CHILD 8.4E-04 7.8E-04 3.2E-04 1.1E-03 9.0E-04 3.3E-03 8.2E-04 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

MEAT PATHWAY, DIST GP= 1, 2434. METERS WINDS TOWARD ESE
 ADULT 3.9E-05 3.5E-05 4.6E-06 4.1E-05 3.7E-05 1.6E-04 3.5E-05 0.0E+00
 TEEN 2.3E-05 2.1E-05 3.8E-06 2.6E-05 2.3E-05 1.1E-04 2.1E-05 0.0E+00
 CHILD 2.6E-05 2.5E-05 6.9E-06 3.2E-05 2.8E-05 1.6E-04 2.6E-05 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

COW PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD ESE
 ADULT 5.7E-05 4.0E-05 2.0E-05 6.7E-05 5.4E-05 1.5E-03 4.1E-05 0.0E+00
 TEEN 7.0E-05 5.2E-05 3.5E-05 1.0E-04 7.8E-05 2.4E-03 5.5E-05 0.0E+00
 CHILD 9.8E-05 8.0E-05 8.4E-05 1.7E-04 1.3E-04 4.8E-03 8.6E-05 0.0E+00
 INFNT 1.4E-04 1.2E-04 1.4E-04 2.9E-04 2.0E-04 1.2E-02 1.3E-04 0.0E+00

GOAT PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD ESE
 ADULT 1.3E-04 8.0E-05 5.3E-05 1.6E-04 1.1E-04 1.9E-03 8.5E-05 0.0E+00
 TEEN 1.5E-04 1.0E-04 9.5E-05 2.4E-04 1.6E-04 2.9E-03 1.2E-04 0.0E+00
 CHILD 2.0E-04 1.6E-04 2.3E-04 4.0E-04 2.6E-04 5.8E-03 1.8E-04 0.0E+00
 INFNT 2.9E-04 2.4E-04 3.7E-04 7.1E-04 4.0E-04 1.4E-02 2.9E-04 0.0E+00

INHAL PATHWAY, DIST GP= 1, 1643. METERS WINDS TOWARD ESE
 ADULT 2.4E-04 2.4E-04 2.3E-06 2.4E-04 2.4E-04 6.3E-04 2.4E-04 0.0E+00
 TEEN 2.4E-04 2.4E-04 3.2E-06 2.5E-04 2.5E-04 7.3E-04 2.4E-04 0.0E+00
 CHILD 2.2E-04 2.2E-04 4.3E-06 2.2E-04 2.2E-04 7.7E-04 2.2E-04 0.0E+00
 INFNT 1.2E-04 1.2E-04 3.0E-06 1.3E-04 1.3E-04 6.3E-04 1.2E-04 0.0E+00

SUBTOTALS (NO PLUME)
 ADULT 1.1E-03 9.7E-04 3.0E-04 1.2E-03 1.1E-03 6.8E-03 9.9E-04 1.5E-04
 TEEN 1.2E-03 1.1E-03 4.0E-04 1.5E-03 1.2E-03 8.5E-03 1.1E-03 1.5E-04
 CHILD 1.5E-03 1.4E-03 7.7E-04 2.1E-03 1.7E-03 1.5E-02 1.5E-03 1.5E-04
 INFNT 6.9E-04 6.2E-04 6.5E-04 1.3E-03 8.6E-04 2.6E-02 6.7E-04 1.5E-04

TOTALS
 ADULT 1.7E-03 1.5E-03 8.5E-04 1.8E-03 1.6E-03 7.3E-03 1.6E-03 1.5E-03
 TEEN 1.8E-03 1.6E-03 9.6E-04 2.0E-03 1.8E-03 9.0E-03 1.7E-03 1.5E-03
 CHILD 2.1E-03 1.9E-03 1.3E-03 2.6E-03 2.2E-03 1.5E-02 2.0E-03 1.5E-03
 INFNT 1.2E-03 1.2E-03 1.2E-03 1.8E-03 1.4E-03 2.7E-02 1.2E-03 1.5E-03

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT

FOR DATES 95 4 1 1 THRU 95 63024

T.BODY GI-TRCT BONE LIVER KIDNEY THYRD LUNG SKIN

PLUME PATHWAY, DIST GP= 1, 1136. METERS WINDS TOWARD SE
 ADULT 1.0E-03 1.0E-03 1.0E-03 1.0E-03 1.0E-03 1.0E-03 1.1E-03 2.5E-03
 TEEN 1.0E-03 1.0E-03 1.0E-03 1.0E-03 1.0E-03 1.0E-03 1.1E-03 2.5E-03
 CHILD 1.0E-03 1.0E-03 1.0E-03 1.0E-03 1.0E-03 1.0E-03 1.1E-03 2.5E-03
 INFNT 1.0E-03 1.0E-03 1.0E-03 1.0E-03 1.0E-03 1.0E-03 1.1E-03 2.5E-03

GROUND PATHWAY, DIST GP= 1, 1136. METERS WINDS TOWARD SE
 ADULT 2.2E-04 2.2E-04 2.2E-04 2.2E-04 2.2E-04 2.2E-04 2.2E-04 2.5E-04
 TEEN 2.2E-04 2.2E-04 2.2E-04 2.2E-04 2.2E-04 2.2E-04 2.2E-04 2.5E-04
 CHILD 2.2E-04 2.2E-04 2.2E-04 2.2E-04 2.2E-04 2.2E-04 2.2E-04 2.5E-04
 INFNT 2.2E-04 2.2E-04 2.2E-04 2.2E-04 2.2E-04 2.2E-04 2.2E-04 2.5E-04

VEGET PATHWAY, DIST GP= 1, 914. METERS WINDS TOWARD SE
 ADULT 1.3E-03 1.1E-03 2.1E-04 1.4E-03 1.2E-03 6.3E-03 1.2E-03 0.0E+00
 TEEN 1.5E-03 1.3E-03 3.3E-04 1.8E-03 1.5E-03 5.5E-03 1.3E-03 0.0E+00
 CHILD 2.1E-03 2.0E-03 7.6E-04 2.8E-03 2.3E-03 8.5E-03 2.1E-03 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

MEAT PATHWAY, DIST GP= 1, 4354. METERS WINDS TOWARD SE
 ADULT 1.7E-05 1.6E-05 1.6E-06 1.8E-05 1.7E-05 6.3E-05 1.6E-05 0.0E+00
 TEEN 1.0E-05 9.3E-06 1.4E-06 1.1E-05 1.0E-05 4.4E-05 9.5E-06 0.0E+00
 CHILD 1.2E-05 1.1E-05 2.5E-06 1.4E-05 1.2E-05 6.3E-05 1.1E-05 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

COW PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD SE
 ADULT 5.8E-05 4.2E-05 1.8E-05 6.7E-05 5.5E-05 1.5E-03 4.2E-05 0.0E+00
 TEEN 7.1E-05 5.4E-05 3.2E-05 9.9E-05 7.9E-05 2.4E-03 5.7E-05 0.0E+00
 CHILD 1.0E-04 8.4E-05 7.8E-05 1.6E-04 1.3E-04 4.7E-03 9.0E-05 0.0E+00
 INFNT 1.5E-04 1.3E-04 1.3E-04 2.9E-04 2.0E-04 1.1E-02 1.4E-04 0.0E+00

GOAT PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD SE
 ADULT 1.3E-04 8.4E-05 4.8E-05 1.5E-04 1.1E-04 1.9E-03 8.9E-05 0.0E+00
 TEEN 1.6E-04 1.1E-04 8.7E-05 2.3E-04 1.6E-04 2.9E-03 1.2E-04 0.0E+00
 CHILD 2.1E-04 1.7E-04 2.1E-04 3.8E-04 2.6E-04 5.8E-03 1.9E-04 0.0E+00
 INFNT 3.0E-04 2.6E-04 3.4E-04 6.8E-04 4.1E-04 1.4E-02 3.0E-04 0.0E+00

INHAL PATHWAY, DIST GP= 1, 1136. METERS WINDS TOWARD SE
 ADULT 4.5E-04 4.5E-04 4.1E-06 4.5E-04 4.5E-04 1.1E-03 4.4E-04 0.0E+00
 TEEN 4.5E-04 4.5E-04 5.7E-06 4.5E-04 4.5E-04 1.3E-03 4.5E-04 0.0E+00
 CHILD 4.0E-04 4.0E-04 7.7E-06 4.0E-04 4.0E-04 1.4E-03 4.0E-04 0.0E+00
 INFNT 2.3E-04 2.3E-04 5.3E-06 2.3E-04 2.3E-04 1.1E-03 2.3E-04 0.0E+00

SUBTOTALS (NO PLUME)
 ADULT 2.2E-03 1.9E-03 5.0E-04 2.3E-03 2.1E-03 1.1E-02 2.0E-03 2.5E-04
 TEEN 2.4E-03 2.1E-03 6.7E-04 2.8E-03 2.4E-03 1.2E-02 2.2E-03 2.5E-04
 CHILD 3.1E-03 2.9E-03 1.3E-03 4.0E-03 3.3E-03 2.1E-02 3.0E-03 2.5E-04
 INFNT 9.0E-04 8.3E-04 6.9E-04 1.4E-03 1.1E-03 2.7E-02 8.8E-04 2.5E-04

TOTALS
 ADULT 3.2E-03 3.0E-03 1.5E-03 3.4E-03 3.1E-03 1.2E-02 3.0E-03 2.8E-03
 TEEN 3.4E-03 3.2E-03 1.7E-03 3.8E-03 3.4E-03 1.3E-02 3.3E-03 2.8E-03
 CHILD 4.1E-03 3.9E-03 2.3E-03 5.0E-03 4.3E-03 2.2E-02 4.0E-03 2.8E-03
 INFNT 1.9E-03 1.9E-03 1.7E-03 2.5E-03 2.1E-03 2.8E-02 1.9E-03 2.8E-03

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT

FOR DATES 95 4 1 1 THRU 95 63024

T.BODY GI-TRCT BONE LIVER KIDNEY THYRD LUNG SKIN

PLUME PATHWAY, DIST GP= 1, 1507. METERS WINDS TOWARD SSE
 ADULT 5.8E-04 5.8E-04 5.8E-04 5.8E-04 5.8E-04 5.8E-04 6.0E-04 1.4E-03
 TEEN 5.8E-04 5.8E-04 5.8E-04 5.8E-04 5.8E-04 5.8E-04 6.0E-04 1.4E-03
 CHILD 5.8E-04 5.8E-04 5.8E-04 5.8E-04 5.8E-04 5.8E-04 6.0E-04 1.4E-03
 INFNT 5.8E-04 5.8E-04 5.8E-04 5.8E-04 5.8E-04 5.8E-04 6.0E-04 1.4E-03

GROUND PATHWAY, DIST GP= 1, 1507. METERS WINDS TOWARD SSE
 ADULT 1.7E-04 1.7E-04 1.7E-04 1.7E-04 1.7E-04 1.7E-04 1.7E-04 2.0E-04
 TEEN 1.7E-04 1.7E-04 1.7E-04 1.7E-04 1.7E-04 1.7E-04 1.7E-04 2.0E-04
 CHILD 1.7E-04 1.7E-04 1.7E-04 1.7E-04 1.7E-04 1.7E-04 1.7E-04 2.0E-04
 INFNT 1.7E-04 1.7E-04 1.7E-04 1.7E-04 1.7E-04 1.7E-04 1.7E-04 2.0E-04

VEGET PATHWAY, DIST GP= 1, 1093. METERS WINDS TOWARD SSE
 ADULT 9.6E-04 7.7E-04 2.0E-04 1.1E-03 8.8E-04 5.8E-03 7.9E-04 0.0E+00
 TEEN 1.0E-03 8.8E-04 3.1E-04 1.3E-03 1.0E-03 5.0E-03 9.2E-04 0.0E+00
 CHILD 1.5E-03 1.3E-03 7.1E-04 2.1E-03 1.6E-03 7.7E-03 1.4E-03 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

MEAT PATHWAY, DIST GP= 1, 1093. METERS WINDS TOWARD SSE
 ADULT 1.3E-04 1.1E-04 2.0E-05 1.4E-04 1.2E-04 7.1E-04 1.1E-04 0.0E+00
 TEEN 7.4E-05 6.6E-05 1.6E-05 8.9E-05 7.5E-05 5.0E-04 6.8E-05 0.0E+00
 CHILD 8.4E-05 7.9E-05 3.0E-05 1.1E-04 9.1E-05 7.4E-04 8.2E-05 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

COW PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD SSE
 ADULT 5.7E-05 3.6E-05 2.3E-05 6.8E-05 5.4E-05 2.0E-03 3.7E-05 0.0E+00
 TEEN 6.9E-05 4.7E-05 4.1E-05 1.0E-04 7.9E-05 3.1E-03 5.1E-05 0.0E+00
 CHILD 9.4E-05 7.2E-05 9.9E-05 1.7E-04 1.3E-04 6.2E-03 8.0E-05 0.0E+00
 INFNT 1.4E-04 1.1E-04 1.7E-04 3.1E-04 2.0E-04 1.5E-02 1.2E-04 0.0E+00

GOAT PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD SSE
 ADULT 1.3E-04 7.3E-05 6.1E-05 1.6E-04 1.1E-04 2.4E-03 7.9E-05 0.0E+00
 TEEN 1.5E-04 9.5E-05 1.1E-04 2.5E-04 1.6E-04 3.8E-03 1.1E-04 0.0E+00
 CHILD 2.0E-04 1.5E-04 2.6E-04 4.2E-04 2.6E-04 7.5E-03 1.7E-04 0.0E+00
 INFNT 2.8E-04 2.2E-04 4.3E-04 7.6E-04 4.1E-04 1.8E-02 2.7E-04 0.0E+00

INHAL PATHWAY, DIST GP= 1, 1507. METERS WINDS TOWARD SSE
 ADULT 2.6E-04 2.6E-04 2.7E-06 2.6E-04 2.6E-04 7.3E-04 2.6E-04 0.0E+00
 TEEN 2.6E-04 2.6E-04 3.7E-06 2.6E-04 2.6E-04 8.5E-04 2.6E-04 0.0E+00
 CHILD 2.3E-04 2.3E-04 5.0E-06 2.3E-04 2.3E-04 9.1E-04 2.3E-04 0.0E+00
 INFNT 1.3E-04 1.3E-04 3.5E-06 1.4E-04 1.3E-04 7.5E-04 1.3E-04 0.0E+00

SUBTOTALS (NO PLUME)

ADULT 1.7E-03 1.4E-03 4.8E-04 1.9E-03 1.6E-03 1.2E-02 1.4E-03 2.0E-04
 TEEN 1.8E-03 1.5E-03 6.5E-04 2.2E-03 1.8E-03 1.4E-02 1.6E-03 2.0E-04
 CHILD 2.2E-03 2.0E-03 1.3E-03 3.2E-03 2.5E-03 2.3E-02 2.2E-03 2.0E-04
 INFNT 7.2E-04 6.3E-04 7.7E-04 1.4E-03 9.2E-04 3.4E-02 7.0E-04 2.0E-04

TOTALS

ADULT 2.3E-03 2.0E-03 1.1E-03 2.4E-03 2.2E-03 1.2E-02 2.0E-03 1.6E-03
 TEEN 2.3E-03 2.1E-03 1.2E-03 2.8E-03 2.4E-03 1.4E-02 2.2E-03 1.6E-03
 CHILD 2.8E-03 2.6E-03 1.9E-03 3.8E-03 3.1E-03 2.4E-02 2.8E-03 1.6E-03
 INFNT 1.3E-03 1.2E-03 1.4E-03 2.0E-03 1.5E-03 3.5E-02 1.3E-03 1.6E-03

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT

FOR DATES 95 4 1 1 THRU 95 63024

T.BODY GI-TRCT BONE LIVER KIDNEY THYRD LUNG SKIN

PLUME PATHWAY, DIST GP= 1, 1026. METERS WINDS TOWARD S
 ADULT 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.4E-03 3.8E-03
 TEEN 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.4E-03 3.8E-03
 CHILD 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.4E-03 3.8E-03
 INFNT 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.4E-03 3.8E-03

GROUND PATHWAY, DIST GP= 1, 1026. METERS WINDS TOWARD S
 ADULT 3.8E-04 3.8E-04 3.8E-04 3.8E-04 3.8E-04 3.8E-04 3.8E-04 4.4E-04
 TEEN 3.8E-04 3.8E-04 3.8E-04 3.8E-04 3.8E-04 3.8E-04 3.8E-04 4.4E-04
 CHILD 3.8E-04 3.8E-04 3.8E-04 3.8E-04 3.8E-04 3.8E-04 3.8E-04 4.4E-04
 INFNT 3.8E-04 3.8E-04 3.8E-04 3.8E-04 3.8E-04 3.8E-04 3.8E-04 4.4E-04

VEGET PATHWAY, DIST GP= 1, 863. METERS WINDS TOWARD S
 ADULT 1.7E-03 1.4E-03 3.4E-04 1.9E-03 1.6E-03 1.0E-02 1.4E-03 0.0E+00
 TEEN 1.9E-03 1.6E-03 5.3E-04 2.4E-03 1.9E-03 8.9E-03 1.7E-03 0.0E+00
 CHILD 2.7E-03 2.5E-03 1.2E-03 3.7E-03 2.9E-03 1.4E-02 2.6E-03 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

MEAT PATHWAY, DIST GP= 1, 6115. METERS WINDS TOWARD S
 ADULT 1.1E-05 1.0E-05 1.3E-06 1.2E-05 1.1E-05 4.9E-05 1.0E-05 0.0E+00
 TEEN 6.5E-06 5.9E-06 1.0E-06 7.5E-06 6.6E-06 3.4E-05 6.1E-06 0.0E+00
 CHILD 7.5E-06 7.2E-06 1.9E-06 9.2E-06 7.9E-06 5.0E-05 7.3E-06 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

COW PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD S
 ADULT 7.0E-05 4.6E-05 2.7E-05 8.3E-05 6.7E-05 2.4E-03 4.7E-05 0.0E+00
 TEEN 8.5E-05 6.0E-05 4.8E-05 1.3E-04 9.7E-05 3.7E-03 6.4E-05 0.0E+00
 CHILD 1.2E-04 9.2E-05 1.1E-04 2.1E-04 1.6E-04 7.4E-03 1.0E-04 0.0E+00
 INFNT 1.7E-04 1.4E-04 1.9E-04 3.8E-04 2.5E-04 1.8E-02 1.6E-04 0.0E+00

GOAT PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD S
 ADULT 1.6E-04 9.2E-05 7.1E-05 2.0E-04 1.4E-04 2.9E-03 9.9E-05 0.0E+00
 TEEN 1.9E-04 1.2E-04 1.3E-04 3.0E-04 2.0E-04 4.5E-03 1.4E-04 0.0E+00
 CHILD 2.4E-04 1.8E-04 3.1E-04 5.0E-04 3.2E-04 8.9E-03 2.1E-04 0.0E+00
 INFNT 3.5E-04 2.8E-04 5.0E-04 9.1E-04 5.0E-04 2.2E-02 3.4E-04 0.0E+00

INHAL PATHWAY, DIST GP= 1, 1026. METERS WINDS TOWARD S
 ADULT 5.9E-04 5.9E-04 5.4E-06 5.9E-04 5.9E-04 1.5E-03 5.9E-04 0.0E+00
 TEEN 5.9E-04 5.9E-04 7.6E-06 6.0E-04 6.0E-04 1.7E-03 5.9E-04 0.0E+00
 CHILD 5.2E-04 5.2E-04 1.0E-05 5.3E-04 5.3E-04 1.8E-03 5.2E-04 0.0E+00
 INFNT 3.0E-04 3.0E-04 7.0E-06 3.1E-04 3.1E-04 1.5E-03 3.0E-04 0.0E+00

SUBTOTALS (NO PLUME)
 ADULT 2.9E-03 2.5E-03 8.2E-04 3.2E-03 2.8E-03 1.7E-02 2.5E-03 4.4E-04
 TEEN 3.1E-03 2.7E-03 1.1E-03 3.8E-03 3.2E-03 1.9E-02 2.8E-03 4.4E-04
 CHILD 3.9E-03 3.6E-03 2.0E-03 5.4E-03 4.3E-03 3.2E-02 3.8E-03 4.4E-04
 INFNT 1.2E-03 1.1E-03 1.1E-03 2.0E-03 1.4E-03 4.1E-02 1.2E-03 4.4E-04

TOTALS
 ADULT 4.3E-03 3.8E-03 2.1E-03 4.5E-03 4.1E-03 1.9E-02 3.9E-03 4.2E-03
 TEEN 4.4E-03 4.1E-03 2.4E-03 5.1E-03 4.5E-03 2.1E-02 4.2E-03 4.2E-03
 CHILD 5.2E-03 4.9E-03 3.3E-03 6.7E-03 5.6E-03 3.3E-02 5.2E-03 4.2E-03
 INFNT 2.5E-03 2.4E-03 2.4E-03 3.3E-03 2.7E-03 4.3E-02 2.5E-03 4.2E-03

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT

FOR DATES 95 4 1 1 THRU 95 63024

T.BODY GI-TRCT BONE LIVER KIDNEY THYRD LUNG SKIN

PLUME PATHWAY, DIST GP= 1, 942. METERS WINDS TOWARD SSW
 ADULT 9.6E-04 9.6E-04 9.6E-04 9.6E-04 9.6E-04 9.6E-04 9.8E-04 2.3E-03
 TEEN 9.6E-04 9.6E-04 9.6E-04 9.6E-04 9.6E-04 9.6E-04 9.8E-04 2.3E-03
 CHILD 9.6E-04 9.6E-04 9.6E-04 9.6E-04 9.6E-04 9.6E-04 9.8E-04 2.3E-03
 INFNT 9.6E-04 9.6E-04 9.6E-04 9.6E-04 9.6E-04 9.6E-04 9.8E-04 2.3E-03

GROUND PATHWAY, DIST GP= 1, 942. METERS WINDS TOWARD SSW
 ADULT 1.7E-04 1.7E-04 1.7E-04 1.7E-04 1.7E-04 1.7E-04 1.7E-04 1.9E-04
 TEEN 1.7E-04 1.7E-04 1.7E-04 1.7E-04 1.7E-04 1.7E-04 1.7E-04 1.9E-04
 CHILD 1.7E-04 1.7E-04 1.7E-04 1.7E-04 1.7E-04 1.7E-04 1.7E-04 1.9E-04
 INFNT 1.7E-04 1.7E-04 1.7E-04 1.7E-04 1.7E-04 1.7E-04 1.7E-04 1.9E-04

VEGET PATHWAY, DIST GP= 1, 770. METERS WINDS TOWARD SSW
 ADULT 1.2E-03 1.0E-03 1.6E-04 1.2E-03 1.1E-03 4.9E-03 1.0E-03 0.0E+00
 TEEN 1.3E-03 1.2E-03 2.4E-04 1.5E-03 1.3E-03 4.4E-03 1.2E-03 0.0E+00
 CHILD 1.9E-03 1.8E-03 5.7E-04 2.4E-03 2.0E-03 6.7E-03 1.9E-03 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

MEAT PATHWAY, DIST GP= 1, 8045. METERS WINDS TOWARD SSW
 ADULT 4.8E-06 4.5E-06 3.0E-07 5.0E-06 4.7E-06 1.3E-05 4.6E-06 0.0E+00
 TEEN 2.8E-06 2.7E-06 2.5E-07 3.0E-06 2.8E-06 9.0E-06 2.7E-06 0.0E+00
 CHILD 3.3E-06 3.2E-06 4.5E-07 3.7E-06 3.4E-06 1.3E-05 3.3E-06 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

COW PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD SSW
 ADULT 3.9E-05 3.0E-05 1.0E-05 4.4E-05 3.8E-05 8.7E-04 3.0E-05 0.0E+00
 TEEN 4.8E-05 3.9E-05 1.8E-05 6.4E-05 5.3E-05 1.4E-03 4.1E-05 0.0E+00
 CHILD 7.0E-05 6.0E-05 4.4E-05 1.0E-04 8.5E-05 2.7E-03 6.4E-05 0.0E+00
 INFNT 1.0E-04 9.1E-05 7.3E-05 1.8E-04 1.3E-04 6.5E-03 9.8E-05 0.0E+00

GOAT PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD SSW
 ADULT 8.7E-05 6.1E-05 2.7E-05 1.0E-04 7.7E-05 1.1E-03 6.3E-05 0.0E+00
 TEEN 1.0E-04 7.9E-05 4.9E-05 1.5E-04 1.1E-04 1.7E-03 8.5E-05 0.0E+00
 CHILD 1.4E-04 1.2E-04 1.2E-04 2.4E-04 1.7E-04 3.3E-03 1.3E-04 0.0E+00
 INFNT 2.1E-04 1.9E-04 1.9E-04 4.2E-04 2.7E-04 7.8E-03 2.1E-04 0.0E+00

INHAL PATHWAY, DIST GP= 1, 942. METERS WINDS TOWARD SSW
 ADULT 4.2E-04 4.2E-04 3.7E-06 4.2E-04 4.2E-04 1.0E-03 4.2E-04 0.0E+00
 TEEN 4.2E-04 4.2E-04 5.1E-06 4.3E-04 4.3E-04 1.1E-03 4.2E-04 0.0E+00
 CHILD 3.7E-04 3.7E-04 6.9E-06 3.8E-04 3.8E-04 1.2E-03 3.7E-04 0.0E+00
 INFNT 2.1E-04 2.1E-04 4.7E-06 2.2E-04 2.2E-04 9.9E-04 2.1E-04 0.0E+00

SUBTOTALS (NO PLUME)

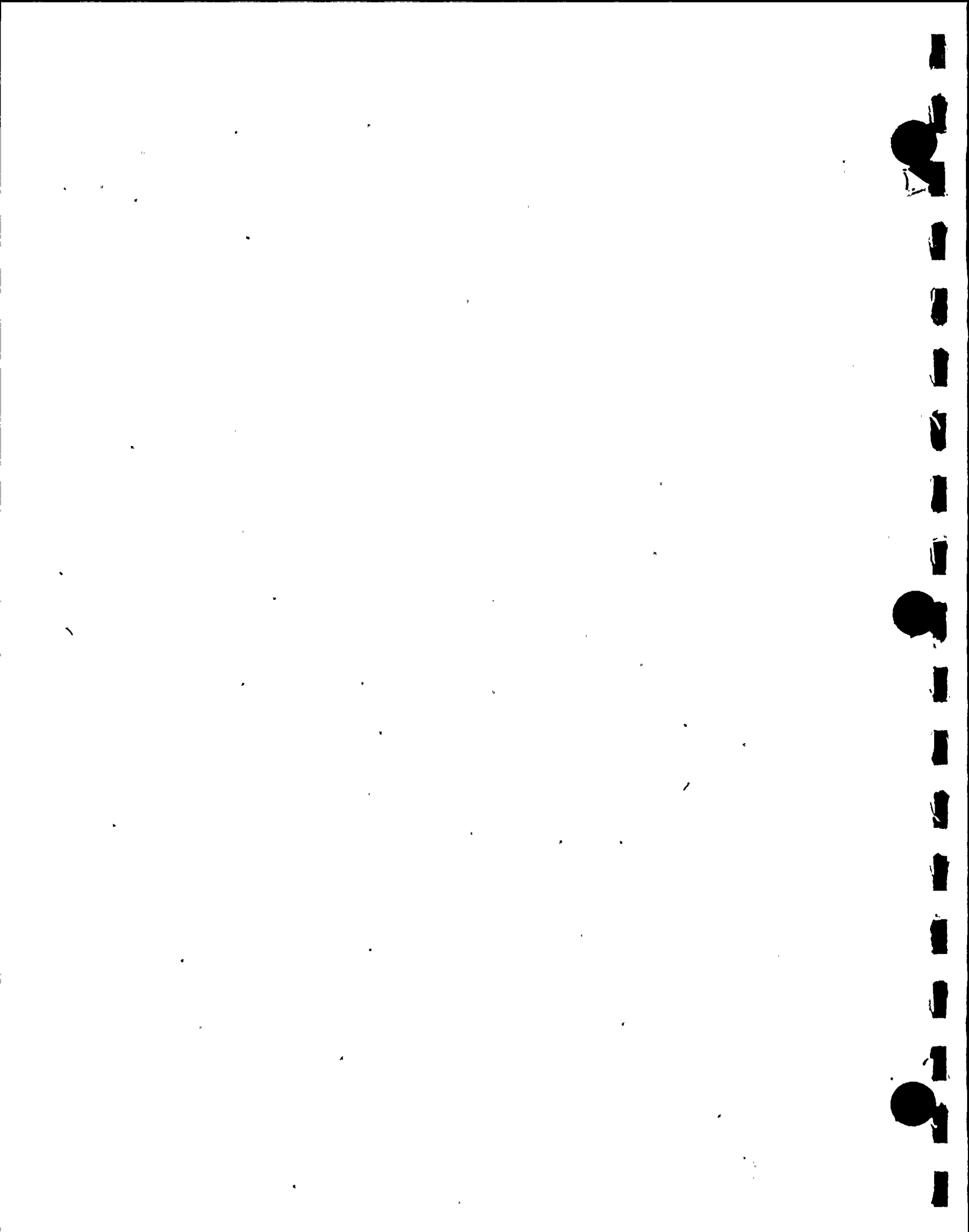
ADULT 1.9E-03 1.7E-03 3.6E-04 2.0E-03 1.8E-03 8.0E-03 1.7E-03 1.9E-04
 TEEN 2.0E-03 1.9E-03 4.8E-04 2.3E-03 2.1E-03 8.7E-03 1.9E-03 1.9E-04
 CHILD 2.7E-03 2.5E-03 9.0E-04 3.3E-03 2.8E-03 1.4E-02 2.6E-03 1.9E-04
 INFNT 7.0E-04 6.6E-04 4.4E-04 9.9E-04 7.9E-04 1.5E-02 6.9E-04 1.9E-04

TOTALS

ADULT 2.8E-03 2.7E-03 1.3E-03 2.9E-03 2.8E-03 8.9E-03 2.7E-03 2.5E-03
 TEEN 3.0E-03 2.8E-03 1.4E-03 3.3E-03 3.0E-03 9.7E-03 2.9E-03 2.5E-03
 CHILD 3.6E-03 3.5E-03 1.9E-03 4.2E-03 3.8E-03 1.5E-02 3.6E-03 2.5E-03
 INFNT 1.7E-03 1.6E-03 1.4E-03 1.9E-03 1.7E-03 1.6E-02 1.7E-03 2.5E-03

APPENDIX 1.4

Summary of Maximum Individual Doses
Third Quarter, 1995



SUMMARY OF MAXIMUM INDIVIDUAL DOSES

3rd Quarter 1995

EFFLUENT	APPLICABLE ORGAN	ESTIMATED DOSE (mrem)	AGE GROUP	LOCATION DIST DIR (M) (Toward)	% OF APPLICABLE LIMIT	LIMIT (mrem) QTR
Liquid	Total Body	3.57E-2	Adult	Receptor 1	2.30E+0	1.5E+0
Liquid	Liver	4.47E-2	Adult	Receptor 1	8.94E-1	5.0E+0
Noble Gas	Air Dose (Gamma-mrad)	1.38E-2		651 N	2.76E-1	5.0E+0
Noble Gas	Air dose (Beta-mrad)	3.00E-2		651 N	3.00E-1	1.0E+1
Iodines and Particulates	Thyroid	1.90E-1	Child	659 N	2.53E+0	7.5E+0

FOR RECEPTOR NUMBER 1

LAST LIQUID DOSE ACCUMULATIONS (MREM)
 START DATE 95 7 1 1 END DATE 95 93024

	BONE	LIVER	T.BODY	THYRD	KIDNEY	LUNG	GI-LLI	SKIN
WATER								
ADULT	1.5E-04	9.0E-03	8.9E-03	1.2E-02	8.8E-03	8.7E-03	9.4E-03	0.0E+00
TEEN	1.4E-04	6.4E-03	6.3E-03	8.8E-03	6.2E-03	6.2E-03	6.6E-03	0.0E+00
CHILD	4.1E-04	1.2E-02	1.2E-02	1.8E-02	1.2E-02	1.2E-02	1.2E-02	0.0E+00
INFANT	4.3E-04	1.2E-02	1.2E-02	2.2E-02	1.2E-02	1.2E-02	1.2E-02	0.0E+00
SHORE								
ADULT	7.5E-05	7.5E-05	7.5E-05	7.5E-05	7.5E-05	7.5E-05	7.5E-05	8.8E-05
TEEN	4.2E-04	4.2E-04	4.2E-04	4.2E-04	4.2E-04	4.2E-04	4.2E-04	4.9E-04
CHILD	8.8E-05	8.8E-05	8.8E-05	8.8E-05	8.8E-05	8.8E-05	8.8E-05	1.0E-04
INFANT	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
FW SPT FISH								
ADULT	1.9E-02	3.6E-02	2.7E-02	3.8E-03	1.2E-02	4.4E-03	3.1E-03	0.0E+00
TEEN	2.0E-02	3.6E-02	1.5E-02	3.5E-03	1.2E-02	4.9E-03	2.2E-03	0.0E+00
CHILD	2.5E-02	3.2E-02	6.4E-03	3.6E-03	1.0E-02	3.9E-03	9.8E-04	0.0E+00
INFANT	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
TOTAL								
ADULT	2.0E-02	4.5E-02	3.6E-02	1.6E-02	2.1E-02	1.3E-02	1.3E-02	8.8E-05
TEEN	2.1E-02	4.3E-02	2.2E-02	1.3E-02	1.9E-02	1.2E-02	9.2E-03	4.9E-04
CHILD	2.6E-02	4.4E-02	1.8E-02	2.2E-02	2.2E-02	1.6E-02	1.3E-02	1.0E-04
INFANT	4.3E-04	1.2E-02	1.2E-02	2.2E-02	1.2E-02	1.2E-02	1.2E-02	0.0E+00

DATES OF LAST AIR DOSE ACCUMULATION ARE FROM 95 7 1 1 0 TO 95 93024 0
DOSE ACCUMULATION FOR GAMMA MRAD

FOR RELEASE POINT 1

**DIRECTION FROM N					
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
**DIRECTION FROM NNE					
6.8445E-07	7.9192E-08	3.4808E-08	1.9716E-08	1.3288E-08	
6.0772E-09	2.0586E-09	9.3740E-10	5.6258E-10	3.1941E-10	
**DIRECTION FROM NE					
2.1782E-06	2.8024E-07	1.4419E-07	9.1028E-08	6.4517E-08	
3.2540E-08	1.3318E-08	6.8389E-09	4.4704E-09	2.8524E-09	
**DIRECTION FROM ENE					
1.9782E-06	1.9279E-07	1.0455E-07	6.7876E-08	4.9691E-08	
2.6617E-08	1.1317E-08	5.7188E-09	3.6746E-09	2.4078E-09	
**DIRECTION FROM E					
2.1666E-06	2.1115E-07	1.1451E-07	7.4341E-08	5.4423E-08	
2.9152E-08	1.2394E-08	6.2634E-09	4.0246E-09	2.6372E-09	
**DIRECTION FROM ESE					
3.5848E-06	3.4936E-07	1.8946E-07	1.2300E-07	9.0045E-08	
4.8233E-08	2.0507E-08	1.0363E-08	6.6589E-09	4.3633E-09	
**DIRECTION FROM SE					
1.9439E-05	2.0696E-06	1.1023E-06	7.0897E-07	5.1355E-07	
2.6988E-07	1.1341E-07	5.7593E-08	3.7203E-08	2.4179E-08	
**DIRECTION FROM SSE					
1.3243E-04	1.2955E-05	7.0035E-06	4.5385E-06	3.3203E-06	
1.7768E-06	7.5443E-07	3.8113E-07	2.4489E-07	1.6039E-07	
**DIRECTION FROM S					
1.9041E-05	1.8070E-06	8.2242E-07	4.8347E-07	3.3293E-07	
1.6087E-07	6.1028E-08	3.0749E-08	2.0289E-08	1.3309E-08	
**DIRECTION FROM SSW					
6.9298E-05	6.7607E-06	3.6609E-06	2.3748E-06	1.7377E-06	
9.3013E-07	3.9513E-07	1.9962E-07	1.2824E-07	8.4002E-08	
**DIRECTION FROM SW					
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	
**DIRECTION FROM WSW					
1.8389E-04	8.9160E-06	5.3343E-06	3.8051E-06	2.9580E-06	
1.7743E-06	8.8692E-07	5.3213E-07	3.8009E-07	2.6590E-07	
**DIRECTION FROM W					
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	
**DIRECTION FROM WNW					
7.1428E-04	2.6279E-05	1.1736E-05	7.8766E-06	6.0469E-06	
3.6281E-06	1.8140E-06	1.0884E-06	7.7741E-07	5.4385E-07	
**DIRECTION FROM NW					
9.9469E-05	4.8428E-06	2.9105E-06	2.0782E-06	1.6160E-06	
9.6960E-07	4.8478E-07	2.9087E-07	2.0776E-07	1.4534E-07	
**DIRECTION FROM NNW					
3.3018E-07	2.5275E-08	1.0040E-08	5.4173E-09	3.4551E-09	
1.4184E-09	4.2877E-10	2.1578E-10	1.5413E-10	1.0783E-10	

DISTANCES USED IN CALCULATIONS

594.0 2416.0 4020.0 5630.0 7240.0
12067.0 24135.0 40225.0 56315.0 80500.0

DATES OF LAST AIR DOSE ACCUMULATION ARE FROM 95 7 1 1 0 TO 95 93024 0
DOSE ACCUMULATION FOR GAMMA MRAD

FOR RELEASE POINT 2

**DIRECTION FROM N				
1.7156E-03	2.0122E-04	9.3542E-05	5.5244E-05	3.8280E-05
1.8608E-05	7.0311E-06	3.4567E-06	2.1984E-06	1.3584E-06
**DIRECTION FROM NNE				
1.4736E-03	1.9622E-04	9.1304E-05	5.3565E-05	3.7558E-05
1.8831E-05	7.2972E-06	3.6122E-06	2.3076E-06	1.4382E-06
**DIRECTION FROM NE				
1.0583E-03	1.3145E-04	6.2713E-05	3.7565E-05	2.6493E-05
1.3382E-05	5.2845E-06	2.6398E-06	1.6945E-06	1.0677E-06
**DIRECTION FROM ENE				
4.0710E-03	4.9350E-04	2.4949E-04	1.5556E-04	1.1057E-04
5.6246E-05	2.2880E-05	1.1606E-05	7.5184E-06	4.8008E-06
**DIRECTION FROM E				
6.5169E-03	7.2647E-04	3.7724E-04	2.3890E-04	1.7203E-04
8.9628E-05	3.7213E-05	1.8854E-05	1.2173E-05	7.8657E-06
**DIRECTION FROM ESE				
1.0485E-02	1.1793E-03	6.0473E-04	3.7962E-04	2.7340E-04
1.4279E-04	5.9080E-05	2.9831E-05	1.9219E-05	1.2405E-05
**DIRECTION FROM SE				
9.0909E-03	1.0420E-03	5.2981E-04	3.3102E-04	2.3730E-04
1.2286E-04	5.0453E-05	2.5467E-05	1.6417E-05	1.0556E-05
**DIRECTION FROM SSE				
9.6676E-03	1.0336E-03	5.3516E-04	3.3822E-04	2.4440E-04
1.2830E-04	5.3357E-05	2.6922E-05	1.7324E-05	1.1226E-05
**DIRECTION FROM S				
1.5849E-02	1.7691E-03	9.0389E-04	5.6645E-04	4.0730E-04
2.1207E-04	8.7472E-05	4.4135E-05	2.8425E-05	1.8329E-05
**DIRECTION FROM SSW				
9.3635E-03	1.0510E-03	5.2870E-04	3.2779E-04	2.3543E-04
1.2259E-04	5.0214E-05	2.5195E-05	1.6166E-05	1.0397E-05
**DIRECTION FROM SW				
4.6825E-03	5.3389E-04	2.5799E-04	1.5629E-04	1.1063E-04
5.6163E-05	2.2374E-05	1.1198E-05	7.1953E-06	4.5765E-06
**DIRECTION FROM WSW				
2.9230E-03	3.0023E-04	1.4748E-04	9.0603E-05	6.4705E-05
3.3375E-05	1.3543E-05	6.8144E-06	4.3865E-06	2.8238E-06
**DIRECTION FROM W				
2.2679E-03	2.7018E-04	1.2981E-04	7.8409E-05	5.5261E-05
2.7837E-05	1.1080E-05	5.6191E-06	3.6474E-06	2.3147E-06
**DIRECTION FROM WNW				
2.6974E-03	2.9690E-04	1.4176E-04	8.5282E-05	6.0334E-05
3.0661E-05	1.2178E-05	6.0910E-06	3.9156E-06	2.4972E-06
**DIRECTION FROM NW				
2.5651E-03	2.8125E-04	1.3787E-04	8.4206E-05	6.0184E-05
3.1132E-05	1.2606E-05	6.3191E-06	4.0562E-06	2.6020E-06
**DIRECTION FROM NNW				
1.8097E-03	2.2143E-04	1.0690E-04	6.4709E-05	4.5530E-05
2.2821E-05	9.0382E-06	4.5546E-06	2.9431E-06	1.8592E-06

DISTANCES USED IN CALCULATIONS

594.0 2416.0 4020.0 5630.0 7240.0
12067.0 24135.0 40225.0 56315.0 80500.0

DATES OF LAST AIR DOSE ACCUMULATION ARE FROM 95 7 1 1 0 TO 95 93024 0
DOSE ACCUMULATION FOR BETA MRAD

FOR RELEASE POINT 1

**DIRECTION FROM N					
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
**DIRECTION FROM NNE					
7.4110E-05	8.5747E-06	3.7689E-06	2.1347E-06	1.4388E-06	
6.5801E-07	2.2289E-07	1.0150E-07	6.0914E-08	3.4584E-08	
**DIRECTION FROM NE					
2.3585E-04	3.0344E-05	1.5613E-05	9.8562E-06	6.9856E-06	
3.5233E-06	1.4420E-06	7.4049E-07	4.8403E-07	3.0884E-07	
**DIRECTION FROM ENE					
2.1419E-04	2.0875E-05	1.1321E-05	7.3494E-06	5.3803E-06	
2.8819E-06	1.2253E-06	6.1921E-07	3.9788E-07	2.6071E-07	
**DIRECTION FROM E					
2.3459E-04	2.2863E-05	1.2399E-05	8.0494E-06	5.8927E-06	
3.1564E-06	1.3420E-06	6.7818E-07	4.3577E-07	2.8554E-07	
**DIRECTION FROM ESE					
3.8814E-04	3.7827E-05	2.0514E-05	1.3318E-05	9.7498E-06	
5.2224E-06	2.2204E-06	1.1221E-06	7.2100E-07	4.7244E-07	
**DIRECTION FROM SE					
2.1048E-03	2.2409E-04	1.1935E-04	7.6765E-05	5.5605E-05	
2.9222E-05	1.2280E-05	6.2360E-06	4.0282E-06	2.6180E-06	
**DIRECTION FROM SSE					
2.2949E-03	2.2893E-04	1.2175E-04	7.8158E-05	5.6971E-05	
3.0328E-05	1.2786E-05	6.4495E-06	4.1428E-06	2.7064E-06	
**DIRECTION FROM S					
9.9330E-04	1.1387E-04	5.6561E-05	3.4819E-05	2.4868E-05	
1.2829E-05	5.2205E-06	2.6311E-06	1.6980E-06	1.0921E-06	
**DIRECTION FROM SSW					
2.5878E-04	2.5990E-05	1.3498E-05	8.5547E-06	6.1805E-06	
3.2366E-06	1.3394E-06	6.7071E-07	4.2870E-07	2.7755E-07	
**DIRECTION FROM SW					
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	
**DIRECTION FROM WSW					
7.0697E-04	3.4970E-05	2.0575E-05	1.4554E-05	1.1261E-05	
6.7079E-06	3.3331E-06	1.9968E-06	1.4263E-06	9.9778E-07	
**DIRECTION FROM W					
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	
**DIRECTION FROM WNW					
2.6457E-03	9.7355E-05	4.3492E-05	2.9191E-05	2.2410E-05	
1.3446E-05	6.7226E-06	4.0335E-06	2.8811E-06	2.0155E-06	
**DIRECTION FROM NW					
3.6512E-04	1.7776E-05	1.0683E-05	7.6282E-06	5.9319E-06	
3.5590E-06	1.7795E-06	1.0677E-06	7.6262E-07	5.3350E-07	
**DIRECTION FROM NNW					
3.5751E-05	2.7367E-06	1.0871E-06	5.8656E-07	3.7410E-07	
1.5358E-07	4.6425E-08	2.3364E-08	1.6689E-08	1.1675E-08	

DISTANCES USED IN CALCULATIONS

594.0 2416.0 4020.0 5630.0 7240.0
12067.0 24135.0 40225.0 56315.0 80500.0

DATES OF LAST AIR DOSE ACCUMULATION ARE FROM 95 7 1 1 0 TO 95 93024 0
DOSE ACCUMULATION FOR BETA MRAD

FOR RELEASE POINT 2

**DIRECTION FROM N

3.4383E-03	4.0252E-04	1.8696E-04	1.1036E-04	7.6398E-05
3.7052E-05	1.3960E-05	6.8523E-06	4.3530E-06	2.6851E-06

**DIRECTION FROM NNE

2.9182E-03	3.9030E-04	1.8167E-04	1.0657E-04	7.4764E-05
3.7532E-05	1.4560E-05	7.2104E-06	4.6075E-06	2.8730E-06

**DIRECTION FROM NE

1.9293E-03	2.4204E-04	1.1484E-04	6.8507E-05	4.8266E-05
2.4356E-05	9.5920E-06	4.7898E-06	3.0748E-06	1.9346E-06

**DIRECTION FROM ENE

8.4757E-03	1.0290E-03	5.2044E-04	3.2458E-04	2.3071E-04
1.1736E-04	4.7749E-05	2.4225E-05	1.5694E-05	1.0022E-05

**DIRECTION FROM E

1.3038E-02	1.4525E-03	7.5462E-04	4.7803E-04	3.4425E-04
1.7937E-04	7.4489E-05	3.7741E-05	2.4369E-05	1.5747E-05

**DIRECTION FROM ESE

2.1541E-02	2.4261E-03	1.2435E-03	7.8033E-04	5.6200E-04
2.9356E-04	1.2145E-04	6.1320E-05	3.9504E-05	2.5497E-05

**DIRECTION FROM SE

1.8895E-02	2.1707E-03	1.1032E-03	6.8901E-04	4.9383E-04
2.5560E-04	1.0493E-04	5.2967E-05	3.4144E-05	2.1949E-05

**DIRECTION FROM SSE

1.9789E-02	2.1182E-03	1.0961E-03	6.9251E-04	5.0034E-04
2.6262E-04	1.0920E-04	5.5099E-05	3.5457E-05	2.2975E-05

**DIRECTION FROM S

3.3637E-02	3.7585E-03	1.9202E-03	1.2033E-03	8.6518E-04
4.5040E-04	1.8577E-04	9.3738E-05	6.0376E-05	3.8929E-05

**DIRECTION FROM SSW

1.9894E-02	2.2307E-03	1.1222E-03	6.9581E-04	4.9983E-04
2.6033E-04	1.0665E-04	5.3508E-05	3.4330E-05	2.2081E-05

**DIRECTION FROM SW

9.9831E-03	1.1371E-03	5.4996E-04	3.3335E-04	2.3604E-04
1.1989E-04	4.7793E-05	2.3925E-05	1.5373E-05	9.7813E-06

**DIRECTION FROM WSW

6.2476E-03	6.4023E-04	3.1486E-04	1.9357E-04	1.3829E-04
7.1375E-05	2.8981E-05	1.4580E-05	9.3836E-06	6.0426E-06

**DIRECTION FROM W

4.8795E-03	5.8193E-04	2.7964E-04	1.6893E-04	1.1904E-04
5.9946E-05	2.3857E-05	1.2099E-05	7.8537E-06	4.9832E-06

**DIRECTION FROM WNW

5.7526E-03	6.3201E-04	3.0195E-04	1.8173E-04	1.2861E-04
6.5396E-05	2.5989E-05	1.2999E-05	8.3556E-06	5.3305E-06

**DIRECTION FROM NW

5.4814E-03	5.9914E-04	2.9376E-04	1.7944E-04	1.2829E-04
6.6408E-05	2.6899E-05	1.3480E-05	8.6504E-06	5.5509E-06

**DIRECTION FROM NNW

3.8569E-03	4.7340E-04	2.2845E-04	1.3823E-04	9.7240E-05
4.8724E-05	1.9288E-05	9.7172E-06	6.2784E-06	3.9647E-06

DISTANCES USED IN CALCULATIONS

594.0	2416.0	4020.0	5630.0	7240.0
12067.0	24135.0	40225.0	56315.0	80500.0

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT

FOR DATES 95 7 1 1 THRU 95 93024

T.BODY GI-TRCT BONE LIVER KIDNEY THYRD LUNG SKIN

PLUME PATHWAY, DIST GP= 1, 659. METERS WINDS TOWARD N
 ADULT 8.0E-03 8.0E-03 8.0E-03 8.0E-03 8.0E-03 8.0E-03 8.2E-03 2.1E-02
 TEEN 8.0E-03 8.0E-03 8.0E-03 8.0E-03 8.0E-03 8.0E-03 8.2E-03 2.1E-02
 CHILD 8.0E-03 8.0E-03 8.0E-03 8.0E-03 8.0E-03 8.0E-03 8.2E-03 2.1E-02
 INFNT 8.0E-03 8.0E-03 8.0E-03 8.0E-03 8.0E-03 8.0E-03 8.2E-03 2.1E-02

GROUND PATHWAY, DIST GP= 1, 659. METERS WINDS TOWARD N
 ADULT 1.9E-02 1.9E-02 1.9E-02 1.9E-02 1.9E-02 1.9E-02 1.9E-02 2.2E-02
 TEEN 1.9E-02 1.9E-02 1.9E-02 1.9E-02 1.9E-02 1.9E-02 1.9E-02 2.2E-02
 CHILD 1.9E-02 1.9E-02 1.9E-02 1.9E-02 1.9E-02 1.9E-02 1.9E-02 2.2E-02
 INFNT 1.9E-02 1.9E-02 1.9E-02 1.9E-02 1.9E-02 1.9E-02 1.9E-02 2.2E-02

VEGET PATHWAY, DIST GP= 1, 8045. METERS WINDS TOWARD N
 ADULT 5.4E-04 3.1E-04 1.8E-04 6.3E-04 4.1E-04 1.5E-03 3.4E-04 0.0E+00
 TEEN 5.5E-04 3.5E-04 2.8E-04 8.4E-04 5.1E-04 1.3E-03 4.1E-04 0.0E+00
 CHILD 6.8E-04 5.4E-04 6.5E-04 1.3E-03 8.0E-04 2.1E-03 6.3E-04 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

MEAT PATHWAY, DIST GP= 1, 8045. METERS WINDS TOWARD N
 ADULT 6.8E-05 4.4E-05 1.9E-05 7.7E-05 5.5E-05 1.9E-04 4.7E-05 0.0E+00
 TEEN 3.7E-05 2.6E-05 1.5E-05 5.3E-05 3.5E-05 1.3E-04 2.9E-05 0.0E+00
 CHILD 3.8E-05 3.2E-05 2.7E-05 6.5E-05 4.3E-05 1.9E-04 3.5E-05 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

COW PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD N
 ADULT 1.0E-03 2.9E-04 5.7E-04 1.3E-03 6.5E-04 1.4E-02 3.6E-04 0.0E+00
 TEEN 1.1E-03 3.7E-04 1.0E-03 2.1E-03 1.0E-03 2.3E-02 5.5E-04 0.0E+00
 CHILD 1.1E-03 5.5E-04 2.4E-03 3.5E-03 1.6E-03 4.4E-02 8.5E-04 0.0E+00
 INFNT 1.4E-03 8.2E-04 3.9E-03 6.5E-03 2.6E-03 1.1E-01 1.4E-03 0.0E+00

GOAT PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD N
 ADULT 2.7E-03 5.9E-04 1.7E-03 3.5E-03 1.6E-03 1.7E-02 8.4E-04 0.0E+00
 TEEN 2.9E-03 7.7E-04 3.0E-03 5.9E-03 2.5E-03 2.7E-02 1.3E-03 0.0E+00
 CHILD 2.7E-03 1.1E-03 7.0E-03 9.7E-03 4.0E-03 5.4E-02 2.0E-03 0.0E+00
 INFNT 3.2E-03 1.7E-03 1.1E-02 1.8E-02 6.3E-03 1.3E-01 3.3E-03 0.0E+00

INHAL PATHWAY, DIST GP= 1, 659. METERS WINDS TOWARD N
 ADULT 7.3E-03 6.6E-03 5.5E-04 7.5E-03 7.1E-03 3.6E-02 6.7E-03 0.0E+00
 TEEN 7.2E-03 6.7E-03 7.7E-04 7.9E-03 7.3E-03 4.3E-02 6.8E-03 0.0E+00
 CHILD 6.2E-03 5.9E-03 1.0E-03 7.1E-03 6.4E-03 4.7E-02 6.0E-03 0.0E+00
 INFNT 3.5E-03 3.4E-03 6.4E-04 4.3E-03 3.7E-03 4.1E-02 3.5E-03 0.0E+00

SUBTOTALS (NO PLUME)
 ADULT 3.1E-02 2.7E-02 2.2E-02 3.2E-02 2.9E-02 8.8E-02 2.7E-02 2.2E-02
 TEEN 3.1E-02 2.7E-02 2.4E-02 3.6E-02 3.0E-02 1.1E-01 2.8E-02 2.2E-02
 CHILD 3.0E-02 2.7E-02 3.0E-02 4.1E-02 3.2E-02 1.7E-01 2.8E-02 2.2E-02
 INFNT 2.7E-02 2.5E-02 3.5E-02 4.8E-02 3.2E-02 3.0E-01 2.7E-02 2.2E-02

TOTALS
 ADULT 3.9E-02 3.5E-02 3.0E-02 4.0E-02 3.7E-02 9.6E-02 3.5E-02 4.3E-02
 TEEN 3.9E-02 3.5E-02 3.2E-02 4.4E-02 3.8E-02 1.2E-01 3.6E-02 4.3E-02
 CHILD 3.8E-02 3.5E-02 3.8E-02 4.9E-02 4.0E-02 1.7E-01 3.7E-02 4.3E-02
 INFNT 3.5E-02 3.3E-02 4.3E-02 5.6E-02 4.0E-02 3.0E-01 3.5E-02 4.3E-02

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT
FOR DATES 95 7 1 1 THRU 95 93024

T.BODY GI-TRCT BONE LIVER KIDNEY THYRD LUNG SKIN

PLUME PATHWAY, DIST GP= 1, 660. METERS WINDS TOWARD NNE
ADULT 4.7E-03 4.7E-03 4.7E-03 4.7E-03 4.7E-03 4.7E-03 4.9E-03 1.2E-02
TEEN 4.7E-03 4.7E-03 4.7E-03 4.7E-03 4.7E-03 4.7E-03 4.9E-03 1.2E-02
CHILD 4.7E-03 4.7E-03 4.7E-03 4.7E-03 4.7E-03 4.7E-03 4.9E-03 1.2E-02
INFNT 4.7E-03 4.7E-03 4.7E-03 4.7E-03 4.7E-03 4.7E-03 4.9E-03 1.2E-02

GROUND PATHWAY, DIST GP= 1, 660. METERS WINDS TOWARD NNE
ADULT 1.4E-02 1.4E-02 1.4E-02 1.4E-02 1.4E-02 1.4E-02 1.4E-02 1.7E-02
TEEN 1.4E-02 1.4E-02 1.4E-02 1.4E-02 1.4E-02 1.4E-02 1.4E-02 1.7E-02
CHILD 1.4E-02 1.4E-02 1.4E-02 1.4E-02 1.4E-02 1.4E-02 1.4E-02 1.7E-02
INFNT 1.4E-02 1.4E-02 1.4E-02 1.4E-02 1.4E-02 1.4E-02 1.4E-02 1.7E-02

VEGET PATHWAY, DIST GP= 1, 814. METERS WINDS TOWARD NNE
ADULT 1.6E-02 7.7E-03 6.7E-03 1.9E-02 1.2E-02 5.3E-02 8.7E-03 0.0E+00
TEEN 1.6E-02 8.8E-03 1.0E-02 2.6E-02 1.5E-02 4.6E-02 1.1E-02 0.0E+00
CHILD 1.8E-02 1.3E-02 2.4E-02 4.2E-02 2.3E-02 7.0E-02 1.6E-02 0.0E+00
INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

MEAT PATHWAY, DIST GP= 1, 7725. METERS WINDS TOWARD NNE
ADULT 6.1E-05 4.2E-05 1.5E-05 6.8E-05 5.1E-05 1.6E-04 4.4E-05 0.0E+00
TEEN 3.4E-05 2.5E-05 1.2E-05 4.6E-05 3.2E-05 1.1E-04 2.7E-05 0.0E+00
CHILD 3.5E-05 3.0E-05 2.2E-05 5.7E-05 3.9E-05 1.6E-04 3.3E-05 0.0E+00
INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

COW PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD NNE
ADULT 8.0E-04 2.5E-04 4.3E-04 1.0E-03 5.3E-04 1.1E-02 3.1E-04 0.0E+00
TEEN 8.7E-04 3.3E-04 7.7E-04 1.6E-03 8.2E-04 1.8E-02 4.6E-04 0.0E+00
CHILD 9.3E-04 4.9E-04 1.8E-03 2.7E-03 1.3E-03 3.4E-02 7.1E-04 0.0E+00
INFNT 1.2E-03 7.3E-04 3.0E-03 5.0E-03 2.1E-03 8.3E-02 1.1E-03 0.0E+00

GOAT PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD NNE
ADULT 2.2E-03 5.2E-04 1.3E-03 2.7E-03 1.3E-03 1.4E-02 7.1E-04 0.0E+00
TEEN 2.3E-03 6.7E-04 2.2E-03 4.6E-03 2.0E-03 2.1E-02 1.1E-03 0.0E+00
CHILD 2.2E-03 1.0E-03 5.3E-03 7.5E-03 3.2E-03 4.2E-02 1.7E-03 0.0E+00
INFNT 2.7E-03 1.5E-03 8.6E-03 1.4E-02 5.0E-03 1.0E-01 2.7E-03 0.0E+00

INHAL PATHWAY, DIST GP= 1, 660. METERS WINDS TOWARD NNE
ADULT 6.1E-03 5.8E-03 3.2E-04 6.3E-03 6.0E-03 2.3E-02 5.8E-03 0.0E+00
TEEN 6.1E-03 5.8E-03 4.4E-04 6.5E-03 6.1E-03 2.7E-02 5.9E-03 0.0E+00
CHILD 5.3E-03 5.1E-03 5.9E-04 5.8E-03 5.4E-03 2.9E-02 5.2E-03 0.0E+00
INFNT 3.0E-03 2.9E-03 3.7E-04 3.4E-03 3.1E-03 2.5E-02 3.0E-03 0.0E+00

SUBTOTALS (NO PLUME)

ADULT 4.0E-02 2.9E-02 2.3E-02 4.4E-02 3.4E-02 1.1E-01 3.0E-02 1.7E-02
TEEN 3.9E-02 3.0E-02 2.8E-02 5.4E-02 3.8E-02 1.3E-01 3.3E-02 1.7E-02
CHILD 4.1E-02 3.4E-02 4.6E-02 7.3E-02 4.7E-02 1.9E-01 3.8E-02 1.7E-02
INFNT 2.1E-02 1.9E-02 2.6E-02 3.7E-02 2.5E-02 2.2E-01 2.1E-02 1.7E-02

TOTALS

ADULT 4.4E-02 3.3E-02 2.8E-02 4.8E-02 3.8E-02 1.2E-01 3.5E-02 2.9E-02
TEEN 4.4E-02 3.5E-02 3.3E-02 5.8E-02 4.3E-02 1.3E-01 3.7E-02 2.9E-02
CHILD 4.6E-02 3.9E-02 5.1E-02 7.8E-02 5.2E-02 1.9E-01 4.3E-02 2.9E-02
INFNT 2.6E-02 2.4E-02 3.1E-02 4.1E-02 2.9E-02 2.3E-01 2.6E-02 2.9E-02

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT

FOR DATES 95 7 1 1 THRU 95 93024

T.BODY GI-TRCT BONE LIVER KIDNEY THYRD LUNG SKIN

PLUME PATHWAY, DIST GP= 1, 943. METERS WINDS TOWARD NE
 ADULT 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.4E-03 3.4E-03
 TEEN 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.4E-03 3.4E-03
 CHILD 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.4E-03 3.4E-03
 INFNT 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.4E-03 3.4E-03

GROUND PATHWAY, DIST GP= 1, 943. METERS WINDS TOWARD NE
 ADULT 7.6E-03 7.6E-03 7.6E-03 7.6E-03 7.6E-03 7.6E-03 7.6E-03 8.9E-03
 TEEN 7.6E-03 7.6E-03 7.6E-03 7.6E-03 7.6E-03 7.6E-03 7.6E-03 8.9E-03
 CHILD 7.6E-03 7.6E-03 7.6E-03 7.6E-03 7.6E-03 7.6E-03 7.6E-03 8.9E-03
 INFNT 7.6E-03 7.6E-03 7.6E-03 7.6E-03 7.6E-03 7.6E-03 7.6E-03 8.9E-03

VEGET PATHWAY, DIST GP= 1, 1052. METERS WINDS TOWARD NE
 ADULT 7.3E-03 1.9E-03 4.2E-03 9.2E-03 4.3E-03 3.1E-02 2.5E-03 0.0E+00
 TEEN 6.6E-03 2.1E-03 6.5E-03 1.3E-02 5.8E-03 2.6E-02 3.4E-03 0.0E+00
 CHILD 6.4E-03 3.1E-03 1.5E-02 2.1E-02 9.0E-03 4.0E-02 5.1E-03 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

MEAT PATHWAY, DIST GP= 1, 7725. METERS WINDS TOWARD NE
 ADULT 3.2E-05 1.3E-05 1.5E-05 3.9E-05 2.2E-05 1.3E-04 1.6E-05 0.0E+00
 TEEN 1.6E-05 7.9E-06 1.2E-05 2.9E-05 1.5E-05 9.5E-05 1.0E-05 0.0E+00
 CHILD 1.4E-05 9.4E-06 2.2E-05 3.6E-05 1.8E-05 1.4E-04 1.2E-05 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

COW PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD NE
 ADULT 6.3E-04 9.8E-05 4.2E-04 8.3E-04 3.7E-04 1.1E-02 1.5E-04 0.0E+00
 TEEN 6.5E-04 1.3E-04 7.5E-04 1.4E-03 6.1E-04 1.7E-02 2.6E-04 0.0E+00
 CHILD 6.0E-04 1.8E-04 1.8E-03 2.3E-03 9.9E-04 3.4E-02 3.9E-04 0.0E+00
 INFNT 7.0E-04 2.6E-04 2.9E-03 4.4E-03 1.6E-03 8.2E-02 6.5E-04 0.0E+00

GOAT PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD NE
 ADULT 1.8E-03 2.1E-04 1.2E-03 2.4E-03 9.4E-04 1.3E-02 3.9E-04 0.0E+00
 TEEN 1.8E-03 2.7E-04 2.2E-03 4.0E-03 1.6E-03 2.1E-02 6.7E-04 0.0E+00
 CHILD 1.5E-03 3.7E-04 5.1E-03 6.7E-03 2.5E-03 4.1E-02 1.0E-03 0.0E+00
 INFNT 1.7E-03 5.3E-04 8.3E-03 1.3E-02 3.9E-03 9.9E-02 1.7E-03 0.0E+00

INHAL PATHWAY, DIST GP= 1, 943. METERS WINDS TOWARD NE
 ADULT 1.2E-03 1.1E-03 8.9E-05 1.3E-03 1.2E-03 5.9E-03 1.1E-03 0.0E+00
 TEEN 1.2E-03 1.1E-03 1.2E-04 1.3E-03 1.2E-03 7.1E-03 1.2E-03 0.0E+00
 CHILD 1.0E-03 1.0E-03 1.6E-04 1.2E-03 1.1E-03 7.7E-03 1.0E-03 0.0E+00
 INFNT 5.9E-04 5.7E-04 1.0E-04 7.1E-04 6.3E-04 6.7E-03 5.9E-04 0.0E+00

SUBTOTALS (NO PLUME)
 ADULT 1.9E-02 1.1E-02 1.4E-02 2.1E-02 1.4E-02 6.9E-02 1.2E-02 8.9E-03
 TEEN 1.8E-02 1.1E-02 1.7E-02 2.8E-02 1.7E-02 7.9E-02 1.3E-02 8.9E-03
 CHILD 1.7E-02 1.2E-02 3.0E-02 3.9E-02 2.1E-02 1.3E-01 1.5E-02 8.9E-03
 INFNT 1.1E-02 9.0E-03 1.9E-02 2.5E-02 1.4E-02 2.0E-01 1.1E-02 8.9E-03

TOTALS
 ADULT 2.0E-02 1.2E-02 1.5E-02 2.3E-02 1.6E-02 7.0E-02 1.3E-02 1.2E-02
 TEEN 1.9E-02 1.3E-02 1.9E-02 2.9E-02 1.8E-02 8.0E-02 1.4E-02 1.2E-02
 CHILD 1.9E-02 1.4E-02 3.1E-02 4.1E-02 2.3E-02 1.3E-01 1.7E-02 1.2E-02
 INFNT 1.2E-02 1.0E-02 2.0E-02 2.7E-02 1.5E-02 2.0E-01 1.2E-02 1.2E-02

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT

FOR DATES 95 7 1 1 THRU 95 93024

T.BODY GI-TRCT BONE LIVER KIDNEY THYRD LUNG SKIN

PLUME PATHWAY, DIST GP= 1, 1747. METERS WINDS TOWARD ENE
 ADULT 3.0E-04 3.0E-04 3.0E-04 3.0E-04 3.0E-04 3.0E-04 3.1E-04 7.7E-04
 TEEN 3.0E-04 3.0E-04 3.0E-04 3.0E-04 3.0E-04 3.0E-04 3.1E-04 7.7E-04
 CHILD 3.0E-04 3.0E-04 3.0E-04 3.0E-04 3.0E-04 3.0E-04 3.1E-04 7.7E-04
 INFNT 3.0E-04 3.0E-04 3.0E-04 3.0E-04 3.0E-04 3.0E-04 3.1E-04 7.7E-04

GROUND PATHWAY, DIST GP= 1, 1747. METERS WINDS TOWARD ENE
 ADULT 2.3E-03 2.3E-03 2.3E-03 2.3E-03 2.3E-03 2.3E-03 2.3E-03 2.6E-03
 TEEN 2.3E-03 2.3E-03 2.3E-03 2.3E-03 2.3E-03 2.3E-03 2.3E-03 2.6E-03
 CHILD 2.3E-03 2.3E-03 2.3E-03 2.3E-03 2.3E-03 2.3E-03 2.3E-03 2.6E-03
 INFNT 2.3E-03 2.3E-03 2.3E-03 2.3E-03 2.3E-03 2.3E-03 2.3E-03 2.6E-03

VEGET PATHWAY, DIST GP= 1, 1852. METERS WINDS TOWARD ENE
 ADULT 2.2E-03 4.7E-04 1.4E-03 2.8E-03 1.3E-03 9.7E-03 6.8E-04 0.0E+00
 TEEN 2.0E-03 5.3E-04 2.1E-03 4.1E-03 1.7E-03 8.2E-03 9.3E-04 0.0E+00
 CHILD 1.8E-03 7.7E-04 4.9E-03 6.7E-03 2.7E-03 1.2E-02 1.4E-03 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

MEAT PATHWAY, DIST GP= 1, 3862. METERS WINDS TOWARD ENE
 ADULT 7.8E-05 2.2E-05 4.3E-05 9.7E-05 4.7E-05 3.7E-04 2.8E-05 0.0E+00
 TEEN 3.7E-05 1.3E-05 3.5E-05 7.4E-05 3.3E-05 2.6E-04 2.0E-05 0.0E+00
 CHILD 2.9E-05 1.5E-05 6.4E-05 9.3E-05 4.1E-05 4.0E-04 2.3E-05 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

COW PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD ENE
 ADULT 5.0E-04 6.2E-05 3.5E-04 6.7E-04 2.9E-04 8.8E-03 1.1E-04 0.0E+00
 TEEN 5.1E-04 8.0E-05 6.2E-04 1.1E-03 4.8E-04 1.4E-02 1.9E-04 0.0E+00
 CHILD 4.6E-04 1.1E-04 1.5E-03 1.9E-03 7.7E-04 2.7E-02 2.8E-04 0.0E+00
 INFNT 5.1E-04 1.5E-04 2.4E-03 3.6E-03 1.2E-03 6.7E-02 4.8E-04 0.0E+00

GOAT PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD ENE
 ADULT 1.4E-03 1.3E-04 1.0E-03 1.9E-03 7.4E-04 1.1E-02 2.8E-04 0.0E+00
 TEEN 1.4E-03 1.7E-04 1.8E-03 3.3E-03 1.2E-03 1.7E-02 5.0E-04 0.0E+00
 CHILD 1.2E-03 2.2E-04 4.3E-03 5.5E-03 2.0E-03 3.3E-02 7.7E-04 0.0E+00
 INFNT 1.3E-03 3.1E-04 6.9E-03 1.0E-02 3.1E-03 8.0E-02 1.3E-03 0.0E+00

INHAL PATHWAY, DIST GP= 1, 1747. METERS WINDS TOWARD ENE
 ADULT 2.8E-04 2.5E-04 1.9E-05 2.8E-04 2.7E-04 1.3E-03 2.6E-04 0.0E+00
 TEEN 2.7E-04 2.5E-04 2.6E-05 3.0E-04 2.8E-04 1.5E-03 2.6E-04 0.0E+00
 CHILD 2.3E-04 2.3E-04 3.5E-05 2.7E-04 2.4E-04 1.7E-03 2.3E-04 0.0E+00
 INFNT 1.3E-04 1.3E-04 2.2E-05 1.6E-04 1.4E-04 1.4E-03 1.3E-04 0.0E+00

SUBTOTALS (NO PLUME)

ADULT 6.8E-03 3.2E-03 5.0E-03 8.1E-03 4.9E-03 3.3E-02 3.6E-03 2.6E-03
 TEEN 6.5E-03 3.3E-03 6.9E-03 1.1E-02 6.0E-03 4.3E-02 4.2E-03 2.6E-03
 CHILD 6.0E-03 3.6E-03 1.3E-02 1.7E-02 8.0E-03 7.7E-02 5.0E-03 2.6E-03
 INFNT 4.2E-03 2.9E-03 1.2E-02 1.6E-02 6.8E-03 1.5E-01 4.2E-03 2.6E-03

TOTALS

ADULT 7.1E-03 3.5E-03 5.3E-03 8.4E-03 5.2E-03 3.3E-02 3.9E-03 3.4E-03
 TEEN 6.8E-03 3.6E-03 7.2E-03 1.1E-02 6.3E-03 4.3E-02 4.5E-03 3.4E-03
 CHILD 6.3E-03 3.9E-03 1.3E-02 1.7E-02 8.3E-03 7.8E-02 5.3E-03 3.4E-03
 INFNT 4.5E-03 3.2E-03 1.2E-02 1.7E-02 7.1E-03 1.5E-01 4.5E-03 3.4E-03

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT

FOR DATES 95 7 1 1 THRU 95 93024

T.BODY GI-TRCT BONE LIVER KIDNEY THYRD LUNG SKIN

PLUME PATHWAY, DIST GP= 1, 1716. METERS WINDS TOWARD E
 ADULT 2.6E-04 2.6E-04 2.6E-04 2.6E-04 2.6E-04 2.6E-04 2.7E-04 6.7E-04
 TEEN 2.6E-04 2.6E-04 2.6E-04 2.6E-04 2.6E-04 2.6E-04 2.7E-04 6.7E-04
 CHILD 2.6E-04 2.6E-04 2.6E-04 2.6E-04 2.6E-04 2.6E-04 2.7E-04 6.7E-04
 INFNT 2.6E-04 2.6E-04 2.6E-04 2.6E-04 2.6E-04 2.6E-04 2.7E-04 6.7E-04

GROUND PATHWAY, DIST GP= 1, 1716. METERS WINDS TOWARD E
 ADULT 2.1E-03 2.1E-03 2.1E-03 2.1E-03 2.1E-03 2.1E-03 2.1E-03 2.4E-03
 TEEN 2.1E-03 2.1E-03 2.1E-03 2.1E-03 2.1E-03 2.1E-03 2.1E-03 2.4E-03
 CHILD 2.1E-03 2.1E-03 2.1E-03 2.1E-03 2.1E-03 2.1E-03 2.1E-03 2.4E-03
 INFNT 2.1E-03 2.1E-03 2.1E-03 2.1E-03 2.1E-03 2.1E-03 2.1E-03 2.4E-03

VEGET PATHWAY, DIST GP= 1, 1705. METERS WINDS TOWARD E
 ADULT 2.1E-03 3.4E-04 1.4E-03 2.8E-03 1.1E-03 9.3E-03 5.6E-04 0.0E+00
 TEEN 1.9E-03 3.9E-04 2.2E-03 4.1E-03 1.6E-03 7.8E-03 8.0E-04 0.0E+00
 CHILD 1.6E-03 5.6E-04 5.0E-03 6.6E-03 2.5E-03 1.2E-02 1.2E-03 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

MEAT PATHWAY, DIST GP= 1, 6810. METERS WINDS TOWARD E
 ADULT 2.4E-05 6.1E-06 1.3E-05 3.0E-05 1.4E-05 1.1E-04 8.1E-06 0.0E+00
 TEEN 1.1E-05 3.6E-06 1.1E-05 2.3E-05 1.0E-05 7.9E-05 5.7E-06 0.0E+00
 CHILD 8.6E-06 4.2E-06 2.0E-05 2.9E-05 1.2E-05 1.2E-04 6.7E-06 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

COW PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD E
 ADULT 4.4E-04 4.3E-05 3.1E-04 5.8E-04 2.4E-04 7.5E-03 8.5E-05 0.0E+00
 TEEN 4.4E-04 5.6E-05 5.5E-04 1.0E-03 4.1E-04 1.2E-02 1.5E-04 0.0E+00
 CHILD 3.8E-04 7.2E-05 1.3E-03 1.7E-03 6.6E-04 2.3E-02 2.3E-04 0.0E+00
 INFNT 4.2E-04 1.0E-04 2.1E-03 3.2E-03 1.1E-03 5.7E-02 3.9E-04 0.0E+00

GOAT PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD E
 ADULT 1.3E-03 9.3E-05 9.0E-04 1.7E-03 6.3E-04 9.0E-03 2.3E-04 0.0E+00
 TEEN 1.2E-03 1.2E-04 1.6E-03 2.9E-03 1.1E-03 1.4E-02 4.2E-04 0.0E+00
 CHILD 1.0E-03 1.5E-04 3.8E-03 4.8E-03 1.7E-03 2.8E-02 6.4E-04 0.0E+00
 INFNT 1.0E-03 2.1E-04 6.1E-03 9.1E-03 2.7E-03 6.8E-02 1.1E-03 0.0E+00

INHAL PATHWAY, DIST GP= 1, 1716. METERS WINDS TOWARD E
 ADULT 1.8E-04 1.6E-04 1.8E-05 1.9E-04 1.8E-04 1.1E-03 1.6E-04 0.0E+00
 TEEN 1.8E-04 1.6E-04 2.5E-05 2.0E-04 1.8E-04 1.3E-03 1.7E-04 0.0E+00
 CHILD 1.5E-04 1.4E-04 3.3E-05 1.8E-04 1.6E-04 1.4E-03 1.5E-04 0.0E+00
 INFNT 8.6E-05 8.2E-05 2.1E-05 1.1E-04 9.3E-05 1.3E-03 8.5E-05 0.0E+00

SUBTOTALS (NO PLUME)

ADULT 6.1E-03 2.7E-03 4.7E-03 7.3E-03 4.3E-03 2.9E-02 3.1E-03 2.4E-03
 TEEN 5.8E-03 2.8E-03 6.4E-03 1.0E-02 5.3E-03 3.7E-02 3.6E-03 2.4E-03
 CHILD 5.3E-03 3.0E-03 1.2E-02 1.5E-02 7.1E-03 6.7E-02 4.3E-03 2.4E-03
 INFNT 3.6E-03 2.5E-03 1.0E-02 1.4E-02 5.9E-03 1.3E-01 3.7E-03 2.4E-03

TOTALS

ADULT 6.4E-03 3.0E-03 5.0E-03 7.6E-03 4.6E-03 2.9E-02 3.4E-03 3.1E-03
 TEEN 6.1E-03 3.1E-03 6.7E-03 1.1E-02 5.6E-03 3.8E-02 3.9E-03 3.1E-03
 CHILD 5.5E-03 3.3E-03 1.2E-02 1.6E-02 7.4E-03 6.7E-02 4.6E-03 3.1E-03
 INFNT 3.9E-03 2.7E-03 1.1E-02 1.5E-02 6.2E-03 1.3E-01 3.9E-03 3.1E-03

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT
FOR DATES 95 7 1 1 THRU 95 93024
T.BODY GI-TRCT BONE LIVER KIDNEY THYRD LUNG SKIN

PLUME PATHWAY, DIST GP= 1, 1643. METERS WINDS TOWARD ESE
ADULT 3.4E-04 3.4E-04 3.4E-04 3.4E-04 3.4E-04 3.4E-04 3.6E-04 9.3E-04
TEEN 3.4E-04 3.4E-04 3.4E-04 3.4E-04 3.4E-04 3.4E-04 3.6E-04 9.3E-04
CHILD 3.4E-04 3.4E-04 3.4E-04 3.4E-04 3.4E-04 3.4E-04 3.6E-04 9.3E-04
INFNT 3.4E-04 3.4E-04 3.4E-04 3.4E-04 3.4E-04 3.4E-04 3.6E-04 9.3E-04

GROUND PATHWAY, DIST GP= 1, 1643. METERS WINDS TOWARD ESE
ADULT 1.9E-03 1.9E-03 1.9E-03 1.9E-03 1.9E-03 1.9E-03 1.9E-03 2.3E-03
TEEN 1.9E-03 1.9E-03 1.9E-03 1.9E-03 1.9E-03 1.9E-03 1.9E-03 2.3E-03
CHILD 1.9E-03 1.9E-03 1.9E-03 1.9E-03 1.9E-03 1.9E-03 1.9E-03 2.3E-03
INFNT 1.9E-03 1.9E-03 1.9E-03 1.9E-03 1.9E-03 1.9E-03 1.9E-03 2.3E-03

VEGET PATHWAY, DIST GP= 1, 1628. METERS WINDS TOWARD ESE
ADULT 2.2E-03 5.1E-04 1.3E-03 2.8E-03 1.3E-03 9.3E-03 7.1E-04 0.0E+00
TEEN 2.0E-03 5.8E-04 2.0E-03 4.0E-03 1.7E-03 7.8E-03 9.6E-04 0.0E+00
CHILD 1.9E-03 8.5E-04 4.7E-03 6.5E-03 2.7E-03 1.2E-02 1.5E-03 0.0E+00
INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

MEAT PATHWAY, DIST GP= 1, 2434. METERS WINDS TOWARD ESE
ADULT 1.3E-04 3.8E-05 6.8E-05 1.6E-04 7.8E-05 5.8E-04 4.8E-05 0.0E+00
TEEN 6.1E-05 2.2E-05 5.6E-05 1.2E-04 5.5E-05 4.2E-04 3.3E-05 0.0E+00
CHILD 4.9E-05 2.6E-05 1.0E-04 1.5E-04 6.7E-05 6.2E-04 3.9E-05 0.0E+00
INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

COW PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD ESE
ADULT 3.9E-04 5.2E-05 2.7E-04 5.2E-04 2.3E-04 6.8E-03 8.8E-05 0.0E+00
TEEN 4.0E-04 6.8E-05 4.8E-04 8.9E-04 3.8E-04 1.1E-02 1.5E-04 0.0E+00
CHILD 3.6E-04 9.2E-05 1.1E-03 1.5E-03 6.1E-04 2.1E-02 2.3E-04 0.0E+00
INFNT 4.1E-04 1.3E-04 1.8E-03 2.8E-03 9.6E-04 5.1E-02 3.9E-04 0.0E+00

GOAT PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD ESE
ADULT 1.1E-03 1.1E-04 7.8E-04 1.5E-03 5.8E-04 8.1E-03 2.3E-04 0.0E+00
TEEN 1.1E-03 1.4E-04 1.4E-03 2.6E-03 9.7E-04 1.3E-02 4.0E-04 0.0E+00
CHILD 9.4E-04 1.9E-04 3.3E-03 4.2E-03 1.6E-03 2.5E-02 6.1E-04 0.0E+00
INFNT 1.0E-03 2.7E-04 5.3E-03 8.0E-03 2.4E-03 6.2E-02 1.0E-03 0.0E+00

INHAL PATHWAY, DIST GP= 1, 1643. METERS WINDS TOWARD ESE
ADULT 2.8E-04 2.5E-04 2.2E-05 2.9E-04 2.7E-04 1.4E-03 2.5E-04 0.0E+00
TEEN 2.7E-04 2.5E-04 3.0E-05 3.0E-04 2.8E-04 1.7E-03 2.6E-04 0.0E+00
CHILD 2.3E-04 2.2E-04 4.0E-05 2.7E-04 2.5E-04 1.8E-03 2.3E-04 0.0E+00
INFNT 1.3E-04 1.3E-04 2.5E-05 1.6E-04 1.4E-04 1.6E-03 1.3E-04 0.0E+00

SUBTOTALS (NO PLUME)
ADULT 6.0E-03 2.9E-03 4.4E-03 7.2E-03 4.4E-03 2.8E-02 3.3E-03 2.3E-03
TEEN 5.8E-03 3.0E-03 5.9E-03 9.8E-03 5.3E-03 3.5E-02 3.7E-03 2.3E-03
CHILD 5.4E-03 3.3E-03 1.1E-02 1.5E-02 7.1E-03 6.3E-02 4.5E-03 2.3E-03
INFNT 3.5E-03 2.5E-03 9.1E-03 1.3E-02 5.5E-03 1.2E-01 3.5E-03 2.3E-03

TOTALS
ADULT 6.4E-03 3.2E-03 4.7E-03 7.5E-03 4.7E-03 2.8E-02 3.6E-03 3.2E-03
TEEN 6.1E-03 3.3E-03 6.3E-03 1.0E-02 5.7E-03 3.6E-02 4.1E-03 3.2E-03
CHILD 5.7E-03 3.7E-03 1.2E-02 1.5E-02 7.4E-03 6.3E-02 4.9E-03 3.2E-03
INFNT 3.8E-03 2.8E-03 9.5E-03 1.3E-02 5.8E-03 1.2E-01 3.9E-03 3.2E-03

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT

FOR DATES 95 7 1 1 THRU 95 93024

T.BODY GI-TRCT BONE LIVER KIDNEY THYRD LUNG SKIN

PLUME PATHWAY, DIST GP= 1, 1136. METERS WINDS TOWARD SE
 ADULT 5.4E-04 5.4E-04 5.4E-04 5.4E-04 5.4E-04 5.4E-04 5.6E-04 1.4E-03
 TEEN 5.4E-04 5.4E-04 5.4E-04 5.4E-04 5.4E-04 5.4E-04 5.6E-04 1.4E-03
 CHILD 5.4E-04 5.4E-04 5.4E-04 5.4E-04 5.4E-04 5.4E-04 5.6E-04 1.4E-03
 INFNT 5.4E-04 5.4E-04 5.4E-04 5.4E-04 5.4E-04 5.4E-04 5.6E-04 1.4E-03

GROUND PATHWAY, DIST GP= 1, 1136. METERS WINDS TOWARD SE
 ADULT 2.1E-03 2.1E-03 2.1E-03 2.1E-03 2.1E-03 2.1E-03 2.1E-03 2.5E-03
 TEEN 2.1E-03 2.1E-03 2.1E-03 2.1E-03 2.1E-03 2.1E-03 2.1E-03 2.5E-03
 CHILD 2.1E-03 2.1E-03 2.1E-03 2.1E-03 2.1E-03 2.1E-03 2.1E-03 2.5E-03
 INFNT 2.1E-03 2.1E-03 2.1E-03 2.1E-03 2.1E-03 2.1E-03 2.1E-03 2.5E-03

VEGET PATHWAY, DIST GP= 1, 914. METERS WINDS TOWARD SE
 ADULT 3.6E-03 1.0E-03 2.0E-03 4.6E-03 2.2E-03 1.5E-02 1.3E-03 0.0E+00
 TEEN 3.3E-03 1.2E-03 3.2E-03 6.6E-03 2.9E-03 1.2E-02 1.8E-03 0.0E+00
 CHILD 3.3E-03 1.7E-03 7.3E-03 1.1E-02 4.6E-03 1.9E-02 2.7E-03 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

MEAT PATHWAY, DIST GP= 1, 4354. METERS WINDS TOWARD SE
 ADULT 3.5E-05 1.4E-05 1.6E-05 4.2E-05 2.3E-05 1.4E-04 1.6E-05 0.0E+00
 TEEN 1.7E-05 8.2E-06 1.3E-05 3.1E-05 1.6E-05 1.0E-04 1.1E-05 0.0E+00
 CHILD 1.5E-05 9.7E-06 2.4E-05 3.9E-05 1.9E-05 1.5E-04 1.3E-05 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

COW PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD SE
 ADULT 2.5E-04 4.2E-05 1.6E-04 3.2E-04 1.5E-04 4.0E-03 6.4E-05 0.0E+00
 TEEN 2.6E-04 5.5E-05 2.9E-04 5.5E-04 2.4E-04 6.4E-03 1.0E-04 0.0E+00
 CHILD 2.4E-04 7.8E-05 6.8E-04 9.0E-04 3.9E-04 1.3E-02 1.6E-04 0.0E+00
 INFNT 2.8E-04 1.1E-04 1.1E-03 1.7E-03 6.1E-04 3.1E-02 2.7E-04 0.0E+00

GOAT PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD SE
 ADULT 7.0E-04 8.9E-05 4.7E-04 9.1E-04 3.7E-04 4.9E-03 1.6E-04 0.0E+00
 TEEN 7.0E-04 1.2E-04 8.3E-04 1.6E-03 6.1E-04 7.7E-03 2.7E-04 0.0E+00
 CHILD 6.1E-04 1.6E-04 2.0E-03 2.6E-03 9.8E-04 1.5E-02 4.1E-04 0.0E+00
 INFNT 6.7E-04 2.3E-04 3.2E-03 4.8E-03 1.5E-03 3.7E-02 7.0E-04 0.0E+00

INHAL PATHWAY, DIST GP= 1, 1136. METERS WINDS TOWARD SE
 ADULT 4.2E-04 3.8E-04 3.8E-05 4.4E-04 4.1E-04 2.3E-03 3.8E-04 0.0E+00
 TEEN 4.1E-04 3.8E-04 5.2E-05 4.6E-04 4.2E-04 2.8E-03 3.9E-04 0.0E+00
 CHILD 3.5E-04 3.3E-04 6.9E-05 4.1E-04 3.7E-04 3.0E-03 3.4E-04 0.0E+00
 INFNT 2.0E-04 1.9E-04 4.4E-05 2.5E-04 2.2E-04 2.7E-03 2.0E-04 0.0E+00

SUBTOTALS (NO PLUME)
 ADULT 7.2E-03 3.7E-03 4.9E-03 8.4E-03 5.3E-03 2.8E-02 4.1E-03 2.5E-03
 TEEN 6.9E-03 3.9E-03 6.5E-03 1.1E-02 6.4E-03 3.2E-02 4.7E-03 2.5E-03
 CHILD 6.7E-03 4.5E-03 1.2E-02 1.7E-02 8.5E-03 5.2E-02 5.8E-03 2.5E-03
 INFNT 3.3E-03 2.7E-03 6.5E-03 8.9E-03 4.5E-03 7.2E-02 3.3E-03 2.5E-03

TOTALS
 ADULT 7.7E-03 4.2E-03 5.4E-03 9.0E-03 5.8E-03 2.9E-02 4.7E-03 3.9E-03
 TEEN 7.4E-03 4.4E-03 7.0E-03 1.2E-02 6.9E-03 3.2E-02 5.2E-03 3.9E-03
 CHILD 7.2E-03 5.0E-03 1.3E-02 1.7E-02 9.0E-03 5.3E-02 6.3E-03 3.9E-03
 INFNT 3.8E-03 3.2E-03 7.0E-03 9.5E-03 5.0E-03 7.3E-02 3.9E-03 3.9E-03

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT

FOR DATES 95 7 1 1 THRU 95 93024

T.BODY GI-TRCT BONE LIVER KIDNEY THYRD LUNG SKIN

PLUME PATHWAY, DIST GP= 1, 1507. METERS WINDS TOWARD SSE
 ADULT 2.5E-04 2.5E-04 2.5E-04 2.5E-04 2.5E-04 2.5E-04 2.6E-04 6.5E-04
 TEEN 2.5E-04 2.5E-04 2.5E-04 2.5E-04 2.5E-04 2.5E-04 2.6E-04 6.5E-04
 CHILD 2.5E-04 2.5E-04 2.5E-04 2.5E-04 2.5E-04 2.5E-04 2.6E-04 6.5E-04
 INFNT 2.5E-04 2.5E-04 2.5E-04 2.5E-04 2.5E-04 2.5E-04 2.6E-04 6.5E-04

GROUND PATHWAY, DIST GP= 1, 1507. METERS WINDS TOWARD SSE
 ADULT 9.9E-04 9.9E-04 9.9E-04 9.9E-04 9.9E-04 9.9E-04 9.9E-04 1.2E-03
 TEEN 9.9E-04 9.9E-04 9.9E-04 9.9E-04 9.9E-04 9.9E-04 9.9E-04 1.2E-03
 CHILD 9.9E-04 9.9E-04 9.9E-04 9.9E-04 9.9E-04 9.9E-04 9.9E-04 1.2E-03
 INFNT 9.9E-04 9.9E-04 9.9E-04 9.9E-04 9.9E-04 9.9E-04 9.9E-04 1.2E-03

VEGET PATHWAY, DIST GP= 1, 1093. METERS WINDS TOWARD SSE
 ADULT 2.1E-03 6.7E-04 1.1E-03 2.6E-03 1.3E-03 8.6E-03 8.5E-04 0.0E+00
 TEEN 2.0E-03 7.7E-04 1.7E-03 3.7E-03 1.7E-03 7.3E-03 1.1E-03 0.0E+00
 CHILD 2.0E-03 1.1E-03 4.0E-03 6.0E-03 2.7E-03 1.1E-02 1.7E-03 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

MEAT PATHWAY, DIST GP= 1, 1093. METERS WINDS TOWARD SSE
 ADULT 2.4E-04 9.6E-05 1.1E-04 3.0E-04 1.6E-04 1.1E-03 1.1E-04 0.0E+00
 TEEN 1.2E-04 5.7E-05 9.4E-05 2.2E-04 1.1E-04 7.5E-04 7.5E-05 0.0E+00
 CHILD 1.0E-04 6.7E-05 1.7E-04 2.7E-04 1.4E-04 1.1E-03 8.9E-05 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

COW PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD SSE
 ADULT 1.9E-04 3.6E-05 1.2E-04 2.4E-04 1.1E-04 3.1E-03 5.2E-05 0.0E+00
 TEEN 2.0E-04 4.7E-05 2.1E-04 4.1E-04 1.8E-04 5.0E-03 8.3E-05 0.0E+00
 CHILD 1.9E-04 6.8E-05 5.0E-04 6.8E-04 3.0E-04 9.8E-03 1.3E-04 0.0E+00
 INFNT 2.2E-04 9.9E-05 8.2E-04 1.3E-03 4.7E-04 2.4E-02 2.1E-04 0.0E+00

GOAT PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD SSE
 ADULT 5.3E-04 7.6E-05 3.5E-04 6.9E-04 2.8E-04 3.8E-03 1.3E-04 0.0E+00
 TEEN 5.3E-04 9.8E-05 6.2E-04 1.2E-03 4.7E-04 6.0E-03 2.1E-04 0.0E+00
 CHILD 4.7E-04 1.4E-04 1.5E-03 1.9E-03 7.5E-04 1.2E-02 3.3E-04 0.0E+00
 INFNT 5.3E-04 2.0E-04 2.4E-03 3.6E-03 1.2E-03 2.9E-02 5.5E-04 0.0E+00

INHAL PATHWAY, DIST GP= 1, 1507. METERS WINDS TOWARD SSE
 ADULT 2.3E-04 2.1E-04 1.7E-05 2.4E-04 2.3E-04 1.1E-03 2.2E-04 0.0E+00
 TEEN 2.3E-04 2.1E-04 2.3E-05 2.5E-04 2.3E-04 1.4E-03 2.2E-04 0.0E+00
 CHILD 2.0E-04 1.9E-04 3.1E-05 2.3E-04 2.1E-04 1.5E-03 1.9E-04 0.0E+00
 INFNT 1.1E-04 1.1E-04 2.0E-05 1.4E-04 1.2E-04 1.3E-03 1.1E-04 0.0E+00

SUBTOTALS (NO PLUME)

ADULT 4.3E-03 2.1E-03 2.7E-03 5.1E-03 3.1E-03 1.9E-02 2.3E-03 1.2E-03
 TEEN 4.0E-03 2.2E-03 3.7E-03 6.8E-03 3.7E-03 2.1E-02 2.7E-03 1.2E-03
 CHILD 4.0E-03 2.6E-03 7.2E-03 1.0E-02 5.1E-03 3.6E-02 3.4E-03 1.2E-03
 INFNT 1.9E-03 1.4E-03 4.2E-03 6.0E-03 2.8E-03 5.5E-02 1.9E-03 1.2E-03

TOTALS

ADULT 4.5E-03 2.3E-03 3.0E-03 5.3E-03 3.4E-03 1.9E-02 2.6E-03 1.8E-03
 TEEN 4.3E-03 2.4E-03 3.9E-03 7.0E-03 4.0E-03 2.2E-02 2.9E-03 1.8E-03
 CHILD 4.2E-03 2.9E-03 7.4E-03 1.0E-02 5.4E-03 3.7E-02 3.7E-03 1.8E-03
 INFNT 2.1E-03 1.7E-03 4.4E-03 6.3E-03 3.0E-03 5.5E-02 2.1E-03 1.8E-03

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT

FOR DATES 95 7 1 1 THRU 95 93024

T.BODY GI-TRCT BONE LIVER KIDNEY THYRD LUNG SKIN

PLUME PATHWAY, DIST GP= 1, 1026. METERS WINDS TOWARD S
 ADULT 4.3E-04 4.3E-04 4.3E-04 4.3E-04 4.3E-04 4.3E-04 4.5E-04 1.1E-03
 TEEN 4.3E-04 4.3E-04 4.3E-04 4.3E-04 4.3E-04 4.3E-04 4.5E-04 1.1E-03
 CHILD 4.3E-04 4.3E-04 4.3E-04 4.3E-04 4.3E-04 4.3E-04 4.5E-04 1.1E-03
 INFNT 4.3E-04 4.3E-04 4.3E-04 4.3E-04 4.3E-04 4.3E-04 4.5E-04 1.1E-03

GROUND PATHWAY, DIST GP= 1, 1026. METERS WINDS TOWARD S
 ADULT 1.9E-03 1.9E-03 1.9E-03 1.9E-03 1.9E-03 1.9E-03 1.9E-03 2.2E-03
 TEEN 1.9E-03 1.9E-03 1.9E-03 1.9E-03 1.9E-03 1.9E-03 1.9E-03 2.2E-03
 CHILD 1.9E-03 1.9E-03 1.9E-03 1.9E-03 1.9E-03 1.9E-03 1.9E-03 2.2E-03
 INFNT 1.9E-03 1.9E-03 1.9E-03 1.9E-03 1.9E-03 1.9E-03 1.9E-03 2.2E-03

VEGET PATHWAY, DIST GP= 1, 863. METERS WINDS TOWARD S
 ADULT 4.2E-03 2.1E-03 1.7E-03 5.0E-03 3.0E-03 1.5E-02 2.3E-03 0.0E+00
 TEEN 4.1E-03 2.4E-03 2.6E-03 6.8E-03 3.8E-03 1.3E-02 2.8E-03 0.0E+00
 CHILD 4.9E-03 3.6E-03 6.0E-03 1.1E-02 5.9E-03 2.0E-02 4.4E-03 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

MEAT PATHWAY, DIST GP= 1, 6115. METERS WINDS TOWARD S
 ADULT 2.4E-05 1.5E-05 6.3E-06 2.6E-05 1.9E-05 7.5E-05 1.6E-05 0.0E+00
 TEEN 1.3E-05 9.2E-06 5.1E-06 1.8E-05 1.2E-05 5.2E-05 1.0E-05 0.0E+00
 CHILD 1.3E-05 1.1E-05 9.3E-06 2.2E-05 1.5E-05 7.6E-05 1.2E-05 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

COW PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD S
 ADULT 2.2E-04 7.2E-05 1.2E-04 2.8E-04 1.5E-04 3.6E-03 8.8E-05 0.0E+00
 TEEN 2.4E-04 9.4E-05 2.1E-04 4.6E-04 2.4E-04 5.7E-03 1.3E-04 0.0E+00
 CHILD 2.6E-04 1.4E-04 5.1E-04 7.6E-04 3.8E-04 1.1E-02 2.0E-04 0.0E+00
 INFNT 3.4E-04 2.1E-04 8.3E-04 1.4E-03 5.9E-04 2.7E-02 3.2E-04 0.0E+00

GOAT PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD S
 ADULT 6.0E-04 1.5E-04 3.5E-04 7.6E-04 3.6E-04 4.4E-03 2.0E-04 0.0E+00
 TEEN 6.3E-04 1.9E-04 6.2E-04 1.3E-03 5.6E-04 6.9E-03 3.1E-04 0.0E+00
 CHILD 6.3E-04 2.9E-04 1.5E-03 2.1E-03 9.0E-04 1.4E-02 4.7E-04 0.0E+00
 INFNT 7.6E-04 4.3E-04 2.4E-03 3.9E-03 1.4E-03 3.3E-02 7.7E-04 0.0E+00

INHAL PATHWAY, DIST GP= 1, 1026. METERS WINDS TOWARD S
 ADULT 8.8E-04 8.5E-04 2.2E-05 8.9E-04 8.7E-04 2.3E-03 8.6E-04 0.0E+00
 TEEN 8.8E-04 8.6E-04 3.1E-05 9.1E-04 8.8E-04 2.6E-03 8.6E-04 0.0E+00
 CHILD 7.7E-04 7.6E-04 4.1E-05 8.1E-04 7.8E-04 2.8E-03 7.6E-04 0.0E+00
 INFNT 4.4E-04 4.4E-04 2.6E-05 4.7E-04 4.5E-04 2.3E-03 4.4E-04 0.0E+00

SUBTOTALS (NO PLUME)

ADULT 7.8E-03 5.0E-03 4.0E-03 8.8E-03 6.3E-03 2.8E-02 5.4E-03 2.2E-03
 TEEN 7.8E-03 5.4E-03 5.3E-03 1.1E-02 7.4E-03 3.1E-02 6.0E-03 2.2E-03
 CHILD 8.4E-03 6.7E-03 9.9E-03 1.6E-02 9.9E-03 5.0E-02 7.7E-03 2.2E-03
 INFNT 3.4E-03 3.0E-03 5.1E-03 7.6E-03 4.3E-03 6.4E-02 3.4E-03 2.2E-03

TOTALS

ADULT 8.2E-03 5.5E-03 4.5E-03 9.2E-03 6.8E-03 2.8E-02 5.8E-03 3.3E-03
 TEEN 8.2E-03 5.8E-03 5.8E-03 1.2E-02 7.8E-03 3.1E-02 6.5E-03 3.3E-03
 CHILD 8.9E-03 7.1E-03 1.0E-02 1.7E-02 1.0E-02 5.0E-02 8.1E-03 3.3E-03
 INFNT 3.9E-03 3.4E-03 5.5E-03 8.1E-03 4.8E-03 6.4E-02 3.9E-03 3.3E-03

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT

FOR DATES 95 7 1 1 THRU 95 93024

T.BODY GI-TRCT BONE LIVER KIDNEY THYRD LUNG SKIN

PLUME PATHWAY, DIST GP= 1, 942. METERS WINDS TOWARD SSW
 ADULT 4.5E-04 4.5E-04 4.5E-04 4.5E-04 4.5E-04 4.5E-04 4.6E-04 1.1E-03
 TEEN 4.5E-04 4.5E-04 4.5E-04 4.5E-04 4.5E-04 4.5E-04 4.6E-04 1.1E-03
 CHILD 4.5E-04 4.5E-04 4.5E-04 4.5E-04 4.5E-04 4.5E-04 4.6E-04 1.1E-03
 INFNT 4.5E-04 4.5E-04 4.5E-04 4.5E-04 4.5E-04 4.5E-04 4.6E-04 1.1E-03

GROUND PATHWAY, DIST GP= 1, 942. METERS WINDS TOWARD SSW
 ADULT 9.6E-04 9.6E-04 9.6E-04 9.6E-04 9.6E-04 9.6E-04 9.6E-04 1.1E-03
 TEEN 9.6E-04 9.6E-04 9.6E-04 9.6E-04 9.6E-04 9.6E-04 9.6E-04 1.1E-03
 CHILD 9.6E-04 9.6E-04 9.6E-04 9.6E-04 9.6E-04 9.6E-04 9.6E-04 1.1E-03
 INFNT 9.6E-04 9.6E-04 9.6E-04 9.6E-04 9.6E-04 9.6E-04 9.6E-04 1.1E-03

VEGET PATHWAY, DIST GP= 1, 770. METERS WINDS TOWARD SSW
 ADULT 3.3E-03 2.1E-03 8.9E-04 3.7E-03 2.6E-03 9.2E-03 2.3E-03 0.0E+00
 TEEN 3.4E-03 2.4E-03 1.4E-03 4.8E-03 3.2E-03 8.3E-03 2.7E-03 0.0E+00
 CHILD 4.4E-03 3.7E-03 3.2E-03 7.6E-03 5.0E-03 1.3E-02 4.1E-03 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

MEAT PATHWAY, DIST GP= 1, 8045. METERS WINDS TOWARD SSW
 ADULT 1.2E-05 9.5E-06 1.7E-06 1.3E-05 1.1E-05 2.6E-05 9.8E-06 0.0E+00
 TEEN 6.7E-06 5.7E-06 1.4E-06 8.1E-06 6.5E-06 1.7E-05 5.9E-06 0.0E+00
 CHILD 7.4E-06 6.8E-06 2.5E-06 9.9E-06 7.9E-06 2.5E-05 7.2E-06 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

COW PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD SSW
 ADULT 1.3E-04 6.4E-05 5.3E-05 1.6E-04 9.9E-05 1.6E-03 7.0E-05 0.0E+00
 TEEN 1.5E-04 8.3E-05 9.4E-05 2.4E-04 1.4E-04 2.5E-03 9.9E-05 0.0E+00
 CHILD 1.8E-04 1.3E-04 2.2E-04 4.0E-04 2.3E-04 5.0E-03 1.5E-04 0.0E+00
 INFNT 2.5E-04 1.9E-04 3.7E-04 7.2E-04 3.6E-04 1.2E-02 2.4E-04 0.0E+00

GOAT PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD SSW
 ADULT 3.3E-04 1.3E-04 1.5E-04 4.0E-04 2.2E-04 2.0E-03 1.5E-04 0.0E+00
 TEEN 3.6E-04 1.7E-04 2.7E-04 6.4E-04 3.3E-04 3.1E-03 2.2E-04 0.0E+00
 CHILD 4.1E-04 2.6E-04 6.4E-04 1.1E-03 5.3E-04 6.1E-03 3.4E-04 0.0E+00
 INFNT 5.4E-04 3.9E-04 1.0E-03 1.9E-03 8.3E-04 1.5E-02 5.4E-04 0.0E+00

INHAL PATHWAY, DIST GP= 1, 942. METERS WINDS TOWARD SSW
 ADULT 9.0E-04 8.7E-04 2.4E-05 9.1E-04 8.9E-04 2.3E-03 8.7E-04 0.0E+00
 TEEN 8.9E-04 8.7E-04 3.3E-05 9.2E-04 9.0E-04 2.7E-03 8.8E-04 0.0E+00
 CHILD 7.8E-04 7.7E-04 4.4E-05 8.2E-04 8.0E-04 2.8E-03 7.8E-04 0.0E+00
 INFNT 4.5E-04 4.4E-04 2.8E-05 4.8E-04 4.6E-04 2.3E-03 4.5E-04 0.0E+00

SUBTOTALS (NO PLUME)

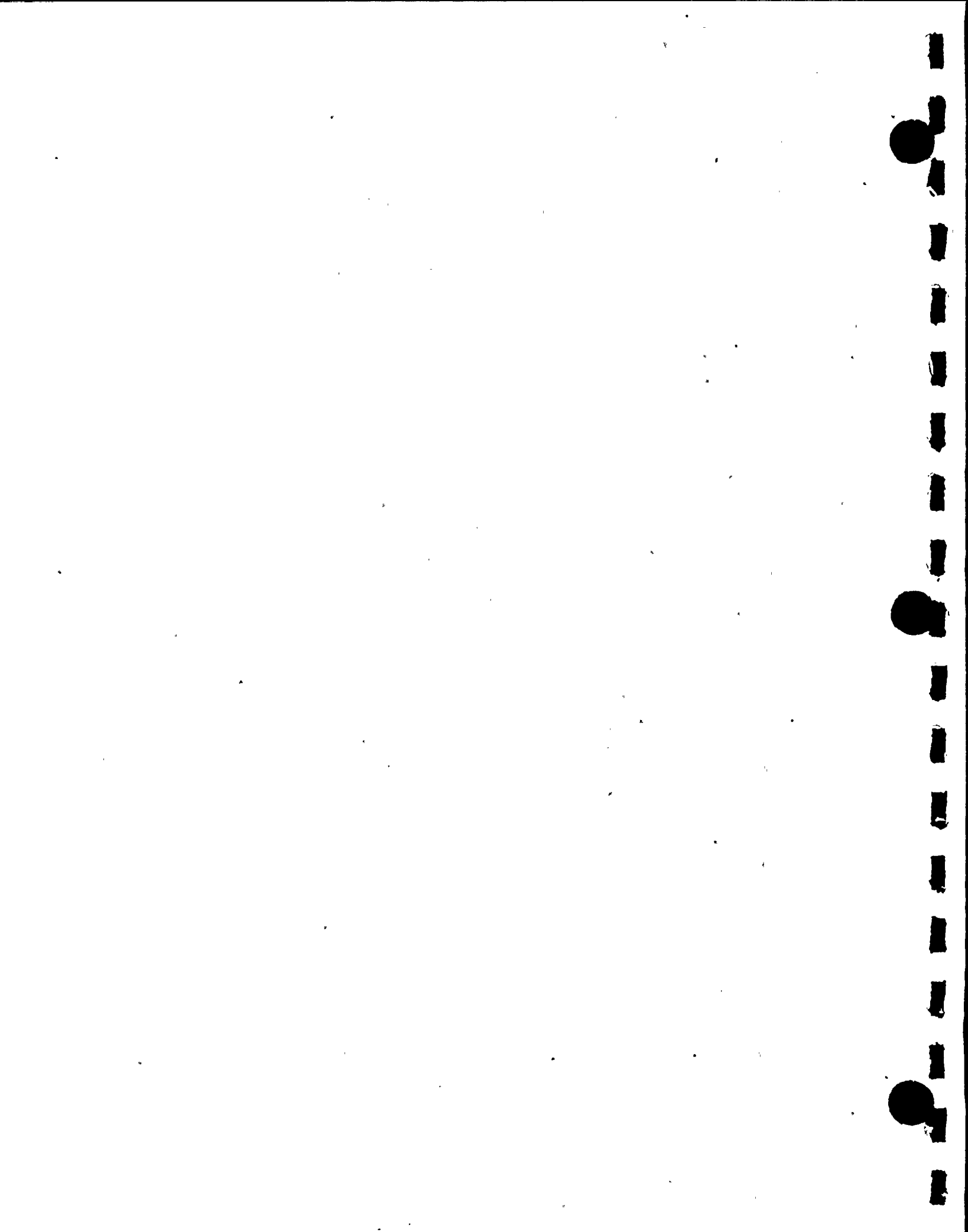
ADULT 5.6E-03 4.2E-03 2.1E-03 6.1E-03 4.8E-03 1.6E-02 4.3E-03 1.1E-03
 TEEN 5.7E-03 4.5E-03 2.7E-03 7.6E-03 5.5E-03 1.8E-02 4.9E-03 1.1E-03
 CHILD 6.8E-03 5.8E-03 5.1E-03 1.1E-02 7.5E-03 2.7E-02 6.4E-03 1.1E-03
 INFNT 2.2E-03 2.0E-03 2.4E-03 4.1E-03 2.6E-03 3.0E-02 2.2E-03 1.1E-03

TOTALS

ADULT 6.0E-03 4.6E-03 2.5E-03 6.5E-03 5.3E-03 1.7E-02 4.8E-03 2.2E-03
 TEEN 6.2E-03 5.0E-03 3.2E-03 8.0E-03 6.0E-03 1.8E-02 5.3E-03 2.2E-03
 CHILD 7.2E-03 6.3E-03 5.5E-03 1.1E-02 7.9E-03 2.8E-02 6.8E-03 2.2E-03
 INFNT 2.6E-03 2.4E-03 2.8E-03 4.5E-03 3.0E-03 3.0E-02 2.6E-03 2.2E-03

APPENDIX 1.5

Summary of Maximum Individual Doses
Fourth Quarter, 1995



SUMMARY OF MAXIMUM INDIVIDUAL DOSES

4th Quarter 1995

EFFLUENT	APPLICABLE ORGAN	ESTIMATED DOSE (mrem)	AGE GROUP	LOCATION DIST DIR (M) (Toward)	% OF APPLICABLE LIMIT	LIMIT (mrem) QTR
Liquid	Total Body	1.12E-2	Adult	Receptor 1	7.47E-1	1.5E+0
Liquid	GI-Tract	2.38E-2	Adult	Receptor 1	4.76E-1	5.0E+0
Noble Gas	Air Dose (Gamma-mrad)	1.02E-3		651 N	2.04E-2	5.0E+0
Noble Gas	Air dose (Beta-mrad)	1.03E-2		594 SSE	1.03E-1	1.0E+1
Iodines and Particulates	Liver	4.05E-2	Child	659 N	5.40E-1	7.5E+0

FOR RECEPTOR NUMBER 1

LAST LIQUID DOSE ACCUMULATIONS (MREM)

START DATE 9510 1 1 END DATE 95123124

	BONE	LIVER	T.BODY	THYRD	KIDNEY	LUNG	GI-LLI	SKIN
WATER								
ADULT	5.3E-05	2.9E-03	2.9E-03	2.9E-03	2.9E-03	2.8E-03	3.3E-03	0.0E+00
TEEN	5.1E-05	2.1E-03	2.1E-03	2.1E-03	2.0E-03	2.0E-03	2.3E-03	0.0E+00
CHILD	1.5E-04	4.0E-03	3.9E-03	4.0E-03	3.9E-03	3.9E-03	4.1E-03	0.0E+00
INFANT	1.5E-04	4.0E-03	3.9E-03	4.0E-03	3.8E-03	3.8E-03	3.9E-03	0.0E+00
SHORE								
ADULT	3.5E-05	3.5E-05	3.5E-05	3.5E-05	3.5E-05	3.5E-05	3.5E-05	4.1E-05
TEEN	1.9E-04	1.9E-04	1.9E-04	1.9E-04	1.9E-04	1.9E-04	1.9E-04	2.3E-04
CHILD	4.1E-05	4.1E-05	4.1E-05	4.1E-05	4.1E-05	4.1E-05	4.1E-05	4.8E-05
INFANT	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
FW SPT FISH								
ADULT	7.0E-03	1.1E-02	8.2E-03	2.5E-04	3.9E-03	1.4E-03	2.0E-02	0.0E+00
TEEN	7.4E-03	1.2E-02	4.7E-03	2.1E-04	4.0E-03	1.6E-03	1.4E-02	0.0E+00
CHILD	9.3E-03	1.0E-02	2.0E-03	1.9E-04	3.4E-03	1.3E-03	5.2E-03	0.0E+00
INFANT	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
TOTAL								
ADULT	7.1E-03	1.4E-02	1.1E-02	3.2E-03	6.8E-03	4.3E-03	2.4E-02	4.1E-05
TEEN	7.7E-03	1.4E-02	7.0E-03	2.5E-03	6.2E-03	3.8E-03	1.7E-02	2.3E-04
CHILD	9.4E-03	1.4E-02	5.9E-03	4.2E-03	7.3E-03	5.2E-03	9.4E-03	4.8E-05
INFANT	1.5E-04	4.0E-03	3.9E-03	4.0E-03	3.8E-03	3.8E-03	3.9E-03	0.0E+00

DATES OF LAST AIR DOSE ACCUMULATION ARE FROM 9510 1 1 0 TO 95123124 0
DOSE ACCUMULATION FOR GAMMA MRAD

FOR RELEASE POINT 1

**DIRECTION FROM N

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM NNE

8.8564E-05	1.0247E-05	4.5039E-06	2.5511E-06	1.7194E-06
7.8635E-07	2.6637E-07	1.2129E-07	7.2794E-08	4.1330E-08

**DIRECTION FROM NE

9.8404E-06	1.1386E-06	5.0043E-07	2.8345E-07	1.9104E-07
8.7372E-08	2.9596E-08	1.3477E-08	8.0882E-09	4.5922E-09

**DIRECTION FROM ENE

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM E

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM ESE

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM SE

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM SSE

7.9777E-05	1.1173E-05	5.0848E-06	2.9214E-06	2.0561E-06
1.0466E-06	4.0548E-07	1.9994E-07	1.2748E-07	7.9527E-08

**DIRECTION FROM S

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM SSW

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM SW

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM WSW

3.7548E-08	4.3444E-09	1.9095E-09	1.0816E-09	7.2895E-10
3.3338E-10	1.1293E-10	5.1424E-11	3.0862E-11	1.7522E-11

**DIRECTION FROM W

6.8613E-07	2.2452E-08	8.2638E-09	5.2515E-09	3.9830E-09
2.3898E-09	1.1948E-09	7.1690E-10	5.1207E-10	3.5823E-10

**DIRECTION FROM WNW

4.3048E-05	4.1927E-06	1.7777E-06	9.9047E-07	6.5560E-07
2.8998E-07	9.5075E-08	4.4546E-08	2.8235E-08	1.7269E-08

**DIRECTION FROM NW

7.8260E-06	6.1833E-07	2.4802E-07	1.3450E-07	8.6295E-08
3.5874E-08	1.1003E-08	5.4668E-09	3.8280E-09	2.6246E-09

**DIRECTION FROM NNW

8.9558E-05	1.1927E-05	5.3825E-06	3.0821E-06	2.1474E-06
1.0677E-06	4.0274E-07	1.9572E-07	1.2349E-07	7.5873E-08

DISTANCES USED IN CALCULATIONS

594.0	2416.0	4020.0	5630.0	7240.0
12067.0	24135.0	40225.0	56315.0	80500.0

DATES OF LAST AIR DOSE ACCUMULATION ARE FROM 9510 1 1 0 TO 95123124 0
DOSE ACCUMULATION FOR GAMMA MRAD.

FOR RELEASE POINT 2

**DIRECTION FROM N

2.3806E-04	2.4504E-05	1.0716E-05	6.1024E-06	4.1427E-06
1.9368E-06	6.8551E-07	3.2782E-07	2.0560E-07	1.2424E-07

**DIRECTION FROM NNE

1.0944E-04	1.2782E-05	5.6863E-06	3.2480E-06	2.2284E-06
1.0676E-06	3.8714E-07	1.8547E-07	1.1599E-07	7.0104E-08

**DIRECTION FROM NE

3.1259E-04	3.9342E-05	1.7751E-05	1.0205E-05	7.0625E-06
3.4493E-06	1.2813E-06	6.1890E-07	3.8878E-07	2.3689E-07

**DIRECTION FROM ENE

3.8519E-04	4.6816E-05	2.1567E-05	1.2614E-05	8.7496E-06
4.2743E-06	1.6067E-06	7.8135E-07	4.9311E-07	3.0331E-07

**DIRECTION FROM E

6.5904E-04	8.1949E-05	3.8092E-05	2.2397E-05	1.5626E-05
7.7299E-06	2.9532E-06	1.4476E-06	9.1788E-07	5.6845E-07

**DIRECTION FROM ESE

5.7868E-04	6.7976E-05	3.1815E-05	1.8828E-05	1.3158E-05
6.5204E-06	2.4997E-06	1.2242E-06	7.7545E-07	4.8291E-07

**DIRECTION FROM SE

9.1369E-04	1.0577E-04	5.0771E-05	3.0577E-05	2.1549E-05
1.0834E-05	4.2504E-06	2.1008E-06	1.3371E-06	8.4193E-07

**DIRECTION FROM SSE

1.2958E-03	1.4980E-04	7.2630E-05	4.4074E-05	3.1095E-05
1.5645E-05	6.1763E-06	3.0673E-06	1.9585E-06	1.2363E-06

**DIRECTION FROM S

1.1763E-03	1.3805E-04	6.5912E-05	3.9573E-05	2.7803E-05
1.3900E-05	5.4298E-06	2.6898E-06	1.7168E-06	1.0794E-06

**DIRECTION FROM SSW

5.0727E-04	6.0270E-05	2.8478E-05	1.6986E-05	1.1857E-05
5.8476E-06	2.2484E-06	1.1071E-06	7.0388E-07	4.3803E-07

**DIRECTION FROM SW

3.8041E-04	4.6310E-05	2.1014E-05	1.2164E-05	8.3924E-06
4.0585E-06	1.5005E-06	7.2468E-07	4.5511E-07	2.7666E-07

**DIRECTION FROM WSW

3.6156E-04	4.1996E-05	1.8986E-05	1.0978E-05	7.5713E-06
3.6596E-06	1.3492E-06	6.4959E-07	4.0723E-07	2.4832E-07

**DIRECTION FROM W

6.1420E-04	7.0788E-05	3.1481E-05	1.8005E-05	1.2309E-05
5.8415E-06	2.0986E-06	1.0000E-06	6.2339E-07	3.7479E-07

**DIRECTION FROM WNW

6.7418E-04	7.6209E-05	3.3600E-05	1.9109E-05	1.2975E-05
6.0552E-06	2.1201E-06	9.9386E-07	6.1156E-07	3.6053E-07

**DIRECTION FROM NW

5.7684E-04	6.5431E-05	2.8927E-05	1.6476E-05	1.1234E-05
5.3032E-06	1.8885E-06	8.9743E-07	5.5887E-07	3.3534E-07

**DIRECTION FROM NNW

4.7832E-04	5.7005E-05	2.5340E-05	1.4450E-05	9.9086E-06
4.7406E-06	1.7112E-06	8.1431E-07	5.0627E-07	3.0368E-07

DISTANCES USED IN CALCULATIONS

594.0	2416.0	4020.0	5630.0	7240.0
12067.0	24135.0	40225.0	56315.0	80500.0

DATES OF LAST AIR DOSE ACCUMULATION ARE FROM 9510 1 1 0 TO 95123124 0
DOSE ACCUMULATION FOR BETA MRAD

FOR RELEASE POINT 1

**DIRECTION FROM N

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM NNE

1.0001E-02	1.1571E-03	5.0861E-04	2.8808E-04	1.9416E-04
8.8799E-05	3.0079E-05	1.3697E-05	8.2203E-06	4.6672E-06

**DIRECTION FROM NE

1.1112E-03	1.2857E-04	5.6512E-05	3.2009E-05	2.1573E-05
9.8665E-06	3.3422E-06	1.5219E-06	9.1337E-07	5.1857E-07

**DIRECTION FROM ENE

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM E

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM ESE

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM SE

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM SSE

8.8452E-03	1.2388E-03	5.6376E-04	3.2391E-04	2.2796E-04
1.1604E-04	4.4957E-05	2.2168E-05	1.4134E-05	8.8174E-06

**DIRECTION FROM S

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM SSW

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM SW

0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

**DIRECTION FROM WSW

4.8091E-08	5.5642E-09	2.4457E-09	1.3853E-09	9.3363E-10
4.2699E-10	1.4464E-10	6.5863E-11	3.9528E-11	2.2442E-11

**DIRECTION FROM W

8.7879E-07	2.8756E-08	1.0584E-08	6.7261E-09	5.1014E-09
3.0608E-09	1.5303E-09	9.1819E-10	6.5585E-10	4.5881E-10

**DIRECTION FROM WNW

4.8643E-03	4.7345E-04	2.0071E-04	1.1182E-04	7.4010E-05
3.2730E-05	1.0730E-05	5.0279E-06	3.1877E-06	1.9503E-06

**DIRECTION FROM NW

8.2990E-04	6.5570E-05	2.6301E-05	1.4263E-05	9.1511E-06
3.8042E-06	1.1668E-06	5.7972E-07	4.0593E-07	2.7832E-07

**DIRECTION FROM NNW

9.9981E-03	1.3340E-03	6.0220E-04	3.4487E-04	2.4038E-04
1.1963E-04	4.5172E-05	2.1966E-05	1.3866E-05	8.5244E-06

DISTANCES USED IN CALCULATIONS

594.0	2416.0	4020.0	5630.0	7240.0
12067.0	24135.0	40225.0	56315.0	80500.0

DATES OF LAST AIR DOSE ACCUMULATION ARE FROM 9510 1 1'0 TO 95123124 0
DOSE ACCUMULATION FOR BETA MRAD

FOR RELEASE POINT 2

**DIRECTION FROM N

1.5854E-04	1.6326E-05	7.1400E-06	4.0662E-06	2.7604E-06
1.2905E-06	4.5677E-07	2.1842E-07	1.3697E-07	8.2760E-08

**DIRECTION FROM NNE

7.2972E-05	8.5229E-06	3.7910E-06	2.1652E-06	1.4853E-06
7.1124E-07	2.5775E-07	1.2342E-07	7.7160E-08	4.6609E-08

**DIRECTION FROM NE

2.0715E-04	2.6067E-05	1.1765E-05	6.7650E-06	4.6819E-06
2.2866E-06	8.4960E-07	4.1043E-07	2.5785E-07	1.5713E-07

**DIRECTION FROM ENE

2.5838E-04	3.1396E-05	1.4468E-05	8.4639E-06	5.8715E-06
2.8689E-06	1.0788E-06	5.2466E-07	3.3112E-07	2.0370E-07

**DIRECTION FROM E

4.3830E-04	5.4473E-05	2.5335E-05	1.4902E-05	1.0399E-05
5.1457E-06	1.9669E-06	9.6438E-07	6.1155E-07	3.7885E-07

**DIRECTION FROM ESE

3.8823E-04	4.5626E-05	2.1361E-05	1.2644E-05	8.8375E-06
4.3803E-06	1.6799E-06	8.2290E-07	5.2130E-07	3.2470E-07

**DIRECTION FROM SE

6.1187E-04	7.0831E-05	3.4014E-05	2.0490E-05	1.4442E-05
7.2636E-06	2.8506E-06	1.4091E-06	8.9691E-07	5.6484E-07

**DIRECTION FROM SSE

8.6885E-04	1.0038E-04	4.8702E-05	2.9566E-05	2.0866E-05
1.0505E-05	4.1499E-06	2.0613E-06	1.3163E-06	8.3121E-07

**DIRECTION FROM S

7.9087E-04	9.2789E-05	4.4325E-05	2.6621E-05	1.8708E-05
9.3568E-06	3.6571E-06	1.8120E-06	1.1566E-06	7.2737E-07

**DIRECTION FROM SSW

3.4016E-04	4.0392E-05	1.9088E-05	1.1387E-05	7.9498E-06
3.9221E-06	1.5085E-06	7.4282E-07	4.7226E-07	2.9395E-07

**DIRECTION FROM SW

2.5390E-04	3.0903E-05	1.4027E-05	8.1215E-06	5.6035E-06
2.7102E-06	1.0023E-06	4.8419E-07	3.0413E-07	1.8492E-07

**DIRECTION FROM WSW

2.4333E-04	2.8250E-05	1.2777E-05	7.3900E-06	5.0978E-06
2.4648E-06	9.0923E-07	4.3789E-07	2.7456E-07	1.6747E-07

**DIRECTION FROM W

4.0977E-04	4.7235E-05	2.1010E-05	1.2018E-05	8.2167E-06
3.9003E-06	1.4017E-06	6.6810E-07	4.1656E-07	2.5051E-07

**DIRECTION FROM WNW

4.4939E-04	5.0817E-05	2.2406E-05	1.2743E-05	8.6527E-06
4.0385E-06	1.4142E-06	6.6297E-07	4.0796E-07	2.4051E-07

**DIRECTION FROM NW

3.8390E-04	4.3531E-05	1.9243E-05	1.0960E-05	7.4723E-06
3.5263E-06	1.2552E-06	5.9634E-07	3.7130E-07	2.2273E-07

**DIRECTION FROM NNW

3.1796E-04	3.7868E-05	1.6831E-05	9.5973E-06	6.5804E-06
3.1474E-06	1.1357E-06	5.4036E-07	3.3591E-07	2.0146E-07

DISTANCES USED IN CALCULATIONS

594.0	2416.0	4020.0	5630.0	7240.0
12067.0	24135.0	40225.0	56315.0	80500.0

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT
FOR DATES 9510 1 1 THRU 95123124

T.BODY	GI-TRCT	BONE	LIVER	KIDNEY	THYRD	LUNG	SKIN
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PLUME PATHWAY, DIST GP= 1, 659. METERS WINDS TOWARD N

ADULT	6.2E-04	6.2E-04	6.2E-04	6.2E-04	6.2E-04	6.2E-04	6.3E-04	1.1E-03
TEEN	6.2E-04	6.2E-04	6.2E-04	6.2E-04	6.2E-04	6.2E-04	6.3E-04	1.1E-03
CHILD	6.2E-04	6.2E-04	6.2E-04	6.2E-04	6.2E-04	6.2E-04	6.3E-04	1.1E-03
INFNT	6.2E-04	6.2E-04	6.2E-04	6.2E-04	6.2E-04	6.2E-04	6.3E-04	1.1E-03

GROUND PATHWAY, DIST GP= 1, 659. METERS WINDS TOWARD N

ADULT	1.1E-02	1.1E-02	1.1E-02	1.1E-02	1.1E-02	1.1E-02	1.1E-02	1.3E-02
TEEN	1.1E-02	1.1E-02	1.1E-02	1.1E-02	1.1E-02	1.1E-02	1.1E-02	1.3E-02
CHILD	1.1E-02	1.1E-02	1.1E-02	1.1E-02	1.1E-02	1.1E-02	1.1E-02	1.3E-02
INFNT	1.1E-02	1.1E-02	1.1E-02	1.1E-02	1.1E-02	1.1E-02	1.1E-02	1.3E-02

VEGET PATHWAY, DIST GP= 1, 8045. METERS WINDS TOWARD N

ADULT	5.4E-04	4.5E-04	9.6E-05	5.8E-04	4.9E-04	4.5E-04	4.5E-04	0.0E+00
TEEN	5.9E-04	5.1E-04	1.5E-04	7.3E-04	5.8E-04	5.2E-04	5.3E-04	0.0E+00
CHILD	8.4E-04	7.8E-04	3.5E-04	1.1E-03	9.0E-04	8.0E-04	8.2E-04	0.0E+00
INFNT	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

MEAT PATHWAY, DIST GP= 1, 8045. METERS WINDS TOWARD N

ADULT	7.3E-05	6.5E-05	9.6E-06	7.8E-05	6.8E-05	6.5E-05	6.5E-05	0.0E+00
TEEN	4.2E-05	3.9E-05	7.9E-06	4.9E-05	4.2E-05	3.9E-05	3.9E-05	0.0E+00
CHILD	4.8E-05	4.6E-05	1.4E-05	6.1E-05	5.0E-05	4.7E-05	4.7E-05	0.0E+00
INFNT	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

COW PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD N

ADULT	6.7E-04	3.8E-04	2.8E-04	8.1E-04	5.2E-04	5.5E-04	4.2E-04	0.0E+00
TEEN	7.7E-04	5.0E-04	5.1E-04	1.2E-03	7.4E-04	7.7E-04	5.9E-04	0.0E+00
CHILD	9.8E-04	7.8E-04	1.2E-03	2.1E-03	1.2E-03	1.3E-03	9.2E-04	0.0E+00
INFNT	1.4E-03	1.2E-03	1.9E-03	3.6E-03	1.8E-03	2.5E-03	1.4E-03	0.0E+00

GOAT PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD N

ADULT	1.7E-03	7.9E-04	8.4E-04	2.1E-03	1.2E-03	9.8E-04	9.1E-04	0.0E+00
TEEN	1.8E-03	1.0E-03	1.5E-03	3.3E-03	1.8E-03	1.3E-03	1.3E-03	0.0E+00
CHILD	2.2E-03	1.6E-03	3.6E-03	5.4E-03	2.8E-03	2.2E-03	2.0E-03	0.0E+00
INFNT	3.0E-03	2.4E-03	5.8E-03	9.8E-03	4.4E-03	4.0E-03	3.2E-03	0.0E+00

INHAL PATHWAY, DIST GP= 1, 659. METERS WINDS TOWARD N

ADULT	9.6E-03	9.5E-03	1.3E-04	9.6E-03	9.5E-03	9.6E-03	9.6E-03	0.0E+00
TEEN	9.6E-03	9.5E-03	1.8E-04	9.8E-03	9.6E-03	9.7E-03	9.7E-03	0.0E+00
CHILD	8.5E-03	8.4E-03	2.4E-04	8.7E-03	8.5E-03	8.7E-03	8.6E-03	0.0E+00
INFNT	4.8E-03	4.8E-03	1.5E-04	5.0E-03	4.9E-03	5.1E-03	4.9E-03	0.0E+00

SUBTOTALS (NO PLUME)

ADULT	2.4E-02	2.2E-02	1.3E-02	2.4E-02	2.3E-02	2.3E-02	2.3E-02	1.3E-02
TEEN	2.4E-02	2.3E-02	1.4E-02	2.6E-02	2.4E-02	2.4E-02	2.3E-02	1.3E-02
CHILD	2.4E-02	2.3E-02	1.7E-02	2.8E-02	2.5E-02	2.4E-02	2.4E-02	1.3E-02
INFNT	2.0E-02	2.0E-02	1.9E-02	3.0E-02	2.2E-02	2.3E-02	2.1E-02	1.3E-02

TOTALS

ADULT	2.4E-02	2.3E-02	1.3E-02	2.5E-02	2.4E-02	2.3E-02	2.3E-02	1.4E-02
TEEN	2.5E-02	2.3E-02	1.4E-02	2.7E-02	2.4E-02	2.4E-02	2.4E-02	1.4E-02
CHILD	2.4E-02	2.3E-02	1.7E-02	2.9E-02	2.5E-02	2.5E-02	2.4E-02	1.4E-02
INFNT	2.1E-02	2.0E-02	2.0E-02	3.0E-02	2.3E-02	2.3E-02	2.1E-02	1.4E-02

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT

FOR DATES 9510 1 1 THRU 95123124

T.BODY GI-TRCT BONE LIVER KIDNEY THYRD LUNG SKIN

PLUME PATHWAY, DIST GP= 1, 660. METERS WINDS TOWARD NNE
 ADULT 2.7E-04 2.7E-04 2.7E-04 2.7E-04 2.7E-04 2.7E-04 2.7E-04 4.7E-04
 TEEN 2.7E-04 2.7E-04 2.7E-04 2.7E-04 2.7E-04 2.7E-04 2.7E-04 4.7E-04
 CHILD 2.7E-04 2.7E-04 2.7E-04 2.7E-04 2.7E-04 2.7E-04 2.7E-04 4.7E-04
 INFNT 2.7E-04 2.7E-04 2.7E-04 2.7E-04 2.7E-04 2.7E-04 2.7E-04 4.7E-04

GROUND PATHWAY, DIST GP= 1, 660. METERS WINDS TOWARD NNE
 ADULT 4.5E-03 4.5E-03 4.5E-03 4.5E-03 4.5E-03 4.5E-03 4.5E-03 5.3E-03
 TEEN 4.5E-03 4.5E-03 4.5E-03 4.5E-03 4.5E-03 4.5E-03 4.5E-03 5.3E-03
 CHILD 4.5E-03 4.5E-03 4.5E-03 4.5E-03 4.5E-03 4.5E-03 4.5E-03 5.3E-03
 INFNT 4.5E-03 4.5E-03 4.5E-03 4.5E-03 4.5E-03 4.5E-03 4.5E-03 5.3E-03

VEGET PATHWAY, DIST GP= 1, 814. METERS WINDS TOWARD NNE
 ADULT 6.3E-03 4.5E-03 1.9E-03 7.2E-03 5.3E-03 4.7E-03 4.7E-03 0.0E+00
 TEEN 6.7E-03 5.2E-03 2.9E-03 9.3E-03 6.5E-03 5.3E-03 5.6E-03 0.0E+00
 CHILD 9.0E-03 7.9E-03 6.9E-03 1.5E-02 1.0E-02 8.2E-03 8.6E-03 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

MEAT PATHWAY, DIST GP= 1, 7725. METERS WINDS TOWARD NNE
 ADULT 2.7E-05 2.4E-05 4.1E-06 2.9E-05 2.5E-05 2.4E-05 2.4E-05 0.0E+00
 TEEN 1.6E-05 1.4E-05 3.4E-06 1.9E-05 1.5E-05 1.4E-05 1.4E-05 0.0E+00
 CHILD 1.8E-05 1.7E-05 6.2E-06 2.3E-05 1.9E-05 1.8E-05 1.7E-05 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

COW PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD NNE
 ADULT 2.5E-04 1.4E-04 1.1E-04 3.0E-04 1.9E-04 2.2E-04 1.5E-04 0.0E+00
 TEEN 2.9E-04 1.8E-04 2.0E-04 4.7E-04 2.7E-04 3.0E-04 2.1E-04 0.0E+00
 CHILD 3.6E-04 2.8E-04 4.9E-04 7.9E-04 4.4E-04 5.4E-04 3.3E-04 0.0E+00
 INFNT 4.9E-04 4.2E-04 7.8E-04 1.4E-03 6.8E-04 1.1E-03 5.2E-04 0.0E+00

GOAT PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD NNE
 ADULT 6.3E-04 2.8E-04 3.4E-04 7.9E-04 4.4E-04 3.7E-04 3.3E-04 0.0E+00
 TEEN 6.9E-04 3.6E-04 6.1E-04 1.3E-03 6.6E-04 5.1E-04 4.7E-04 0.0E+00
 CHILD 8.0E-04 5.6E-04 1.5E-03 2.1E-03 1.1E-03 8.7E-04 7.3E-04 0.0E+00
 INFNT 1.1E-03 8.5E-04 2.3E-03 3.8E-03 1.6E-03 1.6E-03 1.2E-03 0.0E+00

INHAL PATHWAY, DIST GP= 1, 660. METERS WINDS TOWARD NNE
 ADULT 3.4E-03 3.4E-03 4.4E-05 3.4E-03 3.4E-03 3.5E-03 3.4E-03 0.0E+00
 TEEN 3.4E-03 3.4E-03 6.1E-05 3.5E-03 3.4E-03 3.5E-03 3.5E-03 0.0E+00
 CHILD 3.0E-03 3.0E-03 8.2E-05 3.1E-03 3.0E-03 3.1E-03 3.1E-03 0.0E+00
 INFNT 1.7E-03 1.7E-03 5.0E-05 1.8E-03 1.7E-03 1.9E-03 1.8E-03 0.0E+00

SUBTOTALS (NO PLUME)

ADULT 1.5E-02 1.3E-02 6.9E-03 1.6E-02 1.4E-02 1.3E-02 1.3E-02 5.3E-03
 TEEN 1.6E-02 1.4E-02 8.3E-03 1.9E-02 1.5E-02 1.4E-02 1.4E-02 5.3E-03
 CHILD 1.8E-02 1.6E-02 1.3E-02 2.5E-02 1.9E-02 1.7E-02 1.7E-02 5.3E-03
 INFNT 7.8E-03 7.5E-03 7.7E-03 1.2E-02 8.6E-03 9.0E-03 8.0E-03 5.3E-03

TOTALS

ADULT 1.5E-02 1.3E-02 7.1E-03 1.7E-02 1.4E-02 1.4E-02 1.3E-02 5.8E-03
 TEEN 1.6E-02 1.4E-02 8.6E-03 1.9E-02 1.6E-02 1.4E-02 1.5E-02 5.8E-03
 CHILD 1.8E-02 1.7E-02 1.4E-02 2.6E-02 1.9E-02 1.8E-02 1.8E-02 5.8E-03
 INFNT 8.1E-03 7.8E-03 8.0E-03 1.2E-02 8.8E-03 9.3E-03 8.2E-03 5.8E-03

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT

FOR DATES 9510 1 1 THRU 95123124

T.BODY GI-TRCT BONE LIVER KIDNEY THYRD LUNG SKIN

PLUME PATHWAY, DIST GP= 1, 943. METERS WINDS TOWARD NE
 ADULT 1.2E-04 1.2E-04 1.2E-04 1.2E-04 1.2E-04 1.2E-04 1.2E-04 2.0E-04
 TEEN 1.2E-04 1.2E-04 1.2E-04 1.2E-04 1.2E-04 1.2E-04 1.2E-04 2.0E-04
 CHILD 1.2E-04 1.2E-04 1.2E-04 1.2E-04 1.2E-04 1.2E-04 1.2E-04 2.0E-04
 INFNT 1.2E-04 1.2E-04 1.2E-04 1.2E-04 1.2E-04 1.2E-04 1.2E-04 2.0E-04

GROUND PATHWAY, DIST GP= 1, 943. METERS WINDS TOWARD NE
 ADULT 2.7E-03 2.7E-03 2.7E-03 2.7E-03 2.7E-03 2.7E-03 2.7E-03 3.2E-03
 TEEN 2.7E-03 2.7E-03 2.7E-03 2.7E-03 2.7E-03 2.7E-03 2.7E-03 3.2E-03
 CHILD 2.7E-03 2.7E-03 2.7E-03 2.7E-03 2.7E-03 2.7E-03 2.7E-03 3.2E-03
 INFNT 2.7E-03 2.7E-03 2.7E-03 2.7E-03 2.7E-03 2.7E-03 2.7E-03 3.2E-03

VEGET PATHWAY, DIST GP= 1, 1052. METERS WINDS TOWARD NE
 ADULT 3.7E-03 2.3E-03 1.4E-03 4.4E-03 2.9E-03 2.4E-03 2.5E-03 0.0E+00
 TEEN 3.8E-03 2.6E-03 2.2E-03 5.9E-03 3.6E-03 2.7E-03 3.0E-03 0.0E+00
 CHILD 4.8E-03 4.0E-03 5.2E-03 9.4E-03 5.7E-03 4.1E-03 4.6E-03 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

MEAT PATHWAY, DIST GP= 1, 7725. METERS WINDS TOWARD NE
 ADULT 2.1E-05 1.7E-05 4.8E-06 2.3E-05 1.8E-05 1.7E-05 1.7E-05 0.0E+00
 TEEN 1.2E-05 1.0E-05 3.9E-06 1.5E-05 1.2E-05 9.9E-06 1.0E-05 0.0E+00
 CHILD 1.3E-05 1.2E-05 7.2E-06 1.9E-05 1.4E-05 1.2E-05 1.2E-05 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

COW PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD NE
 ADULT 2.4E-04 1.0E-04 1.3E-04 3.0E-04 1.7E-04 1.5E-04 1.2E-04 0.0E+00
 TEEN 2.6E-04 1.3E-04 2.4E-04 4.8E-04 2.5E-04 2.1E-04 1.7E-04 0.0E+00
 CHILD 3.0E-04 2.0E-04 5.7E-04 8.1E-04 4.0E-04 3.7E-04 2.7E-04 0.0E+00
 INFNT 4.0E-04 3.1E-04 9.0E-04 1.5E-03 6.1E-04 7.2E-04 4.3E-04 0.0E+00

GOAT PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD NE
 ADULT 6.3E-04 2.1E-04 3.9E-04 8.1E-04 4.0E-04 2.6E-04 2.7E-04 0.0E+00
 TEEN 6.6E-04 2.7E-04 7.1E-04 1.3E-03 6.2E-04 3.6E-04 4.0E-04 0.0E+00
 CHILD 7.0E-04 4.2E-04 1.7E-03 2.2E-03 9.9E-04 6.1E-04 6.2E-04 0.0E+00
 INFNT 9.0E-04 6.3E-04 2.7E-03 4.1E-03 1.5E-03 1.1E-03 1.0E-03 0.0E+00

INHAL PATHWAY, DIST GP= 1, 943. METERS WINDS TOWARD NE
 ADULT 1.5E-03 1.4E-03 1.8E-05 1.5E-03 1.5E-03 1.5E-03 1.5E-03 0.0E+00
 TEEN 1.5E-03 1.5E-03 2.5E-05 1.5E-03 1.5E-03 1.5E-03 1.5E-03 0.0E+00
 CHILD 1.3E-03 1.3E-03 3.3E-05 1.3E-03 1.3E-03 1.3E-03 1.3E-03 0.0E+00
 INFNT 7.4E-04 7.4E-04 2.0E-05 7.6E-04 7.5E-04 7.8E-04 7.5E-04 0.0E+00

SUBTOTALS (NO PLUME)
 ADULT 8.8E-03 6.8E-03 4.7E-03 9.7E-03 7.7E-03 7.0E-03 7.1E-03 3.2E-03
 TEEN 8.9E-03 7.2E-03 5.9E-03 1.2E-02 8.7E-03 7.5E-03 7.8E-03 3.2E-03
 CHILD 9.9E-03 8.6E-03 1.0E-02 1.7E-02 1.1E-02 9.2E-03 9.5E-03 3.2E-03
 INFNT 4.8E-03 4.4E-03 6.4E-03 9.1E-03 5.7E-03 5.4E-03 4.9E-03 3.2E-03

TOTALS
 ADULT 8.9E-03 6.9E-03 4.8E-03 9.8E-03 7.8E-03 7.1E-03 7.2E-03 3.4E-03
 TEEN 9.1E-03 7.4E-03 6.1E-03 1.2E-02 8.8E-03 7.6E-03 7.9E-03 3.4E-03
 CHILD 1.0E-02 8.8E-03 1.0E-02 1.7E-02 1.1E-02 9.3E-03 9.6E-03 3.4E-03
 INFNT 4.9E-03 4.5E-03 6.5E-03 9.2E-03 5.8E-03 5.5E-03 5.0E-03 3.4E-03

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT
FOR DATES 9510 1 1 THRU 95123124

T.BODY GI-TRCT BONE LIVER KIDNEY THYRD LUNG SKIN

PLUME	PATHWAY,	DIST	GP=	1,	1747.	METERS	WINDS	TOWARD	ENE
ADULT	4.1E-05	4.1E-05	4.1E-05	4.1E-05	4.1E-05	4.1E-05	4.1E-05	4.1E-05	7.2E-05
TEEN	4.1E-05	4.1E-05	4.1E-05	4.1E-05	4.1E-05	4.1E-05	4.1E-05	4.1E-05	7.2E-05
CHILD	4.1E-05	4.1E-05	4.1E-05	4.1E-05	4.1E-05	4.1E-05	4.1E-05	4.1E-05	7.2E-05
INFNT	4.1E-05	4.1E-05	4.1E-05	4.1E-05	4.1E-05	4.1E-05	4.1E-05	4.1E-05	7.2E-05
GROUND	PATHWAY,	DIST	GP=	1,	1747.	METERS	WINDS	TOWARD	ENE
ADULT	1.6E-03	1.6E-03	1.6E-03	1.6E-03	1.6E-03	1.6E-03	1.6E-03	1.6E-03	1.8E-03
TEEN	1.6E-03	1.6E-03	1.6E-03	1.6E-03	1.6E-03	1.6E-03	1.6E-03	1.6E-03	1.8E-03
CHILD	1.6E-03	1.6E-03	1.6E-03	1.6E-03	1.6E-03	1.6E-03	1.6E-03	1.6E-03	1.8E-03
INFNT	1.6E-03	1.6E-03	1.6E-03	1.6E-03	1.6E-03	1.6E-03	1.6E-03	1.6E-03	1.8E-03
VEGET	PATHWAY,	DIST	GP=	1,	1852.	METERS	WINDS	TOWARD	ENE
ADULT	2.0E-03	1.1E-03	8.8E-04	2.4E-03	1.5E-03	1.2E-03	1.2E-03	1.2E-03	0.0E+00
TEEN	2.0E-03	1.3E-03	1.4E-03	3.3E-03	1.9E-03	1.3E-03	1.5E-03	1.5E-03	0.0E+00
CHILD	2.5E-03	2.0E-03	3.3E-03	5.4E-03	3.0E-03	2.0E-03	2.3E-03	2.3E-03	0.0E+00
INFNT	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
MEAT	PATHWAY,	DIST	GP=	1,	3862.	METERS	WINDS	TOWARD	ENE
ADULT	8.1E-05	5.6E-05	2.7E-05	9.4E-05	6.6E-05	5.4E-05	5.6E-05	5.6E-05	0.0E+00
TEEN	4.4E-05	3.3E-05	2.3E-05	6.5E-05	4.2E-05	3.3E-05	3.5E-05	3.5E-05	0.0E+00
CHILD	4.5E-05	3.8E-05	4.1E-05	8.1E-05	5.1E-05	4.0E-05	4.2E-05	4.2E-05	0.0E+00
INFNT	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
COW	PATHWAY,	DIST	GP=	1,	4091.	METERS	WINDS	TOWARD	ENE
ADULT	3.4E-04	1.2E-04	2.1E-04	4.4E-04	2.2E-04	1.8E-04	1.5E-04	1.5E-04	0.0E+00
TEEN	3.6E-04	1.5E-04	3.8E-04	7.2E-04	3.4E-04	2.6E-04	2.2E-04	2.2E-04	0.0E+00
CHILD	3.9E-04	2.3E-04	9.1E-04	1.2E-03	5.4E-04	4.5E-04	3.4E-04	3.4E-04	0.0E+00
INFNT	4.9E-04	3.5E-04	1.5E-03	2.2E-03	8.4E-04	8.8E-04	5.5E-04	5.5E-04	0.0E+00
GOAT	PATHWAY,	DIST	GP=	1,	4091.	METERS	WINDS	TOWARD	ENE
ADULT	9.1E-04	2.4E-04	6.3E-04	1.2E-03	5.5E-04	3.1E-04	3.3E-04	3.3E-04	0.0E+00
TEEN	9.5E-04	3.2E-04	1.1E-03	2.0E-03	8.7E-04	4.3E-04	5.2E-04	5.2E-04	0.0E+00
CHILD	9.4E-04	4.8E-04	2.7E-03	3.4E-03	1.4E-03	7.3E-04	8.0E-04	8.0E-04	0.0E+00
INFNT	1.1E-03	7.2E-04	4.4E-03	6.3E-03	2.2E-03	1.4E-03	1.3E-03	1.3E-03	0.0E+00
INHAL	PATHWAY,	DIST	GP=	1,	1747.	METERS	WINDS	TOWARD	ENE
ADULT	6.7E-04	6.6E-04	8.5E-06	6.7E-04	6.6E-04	6.7E-04	6.7E-04	6.7E-04	0.0E+00
TEEN	6.7E-04	6.6E-04	1.2E-05	6.8E-04	6.7E-04	6.8E-04	6.7E-04	6.7E-04	0.0E+00
CHILD	5.9E-04	5.9E-04	1.6E-05	6.0E-04	5.9E-04	6.1E-04	6.0E-04	6.0E-04	0.0E+00
INFNT	3.4E-04	3.4E-04	9.6E-06	3.5E-04	3.4E-04	3.5E-04	3.4E-04	3.4E-04	0.0E+00
SUBTOTALS (NO PLUME)									
ADULT	5.6E-03	3.8E-03	3.3E-03	6.4E-03	4.6E-03	4.0E-03	4.0E-03	4.0E-03	1.8E-03
TEEN	5.6E-03	4.0E-03	4.5E-03	8.4E-03	5.4E-03	4.3E-03	4.5E-03	4.5E-03	1.8E-03
CHILD	6.0E-03	4.9E-03	8.6E-03	1.2E-02	7.2E-03	5.4E-03	5.7E-03	5.7E-03	1.8E-03
INFNT	3.6E-03	3.0E-03	7.4E-03	1.0E-02	5.0E-03	4.2E-03	3.8E-03	3.8E-03	1.8E-03
TOTALS									
ADULT	5.7E-03	3.8E-03	3.4E-03	6.5E-03	4.7E-03	4.0E-03	4.1E-03	4.1E-03	1.9E-03
TEEN	5.7E-03	4.1E-03	4.6E-03	8.4E-03	5.5E-03	4.3E-03	4.6E-03	4.6E-03	1.9E-03
CHILD	6.1E-03	4.9E-03	8.6E-03	1.2E-02	7.2E-03	5.5E-03	5.7E-03	5.7E-03	1.9E-03
INFNT	3.6E-03	3.0E-03	7.5E-03	1.1E-02	5.0E-03	4.2E-03	3.8E-03	3.8E-03	1.9E-03

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT

FOR DATES 9510 1 1 THRU 95123124

T.BODY GI-TRCT BONE LIVER KIDNEY THYRD LUNG SKIN

PLUME PATHWAY, DIST GP= 1, 1716. METERS WINDS TOWARD E
 ADULT 7.1E-05 7.1E-05 7.1E-05 7.1E-05 7.1E-05 7.1E-05 7.1E-05 1.3E-04
 TEEN 7.1E-05 7.1E-05 7.1E-05 7.1E-05 7.1E-05 7.1E-05 7.1E-05 1.3E-04
 CHILD 7.1E-05 7.1E-05 7.1E-05 7.1E-05 7.1E-05 7.1E-05 7.1E-05 1.3E-04
 INFNT 7.1E-05 7.1E-05 7.1E-05 7.1E-05 7.1E-05 7.1E-05 7.1E-05 1.3E-04

GROUND PATHWAY, DIST GP= 1, 1716. METERS WINDS TOWARD E
 ADULT 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.6E-03
 TEEN 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.6E-03
 CHILD 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.6E-03
 INFNT 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.3E-03 1.6E-03

VEGET PATHWAY, DIST GP= 1, 1705. METERS WINDS TOWARD E
 ADULT 2.1E-03 1.3E-03 8.0E-04 2.4E-03 1.6E-03 1.4E-03 1.4E-03 0.0E+00
 TEEN 2.1E-03 1.5E-03 1.3E-03 3.3E-03 2.0E-03 1.6E-03 1.6E-03 0.0E+00
 CHILD 2.7E-03 2.2E-03 2.9E-03 5.3E-03 3.2E-03 2.4E-03 2.5E-03 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

MEAT PATHWAY, DIST GP= 1, 6810. METERS WINDS TOWARD E
 ADULT 2.8E-05 2.2E-05 7.5E-06 3.2E-05 2.4E-05 2.2E-05 2.1E-05 0.0E+00
 TEEN 1.6E-05 1.3E-05 6.2E-06 2.1E-05 1.5E-05 1.4E-05 1.3E-05 0.0E+00
 CHILD 1.7E-05 1.5E-05 1.1E-05 2.7E-05 1.8E-05 1.7E-05 1.6E-05 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

COW PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD E
 ADULT 2.8E-04 1.1E-04 1.7E-04 3.6E-04 1.9E-04 2.6E-04 1.3E-04 0.0E+00
 TEEN 3.1E-04 1.5E-04 3.0E-04 5.8E-04 2.9E-04 3.9E-04 2.0E-04 0.0E+00
 CHILD 3.4E-04 2.2E-04 7.2E-04 9.8E-04 4.6E-04 7.1E-04 3.1E-04 0.0E+00
 INFNT 4.5E-04 3.4E-04 1.1E-03 1.8E-03 7.2E-04 1.5E-03 4.9E-04 0.0E+00

GOAT PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD E
 ADULT 7.5E-04 2.3E-04 5.0E-04 9.8E-04 4.7E-04 4.0E-04 3.0E-04 0.0E+00
 TEEN 7.9E-04 3.0E-04 9.0E-04 1.6E-03 7.3E-04 5.8E-04 4.6E-04 0.0E+00
 CHILD 8.1E-04 4.6E-04 2.1E-03 2.7E-03 1.2E-03 1.0E-03 7.1E-04 0.0E+00
 INFNT 1.0E-03 6.9E-04 3.4E-03 5.1E-03 1.8E-03 2.1E-03 1.2E-03 0.0E+00

INHAL PATHWAY, DIST GP= 1, 1716. METERS WINDS TOWARD E
 ADULT 6.8E-04 6.7E-04 7.3E-06 6.8E-04 6.8E-04 7.0E-04 6.8E-04 0.0E+00
 TEEN 6.8E-04 6.8E-04 1.0E-05 6.9E-04 6.8E-04 7.1E-04 6.9E-04 0.0E+00
 CHILD 6.0E-04 6.0E-04 1.4E-05 6.1E-04 6.0E-04 6.4E-04 6.1E-04 0.0E+00
 INFNT 3.4E-04 3.4E-04 8.3E-06 3.5E-04 3.5E-04 3.8E-04 3.5E-04 0.0E+00

SUBTOTALS (NO PLUME)
 ADULT 5.2E-03 3.7E-03 2.8E-03 5.8E-03 4.3E-03 4.2E-03 3.8E-03 1.6E-03
 TEEN 5.2E-03 4.0E-03 3.8E-03 7.5E-03 5.1E-03 4.6E-03 4.3E-03 1.6E-03
 CHILD 5.8E-03 4.9E-03 7.2E-03 1.1E-02 6.8E-03 6.2E-03 5.5E-03 1.6E-03
 INFNT 3.2E-03 2.7E-03 5.9E-03 8.5E-03 4.3E-03 5.4E-03 3.3E-03 1.6E-03

TOTALS
 ADULT 5.2E-03 3.7E-03 2.9E-03 5.9E-03 4.4E-03 4.2E-03 3.9E-03 1.7E-03
 TEEN 5.3E-03 4.0E-03 3.9E-03 7.6E-03 5.2E-03 4.7E-03 4.4E-03 1.7E-03
 CHILD 5.9E-03 4.9E-03 7.3E-03 1.1E-02 6.9E-03 6.2E-03 5.6E-03 1.7E-03
 INFNT 3.2E-03 2.8E-03 6.0E-03 8.6E-03 4.3E-03 5.4E-03 3.4E-03 1.7E-03

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT

FOR DATES 9510 1 1 THRU 95123124

T.BODY GI-TRCT BONE LIVER KIDNEY THYRD LUNG SKIN

PLUME PATHWAY, DIST GP= 1, 1643. METERS WINDS TOWARD ESE
 ADULT 8.8E-05 8.8E-05 8.8E-05 8.8E-05 8.8E-05 8.8E-05 9.7E-05 7.6E-04
 TEEN 8.8E-05 8.8E-05 8.8E-05 8.8E-05 8.8E-05 8.8E-05 9.7E-05 7.6E-04
 CHILD 8.8E-05 8.8E-05 8.8E-05 8.8E-05 8.8E-05 8.8E-05 9.7E-05 7.6E-04
 INFNT 8.8E-05 8.8E-05 8.8E-05 8.8E-05 8.8E-05 8.8E-05 9.7E-05 7.6E-04

GROUND PATHWAY, DIST GP= 1, 1643. METERS WINDS TOWARD ESE
 ADULT 1.5E-03 1.5E-03 1.5E-03 1.5E-03 1.5E-03 1.5E-03 1.5E-03 1.7E-03
 TEEN 1.5E-03 1.5E-03 1.5E-03 1.5E-03 1.5E-03 1.5E-03 1.5E-03 1.7E-03
 CHILD 1.5E-03 1.5E-03 1.5E-03 1.5E-03 1.5E-03 1.5E-03 1.5E-03 1.7E-03
 INFNT 1.5E-03 1.5E-03 1.5E-03 1.5E-03 1.5E-03 1.5E-03 1.5E-03 1.7E-03

VEGET PATHWAY, DIST GP= 1, 1628. METERS WINDS TOWARD ESE
 ADULT 2.2E-03 1.4E-03 8.7E-04 2.6E-03 1.7E-03 1.5E-03 1.4E-03 0.0E+00
 TEEN 2.2E-03 1.6E-03 1.4E-03 3.5E-03 2.2E-03 1.7E-03 1.7E-03 0.0E+00
 CHILD 2.8E-03 2.3E-03 3.2E-03 5.7E-03 3.4E-03 2.6E-03 2.7E-03 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

MEAT PATHWAY, DIST GP= 1, 2434. METERS WINDS TOWARD ESE
 ADULT 1.5E-04 1.1E-04 4.4E-05 1.7E-04 1.2E-04 1.1E-04 1.1E-04 0.0E+00
 TEEN 8.1E-05 6.6E-05 3.7E-05 1.1E-04 7.8E-05 6.9E-05 6.7E-05 0.0E+00
 CHILD 8.5E-05 7.5E-05 6.7E-05 1.4E-04 9.5E-05 8.7E-05 8.0E-05 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

COW PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD ESE
 ADULT 2.8E-04 1.1E-04 1.7E-04 3.6E-04 1.9E-04 2.7E-04 1.3E-04 0.0E+00
 TEEN 3.0E-04 1.4E-04 3.0E-04 5.8E-04 2.8E-04 4.0E-04 1.9E-04 0.0E+00
 CHILD 3.4E-04 2.2E-04 7.2E-04 9.7E-04 4.6E-04 7.4E-04 3.0E-04 0.0E+00
 INFNT 4.4E-04 3.3E-04 1.2E-03 1.8E-03 7.1E-04 1.6E-03 4.8E-04 0.0E+00

GOAT PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD ESE
 ADULT 7.4E-04 2.2E-04 5.0E-04 9.8E-04 4.7E-04 4.1E-04 2.9E-04 0.0E+00
 TEEN 7.8E-04 2.9E-04 9.0E-04 1.6E-03 7.2E-04 5.9E-04 4.5E-04 0.0E+00
 CHILD 8.0E-04 4.4E-04 2.2E-03 2.7E-03 1.2E-03 1.1E-03 6.9E-04 0.0E+00
 INFNT 1.0E-03 6.7E-04 3.5E-03 5.1E-03 1.8E-03 2.2E-03 1.1E-03 0.0E+00

INHAL PATHWAY, DIST GP= 1, 1643. METERS WINDS TOWARD ESE
 ADULT 7.1E-04 7.1E-04 7.4E-06 7.2E-04 7.1E-04 7.4E-04 7.2E-04 0.0E+00
 TEEN 7.2E-04 7.1E-04 1.0E-05 7.2E-04 7.2E-04 7.5E-04 7.3E-04 0.0E+00
 CHILD 6.3E-04 6.3E-04 1.4E-05 6.4E-04 6.3E-04 6.8E-04 6.4E-04 0.0E+00
 INFNT 3.6E-04 3.6E-04 8.4E-06 3.7E-04 3.6E-04 4.1E-04 3.7E-04 0.0E+00

SUBTOTALS (NO PLUME)
 ADULT 5.6E-03 4.0E-03 3.1E-03 6.3E-03 4.7E-03 4.5E-03 4.2E-03 1.7E-03
 TEEN 5.6E-03 4.2E-03 4.1E-03 8.0E-03 5.4E-03 4.9E-03 4.6E-03 1.7E-03
 CHILD 6.2E-03 5.2E-03 7.6E-03 1.2E-02 7.2E-03 6.6E-03 5.9E-03 1.7E-03
 INFNT 3.3E-03 2.8E-03 6.1E-03 8.7E-03 4.4E-03 5.7E-03 3.5E-03 1.7E-03

TOTALS
 ADULT 5.7E-03 4.1E-03 3.1E-03 6.4E-03 4.8E-03 4.6E-03 4.3E-03 2.5E-03
 TEEN 5.7E-03 4.3E-03 4.2E-03 8.1E-03 5.5E-03 5.0E-03 4.7E-03 2.5E-03
 CHILD 6.3E-03 5.3E-03 7.7E-03 1.2E-02 7.3E-03 6.7E-03 6.0E-03 2.5E-03
 INFNT 3.4E-03 2.9E-03 6.2E-03 8.8E-03 4.5E-03 5.8E-03 3.5E-03 2.5E-03

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT

FOR DATES 9510 1 1 THRU 95123124

T.BODY GI-TRCT BONE LIVER KIDNEY THYRD LUNG SKIN

PLUME PATHWAY, DIST GP= 1, 1136. METERS WINDS TOWARD SE
 ADULT 1.3E-04 1.3E-04 1.3E-04 1.3E-04 1.3E-04 1.3E-04 1.3E-04 4.0E-04
 TEEN 1.3E-04 1.3E-04 1.3E-04 1.3E-04 1.3E-04 1.3E-04 1.3E-04 4.0E-04
 CHILD 1.3E-04 1.3E-04 1.3E-04 1.3E-04 1.3E-04 1.3E-04 1.3E-04 4.0E-04
 INFNT 1.3E-04 1.3E-04 1.3E-04 1.3E-04 1.3E-04 1.3E-04 1.3E-04 4.0E-04

GROUND PATHWAY, DIST GP= 1, 1136. METERS WINDS TOWARD SE
 ADULT 1.5E-03 1.5E-03 1.5E-03 1.5E-03 1.5E-03 1.5E-03 1.5E-03 1.8E-03
 TEEN 1.5E-03 1.5E-03 1.5E-03 1.5E-03 1.5E-03 1.5E-03 1.5E-03 1.8E-03
 CHILD 1.5E-03 1.5E-03 1.5E-03 1.5E-03 1.5E-03 1.5E-03 1.5E-03 1.8E-03
 INFNT 1.5E-03 1.5E-03 1.5E-03 1.5E-03 1.5E-03 1.5E-03 1.5E-03 1.8E-03

VEGET PATHWAY, DIST GP= 1, 914. METERS WINDS TOWARD SE
 ADULT 3.2E-03 2.2E-03 1.1E-03 3.7E-03 2.6E-03 2.7E-03 2.3E-03 0.0E+00
 TEEN 3.3E-03 2.5E-03 1.8E-03 4.9E-03 3.2E-03 2.9E-03 2.7E-03 0.0E+00
 CHILD 4.4E-03 3.8E-03 4.1E-03 7.9E-03 5.1E-03 4.4E-03 4.2E-03 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

MEAT PATHWAY, DIST GP= 1, 4354. METERS WINDS TOWARD SE
 ADULT 3.5E-05 3.0E-05 8.5E-06 3.9E-05 3.0E-05 3.1E-05 2.7E-05 0.0E+00
 TEEN 1.9E-05 1.7E-05 7.0E-06 2.6E-05 1.9E-05 1.9E-05 1.7E-05 0.0E+00
 CHILD 2.1E-05 2.0E-05 1.3E-05 3.2E-05 2.3E-05 2.4E-05 2.0E-05 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

COW PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD SE
 ADULT 1.5E-04 7.1E-05 8.2E-05 1.9E-04 1.1E-04 2.3E-04 8.1E-05 0.0E+00
 TEEN 1.7E-04 9.2E-05 1.5E-04 3.0E-04 1.6E-04 3.5E-04 1.2E-04 0.0E+00
 CHILD 2.0E-04 1.4E-04 3.5E-04 5.0E-04 2.6E-04 6.5E-04 1.8E-04 0.0E+00
 INFNT 2.6E-04 2.1E-04 5.7E-04 9.1E-04 4.0E-04 1.5E-03 2.9E-04 0.0E+00

GOAT PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD SE
 ADULT 3.9E-04 1.4E-04 2.4E-04 5.0E-04 2.6E-04 3.3E-04 1.8E-04 0.0E+00
 TEEN 4.1E-04 1.9E-04 4.4E-04 8.2E-04 3.9E-04 4.9E-04 2.6E-04 0.0E+00
 CHILD 4.5E-04 2.9E-04 1.1E-03 1.4E-03 6.4E-04 9.0E-04 4.1E-04 0.0E+00
 INFNT 5.9E-04 4.4E-04 1.7E-03 2.5E-03 9.9E-04 1.9E-03 6.6E-04 0.0E+00

INHAL PATHWAY, DIST GP= 1, 1136. METERS WINDS TOWARD SE
 ADULT 8.3E-04 8.3E-04 7.6E-06 8.4E-04 8.3E-04 8.8E-04 8.4E-04 0.0E+00
 TEEN 8.4E-04 8.3E-04 1.1E-05 8.5E-04 8.4E-04 9.0E-04 8.5E-04 0.0E+00
 CHILD 7.4E-04 7.4E-04 1.4E-05 7.5E-04 7.4E-04 8.1E-04 7.6E-04 0.0E+00
 INFNT 4.2E-04 4.2E-04 8.6E-06 4.3E-04 4.3E-04 5.0E-04 4.4E-04 0.0E+00

SUBTOTALS (NO PLUME)
 ADULT 6.2E-03 4.8E-03 3.0E-03 6.8E-03 5.4E-03 5.7E-03 4.9E-03 1.8E-03
 TEEN 6.3E-03 5.2E-03 3.9E-03 8.4E-03 6.2E-03 6.2E-03 5.5E-03 1.8E-03
 CHILD 7.3E-03 6.5E-03 7.1E-03 1.2E-02 8.3E-03 8.4E-03 7.1E-03 1.8E-03
 INFNT 2.8E-03 2.6E-03 3.8E-03 5.4E-03 3.3E-03 5.4E-03 2.9E-03 1.8E-03

TOTALS
 ADULT 6.3E-03 5.0E-03 3.1E-03 7.0E-03 5.5E-03 5.8E-03 5.1E-03 2.2E-03
 TEEN 6.4E-03 5.3E-03 4.0E-03 8.6E-03 6.3E-03 6.3E-03 5.6E-03 2.2E-03
 CHILD 7.5E-03 6.6E-03 7.2E-03 1.2E-02 8.4E-03 8.5E-03 7.2E-03 2.2E-03
 INFNT 2.9E-03 2.7E-03 3.9E-03 5.5E-03 3.5E-03 5.5E-03 3.0E-03 2.2E-03

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT

FOR DATES 9510 1 1 THRU 95123124

T.BODY GI-TRCT BONE LIVER KIDNEY THYRD LUNG SKIN

PLUME PATHWAY, DIST GP= 1, 1507. METERS WINDS TOWARD SSE
 ADULT 8.4E-05 8.4E-05 8.4E-05 8.4E-05 8.4E-05 8.4E-05 1.1E-04 1.9E-03
 TEEN 8.4E-05 8.4E-05 8.4E-05 8.4E-05 8.4E-05 8.4E-05 1.1E-04 1.9E-03
 CHILD 8.4E-05 8.4E-05 8.4E-05 8.4E-05 8.4E-05 8.4E-05 1.1E-04 1.9E-03
 INFNT 8.4E-05 8.4E-05 8.4E-05 8.4E-05 8.4E-05 8.4E-05 1.1E-04 1.9E-03

GROUND PATHWAY, DIST GP= 1, 1507. METERS WINDS TOWARD SSE
 ADULT 7.3E-04 7.3E-04 7.3E-04 7.3E-04 7.3E-04 7.3E-04 7.3E-04 8.6E-04
 TEEN 7.3E-04 7.3E-04 7.3E-04 7.3E-04 7.3E-04 7.3E-04 7.3E-04 8.6E-04
 CHILD 7.3E-04 7.3E-04 7.3E-04 7.3E-04 7.3E-04 7.3E-04 7.3E-04 8.6E-04
 INFNT 7.3E-04 7.3E-04 7.3E-04 7.3E-04 7.3E-04 7.3E-04 7.3E-04 8.6E-04

VEGET PATHWAY, DIST GP= 1, 1093. METERS WINDS TOWARD SSE
 ADULT 2.1E-03 1.5E-03 6.9E-04 2.4E-03 1.8E-03 1.7E-03 1.5E-03 0.0E+00
 TEEN 2.2E-03 1.7E-03 1.1E-03 3.2E-03 2.1E-03 1.8E-03 1.8E-03 0.0E+00
 CHILD 2.9E-03 2.5E-03 2.6E-03 5.1E-03 3.3E-03 2.8E-03 2.8E-03 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

MEAT PATHWAY, DIST GP= 1, 1093. METERS WINDS TOWARD SSE
 ADULT 2.8E-04 2.3E-04 6.9E-05 3.1E-04 2.4E-04 2.3E-04 2.1E-04 0.0E+00
 TEEN 1.5E-04 1.3E-04 5.7E-05 2.0E-04 1.5E-04 1.4E-04 1.3E-04 0.0E+00
 CHILD 1.7E-04 1.5E-04 1.0E-04 2.6E-04 1.8E-04 1.8E-04 1.6E-04 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

COW PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD SSE
 ADULT 1.3E-04 6.4E-05 6.8E-05 1.6E-04 9.6E-05 1.6E-04 7.2E-05 0.0E+00
 TEEN 1.5E-04 8.3E-05 1.2E-04 2.6E-04 1.4E-04 2.3E-04 1.0E-04 0.0E+00
 CHILD 1.8E-04 1.3E-04 3.0E-04 4.3E-04 2.3E-04 4.2E-04 1.6E-04 0.0E+00
 INFNT 2.4E-04 1.9E-04 4.7E-04 7.9E-04 3.5E-04 9.1E-04 2.5E-04 0.0E+00

GOAT PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD SSE
 ADULT 3.4E-04 1.3E-04 2.0E-04 4.3E-04 2.3E-04 2.4E-04 1.6E-04 0.0E+00
 TEEN 3.6E-04 1.7E-04 3.7E-04 7.0E-04 3.4E-04 3.4E-04 2.3E-04 0.0E+00
 CHILD 4.0E-04 2.6E-04 8.8E-04 1.2E-03 5.5E-04 6.1E-04 3.6E-04 0.0E+00
 INFNT 5.3E-04 4.0E-04 1.4E-03 2.2E-03 8.7E-04 1.3E-03 5.8E-04 0.0E+00

INHAL PATHWAY, DIST GP= 1, 1507. METERS WINDS TOWARD SSE
 ADULT 4.8E-04 4.8E-04 4.3E-06 4.8E-04 4.8E-04 5.0E-04 4.8E-04 0.0E+00
 TEEN 4.8E-04 4.8E-04 6.0E-06 4.9E-04 4.8E-04 5.1E-04 4.9E-04 0.0E+00
 CHILD 4.3E-04 4.2E-04 8.1E-06 4.3E-04 4.3E-04 4.6E-04 4.3E-04 0.0E+00
 INFNT 2.4E-04 2.4E-04 4.9E-06 2.5E-04 2.5E-04 2.8E-04 2.5E-04 0.0E+00

SUBTOTALS (NO PLUME)

ADULT 4.1E-03 3.1E-03 1.8E-03 4.6E-03 3.5E-03 3.5E-03 3.2E-03 8.6E-04
 TEEN 4.1E-03 3.3E-03 2.4E-03 5.6E-03 4.0E-03 3.8E-03 3.5E-03 8.6E-04
 CHILD 4.8E-03 4.2E-03 4.6E-03 8.2E-03 5.5E-03 5.2E-03 4.6E-03 8.6E-04
 INFNT 1.7E-03 1.6E-03 2.6E-03 3.9E-03 2.2E-03 3.2E-03 1.8E-03 8.6E-04

TOTALS

ADULT 4.2E-03 3.2E-03 1.9E-03 4.6E-03 3.6E-03 3.6E-03 3.3E-03 2.8E-03
 TEEN 4.2E-03 3.4E-03 2.5E-03 5.7E-03 4.1E-03 3.9E-03 3.6E-03 2.8E-03
 CHILD 4.9E-03 4.3E-03 4.7E-03 8.3E-03 5.6E-03 5.3E-03 4.8E-03 2.8E-03
 INFNT 1.8E-03 1.7E-03 2.7E-03 4.0E-03 2.3E-03 3.3E-03 1.9E-03 2.8E-03

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT

FOR DATES 9510 1 1 THRU 95123124

T.BODY GI-TRCT BONE LIVER KIDNEY THYRD LUNG SKIN

PLUME PATHWAY, DIST GP= 1, 1026. METERS WINDS TOWARD S
 ADULT 6.0E-05 6.0E-05 6.0E-05 6.0E-05 6.0E-05 6.0E-05 6.0E-05 1.1E-04
 TEEN 6.0E-05 6.0E-05 6.0E-05 6.0E-05 6.0E-05 6.0E-05 6.0E-05 1.1E-04
 CHILD 6.0E-05 6.0E-05 6.0E-05 6.0E-05 6.0E-05 6.0E-05 6.0E-05 1.1E-04
 INFNT 6.0E-05 6.0E-05 6.0E-05 6.0E-05 6.0E-05 6.0E-05 6.0E-05 1.1E-04

GROUND PATHWAY, DIST GP= 1, 1026. METERS WINDS TOWARD S
 ADULT 9.1E-04 9.1E-04 9.1E-04 9.1E-04 9.1E-04 9.1E-04 9.1E-04 1.1E-03
 TEEN 9.1E-04 9.1E-04 9.1E-04 9.1E-04 9.1E-04 9.1E-04 9.1E-04 1.1E-03
 CHILD 9.1E-04 9.1E-04 9.1E-04 9.1E-04 9.1E-04 9.1E-04 9.1E-04 1.1E-03
 INFNT 9.1E-04 9.1E-04 9.1E-04 9.1E-04 9.1E-04 9.1E-04 9.1E-04 1.1E-03

VEGET PATHWAY, DIST GP= 1, 863. METERS WINDS TOWARD S
 ADULT 1.8E-03 1.2E-03 6.6E-04 2.1E-03 1.4E-03 1.4E-03 1.2E-03 0.0E+00
 TEEN 1.8E-03 1.3E-03 1.0E-03 2.8E-03 1.8E-03 1.5E-03 1.5E-03 0.0E+00
 CHILD 2.4E-03 2.0E-03 2.5E-03 4.5E-03 2.8E-03 2.3E-03 2.3E-03 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

MEAT PATHWAY, DIST GP= 1, 6115. METERS WINDS TOWARD S
 ADULT 9.5E-06 7.8E-06 2.5E-06 1.1E-05 8.2E-06 8.0E-06 7.3E-06 0.0E+00
 TEEN 5.3E-06 4.6E-06 2.0E-06 7.1E-06 5.1E-06 4.9E-06 4.5E-06 0.0E+00
 CHILD 5.7E-06 5.2E-06 3.7E-06 8.9E-06 6.2E-06 6.1E-06 5.4E-06 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

COW PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD S
 ADULT 7.7E-05 3.3E-05 4.5E-05 9.8E-05 5.4E-05 9.5E-05 3.9E-05 0.0E+00
 TEEN 8.5E-05 4.3E-05 8.0E-05 1.6E-04 8.1E-05 1.4E-04 5.6E-05 0.0E+00
 CHILD 9.7E-05 6.6E-05 1.9E-04 2.6E-04 1.3E-04 2.7E-04 8.7E-05 0.0E+00
 INFNT 1.3E-04 9.9E-05 3.1E-04 4.8E-04 2.0E-04 5.9E-04 1.4E-04 0.0E+00

GOAT PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD S
 ADULT 2.0E-04 6.8E-05 1.3E-04 2.6E-04 1.3E-04 1.4E-04 8.6E-05 0.0E+00
 TEEN 2.1E-04 8.8E-05 2.4E-04 4.4E-04 2.0E-04 2.0E-04 1.3E-04 0.0E+00
 CHILD 2.3E-04 1.3E-04 5.8E-04 7.3E-04 3.3E-04 3.7E-04 2.0E-04 0.0E+00
 INFNT 2.9E-04 2.0E-04 9.2E-04 1.4E-03 5.1E-04 7.9E-04 3.2E-04 0.0E+00

INHAL PATHWAY, DIST GP= 1, 1026. METERS WINDS TOWARD S
 ADULT 4.7E-04 4.7E-04 4.8E-06 4.7E-04 4.7E-04 4.9E-04 4.7E-04 0.0E+00
 TEEN 4.7E-04 4.7E-04 6.7E-06 4.8E-04 4.7E-04 5.0E-04 4.8E-04 0.0E+00
 CHILD 4.2E-04 4.1E-04 9.0E-06 4.2E-04 4.2E-04 4.5E-04 4.2E-04 0.0E+00
 INFNT 2.4E-04 2.4E-04 5.5E-06 2.4E-04 2.4E-04 2.7E-04 2.4E-04 0.0E+00

SUBTOTALS (NO PLUME)
 ADULT 3.5E-03 2.7E-03 1.8E-03 3.9E-03 3.0E-03 3.0E-03 2.7E-03 1.1E-03
 TEEN 3.5E-03 2.9E-03 2.3E-03 4.8E-03 3.5E-03 3.2E-03 3.0E-03 1.1E-03
 CHILD 4.0E-03 3.5E-03 4.2E-03 6.9E-03 4.6E-03 4.3E-03 3.9E-03 1.1E-03
 INFNT 1.6E-03 1.5E-03 2.1E-03 3.0E-03 1.9E-03 2.6E-03 1.6E-03 1.1E-03

TOTALS
 ADULT 3.5E-03 2.7E-03 1.8E-03 3.9E-03 3.1E-03 3.1E-03 2.8E-03 1.2E-03
 TEEN 3.6E-03 2.9E-03 2.3E-03 4.8E-03 3.5E-03 3.3E-03 3.1E-03 1.2E-03
 CHILD 4.1E-03 3.6E-03 4.2E-03 6.9E-03 4.6E-03 4.3E-03 3.9E-03 1.2E-03
 INFNT 1.6E-03 1.5E-03 2.2E-03 3.1E-03 1.9E-03 2.6E-03 1.7E-03 1.2E-03

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT

FOR DATES 9510 1 1 THRU 95123124

T.BODY GI-TRCT BONE LIVER KIDNEY THYRD LUNG SKIN

PLUME PATHWAY, DIST GP= 1, 942. METERS WINDS TOWARD SSW
 ADULT 6.1E-05 6.1E-05 6.1E-05 6.1E-05 6.1E-05 6.1E-05 1.1E-04 3.5E-03
 TEEN 6.1E-05 6.1E-05 6.1E-05 6.1E-05 6.1E-05 6.1E-05 1.1E-04 3.5E-03
 CHILD 6.1E-05 6.1E-05 6.1E-05 6.1E-05 6.1E-05 6.1E-05 1.1E-04 3.5E-03
 INFNT 6.1E-05 6.1E-05 6.1E-05 6.1E-05 6.1E-05 6.1E-05 1.1E-04 3.5E-03

GROUND PATHWAY, DIST GP= 1, 942. METERS WINDS TOWARD SSW
 ADULT 3.3E-04 3.3E-04 3.3E-04 3.3E-04 3.3E-04 3.3E-04 3.3E-04 3.9E-04
 TEEN 3.3E-04 3.3E-04 3.3E-04 3.3E-04 3.3E-04 3.3E-04 3.3E-04 3.9E-04
 CHILD 3.3E-04 3.3E-04 3.3E-04 3.3E-04 3.3E-04 3.3E-04 3.3E-04 3.9E-04
 INFNT 3.3E-04 3.3E-04 3.3E-04 3.3E-04 3.3E-04 3.3E-04 3.3E-04 3.9E-04

VEGET PATHWAY, DIST GP= 1, 770. METERS WINDS TOWARD SSW
 ADULT 1.1E-03 8.9E-04 2.7E-04 1.3E-03 1.0E-03 9.6E-04 9.1E-04 0.0E+00
 TEEN 1.2E-03 1.0E-03 4.2E-04 1.6E-03 1.2E-03 1.1E-03 1.1E-03 0.0E+00
 CHILD 1.7E-03 1.5E-03 9.8E-04 2.6E-03 1.9E-03 1.7E-03 1.7E-03 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

MEAT PATHWAY, DIST GP= 1, 8045. METERS WINDS TOWARD SSW
 ADULT 3.6E-06 3.2E-06 5.0E-07 3.9E-06 3.4E-06 3.3E-06 3.2E-06 0.0E+00
 TEEN 2.1E-06 1.9E-06 4.1E-07 2.5E-06 2.1E-06 2.0E-06 1.9E-06 0.0E+00
 CHILD 2.4E-06 2.3E-06 7.6E-07 3.0E-06 2.5E-06 2.5E-06 2.3E-06 0.0E+00
 INFNT 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

COW PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD SSW
 ADULT 3.7E-05 2.2E-05 1.5E-05 4.4E-05 2.9E-05 4.2E-05 2.4E-05 0.0E+00
 TEEN 4.3E-05 2.9E-05 2.7E-05 6.7E-05 4.1E-05 6.0E-05 3.3E-05 0.0E+00
 CHILD 5.5E-05 4.5E-05 6.3E-05 1.1E-04 6.6E-05 1.1E-04 5.2E-05 0.0E+00
 INFNT 7.7E-05 6.8E-05 1.0E-04 2.0E-04 1.0E-04 2.2E-04 8.1E-05 0.0E+00

GOAT PATHWAY, DIST GP= 1, 4091. METERS WINDS TOWARD SSW
 ADULT 9.1E-05 4.5E-05 4.4E-05 1.1E-04 6.7E-05 6.8E-05 5.1E-05 0.0E+00
 TEEN 1.0E-04 5.9E-05 7.9E-05 1.8E-04 9.7E-05 9.6E-05 7.2E-05 0.0E+00
 CHILD 1.2E-04 9.1E-05 1.9E-04 2.9E-04 1.5E-04 1.7E-04 1.1E-04 0.0E+00
 INFNT 1.7E-04 1.4E-04 3.0E-04 5.2E-04 2.4E-04 3.2E-04 1.8E-04 0.0E+00

INHAL PATHWAY, DIST GP= 1, 942. METERS WINDS TOWARD SSW
 ADULT 3.6E-04 3.5E-04 4.1E-06 3.6E-04 3.5E-04 3.6E-04 3.6E-04 0.0E+00
 TEEN 3.6E-04 3.5E-04 5.8E-06 3.6E-04 3.6E-04 3.7E-04 3.6E-04 0.0E+00
 CHILD 3.1E-04 3.1E-04 7.7E-06 3.2E-04 3.2E-04 3.3E-04 3.2E-04 0.0E+00
 INFNT 1.8E-04 1.8E-04 4.7E-06 1.9E-04 1.8E-04 1.9E-04 1.8E-04 0.0E+00

SUBTOTALS (NO PLUME)
 ADULT 2.0E-03 1.6E-03 6.6E-04 2.1E-03 1.8E-03 1.8E-03 1.7E-03 3.9E-04
 TEEN 2.1E-03 1.8E-03 8.6E-04 2.5E-03 2.0E-03 1.9E-03 1.9E-03 3.9E-04
 CHILD 2.5E-03 2.3E-03 1.6E-03 3.6E-03 2.7E-03 2.6E-03 2.5E-03 3.9E-04
 INFNT 7.6E-04 7.2E-04 7.4E-04 1.2E-03 8.6E-04 1.1E-03 7.8E-04 3.9E-04

TOTALS
 ADULT 2.0E-03 1.7E-03 7.2E-04 2.2E-03 1.8E-03 1.8E-03 1.8E-03 3.8E-03
 TEEN 2.1E-03 1.9E-03 9.2E-04 2.6E-03 2.1E-03 2.0E-03 2.0E-03 3.8E-03
 CHILD 2.6E-03 2.4E-03 1.6E-03 3.7E-03 2.8E-03 2.7E-03 2.6E-03 3.8E-03
 INFNT 8.2E-04 7.8E-04 8.0E-04 1.3E-03 9.2E-04 1.1E-03 8.8E-04 3.8E-03

APPENDIX 2.1

Summary of Hourly Meteorological Data
First Quarter, 1995



Joint Frequency Tables
1st Quarter 1995

HOURS AT EACH WIND SPEED AND DIRECTION
 PERIOD OF RECORD = 95010101-95033124
 STABILITY CLASS: A DT/DZ
 ELEVATION: SPEED:SPD10M DIRECTION:DIR10M LAPSE:DT60M

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	19	16	0	0	0	35
NNE	0	0	0	0	0	0	0
NE	0	2	1	0	0	0	3
ENE	0	0	0	0	0	0	0
E	0	0	2	0	0	0	2
ESE	0	1	4	0	0	0	5
SE	0	12	7	0	0	0	19
SSE	0	2	3	0	0	0	5
S	1	4	3	7	0	0	15
SSW	0	1	7	3	0	0	11
SW	0	0	4	0	0	0	4
WSW	0	4	14	0	0	0	18
W	0	6	15	4	0	0	25
WNW	2	17	2	0	0	0	21
NW	0	15	2	0	0	0	17
NNW	0	24	10	0	0	0	34
TOTAL	3	107	90	14	0	0	214

PERIODS OF CALM(HOURS): 0
 VARIABLE DIRECTION 0
 HOURS OF MISSING DATA: 0

Joint Frequency Tables
1st Quarter 1995

HOURS AT EACH WIND SPEED AND DIRECTION
 PERIOD OF RECORD = 95010101-95033124
 STABILITY CLASS: B DT/DZ
 ELEVATION: SPEED:SPD10M DIRECTION:DIR10M LAPSE:DT60M

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	1	8	3	0	0	0	12
NNE	0	2	0	0	0	0	2
NE	0	4	0	0	0	0	4
ENE	0	3	4	1	0	0	8
E	1	3	1	1	0	0	6
ESE	0	7	1	0	0	0	8
SE	0	3	3	0	0	0	6
SSE	0	4	2	0	0	0	6
S	0	3	4	1	0	0	8
SSW	0	1	3	1	0	0	5
SW	0	1	0	1	0	0	2
WSW	0	5	4	2	0	0	11
W	0	6	11	0	0	0	17
WNW	0	7	7	0	0	0	14
NW	1	7	1	0	0	0	9
NNW	0	6	6	1	0	0	13
TOTAL	3	70	50	8	0	0	131

PERIODS OF CALM(HOURS): 0
 VARIABLE DIRECTION 0
 HOURS OF MISSING DATA: 0

Joint Frequency Tables
1st Quarter 1995

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 95010101-95033124
 STABILITY CLASS: C DT/DZ
 ELEVATION: SPEED:SPD10M DIRECTION:DIR10M LAPSE:DT60M

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	1	13	8	0	0	0	22
NNE	1	4	2	0	0	0	7
NE	2	0	0	0	0	0	2
ENE	1	4	0	0	0	0	5
E	1	6	4	1	0	0	12
ESE	2	3	1	0	0	0	6
SE	3	4	1	0	0	0	8
SSE	1	2	0	0	0	0	3
S	3	3	3	0	0	0	9
SSW	0	2	2	0	0	0	4
SW	0	0	4	0	0	0	4
WSW	0	2	6	1	0	0	9
W	0	10	13	1	0	0	24
WNW	0	4	13	1	0	0	18
NW	2	5	2	0	0	0	9
NNW	0	11	5	2	0	0	18
TOTAL	17	73	64	6	0	0	160

PERIODS OF CALM(HOURS): 0
 VARIABLE DIRECTION 0
 HOURS OF MISSING DATA: 0

Joint Frequency Tables
1st Quarter 1995

HOURS AT EACH WIND SPEED AND DIRECTION
 PERIOD OF RECORD = 95010101-95033124
 STABILITY CLASS: D DT/DZ
 ELEVATION: SPEED:SPD10M DIRECTION:DIR10M LAPSE:DT60M

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	9	60	26	9	0	0	104
NNE	5	23	6	0	0	0	34
NE	4	18	7	0	0	0	29
ENE	8	25	8	2	0	0	43
E	6	23	23	10	0	0	62
ESE	8	49	27	0	0	0	84
SE	10	30	8	0	0	0	48
SSE	11	26	20	0	0	0	57
S	6	10	15	1	0	0	32
SSW	6	13	38	2	0	0	59
SW	7	14	33	3	0	0	57
WSW	4	12	30	7	0	0	53
W	5	44	93	9	0	0	151
WNW	13	55	64	3	0	0	135
NW	25	34	29	0	0	0	88
NNW	15	41	55	7	0	0	118
TOTAL	142	477	482	53	0	0	1154
PERIODS OF CALM(HOURS):			0				
VARIABLE DIRECTION			0				
HOURS OF MISSING DATA:			0				

Joint Frequency Tables
1st Quarter 1995

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 95010101-95033124
 STABILITY CLASS: E DT/DZ
 ELEVATION: SPEED:SPD10M DIRECTION:DIR10M LAPSE:DT60M

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	11	3	6	0	0	0	20
NNE	7	4	0	0	0	0	11
NE	6	9	1	0	0	0	16
ENE	4	9	0	0	0	0	13
E	4	7	0	0	0	0	11
ESE	6	13	0	0	0	0	19
SE	6	12	2	0	0	0	20
SSE	10	15	1	0	0	0	26
S	10	19	5	0	0	0	34
SSW	2	16	17	0	0	0	35
SW	2	8	2	0	0	0	12
WSW	1	2	1	0	0	0	4
W	2	10	3	0	0	0	15
WNW	10	8	3	0	0	0	21
NW	7	6	1	0	0	0	14
NNW	9	12	1	0	0	0	22
TOTAL	97	153	43	0	0	0	293
PERIODS OF CALM(HOURS):	0						
VARIABLE DIRECTION	0						
HOURS OF MISSING DATA:	0						

Joint Frequency Tables
1st Quarter 1995

HOURS AT EACH WIND SPEED AND DIRECTION
 PERIOD OF RECORD = 95010101-95033124
 STABILITY CLASS: F DT/DZ
 ELEVATION: SPEED:SPD10M DIRECTION:DIR10M LAPSE:DT60M

WIND SPEED (MPH)							
WIND DIRECTION	1-3	4-7	8-12	13-18	19-24	>24	TOTAL

N	2	1	0	0	0	0	3
NNE	1	0	0	0	0	0	1
NE	4	0	0	0	0	0	4
ENE	3	2	0	0	0	0	5
E	3	3	0	0	0	0	6
ESE	5	0	0	0	0	0	5
SE	6	1	0	0	0	0	7
SSE	13	14	0	0	0	0	27
S	6	12	0	0	0	0	18
SSW	4	2	0	0	0	0	6
SW	2	1	0	0	0	0	3
WSW	1	0	0	0	0	0	1
W	2	0	0	0	0	0	2
WNW	3	0	0	0	0	0	3
NW	4	0	0	0	0	0	4
NNW	1	0	0	0	0	0	1

TOTAL	60	36	0	0	0	0	96

PERIODS OF CALM(HOURS): 0
 VARIABLE DIRECTION 0
 HOURS OF MISSING DATA: 0

Joint Frequency Tables
1st Quarter 1995

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 95010101-95033124
 STABILITY CLASS: G DT/DZ
 ELEVATION: SPEED:SPD10M DIRECTION:DIR10M LAPSE:DT60M

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	1	0	0	0	0	0	1
NNE	0	0	0	0	0	0	0
NE	2	1	0	0	0	0	3
ENE	3	1	0	0	0	0	4
E	7	3	0	0	0	0	10
ESE	8	1	0	0	0	0	9
SE	17	1	0	0	0	0	18
SSE	18	0	0	0	0	0	18
S	13	13	0	0	0	0	26
SSW	2	1	0	0	0	0	3
SW	3	0	0	0	0	0	3
WSW	0	0	0	0	0	0	0
W	2	0	0	0	0	0	2
WNW	3	0	0	0	0	0	3
NW	6	0	0	0	0	0	6
NNW	5	1	0	0	0	0	6
TOTAL	90	22	0	0	0	0	112
PERIODS OF CALM (HOURS):	0						
VARIABLE DIRECTION	0						
HOURS OF MISSING DATA:	0						

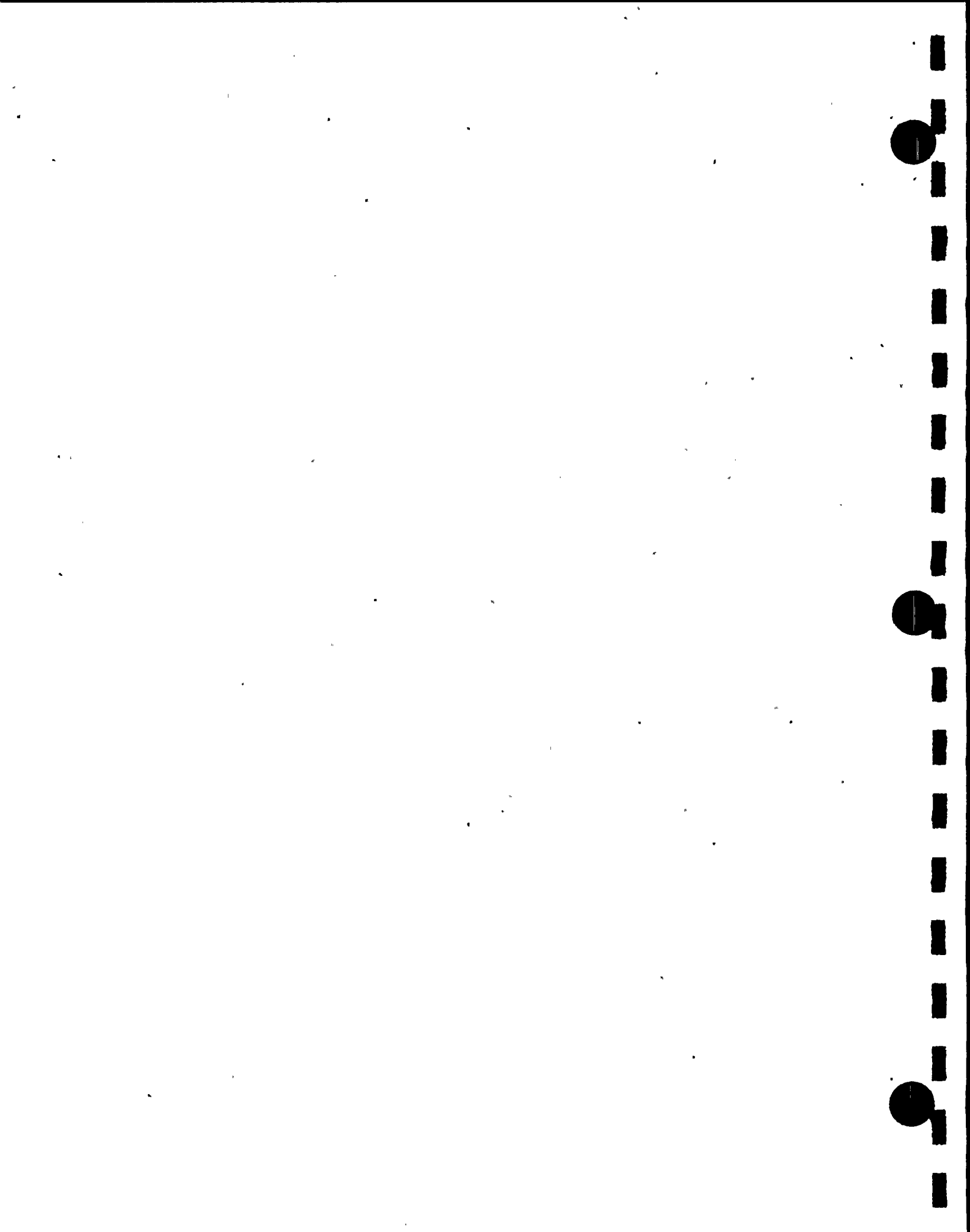
Joint Frequency Tables
1st Quarter 1995

HOURS AT EACH WIND SPEED AND DIRECTION
 PERIOD OF RECORD = 95010101-95033124
 STABILITY CLASS: ALL DT/DZ
 ELEVATION: SPEED:SPD10M DIRECTION:DIR10M LAPSE:DT60M

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	25	104	59	9	0	0	197
NNE	14	33	8	0	0	0	55
NE	18	34	9	0	0	0	61
ENE	19	44	12	3	0	0	78
E	22	45	30	12	0	0	109
ESE	29	74	33	0	0	0	136
SE	42	63	21	0	0	0	126
SSE	53	63	26	0	0	0	142
S	39	64	30	9	0	0	142
SSW	14	36	67	6	0	0	123
SW	14	24	43	4	0	0	85
WSW	6	25	55	10	0	0	96
W	11	76	135	14	0	0	236
WNW	31	91	89	4	0	0	215
NW	45	67	35	0	0	0	147
NNW	30	95	77	10	0	0	212
TOTAL	412	938	729	81	0	0	2160
PERIODS OF CALM (HOURS):			0				
VARIABLE DIRECTION			0				
HOURS OF MISSING DATA:			0				

APPENDIX 2.2

Summary of Hourly Data Meteorological Data
Second Quarter, 1995



Joint Frequency Tables
2nd Quarter 1995

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 95040101-95063024
 STABILITY CLASS: A DT/DZ
 ELEVATION: SPEED:SPD10M DIRECTION:DIR10M LAPSE:DT60M

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	1	44	5	0	0	0	50
NNE	2	4	0	0	0	0	6
NE	0	3	3	0	0	0	6
ENE	0	7	8	4	1	0	20
E	1	12	2	1	0	0	16
ESE	0	10	1	0	0	0	11
SE	0	7	6	1	0	0	14
SSE	4	8	4	0	0	0	16
S	0	4	5	0	0	0	9
SSW	0	2	0	0	0	0	2
SW	0	4	6	2	0	0	12
WSW	0	27	11	1	0	0	39
W	0	38	22	0	0	0	60
WNW	0	28	10	0	0	0	38
NW	3	38	7	0	0	0	48
NNW	1	51	8	0	0	0	60
TOTAL	12	287	98	9	1	0	407

PERIODS OF CALM (HOURS): 0
 VARIABLE DIRECTION 0
 HOURS OF MISSING DATA: 50

Joint Frequency Tables
2nd Quarter 1995

HOURS AT EACH WIND SPEED AND DIRECTION
 PERIOD OF RECORD = 95040101-95063024
 STABILITY CLASS: B DT/DZ
 ELEVATION: SPEED:SPD10M DIRECTION:DIR10M LAPSE:DT60M"

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	2	8	0	0	0	0	10
NNE	2	2	0	0	0	0	4
NE	0	1	1	0	0	0	2
ENE	0	1	0	0	0	0	1
E	0	3	1	0	0	0	4
ESE	3	7	3	0	0	0	13
SE	2	3	0	1	0	0	6
SSE	1	1	0	2	0	0	4
S	2	4	1	0	0	0	7
SSW	0	0	0	1	0	0	1
SW	0	2	1	0	0	0	3
WSW	0	5	1	0	0	0	6
W	2	14	3	0	0	0	19
WNW	1	5	0	0	0	0	6
NW	2	8	1	0	0	0	11
NNW	3	10	2	0	0	0	15
TOTAL	20	74	14	4	0	0	112

PERIODS OF CALM (HOURS): 0
 VARIABLE DIRECTION 0
 HOURS OF MISSING DATA: 50

Joint Frequency Tables
2nd Quarter 1995

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 95040101-95063024
 STABILITY CLASS: C DT/DZ
 ELEVATION: SPEED:SPD10M DIRECTION:DIR10M LAPSE:DT60M

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	2	11	0	0	0	0	13
NNE	0	2	2	0	0	0	4
NE	0	0	1	1	0	0	2
ENE	0	7	5	0	0	0	12
E	0	4	4	1	0	0	9
ESE	3	2	4	0	0	0	9
SE	1	4	1	1	0	0	7
SSE	2	1	0	0	0	0	3
S	4	5	1	0	0	0	10
SSW	0	3	2	0	1	0	6
SW	0	5	3	1	0	0	9
WSW	0	6	4	0	0	0	10
W	2	9	1	0	0	0	12
WNW	1	3	1	0	0	0	5
NW	3	4	0	0	0	0	7
NNW	2	7	0	0	0	0	9
TOTAL	20	73	29	4	1	0	127

PERIODS OF CALM (HOURS): 0
 VARIABLE DIRECTION 0
 HOURS OF MISSING DATA: 50

Joint Frequency Tables
2nd Quarter 1995

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 95040101-95063024
 STABILITY CLASS: D DT/DZ
 ELEVATION: SPEED:SPD10M DIRECTION:DIR10M LAPSE:DT60M

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	13	50	3	1	0	0	67
NNE	6	21	2	0	0	0	29
NE	7	17	8	5	0	0	37
ENE	6	15	8	5	0	0	34
E	4	23	17	3	0	0	47
ESE	4	17	40	12	0	0	73
SE	9	13	20	0	0	0	42
SSE	8	1	5	4	0	0	18
S	6	5	6	1	0	0	18
SSW	4	7	7	4	2	0	24
SW	10	12	13	4	0	0	39
WSW	6	9	37	16	0	0	68
W	13	18	19	2	0	0	52
WNW	11	22	9	0	0	0	42
NW	13	21	1	0	0	0	35
NNW	19	25	6	1	0	0	51
TOTAL	139	276	201	58	2	0	676
PERIODS OF CALM(HOURS):	0						
VARIABLE DIRECTION	0						
HOURS OF MISSING DATA:	50						

Joint Frequency Tables
2nd Quarter 1995

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 95040101-95063024
 STABILITY CLASS: E DT/DZ
 ELEVATION: SPEED:SPD10M DIRECTION:DIR10M LAPSE:DT60M

		WIND SPEED (MPH)					
WIND DIRECTION	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	15	21	0	0	0	0	36
NNE	16	9	0	0	0	0	25
NE	9	14	0	0	0	0	23
ENE	9	20	0	0	0	0	29
E	19	19	2	1	0	0	41
ESE	16	21	8	0	0	0	45
SE	11	14	5	0	0	0	30
SSE	9	15	6	1	0	0	31
S	17	16	3	2	0	0	38
SSW	9	8	2	3	0	0	22
SW	8	7	4	0	0	0	19
WSW	7	16	6	3	0	0	32
W	9	8	9	0	0	0	26
WNW	6	11	4	0	0	0	21
NW	12	1	1	0	0	0	14
NNW	21	3	0	0	0	0	24
TOTAL	193	203	50	10	0	0	456

PERIODS OF CALM(HOURS): 0
 VARIABLE DIRECTION 0
 HOURS OF MISSING DATA: 50

Joint Frequency Tables
2nd Quarter 1995

HOURS AT EACH WIND SPEED AND DIRECTION
 PERIOD OF RECORD = 95040101-95063024
 STABILITY CLASS: F DT/DZ
 ELEVATION: SPEED:SPD10M DIRECTION:DIR10M LAPSE:DT60M

WIND SPEED (MPH)							
WIND DIRECTION	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	3	1	0	0	0	0	4
NNE	4	1	0	0	0	0	5
NE	8	0	0	0	0	0	8
ENE	7	1	0	0	0	0	8
E	15	6	0	0	0	0	21
ESE	16	2	0	0	0	0	18
SE	13	0	0	0	0	0	13
SSE	11	4	0	0	0	0	15
S	16	2	0	0	0	0	18
SSW	5	3	0	0	0	0	8
SW	7	1	0	0	0	0	8
WSW	4	3	0	0	0	0	7
W	7	1	0	0	0	0	8
WNW	13	1	0	0	0	0	14
NW	8	1	0	0	0	0	9
NNW	1	1	0	0	0	0	2
TOTAL	138	28	0	0	0	0	166
PERIODS OF CALM(HOURS):	0						
VARIABLE DIRECTION	0						
HOURS OF MISSING DATA:	50						

Joint Frequency Tables
2nd Quarter 1995

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 95040101-95063024
 STABILITY CLASS: G DT/DZ
 ELEVATION: SPEED:SPD10M DIRECTION:DIR10M LAPSE:DT60M

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	3	0	0	0	0	0	3
NNE	0	0	0	0	0	0	0
NE	6	0	0	0	0	0	6
ENE	19	2	0	0	0	0	21
E	31	5	0	0	0	0	36
ESE	20	0	0	0	0	0	20
SE	18	0	0	0	0	0	18
SSE	29	0	0	0	0	0	29
S	23	2	0	0	0	0	25
SSW	15	2	0	0	0	0	17
SW	2	0	0	0	0	0	2
WSW	3	0	0	0	0	0	3
W	3	0	0	0	0	0	3
WNW	3	0	0	0	0	0	3
NW	3	0	0	0	0	0	3
NNW	1	0	0	0	0	0	1
TOTAL	179	11	0	0	0	0	190
PERIODS OF CALM(HOURS): 0							
VARIABLE DIRECTION 0							
HOURS OF MISSING DATA: 50							

Joint Frequency Tables
2nd Quarter 1995

HOURS AT EACH WIND SPEED AND DIRECTION
 PERIOD OF RECORD = 95040101-95063024
 STABILITY CLASS: ALL DT/DZ
 ELEVATION: SPEED:SPD10M DIRECTION:DIR10M LAPSE:DT60M

WIND SPEED (MPH)							
WIND DIRECTION	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
-----	---	---	---	---	---	---	---
N	39	135	8	1	0	0	183
NNE	30	39	4	0	0	0	73
NE	30	35	13	6	0	0	84
ENE	41	53	21	9	1	0	125
E	70	72	26	6	0	0	174
ESE	62	59	56	12	0	0	189
SE	54	41	32	3	0	0	130
SSE	64	30	15	7	0	0	116
S	68	38	16	3	0	0	125
SSW	33	25	11	8	3	0	80
SW	27	31	27	7	0	0	92
WSW	20	66	59	20	0	0	165
W	36	88	54	2	0	0	180
WNW	35	70	24	0	0	0	129
NW	44	73	10	0	0	0	127
NNW	48	97	16	1	0	0	162
-----	---	---	---	---	---	---	---
TOTAL	701	952	392	85	4	0	2134
-----	---	---	---	---	---	---	---
PERIODS OF CALM(HOURS):			0				
VARIABLE DIRECTION			0				
HOURS OF MISSING DATA:			50				

APPENDIX 2.3

Summary of Hourly Meteorological Data
Third Quarter, 1995



Joint Frequency Tables
3rd Quarter 1995

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 95070101-95093024

STABILITY CLASS: A DT/DZ

ELEVATION: SPEED:SPD10M DIRECTION:DIR10M LAPSE:DT60M

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	3	50	2	0	0	0	55
NNE	1	8	3	0	0	0	12
NE	1	3	0	0	0	0	4
ENE	1	10	0	0	0	0	11
E	1	10	0	0	0	0	11
ESE	2	10	0	0	0	0	12
SE	2	14	0	0	0	0	16
SSE	2	5	0	0	0	0	7
S	1	24	8	0	0	0	33
SSW	0	5	1	0	0	0	6
SW	0	22	22	0	0	0	44
WSW	1	39	14	0	0	0	54
W	8	39	7	0	0	0	54
WNW	4	23	6	0	0	0	33
NW	8	21	0	0	0	0	29
NNW	8	24	1	0	0	0	33
TOTAL	43	307	64	0	0	0	414
PERIODS OF CALM (HOURS):	0						
VARIABLE DIRECTION	0						
HOURS OF MISSING DATA:	0						

Joint Frequency Tables
3rd Quarter 1995

HOURS AT EACH WIND SPEED AND DIRECTION
 PERIOD OF RECORD = 95070101-95093024
 STABILITY CLASS: B DT/DZ
 ELEVATION: SPEED:SPD10M DIRECTION:DIR10M LAPSE:DT60M

WIND SPEED (MPH)							
WIND DIRECTION	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	0	5	1	0	0	0	6
NNE	0	1	0	0	0	0	1
NE	1	2	0	0	0	0	3
ENE	0	3	0	0	0	0	3
E	0	2	0	0	0	0	2
ESE	3	2	0	0	0	0	5
SE	2	1	0	0	0	0	3
SSE	4	1	0	0	0	0	5
S	0	3	4	0	0	0	7
SSW	1	8	0	0	0	0	9
SW	3	16	4	0	0	0	23
WSW	2	19	4	0	0	0	25
W	1	3	1	0	0	0	5
WNW	2	6	0	0	0	0	8
NW	1	2	0	0	0	0	3
NNW	5	0	0	0	0	0	5
TOTAL	25	74	14	0	0	0	113
PERIODS OF CALM(HOURS):	0						
VARIABLE DIRECTION	0						
HOURS OF MISSING DATA:	0						

Joint Frequency Tables
3rd Quarter 1995

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 95070101-95093024
 STABILITY CLASS: C DT/DZ
 ELEVATION: SPEED:SPD10M DIRECTION:DIR10M LAPSE:DT60M

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	3	7	0	0	0	0	10
NNE	0	2	0	0	0	0	2
NE	0	1	0	0	0	0	1
ENE	2	6	0	0	0	0	8
E	1	5	0	0	0	0	6
ESE	1	5	0	0	0	0	6
SE	4	3	0	0	0	0	7
SSE	6	2	0	0	0	0	8
S	3	11	0	0	0	0	14
SSW	0	4	1	0	0	0	5
SW	0	17	5	0	0	0	22
WSW	3	9	2	0	0	0	14
W	0	6	0	0	0	0	6
WNW	6	6	1	0	0	0	13
NW	3	0	0	0	0	0	3
NNW	2	0	0	0	0	0	2
TOTAL	34	84	9	0	0	0	127

PERIODS OF CALM (HOURS): 0
 VARIABLE DIRECTION 0
 HOURS OF MISSING DATA: 0

Joint Frequency Tables
3rd Quarter 1995

HOURS AT EACH WIND SPEED AND DIRECTION
 PERIOD OF RECORD = 95070101-95093024
 STABILITY CLASS: D DT/DZ
 ELEVATION: SPEED:SPD10M DIRECTION:DIR10M LAPSE:DT60M

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	18	24	2	0	0	0	44
NNE	11	17	2	0	0	0	30
NE	4	19	7	0	0	0	30
ENE	8	10	2	0	0	0	20
E	4	10	0	0	0	0	14
ESE	9	12	0	0	0	0	21
SE	14	1	0	0	0	0	15
SSE	12	4	0	0	0	0	16
S	15	13	4	0	0	0	32
SSW	11	14	3	0	0	0	28
SW	10	37	11	0	0	0	58
WSW	2	17	10	0	0	0	29
W	4	6	6	0	0	0	16
WNW	13	8	2	0	0	0	23
NW	9	2	1	0	0	0	12
NNW	10	3	0	0	0	0	13
TOTAL	154	197	50	0	0	0	401
PERIODS OF CALM (HOURS) :	0						
VARIABLE DIRECTION	0						
HOURS OF MISSING DATA:	0						

Joint Frequency Tables
3rd Quarter 1995

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 95070101-95093024
 STABILITY CLASS: E DT/DZ
 ELEVATION: SPEED:SPD10M DIRECTION:DIR10M LAPSE:DT60M

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	21	4	1	0	0	0	26
NNE	27	8	0	0	0	0	35
NE	9	12	0	0	0	0	21
ENE	14	5	0	0	0	0	19
E	34	12	0	0	0	0	46
ESE	50	11	0	0	0	0	61
SE	30	13	0	0	0	0	43
SSE	26	6	0	0	0	0	32
S	43	28	6	0	0	0	77
SSW	22	64	5	0	0	0	91
SW	19	37	7	0	0	0	63
WSW	8	16	2	1	0	0	27
W	6	14	3	0	0	0	23
WNW	11	7	2	0	0	0	20
NW	10	0	0	0	0	0	10
NNW	3	7	0	0	0	0	10
TOTAL	333	244	26	1	0	0	604

PERIODS OF CALM(HOURS): 0
 VARIABLE DIRECTION 0
 HOURS OF MISSING DATA: 0

Joint Frequency Tables
3rd Quarter 1995

HOURS AT EACH WIND SPEED AND DIRECTION
 PERIOD OF RECORD = 95070101-95093024
 STABILITY CLASS: F DT/DZ
 ELEVATION: SPEED:SPD10M DIRECTION:DIR10M LAPSE:DT60M

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	9	0	0	0	0	0	9
NNE	8	0	0	0	0	0	8
NE	8	3	0	0	0	0	11
ENE	27	3	0	0	0	0	30
E	44	0	0	0	0	0	44
ESE	43	2	0	0	0	0	45
SE	27	0	0	0	0	0	27
SSE	18	0	0	0	0	0	18
S	28	4	0	0	0	0	32
SSW	21	4	0	0	0	0	25
SW	11	5	0	0	0	0	16
WSW	5	0	0	0	0	0	5
W	4	0	0	0	0	0	4
WNW	5	0	0	0	0	0	5
NW	2	0	0	0	0	0	2
NNW	4	0	0	0	0	0	4
TOTAL	264	21	0	0	0	0	285

PERIODS OF CALM (HOURS): 0
 VARIABLE DIRECTION 0
 HOURS OF MISSING DATA: 0

Joint Frequency Tables
3rd Quarter 1995

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 95070101-95093024
 STABILITY CLASS: G DT/DZ
 ELEVATION: SPEED:SPD10M DIRECTION:DIR10M LAPSE:DT60M

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	1	0	0	0	0	0	1
NNE	0	0	0	0	0	0	0
NE	4	0	0	0	0	0	4
ENE	10	0	0	0	0	0	10
E	41	0	0	0	0	0	41
ESE	42	0	0	0	0	0	42
SE	26	0	0	0	0	0	26
SSE	44	0	0	0	0	0	44
S	51	2	0	0	0	0	53
SSW	25	5	0	0	0	0	30
SW	5	0	0	0	0	0	5
WSW	2	0	0	0	0	0	2
W	1	0	0	0	0	0	1
WNW	1	0	0	0	0	0	1
NW	2	0	0	0	0	0	2
NNW	2	0	0	0	0	0	2
TOTAL	257	7	0	0	0	0	264

PERIODS OF CALM(HOURS): 0
 VARIABLE DIRECTION 0
 HOURS OF MISSING DATA: 0

Joint Frequency Tables
3rd Quarter 1995

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 95070101-95093024
 STABILITY CLASS: ALL DT/DZ
 ELEVATION: SPEED:SPD10M DIRECTION:DIR10M LAPSE:DT60M

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	55	90	6	0	0	0	151
NNE	47	36	5	0	0	0	88
NE	27	40	7	0	0	0	74
ENE	62	37	2	0	0	0	101
E	125	39	0	0	0	0	164
ESE	150	42	0	0	0	0	192
SE	105	32	0	0	0	0	137
SSE	112	18	0	0	0	0	130
S	141	85	22	0	0	0	248
SSW	80	104	10	0	0	0	194
SW	48	134	49	0	0	0	231
WSW	23	100	32	1	0	0	156
W	24	68	17	0	0	0	109
WNW	42	50	11	0	0	0	103
NW	35	25	1	0	0	0	61
NNW	34	34	1	0	0	0	69
TOTAL	1110	934	163	1	0	0	2208
PERIODS OF CALM(HOURS):			0				
VARIABLE DIRECTION			0				
HOURS OF MISSING DATA:			0				

APPENDIX 2.4

Summary of Hourly Data Meteorological Data
Fourth Quarter, 1995



Joint Frequency Tables
4th Quarter 1995

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 95100101-95123124
 STABILITY CLASS: A DT/DZ
 ELEVATION: SPEED:SPD10M DIRECTION:DIR10M LAPSE:DT60M

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	11	3	0	0	0	14
NNE	0	3	1	0	0	0	4
NE	0	1	0	1	0	0	2
ENE	0	0	0	0	0	0	0
E	0	1	0	0	0	0	1
ESE	0	4	0	0	0	0	4
SE	0	1	5	0	0	0	6
SSE	0	1	1	1	0	0	3
S	0	4	24	9	0	0	37
SSW	0	1	8	1	0	0	10
SW	0	3	7	1	0	0	11
WSW	0	8	8	0	0	0	16
W	1	8	4	6	0	0	19
WNW	0	19	10	0	0	0	29
NW	1	13	12	0	0	0	26
NNW	0	9	1	0	0	0	10
TOTAL	2	87	84	19	0	0	192

PERIODS OF CALM (HOURS): 0
 VARIABLE DIRECTION 0
 HOURS OF MISSING DATA: 4

Joint Frequency Tables
4th Quarter 1995

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 95100101-95123124

STABILITY CLASS: B DT/DZ

ELEVATION: SPEED:SPD10M DIRECTION:DIR10M LAPSE:DT60M

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	2	7	3	0	0	0	12
NNE	0	2	0	0	0	0	2
NE	0	2	1	1	0	0	4
ENE	0	0	0	1	0	0	1
E	0	2	0	0	0	0	2
ESE	1	0	0	0	0	0	1
SE	0	2	2	0	0	0	4
SSE	1	4	4	0	0	0	9
S	0	5	5	0	0	0	10
SSW	0	2	3	0	0	0	5
SW	0	2	8	0	0	0	10
WSW	1	5	6	1	0	0	13
W	3	6	3	4	0	0	16
WNW	0	5	7	0	0	0	12
NW	0	2	8	0	0	0	10
NNW	0	7	3	0	0	0	10
TOTAL	8	53	53	7	0	0	121
PERIODS OF CALM(HOURS):	0						
VARIABLE DIRECTION	0						
HOURS OF MISSING DATA:	4						

Joint Frequency Tables
4th Quarter 1995

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 95100101-95123124
 STABILITY CLASS: C DT/DZ
 ELEVATION: SPEED:SPD10M DIRECTION:DIR10M LAPSE:DT60M

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	2	5	1	1	0	0	9
NNE	0	1	1	0	0	0	2
NE	0	1	0	1	0	0	2
ENE	0	4	2	0	0	0	6
E	0	2	1	0	0	0	3
ESE	3	2	4	0	0	0	9
SE	0	4	1	0	0	0	5
SSE	2	4	3	1	0	0	10
S	2	10	10	0	0	0	22
SSW	0	3	3	1	0	0	7
SW	0	2	2	1	0	0	5
WSW	0	2	5	7	1	0	15
W	0	8	10	5	0	0	23
WNW	0	9	4	1	0	0	14
NW	2	9	8	0	0	0	19
NNW	1	2	3	0	0	0	6
TOTAL	12	68	58	18	1	0	157

PERIODS OF CALM(HOURS): 0
 VARIABLE DIRECTION 0
 HOURS OF MISSING DATA: 4

Joint Frequency Tables
4th Quarter 1995

HOURS AT EACH WIND SPEED AND DIRECTION
 PERIOD OF RECORD = 95100101-95123124
 STABILITY CLASS: D DT/DZ
 ELEVATION: SPEED:SPD10M DIRECTION:DIR10M LAPSE:DT60M

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	7	19	7	8	1	0	42
NNE	7	2	7	0	0	0	16
NE	4	17	9	6	0	0	36
ENE	8	24	23	2	0	0	57
E	7	32	7	0	0	0	46
ESE	20	15	5	0	0	0	40
SE	16	22	14	1	0	0	53
SSE	17	30	15	6	0	0	68
S	10	40	37	14	0	0	101
SSW	6	27	26	8	0	0	67
SW	6	24	29	7	1	0	67
WSW	5	20	54	13	0	0	92
W	8	37	65	39	0	0	149
WNW	9	79	69	15	0	0	172
NW	6	65	49	0	0	0	120
NNW	5	50	17	5	0	0	77
TOTAL	141	503	433	124	2	0	1203

PERIODS OF CALM (HOURS): 0
 VARIABLE DIRECTION 0
 HOURS OF MISSING DATA: 4

Joint Frequency Tables
4th Quarter 1995

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 95100101-95123124
 STABILITY CLASS: E DT/DZ
 ELEVATION: SPEED:SPD10M DIRECTION:DIR10M LAPSE:DT60M

WIND SPEED (MPH)							
WIND DIRECTION	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	2	0	0	0	0	0	2
NNE	1	2	0	0	0	0	3
NE	9	4	0	0	0	0	13
ENE	8	13	1	0	0	0	22
E	13	20	0	0	0	0	33
ESE	13	12	0	0	0	0	25
SE	13	12	4	0	0	0	29
SSE	16	17	12	0	0	0	45
S	13	41	14	1	0	0	69
SSW	5	10	8	0	0	0	23
SW	5	11	1	1	1	0	19
WSW	1	14	14	0	0	0	29
W	8	9	3	0	0	0	20
WNW	4	6	1	0	0	0	11
NW	4	5	0	0	0	0	9
NNW	5	10	0	0	0	0	15
TOTAL	120	186	58	2	1	0	367
PERIODS OF CALM(HOURS):	0						
VARIABLE DIRECTION	0						
HOURS OF MISSING DATA:	4						

Joint Frequency Tables
4th Quarter 1995

HOURS AT EACH WIND SPEED AND DIRECTION
PERIOD OF RECORD = 95100101-95123124
STABILITY CLASS: F DT/DZ
ELEVATION: SPEED:SPD10M DIRECTION:DIR10M LAPSE:DT60M

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	1	1	0	0	0	0	2
ENE	2	5	0	0	0	0	7
E	9	1	0	0	0	0	10
ESE	6	0	0	0	0	0	6
SE	6	1	0	0	0	0	7
SSE	12	2	0	0	0	0	14
S	8	22	0	0	0	0	30
SSW	5	3	0	0	0	0	8
SW	3	1	0	0	0	0	4
WSW	2	0	0	0	0	0	2
W	1	1	0	0	0	0	2
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
TOTAL	55	37	0	0	0	0	92

PERIODS OF CALM(HOURS): 0
VARIABLE DIRECTION 0
HOURS OF MISSING DATA: 4

Joint Frequency Tables
4th Quarter 1995

HOURS AT EACH WIND SPEED AND DIRECTION
PERIOD OF RECORD = 95100101-95123124
STABILITY CLASS: G DT/DZ
ELEVATION: SPEED:SPD10M DIRECTION:DIR10M LAPSE:DT60M

		WIND SPEED (MPH)					
WIND DIRECTION	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	2	0	0	0	0	0	2
E	5	0	0	0	0	0	5
ESE	5	0	0	0	0	0	5
SE	11	1	0	0	0	0	12
SSE	20	0	0	0	0	0	20
S	16	5	0	0	0	0	21
SSW	5	1	0	0	0	0	6
SW	0	0	0	0	0	0	0
WSW	1	0	0	0	0	0	1
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
TOTAL	65	7	0	0	0	0	72

PERIODS OF CALM (HOURS): 0
VARIABLE DIRECTION 0
HOURS OF MISSING DATA: 4

Joint Frequency Tables
4th Quarter 1995

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 95100101-95123124

STABILITY CLASS: ALL DT/DZ

ELEVATION: SPEED:SPD10M DIRECTION:DIR10M LAPSE:DT60M

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	13	42	14	9	1	0	79
NNE	8	10	9	0	0	0	27
NE	14	26	10	9	0	0	59
ENE	20	46	26	3	0	0	95
E	34	58	8	0	0	0	100
ESE	48	33	9	0	0	0	90
SE	46	43	26	1	0	0	116
SSE	68	58	35	8	0	0	169
S	49	127	90	24	0	0	290
SSW	21	47	48	10	0	0	126
SW	14	43	47	10	2	0	116
WSW	10	49	87	21	1	0	168
W	21	69	85	54	0	0	229
WNW	13	118	91	16	0	0	238
NW	13	94	77	0	0	0	184
NNW	11	78	24	5	0	0	118
TOTAL	403	941	686	170	4	0	2204

PERIODS OF CALM(HOURS): 0
VARIABLE DIRECTION 0
HOURS OF MISSING DATA: 4

APPENDIX 3.0

Offsite Dose Calculation Manual (ODCM) Changes



Off-site Dose Calculation Manual (ODCM)

The Off-site Dose Calculation Manual, PMP 6010 OSD.001, was changed during the report period. The reasons for the changes and the PNSRC approval are documented on the procedure cover sheet. These changes did not reduce the accuracy or reliability of effluent, dose or setpoint calculations. It was determined that the change will maintain the level of radioactive effluent control required by: 10 CFR 20.106, Radioactivity in Effluents to Unrestricted Areas; 40 CFR Part 190, Environmental Radiation Protection Standards for Nuclear Power Operations; 10 CFR 50.36a, Technical Specifications on Effluents from Nuclear Power Reactors; and Appendix I to 10 CFR Part 50, Numerical Guides for Design Objectives and Limiting Conditions for Operation to meet the Criterion "As Low As Is Reasonably Achievable" for Radioactive Material in Light-Water-Cooled Nuclear Power Reactor Effluents.

MAY 10 1995

CONTROLLED
DOCUMENT

**DONALD C. COOK NUCLEAR PLANT
PLANT MANAGER PROCEDURE COVER SHEET**

Instruction No.	12 PMP 6010 OSD.001
Revision No.	9

TITLE **OFF-SITE DOSE CALCULATION MANUAL**

SCOPE OF REVISION Marginal markings used. Removed all references to Radiological and Environmental Technical Specifications due to the deletion from Tech Specs. Updated X/Q values (Att 3.16) to include 1994 data and changed to a ten year average rather than an annual average to omit the need for annual updates of this document. Added Attachment 3.24, Safety Evaluation by the NRC Related to Disposal of Slightly Contaminated Sludge, per NRC request. Changed Att 3.20 and 3.21 to table format for clarification purposes. Deleted Totzke farm from Att 3.19 due to Totzke going out of business. Corrected typographical errors and reformatted equations for consistency and clarification. Deleted requirement that limited incineration of waste oil to 0.1% of limits per new 10CFR20. Deleted Effective date section due to GL 89-01 implementation. Added Gaseous MRPs to Att 3.8 and reformatted for consistency. Changed Att 3.6, batch release for dissolved and entrained gases from 1/month to each batch for consistency. Reordered Att 3.7 and added note for clarification. Deleted notes pertaining to "as equipment becomes operational" from Att 3.3, 3.5 and 3.7 as that equipment is operational. Removed 1.5 factor from 4.3.1.1 to allow more flexibility in an attempt to eliminate spurious alarms. Deleted Table Notations from Att 3.5 pertaining to Explosive gas instrumentation since this document does not deal with them.

SIGNATURES	REVISION NUMBER			
.....	Revision 9			
PREPARED BY	<i>[Signature]</i>			
QUALITY ASSURANCE SUPERINTENDENT APPROVAL	<i>[Signature]</i>			
PLANT NUCLEAR SAFETY COMMITTEE	#2872 5-4-95			
PLANT MANAGER APPROVAL	<i>[Signature]</i>			
APPROVAL DATE	5-4-95			
EFFECTIVE DATE	5/10/95			

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INDIANA MICHIGAN POWER COMPANY
DONALD C. COOK NUCLEAR PLANT

OFF-SITE DOSE CALCULATION MANUAL

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INDIANA MICHIGAN POWER COMPANY
DONALD C. COOK NUCLEAR PLANT

OFF-SITE DOSE CALCULATION MANUAL

1.0 OBJECTIVE

The Off-Site Dose Calculation Manual (ODCM) is a supporting document to the Radiological Effluent Technical Specifications (RETS), as defined in NUREG-0472. The ODCM contains the methodology and parameters to be used in the calculation of off site doses due to radioactive liquid and gaseous effluents and in the calculation of liquid and gaseous monitoring instrumentation alarm/trip setpoints. The ODCM provides flow diagrams detailing the treatment path and the major components of the radioactive liquid and gaseous waste management systems. The ODCM is also a supporting document to the Radiological Environmental Monitoring Program (REMP) and presents maps of the sample locations and the meteorological model used to estimate the atmospheric dispersion and deposition parameters. The ODCM specifically addresses the design characteristics of the Donald C. Cook Nuclear Plant based on the flow diagrams contained on the "OP Drawings" and plant "System Description" documents.

2.0 REFERENCES

- 2.1 10CFR20, Standards for Protection Against Radiation
- 2.2 10CFR50, Domestic Licensing of Production and Utilization Facilities
- 2.3 PMI 6010, Radiation Protection Plan
- 2.4 NUREG-0472
- 2.5 NUREG-0133
- 2.6 Regulatory Guide 1.109
- 2.7 Regulatory Guide 1.111
- 2.8 Regulatory Guide 1.113
- 2.9 Final Safety Analysis Report (FSAR)
- 2.10 Technical Specifications, Appendix A, Sections 6.8.1.e and 6.15, Off-site Dose Calculation Manual
- 2.11 Final Environmental Statement D. C. Cook Nuclear Plant, August 1973
- 2.12 NUREG-0017

- 2.13 Correspondence: D. Noble to W. MacRae, "Referenced Efficiencies for RRS-1001", July 21, 1989
- 2.14 ODCM Setpoints for Liquid Effluent Monitors (Bases), ENGR 107-04 8112.1 Environs Rad Monitor System
- 2.15 Radiological Support Section Calculation RS-C-0202, July 31, 1989
- 2.16 Radiological Support Section Calculation RS-C-0106, March 19, 1987
- 2.17 "Implementation of Programmatic Controls for Radiological Effluent Technical Specifications in the Administrative Controls Section of the Technical Specifications and the Relocation of Procedural Details of RETS to the Off-site Dose Calculation Manual or to the Process Control Program (Generic Letter 89-01)", United States Nuclear Regulatory Commission, January 31, 1989
- 2.18 12 THP 6010 RPP.601 Preparation of the Annual Radioactive Effluent Release Report

3.0 LIST OF ATTACHMENTS

- 3.1 R_i Dose Factors for Various Pathways
- 3.2 Radioactive Liquid Effluent Monitoring Instrumentation
- 3.3 Radioactive Liquid Effluent Monitoring Instrumentation Surveillance Requirements
- 3.4 Radioactive Gaseous Effluent Monitoring Instrumentation
- 3.5 Radioactive Gaseous Effluent Monitoring Instrumentation Surveillance Requirements
- 3.6 Radioactive Liquid Waste Sampling and Analysis Program
- 3.7 Radioactive Gaseous Waste Sampling and Analysis Program
- 3.8 Multiple Release Point Factors for Release Points
- 3.9 Liquid Effluent Release Systems Diagram
- 3.10 Plant Liquid Effluent Parameters
- 3.11 Counting Efficiency Table for RRS-1000
- 3.12 Counting Efficiency Curve for R-19, R-24
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- 3.14 Gaseous Effluent Release Systems Diagram
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- 3.16 $\overline{X/Q}$ and D/Q Meteorological Parameters
- 3.17 Annual Evaluation of $\overline{X/Q}$ and D/Q Values for All Sectors
- 3.18 Dose Factors for Noble Gases and Daughters, Radioiodines and Radioactive Particulates, and Gaseous Effluents
- 3.19 Sample Stations, Types and Frequencies for the REMP
- 3.20 Maximum Values for the Lower Limits of Detection
- 3.21 Reporting Levels for Radioactive Concentrations in Environmental Samples
- 3.22 On-Site Monitoring Locations
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- 3.24 Safety Evaluation by the Office of Nuclear Reactor Regulation |
Related to Disposal of Slightly Contaminated Sludge

4.0 DETAILS

4.1 Calculation of Off-Site Doses

4.1.1 Gaseous Effluent Releases

The calculation of doses from effluent releases is performed by the computer program MIDAS (Meteorological Information and Dose Assessment System). The site specific parameters associated with MIDAS reside in the following subprograms:

MIDER
MIDEX
MIDEL
MIDEG
MIDEN

The subprogram used to enter and edit gaseous release data is called MD1EQ (EQ). The data entered in EQ can be used to calculate the accumulation of dose to individual land based receptors based on hourly meteorology and release data. The air dose from this data is calculated via the XDAIR subprogram in MIDAS. It computes air dose results for use in Regulatory Guide 1.21 reports and 10CFR50 Appendix I calculations based on routine releases.

The formula used for the calculation of the air dose is taken from Regulatory Guide 1.109:

$$D_{\gamma}, D_{\beta} \text{ air} = \frac{\chi}{Q} \times \sum [(M_i \text{ or } N_i) \times Q_i \times 3.17E^{-8}]$$

$D_{\gamma}, D_{\beta}, \text{ air}$ = the gamma or beta air dose in mrad/yr to an individual receptor.

χ/Q = the annual average or real time atmospheric dispersion factor over land, sec/m^3

M_i = the gamma air dose factor, $\frac{\text{mrad} - \text{m}^3}{\text{yr} - \mu\text{Ci}}$, from Attachment 3.18

N_i = the beta air dose factor, $\frac{\text{mrad} - \text{m}^3}{\text{yr} - \mu\text{Ci}}$ from Attachment 3.18

Q_i = the release of radionuclide, i , in $\mu\text{Ci}/\text{yr}$

$3.17E^{-8}$ = inverse number of seconds/year, years/second.

The value for the ground average χ/Q is determined using equations shown below:

$$\chi/Q = \frac{2.03}{\bar{u}_{m_g} \times x \times \Sigma_g} \times T_f$$

where:

$$\Sigma_g = \text{minimum of } \sqrt{\sigma_{z_g}^2 + \frac{H_c^2}{2\pi}} \text{ or } \Sigma_g = \sqrt{3}\sigma_{z_g}$$

x = distance downwind of the source, meters.
This information is found in parameter 5 of MIDEEX.

\bar{u}_{m_g} = wind speed for ground release, meters/second.

σ_{z_g} is the vertical dispersion coefficient for ground release (meters)

H_c = building height (meters) from parameter 28 of MIDER.

T_f = terrain factor (= 1 for Cook Nuclear Plant) because we consider all our releases to be ground level (see parameter #5 in MIDEEX).

$$2.03 = \sqrt{2 + \pi} + 0.393 \text{ (22.5° in radians)}$$

The dose due to gaseous releases (other than the air dose) is calculated by the MIDAS subprogram GASPRO. GASPRO computes the accumulation of dose to individual receptors based on hourly meteorology and release data. Calculations consider the effect of each important radionuclide for each pathway, organ, age group, distance and direction.

Calculations are based on the environmental pathways-to-man models in RG 1.109. The program considers 7 pathways, 8 organs, and 4 age groups in 16 direction sectors. The distances used are taken from the MIDEEX file.

The equation used to calculate the dose in mrem is:

Total Body Plume Pathway (mrem)

$$\text{Dose (mrem)} = 3.17E^4 \times \sum (Q_i \times \chi/Q \times S_f \times DFB_i \times t)$$

where:

$3.17E^4$ = conversion factor, $\frac{\rho\text{Ci} - \text{year}}{\text{Ci} - \text{sec}}$

S_f = shielding factor that accounts for the dose reduction due to shielding provided by residential structures during occupancy (maximum exposed individual = 0.7 per Table E-15 of RG 1.109)

DFB_i = the whole body dose factor from Table B-1 of Regulatory Guide 1.109, mrem - m^3 per $\rho\text{Ci} - \text{yr}$

Q_i = the release rate of radionuclide i, in Curies/second

χ/Q = the annual average or real time atmospheric dispersion factor, sec/m^3 .

t = duration of release, in seconds

Skin Plume Pathway (mrem)

$$\text{Dose (mrem)} = 3.17E^4 \times 1.11 \times S_f \times t \times \frac{\chi}{Q} \times [\sum(Q_i \times DF_i) + \sum(Q_i \times DFS_i)]$$

Where:

$3.17E^4$ = conversion factor, $\frac{\rho\text{Ci} - \text{year}}{\text{Ci} - \text{sec}}$

1.11 = conversion factor, tissue to air, $\frac{\text{mrem}}{\text{mrad}}$

Q_i = release rate of radionuclide i, in Curies/second.

χ/Q = the annual average OR real time atmospheric dispersion factor, in sec/m^3 .

S_f = shielding factor, that accounts for dose reduction due to shielding provided by residential structures during occupancy, 0.7 per Table E-15, RG 1.109.

t = duration of release, seconds

DF_i = the gamma air dose factor for a uniform semi-infinite cloud of radionuclide i, in $\text{mrad}\cdot\text{m}^3/\rho\text{Ci}\cdot\text{yr}$ from Table B-1, RG 1.109.

DFS_i = the beta skin dose factor for a semi-infinite cloud of radionuclide i, in $\text{mrem}\cdot\text{m}^3/\rho\text{Ci}\cdot\text{yr}$ from Table B-1, RG 1.109.

Radionuclide and Radioactive Particulate Doses

The dose, D_p in mrem/yr, to an individual from radionuclides, other than noble gases, with half-lives greater than 8 days in gaseous effluents released to unrestricted areas will be determined as follows:

$$D_{TP} \text{ (mrem/year)} = 3.17E^{-8} \times \sum (R_i \times W \times Q_{ic})$$

where:

R_i = the most restrictive dose factor for each identified radionuclide i , in m^2 - mrem/yr per $\mu\text{Ci/sec}$ (for food and ground pathways) or mrem/yr per $\mu\text{Ci}/m^3$ (for inhalation pathway), for the appropriate pathway.

For sectors with existing pathways within 5 miles of the site, use the values of R_i for these real pathways, otherwise use pathways distance of 5 miles. See Attachment 3.1 for the maximum R_i values for the most controlling age group for selected radionuclides. R_i values were generated by computer code PARTS, see NUREG-0133, Appendix D.

W = the annual average or real time atmospheric dispersion parameters for estimating doses to an individual at the worst case location, and where W is further defined as:

W_{in} = $\overline{\chi/Q}$ for the inhalation pathway, in sec/m^3 .

W_{fg} = $\overline{D/Q}$ for the food and ground pathways in $1/m^2$

Q_{ic} = the release rate of those radioiodines, radioactive materials in particulate form and radionuclides other than noble gases with half-lives greater than eight (8) days, in $\mu\text{Ci}/\text{yr}$.

$3.17E^{-8}$ = inverse number of seconds in a year, years/second.

This calculation is made for each pathway. The maximum computed dose at any receptor for each pathway is selected. These are summed together to get the dose to compare to the limits. Only the maximum of the cow milk or goat milk pathway (not both) is included in the total.

In addition to the above routines, the QUICKG routine of the MIDAS system is used to provide data used in the monthly reports because of its simplicity compared to the process described above. The QUICKG routine is based on NUREG 0133 Section 5.3.1(a) methodology instead of the RG 1.109 methodology.

The equations used are as follows:

Gamma Radiation Dose (GD) - ground release

$$GD \text{ (mrad/year)} = 3.17E^{-8} (M_i \times \chi/Q \times Q_i)$$

Beta Radiation Dose (BD) - ground release

$$BD \text{ (mrad/year)} = 3.17E^{-8} (N_i \times \chi/Q \times Q_i)$$

where:

- M_i = air dose factor due to gamma emissions for each noble gas radionuclide, i . These factors are listed in Attachment 3.18, parameter 4 of MIDEN and are taken from Table B-1 of RG 1.109
- N_i = air dose factor due to beta emissions for each noble gas radionuclide, i . These factors are listed in Attachment 3.18, parameter 4 of MIDEN and are taken from Table B-1 of RG 1.109.
- χ/Q = the average annual or real time relative concentration, sec/m^3 for vent releases. These factors are taken from parameter 9 of MIDEN or Attachment 3.16.
- Q_i = The amount of noble gas radionuclide released, $\mu\text{Ci}/\text{sec}$. Calculated via the MD1EQ/MD1AG pathway from plant release data sheets.

STEAM GENERATOR BLOWDOWN SYSTEM (START UP FLASH TANK VENT)

The amount of radioiodine and other radionuclides that are released via the start up flash tank and it's vent are calculated through actual sample results while the start up flash tank is in service.

The following calculation is performed to determine the amount of curies released through this pathway.

$$\text{Curies} = \frac{\mu\text{Ci}}{\text{ml}} \times \text{GPM} \times \text{time on flash tank (min)} \times 3.785\text{E}^{-3}$$

3.785E^{-3} is the factor to convert $\mu\text{Ci} - \text{gal}/\text{ml}$ to Ci.

The flow rate is determined from the blowdown valve position and the time on the start up tank. Chemistry Department performs the sampling and analysis of the samples.

This data is provided to the MIDAS computer and a dose calculation is performed to ensure compliance with section 4.2 dose limits. MIDAS uses the formulas given in section 4.1.2 to calculate doses to members of the public.

NOTE

THIS SECTION PROVIDES THE MINIMUM REQUIREMENTS TO BE FOLLOWED AT COOK PLANT. THIS WOULD BE USED IF ACTUAL SAMPLE DATA WAS NOT AVAILABLE EACH TIME THE START UP FLASH TANK WAS IN SERVICE.

The radioiodine release rate must be determined in accordance with the following equation every 31 day period whenever the specific activity of the secondary

coolant system is greater than 0.01 $\mu\text{Ci/g}$ dose equivalent I-131.

If the specific activity of the secondary coolant system is less than 0.01 $\mu\text{Ci/g}$ dose equivalent I-131, the release rate must be determined once every six months.

$$Q_y = (Ci) (IPF) (R_{sgb})$$

Where:

Q_y = The release rate of I-131 from the steam generator flash tank vent, in $\mu\text{Ci/sec}$.

Ci = the concentration ($\mu\text{Ci/cc}$) of I-131 in the secondary coolant averaged over a period not exceeding seven days.

IPF = the iodine partition factor for the Start Up Flash Tank, 0.05, in accordance with NUREG-0017.

R_{sgb} = the steam generator blowdown rate to the start up flash tank, in cc/sec.

The calculated release rate shall be assumed to be the release rate until the next determination and used in the monthly dose projections to ensure compliance with section 4.2 dose limits. The release rate calculations shall be reported in the Annual Radioactive Effluent Report.

Steam Generators are sparged, sampled and drained as batches early in outages to facilitate cooldown for entry into the steam generator. This is repeated prior to startup to improve steam generator chemistry for the startup.

4.1.2 Liquid Effluent Releases

The calculation of doses from liquid effluent releases is also performed by the MIDAS program. The subprogram used to enter and edit liquid release data is called MD1EB (EB).

To calculate the individual doses (in mrem), the program DS1LI (LD) is used. It computes the individual dose for up to 5 receptors for 14 liquid pathways due to release of radioactive liquid effluents. The pathways to be used can be selected using the MIDEI program by changing the values given in parameter 1. Cook Nuclear Plant uses 3 pathways: potable water, shoreline and aquatic foods (fresh water sport fishing).

The equations used are taken from RG 1.109 Appendix A. They are as follows:

Potable Water

$$R_{apj} = 1100 \times \frac{U_{ap}}{M_p \times F \times 2.23E^{-3}} \times \sum_i Q_i \times D_{aipj} e^{-\lambda_i t_p}$$

where:

- R_{apj} = the total annual dose to organ j to individuals of age groups a from all of the nuclides i in pathway p, in mrem/year.
- 1100 = Factor to convert Ci - sec/yr - ft³ to ρ Ci/l.
- U_{ap} = a usage factor that specifies the exposure time or intake rate for an individual of age group "a" associated with pathway "p". Given in #29-84 of parameter 4 in MIDEI and RG 1.109 Table E-5.
- M_p = the dilution factor at the point of exposure (or the point of withdrawal of drinking water or point of harvest of aquatic food). Given in parameter 5 of MIDEI as 2.6.
- F = the dilution water flow rate in gpm
- $2.23E^{-3}$ = conversion factor, $\frac{\text{ft}^3 - \text{m}}{\text{sec} - \text{g}}$
- Q_i = the release rate of nuclide i for the time period of the run input via MIDEI, Curies/year
- D_{aipj} = the dose factor, specific to a given age group a, radionuclide i, pathway p, and organ j, which can be used to calculate the radiation dose from an intake of a radionuclide, in mrem/ ρ Ci. The values are taken from tables E-11 through E-14 of RG 1.109 and are located within the MIDAS code
- λ_i = the radioactive decay constant for radionuclide i, in hours⁻¹
- t_p = the average transit time required for nuclides to reach the point of exposure, 12 hours. For internal dose, t_p is the total elapsed time between release of the nuclides and ingestion of food or water, in hours. Given as #25 of parameter 4 in MIDEI.

Aquatic Foods

$$R_{apj} = 1100 \times \frac{U_{ap}}{M_p \times F \times 2.23E^{-3}} \times \sum_i Q_i \times B_{ip} \times D_{aipj} e^{-\lambda_i t_p}$$

where:

B_{ip} = the equilibrium bioaccumulation factor for nuclide i in pathway p , expressed as the ratio of the concentration in biota (in $\rho\text{Ci/kg}$) to the radionuclide concentration in water (in $\rho\text{Ci/liter}$) in liters/kg. The factors are located within the MIDAS code and are taken from Table A-1 of RG 1.109

t_p = the average transit time required for nuclides to reach the point of exposure, 24 hours. For internal dose, t_p is the total elapsed between release of the nuclides and ingestion of food or water, in hours. Given as #26 of parameter 4 in MIDEL.

M_p = the dilution factor at the point of exposure, 1.0 for Aquatic Foods.

Shoreline Deposits

$$R_{apj} = 110,000 \times \frac{U_{ap} \times W}{M_p \times F \times 2.23E^{-3}} \times \sum_i Q_i \times T_i \times D_{aipj} [e^{-\lambda_i t_p}] \times [1 - e^{-\lambda_i t_b}]$$

where:

W = the shoreline width factor. Given as an input of 0.3 when running the program, based on Table A-2 in RG 1.109.

T_i = the radioactive half-life of the nuclide, i , in days

t_b = the period of time for which sediment or soil is exposed to the contaminated water, $1.31E^5$ hours. Given in MIDEL as item 6 of parameter 4.

t_p = the average transit time required for nuclides to reach the point of exposure, 0 hours. Given as #28 of parameter 4 in MIDEL.

110000 = Factor to convert $\text{Ci} - \text{sec/yr} - \text{ft}^3$ to $\rho\text{Ci/l}$ and account for proportionality constant in the sediment radioactivity model.

The program MIDAS uses the following plant specific parameters which are inputted by the operator.

Irrigation rate = 0.0
 Fraction of time on pasture = 0.0
 Fraction of feed on pasture = 0.0
 Shore width factor = 0.3
 (from Reg. Guide 1.109, Table A-2)

The results of DS1LI are printed in LDRPT (LP). These results are used in the monthly report of liquid releases.

In addition, the program DOSUM (DM) is used to search the results files of DS1LI to find the maximum liquid pathway individual doses. The highest exposures are then printed in a summary table. Each line is compared with the appropriate dose limit. The table provides a concise summary of off-site environmental dose calculations for inclusion in Regulatory Guide 1.21 reports.

4.2 Limits of Operation and Surveillances of the Effluent Release Points

4.2.1 Radioactive Liquid Effluent Monitoring Instrumentation

- 4.2.1.1 The radioactive liquid effluent monitoring instrumentation channels shown in Attachment 3.2 shall be operable with their alarm/trip setpoints set to ensure that the limits of section 4.2.3.1 are not exceeded.
- 4.2.1.2 The applicability of each channel is shown in Attachment 3.2.
- 4.2.1.3 With a radioactive liquid effluent monitoring instrumentation channel alarm/trip setpoint less conservative than a value which will ensure that the limits of section 4.2.3.1 are met, without delay suspend the release of radioactive liquid effluents monitored by the affected channel, and reset or declare the monitor inoperable.
- 4.2.1.4 With one or more radioactive liquid effluent monitoring instrumentation channels inoperable, take the applicable action shown in Attachment 3.2.
- 4.2.1.5 The provision of the Technical Specifications 3.0.3 and 3.0.4 are not applicable.
- 4.2.1.6 The setpoints shall be determined in accordance with the methodology as described in section 4.3.1. The setpoints shall be recorded.
- 4.2.1.7 Each radioactive liquid effluent monitoring instrumentation channel shall be demonstrated operable by performance of the CHANNEL CHECK, SOURCE CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST at the frequencies shown in Attachment 3.3.

4.2.2 Radioactive Gaseous Effluent Monitoring Instrumentation

- 4.2.2.1 The radioactive gaseous process and effluent monitoring instrumentation channels shown in Attachment 3.4 shall be operable with their alarm/trip setpoints set to ensure that the limits of section 4.2.4.1 are not exceeded.
- 4.2.2.2 The applicability of each channel is shown in Attachment 3.4.
- 4.2.2.3 With a radioactive gaseous process or effluent monitoring instrumentation channel alarm/trip setpoint less conservative than a value which will ensure that the limits of section 4.2.4.1 are met, without delay suspend the release of radioactive gaseous effluents monitored by the affected channel, and reset or declare the channel inoperable.
- 4.2.2.4 With less than the minimum number of radioactive gaseous effluent monitoring instrumentation channels operable, take the action shown in Attachment 3.4.
- 4.2.2.5 The provisions of the Technical Specifications 3.0.3 and 3.0.4 are not applicable.

NOTE

THIS SURVEILLANCE REQUIREMENT DOES NOT APPLY TO THE WASTE GAS HOLDUP SYSTEM HYDROGEN AND OXYGEN MONITORS, AS THEIR SETPOINTS ARE NOT ADDRESSED IN THIS DOCUMENT.

- 4.2.2.6 The setpoints shall be determined in accordance with the methodology as described in section 4.3.2. The setpoint shall be recorded.
 - 4.2.2.7 Each radioactive gaseous process or effluent monitoring instrumentation channel shall be demonstrated operable by performance of the CHANNEL CHECK, SOURCE CHECK, CHANNEL CALIBRATION, and CHANNEL FUNCTIONAL TEST operations at the frequencies shown in Attachment 3.5.
- #### 4.2.3 Liquid Effluents
- 4.2.3.1 Concentration Excluding Releases via the Turbine Room Sump Discharge
 - 4.2.3.1.1 The concentration of radioactive material released at any time from the site via either the Batch Release Tanks or the Plant Continuous Releases excluding only the Turbine Room Sump discharge to the Absorption Pond 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 2×10^{-4} $\mu\text{Ci/ml}$ total activity.

- 4.2.3.1.2 The applicability of this section is at all times.
- 4.2.3.1.3 With the concentration of radioactive material released from the site via either the Batch Waste Release Tanks or the Plant Continuous Releases other than the Turbine Room Sump to the Absorption Pond exceeding the above limits, without delay restore the concentration to within the above limits.
- 4.2.3.1.4 Radioactive liquid wastes shall be sampled and analyzed according to the sampling and analysis program of Attachment 3.6.
- 4.2.3.1.5 The results of radioactive analysis shall be used in accordance with the methods of this document to assure that all concentrations at the point of release are maintained within the limits as stated above.

4.2.3.2 Concentration of Releases from the Turbine Room Sump Discharge

- 4.2.3.2.1 Releases via the Turbine Room Sump discharge to the on-site Absorption Pond shall be limited to the concentrations specified in 10 CFR Part 20, Appendix B, Table II, Column 2. For dissolved or entrained noble gases, the concentration shall be limited to 2×10^{-4} $\mu\text{Ci/ml}$ total activity.
- 4.2.3.2.2 This section is applicable at all times.
- 4.2.3.2.3 With releases from the Turbine Room Sump exceeding the above limits, perform a dose projection due to liquid releases to UNRESTRICTED AREAS to determine if the limits of section 4.2.3.3.1 of the ODCM have been exceeded. If the dose limits are exceeded, follow the direction of the action statements following section 4.2.3.3.3.
- 4.2.3.2.4 The provisions of Technical Specifications 3.0.3 and 3.0.4 are not applicable.
- 4.2.3.2.5 Radioactive liquid wastes shall be sampled and analyzed according to the sampling and analysis program of Attachment 3.6.

4.2.3.2.6 The results of radioactive analysis shall be used in accordance with the methods of this document to assure that all concentrations at the point of release are maintained within the limits as stated above.

4.2.3.3 Dose

4.2.3.3.1 The dose or dose commitment to an individual from radioactive material in liquid effluents released to unrestricted areas shall be limited during any calendar quarter to ≤ 1.5 mrem to the total body and to ≤ 5 mrem to any organ, and during any calendar year to ≤ 3 mrem to the total body and to ≤ 10 mrem to any organ.

4.2.3.3.2 These limits are applicable at all times.

4.2.3.3.3 With the calculated dose from the release of radioactive materials in liquid effluents exceeding any of the above limits, prepare and submit to the Commission within 30 days a Special Report which identifies the cause(s) for exceeding the limit(s) and defines the corrective actions taken to reduce the releases and the proposed corrective actions taken to assure that subsequent releases will be within the above limits. This Special Report shall also include (1) the results of radiological analyses of the drinking water source, and (2) the radiological impacts on finished drinking water supplies with regard to the requirements of 40 CFR 141, Safe Drinking Water Act. (Applicable only if drinking water supply is taken from the receiving water body.)

4.2.3.3.4 The provisions of Technical Specifications 3.0.3 and 3.0.4 are not applicable.

4.2.3.3.5 Cumulative dose contributions from liquid effluents shall be determined in accordance with this document at least once per 31 days. Dose may be projected based on estimates from previous monthly projections and current or future plant conditions.

4.2.3.4 Liquid Radwaste Treatment System

- 4.2.3.4.1 The liquid radwaste treatment system shall be used to reduce the radioactive materials in liquid wastes prior to their discharge when the projected doses due to the liquid effluent from the site when averaged over 31 days, would exceed 0.06 mrem to the total body or 0.2 mrem to any organ.
- 4.2.3.4.2 This section is applicable at all times.
- 4.2.3.4.3 With radioactive liquid waste being discharged without treatment and in excess of the above limits, in lieu of any other report required by Technical Specification 6.9.1, prepare and submit to the Commission within 30 days a Special Report which includes the following information:
 - (1) Identification of the inoperable equipment or subsystems and the reason for inoperability,
 - (2) Action(s) taken to restore the inoperable equipment to operable status, and
 - (3) Summary description of action(s) taken to prevent recurrence.
- 4.2.3.4.4 The provisions of Technical Specifications 3.0.3 and 3.0.4 are not applicable.
- 4.2.3.4.5 Doses due to liquid releases to UNRESTRICTED AREAS shall be projected at least once per 31 days, in accordance with this document, whenever liquid releases are being made without being processed by the liquid radwaste treatment system.

4.2.4 Gaseous Effluents

4.2.4.1 Dose Rate

- 4.2.4.1.1 The dose rate due to radioactive materials released in gaseous effluents from the site shall be limited to ≤ 500 mrem/yr to the total body and ≤ 3000 mrem/yr to the skin for noble gases. The dose rate due to all radioiodines and for all radioactive materials in particulate form and radionuclides (other than noble gases) with half-lives greater than 8 days shall be limited to ≤ 1500 mrem/yr to any organ.
- 4.2.4.1.2 This section is applicable at all times.

- 4.2.4.1.3 With the dose rate(s) exceeding the above limits, without delay decrease the release rate to within the above limit(s).
- 4.2.4.1.4 The dose rate due to noble gases in gaseous effluents shall be determined to be within the above limits in accordance with the methods and procedures described in this document.
- 4.2.4.1.5 The dose rate due to radioactive materials, other than noble gases, in gaseous effluents shall be determined to be within the above limits in accordance with the methods and procedures of this document by obtaining representative samples and performing analyses in accordance with the sampling and analysis program in Attachment 3.7.

4.2.4.2 Dose - Noble Gases

- 4.2.4.2.1 The air dose in unrestricted areas due to noble gases released in gaseous effluents shall be limited during any calendar quarter, to ≤ 5 mrad for gamma radiation and ≤ 10 mrad for beta radiation and during any calendar year, to ≤ 10 mrad for gamma radiation and ≤ 20 mrad for beta radiation.
- 4.2.4.2.2 This section is applicable at all times.
- 4.2.4.2.3 With the calculated air dose from radioactive noble gases in gaseous effluents exceeding any of the above limits, prepare and submit to the Commission within 30 days a Special Report which identifies the cause(s) for exceeding the limit(s) and defines the corrective actions to be taken to reduce the releases and the proposed corrective actions to be taken to assure that subsequent releases will be within the above limits.
- 4.2.4.2.4 The provisions of Technical Specification 3.0.3 and 3.0.4 are not applicable.
- 4.2.4.2.5 Cumulative dose contributions for the total time period shall be determined in accordance with this document at least once every 31 days.

4.2.4.3 Dose - Iodine-131, Iodine-133, Tritium, and Radioactive Material in Particulate Form

- 4.2.4.3.1 The dose to a MEMBER OF THE PUBLIC from radioiodine, radioactive materials in particulate form, and radionuclides other than noble gases with half-lives greater than 8 days in gaseous effluents released to unrestricted areas (site boundary) shall be limited to the following:
- (a) During any calendar quarter to less than or equal to 7.5 mrem to any organ,
 - (b) During any calendar year to less than or equal to 15 mrem to any organ, and
- 4.2.4.3.2 This section is applicable at all times.
- 4.2.4.3.3 With the calculated dose from the release of radioiodines, radioactive materials in particulate form, or radionuclides other than noble gases in gaseous effluents exceeding any of the above limits, prepare and submit to the Commission within 30 days a Special Report which identifies the cause(s) for exceeding the limit and defines the corrective actions taken to assure that subsequent releases will be within the above limits.
- 4.2.4.3.4 The provisions of Technical Specification 3.0.3 and 3.0.4 are not applicable.
- 4.2.4.3.5 Cumulative dose contributions for the total time period shall be determined in accordance with this document at least once every 31 days.

4.2.4.4 Gaseous Radwaste Treatment

- 4.2.4.4.1 The gaseous radwaste treatment system and the ventilation exhaust treatment system shall be used to reduce radioactive materials in gaseous wastes prior to their discharge when projected gaseous effluent air doses due to gaseous effluent releases to unrestricted areas when averaged over 31 days, would exceed 0.2 mrad for gamma radiation and 0.4 mrad for beta radiation. The ventilation exhaust treatment system shall be used to reduce radioactive materials in gaseous waste prior to their discharge when the projected doses due to gaseous effluent releases to unrestricted areas when averaged over 31 days would exceed 0.3 mrem to any organ.
- 4.2.4.4.2 This section is applicable at all times.

4.2.4.4.3 With gaseous waste being discharged without treatment and in excess of the above limits, prepare and submit to the Commission within 30 days a Special Report which includes the following information:

(a) Identification of the inoperable equipment or subsystems and the reasons for inoperability.

(b) Action(s) taken to restore the inoperable equipment to operable status.

4.2.4.4.4 The provisions of Technical Specification 3.0.3 and 3.0.4 are not applicable.

4.2.4.4.5 Doses due to gaseous releases to UNRESTRICTED AREAS shall be projected at least once per 31 days in accordance with this document, whenever the gaseous waste treatment system or ventilation exhaust treatment system is not operational.

4.2.5 Radioactive Effluents - Total Dose

4.2.5.1 The dose or dose commitment to a real individual from all uranium fuel cycle sources is limited to ≤ 25 mrem to the total body or any organ (except the thyroid, which is limited to ≤ 75 mrem) over a period of 12 consecutive months.

4.2.5.2 This section is applicable at all times.

4.2.5.3 With the calculated doses from the release of radioactive materials in liquid or gaseous effluents exceeding twice the limits of sections 4.2.3.3, 4.2.4.2 or 4.2.4.3 prepare and submit a Special Report to the Director, Nuclear Reactor Regulation, U. S. Nuclear Regulatory Commission, Washington D. C. 20555, within 30 days, which defines the corrective action to be taken to reduce subsequent releases to prevent recurrence of exceeding the limits above. This Special Report shall include an analyses which estimates the radiation exposure (dose) to a member of the public from uranium fuel cycle sources (including all effluent pathways and direct radiation) for a 12 consecutive month period that includes the release(s) covered by this report. If the estimated dose(s) exceeds the limits above, and if the release condition resulting in violation of 40 CFR 190 has not already been corrected, the special report shall include a request for a variance in accordance with the provisions of 40 CFR 190 and including the specified information of paragraph 190.11(b). Submittal of the report is considered a timely request, and a variance is granted until staff action on the request is complete. The variance only

relates to the limits of 40 CFR 190, and does not apply in any way to the requirements for dose limitation of 10 CFR part 20, as addressed in other sections of this procedure.

- 4.2.5.4 The provisions of Technical Specification 3.0.3 and 3.0.4 are not applicable.
- 4.2.5.5 Cumulative dose contributions from liquid and gaseous effluents shall be determined in accordance with this document (including Sections 4.2.3.3, 4.2.4.2 and 4.2.4.3).

4.3 Calculation of Alarm/Trip Setpoints

The alarm and trip setpoints are to provide monitoring, indication and control of liquid and gaseous effluents. The setpoints are used in conjunction with sampling programs to assure that the releases are kept within the limits of 10CFR20 Appendix B Table II. Setpoints shall be established for liquid and gaseous monitors. Depending on the monitor function, it would be a continuous or batch monitor. The different types of monitors are subject to different setpoint methodologies.

One variable used in the setpoint calculations is the multiple release point factor (MRP). The MRP is a factor used such that when all the releases are integrated, the applicable LIMIT value will not be violated. The MRP is determined such that the sum of the MRP's for that effluent type (liquid or gaseous) is less than or equal to 1. The value of the MRP is arbitrary, and it should be assigned based on operational performance. The values of the MRP for each liquid release point are given in Attachments 3.8.

4.3.1 Liquid Monitors

Liquid monitor setpoints shall be established for each monitor of the liquid effluent release systems. A schematic of the liquid effluent release systems is shown as Attachment 3.9. A list of the Plant Liquid Effluent Parameters is in Attachment 3.10. The exact details of each system design and operation can be found in the system descriptions. The setpoints are intended to help keep releases within the limits of 10CFR20 Appendix B, Table II, Column 2. Setpoints shall be determined using either the batch or the continuous methodology.

4.3.1.1 Liquid Batch Monitor Setpoint Methodology

There is only one monitor used on the Waste Disposal System for liquid batch releases. This monitor is identified as RRS-1000. R-19 and R-24 also can be used to monitor batch releases while draining steam generators. The function of these monitors is to act as a check on the sampling program. The sampling program determines the nuclides and concentrations of those nuclides prior to release. The discharge flow rates and dilution flow rates are then adjusted to keep the release within the limits of 10CFR20. Based on the concentrations of nuclides in the release the count rate on the monitor can be predicted. The high alarm setpoint can then be set above the predicted value up to the maximum setpoint of the system.

The radioactive concentration of each batch of radioactive liquid waste to be discharged is determined prior to each release by sampling and analysis in accordance with Attachment 3.6.

The flow rates are determined in order to keep the release within the requirements of 10CFR20 Appendix B, Table II, Column 2. The equation to calculate the flow rates is:

$$\left[\sum \frac{C_i}{LIMIT_i} \right] \times \frac{f}{MRP} \leq F + f$$

Where:

- C_i = the concentration of nuclide i in $\mu\text{Ci/ml}$.
- $LIMIT_i$ = the 10CFR20 Appendix B, Table II, Column 2 limit of nuclide i in $\mu\text{Ci/ml}$.
- f = the effluent flow rate in gpm (Attachment 3.10).
- F = the dilution water flow rate as estimated prior to release. The dilution flow rate is a multiple of 230,000 gpm depending on the number of circulation pumps in operation.
- MRP = the multiple release point factor. A factor such that when all the release points are operating at one time the limits of 10CFR20 will not be exceeded.

This equation shall be true during the batch release. Before the release is started, the maximum effluent flow rate and the minimum dilution flow rate should be substituted for f and F , respectively. If the equation is true, then the release can proceed with those flow rates as the limits of operation. If the equation is not true, then the effluent flow rate can be reduced or the dilution flow rate can be increased to make the equation true. This equation may be rearranged to solve for the maximum effluent release flow rate (f).

The setpoint is used as a quality check on the sampling program. The setpoint is used to stop the effluent flow when the monitor reading is greater than the predicted value from the sampling program. The predicted value is generated by converting the effluent concentration for each γ emitting radionuclide to counts per unit of time as per Attachment 3.11 or 3.12. The sum of all the counts per unit of time is the predicted count rate. The predicted count rate can then be multiplied by a factor to determine the high alarm setpoint that will provide a high degree of conservatism and eliminate spurious alarms.

4.3.1.2 Liquid Continuous Monitor Setpoint Methodology

There are eight monitors used as continuous liquid release monitors. These monitors are used in the steam generator blowdown, blowdown treatment and essential service water systems.

The monitors are identified as:

- o R-19 for the steam generator blowdown for both units.
- o R-24 for the blowdown treatment system for both units.
- o R-20 for the east ESW system for each unit.
- o R-28 for the west ESW system for each unit.

The function of the monitors is to assure that releases are kept within the limits of 10CFR20 Appendix B, Table II.

The monitors on the steam generator blowdown and blowdown treatment systems have trip functions associated with their setpoints. The essential service water monitors are equipped with an alarm function only and monitor effluent in the event the Containment Spray Heat Exchangers are used.

The setpoint for the continuous monitors is:

$$S_p \leq \frac{C \times F \times MRP \times Eff \times SF}{f}$$

where:

S_p = the setpoint of the monitor (cpm)

C = 5×10^{-7} $\mu\text{Ci/ml}$, the maximum permissible limit from 10CFR20 Appendix B Table II, Column 2 of a known possible nuclide in the effluent stream.

OR

= if a mixture is to be specified,

$$\frac{\sum C_i}{\sum \frac{C_i}{LIMIT_i}}$$

F = the dilution water (circ water) flow rate in gpm obtained from Attachment 3.10 For routine operation, the setpoint should be calculated using the minimum dilution flow rate of 230,000 gpm.

MRP = the multiple release point factor. A factor such that when all the release points are operating at one time the limits of 10CFR20 will not be exceeded (Attachment 3.8). The MRP for R-20 and R-28 is set to 1.

SF = Safety Factor, 0.9.

Eff = Efficiency

R-19 - 4.2 E⁶ cpm/ μ Ci/ml
 R-24 - 7.5 E⁶ cpm/ μ Ci/ml
 R-20 - 4.3 E⁶ cpm/ μ Ci/ml
 R-28 - 4.3 E⁶ cpm/ μ Ci/ml

f = the applicable effluent release flow rate in gpm. For routine operation, the setpoint should be calculated using the maximum effluent flow rate (Attachment 3.10).

4.3.2 Gaseous Monitors

For the purpose of implementing sections 4.2.2 and 4.2.4.1, the alarm setpoints for gaseous effluents released into unrestricted areas will be established using the following methodology. In addition, the above sections do not apply to instantaneous alarm and trip setpoints for integrating radiation monitors sampling radioiodines, radioactive materials in particulate form and radionuclides other than noble gases. A schematic of the gaseous effluent release systems is presented in Attachment 3.14. Attachment 3.15 presents the effluent flow rate parameter(s).

4.3.2.1 Plant Unit Vent

The gaseous effluents discharged from the plant vent will be monitored by the plant vent radiation monitor low range noble gas channel [Tag No. VRS-1505 (Unit 1), VRS-2505 (Unit 2)] to assure that alarms and trip actions (isolation of gaseous release) will occur prior to exceeding the limits in section 4.2.4. The alarm setpoint values will be established using the following equation:

$$S_p = \frac{SF \times MRP \times DL_j}{F_p \times \bar{\chi}/Q \times \sum_i (W_i \times DCF_{ij})}$$

where:

S_p = the maximum setpoint of the monitor in μ Ci/cc for release point p, based on the most limiting organ.

SF = an administrative operation safety factor, < 1.0.

MRP = a weighted multiple release point factor (≤ 1.0), such that when all site gaseous releases are integrated, the applicable dose will not be exceeded based on the release rate of each effluent point. The MRP will be based on the ratio of the release rate or the volumetric flow rate of each effluent point to the total respective flow rate value of the plant and will be consistent with past operational experience. The MRP is computed as follows:

- 1) compute the average release rate, Q_p , (or the volumetric flow rate, f_p) from each release point p.
- 2) compute ΣQ_p (or Σf_p) for all release points.
- 3) ratio $Q_p/\Sigma Q_p$ (or $f_p/\Sigma f_p$) for each release point. This ratio is the MRP for that specific release point.
- 4) repeat 1) through 3) for each of the site's eight gaseous release points.

F_p = the maximum volumetric flow rate of release point p, at the time of the release in cc/sec.. The maximum Unit Vent flow rate, by design, is 139,600 cfm for Unit 1 and 103,500 for Unit 2.

DL_j = dose rate limit to organ j in an unrestricted area (mrem/yr).

Based on continuous releases, the dose rate limits, DL_j , from section 4.2.4.1, are as follows:

Total Body	≤ 500 mrem/year
Skin	≤ 3000 mrem/year
Any Organ	≤ 1500 mrem/year

\bar{x}/Q = the annual average relative concentration in the applicable sector or area, in sec/m^3 (see Attachment 3.16). The \bar{x}/Q values will be evaluated on an annual basis against the 10 year averages and documented by completing Attachment 3.17 and filing in accordance with the retention schedule.

W_i = weighted factor for the radionuclide:

$$W_i = \frac{C_i}{\sum C_k}$$

where:

C_i = concentration of the most abundant radionuclide i , and C_k is the total concentration of all identified radionuclides in that release pathway. For batch releases, this value may be set to one (1) for conservatism.

DCF_{ij} = dose conversion factor which is used to relate radiation dose to organ j , from exposure to radionuclide i in mrem/yr per $\mu\text{Ci}/\text{m}^3$. See equations below.

The dose conversion factor, DCF_{ij} , is dependent upon the organ of concern.

For the whole body:

$$DCF_{ij} = K_i$$

where:

K_i = whole body dose factor due to gamma emissions for each identified noble gas radionuclide in mrem/yr per $\mu\text{Ci}/\text{m}^3$. See Attachment 3.18

For the skin:

$$DCF_{ij} = L_i + 1.1M_i$$

where:

L_i = skin dose factor due to beta emissions for each identified noble gas radionuclide, in mrem/yr per $\mu\text{Ci}/\text{m}^3$. See Attachment 3.18

1.1 = the ratio of tissue to air absorption coefficient over the energy range of photons of interest. This ratio converts absorbed dose (mrad) to dose equivalent (mrem).

M_i = the air dose factor due to gamma emissions for each identified noble gas radionuclide in mrad/yr per $\mu\text{Ci}/\text{m}^3$. See Attachment 3.18.

For the thyroid, via inhalation:

$$DCF_{ij} = P_i$$

where:

P_i = the dose parameter, for radionuclides other than noble gas, for the inhalation pathway in mrem/yr per $\mu\text{Ci}/\text{m}^3$. See Attachment 3.18

The plant vent radiation monitor low range noble gas channel setpoint, S_p , will be set such that the dose rate in unrestricted areas to the whole body, skin and thyroid (or any other organ), whichever is most limiting, will be less than or equal to 500 mrem/yr, 3000 mrem/yr, and 1500 mrem/yr respectively. The thyroid dose is limited to the inhalation pathway only. The plant vent radiation monitor low range noble gas setpoint, S_p , will be recomputed whenever gaseous releases from the Containment and Gas Decay Tanks are discharged through the plant vent to determine the most limiting organ. The setpoint, S_p , may be established at a lower value than the lowest computed value via the setpoint equation.

At certain times, it may be desirable to increase the setpoint, if the vent flow rate is decreased. This may be accomplished in one of two ways.

$$\frac{\text{Max Concentration } (\mu\text{Ci/cc}) \times \text{Max. Flowrate (cfm)}}{\text{New Max. Concentration } (\mu\text{Ci/cc})}$$

= New Max. Flow rate in cfm

or

$$\frac{\text{Max Concentration } (\mu\text{Ci/cc}) \times \text{Max. Flowrate (cfm)}}{\text{New Max. Flowrate (cfm)}}$$

= New Max. Concentration in $\mu\text{Ci/cc}$

4.3.2.2

Waste Gas Decay Tanks

The gaseous effluents discharged from the Waste Gas System will be monitored by the vent stack monitors VRS-1505 and VRS-2505.

Due to a high radiation alarm, an automatic termination of the release from the waste gas system will be initiated from the plant vent radiation monitor low range noble gas channel (VRS-1505 or VRS-2505). Therefore, for any gaseous release configuration, which includes normal operation and waste gas system gaseous discharges, the alarm setpoint of the plant vent radiation monitor will be recomputed to determine the most limiting organ based on all gaseous effluent source terms.

4.3.2.3 Containment Purge and Exhaust System

The gaseous effluents discharged by the Containment Purge and Exhaust Systems and Instrumentation Room Purge and Exhaust System will be monitored by the plant vent radiation monitor noble gas channels (VRS-1505 for Unit 1, VRS-2505 for Unit 2); and alarms and trip actions will occur prior to exceeding the limits in section 4.2.4.1.

For the Containment System, a continuous air sample from the containment atmosphere is drawn through a closed, sealed system to the radiation monitors (Tag No. ERS-1300/1400 for Unit 1 and ERS-2300/2400 for Unit 2). The sample is then returned to containment. Grab sample analysis is performed for a Containment purge before release.

The Upper Containment area is monitored by normal range area gamma monitors (Tag No. VRS-1101/1201 for Unit 1 and VRS-2101/2201 for Unit 2), which also give Purge and Exhaust Isolation Trip signals upon actuation of their high alarm.

For the Containment Pressure Relief System, no sample is routinely taken.

The containment airborne and area monitors, upon actuation of their high alarm, will automatically initiate closure of the Containment and Instrument Room purge supply and exhaust duct valves and containment pressure relief system valves. Complete trip of all isolation control devices requires high alarm of one of the two Train A monitors (ERS-1300/2300 or VRS-1101/2101) and one of the two Train B monitors (ERS-1400/2400 or VRS-1201/2201).

4.3.2.4 Steam Jet Air Ejector System (SJAE)

The gaseous effluents from the Steam Jet Air Ejector System discharged to the environment are continuously monitored by radiation monitor (Tag No. SRA-1900 for Unit 1 and SRA-2900 for Unit 2). The monitor will alarm prior to exceeding the limits of section 4.2.4.1. The alarm setpoint for the Condenser Air Ejector System monitor will be based on the maximum air ejector exhaust flow rate, (Attachment 3.15). The alarm setpoint value will be established using the following equations:

$$S_{SJAE} = \frac{SF \times MRP \times DL_j}{F_p \times \bar{\chi}/Q \times \sum_i (W_i \times DCF_{ij})}$$

where:

S_{SJAE} = the maximum setpoint, based on the most limiting organ, in $\mu\text{Ci/cc}$

and where the other terms are as previously defined.

4.3.2.5

Gland Seal Condenser Exhaust

The gaseous effluents from the Gland Seal Condenser Exhaust discharged to the environment are continuously monitored by radiation monitor (Tag No. SRA-1800 for Unit 1 and SRA-2800 for Unit 2). The radiation monitor will alarm prior to exceeding the limits of section 4.2.4.1. The alarm setpoint for the GSCE monitor will be based on the maximum condenser exhaust flow rate (1260 CFM Unit 1, 2754 CFM each for the two Unit 2 vents). The alarm setpoint value will be established using the following equation:

$$S_{GSCE} = \frac{SF \times MRP \times DL_j}{F_p \times \bar{\chi}/Q \times \sum_i (W_i \times DCF_{ij})}$$

where:

S_{GSCE} = the maximum setpoint, based on the most limiting organ, in $\mu\text{Ci/cc}$

and where the other terms are as previously defined.

4.3.2.6

Emergency Gaseous Setpoint Methodology

Each of the routine gaseous release paths can also indicate off-normal release concentrations. If this would occur, the setpoint methodology for gaseous monitors would determine setpoints to alarm or trip and indicate an off-normal occurrence. The mid and high range setpoints should be used to indicate when the effluent concentrations are possibly exceeding limits that may contribute to a dose in excess of predetermined limits as outlined in the Emergency Plan. There are four classifications of accidents. They are Unusual Event, Alert, Site Area Emergency and General Emergency. The last two classifications have site boundary dose rate limits of 50 mrem/hr and 250 mrem/hr associated with them. The mid and high range setpoints should be set to respond at these levels. The high range setpoints for the Unit Vent monitors, VRS-1509 and VRS-2509, will use the setpoints calculated in the Radiological Support Section Calculation RS-C-0106. The PORV monitor is a single channel emergency monitor. To show when an event with radioactive releases occurred the setpoint

should be set to the value for a General Emergency, 250 mrem/hr.

The equation used to determine the setpoint is then:

$$S_p = \frac{DR}{F \times \overline{\chi/Q} \times DCF}$$

where:

- S_p = the alarm/setpoint of the monitor, $\mu\text{Ci/cc}$.
- DR = the dose rate associated with the setpoint either 50 mrem/hr or 250 mrem/hr.
- F = the maximum flow rate for this effluent point in m^3/sec . To convert CFM to m^3/sec , multiply the flow rate in CFM by 4.71×10^{-4} .
- $\overline{\chi/Q}$ = The historical annual average relative concentration (sec/m^3) based on meteorological data summarized in Attachment 3.16 as recommended in Regulatory Guide 1.111
- DCF = the dose conversion factor to change mrem/hr to $\mu\text{Ci/cc}$. The conversion factor for the PORV monitors is 64,000 (Ref. 2.15). The conversion factor for the other mid and high range monitors is 622,000 (Ref. 2.15).

4.4 Radioactive Effluents Total Dose

The cumulative dose contributions from liquid and gaseous effluents will be determined by summing the cumulative doses as derived in Sections 4.2.3.3, 4.2.4.2 and 4.2.4.3 of this procedure. Dose contribution from direct radiation exposure will be based on the results of the direct radiation monitoring devices located at the REMP monitoring stations. See NUREG-0133, Section 3.8.

4.5 Radiological Environmental Monitoring Program (REMP)

4.5.1 Purpose of the Radiological Environmental Monitoring Program

The purpose of the REMP is to establish baseline radiation and radioactivity concentrations in the environs prior to reactor operations, to monitor critical environmental exposure pathways, and to determine the radiological impact, if any, caused by the operation of the Donald C. Cook Nuclear Plant upon the local environment.

The first purpose of the Radiological Environmental Monitoring Program was completed prior to the initial operation of either of the two nuclear units at the Cook Plant Site. The second and third purposes of the REMP are an on-going operation and as such various environmental media and exposure pathways are examined. The various pathways and sample media used are delineated in Attachment 3.19, Radiological Environmental Monitoring Program. Included is a list of the sample media, analysis required, sample stations, and frequency requirements for both collection and analysis. Attachment 3.19 defines the scope of the Radiological Environmental Monitoring Program for the Donald C. Cook Nuclear Plant.

4.5.2 Conduct of the Radiological Environmental Monitoring Program

Sample collection and analysis for the Radiological Environmental Monitoring Program shall be conducted in accordance with Attachment 3.19, Radiological Environmental Monitoring Program, Attachment 3.20, Maximum Values for Lower Limits of Detection, and Attachment 3.21, Reporting Levels for Radioactive Concentrations in Environmental Samples. These are applicable at all times. The on-site monitoring locations are shown on Attachment 3.22, while the off-site monitoring locations are shown on Attachment 3.23

4.5.2.1 Each surveillance requirement shall be performed within the specified time interval in Attachment 3.19 with a maximum allowable extension not to exceed 25% of the surveillance interval.

4.5.2.2 If an environmental sample cannot be collected in accordance with Attachment 3.19, a description of the reasons for deviation and the actions taken to prevent a reoccurrence shall be submitted as part of the Annual Radiological Environmental Operating Report.

Deviations from the required sampling schedule are permitted if specimens are unobtainable due to hazardous conditions, seasonal unavailability, or to malfunction of automatic sampling equipment. If the deviation from the required sampling schedule is due to the malfunction of automatic sampling equipment, every effort shall be made to complete the corrective action prior to the end of the next sampling period.

4.5.2.3 If a radionuclide is detected in any sample medium exceeding the limit established in Attachment 3.21, Reporting Levels for Radioactivity Concentrations, or if more than one radionuclide is detected in any sample medium and the Total Fractional Level (TFL), when averaged over the calendar quarter is greater than or equal to 1, based on the following formula:

$$TFL = \frac{C_{(1)}}{L_{(1)}} + \frac{C_{(2)}}{L_{(2)}} + \dots \geq 1$$

Where:

- $C_{(1)}$ = Concentration of 1st detected nuclide
 $C_{(2)}$ = Concentration of 2nd detected nuclide
 $L_{(1)}$ = Reporting Level of 1st nuclide from Attachment 3.21
 $L_{(2)}$ = Reporting Level of 2nd nuclide from Attachment 3.21

And, the activity is the result of plant effluents, then a Special Report shall be submitted to the Commission within 30 days following the receipt of the applicable analysis results, which includes an evaluation of any release conditions, environmental factors or other aspects which may have contributed to the identified levels. If the radioactivity was not a result of plant effluents, the results shall be described in the Annual Radiological Environmental Operating Report.

If radionuclides other than those specified in Attachment 3.21 are detected and are the result of plant effluents, this report shall be submitted if the potential annual dose to an individual is equal to or greater than the calendar year limits specified in Steps 4.2.3.3.1, 4.2.4.2.1 and 4.2.4.3.1.b.

- 4.5.2.4 If a currently sampled milk farm location becomes unavailable, a special milk farm survey, for that sector, shall be conducted within 15 days
- 4.5.2.4.1 If the unavailable location was an indicator farm, an alternate sample location may be established in the same sector within 8 miles of the Plant if one is available.
 - 4.5.2.4.2 If the unavailable location was a background farm, an alternate sample location may be established > 15 but < 25 miles of the Plant in one of the less prevalent wind direction sectors, if one is available.
 - 4.5.2.4.3 If a replacement farm is unobtainable and the total number of indicator farms is less than three or the background farms is less than one, then a Special Report shall be prepared and submitted to the Commission within 30 days. Vegetation sampling shall be performed in lieu of milk sampling.
 - 4.5.2.4.4 The provisions of Technical Specifications 3.03 and 3.04 are not applicable.

4.5.3 Annual Land Use Census

A land use census shall be conducted and shall identify the location of the nearest milk animal, the nearest residence and the nearest garden of greater than 500 square feet producing fresh leafy vegetables in each of the 10 land covering meteorological sectors within a distance of five miles.

In lieu of the garden census, broad leaf vegetation sampling may be performed at the site boundary in the direction sector having the highest average deposition factor (D/Q) value.

This land use census shall be conducted annually between the dates of June 1 and October 1 by door-to-door survey, aerial survey, or by consulting local agricultural authorities.

4.5.3.1 With a land use census identifying a location(s) which yields a calculated dose or dose commitment greater than the values currently being calculated in this document, prepare and submit to the Commission within 30 days a Special Report which identifies the new location(s).

4.5.3.2 With a land use census identifying a location(s) which yields a calculated dose or dose commitment (via the same exposure pathway) 20 percent or greater than at a location from which samples are currently being obtained in accordance with section 4.5.2, prepare and submit to the Commission within 30 days a Special Report which identifies the new location. This new location shall be added to the Radiological Environmental Monitoring Program within 30 days, if possible. The sampling location having the lowest calculated dose or dose commitment (via the same exposure pathway) may be deleted from this monitoring program after October 31 of the year in which this land use census was conducted.

4.5.3.3 The provisions of Technical Specifications 3.03 and 3.04 are not applicable.

4.5.4 Interlaboratory Comparison Program

In order to comply with Regulatory Guide 4.15, the analytical vendor shall participate in an Interlaboratory Comparison Program, approved by the Commission for radioactive materials. Program results and identified deficiencies shall be addressed in the Annual Radiological Environmental Operating Report.

4.5.4.1 With analyses not being performed as required above, report the corrective actions taken to prevent a recurrence to the Commission in the Annual Radiological Environmental Operating Report.

4.5.4.2 The provisions of Technical Specifications 3.03 and 3.04 are not applicable.

4.6 Steam Generator Storage Facility Groundwater Monitoring Program

4.6.1 Purpose of the Steam Generator Storage Facility Groundwater Radiological Monitoring Program

The purpose of the temporary on-site Steam Generator Storage Facility Radiological Monitoring Program is to establish baseline radiological data for the groundwater surrounding the facility prior to the storage of the Unit 2 Steam Generator Lower Assemblies. Thereafter, the purpose is to monitor the groundwater through observation wells with locations as shown in Attachment 3.22, to determine the radiological impact, if any, caused by the use of the Storage Facility.

4.6.2 Conduct of the Steam Generator Storage Facility Groundwater Radiological Monitoring Program

Groundwater samples shall be collected and analyzed in accordance with Attachment 3.19, REMP. The values from Attachment 3.20, Maximum Values for Lower Limits of Detection (excluding I-131), and Attachment 3.21, Reporting Levels for Radioactive Concentrations in Environmental Samples (excluding I-131) shall apply.

4.7 Meteorological Model

Three towers are used to determine the meteorological conditions at Cook Nuclear Plant. One of the towers is located at the Lake Michigan shoreline to determine the meteorological parameters associated with unmodified shoreline air. The data is accumulated by microprocessors at the tower sites and normally transferred to the central computer every 15 minutes.

The central computer uses the MIDAS program to provide atmospheric dispersion and deposition parameters. The meteorological model used is based on guidance provided in Regulatory Guide 1.111 for routine releases. All calculations use the Gaussian plume model.

4.8 Reporting Requirements

4.8.1 Annual Radiological Environmental Operating Report

Routine radiological environmental operating reports covering the operation of the units during the previous calendar year shall be submitted prior to May 1 of each year.

The Annual Radiological Environmental Operating Report shall include summaries, interpretations, and statistical evaluation of the results of the radiological environmental surveillance activities for the report period, including a comparison with preoperational studies, operational controls (as appropriate), and previous environmental surveillance reports and an assessment of the observed impacts of the plant operation on the environment. The reports shall also include the results of the land use censuses required by Section 4.5.3. If harmful effects or evidence of irreversible damage are detected by the monitoring, the report shall provide an analysis of the problem and a planned course of action to alleviate the problem.

The Annual Radiological Environmental Operating Reports shall include summarized and tabulated results of all radiological environmental samples taken during the report period. In the event that some results are not available for inclusion with the report, the report shall be submitted noting and explaining the reasons for the missing results. The missing data shall be submitted as soon as possible in a supplementary report.

The reports shall include the following: a summary description of the Radiological Environmental Monitoring Program including sampling methods for each sample type, size and physical characteristics of each sample type, sample preparation methods, analytical methods, and measuring equipment used; a map of all sample locations keyed to a table giving distances and directions from one reactor; the result of the land use census required by Section 4.5.3; and the results of participation in the Interlaboratory Comparison Program required by section 4.5.4.

4.8.2 Annual Radiological Effluent Release Report

Routine radioactive effluent release reports covering the operation of the unit during the previous 12 months of operation shall be submitted within 90 days after January 1 of each year.

The radioactive effluent release reports shall include a summary of the quantities of radioactive liquid and gaseous effluents and solid waste released from the units as outlined in Regulatory Guide 1.21, "Measuring, Evaluating and Reporting in Solid Wastes and Releases of Radioactive Materials in Liquid and Gaseous Effluents from Light-Water Cooled Nuclear Power Plants," with data summarized on a quarterly basis following the format of Appendix B, thereof.

The radioactive effluent release report to be submitted 90 days after January 1 of each year shall include a quarterly summary of hourly meteorological data collected during the reporting period. This summary may be in the form of an hour-by-hour listing of wind speed, wind direction, atmospheric stability, and precipitation (if measured) on magnetic tape, or in the form of joint frequency distributions of wind speed, wind direction and atmospheric stability. The report submitted 90 days after January 1 shall include an assessment of the radiation doses due to the radioactive liquid and gaseous effluents released from the unit or station during the previous calendar year. These reports shall include an assessment of the radiation doses from radioactive liquid and gaseous effluents to members of the public due to their activities inside the site boundary during the reporting period. All assumptions used in making these assessments (i.e., specific activity, exposure time and location) shall be included in these reports. The meteorological conditions concurrent with the time of release of radioactive materials in gaseous effluents (as determined by sampling frequency and measurement) shall be used for determining the gaseous pathway doses. The assessment of radiation doses shall be performed in accordance with this procedure.

The radioactive effluent release report to be submitted 90 days after January 1 of each year shall also include an assessment of radiation doses to the likely most exposed member of the public from reactor releases and other nearby uranium fuel cycle sources (including doses from primary effluent pathways and direct radiation) for the previous 12 consecutive months to show conformance with 40 CFR 190, Environmental Radiation Protection Standards for Nuclear Power Operation. Acceptable Methods for calculating the dose contribution from liquid and gaseous effluents are given in Regulatory Guide 1.109, Rev. 1.

The radioactive effluent release report shall include the following information for each type of solid waste shipped off-site during the report period:

- a. Volume (cubic meters),
- b. Total curie quantity (specify whether determined by measurement or estimate),
- c. Principle radionuclides (specify whether determined by measurement or estimate),
- d. Type of waste (e.g., spent resin, compacted dry waste, evaporator bottoms),
- e. Type of container (e.g., LSA, Type A, Type B, Large Quantity), and
- f. Solidification agent (e.g., cement).

The radioactive effluent release report shall include unplanned releases of radioactive materials in gaseous and liquid effluent from the site to unrestricted areas on a quarterly basis.

The radioactive effluent release reports shall include any change to this procedure made during the reporting period.

4.9 Reporting/Management Review

- 4.9.1 Any changes to this procedure must be incorporated in the Annual Radiological Effluent Release Report.
- 4.9.2 This procedure must be updated when the Radiation Monitoring System, its instruments, or the specifications of instruments are changed.
- 4.9.3 This procedure must be reviewed or revised as appropriate based on the results of the land use census and REMP.
- 4.9.4 Any changes to this procedure must be evaluated for potential impact on other related Radiation Protection Department Procedures and changes to these procedures must be considered.
- 4.9.5 This procedure shall be reviewed during the first quarter of each year and updated if necessary. The part of this procedure that shall be reviewed is Attachment 3.16. The review will be documented using Attachment 3.17.

R_i Dose Factors for Various Pathways

NUCLIDE	PATHWAY					
	GROUND	VEGETABLE	MEAT	COW MILK	GOAT MILK	INHALATION
H3	0.0E+00	4.0E+03	3.2E+02	2.4E+03	4.9E+03	1.3E+03
C14	0.0E+00	3.5E+06	5.8E+05	3.2E+06	3.2E+06	3.6E+04
CR51	4.7E+06	1.2E+07	1.6E+06	7.5E+06	9.0E+05	3.3E+03
MN54	1.4E+09	9.4E+08	2.2E+07	3.1E+07	3.7E+06	7.7E+04
FE59	2.7E+08	9.7E+08	1.8E+09	3.4E+08	4.4E+06	1.9E+05
CO58	3.8E+08	6.1E+08	3.1E+08	9.1E+07	1.1E+07	1.1E+05
CO60	2.2E+10	3.2E+09	1.1E+09	2.9E+08	3.4E+07	2.8E+05
ZN65	7.5E+08	2.7E+09	1.0E+09	1.7E+10	2.1E+09	1.3E+05
SR89	2.2E+04	3.5E+10	2.6E+08	1.1E+10	2.2E+10	6.0E+05
SR90	0.0E+00	1.4E+12	1.0E+10	1.0E+11	2.1E+11	1.1E+08
ZR95	2.5E+08	1.2E+09	1.6E+09	1.0E+06	1.2E+05	1.5E+05
SB124	6.0E+08	3.0E+09	4.7E+08	7.8E+08	9.3E+07	4.1E+05
CS134	6.8E+09	2.6E+10	1.2E+09	5.4E+10	1.6E+11	1.1E+06
CS136	1.5E+08	2.2E+08	4.5E+07	5.5E+09	1.7E+10	1.9E+05
CS137	1.0E+10	2.4E+10	1.0E+09	4.9E+10	1.5E+11	8.5E+05
BA140	2.1E+07	2.8E+08	5.7E+07	2.3E+08	2.8E+07	2.3E+05
CE141	1.4E+07	5.3E+08	3.2E+07	1.5E+07	1.8E+06	1.3E+05
CE144	7.0E+07	1.3E+10	3.9E+08	1.3E+08	1.6E+07	8.6E+05
I131	1.7E+07	4.8E+10	5.4E+09	1.0E+12	1.2E+12	1.6E+07
I133	2.4E+06	8.1E+08	1.3E+02	9.6E+09	1.2E+10	3.8E+06
I132	1.2E+06	7.6E+03	0.0E+00	1.4E+02	1.6E+02	1.1E+06
I134	4.5E+05	6.4E-03	0.0E+00	9.4E-10	1.1E-01	5.1E+04
I135	2.5E+06	1.4E+12	6.7E-15	2.0E+07	2.4E+07	7.9E+05
MO99	4.0E+06	1.7E+07	2.4E+05	3.1E+08	3.7E+07	4.1E+02
NB95	1.4E+08	4.7E+08	6.8E+09	2.9E+08	3.5E+07	1.0E+05
SR85	1.2E+05	3.5E+10	4.1E+08	1.1E+10	2.2E+10	6.0E+05

RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION

<u>Instrument</u>	<u>Minimum Channels Operable</u>	<u>Applicability</u>	<u>Action</u>
1. Gross Radioactivity Monitors Providing Automatic Release Termination			
a. Liquid Radwaste Effluent Line (RRS-1001)	(1)#	At times of release	1
b. Steam Generator Blowdown Line (R-19)	(1)	At times of release	2
c. Steam Generator Blowdown Treatment Effluent (R-24)	(1)	At times of release	2
2. Gross Radioactivity Monitors Not Providing Automatic Release Termination			
a. Service Water System Effluent Line (R-20, R-28)	(1) per train	At all times	3
3. Continuous Composite Sampler Flow Monitor			
a. Turbine Building Sump Effluent Line	(1)	At all times	3
4. Flow Rate Measurement Devices			
a. Liquid Radwaste Line (RFI-285)	(1)	At times of release	4
b. Discharge Pipes*	(1)	At all times	NA
c. Steam Generator Blowdown Treatment Effluent (DFI-352)	(1)	At times of release	4

* Pump curves and valve settings may be utilized to estimate flow; in such cases, Action Statement 4 is not applicable.

OPERABILITY of RRS-1001 includes OPERABILITY of flow switch RFS-1010, which is an attendant instrument as defined by Specification 1.6.

TABLE NOTATION

- Action 1 With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases may be resumed for up to 30 days, provided that prior to initiating a release:
1. At least two independent samples are analyzed in accordance with Section 4.2.3.1 and;
 2. At least two technically qualified members of the Facility Staff independently verify the discharge valving. Otherwise, suspend release of radioactive effluents via this pathway.
- Action 2 With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue for up to 30 days provided grab samples are analyzed for gross radioactivity (beta or gamma) at a limit of detection of at least 10^{-7} $\mu\text{Ci}/\text{gram}$:
1. At least once per 8 hours when the specific activity of the secondary coolant is >0.01 $\mu\text{Ci}/\text{gram}$ DOSE EQUIVALENT I-131.
 2. At least once per 24 hours when the specific activity of the secondary coolant is ≤ 0.01 $\mu\text{Ci}/\text{gram}$ DOSE EQUIVALENT I-131.
- Action 3 With the number of channels OPERABLE less than the required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue for up to 30 days provided that at least once per 8 hours, grab samples are collected and analyzed for gross radioactivity (beta or gamma) at a lower limit of detection of at least 10^{-7} $\mu\text{Ci}/\text{ml}$.
- Action 4 With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue for up to 30 days provided the flow rate is estimated at least once per 4 hours during actual releases.

RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

<u>Instrument</u>	<u>CHANNEL CHECK</u>	<u>SOURCE CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>
1. Gross Beta or Gamma Radioactivity Monitors Providing Alarm and Automatic Isolation				
a. Liquid Radwaste Effluent Line (RRS-1001)	D*	P	R(3)	Q(5)
b. Steam Generator Blowdown Effluent Line	D*	M	R(3)	Q(1)
c. Steam Generator Blowdown Treatment Effluent Line	D*	M	R(3)	Q(1)
2. Gross Beta or Gamma Radioactivity Monitors Providing Alarm But Not Isolation				
a. Service Water System Effluent Line	D	M	R(3)	Q(2)
3. Continuous Composite Samplers				
a. Turbine Building Sump Effluent Line	D	N/A	N/A	N/A
4. Flow Rate Monitors				
a. Liquid Radwaste Effluent	D(4)*	N/A	R	Q
b. Steam Generator Blowdown Treatment Line	D(4)*	N/A	N/A	N/A

* During releases via this pathway

TABLE NOTATION

- (1) The CHANNEL FUNCTIONAL TEST shall also demonstrate that automatic isolation of this pathway and control room alarm annunciation occurs if any of the following conditions exists:
 1. Instrument indicates measured levels above the alarm/trip setpoint.
 2. Circuit failure.*
 3. Instrument indicates a downscale failure.*
 4. Instrument control not set in operating mode.*
- (2) The CHANNEL FUNCTIONAL TEST shall also demonstrate that control room alarm annunciation occurs if any of the following conditions exists:
 1. Instrument indicates measured levels above the alarm setpoint.
 2. Circuit failure.
 3. Instrument indicate a downscale failure.
 4. Instrument controls not set in operating mode.
- (3) The initial CHANNEL CALIBRATION shall be performed using one or more sources with traceability back to the National Bureau of Standards. These sources shall permit calibrating the system over its intended range of energy and measurement range. For subsequent CHANNEL CALIBRATION, sources that have been related to the initial calibration may be used.
- (4) CHANNEL CHECK shall consist of verifying indication of flow during periods of release. CHANNEL CHECK shall be made at least once per 24 hours on days on which continuous, periodic or batch releases are made.
- (5) The CHANNEL FUNCTIONAL TEST shall also demonstrate that automatic isolation of this pathway and control room alarm annunciation occurs if any of the following conditions exists:
 1. Instrument indicates measured levels above the alarm/trip setpoint.
 2. Circuit failure.**
 3. Instrument indicates a downscale failure.**
 4. Instrument control not set in operating mode.*
 5. Loss of sample flow.

- * Instrument indicates, but does not provide for automatic isolation.
** Instrument indicates, but does not necessarily cause automatic isolation, no credit is taken for the automatic isolation on such occurrences.

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

<u>Instrument (Instrument #)</u>	<u>Minimum Channels Operable</u>	<u>Applicability</u>	<u>Action</u>
1. Condenser Evacuation System			
a. Noble Gas Activity Monitor (SRA-1905/2905)	(1)	****	6
b. Flow Rate Monitor (SFR-401, 1/2-MR-054 and/or SRA-1910/2910)	(1)	****	5
2. Unit Vent. Auxiliary Building Ventilation System			
a. Noble Gas Activity Monitor (VRS-1505/2505)	(1)	*	6
b. Iodine Sampler Cartridge for VRA-1503/2503	(1)	*	8
c. Particulate Sampler Filter for VRA-1501/2501	(1)	*	8
d. Effluent System Flow Rate Measuring Device (VFR-315, MR-054 and/or VFR-1510/2510)	(1)	*	5
e. Sampler Flow Rate Measuring Device (VFS-1521/2521)	(1)	*	5
3. Containment Purge System			
a. Aux. Building Vent. System Noble Gas Activity Monitor (VRS-1505/2505)	(1)	**** ¹	7
b. Aux. Building Vent. System Particulate Sampler for VRA-1501/2501	(1)	****	8
4. Waste Gas Holdup System			
a. Noble Gas Activity Alarm and Termination of Gas Decay Tank Releases (VRS-1505/2505)	(1)	**** ²	9
5. Gland Seal Exhaust			
a. Noble Gas Activity Monitor (SRA-1805/2805)	(1)	****	6
b. Flow Rate Monitor (SFR-201, MR-054 or SFR-1810/2810)	(1)	****	5

* At all times

**** During releases via this pathway

- 1 For purge purposes only. See Attachment 3.4 (Items 2a, 4a) and Attachment 3.5 (Items 2a, 4a) for other requirements associated with this instrument.
- 2 For gas decay tank releases only, see Item 2 (Unit Vent, Auxiliary Building Ventilation System) for additional requirements.

TABLE NOTATIONS

- Action 5 With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue for up to 30 days provided the flow rate is estimated at least once per 4 hours.
- Action 6 With the number of channels OPERABLE less required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue for up to 30 days provided grab samples are taken at least once per 8 hours and these samples are analyzed for gross activity within 24 hours.
- Action 7 With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirements, immediately suspend PURGING of radioactive effluents via this pathway.
- Action 8 With the number of channels OPERABLE less than require by the Minimum Channels OPERABLE requirement, effluent releases via the affected pathway may continue for up to 30 days provided samples required for weekly analysis are continuously collected with auxiliary sampling equipment as required in Attachment 3.7.
- Action 9 With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, the contents of the tank(s) may be released to the environment for up to 14 days provided that prior to initiating the release:
- a. At least two independent samples of the tank's contents are analyzed and,
 - b. At least two technically qualified members of the Facility Staff independently verify the release rate calculations and discharge valve lineups; otherwise, suspend release of radioactive effluents via this pathway.

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

<u>Instrument</u>	<u>CHANNEL CHECK</u>	<u>SOURCE CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>
1. Condenser Evacuation System				
a. Noble Gas Activity Monitor (SRA-1905/2905)	D**	M	R (2)	Q (1)
b. System Effluent Flow Rate (SFR-401, MR-054, SRA-1910/2910)	D**	NA	R	Q
2. Auxiliary Building Ventilation System				
a. Noble Gas Activity Monitor (VRS-1505/2505)	D*	M	R (2)	Q (1)
b. Iodine Sampler (For VRS-1503/2503)	W*	NA	NA	NA
c. Particulate Sampler (For VRS-1501/2501)	W*	NA	NA	NA
d. System Effluent Flow Rate Measurement Device (VFR-315, MR-054, VRS-1510/2510)	D*	NA	R	Q
e. Sampler Flow Rate Measuring Device (VFS-1521/2521)	D*	NA	R	Q
3. Containment Purge System				
a. Aux. Building Vent. System Noble Gas Activity Monitor (VRS-1505/2505)	D**	P	R (2)	Q (1)
b. Aux. Building Vent. System Particulate Sampler (For VRS-1501/2501)	W**	NA	NA	NA

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

<u>Instrument</u>	<u>CHANNEL CHECK</u>	<u>SOURCE CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>
4. Waste Gas Holdup System				
a. Noble Gas Activity Monitor Providing Alarm & Termination of Gas Decay Tank Releases (VRS-1505/2505)	P**	P	R(2)	Q(3)
5. Gland Seal Exhaust				
a. Noble Gas Activity (SRA-1805/2805)	D**	M	R(2)	Q(1)
b. System Effluent Flow Rate (SFR-201, MR-054, SRA-1810/2810)	D**	NA	R	Q

* At all times

** During releases via this pathway

TABLE NOTATIONS

- 1) The CHANNEL FUNCTIONAL TEST shall also demonstrate that control room alarm annunciation occurs if any of the following conditions exists:
 1. Instrument indicates measured levels above the alarm setpoint.
 2. Circuit failure.
 3. Instrument indicates a downscale failure.
 4. Instrument controls not set in operate mode.
 - 2) The initial CHANNEL CALIBRATION shall be performed using one or more sources with traceability back to the National Bureau of Standards. These sources shall permit calibrating the system over its intended range of energy and measurement range. For subsequent CHANNEL CALIBRATION, sources that have been related to the initial calibration may be used.
 - 3) The CHANNEL CALIBRATION TEST shall also demonstrate that automatic isolation of this pathway and control room alarm annunciation occurs if any of the following conditions exists:
 1. Instrument indicates measured levels above the alarm/trip setpoint.
 2. Circuit failure.*
 3. Instrument indicates a downscale failure.*
 4. Instrument controls not set in operate mode.*
- * Instrument indicates, but does not provide automatic isolation.

RADIOACTIVE LIQUID WASTE SAMPLING AND ANALYSIS PROGRAM

LIQUID RELEASE TYPE	SAMPLING FREQUENCY	MINIMUM ANALYSIS FREQUENCY	TYPE OF ACTIVITY ANALYSIS	LOWER LIMIT OF DETECTION (LLD) ($\mu\text{Ci/ml}$) ^a
A. Batch Waste Release Tanks ^c	P Each Batch	P Each Batch	Principal Gamma Emitters ^e	5×10^{-7}
			I-131	1×10^{-6}
	P Each Batch	P Each Batch	Dissolved and Entrained Gases (Gamma Emitters)	1×10^{-5}
			H-3	1×10^{-5}
	P Each Batch	M Composite ^b	Gross Alpha	1×10^{-7}
			Sr-89, Sr-90	5×10^{-4}
B. Plant Continuous Releases ^d	Daily	W Composite ^b	Principal Gamma Emitters ^e	5×10^{-7}
			I-131	1×10^{-6}
	M Grab Sample	M	Dissolved and Entrained Gases (Gamma Emitters)	1×10^{-5}
			H-3	1×10^{-5}
	Daily	M Composite ^b	Gross Alpha	1×10^{-7}
			Sr-89, Sr-90	5×10^{-4}
	Daily	Q Composite ^b	Fe-55	1×10^{-6}

TABLE NOTATION

- The lower limit of detection (LLD) is defined in Table Notation A. of Attachment 3.20.
- A composite sample is one in which the quantity of liquid sampled is proportional to the quantity of liquid waste discharged and in which the method of sampling employed results in a specimen which is representative of the liquids released.
- A batch release is the discharge of liquid wastes of a discrete volume. Prior to sampling for analysis, each batch shall be isolated and recirculated or sparged to ensure thorough mixing.
- A continuous release is the discharge of liquid of a non-discrete volume; e.g. from a volume of system that has an input flow during the continuous release.
- The principal gamma emitters for which the LLD specification applies exclusively are the following radionuclides: Mn-54, Fe-59, Co-58, Co-60, Zn-65, Mo-99, Cs-134, Cs-137, Ce-141 and Ce-144. This list does not mean that only these nuclides are to be detected and reported. Other peaks which are measurable and identifiable, together with the above nuclides, shall also be identified and reported.

RADIOACTIVE GASEOUS WASTE SAMPLING AND ANALYSIS PROGRAM

Gaseous Release Type	Frequency	Minimum Analysis Frequency	Type of Activity Analysis	Lower Limit of Detection ($\mu\text{Ci/ml}$) ^a
a. Waste Gas Storage Tank	P Each Tank Grab Sample	P Each Tank	Principal Gamma Emitters ^c	1×10^{-4}
b. Containment Purge	P Each Purge Grab Sample ^b	P Each Purge ^b	Principal Gamma Emitters ^c	1×10^{-4}
			H-3	1×10^{-6}
c. Condenser Evacuation System and Gland Seal Exhaust	M Grab Sample ^b	M ^b Particulate Sample	Principle Gamma Emitters ^c	1×10^{-4}
		M ^b	H-3	1×10^{-6}
		M ^b Iodine Adsorbing/Media	I-131	1×10^{-12}
	Continuous	W ^b Noble Gas Sample	Noble Gases	1×10^{-6}
	Continuous ^d	W ^c Iodine Adsorbing/Media	I-131	1×10^{-12}
d. Auxiliary Building Vent	Continuous ^d	W ^c Particulate Sample	Principal Gamma Emitters ^c	1×10^{-11}
	Continuous ^d	M Composite Particulate Sample	Gross Alpha	1×10^{-11}
	Continuous ^d	M Composite	H-3	1×10^{-6}
	Continuous ^d	Q Composite Particulate Sample	Sr-89, Sr-90	1×10^{-11}
	Continuous ^d	W ^b Noble Gas Sample	Noble Gases	1×10^{-6}

RADIOACTIVE GASEOUS WASTE SAMPLING AND ANALYSIS PROGRAM

Gaseous Release Type	Frequency	Minimum Analysis Frequency	Type of Activity Analysis	Lower Limit of Detection ($\mu\text{Ci/ml}$) ^a
e. Incinerated Oil ^f	P Each Batch ^g	P Each Batch ^g	Principle Gamma Emitters	5×10^{-7}

Table Notation

- a. The lower limit of detection (LLD) is defined in Table Notation A. of Attachment 3.20.
- b. Analyses shall be also be performed following any operational occurrence which has altered the mixture of radionuclides as indicated by RCS analysis (i.e., start-up).
- c. Samples shall be changed at least once per 7 days and analyses shall be completed within 48 hours after changing. Analyses shall also be performed at least once per 24 hours for 7 days following each shutdown, startup or similar operational occurrence which lead to significant increases or decreases in radioiodine in the Reactor Coolant System. When samples collected for 24 hours are analyzed, the corresponding LLD's may be increased by a factor of 10.
- d. The ratio of the sample flow rate to the sampled stream flow rate shall be known for the time period covered by each dose or dose rate calculation made in accordance with Sections 4.2.4.1, 4.2.4.2, and 4.2.4.3 of this document.
- e. The principal gamma emitters for which the LLD specification applies exclusively are the following radionuclides: Kr-87, Kr-88, Xe-133, Xe-133M, Xe-135 and Xe-138 for gaseous emissions and Mn-54, Fe-59, Co-58, Co-60, Zn-65, Mo-99, Cs-134, Cs-137, Ce-141 and Ce-144 for particulate emissions. This list does not mean that only these nuclides are to be detected and reported. Other peaks which are measurable and identifiable, together with the above nuclides, shall also be identified and reported.
- f. Releases from incinerated oil are discharged through the Auxiliary Boiler System. Releases shall be accounted for based on pre-release grab sample data.
- g. Samples of waste oil to be incinerated shall be collected from the container in which the waste oil is stored (e.g., waste oil storage tanks, 55 gal. drums) prior to transfer to the Auxiliary Boiler System and shall be representative of container contents.
- h. A gas marinelli grab sample shall be obtained and analyzed weekly for noble gases effluent quantification.

Multiple Release Point Factors for Release Points

Liquid Factors

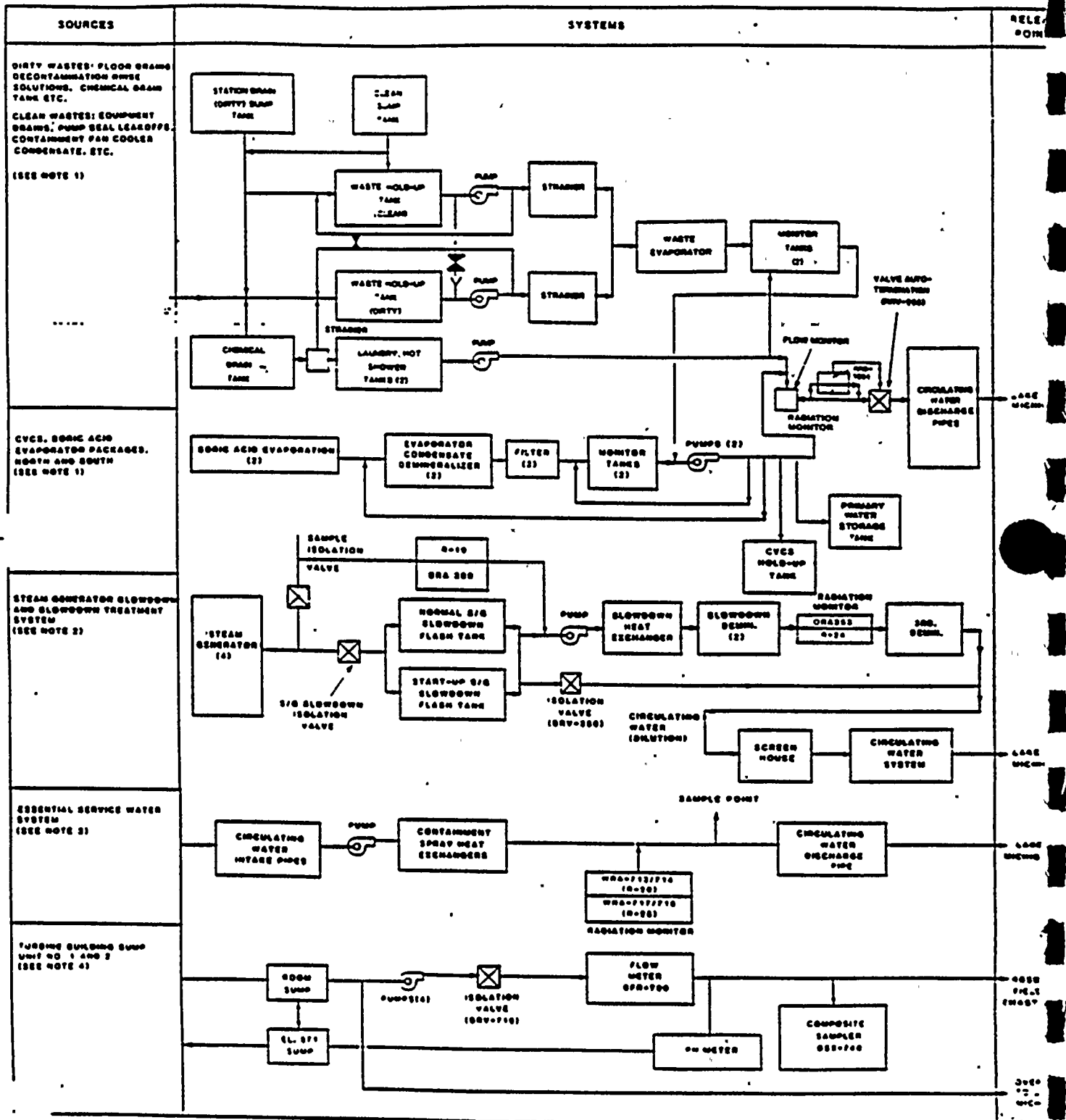
Monitor Description	Monitor Number	MRP
U 1 SG Blowdown	1R19/24*	0.35
U 2 SG Blowdown	2R19/24*	0.35
U 1 & 2 Liquid Waste Discharge	RRS-1000	0.30

Gaseous Factors

Monitor Description	Monitor Number	Flow Rate (cfm)	MRP #
Unit 1			
Unit Vent	VRS-1500	139,600	0.54
Gland Seal Vent	SRA-1800	1,260	0.00484
Steam Jet Air Ejector	SRA-1900	3,600 (b)	0.01
Start Up FT Vent		1,536	0.01
Total		145,996	
Unit 2			
Unit Vent	VRS-2500	103,500	0.40
Gland Seal Vent	SRA-2800	5,508 (a)	0.01
Steam Jet Air Ejector	SRA-2900	3,600 (b)	0.01
Start Up FT Vent		1,536	0.01
Total		114,144	

Either R-19 or R-24 can be used for blowdown monitoring.
Nominal Values
Two release points of 2,754 cfm each are totaled for this value.
This is the total design maximum of the Start Up Air Ejectors. This
is a conservative value for unit 1.

Liquid Effluent Release Systems



NOTES

- NOTE 1: Drawings: OP-12-5119, -5123B, -5133, -5134, -5138, -5138A, -1-5661, -2-5661, -5104F.
System Descriptions: SD-DCC-CH113, -NE101, -HP119. Engineering Control Procedure ECP-12-R2-08.
- NOTE 2: Drawings: OP-12-5105, -5105B, -5141, -5141A, -5119, -5125, -1-5661, -2-5661, -5104F.
System Descriptions: SD-DCC-CH114, -NE101, -HP119.
- NOTE 3: Drawings: OP-12-5113, -5119, -1-5661, -2-5661.
System Descriptions: SD-DCC-HP102, -HP119, NE101.
- NOTE 4: Drawings: OP-12-5125, -5125A, -12-5160.
System Descriptions: SD-DCC-CH117.

USE THE MOST CURRENT DRAWING AND SYSTEM DESCRIPTIONS

PLANT LIQUID EFFLUENT PARAMETERS

SYSTEM	COMPONENTS		CAPACITY (EACH)	FLOW RATE (EACH) *
	TANKS	PUMPS		
I <u>Waste Disposal System</u>				
+ Chemical Drain Tank	1	1	600 GAL.	20 GPM
+ Laundry & Hot Shower Tanks	2	1	600 GAL.	20 GPM
+ Monitor Tanks	4	2	21,600 GAL.	150 GPM
+ Waste Holdup Tanks	2		25,000 GAL.	
+ Waste Evaporators	3			30 GPM
+ Waste Evaporator Condensate Tanks	2	2	6,450 GAL.	150 GPM
II <u>Steam Generator Blowdown and Blowdown Treatment Systems</u>				
+ Start-up Flash Tank (Vented)	1		1,800 GAL.	350 GPM
+ Normal Flash Tank (Not Vented)	1		525 GAL.	100 GPM
+ Blowdown Treatment System	1			60 GPM
III <u>Essential Service Water System</u>				
+ Water Pumps	4			10,000 GPM
+ Containment Spray Heat Exchanger Outlet	4			3,300 GPM
IV <u>Circulating Water Pumps</u>				
Unit 1	3			230,000 GPM
Unit 2	4			230,000 GPM

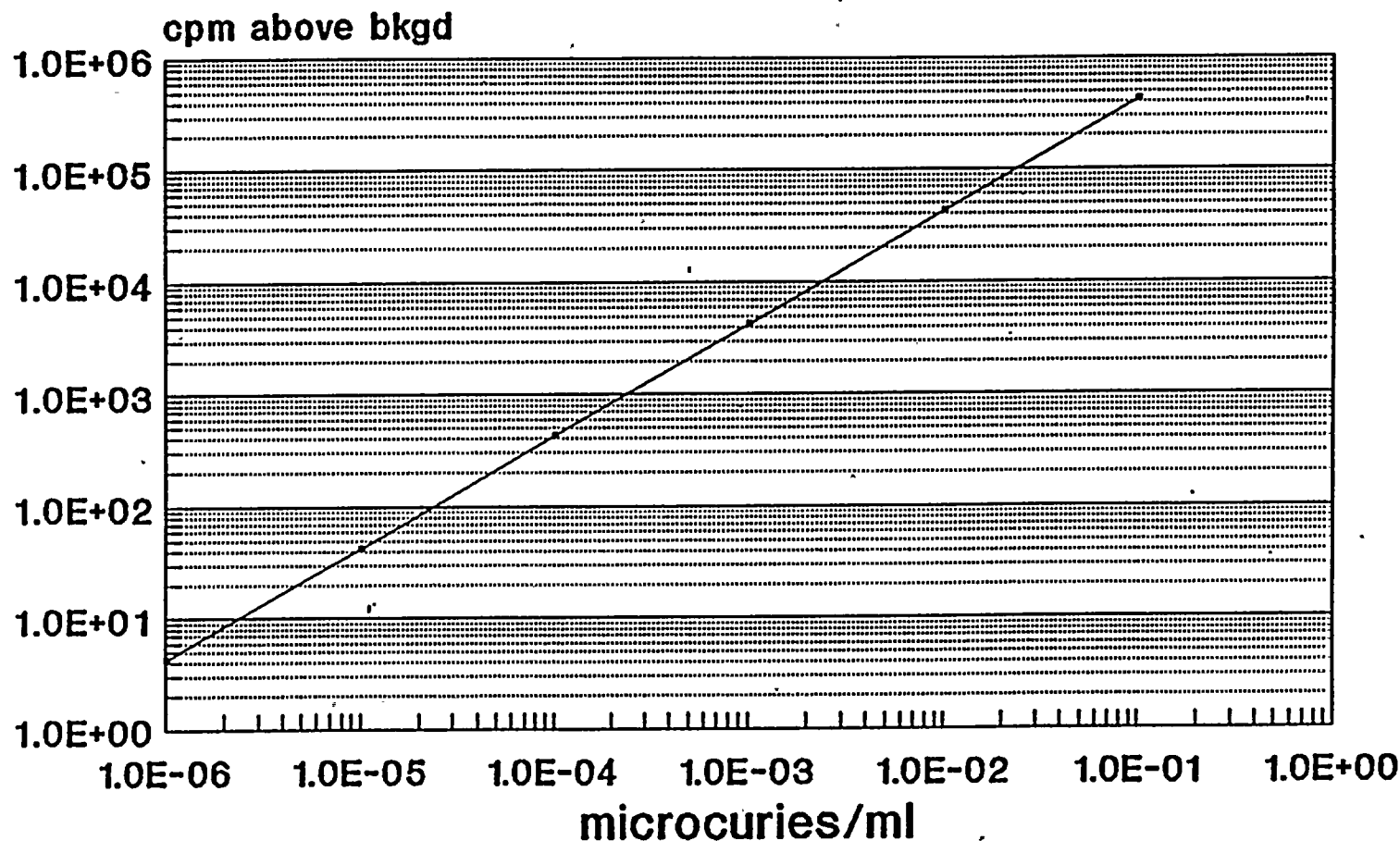
*Nominal Values

VOLUMETRIC DETECTION EFFICIENCIES OF PRINCIPLE
GAMMA EMITTING RADIONUCLIDES FOR RRS-1000

<u>NUCLIDE</u>	<u>EFFICIENCY</u> <u>(cpm/μCi/cc)</u>
I-131	3.78E7
Cs-137	3.00E7
Cs-134	7.93E7
Co-60	5.75E7
Co-58	4.58E7
Cr-51	3.60E6
Mn-54	3.30E7
Zn-65	1.58E7
Ag-110M	9.93E7
Ba-133	4.85E7
Ba-140	1.92E7
Cd-109	9.58E5
Ce-139	3.28E7
Ce-141	1.92E8
Ce-144	4.83E6
Co-57	3.80E7
Cs-136	1.07E8
Fe-59	2.83E7
Sb-124	5.93E7
I-133	3.40E7
I-134	7.23E7
I-135	3.95E7
Mo-99	8.68E6
Na-24	4.45E7
Nb-95	3.28E7
Nb-97	3.50E7
Rb-89	5.00E7
Ru-103	3.48E7
Ru-106	1.23E7
Sb-122	2.55E7
Sb-125	3.15E7
Sn-113	7.33E5
Sr-85	3.70E7
Sr-89	2.88E3
Sr-92	3.67E7
Tc-99M	3.60E7
Y-88	5.25E7
Zr-95	3.38E7
Zr-97	3.10E7
Kr-85	1.56E5
Kr-85M	3.53E7
Kr-88	4.10E7
Xe-131M	8.15E5
Xe-133	7.78E6
Xe-133M	5.75E6
Xe-135	3.83E7

The efficiency factor is 4.2×10^6 cpm/ μ Ci/ml.

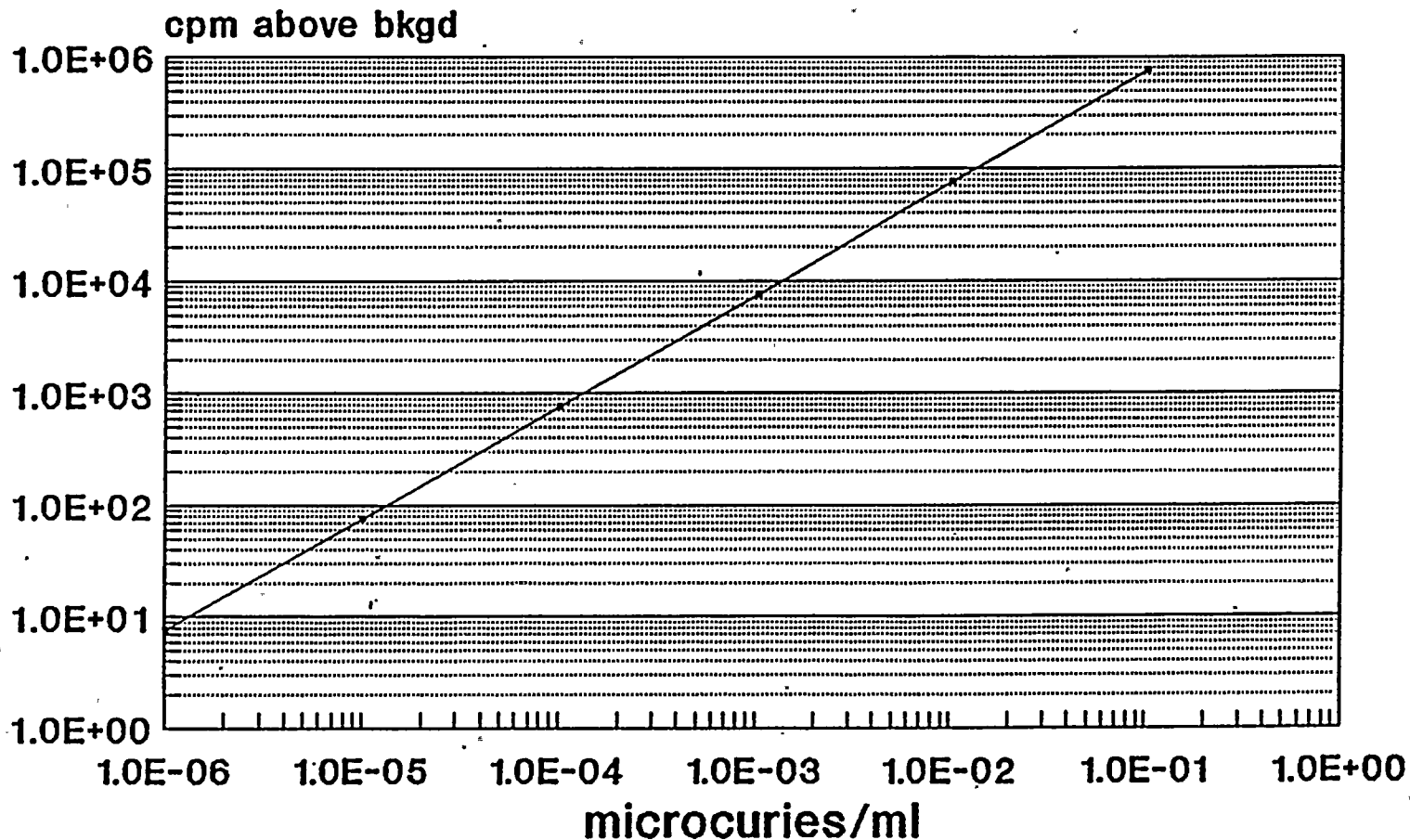
Steam Generator Blowdown R-19



RMS

The efficiency factor is 7.5×10^6 cpm/ μ Ci/ml.

S/G Blowdown Treatment R-24

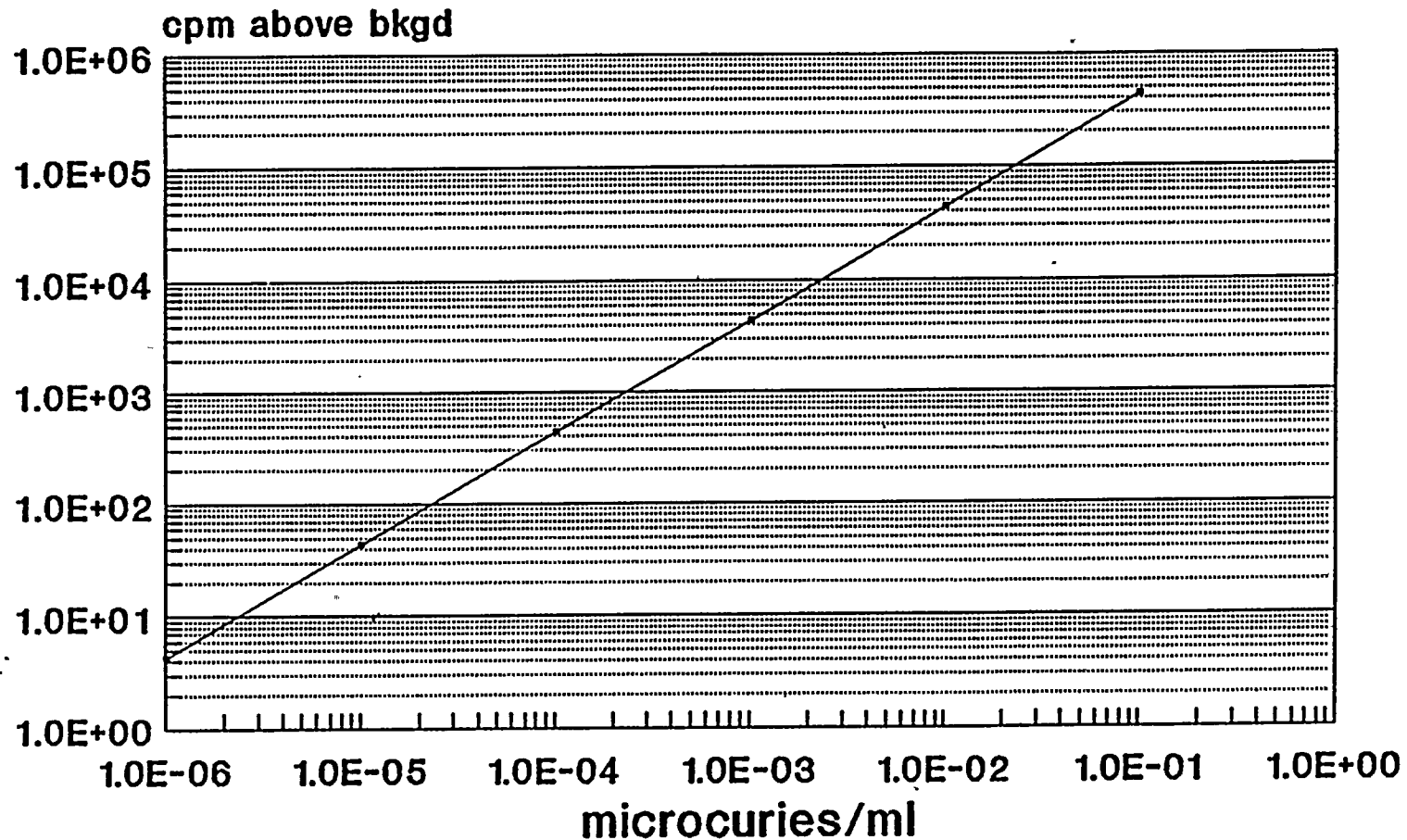


RMS

The efficiency factor is 4.3×10^6 cpm/ μ Ci/ml.

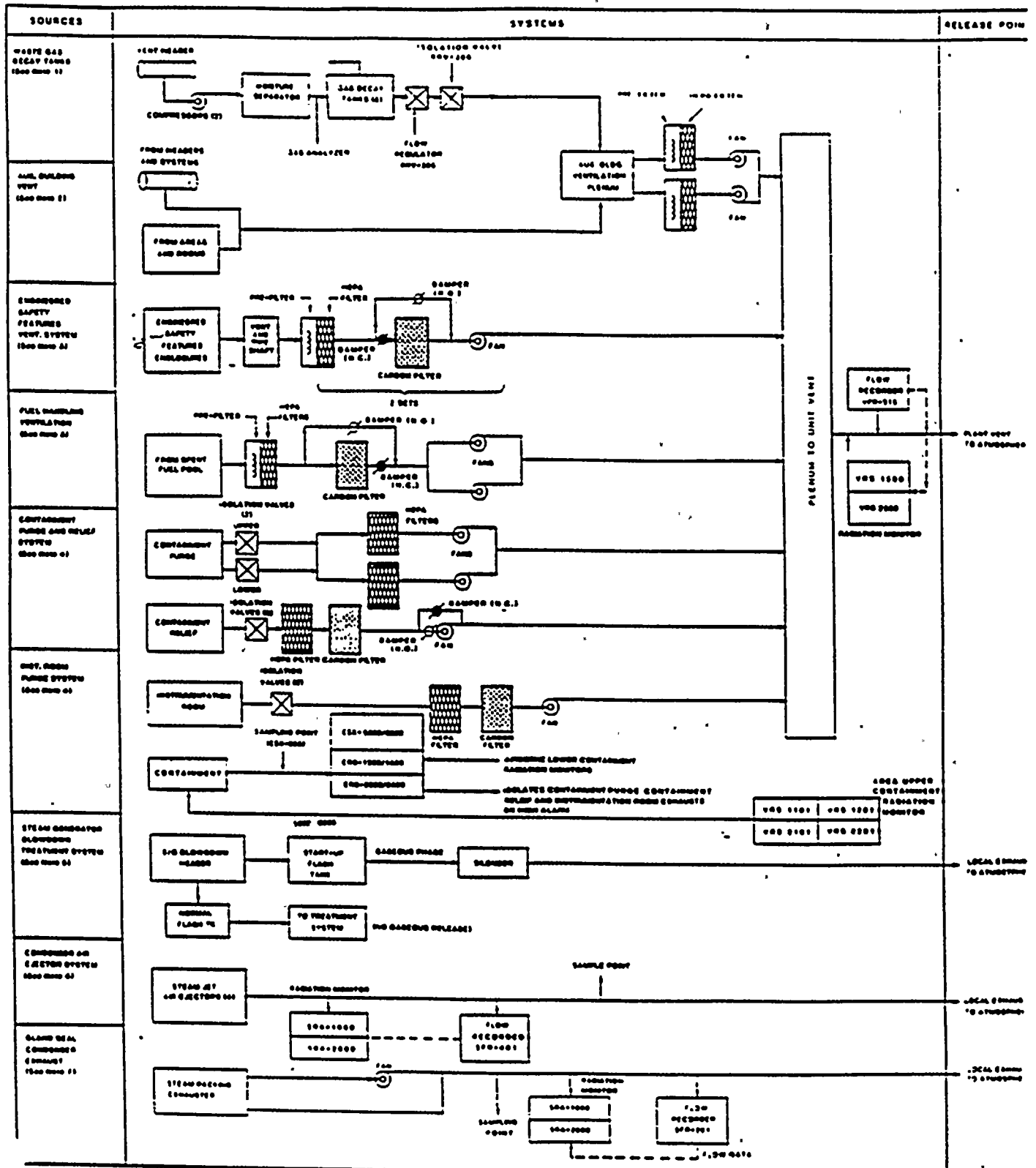
ESW Monitors

R-20, R-28



RMS

Gaseous Effluent Release Systems



NOTES

- NOTE 1: Drawings: OP-12-5119, -5123B, -5133, -5134, -5138, -5138A, 1-5661, -2-5661.
System Descriptions: SD-DCC-CH113, -NE101, -HP119.
- NOTE 2: Drawings: OP-12-5105, -5105B, -5141, -5141A, -5119, -5125, -1-5661, -2-5661.
System Descriptions: SD-DCC-CH114, -NE101, -HP119.
- NOTE 3: Drawings: OP-12-5113, -5119, -1-5661, -2-5661.
System Descriptions: SD-DCC-HP102, -HP119, NE101.
- NOTE 4: Drawings: OP-12-5125, -5125A, -12-5160.
System Descriptions: SD-DCC-CH117.

USE THE MOST CURRENT DRAWING AND SYSTEM DESCRIPTIONS

PLANT GASEOUS EFFLUENT PARAMETERS

SYSTEM	UNIT	EXHAUST FLOW RATE (CFM)	CAPACITY
I	<u>PLANT UNIT VENT:</u>	UNIT 1 UNIT 2	139,600 103,500
	WASTE GAS DECAY TANKS	UNIT 1	125
			4082 FT ³ @100 psig (8 tanks total)
	+AUXILIARY BUILDING EXHAUST	UNIT 1 UNIT 2	72,600 64,500
	+ENG. SAFETY FEATURES VENT	UNIT 1&2	25,000
	+FUEL HANDLING AREA VENT SYSTEM	UNIT 1	30,000
	+CONTAINMENT PURGE SYSTEM	UNIT 1&2	12,000
	+CONTAINMENT PRESSURE RELIEF SYSTEM	UNIT 1&2	1,000
	+INSTRUMENT ROOM PURGE SYSTEM	UNIT 1&2	1,000
II	<u>CONDENSER AIR EJECTOR SYSTEM</u>		2 Release Points - One for Each Unit
	NORMAL STEAM JET AIR EJECTORS	UNIT 1&2	230
	START UP STEAM JET AIR EJECTORS	UNIT 1&2	3,600
III	<u>TURBINE SEALS SYSTEM</u>	UNIT 1 UNIT 2	1,260 5,508
			2 Release Points for Unit 2
IV	<u>START UP FLASH TANK VENT</u>	UNIT 1 UNIT 2	1,536 1,536

$\overline{X/Q}$ GROUND AVERAGE (sec/m³)

10 YEAR AVERAGE OF 1985 - 1994 DATA
DISTANCE (METERS)

DIRECTION (WIND TO)	594.	2416.	4020.	5630.	7240.
S	3.02e-6	3.49e-7	1.63e-7	9.60e-8	6.71e-8
SSW	2.53e-6	3.00e-7	1.42e-7	8.45e-8	5.92e-8
SW	3.53e-6	4.18e-7	2.02e-7	1.22e-7	8.59e-8
WSW	4.62e-6	5.33e-7	2.63e-7	1.62e-7	1.15e-7
W	6.34e-6	7.14e-7	3.57e-7	2.21e-7	1.58e-7
WNW	6.55e-6	7.43e-7	3.71e-7	2.29e-7	1.64e-7
NW	7.91e-6	8.83e-7	4.45e-7	2.76e-7	1.98e-7
NNW	8.32e-6	9.34e-7	4.72e-7	2.94e-7	2.11e-7
N	8.89e-6	1.02e-6	5.08e-7	3.13e-7	2.23e-7
NNE	5.62e-6	6.60e-7	3.23e-7	1.97e-7	1.40e-7
NE	4.11e-6	4.95e-7	2.35e-7	1.41e-7	9.91e-8
ENE	3.60e-6	4.22e-7	2.00e-7	1.19e-7	8.38e-8
E	2.97e-6	3.40e-7	1.60e-7	9.57e-8	6.70e-8
ESE	2.82e-6	3.23e-7	1.51e-7	8.98e-8	6.28e-8
SE	2.73e-6	3.12e-7	1.46e-7	8.70e-8	6.09e-8
SSE	2.86e-6	3.29e-7	1.53e-7	9.02e-8	6.30e-8

DISTANCE

DIRECTION (WIND TO)	12067	24135	40225	56315	80500
S	3.33e-8	1.28e-8	6.36e-9	4.07e-9	2.55e-9
SSW	2.96e-8	1.15e-8	5.72e-9	3.66e-9	2.30e-9
SW	4.33e-8	1.71e-8	8.55e-9	5.48e-9	3.46e-9
WSW	5.86e-8	2.36e-8	1.18e-8	7.60e-9	4.85e-9
W	8.13e-8	3.31e-8	1.66e-8	1.07e-8	6.85e-9
WNW	8.40e-8	3.41e-8	1.71e-8	1.10e-8	7.04e-9
NW	1.02e-7	4.17e-8	2.09e-8	1.35e-8	8.64e-9
NNW	1.09e-7	4.49e-8	2.25e-8	1.45e-8	9.31e-9
N	1.15e-7	4.64e-8	2.33e-8	1.50e-8	9.57e-9
NNE	7.11e-8	2.85e-8	1.43e-8	9.13e-9	5.81e-9
NE	4.99e-8	1.96e-8	9.76e-9	6.25e-9	3.94e-9
ENE	4.21e-8	1.65e-8	8.20e-9	5.25e-9	3.31e-9
E	3.34e-8	1.30e-8	6.45e-9	4.13e-9	2.60e-9
ESE	3.12e-8	1.20e-8	5.95e-9	3.82e-9	2.39e-9
SE	3.03e-8	1.17e-8	5.83e-9	3.73e-9	2.35e-9
SSE	3.12e-8	1.20e-8	5.94e-9	3.81e-9	2.38e-9

DIRECTION - SECTOR

N = A	E = E	S = J	W = N
NNE = B	ESE = F	SSW = K	WNW = P
NE = C	SE = G	SW = L	NW = Q
ENE = D	SSE = H	WSW = M	NNW = R

Worst Case $\overline{X/Q}$ = 1.28e-5 sec/m³ in Sector A 1994

D/Q DEPOSITION (1/m²)

10 YEAR AVERAGE 1985 - 1994 DATA
DISTANCE (METERS)

DIRECTION (WIND TO)	594.	2416.	4020.	5630.	7240.
S	2.06e-8	1.99e-9	9.02e-10	4.74e-10	3.03e-10
SSW	1.27e-8	1.23e-9	5.56e-10	2.92e-10	1.86e-10
SW	1.34e-8	1.30e-9	5.87e-10	3.08e-10	1.96e-10
WSW	1.39e-8	1.34e-9	6.07e-10	3.18e-10	2.03e-10
W	1.77e-8	1.70e-9	7.73e-10	4.06e-10	2.59e-10
WNW	2.01e-8	1.95e-9	8.81e-10	4.63e-10	2.95e-10
NW	2.10e-8	2.03e-9	9.31e-10	4.83e-10	3.08e-10
NNW	2.08e-8	2.01e-9	9.13e-10	4.79e-10	3.05e-10
N	3.02e-8	2.92e-9	1.32e-9	6.95e-10	4.43e-10
NNE	2.36e-8	2.28e-9	1.03e-9	5.43e-10	3.46e-10
NE	2.39e-8	2.31e-9	1.05e-9	5.49e-10	3.51e-10
ENE	2.54e-8	2.46e-9	1.11e-9	5.85e-10	3.73e-10
E	2.11e-8	2.04e-9	9.22e-10	4.84e-10	3.09e-10
ESE	1.93e-8	1.87e-9	8.46e-10	4.44e-10	2.83e-10
SE	1.85e-8	1.79e-9	8.10e-10	4.25e-10	2.71e-10
SSE	1.97e-8	1.90e-9	7.64e-10	4.52e-10	2.89e-10

DIRECTION (WIND TO)	DISTANCE				
	12067	24135	40225	56315	80500
S	1.26e-10	4.11e-11	1.51e-11	8.08e-12	4.05e-12
SSW	7.78e-11	2.53e-11	9.33e-12	4.87e-12	2.49e-12
SW	8.20e-11	2.67e-11	9.82e-12	5.25e-12	2.63e-12
WSW	8.49e-11	2.76e-11	1.02e-11	5.43e-12	2.72e-12
W	1.08e-10	3.52e-11	1.30e-11	6.92e-12	3.47e-12
WNW	1.23e-10	4.02e-11	1.48e-11	7.89e-12	3.96e-12
NW	1.29e-10	4.19e-11	1.54e-11	8.23e-12	4.13e-12
NNW	1.28e-10	4.15e-11	1.53e-11	8.16e-12	4.09e-12
N	1.85e-10	6.02e-11	2.22e-11	1.18e-11	5.94e-12
NNE	1.45e-10	4.71e-11	1.74e-11	9.25e-12	4.64e-12
NE	1.47e-10	4.77e-11	1.76e-11	9.37e-12	4.70e-12
ENE	1.56e-10	5.07e-11	1.87e-11	9.97e-12	5.00e-12
E	1.29e-10	4.20e-11	1.55e-11	8.25e-12	4.08e-12
ESE	1.18e-10	3.86e-11	1.42e-11	7.27e-12	3.80e-12
SE	1.13e-10	3.69e-11	1.36e-11	7.25e-12	3.64e-12
SSE	1.20e-10	3.92e-11	1.44e-11	7.91e-12	3.87e-12

DIRECTION - SECTOR

N = A	E = E	S = J	W = N
NNE = B	ESE = F	SSW = K	WNW = P
NE = C	SE = G	SW = L	NW = Q
ENE = D	SSE = H	WSW = M	NNW = R

Worst Case D/Q = 4.41E-08 1/m² in Sector A 1990

ANNUAL EVALUATION OF \bar{X}/Q AND D/Q VALUES FOR ALL SECTORS.

1. Received annual update of \bar{X}/Q and D/Q values.

Signature

R.P. Department
(print name, title)

2. Worst \bar{X}/Q and D/Q value and sector determined. PMP 6010
OSD.001 has been updated.

Signature

R.P. Department
(print name, title)

3. Approved and verified by:

Signature

R.P. Department
(print name, title)

DOSE FACTORS FOR NOBLE GASES AND DAUGHTERS*

<u>RADIONUCLIDE</u>	TOTAL BODY DOSE FACTOR K_i	SKIN DOSE FACTOR L_i	GAMMA AIR DOSE FACTOR M_i	BETA AIR DOSE FACTOR N_i
	(mrem/yr per $\mu\text{Ci}/\text{m}^3$)	(mrem/yr per $\mu\text{Ci}/\text{m}^3$)	(mrad/yr per $\mu\text{Ci}/\text{m}^3$)	(mrad/yr per $\mu\text{Ci}/\text{m}^3$)
Kr-83m	7.56E-02	--	1.93E+01	2.88E+02
Kr-85m	1.17E+03	1.46E+03	1.23E+03	1.97E+03
Kr-85	1.61E+01	1.34E+03	1.72E+01	1.95E+03
Kr-87	5.92E+03	9.73E+03	6.17E+03	1.03E+04
Kr-88	1.47E+04	2.37E+03	1.52E+04	2.93E+03
Kr-89	1.66E+04	1.01E+04	1.73E+04	1.06E+04
Kr-90	1.56E+04	7.29E+03	1.63E+04	7.83E+03
Xe-131m	9.15E+01	4.76E+02	1.56E+02	1.11E+03
Xe-133m	2.51E+02	9.94E+02	3.27E+02	1.48E+03
Xe-133	2.94E+02	3.06E+02	3.53E+02	1.05E+03
Xe-135m	3.12E+03	7.11E+02	3.36E+03	7.39E+02
Xe-135	1.81E+03	1.86E+03	1.92E+03	2.46E+03
Xe-137	1.42E+03	1.22E+04	1.51E+03	1.27E+04
Xe-138	8.83E+03	4.13E+03	9.21E+03	4.75E+03
Ar-41	8.84E+03	2.69E+03	9.30E+03	3.28E+03

*The listed dose factors are for radionuclides that may be detected in gaseous effluents, from R.G. 1.109, Table B-1.

DOSE FACTORS FOR RADIOIODINES AND
RADIOACTIVE PARTICULATE, GASEOUS EFFLUENTS*

RADIONUCLIDE	P_i INHALATION PATHWAY (mrem/yr per $\mu\text{Ci}/\text{m}^3$)	P_i FOOD & GROUND PATHWAYS ($\text{m}^2 \cdot \text{mrem}/\text{yr}$ per $\mu\text{Ci}/\text{sec}$)	RADIONUCLIDE	P_i INHALATION PATHWAY (mrem/yr per $\mu\text{Ci}/\text{m}^3$)	P_i FOOD & GROUND PATHWAYS ($\text{m}^2 \cdot \text{mrem}/\text{yr}$ per $\mu\text{Ci}/\text{sec}$)
H-3	6.47E+02	2.40E+03	Rb-88	5.57E+02	4.74E+04
C-14	2.65E+04	2.38E+09	Rb-89	3.21E+02	1.76E+05
Na-24	1.06E+04	3.28E+07	Sr-89	2.03E+06	1.28E+10
P-32	2.03E+06	1.63E+11	Sr-90	4.09E+07	1.24E+11
Cr-51	1.28E+04	1.15E+07	Sr-91	7.34E+04	3.41E+06
Mn-54	1.00E+06	1.14E+09	Sr-92	1.40E+05	1.11E+06
Mn-56	7.17E+04	1.29E+06	Y-90	2.69E+05	9.64E+05
Fe-55	8.69E+04	1.38E+08	Y-91m	2.79E+03	1.44E+05
Fe-59	1.02E+06	7.89E+08	Y-91	2.45E+06	6.86E+06
Co-58	7.77E+05	5.89E+08	Y-92	1.27E+05	2.59E+05
Co-60	4.51E+06	4.62E+09	Y-93	1.67E+05	2.80E+05
Ni-63	3.39E+05	3.56E+10	Zr-95	1.75E+06	3.45E+08
Ni-65	5.01E+04	4.43E+05	Zr-97	1.40E+05	4.29E+06
Cu-64	1.50E+04	4.75E+06	Nb-95	4.79E+05	4.06E+08
Zn-65	6.47E+05	2.01E+10	Mo-99	1.35E+05	3.23E+08
Zn-69	1.32E+04	3.01E-09	Tc-99m	2.03E+03	2.81E+05
Rb-86	1.90E+05	2.27E+10	Tc-101	8.44E+02	2.92E+04
Te-131m	1.99E+05	3.48E+07	Ru-103	5.52E+05	1.55E+08
Te-131	8.22E+03	4.18E+04	Ru-105	4.84E+04	9.12E+05
Te-132	3.40E+05	7.26E+07	Ru-106	1.16E+07	3.02E+08
I-130	1.60E+06	8.99E+08	Ag-110m	3.67E+06	1.80E+10
I-131	1.48E+07	1.07E+12	Te-125m	4.47E+05	1.56E+08
I-132	1.69E+05	1.79E+06	Te-127m	1.31E+06	1.06E+09
I-133	3.56E+06	9.78E+09	Te-127	2.44E+04	1.53E+05
I-134	4.45E+04	6.40E+05	Te-129m	1.68E+06	1.45E+09
I-135	6.96E+05	2.40E+07	Te-129	2.63E+04	3.76E+04
Cs-134	7.03E+05	7.21E+10	Ce-143	1.16E+05	4.88E+06
Cs-136	1.35E+05	6.13E+09	Ce-144	9.84E+06	1.95E+08
Cs-137	6.12E+05	6.25E+10	Pr-143	4.33E+05	7.98E+05
Cs-138	8.76E+02	5.15E+05	Pr-144	4.28E+03	2.63E+03
Ba-139	5.10E+04	1.52E+05	Nd-147	3.22E+05	1.26E+07
Ba-140	1.60E+06	2.75E+08	W-187	3.96E+04	5.90E+06
Ba-141	4.75E+03	5.98E+04	Np-239	5.95E+04	2.55E+06
Ba-142	1.55E+03	6.43E+04			
La-140	1.68E+05	2.77E+07			
La-142	5.95E+04	1.09E+06			
Ce-141	5.17E+05	3.35E+07			

*If Sr-90 analysis is performed, use P_i given in Ru-106 for unidentified components.

If Sr-90 and Ru-106 analyses are performed, use P_i given in I-131 for unidentified components.

If Sr-90, Ru-106 and I-131 analyses are performed, use P_i given in P-32 for unidentified components.

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM
SAMPLE STATIONS, SAMPLE TYPES, AND SAMPLE FREQUENCIES

<u>SAMPLE STATION</u>	<u>DESCRIPTION/LOCATION</u>	<u>SAMPLE TYPE</u>	<u>SAMPLE FREQUENCY</u>	<u>ANALYSIS TYPE</u>	<u>ANALYSIS FREQUENCY</u>
ON-SITE AIRBORNE AND DIRECT RADIATION (TLD) STATIONS					
ONS-1 (T-1)	1945 ft @ 18° from Plant Axis	Airborne Particulate	Weekly	Gross beta	Weekly
		Airborne Radiiodine	Weekly	Gamma Isotopic	Quart. Comp.
		TLD	Quarterly	I-131 Direct Radiation	Weekly Quarterly
ONS-2 (T-2)	2338 ft @ 48° from Plant Axis	Airborne Particulate	Weekly	Gross Beta	Weekly
		Airborne Radiiodine	Weekly	Gamma Isotopic	Quart. Comp.
		TLD	Quarterly	I-131 Direct Radiation	Weekly Quarterly
ONS-3 (T-3)	2407 ft @ 90° from Plant Axis	Airborne Particulate	Weekly	Gross Beta	Weekly
		Airborne Radiiodine	Weekly	Gamma Isotopic	Quart. Comp.
		TLD	Quarterly	I-131 Direct Radiation	Weekly Quarterly
ONS-4 (T-4)	1852 ft. @ 118° from Plant Axis	Airborne Particulate	Weekly	Gross Beta	Weekly
		Airborne Radiiodine	Weekly	Gamma Isotopic	Quart. Comp.
		TLD	Quarterly	I-131 Direct Radiation	Weekly Quarterly
ONS-5 (T-5)	1895 ft @ 189° from Plant Axis	Airborne Particulate	Weekly	Gross Beta	Weekly
		Airborne Radiiodine	Weekly	Gamma Isotopic	Quart. Comp.
		TLD	Quarterly	I-131 Direct Radiation	Weekly Quarterly
ONS-6 (T-6)	1917 ft @ 210° from Plant Axis	Airborne Particulate	Weekly	Gross Beta	Weekly
		Airborne Radiiodine	Weekly	Gamma Isotopic	Quart. Comp.
		TLD	Quarterly	I-131 Direct Radiation	Weekly Quarterly
T-7	2103 ft @ 36° from Plant Axis	TLD	Quarterly	Direct Radiation	Quarterly
T-8	2208 ft @ 82° from Plant Axis	TLD	Quarterly	Direct Radiation	Quarterly
T-9	1368 ft @ 149° from Plant Axis	TLD	Quarterly	Direct Radiation	Quarterly
T-10	1390 ft @ 127° from Plant Axis	TLD	Quarterly	Direct Radiation	Quarterly
T-11	1969 ft @ 11° from Plant Axis	TLD	Quarterly	Direct Radiation	Quarterly
T-12	2292 ft @ 63° from Plant Axis	TLD	Quarterly	Direct Radiation	Quarterly
CONTROL AIRBORNE AND DIRECT RADIATION (TLD) STATIONS					
NBF	15.6 miles SSW New Buffalo, MI	Airborne Particulate	Weekly	Gross Beta	Weekly
		Airborne Radiiodine	Weekly	Gamma Isotopic	Quart. Comp.
		TLD	Quarterly	I-131 Direct Radiation	Weekly Quarterly
SBN	26.2 miles SE South Bend, IN	Airborne Particulate	Weekly	Gross Beta	Weekly
		Airborne Radiiodine	Weekly	Gamma Isotopic	Quart. Comp.
		TLD	Quarterly	I-131 Direct Radiation	Weekly Quarterly
DOW	24.3 miles ENE Dowagiac, MI	Airborne Particulate	Weekly	Gross Beta	Weekly
		Airborne Radiiodine	Weekly	Gamma Isotopic	Quart. Comp.
		TLD	Quarterly	I-131 Direct Radiation	Weekly Quarterly
COL	18.9 miles NNE Coloma, MI	Airborne Particulate	Weekly	Gross Beta	Weekly
		Airborne Radiiodine	Weekly	Gamma Isotopic	Quart. Comp.
		TLD	Quarterly	I-131 Direct Radiation	Weekly Quarterly

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM

SAMPLE STATIONS, SAMPLE TYPES, AND SAMPLE FREQUENCIES

<u>SAMPLE STATION</u>	<u>DESCRIPTION/LOCATION</u>	<u>SAMPLE TYPE</u>	<u>SAMPLE FREQUENCY</u>	<u>ANALYSIS TYPE</u>	<u>ANALYSIS FREQUENCY</u>
OFFSITE AIRBORNE AND DIRECT RADIATION (TLD) STATIONS					
OFT-1	4.5 miles NE, Pole #B294-44	TLD	Quarterly	Direct Radiation	Quarterly
OFT-2	3.6 miles, NE, Stevensville Substation	TLD	Quarterly	Direct Radiation	Quarterly
OFT-3	5.1 miles NE, Pole #B296-13	TLD	Quarterly	Direct Radiation	Quarterly
OFT-4	4.1 miles, E, Pole #B350-72	TLD	Quarterly	Direct Radiation	Quarterly
OFT-5	4.2 miles ESE, Pole #B387-32	TLD	Quarterly	Direct Radiation	Quarterly
OFT-6	4.9 miles SE, Pole #B426-1	TLD	Quarterly	Direct Radiation	Quarterly
OFT-7	2.5 miles S, Bridgman Substation	TLD	Quarterly	Direct Radiation	Quarterly
OFT-8	4.0 miles S, Pole #B424-20	TLD	Quarterly	Direct Radiation	Quarterly
OFT-9	4.4 miles ESE, Pole #B369-214	TLD	Quarterly	Direct Radiation	Quarterly
OFT-10	3.8 miles S, Pole #B422-152	TLD	Quarterly	Direct Radiation	Quarterly
OFT-11	3.8 miles S, Pole #B424-12	TLD	Quarterly	Direct Radiation	Quarterly

GROUNDWATER (WELL WATER) SAMPLE STATIONS

W-1	1969 ft @ 11° from Plant Axis	Groundwater	Quarterly	Gamma Isotopic Tritium	Quarterly Quarterly
W-2	2292 ft @ 63° from Plant Axis	Groundwater	Quarterly	Gamma Isotopic Tritium	Quarterly Quarterly
W-3	3279 ft @ 107° from Plant Axis	Groundwater	Quarterly	Gamma Isotopic Tritium	Quarterly Quarterly
W-4	418 ft @ 301° from Plant Axis	Groundwater	Quarterly	Gamma Isotopic Tritium	Quarterly Quarterly
W-5	404 ft @ 290° from Plant Axis	Groundwater	Quarterly	Gamma Isotopic Tritium	Quarterly Quarterly
W-6	424 ft @ 273° from Plant Axis	Groundwater	Quarterly	Gamma Isotopic Tritium	Quarterly Quarterly
W-7	1895 ft @ 189° from Plant Axis	Groundwater	Quarterly	Gamma Isotopic Tritium	Quarterly Quarterly
W-8	1279 ft @ 53° from Plant Axis	Groundwater	Quarterly	Gamma Isotopic Tritium	Quarterly Quarterly
W-9	1447 ft @ 22° from Plant Axis	Groundwater	Quarterly	Gamma Isotopic Tritium	Quarterly Quarterly
W-10	4216 ft @ 129° from Plant Axis	Groundwater	Quarterly	Gamma Isotopic Tritium	Quarterly Quarterly
W-11	3206 ft @ 153° from Plant Axis	Groundwater	Quarterly	Gamma Isotopic Tritium	Quarterly Quarterly
W-12	2631 ft @ 162° from Plant Axis	Groundwater	Quarterly	Gamma Isotopic Tritium	Quarterly Quarterly
W-13	2152 ft @ 182° from Plant Axis	Groundwater	Quarterly	Gamma Isotopic Tritium	Quarterly Quarterly
W-14	1780 ft @ 164° from Plant Axis	Groundwater	Quarterly	Gamma Isotopic Tritium	Quarterly Quarterly

DRINKING WATER

STJ	St. Joseph Public Intake Sta. 9 mi.NE	Drinking water	Daily	Gross Beta Gamma Isotopic I-131 Tritium	14 day Comp. 14 day Comp. 14 day Comp. Quart. Comp.
LTW	Lake Twp. Public Intake Sta. 0.4 mi.S	Drinking water	Daily	Gross Beta Gamma Isotopic I-131 Tritium	14 day Comp. 14 day Comp. 14 day Comp. Quart. Comp.

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM
SAMPLE STATIONS, SAMPLE TYPES, AND SAMPLE FREQUENCIES

SAMPLE STATION	DESCRIPTION/LOCATION	SAMPLE TYPE	SAMPLE FREQUENCY	ANALYSIS TYPE	ANALYSIS FREQUENCY
SURFACE WATER					
SWL-1	Condenser Circulating Water Intake	Surface Water	Daily	Gamma Isotopic Tritium	Month. Comp. Quart. Comp.
SWL-2	Plant Site Boundary - South	Surface Water	Daily	Gamma Isotopic Tritium	Month. Comp. Quart. Comp.
SWL-3	500 ft. south of Plant Centerline Plant Site Boundary - North 500 ft. north of Plant Centerline	Surface Water	Daily	Gamma Isotopic Tritium	Month. Comp. Quart. Comp.
SEDIMENT					
SL-2	Plant Site Boundary - South 500 ft. south of Plant Centerline	Sediment	Semi-Ann.	Gamma Isotopic	Semi-Annual.
SL-3	Plant Site Boundary - North 500 ft. north of Plant Centerline	Sediment	Semi-Ann.	Gamma Isotopic	Semi-Annual.
GROUNDWATER (STEAM GENERATOR STORAGE FACILITY) SAMPLE STATIONS					
SG-1	0.8 mi @ 95° from Plant Axis	Groundwater	Quarterly	Gross Alpha Gross Beta Gamma Isotopic	Quarterly Quarterly Quarterly
SG-2	0.7 mi @ 92° from Plant Axis	Groundwater	Quarterly	Gross Alpha Gross Beta Gamma Isotopic	Quarterly Quarterly Quarterly
SG-4	0.7 mi @ 93° from Plant Axis	Groundwater	Quarterly	Gross Alpha Gross Beta Gamma Isotopic	Quarterly Quarterly Quarterly
SG-5	0.7 mi @ 92° from Plant Axis	Groundwater	Quarterly	Gross Alpha Gross Beta Gamma Isotopic	Quarterly Quarterly Quarterly
INGESTION - MILK Indicator Farms					
Shuler Farm	4.1 miles SE, Baroda	Milk	Once every 15 days	I-131 Gamma Isotopic	per sample per sample
Warmbein Farm	7.7 mi. S, Three Oaks	Milk	Once every 15 days	I-131 Gamma Isotopic	per sample per sample
Freehling Farm	7.0 mi. SE, Buchanan	Milk	Once every 15 days	I-131 Gamma Isotopic	per sample per sample
INGESTION - MILK Background Farms					
Livinghouse Farm	20 miles S, La Porte, IN	Milk	Once every 15 days	I-131 Gamma Isotopic	per sample per sample
Wyant Farm	20.7 miles E, Dowagiac	Milk	Once every 15 days	I-131 Gamma Isotopic	per sample per sample
INGESTION - FISH					
ONS-N	0.3 mile N, Lake Michigan	Fish	2/year.	Gamma Isotopic	per sample
ONS-S	0.4 mile S, Lake Michigan	Fish	2/year.	Gamma Isotopic	per sample
OFS-N	3.5 mile N, Lake Michigan	Fish	2/year.	Gamma Isotopic	per sample
OFS-S	5.0 mile S, Lake Michigan	Fish	2/year.	Gamma Isotopic	per sample

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM
SAMPLE STATIONS, SAMPLE TYPES, AND SAMPLE FREQUENCIES

<u>SAMPLE STATION</u>	<u>DESCRIPTION/LOCATION</u>	<u>SAMPLE TYPE</u>	<u>SAMPLE FREQUENCY</u>	<u>ANALYSIS TYPE</u>	<u>ANALYSIS FREQUENCY</u>
INGESTION - FOOD PRODUCTS					
On Site					
ONS-G	Nearest sample to Plant in the highest D/Q land sector.	Grapes	At time of harvest	Gamma Isotopic	At time of harvest
ONS-V		Broad leaf vegetation	At time of harvest	Gamma Isotopic	At time of harvest
Off Site					
OFS-G	In a land sector containing grapes, approximately 20 miles from the plant, and 180 degrees from the sector with the highest D/Q.	Grapes	At time of harvest	Gamma Isotopic	At time of harvest

Composite samples of Drinking and Surface water shall be collected at least daily. Particulate sample filters should be analyzed for gross beta activity 24 or more hours following filter removal. This will allow for radon and thoron daughter decay. If gross beta activity in air or water is greater than 10 times the yearly mean of control samples for any medium, gamma isotopic analysis should be performed on the individual samples.

If at least three indicator milk samples and one background milk sample cannot be obtained, then three indicator broad leaf samples will be collected at different locations, within eight miles of the plant, in the land sector with the highest D/Q (refers to the highest annual average D/Q). Also one background broad leaf sample will be collected approximately twenty miles from the plant in a land sector 180 degrees from the land sector with the highest D/Q.

Please note the following definitions: Weekly --> at least once per every seven (7) days
Monthly --> at least once per every thirty-one (31) days
Quarterly --> at least once per every ninety-two (92) days
Semi-annually --> at least once every one hundred eight-four (184) days

MAXIMUM VALUES FOR LOWER LIMITS OF DETECTION ^{A,B}

Radionuclides	Food Product pCi/kg, wet	Water pCi/l	Milk pCi/l	Air Filter pCi/m ³	Fish pCi/kg, wet	Sediment pCi/kg, dry
Gross Beta		4'		0.01		
H-3		2000				
Ba-140		60	60			
La-140		15	15			
Cs-134	60	15	15	0.06	130	150
Cs-137	60	18	18	0.06	150	180
Zr-95		30				
Nb-95		15				
Mn-54		15			130	
Fe-59		30			260	
Zn-65		30			260	
Co-58		15			130	
Co-60		15			130	
I-131	60	1	1	0.07		

* LLD for drinking water

NOTES

- A. The Lower Limit of Detection (LLD) is defined as the smallest concentration of radioactive material in sample that will be detected with 95% probability and 5% probability of falsely concluding that a blank observation represents a "real" signal.

For a particular measurement system (which may include radiochemical separation), the LLD is given by the equation:

$$LLD = \frac{4.66 \times S}{E \times V \times 2.22 \times Y \times e^{(-\lambda \times \Delta t)}}$$

where LLD is the a priori lower limit of detection as defined above (as ρCi per unit mass or volume).

S is the standard deviation of the background counting rate or of the counting of a blank sample as appropriate (as counts per minute). The value of S used in the calculation of the LLD for the detection system shall be based on the actual observed variance of the background counting rate of the blank samples (as appropriate) rather than on an unverified theoretically predicted variance. In calculating the LLD for a radionuclide determined by gamma-ray spectrometry, the background shall include the typical contributions of other radionuclides normally present in the samples (e. g., K-40 in milk samples). Analysis shall be performed in such a manner that the stated LLDs will be achieved under routine conditions. Occasionally background fluctuations, unavoidably small sample sizes, the presence of interfering radionuclides, or other uncontrollable circumstances may render these LLDs unachievable. In such cases, the contributing factors will be identified and described in the Annual Radiological Environmental Operating Report.

E is the counting efficiency of the detection equipment as counts per transformation (i.e. disintegration)

V is the sample size in appropriate mass or volume units

2.22 is the conversion factor from picocuries (ρCi) to transformations (disintegrations) per minute

Y is the fractional radiochemical yield as appropriate

λ is the radioactive decay constant for the particular radionuclide

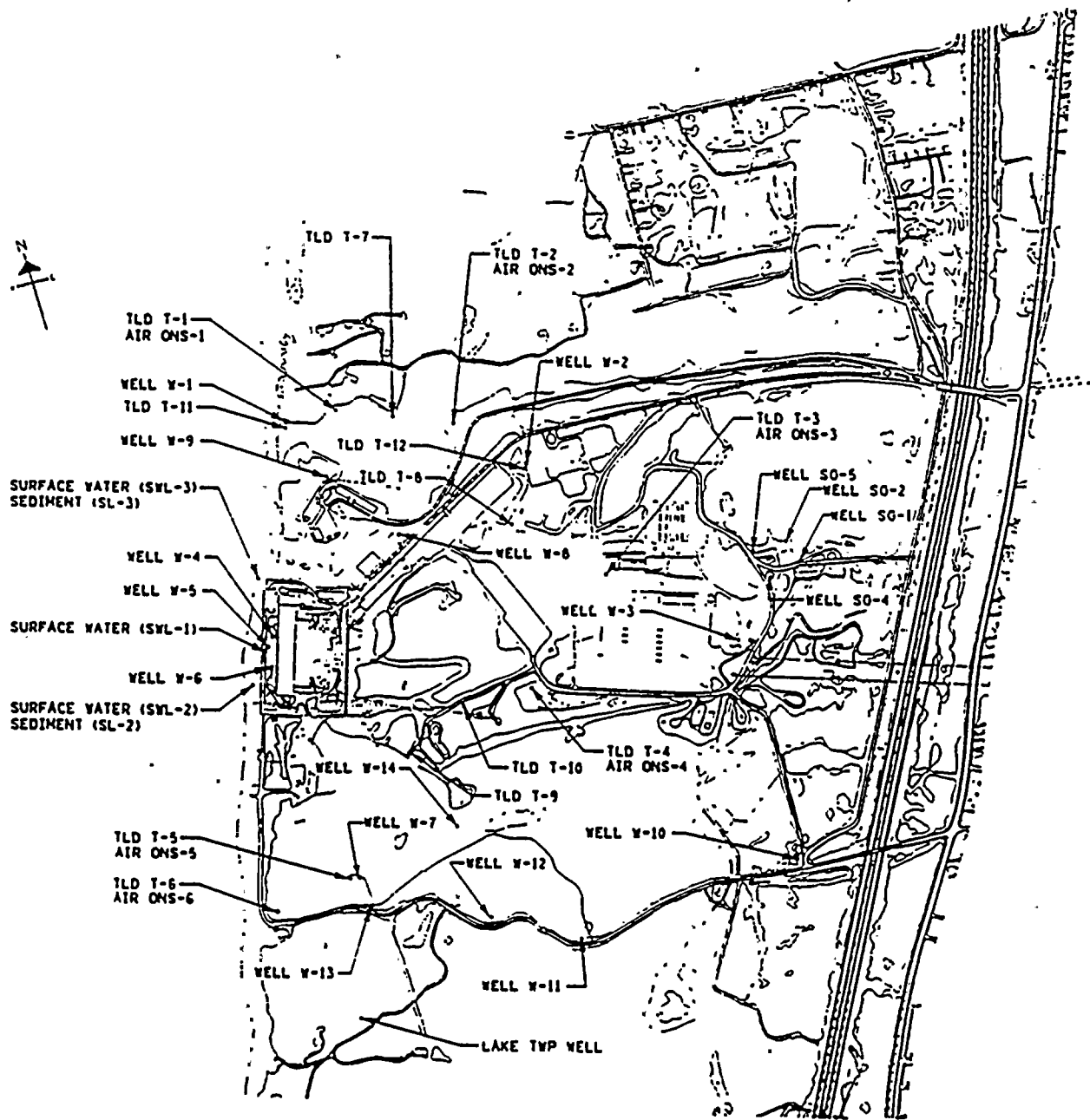
Δt is the elapsed time between sample collection (or end of sample collection period) and time of counting.

- B. Other peaks which are measurable and identifiable, together with the radionuclides listed in Attachment 3.20, shall be identified and reported.

REPORTING LEVELS FOR RADIOACTIVITY CONCENTRATIONS
IN ENVIRONMENTAL SAMPLES

Radionuclide	Food Product $\rho\text{Ci/kg, wet}$	Water $\rho\text{Ci/l}$	Milk $\rho\text{Ci/l}$	Air Filter $\rho\text{Ci/m}^3$	Fish $\rho\text{Ci/kg, wet}$
H-3		20000			
Ba-140		200	300		
La-140		200	300		
Cs-134	1000	30	60	10	1000
Cs-137	2000	50	70	20	2000
Zr-95		400			
Nb-95		400			
Mn-54		1000			30000
Fe-59		400			10000
Zn-65		300			20000
Co-58		1000			30000
Co-60		300			10000
I-131	100	2	3	0.90	

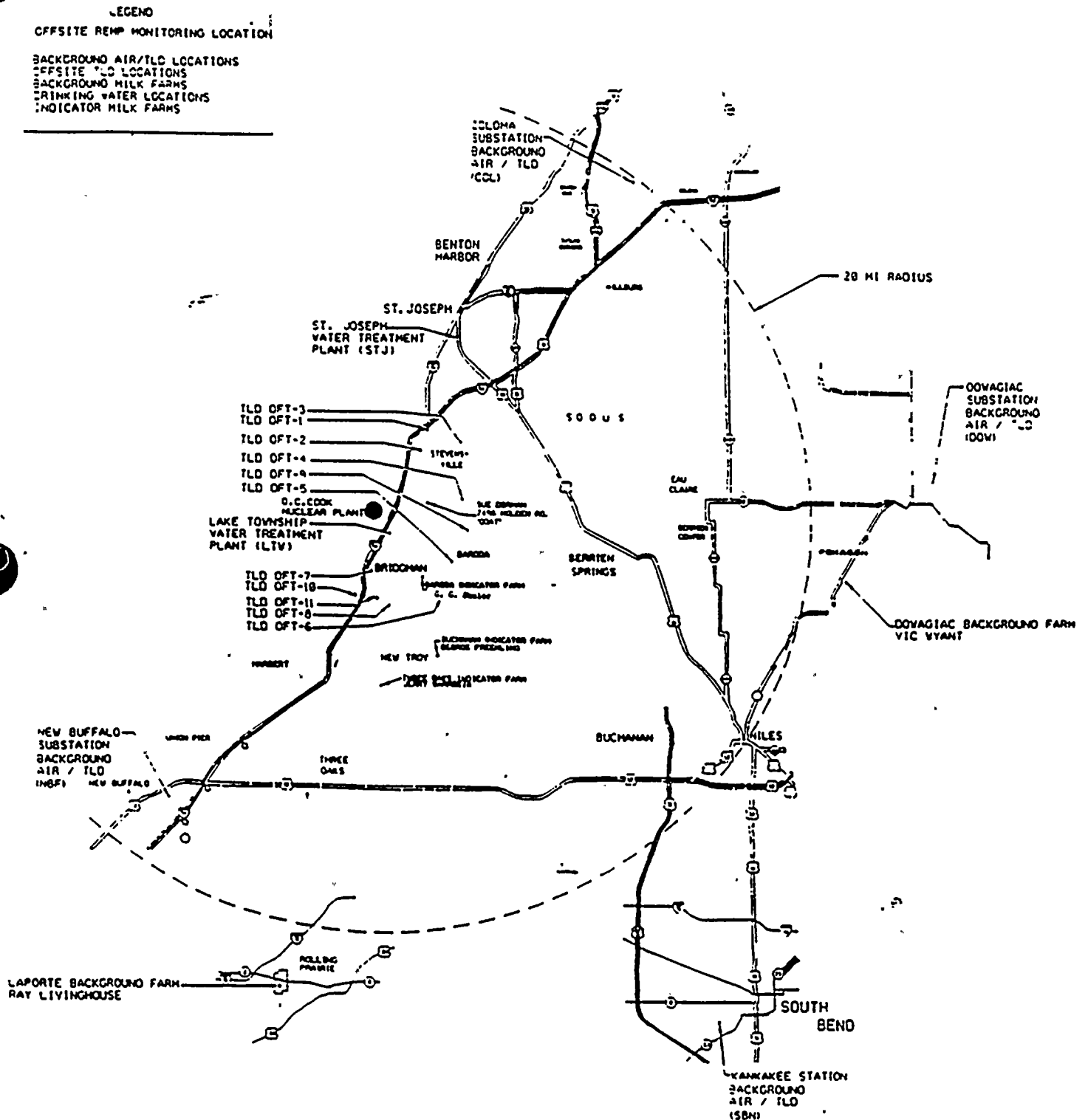
ON-SITE MONITORING LOCATIONS



LEGEND

OHS-1 - OHS-6: Air Sampling Stations
T-1 - T-12: TLD Sampling Stations
W-1 - W-14: REMP 1/S Groundwater Wells
SG-1, SG-2, SG-4, SG-5: REMP Non 1/S Groundwater Wells
SWL-1, 2, 3: Surface Water Sampling Stations
SL-2, 3: Sediment Sampling Stations

OFF-SITE MONITORING LOCATIONS.



SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO DISPOSAL OF SLIGHTLY CONTAMINATED SLUDGE

INDIANA MICHIGAN POWER COMPANY

DONALD C. COOK NUCLEAR PLANT, UNIT NOS. 1 AND 2

DOCKET NOS. 50-315 AND 50-316

1.0 INTRODUCTION

By letters dated October 9, 1991, October 23, 1991, September 3, 1993, and September 29, 1993, Indiana Michigan Power Company (I&M) requested approval pursuant to 10 CFR 20.2002 for the onsite disposal of licensed material not previously considered in the D. C. Cook Final Environmental Statement dated August 1973. Specifically, this request addresses actions taken in 1982 in which approximately 942 cubic meters of slightly contaminated sludge were removed from the turbine room sump absorption pond and pumped to the upper parking lot located within the exclusion area of the D. C. Cook Plant. The contaminated sludge was spread over an area of approximately 4.7 acres. The sludge contained a total radionuclide inventory of 8.89 millicuries (mCi) of Cesium-137, Cesium-136, Cesium-134, Cobalt-60 and Iodine-131.

In its submittal, the licensee addressed specific information requested in accordance with 10 CFR 20.2002(a), provided a detailed description of the licensed material, thoroughly analyzed and evaluated information pertinent to the impacts on the environment of the proposed disposal of licensed material, and committed to follow specific procedures to minimize the risk of unexpected exposures.

2.0 DESCRIPTION OF WASTE

The turbine room sump absorption pond is a collection place for water released from the plant's turbine room sump. The contamination was caused by a primary-to-secondary steam generator leak that entered the pond from the turbine building sump, a recognized release pathway. Sludge, consisting mainly of leaves and roots mixed with sand, built up in the pond. As a result, the licensee dredged the pond in 1982. The radioactive sludge removed by the dredging activities was pumped to a containment area located within the exclusion area. The total volume of 942 cubic meters of the radioactive sludge that was dredged from the bottom of the turbine room absorption pond was subsequently spread and made into a graveled road over the upper parking lot area of approximately 4.7 acres.

The principal radionuclides identified in the dredged material are listed below.

TABLE 1

NUCLIDE (half-life)	ACTIVITY (mCi) 1982	ACTIVITY (mCi) 1991
¹³⁶ Cs (13.2 d)	0.03	NA*
¹³⁴ Cs (2.1 y)	2.34	0.18
¹³⁷ Cs (30.2 y)	5.59	4.57
⁶⁰ Co (5.6 y)	0.90	0.27
¹³¹ I (8.04 d)	0.03	NA*
TOTAL:	8.89	5.02

*NA: not applicable due to decay

3.0 RADIOLOGICAL IMPACTS

The licensee in 1982 evaluated the following potential exposure pathways to members of the general public from the radionuclides in the sludge:

- (1) external exposure caused by groundshine from the disposal site;
- (2) internal exposure caused by inhalation of resuspended radionuclide; and
- (3) internal exposure from ingesting ground water.

The staff has reviewed the licensee's calculational methods and assumptions and finds that they are consistent with NUREG-1101, "Onsite Disposal of Radioactive Waste," Volumes 1 and 2, November 1986 and February 1987, respectively. The staff finds the assessment methodology acceptable. Table 2 lists the doses calculated by the licensee for the maximally exposed member of the public based on a total activity of 8.89 mCi disposed in that year.

TABLE 2

<u>Pathway</u>	<u>Whole Body Dose Received by Maximally Exposed Individual (mrem/year)</u>
Groundshine	0.94
Inhalation	0.94
Groundwater Ingestion	0.73

Total	2.61

On July 5, 1991, the licensee re-sampled the onsite disposal area to assure that no significant impacts and adverse effects had occurred. counting procedure based on the appropriate environmental low-level doses was used by the licensee; however, no activity was detected during the re-sampling¹. This is consistent with the original activity of the material and the decay time. The 1991 re-sampling process used by the licensee confirms that the environmental impact of the 1982 disposal was very small. The staff finds the licensee's methodology acceptable.

4.0 ENVIRONMENTAL FINDING AND CONCLUSION

The staff has evaluated the environmental impact of the proposal to leave in place approximately 942 cubic meters of slightly contaminated sludge underneath the upper parking lot on the D. C. Cook site.

In 1982, the licensee evaluated the potential exposure to members of the general public from the radionuclides in the sludge and calculated the potential dose to the maximally exposed member of the public, based on a total activity of 8.89 mCi disposed in that year, to be 2.61 mrem/yr. The staff has reviewed the licensee's calculational methods and assumptions and found that they are consistent with NUREG-1101, "Onsite Disposal of Radioactive Waste," Volumes 1 and 2, November 1986 and February 1987, respectively. The staff finds the assessment methodology acceptable. For comparison, the radiation from the naturally occurring radionuclides in soils and rocks plus cosmic radiation gives a person in Michigan a whole-body dose rate of about 88 mrem per year outdoors. Subsequent licensee sampling in 1991 identified no detectable activity. The staff evaluated the licensee's sampling and analysis methodology and finds it acceptable. The results of the 1991 re-sampling by the licensee confirms that the environmental impact of the 1982 disposal was very small.

Based on the above the staff finds that the potential environmental impacts of leaving the contaminated sludge in place are insignificant. With regard to the nonradiological impacts, the staff has determined that leaving the soil in place represents the least impact to the environment.

5.0 CONCLUSION

Based on the staff's review of the licensee's discussion, the staff finds the licensee's proposal to retain the material in its present location as documented in this Safety Evaluation acceptable. Also, this Safety Evaluation shall be permanently incorporated as an appendix to the licensee's Offsite Dose Calculation Manual (ODCM), and any future modifications shall be reported to NRC in accordance with the applicable ODCM change protocol.

¹ I&M letter from E. E. Fitzpatrick to the NRC Document Control Desk, September 29, 1993

Therefore, the licensee's proposal to consider the slightly contaminated sludge disposed by retention in place in the manner described in the D. C. Cook submittals date October 9, 1991, October 23, 1991, September 3, 1993, and September 29, 1993, is acceptable.

The guidelines used by the NRC staff for onsite disposal of licensed material and the staff's evaluation of how each guideline has been satisfied are given in Table 3.

Pursuant to 10 CFR 51.32, the Commission has determined that granting of this approval will have no significant impact on the environment (October 31, 1994, 59 FR 54477).

Principal Contributor: J. Minns

Date: November 10, 1994

TABLE 3

20.2002 GUIDELINE FOR ONSITE DISPOSAL ²	STAFF'S EVALUATION
1. The radioactive material should be disposed of in such a manner that it is unlikely that the material would be recycled.	1. Due to the nature of the disposed material, recycling to the general public is not considered likely.
2. Doses to the total body and any body organ of a maximally exposed individuals (a member of the general public or a non-occupationally exposed worker) from the probable pathways of exposure to the disposed material should be less than 1 mrem/year.	2. This guideline was addressed in Table 2. Although the 2.61 mrem/yr is greater than staff's guidelines, the staff finds it acceptable due to 9 yrs decay following analysis and the expected lack of activity detected in the 1991 survey.
3. Doses to the total body and any body organ of an inadvertent intruder from the probable pathways of exposure should be less than 5 mrem/year.	3. Because the material will be land-spread, the staff considers the maximally exposed individual scenario to also address the intruder scenario.
4. Doses to the total body and any body organ of an individual from assumed recycling of the disposed material at the time the disposal site is released from regulatory control from all likely pathways of exposure should be less than 1 mrem.	4. Even if recycling were to occur after release from regulatory control, the dose to a maximally exposed member of the public is not expected to exceed 1 mrem/year, based on exposure scenarios considered in this analysis.

² E. F. Branagan, Jr. and F. J. Congel, "Disposal of Contaminated Radioactive Wastes from Nuclear Power Plants," presented at the Health Physics Society's Mid-Year Symposium on Health Physics Consideration in Decontamination/Decommissioning, Knoxville, Tennessee, February 1986, (CONF-860203).