

Semi-Annual Radioactive Effluent Release Report

January 1, through June 30, 1991

Indiana Michigan Power Company
Bridgman, Michigan

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

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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 the first half of 1991 in accordance with the requirements of Cook Nuclear Plant Technical specifications Sections 6.9.1.8 and 6.9.1.9.

The table below summarizes the pertinent statistics concerning the Plant's operation during the period from January 1, 1991 to June 30, 1991. The data in this table and the descriptive information on plant operation are based upon the respective Unit's Monthly Operating Report for this reporting period.

<u>Parameter</u>	<u>Unit 1</u>	<u>Unit 2</u>
Gross Electrical Generation (MWhr)	3198860	4360520
Unit Service Factor (%)	73.9	98.7
Unit Capacity Factor - MDC* Net (%)	69.6	97.1

Unit 1 entered the reporting period in mode 5 following a refueling outage. Initial criticality for cycle 12 occurred 0826 on January 15, 1991. The reactor was again taken critical on January 23, 1991 following maintenance activities which forced an entry to mode 5. The turbine was synchronized to the system grid on January 26, 1991 at 2345 hours and at 32% rated thermal power. Main turbine overspeed testing was completed on January 27, 1991 after which the unit was on the system grid with the reactor at approximately 53% rated thermal power. Reactor power stabilized at 68% rated thermal power on February 1, 1991 for flux mapping and again at 90% rated thermal power for flux mapping and calorimetric testing. One hundred percent rated thermal power was attained on February 2, 1991 and maintained through April 5, 1991 when reactor power decreased to 70% rated thermal power to allow for operational testing. The unit remained at 100% rated thermal power from April 7, 1991 until a forced shut down to mode 5 for main transformer inspection occurred on April 19, 1991. The reactor achieved criticality again on May 3, 1991 and 100% rated thermal power on May 7, 1991 through May 12, 1991 when a main generator automatic voltage regulator malfunction caused a reactor trip. After completing the repairs, the unit commenced startup on May 15, 1991 with the main generator on line on May 16, 1991 and 100% rated thermal power achieved on May 17, 1991.

Reduced system load demand brought reactor power to 59% rated thermal power on June 1, 1991 to June 3, 1991 whereafter reactor power returned to 100% rated thermal power until June 7, 1991 where maintenance activities required a power reduction to 75% rated thermal power. The unit returned to 100% rated thermal power on June 9, 1991, but initiated a downpower to mode 2 on June 10, 1991 for main generator maintenance. The unit returned to service on the system grid the same day and 100% rated thermal power by June 13, 1991. D. C. Cook Nuclear Plant, Unit 1 exited this reporting period at 100% rated thermal power.

Unit 2 entered the reporting period at 100% rated thermal power. Reactor power decreased to 59% rated thermal power on February 16, 1991 to allow for cleaning of both main feed pump turbine condensers. Reactor power returned to 100% on February 21, 1991. During power ascension a negative reactivity effect of Xenon buildup elicited a decrease in reactor power to 70% rated thermal power on February 22, 1991. The excursion was rectified and unit reactor power reached 100% on February 23, 1991 and remained at this level to March 13, 1991. On this date an ice storm downed high voltage transmission lines resulting in a turbine/reactor trip. Subsequently, the unit was returned to full service by March 15, 1991. Reduced system demand required the reactor power to be decreased to 80% rated thermal power on May 25, 1991 through May 28, 1991, after which reactor remained at 100% rated thermal power. Reduced system demand again forced a reduction to 96% rated thermal power from June 2, 1991 to June 4, 1991. D. C. Cook Nuclear Plant, Unit 2 exited this reporting period at 100% rated thermal power.

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, Semi-Annual Radioactive Effluent Release Report. Appendix 1 of this report presents the information in accordance with section 6.9.1.9 of Appendix A to the Facility Operating Licenses, as specified in the Technical Specification and 10 CFR Part 50, Appendix I. The "Midas System" by Pickard, Lowe and Garrick, Inc., is a computer code that calculates dose for all isotopes that were released by the Plant.

All liquid and gaseous releases were well within Technical Specifications.

There were no abnormal liquid or gaseous releases during this reporting period.

Liquid Releases

During the first quarter of 1991, there were 50 liquid batch releases. There were 33 liquid batches released during the second quarter.

There were no abnormal liquid releases during the first half of 1991. For the purpose of dose assessment, the batch releases were treated as continuous releases. The estimated dose (in millirem) to maximally exposed individuals via the liquid release pathway are given in appendices 1.2 and 1.3 of this report.

Gaseous Releases

During the first quarter of 1991, there were 65 gaseous batch releases. There were 31 gaseous batches released during the second quarter.

The containment pressure reliefs (CPR) continue to be listed as batch releases in accordance with NRC inspections 50-315/89016 (DRSS) and 50-315/89017 (DRSS). There were 91 CPR's during the reporting period compared to 138 CPR's during the second half of 1991.

There were 4 waste decay tank releases during this reporting period. Calculating the dose consequences for continuous batch gaseous releases during the first half of 1991, the meteorological data measured at the time of these releases was used. The estimated dose (in millirem) to maximally exposed individuals via the gaseous release pathway are given in appendices 1.2 and 1.3 of this report.

Solid Waste Disposition

There were 0 shipments of radioactive waste made during this reporting period.

III. METEOROLOGICAL

Appendices 2.1 and 2.2 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 and second quarter 1991. Hourly meteorological data are filed at American Electric Power Service corporation and at the Donald C. Cook Nuclear Plant for review and/or inspection upon request.

IV. Process Control Program (PCP) Changes

The Radioactive Waste Process control Manual 12 PMP 3150 PCP.001 was not revised during this reporting period.

V. Offsite Dose Calculation Manual (ODCM)

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 and can be found in Appendix 4.0 of this report.

VI. TOTAL DOSE

The summary of maximum individual doses (Attachment 12 THP 3150 RMC.301 x 11) has been revised from the 1st Quarter 1988 to date in response to Problem Report 90-0775, boundary distance for the north sector was in error in the Midas Dose Assessment Program.

Technical Specification 3.11.4 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 effluent during the 1988, 1989, and 1990 were well within Technical specification 3.11.4 limits. Measurements using thermoluminescent dosimeters at ten (10) offsite background stations indicate that the dose due to direct radiation is negligible.

VII. CONCLUSIONS

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

APPENDIX 1.1

Radioactive Release Data
January 1 - June 30, 1991

EFFLUENT AND WASTE DISPOSAL SEMI-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 radiiodines 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 II.

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 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} μ Ci/ml total activity.

3. Average Energy

The average energy ($\bar{E}$) of the radionuclide mixture in releases of fission and activation gases is not applicable per Regulatory Guide 1.21 Appendix B Section A.3.

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:

50 releases in the 1st quarter, 1991
33 releases in the 2nd quarter, 1991

2. Total time period for batch releases:

12990 minutes

3. Maximum time for a batch release:

240 minutes

4. Average time period for batch release:

157 minutes

5. Minimum time period for a batch release:

1.0 minutes

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

1.09E+6 gpm circulating water

B. Gaseous

1. Number of batch releases:

65 in 1st quarter, 1991
31 in 2nd quarter, 1991

2. Total time period of batch releases:
2042 minutes
3. Maximum time period for a batch release:
45 minutes
4. Average time period for batch releases:
21 minutes
5. Minimum time period for a batch release:
7 minutes

6. Abnormal Releases

A. Liquid

1. Number of Releases:

1st	2nd
<u>Quarter</u>	<u>Quarter</u>
0	0
2. Total activity released:

1st	2nd
<u>Quarter</u>	<u>Quarter</u>
0	0

B. Gaseous

1. Number of Releases:

1st	2nd
<u>Quarter</u>	<u>Quarter</u>
0	0
2. Total activity released:

1st	2nd
<u>Quarter</u>	<u>Quarter</u>
0	0

EFFLUENT AND WASTE DISPOSAL SEMI-ANNUAL REPORT 1st Half 1991

GASEOUS EFFLUENTS - GROUND-LEVEL RELEASES

Nuclides Released	Unit	Continuous Mode		Batch Mode	
		Quarter 1st	Quarter 2nd	Quarter 1st	Quarter 2nd
1. FISSION GASES					
Krypton-85	Cl		4.52 E-3	1.33 E-1	1.73 E-1
Krypton-85m	Cl	1.22 E-3	7.44 E-4		
Krypton-87	Cl	1.18 E-3	6.13 E-4		
Krypton-88	Cl	1.66 E-3	1.52 E-3		
Xenon-135m	Cl	1.27 E-3	4.39 E-4		
Xenon-133	Cl	4.24 E-1	2.73 E+0	3.14 E-1	5.87 E+0
Xenon-131m	Cl		5.51 E-4	2.05 E-3	5.31 E-2
Argon-41	Cl	1.86 E-2	5.57 E-3	3.14 E-1	2.78 E-1
Xenon-133m	Cl	2.04 E-5			3.02 E-2
Xenon-138	Cl	1.19 E-4	2.07 E-6		
Xenon-135	Cl	2.90 E-1	2.13 E+0	1.19 E-2	5.21 E-3
Total for Period	Cl	7.38 E-1	4.87 E+0	7.75 E-1	6.41 E+0
2. IODINES					
Iodine-131	Cl	7.36 E-7	4.06 E-4		2.61 E-5
Iodine-133	Cl	6.62 E-5	3.04 E-4		3.07 E-8
Iodine-135	Cl		6.11 E-5		
Iodine-132	Cl	1.52 E-6	3.75 E-5		
Total for Period	Cl	6.85 E-5	8.09 E-4		2.61 E-5
Barium-139	Cl	1.69 E-7			
3. PARTICULATES					
Cerium-139	Cl	7.97 E-9			
Strontium-89	Cl				
Strontium-90	Cl				
Cesium-134	Cl	5.22 E-5	1.04 E-4		
Cesium-137	Cl	2.66 E-4	2.10 E-4	5.21 E-8	2.44 E-6
Cobalt-58	Cl	3.29 E-5	1.21 E-5		
Cobalt-60	Cl	7.89 E-5	4.14 E-5	1.55 E-7	3.00 E-6
Yttrium-88	Cl	4.28 E-6			
Antimony-124	Cl	1.19 E-6			
Cesium-136	Cl		1.34 E-5		
Niobium-95	Cl	7.73 E-7			
Cesium-138	Cl	4.72 E-6	8.99 E-6		
Cadmium-109	Cl	2.02 E-6	1.32 E-7		
Sodium-24	Cl	5.71 E-4	7.82 E-4		
Rubidium-88	Cl	1.29 E-5			
Total for Period	Cl	1.02 E-3	1.17 E-3	2.07 E-7	5.44 E-6

EFFLUENT AND WASTE DISPOSAL SEMI-ANNUAL REPORT 1st Half 1991
GASEOUS EFFLUENTS - SUMMATION OF ALL RELEASES

	Units	1st Quarter	2nd Quarter	Est. Total Error, %
A. FISSION AND ACTIVATION GASES				
1. Total release.	Ci	1.51 E+0	1.13 E+0	1.32 E+1
2. Average release rate for period.	μCi/sec	1.94 E-1	1.44 E-1	
3. Percent of applicable limit. (T/S 3.11.2.2 limit)	% Y B	9.60 E-3 3.29 E-3	4.26 E-2 2.08 E-2	
B. IODINES				
1. Total Iodine-131.	Ci	7.36 E-7	4.32 E-4	4.87 E+0
2. Average release rate for period.	μCi/sec	9.47 E-8	5.49 E-5	
3. Percent of applicable limit. (T/S 3.11.2.3 limit)	%	1.33 E-1	2.13 E-1	
C. PARTICULATES				
1. Particulates with half- lives > 8 days.	Ci	4.34 E-4	3.86 E-4	2.03 E+1
2. Average release rate for period.	μCi/sec	5.58 E-5	4.91 E-5	
3. *Percent of applicable limit.	%	1.33 E-1	2.13 E-1	
4. Gross alpha radio- activity. *(T/S 3.11.2.3 limit)	Ci	<4.45 E-7	<6.72 E-7	
D. TRITIUM				
1. Total release.	Ci	1.26 E+0	7.24 E-1	3.65 E-1
2. Average release rate for period.	μCi/sec	1.62 E-1	9.21 E-2	
3. Percent of applicable limit. (10 CFR 20 limit)	%	1.14 E+0	6.05E-1	

EFFLUENT AND WASTE DISPOSAL SEMI-ANNUAL REPORT 1st Half 1991

LIQUID EFFLUENTS

Nuclides Released		BATCH MODE		CONTINUOUS MODE	
		Quarter 1st	Quarter 2nd	Quarter 1st	Quarter 2nd
Strontium-89	Cl				
Strontium-90	Cl				
Cesium-134	Cl	2.38 E-3	1.34 E-3	2.69 E-4	8.98 E-4
Cesium-137	Cl	4.53 E-3	2.48 E-3	3.17 E-3	1.68 E-3
Iodine-131	Cl		7.36 E-5	3.93 E-6	1.01 E-3
Iron-55	Cl	5.80 E-2	3.68 E-3		
Cobalt-58	Cl	1.34 E-1	3.96 E-2	4.87 E-4	3.56 E-5
Cobalt-60	Cl	1.38 E-2	1.24 E-2	1.29 E-3	4.65 E-4
Iron-59	Cl	1.81 E-3	1.48 E-3		
Manganese-54	Cl	1.81 E-2	9.03 E-3		
Chromium-51	Cl	9.53 E-3	8.70 E-3		
Zinc-65	Cl	9.16 E-5	1.02 E-4		
Tin-113	Cl	2.38 E-4	2.54 E-4		
Cadmium-109	Cl			1.17 E-3	
Zirconium-Niobium-95	Cl	3.47 E-3	1.99 E-3	1.99 E-6	
Barium-Lanthanum-140	Cl	1.57 E-5	2.60 E-4		
Antimony-124	Cl	9.70 E-3	3.08 E-4	3.05 E-6	
Antimony-125	Cl	4.24 E-2	2.85 E-3		
Tellurium-132	Cl	2.88 E-5			
Cesium-136	Cl		2.69 E-4		4.42 E-5
Sodium-24	Cl	3.75 E-4	1.05 E-4	2.91 E-3	1.32 E-2
Iodine-133	Cl			2.80 E-4	9.35 E-4
Cobalt-57	Cl	5.97 E-4	2.24 E-4		
Zirconium-97	Cl				
Silver-110M	Cl	6.55 E-2	5.15 E-2		
Iodine-132	Cl			1.02 E-5	1.37 E-4
Iodine-135	Cl			1.57 E-4	
Xenon-133	Cl	5.13 E-4	4.80 E-2	1.63 E-5	5.74 E-5
Xenon-131M	Cl		6.42 E-4		
Xenon-133M	Cl		4.49 E-4		
Xenon-135	Cl	1.61 E-6	1.71 E-4	5.33 E-6	1.12 E-5
Xenon-138	Cl				5.31 E-6
Krypton-85	Cl	1.92 E-4	8.97 E-4		
Xenon-135m	Cl				6.91 E-5

EFFLUENT AND WASTE DISPOSAL SEMI-ANNUAL REPORT 1st Half 1991

LIQUID EFFLUENTS - SUMMATION OF ALL RELEASES

	UNIT	BATCH		CONTINUOUS		Est. Tot Error.
		Quarter 1st	Quarter 2nd	Quarter 1st	Quarter 2nd	
A. FISSION AND ACTIVATION PRODUCTS						
1. Total Release (Not including Tritium, Alpha, Gases)	Ci	3 67 E-1	1.37 E-1	8.43 E-3	1.86 E-2	4.25 E+
2. Average diluted concen- tration during period.	µCi/ml	1.15 E-8	5.85 E-9	1.02 E-11	2.38 E-11	
3. Percent of applicable limit.	%	1.86 E-2	1.42 E-2	7.58 E-5	6.39 E-6	
B. TRITIUM						
1. Total Release	Ci	1.44 E+2	3.37 E+2	1.91 E-1	4.07 E-1	2.06 E-
2. Average diluted concen- tration during period.	µCi/ml	4.53 E-6	1.44 E-5	2.30 E-10	5.22 E-10	
3. Percent of applicable limit.	%	1.51 E-1	4.80 E-1	7.68 E-6	1.74 E-5	
C. DISSOLVED AND ENTRAINED GASES						
1. Total Release	Ci	8.07 E-4	5.02 E-2	2.16 E-5	1.43 E-4	3.47 E
2. Average diluted concen- tration during period.	µCi/ml	2.54 E-11	2.15 E-9	2.61 E-14	1.83 E-13	
3. Percent of applicable limit.	%	1.27 E-5	1.08 E-3	1.31 E-8	9.17 E-8	

EFFLUENT AND WASTE DISPOSAL SEMI-ANNUAL REPORT

Revised
2nd Half 1990

LIQUID EFFLUENTS - SUMMATION OF ALL RELEASES

<u>UNIT</u>		<u>BATCH</u>		<u>CONTINUOUS</u>		<u>Est. total</u>
		Quarter 3rd	Quarter 4th	Quarter 3rd	Quarter 4th	Error, %
A. FISSION AND ACTIVATION PRODUCTS						
1. Total Release (Not including Tritium, Alpha, Gases)	Ci	1.46E-1	3.75E-1	7.81E-1	1.23E-1	1.54%
2. Average diluted concen- tration during period.	µCi/ml	6.58E-9	1.03E-8	1.88E-9*	2.70E-10*	
3. Percent of applicable limit.	%	5.48E-2	2.55E-2	1.35E-1	2.12E-4	
B. TRITIUM						
1. Total Release	Ci	4.82E+2	3.20E+2	1.19E+0	4.04E-1	1.92E-1
2. Average diluted concen- tration during period.	µCi/ml	2.17E-5	8.79E-6	2.86E-9	8.88E-10	
3. Percent of applicable limit.	%	7.23E-1	2.93E-1	9.53E-5	2.96E-5	
C. DISSOLVED AND ENTRAINED GASES						
1. Total Release	Ci	2.73E-1	7.09E-3	2.91E-5	8.93E-6	2.19%
2. Average diluted concen- tration during period.	µCi/ml	1.23E-8	1.95E-10	7.00E-14	1.96E-14	
3. Percent of applicable limit.	%	6.15E-3	9.75E-5	3.50E-8	9.80E-9	

*Corrected math errors.

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LIQUID EFFLUENTS - SUMMATION OF ALL RELEASES

	<u>UNIT</u>	<u>BATCH</u>		<u>CONTINUOUS</u>		Est. Total Error, %
		Quarter 1st	Quarter 2nd	Quarter 1st	Quarter 2nd	
D. GROSS ALPHA RADIOACTIVITY						
1. Total Release	Ci	<8.30 E-5	<5.57 E-5			
E. VOLUME OF WASTE RELEASED	Liters	2.73 E+6	1.94 E+6	7.54 E+8	2.87 E+8	2.00 E+0
F. VOLUME OF DILUTION WATER USED DURING PERIOD	Liters	3.18 E+10	2.34 E+10	8.29 E+11	7.80 E+11	3.48 E+0

EFFLUENT AND WASTE DISPOSAL SEMI-ANNUAL REPORT 1ST Half 1991
SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

A. Solid Waste Shipped Offsite for Burial or Disposal

1. Type of Waste	Unit	6 month Period	Est. Total Error, %
a. Spent resins, filter	m ³	0	
sludges, evaporator bottoms, etc.	Ci	0	
b. Dry compressible waste, contaminated equipment, etc.	m ³	0	
	Ci	0	
c. Irradiated components, control rods, etc.	m ³		
	Ci		
d. Other	m ³		
	Ci		

2. Estimate of Major Nuclide Composition

a.	CS-137	%
	CS-134	%
	CO-58	%
	CO-60	%
b.	CO-60	%
	CO-58	%
	CS-137	%
	CS-134	%

3. Solid Waste Disposition

<u>No. of Shipments</u>	<u>Mode of Transportation</u>	<u>Destination</u>
0		Barnwell, SC
0		Richland, WA

4. Type of Containers Used for Shipment

There were no waste shipments made to a burial site during the reporting period.

5. Solidification Agent

There were no solidifications performed during the reporting period.

RELEASE NUMBER	START DATE STOP DATE	START TIME STOP TIME	Xe131m	Xe133	Xe135	Ar41	H3	Kr85	Co60	Cs137	I131	I133	Xe133m
G-91-01*	10 Mar 91 10 Mar 91	1400 1436		2.95E-5			4.37E-5	1.33E-1	1.55E-7				
G-91-02	21 Apr 91 21 Apr 91	0236 0314		2.25E-1	1.36E-3	5.19E-2	4.28E-2		2.94E-6	2.39E-6			
G-91-03*	24 Apr 91 24 Apr 91	0815 0857		1.11E-3	7.23E-6		5.02E-5	9.48E-2			3.87E-8	1.84E-8	
G-91-04*	27 Apr 91 27 Apr 91	1409 1445	3.66E-2	4.60E+0			4.05E-2			4.79E-8	5.80E-7	1.23E-8	2.87E-2
G-91-05*	5 May 91 5 May 91	0232 0317	1.65E-2	9.56E-1			3.50E-5	7.85E-2	6.25E-8		2.55E-5		1.65E-2
*These are gas decay tank releases.													
I-CPR-91-01	4 Jan 91 4 Jan 91	1403 1417	4.61E-5	4.59E-3	1.89E-4	2.38E-3							
I-CPR-91-02	4 Jan 91 5 Jan 91	2358 0021	1.40E-4	1.40E-2	5.74E-4	7.23E-3							
I-CPR-91-03	5 Jan 91 5 Jan 91	1544 1605	8.06E-5	8.03E-3	3.30E-4	4.16E-3							
I-CPR-91-04	7 Jan 91 7 Jan 91	2026 2050	9.41E-5	9.37E-3	3.85E-4	4.86E-3							
I-CPR-91-05	8 Jan 91 8 Jan 91	1855 1912	8.64E-5	8.60E-3	3.54E-4	4.46E-3							
I-CPR-91-06	10 Jan 91 10 Jan 91	1907 1933	1.61E-4	1.60E-2	6.58E-4	8.29E-3							
I-CPR-91-07	11 Jan 91 11 Jan 91	1242 1259	3.74E-5	3.72E-3	1.53E-4	1.93E-3							
I-CPR-91-08	13 Jan 91 13 Jan 91	2000 2025	1.64E-4	1.64E-2	6.73E-4	8.49E-3							
I-CPR-91-09	18 Jan 91 18 Jan 91	1724 1739	6.91E-5	6.88E-3	2.83E-4	3.57E-3							
I-CPR-91-10	19 Jan 91 19 Jan 91	0627 0646	7.23E-5	7.20E-3	2.96E-4	3.73E-3							
I-CPR-91-11	23 Jan 91 23 Jan 91	0145 0214	1.61E-4	1.61E-2	6.60E-4	8.32E-3							
I-CPR-91-12	27 Jan 91 27 Jan 91	0407 0430	1.45E-4	1.44E-2	5.92E-4	7.46E-3							
I-CPR-91-13	12 Feb 91 12 Feb 91	1220 1240	8.00E-5	7.96E-3	3.28E-4	4.13E-3							
I-CPR-91-14	13 Feb 91 13 Feb 91	1258 1320	8.06E-5	8.03E-3	3.30E-4	4.16E-3							
I-CPR-91-15	18 Feb 91 18 Feb 91	1430 1450	9.41E-5	9.37E-3	3.85E-4	4.86E-3							
I-CPR-91-16	1 Mar 91 1 Mar 91	1949 2014	1.22E-4	1.22E-2	5.00E-4	6.31E-3							
I-CPR-91-17	6 Mar 91 6 Mar 91	0129 0153	8.90E-5	8.86E-3	3.64E-4	4.59E-3							
I-CPR-91-18	17 Mar 91 17 Mar 91	1555 1616	9.54E-5	9.49E-3	3.90E-4	4.92E-3							
I-CPR-91-19	20 Mar 91 20 Mar 91	1847 1905	4.50E-5	4.48E-3	1.84E-4	2.32E-3							
I-CPR-91-20	23 Mar 91 23 Mar 91	0109 0129	8.51E-5	8.47E-3	3.48E-4	4.39E-3							
I-CPR-91-21	27 Mar 91 27 Mar 91	0224 0251	1.13E-4	1.12E-2	4.61E-4	5.81E-3							
I-CPR-91-22	14 Apr 91 14 Apr 91	0930 1000		1.14E-2	3.17E-4	1.56E-2							

RELEASE NUMBER	START DATE STOP DATE	START TIME STOP TIME	Xe131m	Xe133	Xe135	Ar41	H3	Kr85	Co60	Cs137	I131	I133	Xe133m
1-CPR-91-23	27 Apr 91 27 Apr 91	0347 0408		5.46E-3	1.52E-4	7.49E-3							
1-CPR-91-24	29 Apr 91 29 Apr 91	0508 0525		3.85E-3	1.07E-4	5.29E-3							
1-CPR-91-25	5 May 91 5 May 91	1101 1120		8.79E-3	2.45E-4	1.21E-2							
1-CPR-91-26	13 May 91 13 May 91	1847 1912		1.15E-2	3.20E-4	1.58E-2							
1-CPR-91-27	14 Jun 91 14 Jun 91	2052 2116		8.83E-3	2.46E-4	1.21E-2							
1-CPR-91-28	20 Jun 91 20 Jun 91	1650 1712		1.04E-2	2.89E-4	1.42E-2							
1-CPR-91-29	26 Jun 91 26 Jun 91	0650 0713		5.96E-3	1.66E-4	8.18E-3							
1-CPR-91-30	30 Jun 91 30 Jun 91	1000 1035		1.93E-3	5.37E-5	2.65E-3							
2-CPR-90-110	1 Jan 91 1 Jan 91	1232 1253		1.63E-4	3.21E-5	1.90E-3							
2-CPR-91-01	4 Jan 91 4 Jan 91	0035 0054		4.39E-4	8.64E-5	5.12E-3							
2-CPR-91-02	5 Jan 91 5 Jan 91	0052 0111		2.72E-4	5.36E-5	3.17E-3							
2-CPR-91-03	8 Jan 91 8 Jan 91	0205 0224		1.17E-4	2.30E-5	1.36E-3							
2-CPR-91-04	9 Jan 91 9 Jan 91	0110 0132		1.62E-5	3.18E-6	1.89E-4							
2-CPR-91-05	10 Jan 91 10 Jan 91	2114 2135		3.61E-4	7.11E-5	4.22E-3							
2-CPR-91-06	11 Jan 91 11 Jan 91	0947 1009		1.35E-4	2.66E-5	1.58E-3							
2-CPR-91-07	13 Jan 91 13 Jan 91	1614 1646		5.05E-4	9.95E-5	5.90E-3							
2-CPR-91-08	15 Jan 91 15 Jan 91	2318 2337		3.46E-4	6.81E-5	4.04E-3							
2-CPR-91-09	19 Jan 91 19 Jan 91	0350 0408		2.87E-4	5.65E-5	3.35E-3							
2-CPR-91-10	19 Jan 91 19 Jan 91	2143 2200		3.71E-4	7.31E-5	4.34E-3							
2-CPR-91-11	Was Skipped												
2-CPR-91-12	22 Jan 91 22 Jan 91	1650 1716		1.12E-4	2.20E-5	1.31E-3							
2-CPR-91-13	25 Jan 91 25 Jan 91	2256 2317		2.69E-5	5.29E-6	3.14E-4							
2-CPR-91-14	26 Jan 91 26 Jan 91	1815 1835		3.55E-4	6.99E-5	4.14E-3							
2-CPR-91-15	27 Jan 91 27 Jan 91	1228 1248		2.29E-4	2.54E-5	1.51E-3							
2-CPR-91-16	30 Jan 91 30 Jan 91	1047 1103		2.91E-4	5.72E-5	3.39E-3							
2-CPR-91-17	1 Feb 91 1 Feb 91	2242 2305		1.23E-4	2.42E-5	1.43E-3							

RELEASE NUMBER	START DATE STOP DATE	START TIME STOP TIME	Xe131m	Xe133	Xe135	Kr41	H3	Kr85	Co60	Cs137	I131	I133	Xe133m
2-CPR-91-19	5 Feb 91 5 Feb 91	1706 1722		6.23E-5	1.23E-5	7.27E-4							
2-CPR-91-20	8 Feb 91 8 Feb 91	0415 0428		6.47E-3	1.27E-3	7.56E-2							
2-CPR-91-21	9 Feb 91 9 Feb 91	0603 0622		1.03E-4	2.02E-5	1.20E-3							
2-CPR-91-22	12 Feb 91 12 Feb 91	0603 0623		2.53E-5	4.99E-6	2.96E-4							
2-CPR-91-23	12 Feb 91 12 Feb 91	1547 1607		4.56E-5	8.98E-6	5.32E-4							
2-CPR-91-24	13 Feb 91 13 Feb 91	0819 0839		2.51E-5	4.94E-6	2.93E-4							
2-CPR-91-25	14 Feb 91 14 Feb 91	0540 0558		5.84E-4	1.15E-4	6.81E-3							
2-CPR-91-26	18 Feb 91 18 Feb 91	1205 1226		2.42E-4	4.76E-5	2.82E-3							
2-CPR-91-27	21 Feb 91 21 Feb 91	0144 0612		6.35E-4	1.25E-4	7.41E-3							
2-CPR-91-28	23 Feb 91 23 Feb 91	1644 1704		5.28E-4	1.04E-4	6.16E-3							
2-CPR-91-29	26 Feb 91 26 Feb 91	0410 0425		2.28E-4	4.50E-5	2.67E-3							
2-CPR-91-30	27 Feb 91 27 Feb 91	0053 0113		2.01E-4	3.96E-5	2.35E-2							
2-CPR-91-31	28 Feb 91 28 Feb 91	1750 1804		2.35E-4	4.62E-5	2.74E-3							
2-CPR-91-32	1 Mar 91 1 Mar 91	0857 0905		1.82E-4	3.58E-5	2.12E-3							
2-CPR-91-33	1 Mar 91 1 Mar 91	1814 1829		2.35E-4	4.62E-5	2.74E-3							
2-CPR-91-34	5 Mar 91 5 Mar 91	1528 1543		1.20E-4	2.37E-5	1.41E-3							
2-CPR-91-35	6 Mar 91 6 Mar 91	0727 0749		5.39E-4	1.06E-4	6.29E-3							
2-CPR-91-36	12 Mar 91 12 Mar 91	1210 1240		5.15E-5	1.01E-5	6.01E-4							
2-CPR-91-37	17 Mar 91 17 Mar 91	0555 0617		4.03E-4	7.94E-5	4.71E-3							
2-CPR-91-38	17 Mar 91 17 Mar 91	1810 1835		4.28E-4	8.43E-5	5.00E-3							
2-CPR-91-39	21 Mar 91 21 Mar 91	1545 1610		2.53E-4	4.99E-5	2.96E-3							
2-CPR-91-40	22 Mar 91 22 Mar 91	2230 2255		7.47E-4	1.47E-4	8.73E-3							
2-CPR-91-41	26 Mar 91 26 Mar 91	0855 0914		3.32E-4	6.53E-5	3.87E-3							
2-CPR-91-42	26 Mar 91 26 Mar 91	2222 2240		3.61E-4	7.10E-5	4.21E-3							
2-CPR-91-43	27 Mar 91 27 Mar 91	1444 1507		5.42E-4	1.07E-4	6.32E-3							
2-CPR-91-44	3 Apr 91 3 Apr 91	2334 2357		4.27E-4	8.62E-5	5.92E-3							
2-CPR-91-45	7 Apr 91 7 Apr 91	1635 1654		1.33E-4	2.68E-5	1.84E-3							
2-CPR-91-46	13 Apr 91 13 Apr 91	0349 0408		6.00E-5	1.21E-5	8.32E-4							

[illegible]

[illegible]

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

APPENDIX 1.2

Summary of Maximum Individual Doses
First Quarter, 1991

12 THP 3150 RMC.301
Attachment XII

SUMMARY OF MAXIMUM INDIVIDUAL DOSES

REVISED
1st Qtr 1988

EFFLUENT	APPLICABLE ORGAN	ESTIMATED DOSE (MREM)	AGE GROUP	LOCATION DIST DIR (M) (Toward)	% OF APPLICABLE LIMIT	QUARTERLY LIMIT (MR)
Liquid	Total Body	1.96 E-2	Adult	Receptor 1	1.31 E+0	1.5 E+0
Liquid	Liver	2.45 E-2	Child	Receptor 1	4.90 E-1	5.0 E+0
Noble Gas	Air Dose (Gamma-mrad)	7.12 E-3		617 NNE	1.42 E-1	5.0 E+0
Noble Gas	Air Dose (Beta-mrad)	1.54 E-2		629 SE	1.54 E-1	1.0 E+1
Noble Gas	Total Body	2.61 E-3	All	660 NNE	5.22 E-2	Annual 5.0 E+0
Noble Gas	Skin	6.71 E-3	All	660 NNE	4.47 E-2	Annual 1.5 E+1
Iodines and Particulates	Thyroid	7.99 E-3	Infant	660 NNE	1.07 E-1	7.5 E+0

Revised due to updating North Sector Site Boundary in MIDAS Computer Code.

SUMMARY OF MAXIMUM INDIVIDUAL DOSES

REVISED
2nd Qtr 1988

EFFLUENT	APPLICABLE ORGAN	ESTIMATED DOSE (MREM)	AGE GROUP	LOCATION DIST DIR (M) (Toward)	% OF APPLICABLE LIMIT	Quarterly LIMIT (MR)
Liquid	Total Body	6.22 E-2	Adult	Receptor 1	4.15 E+0	1.5 E+0
Liquid	Liver	8.32 E-2	Teen	Receptor 1	1.66 E+0	5.0 E+0
Noble Gas	Air Dose (Gamma-mrad)	5.44 E-3		594 S	1.09 E-1	5.0 E+0
Noble Gas	Air Dose (Beta-mrad)	1.24 E-2		594 SSE	1.24 E-1	1.0 E+1
Noble Gas	Total Body	2.11 E-3	All	659 N	4.22 E-2	Annual 5.0 E+0
Noble Gas	Skin	5.19 E-3	All	659 N	3.46 E-2	Annual 1.5 E+1
Iodines and Particulates	Thyroid	3.68 E-1	Infant	659 N	4.91 E+0	7.5 E+0

Revised due to updating North Sector Site Boundary in MIDAS Computer Code.

12 TWP 3150 RMC.301
Attachment XII

SUMMARY OF MAXIMUM INDIVIDUAL DOSES

REVISED
3rd Qtr 1988

EFFLUENT	APPLICABLE ORGAN	ESTIMATED DOSE (MREM)	AGE GROUP	LOCATION DIST DIR (M) (Toward)	% OF APPLICABLE LIMIT	Quarterly LIMIT (MR)
Liquid	Total Body	3.94 E-2	Adult	Receptor 1	2.63 E+0	1.5 E+0
Liquid	Liver	5.25 E-2	Teen	Receptor 1	1.05 E+0	5.0 E+0
Noble Gas	Air Dose (Gamma-mrad)	8.44 E-4		651 N	1.69 E-2	5.0 E+0
Noble Gas	Air Dose (Beta-mrad)	2.09 E-3		651 N	2.09 E-2	1.0 E+1
Noble Gas	Total Body	4.76 E-4	All	659 N	9.52 E-3	Annual 5.0 E+0
Noble Gas	Skin	1.23 E-3	All	659 N	8.20 E-3	Annual 1.5 E+1
Iodines and Particulates	Thyroid	1.87 E-2	Infant	659 N	2.49 E-1	7.5 E+0

Revised due to updating North Sector Site Boundary in MIDAS Computer Code.

12 THP 3150 RMC.301
Attachment XII

SUMMARY OF MAXIMUM INDIVIDUAL DOSES

REVISED
4th Qtr 1988

EFFLUENT	APPLICABLE ORGAN	ESTIMATED DOSE (MREM)	AGE GROUP	LOCATION DIST DIR (M) (Toward)	% OF APPLICABLE LIMIT	Quarterly LIMIT (MR)
Liquid	Total Body	6.08 E-2	Adult	Receptor 1	4.05 E+0	1.5 E+0
Liquid	Liver	7.90 E-2	Adult	Receptor 1	1.58 E+0	5.0 E+0
Noble Gas	Air Dose (Gamma-mrad)	3.30 E-4		651 N	6.60 E-3	5.0 E+0
Noble Gas	Air Dose (Beta-mrad)	6.19 E-4		651 N	6.19 E-3	1.0 E+1
Noble Gas	Total Body	1.94 E-4	All	659 N	3.88 E-3	Annual 5.0 E+0
Noble Gas	Skin	4.44 E-4	All	659 N	2.96 E-3	Annual 1.5 E+1
Iodines and Particulates	Liver	1.63 E-2	Child	659 N	2.17 E-1	7.5 E+0

Revised due to updating North Sector Site Boundary in MIDAS Computer Code.

SUMMARY OF MAXIMUM INDIVIDUAL DOSES

REVISED
1st Qtr 1989

EFFLUENT	APPLICABLE ORGAN	ESTIMATED DOSE (MREM)	AGE GROUP	LOCATION DIST DIR (M) (Toward)	% OF APPLICABLE LIMIT	QUARTERLY LIMIT (MR)
Liquid	Total Body	8.07 E-2	Adult	Receptor 1	5.38 E+0	1.5 E+0
Liquid	Liver	1.12 E-1	Teen	Receptor 1	2.24 E+0	5.0 E+0
Noble Gas	Air Dose (Gamma-mrad)	8.06 E-3		651 N	1.61 E-1	5.0 E+0
Noble Gas	Air Dose (Beta-mrad)	3.23 E-3		651 N	3.23 E-2	1.0 E+1
Noble Gas	Total Body	4.98 E-3	All	659 N	9.96 E-2	Annual 5.0 E+0
Noble Gas	Skin	8.14 E-3	All	659 N	5.43 E-2	Annual 1.5 E+1
Iodines and Particulates	Liver	2.72 E-2	Child	659 N	3.63 E-1	7.5 E+0

Revised due to updating North Sector Site Boundary in MIDAS Computer Code.

12 TEP 3150 RMC.301
Attachment XII

SUMMARY OF MAXIMUM INDIVIDUAL DOSES

REVISED
2nd Qtr 1989

EFFLUENT	APPLICABLE ORGAN	ESTIMATED DOSE (MREM)	AGE GROUP	LOCATION DIST DIR (M) (Toward)	% OF APPLICABLE LIMIT	Quarterly LIMIT (MR)
Liquid	Total Body	3.62 E-2	Adult	Receptor 1	2.41 E+0	1.5 E+0
Liquid	Liver	4.95 E-2	Teen	Receptor 1	9.90 E-1	5.0 E+0
Nobl	Air Dose (Gamma-mrad)	1.28 E-3		651 N	2.56 E-2	5.0 E+0
Noble Gas	Air Dose (Beta-mrad)	3.80 E-3		651 N	3.80 E-2	1.0 E+1
Noble Gas	Total Body	7.16 E-4	All	659 N	1.43 E-2	Annual 5.0 E+0
Noble Gas	Skin	2.02 E-3	All	659 N	1.35 E-2	Annual 1.5 E+1
Iodines and Particulates	Thyroid	1.41 E-2	Infant	659 N	1.88 E-1	7.5 E+0

Revised due to updating North Sector Site Boundary in MIDAS Computer Code.

12 THP 3150 RMC.301
Attachment XII

SUMMARY OF MAXIMUM INDIVIDUAL DOSES

REVISED
3rd Qtr 1989

EFFLUENT	APPLICABLE ORGAN	ESTIMATED DOSE (MREM)	AGE GROUP	LOCATION DIST DIR (M) (Toward)	% OF APPLICABLE LIMIT	Quarterly LIMIT (MR)
Liquid	Total Body	1.72 E-2	Adult	Receptor 1	1.15 E+0	1.5 E+0
Liquid	Liver	2.25 E-2	Adult	Receptor 1	4.50 E-1	5.0 E+0
Noble Gas	Air Dose (Gamma-mrad)	6.68 E-3		651 N	1.34 E-1	5.0 E+0
Noble Gas	Air Dose (Beta-mrad)	1.91 E-2		651 N	1.91 E-1	1.0 E+1
Noble Gas	Total Body	3.78 E-3	All	659 N	7.56 E-2	Annual 5.0 E+0
Noble Gas	Skin	1.06 E-2	All	659 N	7.07 E-2	Annual 1.5 E+1
Iodines and Particulates	Liver	1.34 E-1	Child	659 N	1.79 E+0	7.5 E+0

Revised due to updating North Sector Site Boundary in MIDAS Computer Code.

12 THP 3150 RMC.301
Attachment XII

SUMMARY OF MAXIMUM INDIVIDUAL DOSES

REVISED
4th Qtr 1989

EFFLUENT	APPLICABLE ORGAN	ESTIMATED DOSE (MREM)	AGE GROUP	LOCATION DIST DIR (M) (Toward)	% OF APPLICABLE LIMIT	Quarterly LIMIT (MR)
Liquid	Total Body	9.60 E-3	Adult	Receptor 1	6.40 E-1	1.5 E+0
Liquid	Liver	1.24 E-2	Child	Receptor 1	2.48 E-1	5.0 E+0
Noble Gas	Air Dose (Gamma-mrad)	1.93 E-2		629 SE	3.86 E-1	5.0 E+0
Noble Gas	Air Dose (Beta-mrad)	5.50 E-2		629 SE	5.50 E-1	1.0 E+1
Noble Gas	Total Body	4.39 E-3	All	1136 SE	8.78 E-2	Annual 5.0 E+0
Noble Gas	Skin	1.30 E-2	All	1136 SE	8.67 E-2	Annual 1.5 E+1
Iodines and Particulates	Bone	1.97 E-1	Child	659 N	2.63 E+0	7.5 E+0

Revised due to updating North Sector Site Boundary in MIDAS Computer Code.

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Attachment XII

SUMMARY OF MAXIMUM INDIVIDUAL DOSES

REVISED
1st Qtr 1990

EFFLUENT	APPLICABLE ORGAN	ESTIMATED DOSE (MREM)	AGE GROUP	LOCATION DIST DIR (M) (Toward)	% OF APPLICABLE LIMIT	QUARTERLY LIMIT (MR)
Liquid	Total Body	4.22 E-2	Adult	Receptor 1	2.81 E+0	1.5 E+0
Liquid	Liver	5.42 E-2	Adult	Receptor 1	1.08 E+0	5.0 E+0
Noble Gas	Air Dose (Gamma-mrad)	2.44 E-2		651 N	4.88 E-1	5.0 E+0
Noble Gas	Air Dose (Beta-mrad)	6.56 E-2		651 N	6.56 E-1	1.0 E+1
Noble Gas	Total Body	1.41 E-2	All	659 N	2.82 E-1	Annual 5.0 E+0
Noble Gas	Skin	4.01 E-2	All	659 N	2.67 E-1	Annual 1.5 E+1
Iodines and Particulates	Bone	5.12 E-1	Child	659 N	6.83 E+0	7.5 E+0

Revised due to updating North Sector Site Boundary in MIDAS Computer Code.

12 THP 3150 RMC.301
Attachment XII

SUMMARY OF MAXIMUM INDIVIDUAL DOSES

REVISED
2nd Qtr 1990

EFFLUENT	APPLICABLE ORGAN	ESTIMATED DOSE (MREM)	AGE GROUP	LOCATION DIST DIR (M) (Toward)	% OF APPLICABLE LIMIT	QUARTERLY LIMIT (MR)
Liquid	Total Body	6.30 E-3	Adult	Receptor 1	4.20 E-1	1.5 E+0
Liquid	Liver	8.14 E-3	Child	Receptor 1	1.63 E-1	5.0 E+0
Noble Gas	Air Dose (Gamma-mrad)	3.21 E-3		651 N	6.42 E-2	5.0 E+0
Noble Gas	Air Dose (Beta-mrad)	6.59 E-3		651 N	6.59 E-2	1.0 E+1
Noble Gas	Total Body	1.87 E-3	All	659 N	3.74 E-2	Annual 5.0 E+0
Noble Gas	Skin	4.55 E-3	All	659 N	3.03 E-2	Annual 1.5 E+1
Iodines and Particulates	Bone	3.13 E-1	Child	659 N	4.17 E+0	7.5 E+0

Revised due to updating North Sector Site Boundary in MIDAS Computer Code.

12 THP 3150 RMC.301
Attachment XII

SUMMARY OF MAXIMUM INDIVIDUAL DOSES

REVISED
3rd Qtr 1990

EFFLUENT	APPLICABLE ORGAN	ESTIMATED DOSE (MREM)	AGE GROUP	LOCATION DIST DIR (M) (Toward)	% OF APPLICABLE LIMIT	Quarterly LIMIT (MR)
Liquid	Total Body	1.65 E-1	Adult	Receptor 1	1.10 E+1	1.5 E+0
Liquid	Bone	6.76 E-1	Child	Receptor 1	1.35 E+1	5.0 E+0
Noble Gas	Air Dose (Gamma-mrad)	5.88 E-3		651 N	1.18 E-1	5.0 E+0
Noble Gas	Air Dose (Beta-mrad)	8.22 E-3		651 N	8.22 E-2	1.0 E+1
Noble Gas	Total Body	3.41 E-3	All	659 N	6.82 E-2	Annual 5.0 E+0
Noble Gas	Skin	7.10 E-3	All	659 N	4.73 E-2	Annual 1.5 E+1
Iodines and Particulates	Thyroid	5.14 E-2	Infant	659 N	6.85 E-1	7.5 E+0

Revised due to updating North Sector Site Boundary in MIDAS Computer Code.

12 THP 3150 RMC.301
Attachment XII

SUMMARY OF MAXIMUM INDIVIDUAL DOSES

REVISED
4th Qtr 1990

EFFLUENT	APPLICABLE ORGAN	ESTIMATED DOSE (MREM)	AGE GROUP	LOCATION DIST DIR (M) (Toward)	% OF APPLICABLE LIMIT	QUARTERLY LIMIT (MR)
Liquid	Total Body	2.29 E-2	Adult	Receptor 1	1.53 E+0	1.5 E+0
Liquid	Bone	4.39 E-2	Child	Receptor 1	8.78 E-1	5.0 E+0
Noble Gas	Air Dose (Gamma-mrad)	3.74 E-3		651 N	7.48 E-2	5.0 E+0
Noble Gas	Air Dose (Beta-mrad)	9.78 E-3		651 N	9.78 E-2	1.0 E+1
Noble Gas	Total Body	2.19 E-3	All	659 N	4.38 E-2	Annual 5.0 E+0
Noble Gas	Skin	6.75 E-3	All	659 N	4.50 E-2	Annual 1.5 E+1
Iodines and Particulates	Thyroid	2.36 E-2	Infant	659 N	3.15 E-1	7.5 E+0

Revised due to updating North Sector Site Boundary in MIDAS Computer Code.

12 THP 3150 RMC.301
Attachment XIISUMMARY OF MAXIMUM INDIVIDUAL DOSES 1st Qtr 1991

EFFLUENT	APPLICABLE ORGAN	ESTIMATED DOSE (MREM)	AGE GROUP	LOCATION DIST DIR (M) (Toward)	% OF APPLICABLE LIMIT	QUARTERLY LIMIT (MR)
Liquid	Total Body	1.80 E-2	Adult	Receptor 1	1.20 E+0	1.5 E+0
Liquid	Liver	2.50 E-2	Teen	Receptor 1	5.00 E-1	5.0 E+0
Noble Gas	Air Dose (Gamma-mrad)	4.80 E-4		651 N	9.60 E-3	5.0 E+0
Noble Gas	Air Dose (Beta-mrad)	3.29 E-4		651 N	3.29 E-3	1.0 E+1
Noble Gas	Total Body	3.00 E-4	All	659 N	6.00 E-3	Annual 5.0 E+0
Noble Gas	Skin	5.61 E-4	All	659 N	3.74 E-3	Annual 1.5 E+1
Iodines and Particulates	Liver	1.00 E-2	Child	660 NNE	1.33 E-1	7.5 E+0

LAST LIQUID DOSE ACCUMULATIONS (MREM)

START DATE 91 1 1 1 END DATE 91 33124

	BONE	LIVER	T.BODY	THIRD	KIDNEY	LUNG	GI-LLI	SKIN
WATER								
ADULT	1.3E-04	2.1E-03	2.0E-03	1.9E-03	1.9E-03	1.9E-03	3.0E-03	0.0E+00
TEEN	1.2E-04	1.5E-03	1.4E-03	1.3E-03	1.4E-03	1.4E-03	2.0E-03	0.0E+00
CHILD	3.6E-04	2.9E-03	2.7E-03	2.5E-03	2.6E-03	2.6E-03	3.1E-03	0.0E+00
INFANT	3.6E-04	2.9E-03	2.6E-03	2.5E-03	2.6E-03	2.6E-03	2.8E-03	0.0E+00

	BONE	LIVER	T.BODY	THIRD	KIDNEY	LUNG	GI-LLI	SKIN
SHORE								
ADULT	4.8E-05	4.8E-05	4.8E-05	4.8E-05	4.8E-05	4.8E-05	4.8E-05	5.6E-05
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	5.6E-05	5.6E-05	5.6E-05	5.6E-05	5.6E-05	5.6E-05	5.6E-05	6.5E-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

	BONE	LIVER	T.BODY	THIRD	KIDNEY	LUNG	GI-LLI	SKIN
FW SPT FISH								
ADULT	1.4E-02	2.3E-02	1.6E-02	1.3E-04	7.5E-03	2.6E-03	1.1E-02	0.0E+00
TEEN	1.5E-02	2.3E-02	9.1E-03	1.0E-04	7.7E-03	3.1E-03	7.6E-03	0.0E+00
CHILD	1.8E-02	2.0E-02	3.7E-03	8.7E-05	6.6E-03	2.4E-03	2.7E-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

	BONE	LIVER	T.BODY	THIRD	KIDNEY	LUNG	GI-LLI	SKIN
TOTAL								
ADULT	1.4E-02	2.5E-02	1.8E-02	2.1E-03	9.5E-03	4.6E-03	1.4E-02	5.6E-05
TEEN	1.5E-02	2.5E-02	1.1E-02	1.7E-03	9.4E-03	4.7E-03	9.9E-03	3.1E-04
CHILD	1.9E-02	2.3E-02	6.4E-03	2.7E-03	9.2E-03	5.1E-03	5.9E-03	6.5E-05
INFANT	3.6E-04	2.9E-03	2.6E-03	2.5E-03	2.6E-03	2.6E-03	2.8E-03	0.0E+00

DATES OF LAST AIR DOSE ACCUMULATION ARE FROM 91 1 1 1 0 TO 91 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 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 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

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

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 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

FOR RELEASE POINT 2

**DIRECTION FROM N

3.0164E-04	3.5567E-05	1.5850E-05	9.0609E-06	6.2166E-06
2.9762E-06	1.0781E-06	5.1525E-07	3.2141E-07	1.9357E-07

**DIRECTION FROM NNE

1.8828E-04	2.1980E-05	9.7829E-06	5.5925E-06	3.8348E-06
1.8352E-06	6.6590E-07	3.1941E-07	2.0028E-07	1.2150E-07

**DIRECTION FROM NE

2.7258E-04	3.3832E-05	1.5695E-05	9.2290E-06	6.4196E-06
3.1557E-06	1.2025E-06	5.9226E-07	3.7732E-07	2.3378E-07

**DIRECTION FROM ENE

2.3825E-04	2.8968E-05	1.3585E-05	8.0388E-06	5.6402E-06
2.8230E-06	1.0942E-06	5.3958E-07	3.4350E-07	2.1494E-07

**DIRECTION FROM E

3.4399E-04	4.1346E-05	1.9602E-05	1.1706E-05	8.2132E-06
4.1006E-06	1.5966E-06	7.9071E-07	5.0476E-07	3.1640E-07

**DIRECTION FROM ESE

3.2903E-04	3.9109E-05	1.8538E-05	1.1078E-05	7.7587E-06
3.8560E-06	1.4961E-06	7.4052E-07	4.7256E-07	2.9576E-07

**DIRECTION FROM SE

3.9847E-04	4.7462E-05	2.2845E-05	1.3784E-05	9.7182E-06
4.8912E-06	1.9285E-06	9.5956E-07	6.1371E-07	3.8665E-07

**DIRECTION FROM SSE

5.9680E-04	6.9200E-05	3.4485E-05	2.1313E-05	1.5134E-05
7.6980E-06	3.1126E-06	1.5729E-06	1.0164E-06	6.4838E-07

**DIRECTION FROM S

5.5296E-04	6.4130E-05	3.1100E-05	1.8860E-05	1.3358E-05
6.7855E-06	2.7011E-06	1.3473E-06	8.6273E-07	5.4716E-07

**DIRECTION FROM SSW

4.5435E-04	5.6633E-05	2.6520E-05	1.5681E-05	1.0965E-05
5.4480E-06	2.1014E-06	1.0379E-06	6.6187E-07	4.1239E-07

**DIRECTION FROM SW

2.5539E-04	3.0164E-05	1.3557E-05	7.8035E-06	5.3628E-06
2.5729E-06	9.3965E-07	4.5150E-07	2.8270E-07	1.7106E-07

**DIRECTION FROM WSW

3.3072E-04	4.0083E-05	1.8169E-05	1.0507E-05	7.2813E-06
3.5645E-06	1.3366E-06	6.5262E-07	4.1354E-07	2.5462E-07

**DIRECTION FROM W

2.6764E-04	3.0598E-05	1.3681E-05	7.8588E-06	5.3946E-06
2.5841E-06	9.4246E-07	4.5443E-07	2.8564E-07	1.7364E-07

**DIRECTION FROM WNW

2.3384E-04	2.7203E-05	1.2208E-05	7.0258E-06	4.8263E-06
2.3152E-06	8.4693E-07	4.0874E-07	2.5725E-07	1.5673E-07

**DIRECTION FROM NW

2.2750E-04	2.4194E-05	1.0772E-05	6.2016E-06	4.2277E-06
1.9897E-06	7.1504E-07	3.4477E-07	2.1719E-07	1.3202E-07

**DIRECTION FROM NNW

3.6225E-04	4.0279E-05	1.8003E-05	1.0352E-05	7.0827E-06
3.3622E-06	1.2126E-06	5.7967E-07	3.6226E-07	2.1928E-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

FOR RELEASE POINT 3

**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

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

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

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

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 NW

4.4744E-07	2.1784E-08	1.3092E-08	9.3483E-09	7.2695E-09
4.3516E-09	2.1807E-09	1.3084E-09	9.3458E-10	6.5380E-10

**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 91 1 1 1 0 TO 91 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

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 SSL

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

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

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 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

FOR RELEASE POINT 2

**DIRECTION FROM N

1.9861E-04	2.3385E-05	1.0432E-05	5.9690E-06	4.0980E-06
1.9646E-06	7.1331E-07	3.4150E-07	2.1326E-07	1.2861E-07

**DIRECTION FROM NNE

1.2105E-04	1.4247E-05	6.3589E-06	3.6412E-06	2.5020E-06
1.2031E-06	4.3940E-07	2.1149E-07	1.3289E-07	8.0863E-08

**DIRECTION FROM NE

1.7684E-04	2.2018E-05	1.0229E-05	6.0204E-06	4.1895E-06
2.0608E-06	7.8611E-07	3.8732E-07	2.4675E-07	1.5288E-07

**DIRECTION FROM ENE

1.5278E-04	1.8552E-05	8.7697E-06	5.2183E-06	3.6702E-06
1.8447E-06	7.2029E-07	3.5652E-07	2.2747E-07	1.4286E-07

**DIRECTION FROM E

2.2590E-04	2.7176E-05	1.2942E-05	7.7496E-06	5.4474E-06
2.7290E-06	1.0669E-06	5.2883E-07	3.3765E-07	2.1204E-07

**DIRECTION FROM ESE

2.2461E-04	2.6665E-05	1.2675E-05	7.5882E-06	5.3214E-06
2.6517E-06	1.0324E-06	5.1176E-07	3.2688E-07	2.0499E-07

**DIRECTION FROM SE

2.6539E-04	3.1797E-05	1.5308E-05	9.2348E-06	6.5155E-06
3.2852E-06	1.2975E-06	6.4616E-07	4.1353E-07	2.6072E-07

**DIRECTION FROM SSE

4.2109E-04	4.9584E-05	2.4760E-05	1.5324E-05	1.0885E-05
5.5400E-06	2.2427E-06	1.1338E-06	7.3281E-07	4.6774E-07

**DIRECTION FROM S

3.7930E-04	4.3956E-05	2.1396E-05	1.3005E-05	9.2247E-06
4.6978E-06	1.8765E-06	9.3722E-07	6.0062E-07	3.8154E-07

**DIRECTION FROM SSW

3.0194E-04	3.7616E-05	1.7687E-05	1.0489E-05	7.3428E-06
3.6552E-06	1.4149E-06	7.0009E-07	4.4687E-07	2.7893E-07

**DIRECTION FROM SW

1.6291E-04	1.9404E-05	8.7492E-06	5.0463E-06	3.4734E-06
1.6720E-06	6.1381E-07	2.9575E-07	1.8553E-07	1.1257E-07

**DIRECTION FROM WSW

2.2503E-04	2.7512E-05	1.2491E-05	7.2286E-06	5.0151E-06
2.4616E-06	9.2594E-07	4.5269E-07	2.8709E-07	1.7700E-07

**DIRECTION FROM W

1.7164E-04	1.9794E-05	8.8843E-06	5.1155E-06	3.5210E-06
1.6969E-06	6.2417E-07	3.0238E-07	1.9063E-07	1.1639E-07

**DIRECTION FROM WNW

1.4804E-04	1.7427E-05	7.8489E-06	4.5263E-06	3.1159E-06
1.5017E-06	5.5278E-07	2.6750E-07	1.6859E-07	1.0294E-07

**DIRECTION FROM NW

1.4020E-04	1.4850E-05	6.6342E-06	3.8303E-06	2.6169E-06
1.2376E-06	4.4846E-07	2.1749E-07	1.3754E-07	8.4026E-08

**DIRECTION FROM NNW

2.4677E-04	2.7462E-05	1.2289E-05	7.0714E-06	4.8430E-06
2.3044E-06	8.3393E-07	3.9947E-07	2.5000E-07	1.5165E-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

FOR RELEASE POINT 3

**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

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

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

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

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 NW

5.0513E-05	2.4593E-06	1.4780E-06	1.0554E-06	8.2068E-07
4.9239E-07	2.4619E-07	1.4771E-07	1.0551E-07	7.3810E-08

**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

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT
FOR DATES 91 1 1 1 THRU 91 33124

" BODY GI-TRCT BONE LIVER KIDNEY THYRD LUNG SKIN

PLUME PATHWAY, DIST GP= 1, 659. METERS, WINDS TOWARD N
ADULT 3.0E-04 3.0E-04 3.0E-04 3.0E-04 3.0E-04 3.0E-04 3.0E-04 5.6E-04
TEEN 3.0E-04 3.0E-04 3.0E-04 3.0E-04 3.0E-04 3.0E-04 3.0E-04 5.6E-04
CHILD 3.0E-04 3.0E-04 3.0E-04 3.0E-04 3.0E-04 3.0E-04 3.0E-04 5.6E-04
INFNT 3.0E-04 3.0E-04 3.0E-04 3.0E-04 3.0E-04 3.0E-04 3.0E-04 5.6E-04

GROUND PATHWAY, DIST GP= 1, 659. METERS, WINDS TOWARD N
ADULT 3.7E-03 3.7E-03 3.7E-03 3.7E-03 3.7E-03 3.7E-03 3.7E-03 4.3E-03
TEEN 3.7E-03 3.7E-03 3.7E-03 3.7E-03 3.7E-03 3.7E-03 3.7E-03 4.3E-03
CHILD 3.7E-03 3.7E-03 3.7E-03 3.7E-03 3.7E-03 3.7E-03 3.7E-03 4.3E-03
INFNT 3.7E-03 3.7E-03 3.7E-03 3.7E-03 3.7E-03 3.7E-03 3.7E-03 4.3E-03

VEGET PATHWAY, DIST GP= 1, 8045. METERS, WINDS TOWARD N
ADULT 3.0E-05 1.1E-05 2.2E-05 4.1E-05 1.8E-05 7.7E-06 1.1E-05 0.0E+00
TEEN 2.8E-05 1.2E-05 3.5E-05 5.9E-05 2.6E-05 8.8E-06 1.5E-05 0.0E+00
CHILD 2.8E-05 1.6E-05 8.2E-05 9.9E-05 4.1E-05 1.4E-05 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

MEAT PATHWAY, DIST GP= 1, 8045. METERS, WINDS TOWARD N
ADULT 3.5E-06 2.2E-06 2.2E-06 4.4E-06 2.2E-06 1.1E-06 1.4E-06 0.0E+00
TEEN 1.7E-06 1.3E-06 1.8E-06 3.3E-06 1.5E-06 6.5E-07 9.8E-07 0.0E+00
CHILD 1.5E-06 1.1E-06 3.4E-06 4.3E-06 1.9E-06 7.8E-07 1.2E-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, 3556. METERS, WINDS TOWARD N
ADULT 9.2E-05 1.1E-05 8.1E-05 1.3E-04 4.9E-05 1.2E-05 2.2E-05 0.0E+00
TEEN 9.0E-05 1.5E-05 1.5E-04 2.2E-04 8.2E-05 1.6E-05 3.8E-05 0.0E+00
CHILD 7.5E-05 2.0E-05 3.5E-04 3.8E-04 1.3E-04 2.9E-05 5.9E-05 0.0E+00
INFNT 8.0E-05 2.8E-05 5.6E-04 7.3E-04 2.1E-04 5.6E-05 1.0E-04 0.0E+00

GOAT PATHWAY, DIST GP= 1, 3556. METERS, WINDS TOWARD N
ADULT 2.7E-04 2.4E-05 2.4E-04 3.8E-04 1.4E-04 2.1E-05 5.7E-05 0.0E+00
TEEN 2.6E-04 3.1E-05 4.4E-04 6.6E-04 2.4E-04 2.8E-05 1.0E-04 0.0E+00
CHILD 2.1E-04 4.1E-05 1.1E-03 1.1E-03 3.9E-04 4.9E-05 1.6E-04 0.0E+00
INFNT 2.1E-04 5.8E-05 1.7E-03 2.2E-03 6.1E-04 8.8E-05 2.8E-04 0.0E+00

INHAL PATHWAY, DIST GP= 1, 659. METERS, WINDS TOWARD N
ADULT 1.8E-04 1.7E-04 1.3E-05 1.9E-04 1.8E-04 1.9E-04 2.3E-04 0.0E+00
TEEN 1.8E-04 1.7E-04 1.8E-05 2.0E-04 1.8E-04 2.0E-04 2.5E-04 0.0E+00
CHILD 1.6E-04 1.5E-04 2.5E-05 1.8E-04 1.6E-04 1.8E-04 2.2E-04 0.0E+00
INFNT 8.9E-05 8.7E-05 1.5E-05 1.1E-04 9.2E-05 1.2E-04 1.3E-04 0.0E+00

SUBTOTALS (NO PLUME)

ADULT 4.3E-03 3.9E-03 4.0E-03 4.4E-03 4.1E-03 3.9E-03 4.0E-03 4.3E-03
TEEN 4.2E-03 3.9E-03 4.3E-03 4.8E-03 4.2E-03 3.9E-03 4.1E-03 4.3E-03
CHILD 4.1E-03 3.9E-03 5.2E-03 5.5E-03 4.4E-03 4.0E-03 4.1E-03 4.3E-03
INFNT 4.1E-03 3.9E-03 5.9E-03 6.7E-03 4.6E-03 3.9E-03 4.2E-03 4.3E-03

TOTALS

ADULT 4.6E-03 4.2E-03 4.3E-03 4.7E-03 4.4E-03 4.2E-03 4.3E-03 4.9E-03
TEEN 4.5E-03 4.2E-03 4.6E-03 5.1E-03 4.5E-03 4.2E-03 4.4E-03 4.9E-03
CHILD 4.4E-03 4.2E-03 5.5E-03 5.8E-03 4.7E-03 4.3E-03 4.4E-03 4.9E-03
INFNT 4.4E-03 4.2E-03 6.2E-03 7.0E-03 4.9E-03 4.2E-03 4.5E-03 4.9E-03

INDIVIDUAL DOSES(MREM) DUE TO GASEOUS EFFLUENT
FOR DATES 91 1 1 1 THRU 91 33124

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

PILME PATHWAY, DIST GP= 1, 660. METERS, WINDS TOWARD NNE
ADULT 2.5E-04 2.5E-04 2.5E-04 2.5E-04 2.5E-04 2.5E-04 2.5E-04 4.6E-04
TEEN 2.5E-04 2.5E-04 2.5E-04 2.5E-04 2.5E-04 2.5E-04 2.5E-04 4.6E-04
CHILD 2.5E-04 2.5E-04 2.5E-04 2.5E-04 2.5E-04 2.5E-04 2.5E-04 4.6E-04
INFNT 2.5E-04 2.5E-04 2.5E-04 2.5E-04 2.5E-04 2.5E-04 2.5E-04 4.6E-04

GROUND PATHWAY, DIST GP= 1, 660. METERS, WINDS TOWARD NNE
ADULT 3.8E-03 3.8E-03 3.8E-03 3.8E-03 3.8E-03 3.8E-03 3.8E-03 4.5E-03
TEEN 3.8E-03 3.8E-03 3.8E-03 3.8E-03 3.8E-03 3.8E-03 3.8E-03 4.5E-03
CHILD 3.8E-03 3.8E-03 3.8E-03 3.8E-03 3.8E-03 3.8E-03 3.8E-03 4.5E-03
INFNT 3.8E-03 3.8E-03 3.8E-03 3.8E-03 3.8E-03 3.8E-03 3.8E-03 4.5E-03

VEGET PATHWAY, DIST GP= 1, 814. METERS, WINDS TOWARD NNE
ADULT 1.4E-03 3.8E-04 1.1E-03 1.9E-03 7.7E-04 2.2E-04 3.9E-04 0.0E+00
TEEN 1.2E-03 4.2E-04 1.8E-03 2.9E-03 1.1E-03 2.5E-04 5.7E-04 0.0E+00
CHILD 1.1E-03 4.8E-04 4.2E-03 4.8E-03 1.8E-03 3.8E-04 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 NNE
ADULT 3.7E-06 2.3E-06 2.5E-06 4.9E-06 2.3E-06 1.0E-06 1.4E-06 0.0E+00
TEEN 1.8E-06 1.3E-06 2.1E-06 3.7E-06 1.6E-06 6.2E-07 9.9E-07 0.0E+00
CHILD 1.5E-06 1.1E-06 3.8E-06 4.8E-06 2.0E-06 7.5E-07 1.2E-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, 3556. METERS, WINDS TOWARD NNE
ADULT 9.7E-05 1.1E-05 8.7E-05 1.4E-04 5.1E-05 1.2E-05 2.2E-05 0.0E+00
TEEN 9.5E-05 1.4E-05 1.6E-04 2.4E-04 8.6E-05 1.6E-05 3.9E-05 0.0E+00
CHILD 7.8E-05 1.9E-05 3.7E-04 4.0E-04 1.4E-04 3.0E-05 6.1E-05 0.0E+00
INFNT 8.1E-05 2.7E-05 6.0E-04 7.7E-04 2.2E-04 5.8E-05 1.0E-04 0.0E+00

GOAT PATHWAY, DIST GP= 1, 3556. METERS, WINDS TOWARD NNE
ADULT 2.8E-04 2.3E-05 2.6E-04 4.0E-04 1.5E-04 2.0E-05 5.9E-05 0.0E+00
TEEN 2.7E-04 3.0E-05 4.7E-04 7.0E-04 2.5E-04 2.8E-05 1.1E-04 0.0E+00
CHILD 2.2E-04 3.9E-05 1.1E-03 1.2E-03 4.1E-04 4.8E-05 1.7E-04 0.0E+00
INFNT 2.2E-04 5.5E-05 1.8E-03 2.3E-03 5.5E-04 8.9E-05 2.9E-04 0.0E+00

INHAL PATHWAY, DIST GP= 1, 660. METERS, WINDS TOWARD NNE
ADULT 1.7E-04 1.6E-04 1.3E-05 1.7E-04 1.6E-04 1.7E-04 2.0E-04 0.0E+00
TEEN 1.6E-04 1.6E-04 1.8E-05 1.8E-04 1.6E-04 1.7E-04 2.2E-04 0.0E+00
CHILD 1.4E-04 1.4E-04 2.4E-05 1.6E-04 1.4E-04 1.6E-04 1.9E-04 0.0E+00
INFNT 8.0E-05 7.9E-05 1.5E-05 9.6E-05 8.3E-05 1.0E-04 1.1E-04 0.0E+00

SUBTOTALS (NO PILME)

ADULT 5.8E-03 4.4E-03 5.3E-03 6.5E-03 5.0E-03 4.3E-03 4.5E-03 4.5E-03
TEEN 5.6E-03 4.5E-03 6.3E-03 7.8E-03 5.5E-03 4.3E-03 4.8E-03 4.5E-03
CHILD 5.4E-03 4.5E-03 9.6E-03 1.0E-02 6.3E-03 4.5E-03 5.1E-03 4.5E-03
INFNT 4.2E-03 4.0E-03 6.3E-03 7.0E-03 4.8E-03 4.1E-03 4.4E-03 4.5E-03

TOTALS

ADULT 6.0E-03 4.7E-03 5.6E-03 6.7E-03 5.2E-03 4.5E-03 4.8E-03 5.0E-03
TEEN 5.8E-03 4.7E-03 6.5E-03 8.1E-03 5.7E-03 4.6E-03 5.0E-03 5.0E-03
CHILD 5.6E-03 4.8E-03 9.9E-03 1.1E-02 6.6E-03 4.7E-03 5.4E-03 5.0E-03
INFNT 4.5E-03 4.3E-03 6.5E-03 7.3E-03 5.0E-03 4.3E-03 4.6E-03 5.0E-03

INDIVIDUAL DOSES(MREM) DUE TO GASEOUS EFFLUENT
FOR DATES 91 1 1 1 THRU 91 33124

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

PLUME PATHWAY, DIST GP= 1, 943. METERS, WINDS TOWARD NE
ADULT 8.0E-05 8.0E-05 8.0E-05 8.0E-05 8.0E-05 8.0E-05 8.0E-05 1.4E-04
TEEN 8.0E-05 8.0E-05 8.0E-05 8.0E-05 8.0E-05 8.0E-05 8.0E-05 1.4E-04
CHILD 8.0E-05 8.0E-05 8.0E-05 8.0E-05 8.0E-05 8.0E-05 8.0E-05 1.4E-04
INFNT 8.0E-05 8.0E-05 8.0E-05 8.0E-05 8.0E-05 8.0E-05 8.0E-05 1.4E-04

GROUND PATHWAY, DIST GP= 1, 943. METERS, WINDS TOWARD NE
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, 1052. METERS, WINDS TOWARD NE
ADULT 8.2E-04 1.8E-04 7.1E-04 1.1E-03 4.4E-04 9.0E-05 2.0E-04 0.0E+00
TEEN 7.1E-04 1.9E-04 1.1E-03 1.7E-03 6.4E-04 1.0E-04 3.1E-04 0.0E+00
CHILD 6.1E-04 2.1E-04 2.6E-03 2.9E-03 1.0E-03 1.6E-04 4.6E-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

MEAT PATHWAY, DIST GP= 1, 7725. METERS WINDS TOWARD NE
ADULT 3.1E-06 1.5E-06 2.4E-06 4.2E-06 1.7E-06 5.4E-07 9.3E-07 0.0E+00
TEEN 1.5E-06 8.6E-07 2.0E-06 3.3E-06 1.3E-06 3.3E-07 6.9E-07 0.0E+00
CHILD 1.1E-06 6.6E-07 3.6E-06 4.2E-06 1.6E-06 4.0E-07 8.2E-07 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, 3556. METERS, WINDS TOWARD NE
ADULT 9.0E-05 7.4E-06 8.3E-05 1.3E-04 4.6E-05 7.0E-06 1.8E-05 0.0E+00
TEEN 8.7E-05 9.5E-06 1.5E-04 2.2E-04 7.8E-05 1.0E-05 3.4E-05 0.0E+00
CHILD 6.8E-05 1.2E-05 3.6E-04 3.8E-04 1.3E-04 1.8E-05 5.2E-05 0.0E+00
INFNT 6.8E-05 1.6E-05 5.7E-04 7.3E-04 2.0E-04 3.6E-05 9.1E-05 0.0E+00

GOAT PATHWAY, DIST GP= 1, 3556. METERS, WINDS TOWARD NE
ADULT 2.7E-04 1.6E-05 2.5E-04 3.8E-04 1.3E-04 1.2E-05 5.0E-05 0.0E+00
TEEN 2.5E-04 2.0E-05 4.5E-04 6.6E-04 2.3E-04 1.7E-05 9.6E-05 0.0E+00
CHILD 2.0E-04 2.4E-05 1.1E-03 1.1E-03 3.8E-04 2.9E-05 1.5E-04 0.0E+00
INFNT 1.9E-04 3.3E-05 1.7E-03 2.2E-03 6.0E-04 5.4E-05 2.6E-04 0.0E+00

INHAL PATHWAY, DIST GP= 1, 943. METERS, WINDS TOWARD NE
ADULT 5.9E-05 5.5E-05 4.7E-06 6.0E-05 5.6E-05 5.8E-05 6.9E-05 0.0E+00
TEEN 5.8E-05 5.5E-05 6.6E-06 6.3E-05 5.7E-05 5.9E-05 7.6E-05 0.0E+00
CHILD 4.9E-05 4.8E-05 8.8E-06 5.7E-05 5.1E-05 5.5E-05 6.6E-05 0.0E+00
INFNT 2.8E-05 2.8E-05 5.4E-06 3.4E-05 2.9E-05 3.4E-05 3.9E-05 0.0E+00

SUBTOTALS (NO PLUME)

ADULT 3.1E-03 2.1E-03 2.9E-03 3.6E-03 2.6E-03 2.1E-03 2.2E-03 2.2E-03
TEEN 3.0E-03 2.2E-03 3.6E-03 4.6E-03 2.9E-03 2.1E-03 2.4E-03 2.2E-03
CHILD 2.8E-03 2.2E-03 6.0E-03 6.3E-03 3.5E-03 2.1E-03 2.6E-03 2.2E-03
INFNT 2.2E-03 2.0E-03 4.2E-03 4.8E-03 2.7E-03 2.0E-03 2.3E-03 2.2E-03

TOTALS

ADULT 3.2E-03 2.2E-03 3.0E-03 3.7E-03 2.6E-03 2.1E-03 2.3E-03 2.3E-03
TEEN 3.1E-03 2.2E-03 3.7E-03 4.6E-03 3.0E-03 2.1E-03 2.5E-03 2.3E-03
CHILD 2.9E-03 2.3E-03 6.0E-03 6.4E-03 3.5E-03 2.2E-03 2.7E-03 2.3E-03
INFNT 2.3E-03 2.0E-03 4.2E-03 4.9E-03 2.8E-03 2.1E-03 2.4E-03 2.3E-03

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT
FOR DATES 91 1 1 1 THRU 91 33124

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

PLUME PATHWAY, DIST GP= 1, 1747. METERS, WINDS TOWARD ENE
ADULT 3.9E-05 3.9E-05 3.9E-05 3.9E-05 3.9E-05 3.9E-05 3.9E-05 7.2E-05
TEEN 3.9E-05 3.9E-05 3.9E-05 3.9E-05 3.9E-05 3.9E-05 3.9E-05 7.2E-05
CHILD 3.9E-05 3.9E-05 3.9E-05 3.9E-05 3.9E-05 3.9E-05 3.9E-05 7.2E-05
INFNT 3.9E-05 3.9E-05 3.9E-05 3.9E-05 3.9E-05 3.9E-05 3.9E-05 7.2E-05

GROUND PATHWAY, DIST GP= 1, 1747. METERS, WINDS TOWARD ENE
ADULT 6.5E-04 6.5E-04 6.5E-04 6.5E-04 6.5E-04 6.5E-04 6.5E-04 7.6E-04
TEEN 6.5E-04 6.5E-04 6.5E-04 6.5E-04 6.5E-04 6.5E-04 6.5E-04 7.6E-04
CHILD 6.5E-04 6.5E-04 6.5E-04 6.5E-04 6.5E-04 6.5E-04 6.5E-04 7.6E-04
INFNT 6.5E-04 6.5E-04 6.5E-04 6.5E-04 6.5E-04 6.5E-04 6.5E-04 7.6E-04

VEGET PATHWAY, DIST GP= 1, 1852. METERS, WINDS TOWARD ENE
ADULT 2.9E-04 7.8E-05 2.4E-04 4.0E-04 1.6E-04 4.2E-05 7.7E-05 0.0E+00
TEEN 2.5E-04 3.5E-05 3.8E-04 6.0E-04 2.3E-04 4.7E-05 1.1E-04 0.0E+00
CHILD 2.2E-04 9.4E-05 9.0E-04 9.9E-04 3.6E-04 7.3E-05 1.7E-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, 3862. METERS, WINDS TOWARD ENE
ADULT 9.8E-06 5.8E-06 7.5E-06 1.3E-05 5.5E-06 1.8E-06 3.0E-06 0.0E+00
TEEN 4.7E-06 3.2E-06 6.2E-06 1.0E-05 4.0E-06 1.1E-06 2.2E-06 0.0E+00
CHILD 3.6E-06 2.4E-06 1.1E-05 1.3E-05 5.0E-06 1.3E-06 2.6E-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, 3556. METERS, WINDS TOWARD ENE
ADULT 7.8E-05 7.6E-06 7.2E-05 1.1E-04 6.1E-05 8.8E-06 1.7E-05 0.0E+00
TEEN 7.6E-05 9.8E-06 1.3E-04 1.9E-04 6.9E-05 1.3E-05 3.1E-05 0.0E+00
CHILD 6.1E-05 1.2E-05 3.1E-04 3.3E-04 1.1E-04 2.4E-05 4.7E-05 0.0E+00
INFNT 6.2E-05 1.7E-05 5.0E-04 6.4E-04 1.8E-04 4.9E-05 8.2E-05 0.0E+00

GOAT PATHWAY, DIST GP= 1, 3556. METERS, WINDS TOWARD ENE
ADULT 2.3E-04 1.6E-05 2.2E-04 3.3E-04 1.2E-04 1.4E-05 4.5E-05 0.0E+00
TEEN 2.2E-04 2.0E-05 3.9E-04 5.8E-04 2.0E-04 2.0E-05 8.6E-05 0.0E+00
CHILD 1.7E-04 2.5E-05 9.3E-04 9.9E-04 3.3E-04 3.6E-05 1.3E-04 0.0E+00
INFNT 1.7E-04 3.5E-05 1.5E-03 1.9E-03 5.3E-04 7.1E-05 2.3E-04 0.0E+00

INHAL PATHWAY, DIST GP= 1, 1747. METERS, WINDS TOWARD ENE
ADULT 2.4E-05 2.3E-05 1.5E-06 2.5E-05 2.3E-05 2.5E-05 3.0E-05 0.0E+00
TEEN 2.4E-05 2.3E-05 2.0E-06 2.6E-05 2.4E-05 2.6E-05 3.3E-05 0.0E+00
CHILD 2.1E-05 2.0E-05 2.7E-06 2.3E-05 2.1E-05 2.4E-05 2.8E-05 0.0E+00
INFNT 1.2E-05 1.2E-05 1.7E-06 1.4E-05 1.2E-05 1.5E-05 1.7E-05 0.0E+00

SUBTOTALS (NO PLUME)

ADULT 1.3E-03 7.8E-04 1.2E-03 1.5E-03 9.9E-04 7.4E-04 8.2E-04 7.6E-04
TEEN 1.2E-03 7.9E-04 1.6E-03 2.1E-03 1.2E-03 7.5E-04 9.1E-04 7.6E-04
CHILD 1.1E-03 8.0E-04 2.8E-03 3.0E-03 1.5E-03 8.0E-04 1.0E-03 7.6E-04
INFNT 8.9E-04 7.1E-04 2.6E-03 3.2E-03 1.4E-03 7.8E-04 9.8E-04 7.6E-04

TOTALS

ADULT 1.3E-03 8.2E-04 1.2E-03 1.6E-03 1.0E-03 7.8E-04 8.6E-04 8.3E-04
TEEN 1.3E-03 8.3E-04 1.6E-03 2.1E-03 1.2E-03 7.9E-04 9.5E-04 8.3E-04
CHILD 1.2E-03 8.4E-04 2.8E-03 3.0E-03 1.5E-03 8.4E-04 1.1E-03 8.3E-04
INFNT 9.3E-04 7.5E-04 2.7E-03 3.2E-03 1.4E-03 8.2E-04 1.0E-03 8.3E-04

INDIVIDUAL DOSES(MREM) DUE TO GASEOUS EFFLUENT
FOR DATES 91 1 1 1 THRU 91 33124

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

PLUME PATHWAY, DIST GP= 1, 1716. METERS, WINDS TOWARD E
ADULT 3.1E-05 3.1E-05 3.1E-05 3.1E-05 3.1E-05 3.1E-05 3.1E-05 5.7E-05
TEEN 3.1E-05 3.1E-05 3.1E-05 3.1E-05 3.1E-05 3.1E-05 3.1E-05 5.7E-05
CHILD 3.1E-05 3.1E-05 3.1E-05 3.1E-05 3.1E-05 3.1E-05 3.1E-05 5.7E-05
INFNT 3.1E-05 3.1E-05 3.1E-05 3.1E-05 3.1E-05 3.1E-05 3.1E-05 5.7E-05

GROUND PATHWAY, DIST GP= 1, 1716. METERS, WINDS TOWARD E
ADULT 7.4E-04 7.4E-04 7.4E-04 7.4E-04 7.4E-04 7.4E-04 7.4E-04 8.6E-04
TEEN 7.4E-04 7.4E-04 7.4E-04 7.4E-04 7.4E-04 7.4E-04 7.4E-04 8.6E-04
CHILD 7.4E-04 7.4E-04 7.4E-04 7.4E-04 7.4E-04 7.4E-04 7.4E-04 8.6E-04
INFNT 7.4E-04 7.4E-04 7.4E-04 7.4E-04 7.4E-04 7.4E-04 7.4E-04 8.6E-04

VEGET PATHWAY, DIST GP= 1, 1705. METERS, WINDS TOWARD E
ADULT 3.8E-04 8.7E-05 3.3E-04 5.4E-04 2.1E-04 4.4E-05 9.5E-05 0.0E+00
TEEN 3.3E-04 9.5E-05 5.2E-04 8.1E-04 3.0E-04 4.9E-05 1.4E-04 0.0E+00
CHILD 2.9E-04 1.0E-04 1.2E-03 1.4E-03 4.8E-04 7.6E-05 2.2E-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, 6810. METERS, WINDS TOWARD E
ADULT 4.0E-06 2.0E-06 1.1E-06 5.4E-06 2.2E-06 6.5E-07 1.2E-06 0.0E+00
TEEN 1.9E-06 1.1E-06 4.6E-06 4.2E-06 1.6E-06 3.9E-07 8.7E-07 0.0E+00
CHILD 1.4E-06 8.3E-07 4.7E-06 5.5E-06 2.1E-06 4.8E-07 1.0E-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, 3556. METERS, WINDS TOWARD E
ADULT 9.4E-05 7.6E-06 8.6E-05 1.3E-04 4.8E-05 6.9E-06 1.9E-05 0.0E+00
TEEN 9.1E-05 9.8E-06 1.6E-04 2.3E-04 8.2E-05 9.8E-06 3.5E-05 0.0E+00
CHILD 7.1E-05 1.2E-05 3.7E-04 4.0E-04 1.3E-04 1.8E-05 5.4E-05 0.0E+00
INFNT 7.1E-05 1.6E-05 5.9E-04 7.6E-04 2.1E-04 3.5E-05 9.4E-05 0.0E+00

GOAT PATHWAY, DIST GP= 1, 3556. METERS, WINDS TOWARD E
ADULT 2.8E-04 1.6E-05 2.6E-04 4.0E-04 1.4E-04 1.2E-05 5.2E-05 0.0E+00
TEEN 2.7E-04 2.1E-05 4.7E-04 6.9E-04 2.4E-04 1.6E-05 1.0E-04 0.0E+00
CHILD 2.0E-04 2.5E-05 1.1E-03 1.2E-03 3.9E-04 2.9E-05 1.5E-04 0.0E+00
INFNT 2.0E-04 3.4E-05 1.8E-03 2.3E-03 6.2E-04 5.4E-05 2.7E-04 0.0E+00

INHAL PATHWAY, DIST GP= 1, 1716. METERS, WINDS TOWARD E
ADULT 2.4E-05 2.2E-05 1.9E-06 2.5E-05 2.3E-05 2.4E-05 2.8E-05 0.0E+00
TEEN 2.4E-05 2.2E-05 2.6E-06 2.5E-05 2.3E-05 2.4E-05 3.1E-05 0.0E+00
CHILD 2.0E-05 2.0E-05 3.5E-06 2.3E-05 2.1E-05 2.2E-05 2.7E-05 0.0E+00
INFNT 1.1E-05 1.1E-05 2.2E-06 1.4E-05 1.2E-05 1.4E-05 1.6E-05 0.0E+00

SUBTOTALS (NO PLUME)
ADULT 1.5E-03 8.7E-04 1.4E-03 1.8E-03 1.2E-03 8.2E-04 9.3E-04 8.6E-04
TEEN 1.5E-03 8.9E-04 1.9E-03 2.5E-03 1.4E-03 8.4E-04 1.0E-03 8.6E-04
CHILD 1.3E-03 9.0E-04 3.5E-03 3.7E-03 1.8E-03 8.8E-04 1.2E-03 8.6E-04
INFNT 1.0E-03 8.0E-04 3.1E-03 3.8E-03 1.6E-03 8.4E-04 1.1E-03 8.6E-04

TOTALS
ADULT 1.6E-03 9.0E-04 1.4E-03 1.9E-03 1.2E-03 8.5E-04 9.6E-04 9.2E-04
TEEN 1.5E-03 9.2E-04 1.9E-03 2.5E-03 1.4E-03 8.7E-04 1.1E-03 9.2E-04
CHILD 1.4E-03 9.3E-04 3.5E-03 3.7E-03 1.8E-03 9.1E-04 1.2E-03 9.2E-04
INFNT 1.0E-03 8.3E-04 3.1E-03 3.8E-03 1.6E-03 8.7E-04 1.1E-03 9.2E-04

INDIVIDUAL DOSES(MREM) DUE TO GASEOUS EFFLUENT
FOR DATES 91 1 1 1 THRU 91 33124

	T.BODY	GI-TRCT	BONE	LIVER	KIDNEY	THYRD	LUNG	SKIN
PLUME PATHWAY, DIST GP= 1, 1643. METERS, WINDS TOWARD ESE								
ADULT	3.0E-05	3.0E-05	3.0E-05	3.0E-05	3.0E-05	3.0E-05	3.0E-05	5.3E-05
TEEN	3.0E-05	3.0E-05	3.0E-05	3.0E-05	3.0E-05	3.0E-05	3.0E-05	5.3E-05
CHILD	3.0E-05	3.0E-05	3.0E-05	3.0E-05	3.0E-05	3.0E-05	3.0E-05	5.3E-05
INFNT	3.0E-05	3.0E-05	3.0E-05	3.0E-05	3.0E-05	3.0E-05	3.0E-05	5.3E-05
GROUND PATHWAY, DIST GP= 1, 1643. METERS, WINDS TOWARD ESE								
ADULT	5.4E-04	5.4E-04	5.4E-04	5.4E-04	5.4E-04	5.4E-04	5.4E-04	6.4E-04
TEEN	5.4E-04	5.4E-04	5.4E-04	5.4E-04	5.4E-04	5.4E-04	5.4E-04	6.4E-04
CHILD	5.4E-04	5.4E-04	5.4E-04	5.4E-04	5.4E-04	5.4E-04	5.4E-04	6.4E-04
INFNT	5.4E-04	5.4E-04	5.4E-04	5.4E-04	5.4E-04	5.4E-04	5.4E-04	6.4E-04
VEGET PATHWAY, DIST GP= 1, 1628. METERS, WINDS TOWARD ESE								
ADULT	3.0E-04	7.3E-05	2.5E-04	4.1E-04	1.6E-04	4.1E-05	8.0E-05	0.0E+00
TEEN	2.6E-04	8.0E-05	3.9E-04	6.2E-04	2.4E-04	4.7E-05	1.2E-04	0.0E+00
CHILD	2.3E-04	9.3E-05	9.2E-04	1.0E-03	3.8E-04	7.2E-05	1.8E-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	1.7E-05	8.4E-06	1.3E-05	2.2E-05	9.4E-06	3.1E-06	5.1E-06	0.0E+00
TEEN	8.0E-06	4.7E-06	1.0E-05	1.7E-05	6.9E-06	1.8E-06	3.8E-06	0.0E+00
CHILD	6.1E-06	3.6E-06	1.9E-05	2.2E-05	8.6E-06	2.2E-06	1.5E-06	0.0E+00
INFNT	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	3.0E+00	0.0E+00
COW PATHWAY, DIST GP= 1, 3556. METERS, WINDS TOWARD ESE								
ADULT	6.6E-05	6.2E-06	6.0E-05	9.4E-05	3.1E-05	5.6E-06	1.4E-05	0.0E+00
TEEN	6.4E-05	7.9E-06	1.1E-04	1.6E-04	5.8E-05	7.9E-06	2.6E-05	0.0E+00
CHILD	5.1E-05	1.0E-05	2.6E-04	2.8E-04	9.5E-05	1.4E-05	3.9E-05	0.0E+00
INFNT	5.2E-05	1.4E-05	4.1E-04	5.3E-04	1.5E-04	2.7E-05	6.8E-05	0.0E+00
GOAT PATHWAY, DIST GP= 1, 3556. METERS, WINDS TOWARD ESE								
ADULT	1.9E-04	1.3E-05	1.8E-04	2.8E-04	9.9E-05	1.0E-05	3.8E-05	0.0E+00
TEEN	1.9E-04	1.7E-05	3.2E-04	4.8E-04	1.7E-04	1.4E-05	7.2E-05	0.0E+00
CHILD	1.5E-04	2.1E-05	7.8E-04	8.3E-04	2.8E-04	2.3E-05	1.1E-04	0.0E+00
INFNT	1.4E-04	2.9E-05	1.2E-03	1.6E-03	4.4E-04	4.2E-05	1.9E-04	0.0E+00
INHAL PATHWAY, DIST GP= 1, 1643. METERS, WINDS TOWARD ESE								
ADULT	2.3E-05	2.2E-05	1.9E-06	2.4E-05	2.2E-05	2.3E-05	2.7E-05	0.0E+00
TEEN	2.3E-05	2.2E-05	2.6E-06	2.5E-05	2.3E-05	2.3E-05	3.0E-05	0.0E+00
CHILD	1.9E-05	1.9E-05	3.5E-06	2.2E-05	2.0E-05	2.1E-05	2.6E-05	0.0E+00
INFNT	1.1E-05	1.1E-05	2.1E-06	1.3E-05	1.2E-05	1.3E-05	1.5E-05	0.0E+00
SUBTOTALS (NO PLUME)								
ADULT	1.1E-03	6.7E-04	1.0E-03	1.4E-03	8.7E-04	6.3E-04	7.1E-04	6.4E-04
TEEN	1.1E-03	6.8E-04	1.4E-03	1.9E-03	1.0E-03	6.4E-04	7.9E-04	6.4E-04
CHILD	1.0E-03	6.9E-04	2.5E-03	2.7E-03	1.3E-03	6.8E-04	9.0E-04	6.4E-04
INFNT	7.5E-04	6.0E-04	2.2E-03	2.7E-03	1.1E-03	6.3E-04	8.2E-04	6.4E-04
TOTALS								
ADULT	1.2E-03	7.0E-04	1.1E-03	1.4E-03	9.0E-04	6.6E-04	7.4E-04	6.9E-04
TEEN	1.1E-03	7.1E-04	1.4E-03	1.9E-03	1.1E-03	6.7E-04	8.2E-04	6.9E-04
CHILD	1.0E-03	7.2E-04	2.6E-03	2.8E-03	1.4E-03	7.1E-04	9.3E-04	6.9E-04
INFNT	7.8E-04	6.3E-04	2.2E-03	2.7E-03	1.2E-03	6.6E-04	8.5E-04	6.9E-04

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT
FOR DATES 91 1 1 1 THRU 91 33124

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

PILME PATHWAY, DIST GP= 1, 1136. METERS, WINDS TOWARD SE
ADULT 5.0E-05 5.0E-05 5.0E-05 5.0E-05 5.0E-05 5.0E-05 5.0E-05 5.0E-05 9.6E-05
TEEN 5.0E-05 5.0E-05 5.0E-05 5.0E-05 5.0E-05 5.0E-05 5.0E-05 5.0E-05 9.6E-05
CHILD 5.0E-05 5.0E-05 5.0E-05 5.0E-05 5.0E-05 5.0E-05 5.0E-05 5.0E-05 9.6E-05
INFNT 5.0E-05 5.0E-05 5.0E-05 5.0E-05 5.0E-05 5.0E-05 5.0E-05 5.0E-05 9.6E-05

GROUND PATHWAY, DIST GP= 1, 1136. METERS, WINDS TOWARD SE
ADULT 1.1E-03 1.1E-03 1.1E-03 1.1E-03 1.1E-03 1.1E-03 1.1E-03 1.1E-03 1.3E-03
TEEN 1.1E-03 1.1E-03 1.1E-03 1.1E-03 1.1E-03 1.1E-03 1.1E-03 1.1E-03 1.3E-03
CHILD 1.1E-03 1.1E-03 1.1E-03 1.1E-03 1.1E-03 1.1E-03 1.1E-03 1.1E-03 1.3E-03
INFNT 1.1E-03 1.1E-03 1.1E-03 1.1E-03 1.1E-03 1.1E-03 1.1E-03 1.1E-03 1.3E-03

VEGET PATHWAY, DIST GP= 1, 914. METERS, WINDS TOWARD SE
ADULT 7.7E-04 2.0E-04 6.5E-04 1.1E-03 4.2E-04 1.1E-04 2.0E-04 0.0E+00
TEEN 6.8E-04 2.2E-04 1.0E-03 1.6E-03 6.1E-04 1.2E-04 3.1E-04 0.0E+00
CHILD 6.0E-04 2.4E-04 2.4E-03 2.7E-03 9.8E-04 1.8E-04 4.6E-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

MEAT PATHWAY, DIST GP= 1, 4354. METERS, WINDS TOWARD SE
ADULT 6.6E-06 3.7E-06 5.0E-06 8.8E-06 3.7E-06 1.2E-06 2.0E-06 0.0E+00
TEEN 3.1E-06 2.1E-06 4.2E-06 6.8E-06 2.7E-06 7.2E-07 1.5E-06 0.0E+00
CHILD 2.4E-06 1.5E-06 7.6E-06 8.9E-06 3.4E-06 8.8E-07 1.7E-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, 3556. METERS, WINDS TOWARD SE
ADULT 6.6E-05 6.2E-06 6.0E-05 9.4E-05 3.4E-05 6.5E-06 1.4E-05 0.0E+00
TEEN 6.4E-05 7.9E-06 1.1E-04 1.6E-04 5.8E-05 9.4E-06 2.5E-05 0.0E+00
CHILD 5.1E-05 9.9E-06 2.6E-04 2.8E-04 9.5E-05 1.7E-05 3.9E-05 0.0E+00
INFNT 5.2E-05 1.4E-05 4.2E-04 5.3E-04 1.5E-04 3.5E-05 6.8E-05 0.0E+00

GOAT PATHWAY, DIST GP= 1, 3556. METERS, WINDS TOWARD SE
ADULT 1.9E-04 1.3E-05 1.8E-04 2.8E-04 9.9E-05 1.1E-05 3.8E-05 0.0E+00
TEEN 1.9E-04 1.7E-05 3.3E-04 4.9E-04 1.7E-04 1.5E-05 7.2E-05 0.0E+00
CHILD 1.5E-04 2.1E-05 7.8E-04 8.3E-04 2.8E-04 2.7E-05 1.1E-04 0.0E+00
INFNT 1.4E-04 2.9E-05 1.2E-03 1.6E-03 4.4E-04 5.2E-05 1.9E-04 0.0E+00

INHAL PATHWAY, DIST GP= 1, 1136. METERS, WINDS TOWARD SE
ADULT 4.1E-05 3.8E-05 3.6E-06 4.3E-05 3.9E-05 4.0E-05 4.8E-05 0.0E+00
TEEN 4.1E-05 3.8E-05 5.0E-06 4.5E-05 4.0E-05 4.1E-05 5.3E-05 0.0E+00
CHILD 3.5E-05 3.4E-05 6.7E-06 4.0E-05 3.6E-05 3.7E-05 4.6E-05 0.0E+00
INFNT 2.0E-05 1.9E-05 4.1E-06 2.4E-05 2.1E-05 2.3E-05 2.7E-05 0.0E+00

SUBTOTALS (NO PILME)
ADULT 2.2E-03 1.3E-03 2.0E-03 2.6E-03 1.7E-03 1.2E-03 1.4E-03 1.3E-03
TEEN 2.0E-03 1.4E-03 2.6E-03 3.4E-03 2.0E-03 1.3E-03 1.5E-03 1.3E-03
CHILD 1.9E-03 1.4E-03 4.6E-03 4.9E-03 2.5E-03 1.3E-03 1.7E-03 1.3E-03
INFNT 1.3E-03 1.1E-03 2.7E-03 3.2E-03 1.7E-03 1.2E-03 1.4E-03 1.3E-03

TOTALS
ADULT 2.2E-03 1.4E-03 2.0E-03 2.6E-03 1.7E-03 1.3E-03 1.4E-03 1.4E-03
TEEN 2.1E-03 1.4E-03 2.6E-03 3.4E-03 2.0E-03 1.3E-03 1.6E-03 1.4E-03
CHILD 2.0E-03 1.4E-03 4.6E-03 5.0E-03 2.5E-03 1.4E-03 1.8E-03 1.4E-03
INFNT 1.3E-03 1.2E-03 2.8E-03 3.3E-03 1.7E-03 1.2E-03 1.4E-03 1.4E-03

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT
FOR DATES 91 1 1 1 THRU 91 33124

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

PILME PATHWAY, DIST GP= 1, 1507. METERS, WINDS TOWARD SSE
ADULT 5.1E-05 5.1E-05 5.1E-05 5.1E-05 5.1E-05 5.1E-05 5.2E-05 9.3E-05
TEEN 5.1E-05 5.1E-05 5.1E-05 5.1E-05 5.1E-05 5.1E-05 5.2E-05 9.3E-05
CHILD 5.1E-05 5.1E-05 5.1E-05 5.1E-05 5.1E-05 5.1E-05 5.2E-05 9.3E-05
INFNT 5.1E-05 5.1E-05 5.1E-05 5.1E-05 5.1E-05 5.1E-05 5.2E-05 9.3E-05

GROUND PATHWAY, DIST GP= 1, 1507. METERS, WINDS TOWARD SSE
ADULT 6.1E-04 6.1E-04 6.1E-04 6.1E-04 6.1E-04 6.1E-04 6.1E-04 7.2E-04
TEEN 6.1E-04 6.1E-04 6.1E-04 6.1E-04 6.1E-04 6.1E-04 6.1E-04 7.2E-04
CHILD 6.1E-04 6.1E-04 6.1E-04 6.1E-04 6.1E-04 6.1E-04 6.1E-04 7.2E-04
INFNT 6.1E-04 6.1E-04 6.1E-04 6.1E-04 6.1E-04 6.1E-04 6.1E-04 7.2E-04

VEGET PATHWAY, DIST GP= 1, 1093. METERS, WINDS TOWARD SSE
ADULT 4.6E-04 1.7E-04 3.7E-04 6.3E-04 2.7E-04 1.0E-04 1.5E-04 0.0E+00
TEEN 4.1E-04 1.9E-04 5.8E-04 9.3E-04 3.8E-04 1.1E-04 2.1E-04 0.0E+00
CHILD 4.0E-04 2.1E-04 1.4E-03 1.5E-03 6.0E-04 1.7E-04 3.2E-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, 1093. METERS, WINDS TOWARD SSE
ADULT 5.2E-05 4.2E-05 3.7E-05 6.8E-05 3.1E-05 1.4E-05 1.9E-05 0.0E+00
TEEN 2.6E-05 2.3E-05 3.0E-05 5.2E-05 2.2E-05 8.2E-06 1.3E-05 0.0E+00
CHILD 2.2E-05 1.7E-05 5.5E-05 6.7E-05 2.7E-05 1.0E-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, 3556. METERS, WINDS TOWARD SSE
ADULT 5.0E-05 6.8E-06 4.5E-05 7.1E-05 2.7E-05 9.7E-06 1.2E-05 0.0E+00
TEEN 4.9E-05 8.8E-06 8.2E-05 1.2E-04 4.5E-05 1.4E-05 2.1E-05 0.0E+00
CHILD 4.1E-05 1.2E-05 2.0E-04 2.1E-04 7.4E-05 2.7E-05 3.3E-05 0.0E+00
INFNT 4.4E-05 1.6E-05 3.1E-04 4.0E-04 1.2E-04 5.6E-05 5.6E-05 0.0E+00

GOAT PATHWAY, DIST GP= 1, 3556. METERS, WINDS TOWARD SSE
ADULT 1.5E-04 1.3E-05 1.4E-04 2.1E-04 7.7E-05 1.6E-05 3.2E-05 0.0E+00
TEEN 1.4E-04 1.7E-05 2.5E-04 3.6E-04 1.3E-04 2.2E-05 5.8E-05 0.0E+00
CHILD 1.1E-04 2.3E-05 5.9E-04 6.2E-04 2.1E-04 4.0E-05 8.9E-05 0.0E+00
INFNT 1.2E-04 3.4E-05 9.4E-04 1.2E-03 3.4E-04 7.9E-05 1.6E-04 0.0E+00

INHAL PATHWAY, DIST GP= 1, 1507. METERS, WINDS TOWARD SSE
ADULT 3.2E-05 3.0E-05 2.0E-06 3.2E-05 3.1E-05 3.3E-05 3.9E-05 0.0E+00
TEEN 3.1E-05 3.0E-05 2.7E-06 3.4E-05 3.1E-05 3.4E-05 4.3E-05 0.0E+00
CHILD 2.7E-05 2.7E-05 3.7E-06 3.0E-05 2.8E-05 3.2E-05 3.7E-05 0.0E+00
INFNT 1.5E-05 1.5E-05 2.2E-06 1.8E-05 1.6E-05 2.0E-05 2.2E-05 0.0E+00

SUBTOTALS (NO PILME)
ADULT 1.4E-03 8.8E-04 1.2E-03 1.6E-03 1.0E-03 7.9E-04 8.6E-04 7.2E-04
TEEN 1.3E-03 8.8E-04 1.6E-03 2.1E-03 1.2E-03 8.0E-04 9.6E-04 7.2E-04
CHILD 1.2E-03 9.1E-04 2.8E-03 3.1E-03 1.6E-03 9.0E-04 1.1E-03 7.2E-04
INFNT 7.9E-04 6.8E-04 1.9E-03 2.2E-03 1.1E-03 7.7E-04 8.5E-04 7.2E-04

TOTALS
ADULT 1.4E-03 9.3E-04 1.3E-03 1.7E-03 1.1E-03 8.4E-04 9.1E-04 8.1E-04
TEEN 1.3E-03 9.3E-04 1.6E-03 2.2E-03 1.3E-03 8.5E-04 1.0E-03 8.1E-04
CHILD 1.3E-03 9.6E-04 2.9E-03 3.1E-03 1.6E-03 9.5E-04 1.2E-03 8.1E-04
INFNT 8.4E-04 7.3E-04 1.9E-03 2.3E-03 1.1E-03 8.2E-04 9.0E-04 8.1E-04

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT
FOR DATES 91 1 1 1 THRU 91 33124

	T.BODY	GI-TRCT	BONE	LIVER	KIDNEY	THYRD	LUNG	SKIN
PLUME PATHWAY, DIST GP= 1, 1026. METERS, WINDS TOWARD S								
ADULT	8.0E-05	8.0E-05	8.0E-05	8.0E-05	8.0E-05	8.0E-05	8.1E-05	1.5E-04
TEEN	8.0E-05	8.0E-05	8.0E-05	8.0E-05	8.0E-05	8.0E-05	8.1E-05	1.5E-04
CHILD	8.0E-05	8.0E-05	8.0E-05	8.0E-05	8.0E-05	8.0E-05	8.1E-05	1.5E-04
INFNT	8.0E-05	8.0E-05	8.0E-05	8.0E-05	8.0E-05	8.0E-05	8.1E-05	1.5E-04
GROUND PATHWAY, DIST GP= 1, 1026. METERS, WINDS TOWARD S								
ADULT	1.1E-03	1.1E-03	1.1E-03	1.1E-03	1.1E-03	1.1E-03	1.1E-03	1.3E-03
TEEN	1.1E-03	1.1E-03	1.1E-03	1.1E-03	1.1E-03	1.1E-03	1.1E-03	1.3E-03
CHILD	1.1E-03	1.1E-03	1.1E-03	1.1E-03	1.1E-03	1.1E-03	1.1E-03	1.3E-03
INFNT	1.1E-03	1.1E-03	1.1E-03	1.1E-03	1.1E-03	1.1E-03	1.1E-03	1.3E-03
VEGET PATHWAY, DIST GP= 1, 863. METERS, WINDS TOWARD S								
ADULT	7.1E-04	2.3E-04	5.8E-04	9.8E-04	4.1E-04	1.3E-04	2.2E-04	0.0E+00
TEEN	6.4E-04	2.5E-04	9.1E-04	1.5E-03	5.8E-04	1.5E-04	3.1E-04	0.0E+00
CHILD	5.9E-04	2.9E-04	2.1E-03	2.4E-03	9.3E-04	2.3E-04	4.7E-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, 6115. METERS, WINDS TOWARD S								
ADULT	3.1E-06	2.1E-06	2.1E-06	4.0E-06	1.9E-06	8.4E-07	1.2E-06	0.0E+00
TEEN	1.5E-06	1.2E-06	1.7E-06	3.1E-06	1.3E-06	5.0E-07	8.2E-07	0.0E+00
CHILD	1.3E-06	9.4E-07	3.2E-06	4.0E-06	1.7E-06	6.1E-07	9.8E-07	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, 3556. METERS, WINDS TOWARD S								
ADULT	5.4E-05	6.7E-06	4.8E-05	7.6E-05	2.9E-05	7.2E-06	1.3E-05	0.0E+00
TEEN	5.3E-05	8.7E-06	8.7E-05	1.3E-04	4.8E-05	1.0E-05	2.2E-05	0.0E+00
CHILD	4.4E-05	1.1E-05	2.1E-04	2.2E-04	7.9E-05	1.8E-05	3.5E-05	0.0E+00
INFNT	4.6E-05	1.6E-05	3.3E-04	4.3E-04	1.3E-04	3.6E-05	5.9E-05	0.0E+00
GOAT PATHWAY, DIST GP= 1, 3556. METERS, WINDS TOWARD S								
ADULT	1.6E-04	1.4E-05	1.4E-04	2.2E-04	8.2E-05	1.3E-05	3.4E-05	0.0E+00
TEEN	1.5E-04	1.8E-05	2.6E-04	3.9E-04	1.4E-04	1.7E-05	6.1E-05	0.0E+00
CHILD	1.2E-04	2.3E-05	6.2E-04	6.6E-04	2.3E-04	3.0E-05	9.4E-05	0.0E+00
INFNT	1.2E-04	3.4E-05	1.0E-03	1.3E-03	3.6E-04	5.6E-05	1.6E-04	0.0E+00
INHAL PATHWAY, DIST GP= 1, 1026. METERS, WINDS TOWARD S								
ADULT	5.6E-05	5.3E-05	4.3E-06	5.8E-05	5.4E-05	5.6E-05	6.7E-05	0.0E+00
TEEN	5.5E-05	5.3E-05	6.0E-06	6.1E-05	5.5E-05	5.8E-05	7.4E-05	0.0E+00
CHILD	4.8E-05	4.6E-05	8.1E-06	5.4E-05	4.9E-05	5.4E-05	6.4E-05	0.0E+00
INFNT	2.7E-05	2.7E-05	4.9E-06	3.2E-05	2.8E-05	3.3E-05	3.8E-05	0.0E+00
SUBTOTALS (NO PLUME)								
ADULT	2.1E-03	1.4E-03	1.9E-03	2.4E-03	1.7E-03	1.3E-03	1.4E-03	1.3E-03
TEEN	2.0E-03	1.4E-03	2.4E-03	3.1E-03	1.9E-03	1.3E-03	1.6E-03	1.3E-03
CHILD	1.9E-03	1.5E-03	4.1E-03	4.5E-03	2.4E-03	1.4E-03	1.8E-03	1.3E-03
INFNT	1.3E-03	1.2E-03	2.4E-03	2.8E-03	1.6E-03	1.2E-03	1.4E-03	1.3E-03
TOTALS								
ADULT	2.2E-03	1.5E-03	2.0E-03	2.5E-03	1.8E-03	1.4E-03	1.5E-03	1.4E-03
TEEN	2.1E-03	1.5E-03	2.4E-03	3.2E-03	2.0E-03	1.4E-03	1.6E-03	1.4E-03
CHILD	2.0E-03	1.5E-03	4.2E-03	4.5E-03	2.5E-03	1.5E-03	1.8E-03	1.4E-03
INFNT	1.4E-03	1.3E-03	2.5E-03	2.9E-03	1.7E-03	1.3E-03	1.4E-03	1.4E-03

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT
FOR DATES 91 1 1 1 THRU 91 33124

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

PILME PATHWAY, DIST GP= 1, 942. METERS, WINDS TOWARD SSW
ADULT 5.8E-05 5.8E-05 5.8E-05 5.8E-05 5.8E-05 5.8E-05 5.8E-05 1.1E-04
TEEN 5.8E-05 5.8E-05 5.8E-05 5.8E-05 5.8E-05 5.8E-05 5.8E-05 1.1E-04
CHILD 5.8E-05 5.8E-05 5.8E-05 5.8E-05 5.8E-05 5.8E-05 5.8E-05 1.1E-04
INFNT 5.8E-05 5.8E-05 5.8E-05 5.8E-05 5.8E-05 5.8E-05 5.8E-05 1.1E-04

GROUND PATHWAY, DIST GP= 1, 942. METERS, WINDS TOWARD SSW
ADULT 9.5E-04 9.5E-04 9.5E-04 9.5E-04 9.5E-04 9.5E-04 9.5E-04 1.1E-03
TEEN 9.5E-04 9.5E-04 9.5E-04 9.5E-04 9.5E-04 9.5E-04 9.5E-04 1.1E-03
CHILD 9.5E-04 9.5E-04 9.5E-04 9.5E-04 9.5E-04 9.5E-04 9.5E-04 1.1E-03
INFNT 9.5E-04 9.5E-04 9.5E-04 9.5E-04 9.5E-04 9.5E-04 9.5E-04 1.1E-03

VEGET PATHWAY, DIST GP= 1, 770. METERS, WINDS TOWARD SSW
ADULT 7.1E-04 1.8E-04 5.8E-04 9.7E-04 3.9E-04 1.0E-04 2.0E-04 0.0E+00
TEEN 6.2E-04 2.0E-04 9.2E-04 1.5E-03 5.6E-04 1.2E-04 2.9E-04 0.0E+00
CHILD 5.6E-04 2.3E-04 2.2E-03 2.4E-03 9.0E-04 1.8E-04 4.3E-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 SSW
ADULT 1.5E-06 8.4E-07 1.1E-06 2.0E-06 9.1E-07 3.6E-07 5.4E-07 0.0E+00
TEEN 7.5E-07 4.7E-07 9.1E-07 1.6E-06 6.6E-07 2.2E-07 3.9E-07 0.0E+00
CHILD 6.0E-07 3.9E-07 1.7E-06 2.0E-06 8.2E-07 2.6E-07 4.6E-07 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, 3556. METERS, WINDS TOWARD SSW
ADULT 4.5E-05 4.7E-06 4.0E-05 6.4E-05 2.3E-05 4.1E-06 9.8E-06 0.0E+00
TEEN 4.4E-05 6.0E-06 7.3E-05 1.1E-04 4.0E-05 5.8E-06 1.8E-05 0.0E+00
CHILD 3.6E-05 7.7E-06 1.7E-04 1.9E-04 6.5E-05 1.0E-05 2.7E-05 0.0E+00
INFNT 3.7E-05 1.1E-05 2.8E-04 3.6E-04 1.0E-04 1.9E-05 4.7E-05 0.0E+00

GOAT PATHWAY, DIST GP= 1, 3556. METERS, WINDS TOWARD SSW
ADULT 1.3E-04 9.8E-06 1.2E-04 1.9E-04 6.7E-05 7.5E-06 2.7E-05 0.0E+00
TEEN 1.3E-04 1.3E-05 2.2E-04 3.3E-04 1.2E-04 1.0E-05 5.0E-05 0.0E+00
CHILD 1.0E-04 1.6E-05 5.2E-04 5.6E-04 1.9E-04 1.7E-05 7.6E-05 0.0E+00
INFNT 1.0E-04 2.3E-05 8.4E-04 1.1E-03 3.0E-04 3.1E-05 1.3E-04 0.0E+00

INHAL PATHWAY, DIST GP= 1, 942. METERS, WINDS TOWARD SSW
ADULT 4.4E-05 4.1E-05 3.7E-06 4.5E-05 4.2E-05 4.3E-05 5.1E-05 0.0E+00
TEEN 4.3E-05 4.1E-05 5.1E-06 4.7E-05 4.3E-05 4.4E-05 5.7E-05 0.0E+00
CHILD 3.7E-05 3.6E-05 6.9E-06 4.2E-05 3.8E-05 4.1E-05 4.9E-05 0.0E+00
INFNT 2.1E-05 2.0E-05 4.2E-06 2.5E-05 2.2E-05 2.5E-05 2.9E-05 0.0E+00

SUBTOTALS (NO PILME)

ADULT 1.9E-03 1.2E-03 1.7E-03 2.2E-03 1.5E-03 1.1E-03 1.2E-03 1.1E-03
TEEN 1.8E-03 1.2E-03 2.2E-03 2.9E-03 1.7E-03 1.1E-03 1.4E-03 1.1E-03
CHILD 1.7E-03 1.2E-03 3.8E-03 4.2E-03 2.1E-03 1.2E-03 1.5E-03 1.1E-03
INFNT 1.1E-03 1.0E-03 2.1E-03 2.4E-03 1.4E-03 1.0E-03 1.2E-03 1.1E-03

TOTALS

ADULT 1.9E-03 1.2E-03 1.8E-03 2.3E-03 1.5E-03 1.2E-03 1.3E-03 1.2E-03
TEEN 1.8E-03 1.3E-03 2.2E-03 2.9E-03 1.8E-03 1.2E-03 1.4E-03 1.2E-03
CHILD 1.7E-03 1.3E-03 3.9E-03 4.2E-03 2.2E-03 1.3E-03 1.6E-03 1.2E-03
INFNT 1.2E-03 1.1E-03 2.1E-03 2.5E-03 1.4E-03 1.1E-03 1.2E-03 1.2E-03

APPENDIX 1.3

Summary of Maximum Individual Doses
Second Quarter, 1991

12 TWP 3150 RMC.301
Attachment XII

SUMMARY OF MAXIMUM INDIVIDUAL DOSES 2nd Qtr 1991

EFFLUENT	APPLICABLE ORGAN	ESTIMATED DOSE (MREM)	AGE GROUP	LOCATION DIST DIR (M) (Toward)	% OF APPLICABLE LIMIT	QUARTERLY LIMIT (MR)
Liquid	Total Body	1.54 E-2	Adult	Receptor 1	1.03 E-0	1.5 E+0
Liquid	Liver	1.97 E-2	Child	Receptor 1	3.94 E-1	5.0 E+0
Noble Gas	Air Dose (Gamma-mrad)	2.13 E-3		594 S	4.26 E-2	5.0 E+0
Noble Gas	Air Dose (Beta-mrad)	2.08 E-3		651 N	2.08 E-2	1.0 E+1
Noble Gas	Total Body	1.13 E-3	All	659 N	2.26 E-2	Annual 5.0 E+0
Noble Gas	Skin	2.64 E-3	All	659 N	1.76 E-2	Annual 1.5 E+1
Iodines and Particulates	Thyroid	1.60 E-2	Infant	659 "	2.13 E-1	7.5 E+0

LAST LIQUID DOSE ACCUMULATIONS (MREM)

START DATE 91 4 1 1 END DATE 91 63024

	BONE	LIVER	T.BODY	THYRD	KIDNEY	LUNG	GI-ILLI	SKIN
WATER								
ADULT	6.2E-05	4.8E-03	4.8E-03	4.9E-03	4.7E-03	4.7E-03	5.2E-03	0.0E+00
TEEN	6.0E-05	3.4E-03	3.3E-03	3.5E-03	3.3E-03	3.3E-03	3.7E-03	0.0E+00
CHILD	1.7E-04	6.5E-03	6.4E-03	6.8E-03	6.4E-03	6.3E-03	6.6E-03	0.0E+00
INFANT	1.8E-04	6.5E-03	6.3E-03	7.0E-03	6.3E-03	6.2E-03	6.4E-03	0.0E+00

SHORE

ADULT	3.1E-05	3.1E-05	3.1E-05	3.1E-05	3.1E-05	3.1E-05	3.1E-05	3.6E-05
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	3.6E-05	3.6E-05	3.6E-05	3.6E-05	3.6E-05	3.6E-05	3.6E-05	4.3E-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	8.4E-03	1.5E-02	1.1E-02	5.7E-04	5.1E-03	1.9E-03	1.7E-03	0.0E+00
TEEN	8.9E-03	1.5E-02	6.1E-03	4.8E-04	5.1E-03	2.1E-03	1.2E-03	0.0E+00
CHILD	1.1E-02	1.3E-02	2.6E-03	4.5E-04	4.3E-03	1.7E-03	5.3E-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	8.5E-03	1.9E-02	1.5E-02	5.5E-03	9.8E-03	6.6E-03	7.0E-03	3.6E-05
TEEN	9.2E-03	1.9E-02	9.7E-03	4.1E-03	8.6E-03	5.6E-03	5.0E-03	2.0E-04
CHILD	1.1E-02	2.0E-02	9.0E-03	7.3E-03	1.1E-02	8.0E-03	7.2E-03	4.3E-05
INFANT	1.8E-04	6.5E-03	6.3E-03	7.0E-03	6.3E-03	6.2E-03	6.4E-03	0.0E+00

DATES OF LAST AIR DOSE ACCUMULATION ARE FROM 91 4 1 1 0 TO 91 63024 0
DOSE ACCUMULATION FOR GAMMA MRAD
FOR RELEASE POINT 1

**DIRECTION FROM N

8.7192E-04	1.0088E-04	4.4341E-05	2.5115E-05	1.6927E-05
7.7416E-06	2.6224E-06	1.1941E-06	7.1666E-07	4.0689E-07

**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

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

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

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

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 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

ENTER: [RETURN] WHEN READY TO CONTINUE

FOR RELEASE POINT 2

**DIRECTION FROM N

1.2586E-03	1.3885E-04	6.7601E-05	4.1167E-05	2.9245E-05
1.4946E-05	5.9997E-06	3.0118E-06	1.9385E-06	1.2403E-06

**DIRECTION FROM NNE

1.2031E-03	1.4646E-04	7.2761E-05	4.4799E-05	3.1820E-05
1.6209E-05	6.5419E-06	3.2951E-06	2.1243E-06	1.3522E-06

**DIRECTION FROM NE

1.7376E-03	2.0364E-04	1.0219E-04	6.3402E-05	4.5129E-05
2.3046E-05	9.3488E-06	4.7143E-06	3.0394E-06	1.9407E-06

**DIRECTION FROM ENE

3.3417E-03	3.5398E-04	1.8431E-04	1.1689E-04	8.4519E-05
4.4383E-05	1.8488E-05	9.3327E-06	6.0057E-06	3.8948E-06

**DIRECTION FROM E

2.6321E-03	2.8602E-04	1.4753E-04	9.3042E-05	6.7050E-05
3.5013E-05	1.4502E-05	7.3177E-06	4.7100E-06	3.0439E-06

**DIRECTION FROM ESE

1.7117E-03	1.9273E-04	9.6924E-05	6.0163E-05	4.3035E-05
2.2204E-05	9.0515E-06	4.5483E-06	2.9228E-06	1.8748E-06

**DIRECTION FROM SE

2.3907E-03	2.6329E-04	1.3500E-04	8.4765E-05	6.1116E-05
3.1989E-05	1.3245E-05	6.6803E-06	4.2992E-06	2.7781E-06

**DIRECTION FROM SSE

2.2297E-03	2.3883E-04	1.2375E-04	7.8220E-05	5.6522E-05
2.9669E-05	1.2338E-05	6.2252E-06	4.0058E-06	2.5961E-06

**DIRECTION FROM S

2.1004E-03	2.4549E-04	1.2346E-04	7.6600E-05	5.4743E-05
2.8215E-05	1.1516E-05	5.8072E-06	3.7430E-06	2.3989E-06

**DIRECTION FROM SSW

1.0483E-03	1.2321E-04	6.0506E-05	3.6957E-05	2.6309E-05
1.3493E-05	5.4362E-06	2.7235E-06	1.7485E-06	1.1145E-06

**DIRECTION FROM SW

8.2852E-04	9.9061E-05	4.6840E-05	2.7977E-05	1.9638E-05
9.8297E-06	3.8588E-06	1.9374E-06	1.2501E-06	7.8861E-07

**DIRECTION FROM WSW

9.6695E-04	1.0408E-04	5.2160E-05	3.2344E-05	2.3210E-05
1.2065E-05	4.9443E-06	2.4910E-06	1.6033E-06	1.0336E-06

**DIRECTION FROM W

6.8144E-04	7.7585E-05	3.8299E-05	2.3480E-05	1.6750E-05
8.6185E-06	3.4835E-06	1.7454E-06	1.1198E-06	7.1555E-07

**DIRECTION FROM WNW

4.5865E-04	5.3539E-05	2.5981E-05	1.5774E-05	1.1159E-05
5.6538E-06	2.2532E-06	1.1302E-06	7.2686E-07	4.6120E-07

**DIRECTION FROM NW

4.5483E-04	4.9248E-05	2.3461E-05	1.4111E-05	9.9105E-06
4.9465E-06	1.9310E-06	9.5891E-07	6.1270E-07	3.8654E-07

**DIRECTION FROM NNW

4.1310E-04	4.3114E-05	2.0679E-05	1.2536E-05	8.8900E-06
4.5398E-06	1.8367E-06	9.4680E-07	6.2077E-07	3.9972E-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

FOR RELEASE POINT 3

**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

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

3.3109E-04	3.8308E-05	1.6838E-05	9.5371E-06	6.4278E-06
2.9397E-06	9.9580E-07	4.5345E-07	2.7214E-07	1.5451E-07

**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

6.7031E-04	7.7556E-05	3.4088E-05	1.9308E-05	1.3013E-05
5.9516E-06	2.0160E-06	9.1803E-07	5.5095E-07	3.1281E-07

**DIRECTION FROM SSE

1.6955E-03	2.3746E-04	1.0807E-04	6.2090E-05	4.3698E-05
2.2243E-05	8.6178E-06	4.2494E-06	2.7094E-06	1.6902E-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

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

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 NW

1.9856E-06	1.8788E-07	7.9119E-08	4.3942E-08	2.8981E-08
1.2731E-08	4.1449E-09	1.9540E-09	1.2524E-09	7.7685E-10

**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 91 4 1 1 0 TO 91 63024 0
DOSE ACCUMULATION FOR BETA MRAD
FOR RELEASE POINT 1

**DIRECTION FROM N

6.3231E-04	7.3160E-05	3.2156E-05	1.8214E-05	1.2276E-05
5.6142E-06	1.9018E-06	8.6599E-07	5.1972E-07	2.9508E-07

**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

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

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

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

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 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

FOR RELEASE POINT 2

**DIRECTION FROM N

1.4403E-03	1.5974E-04	7.7279E-05	4.6864E-05	3.3221E-05
1.6915E-05	6.7563E-06	3.3866E-06	1.784E-06	1.3909E-06

**DIRECTION FROM NNE

1.3340E-03	1.6280E-04	8.0483E-05	4.9396E-05	3.5038E-05
1.7809E-05	7.1615E-06	3.6014E-06	2.3195E-06	1.4738E-06

**DIRECTION FROM NE

1.9648E-03	2.3041E-04	1.1570E-04	7.1808E-05	5.1112E-05
2.6098E-05	1.0590E-05	5.3415E-06	3.4445E-06	2.1994E-06

**DIRECTION FROM ENE

3.6389E-03	1.8660E-04	2.0084E-04	1.2721E-04	9.1914E-05
4.8207E-05	2.0054E-05	1.0121E-05	6.5125E-06	1.2207E-06

**DIRECTION FROM E

3.0250E-03	3.3242E-04	1.7054E-04	1.0720E-04	7.7119E-05
4.0162E-05	1.6584E-05	8.3661E-06	5.3857E-06	3.4751E-06

**DIRECTION FROM ESE

2.1590E-03	2.4689E-04	1.2365E-04	7.6541E-05	5.4666E-05
2.8134E-05	1.1440E-05	5.7497E-06	3.6966E-06	2.3672E-06

**DIRECTION FROM SE

2.7419E-03	3.0419E-04	1.5526E-04	9.7207E-05	7.0009E-05
3.6586E-05	1.5116E-05	7.6229E-06	4.9066E-06	3.1674E-06

**DIRECTION FROM SSE

2.5093E-03	2.6885E-04	1.3914E-04	8.7885E-05	6.3497E-05
3.3327E-05	1.3853E-05	6.9886E-06	4.4967E-06	2.9139E-06

**DIRECTION FROM S

2.3905E-03	3.176E-04	1.4120E-04	8.7416E-05	6.2399E-05
3.2089E-05	1.065E-05	6.5869E-06	4.2457E-06	2.7174E-06

**DIRECTION FROM SSW

1.1982E-03	1.4249E-04	6.9627E-05	4.2380E-05	3.0127E-05
1.5418E-05	6.1919E-06	3.0995E-06	1.9894E-06	1.2658E-06

**DIRECTION FROM SW

9.6956E-04	1.1648E-04	5.4906E-05	3.2710E-05	2.2954E-05
1.1490E-05	4.5025E-06	2.2578E-06	1.4558E-06	9.1753E-07

**DIRECTION FROM WSW

1.0892E-03	1.1804E-04	5.8782E-05	3.6303E-05	2.6008E-05
1.3485E-05	5.5052E-06	2.7703E-06	1.7821E-06	1.1467E-06

**DIRECTION FROM W

7.9907E-04	9.2078E-05	4.5192E-05	2.7599E-05	1.9656E-05
1.0088E-05	4.0634E-06	2.0349E-06	1.3056E-06	8.3271E-07

**DIRECTION FROM WNW

6.0627E-04	7.0463E-05	3.4359E-05	2.0927E-05	1.4822E-05
7.5223E-06	3.0060E-06	1.5080E-06	9.6960E-07	6.1587E-07

**DIRECTION FROM NW

5.3277E-04	5.8022E-05	2.7376E-05	1.6363E-05	1.1457E-05
5.6893E-06	2.2044E-06	1.0928E-06	5.9790E-07	4.3884E-07

**DIRECTION FROM NNW

4.8223E-04	5.1251E-05	2.4506E-05	1.4813E-05	1.0494E-05
5.3505E-06	2.1581E-06	1.1105E-06	7.2739E-07	4.6748E-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

FOR RELEASE POINT 3

**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

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

1.1396E-03	1.3185E-04	5.7954E-05	3.2826E-05	2.2124E-05
1.0118E-05	3.4275E-06	1.5607E-06	9.3667E-07	5.3181E-07

**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

2.0085E-03	2.3239E-04	1.0214E-04	5.7855E-05	3.8993E-05
1.7833E-05	6.0408E-06	2.7508E-06	1.6509E-06	9.3730E-07

**DIRECTION FROM SSE

5.0805E-03	7.1152E-04	3.2381E-04	1.8605E-04	1.3094E-04
6.6650E-05	2.5822E-05	1.2733E-05	8.1185E-06	5.0645E-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

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

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 NW

1.8155E-04	1.7179E-05	7.2340E-06	4.0177E-06	2.6498E-06
1.1640E-06	3.7898E-07	1.7865E-07	1.1451E-07	7.1028E-08

**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

INDIVIDUAL DOSES(MREM) DUE TO GASEOUS EFFLUENT
FOR DATES 91 4 1 1 THRU 91 63024

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

PLUME PATHWAY, DIST GP= 1, 659. METERS, WINDS TOWARD N
ADULT 1.1E-03 1.1E-03 1.1E-03 1.1E-03 1.1E-03 1.1E-03 1.1E-03 2.6E-03
TEEN 1.1E-03 1.1E-03 1.1E-03 1.1E-03 1.1E-03 1.1E-03 1.1E-03 2.6E-03
CHILD 1.1E-03 1.1E-03 1.1E-03 1.1E-03 1.1E-03 1.1E-03 1.1E-03 2.6E-03
INFNT 1.1E-03 1.1E-03 1.1E-03 1.1E-03 1.1E-03 1.1E-03 1.1E-03 2.6E-03

GROUND PATHWAY, DIST GP= 1, 659. METERS, WINDS TOWARD N
ADULT 3.1E-03 3.1E-03 3.1E-03 3.1E-03 3.1E-03 3.1E-03 3.1E-03 3.6E-03
TEEN 3.1E-03 3.1E-03 3.1E-03 3.1E-03 3.1E-03 3.1E-03 3.1E-03 3.6E-03
CHILD 3.1E-03 3.1E-03 3.1E-03 3.1E-03 3.1E-03 3.1E-03 3.1E-03 3.6E-03
INFNT 3.1E-03 3.1E-03 3.1E-03 3.1E-03 3.1E-03 3.1E-03 3.1E-03 3.6E-03

VEGET PATHWAY, DIST GP= 1, 8045. METERS, WINDS TOWARD N
ADULT 3.4E-05 1.0E-05 2.2E-05 4.4E-05 2.1E-05 9.6E-05 1.2E-05 0.0E+00
TEEN 3.1E-05 1.2E-05 3.5E-05 6.5E-05 2.8E-05 8.2E-05 1.6E-05 0.0E+00
CHILD 3.1E-05 1.6E-05 8.2E-05 1.1E-04 4.4E-05 1.2E-04 2.5E-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

MEAT PATHWAY, DIST GP= 1, 8045. METERS, WINDS TOWARD N
ADULT 3.9E-06 1.8E-06 2.3E-06 4.9E-06 2.4E-06 1.2E-05 1.6E-06 0.0E+00
TEEN 1.9E-06 1.0E-06 1.9E-06 3.7E-06 1.7E-06 8.4E-06 1.1E-06 0.0E+00
CHILD 1.6E-06 1.0E-06 3.4E-06 4.7E-06 2.1E-06 1.2E-05 1.3E-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, 3556. METERS, WINDS TOWARD N
ADULT 1.1E-04 1.3E-05 8.5E-05 1.5E-04 6.0E-05 1.3E-03 2.3E-05 0.0E+00
TEEN 1.1E-04 1.6E-05 1.5E-04 2.5E-04 1.0E-04 2.0E-03 4.1E-05 0.0E+00
CHILD 9.3E-05 2.1E-05 3.6E-04 4.3E-04 1.6E-04 4.0E-03 6.3E-05 0.0E+00
INFNT 1.0E-04 3.0E-05 5.9E-04 8.1E-04 2.6E-04 9.7E-03 1.1E-04 0.0E+00

GOAT PATHWAY, DIST GP= 1, 3556. METERS, WINDS TOWARD N
ADULT 3.1E-04 2.6E-05 2.5E-04 4.3E-04 1.6E-04 1.5E-03 6.2E-05 0.0E+00
TEEN 3.1E-04 3.4E-05 4.5E-04 7.4E-04 2.7E-04 2.4E-03 1.1E-04 0.0E+00
CHILD 2.5E-04 4.4E-05 1.1E-03 1.2E-03 4.4E-04 4.8E-03 1.7E-04 0.0E+00
INFNT 2.6E-04 6.2E-05 1.7E-03 2.4E-03 7.0E-04 1.2E-02 3.0E-04 0.0E+00

INHAL PATHWAY, DIST GP= 1, 659. METERS, WINDS TOWARD N
ADULT 2.1E-04 1.7E-04 3.2E-05 2.2E-04 1.9E-04 1.1E-03 2.3E-04 0.0E+00
TEEN 2.0E-04 1.8E-04 4.4E-05 2.4E-04 2.0E-04 1.3E-03 2.7E-04 0.0E+00
CHILD 1.6E-04 1.5E-04 5.9E-05 2.1E-04 1.8E-04 1.4E-03 2.3E-04 0.0E+00
INFNT 9.2E-05 8.7E-05 3.6E-05 1.3E-04 1.0E-04 1.3E-03 1.4E-04 0.0E+00

SUBTOTALS (NO PLUME)

ADULT 3.7E-03 3.3E-03 3.5E-03 3.9E-03 3.5E-03 7.1E-03 3.4E-03 3.6E-03
TEEN 3.7E-03 3.3E-03 3.7E-03 4.4E-03 3.7E-03 8.9E-03 3.5E-03 3.6E-03
CHILD 3.6E-03 3.3E-03 4.6E-03 5.1E-03 3.9E-03 1.3E-02 3.6E-03 3.6E-03
INFNT 3.5E-03 3.2E-03 5.4E-03 6.4E-03 4.1E-03 2.6E-02 3.6E-03 3.6E-03

TOTALS

ADULT 4.9E-03 4.4E-03 4.6E-03 5.0E-03 4.6E-03 8.2E-03 4.5E-03 6.2E-03
TEEN 4.8E-03 4.4E-03 4.9E-03 5.5E-03 4.8E-03 1.0E-02 4.6E-03 6.2E-03
CHILD 4.7E-03 4.4E-03 5.8E-03 6.2E-03 5.0E-03 1.5E-02 4.7E-03 6.2E-03
INFNT 4.6E-03 4.4E-03 6.5E-03 7.5E-03 5.3E-03 2.7E-02 4.8E-03 6.2E-03

INDIVIDUAL DOSLS(MREM) DUE TO GASEOUS EFFLUENT
FOR DATES 91 4 1 1 THRU 91 63024

T.BODY GI-TRCT SO'E LIVER KIDNEY THYRD LUNG SKIN

PLUME PATHWAY, DIST GP= 1, 660. METERS, WINDS TOWARD NNE
ADULT 5.6E-04 5.6E-04 5.6E-04 5.6E-04 5.6E-04 5.6E-04 5.7E-04 1.3E-03
TEEN 5.6E-04 5.6E-04 5.6E-04 5.6E-04 5.6E-04 5.6E-04 5.7E-04 1.3E-03
CHILD 5.6E-04 5.6E-04 5.6E-04 5.6E-04 5.6E-04 5.6E-04 5.7E-04 1.3E-03
INFNT 5.6E-04 5.6E-04 5.6E-04 5.6E-04 5.6E-04 5.6E-04 5.7E-04 1.3E-03

GROUND PATHWAY, DIST GP= 1, 660. METERS, WINDS TOWARD NNE
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, 814. METERS, WINDS TOWARD NNE
ADULT 9.6E-04 1.9E-04 7.3E-04 1.3E-03 5.2E-04 3.0E-03 2.4E-04 0.0E+00
TEEN 8.4E-04 2.1E-04 1.1E-03 1.9E-03 7.4E-04 2.5E-03 3.6E-04 0.0E+00
CHILD 7.2E-04 2.5E-04 2.7E-03 3.2E-03 1.2E-03 3.8E-03 5.4E-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 NNE
ADULT 2.6E-06 1.1E-06 1.6E-06 3.3E-06 1.5E-06 8.2E-06 8.9E-07 0.0E+00
TEEN 1.2E-06 6.1E-07 1.3E-06 2.5E-06 1.1E-06 5.9E-06 6.3E-07 0.0E+00
CHILD 9.7E-07 5.6E-07 2.4E-06 3.2E-06 1.3E-06 8.7E-06 7.5E-07 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, 3556. METERS, WINDS TOWARD NNE
ADULT 7.1E-05 7.1E-06 5.7E-05 9.8E-05 3.9E-05 8.6E-04 1.4E-05 0.0E+00
TEEN 7.1E-05 9.2E-06 1.0E-04 1.7E-04 6.6E-05 1.4E-03 2.6E-05 0.0E+00
CHILD 6.0E-05 1.1E-05 2.4E-04 2.8E-04 1.1E-04 2.7E-03 4.0E-05 0.0E+00
INFNT 6.4E-05 1.6E-05 4.0E-04 5.4E-04 1.7E-04 6.5E-03 6.8E-05 0.0E+00

GOAT PATHWAY, DIST GP= 1, 3556. METERS, WINDS TOWARD NNE
ADULT 2.1E-04 1.5E-05 1.7E-04 2.8E-04 1.1E-04 1.0E-03 3.9E-05 0.0E+00
TEEN 2.0E-04 1.9E-05 3.0E-04 4.9E-04 1.8E-04 1.6E-03 7.2E-05 0.0E+00
CHILD 1.6E-04 2.4E-05 7.2E-04 8.3E-04 2.9E-04 3.2E-03 1.1E-04 0.0E+00
INFNT 1.6E-04 3.3E-05 1.2E-03 1.6E-03 4.6E-04 7.8E-03 1.9E-04 0.0E+00

INHAL PATHWAY, DIST GP= 1, 660. METERS, WINDS TOWARD NNE
ADULT 1.0E-04 8.8E-05 1.6E-05 1.1E-04 9.6E-05 5.4E-04 1.2E-04 0.0E+00
TEEN 1.0E-04 8.8E-05 2.2E-05 1.2E-04 1.0E-04 6.6E-04 1.3E-04 0.0E+00
CHILD 8.3E-05 7.7E-05 2.9E-05 1.1E-04 8.9E-05 7.3E-04 1.1E-04 0.0E+00
INFNT 4.6E-05 4.4E-05 1.8E-05 6.7E-05 5.2E-05 6.4E-04 6.8E-05 0.0E+00

SUBTOTALS (NO PLUME)
ADULT 3.4E-03 2.4E-03 3.0E-03 3.8E-03 2.8E-03 7.5E-03 2.5E-03 2.4E-03
TEEN 3.3E-03 2.4E-03 3.6E-03 4.8E-03 3.1E-03 8.2E-03 2.7E-03 2.4E-03
CHILD 3.1E-03 2.4E-03 5.7E-03 6.5E-03 3.7E-03 1.2E-02 2.9E-03 2.4E-03
INFNT 2.3E-03 2.2E-03 3.6E-03 4.3E-03 2.7E-03 1.7E-02 2.4E-03 2.4E-03

TOTALS
ADULT 4.0E-03 2.9E-03 3.6E-03 4.4E-03 3.4E-03 8.0E-03 3.0E-03 3.7E-03
TEEN 3.8E-03 2.9E-03 4.2E-03 5.3E-03 3.7E-03 8.7E-03 3.2E-03 3.7E-03
CHILD 3.7E-03 3.0E-03 6.3E-03 7.0E-03 4.3E-03 1.3E-02 3.4E-03 3.7E-03
INFNT 2.9E-03 2.7E-03 4.2E-03 4.8E-03 3.3E-03 1.8E-02 3.0E-03 3.7E-03

INDIVIDUAL DOSES(MREM) DUE TO GASEOUS EFFLUENT
FOR DATES 91 4 1 1 THRU 91 63024

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

PLUME PATHWAY, DIST GP= 1, 943. METERS, WINDS TOWARD NE
ADULT 2.6E-04 2.6E-04 2.6E-04 2.6E-04 2.6E-04 2.6E-04 2.6E-04 6.1E-04
TEEN 2.6E-04 2.6E-04 2.6E-04 2.6E-04 2.6E-04 2.6E-04 2.6E-04 6.1E-04
CHILD 2.6E-04 2.6E-04 2.6E-04 2.6E-04 2.6E-04 2.6E-04 2.6E-04 6.1E-04
INFNT 2.6E-04 2.6E-04 2.6E-04 2.6E-04 2.6E-04 2.6E-04 2.6E-04 6.1E-04

GROUND PATHWAY, DIST GP= 1, 943. METERS, WINDS TOWARD NE
ADULT 1.4E-03 1.4E-03 1.4E-03 1.4E-03 1.4E-03 1.4E-03 1.4E-03 1.6E-03
TEEN 1.4E-03 1.4E-03 1.4E-03 1.4E-03 1.4E-03 1.4E-03 1.4E-03 1.6E-03
CHILD 1.4E-03 1.4E-03 1.4E-03 1.4E-03 1.4E-03 1.4E-03 1.4E-03 1.6E-03
INFNT 1.4E-03 1.4E-03 1.4E-03 1.4E-03 1.4E-03 1.4E-03 1.4E-03 1.6E-03

VEGET PATHWAY, DIST GP= 1, 1052. METERS, WINDS TOWARD NE
ADULT 7.2E-04 1.2E-04 5.7E-04 9.8E-04 3.7E-04 2.4E-03 1.6E-04 0.0E+00
TEEN 6.2E-04 1.3E-04 8.9E-04 1.5E-03 5.4E-04 2.0E-03 2.4E-04 0.0E+00
CHILD 5.1E-04 1.4E-04 2.1E-03 2.4E-03 8.6E-04 3.0E-03 3.7E-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 2.8E-06 9.7E-07 2.0E-06 3.7E-06 1.5E-06 1.0E-05 7.6E-07 0.0E+00
TEEN 1.3E-06 5.5E-07 1.6E-06 2.8E-06 1.1E-06 7.2E-06 5.7E-07 0.0E+00
CHILD 9.5E-07 4.5E-07 2.9E-06 3.6E-06 1.4E-06 1.1E-05 6.7E-07 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, 3556. METERS, WINDS TOWARD NE
ADULT 8.4E-05 6.5E-06 6.9E-05 1.2E-04 4.5E-05 1.1E-03 1.5E-05 0.0E+00
TEEN 8.3E-05 8.3E-06 1.2E-04 2.0E-04 7.8E-05 1.7E-03 2.8E-05 0.0E+00
CHILD 6.8E-05 9.5E-06 2.9E-04 3.4E-04 1.3E-04 3.4E-03 4.3E-05 0.0E+00
INFNT 7.2E-05 1.3E-05 4.8E-04 6.5E-04 2.0E-04 8.1E-03 7.6E-05 0.0E+00

GOAT PATHWAY, DIST GP= 1, 3556. METERS, WINDS TOWARD NE
ADULT 2.4E-04 1.4E-05 2.0E-04 3.4E-04 1.2E-04 1.3E-03 4.3E-05 0.0E+00
TEEN 2.4E-04 1.8E-05 3.6E-04 5.9E-04 2.1E-04 2.0E-03 9.1E-05 0.0E+00
CHILD 1.9E-04 2.0E-05 8.7E-04 9.9E-04 3.4E-04 4.0E-03 1.2E-04 0.0E+00
INFNT 1.9E-04 2.6E-05 1.4E-03 1.9E-03 5.4E-04 9.8E-03 2.2E-04 0.0E+00

INHAL PATHWAY, DIST GP= 1, 943. METERS, WINDS TOWARD NE
ADULT 4.4E-05 3.7E-05 6.5E-06 4.6E-05 4.1E-05 2.6E-04 4.9E-05 0.0E+00
TEEN 4.2E-05 3.7E-05 9.0E-06 5.0E-05 4.3E-05 3.1E-04 5.5E-05 0.0E+00
CHILD 3.5E-05 3.3E-05 1.2E-05 4.5E-05 3.8E-05 3.4E-04 4.8E-05 0.0E+00
INFNT 2.0E-05 1.9E-05 7.5E-06 2.8E-05 2.2E-05 3.0E-04 2.8E-05 0.0E+00

SUBTOTALS (NO PLUME)

ADULT 2.5E-03 1.6E-03 2.2E-03 2.9E-03 2.0E-03 6.4E-03 1.6E-03 1.6E-03
TEEN 2.4E-03 1.6E-03 2.8E-03 3.7E-03 2.3E-03 7.4E-03 1.8E-03 1.6E-03
CHILD 2.2E-03 1.6E-03 4.6E-03 5.2E-03 3.7E-03 1.2E-02 2.0E-03 1.6E-03
INFNT 1.7E-03 1.4E-03 3.3E-03 4.0E-03 2.1E-03 2.0E-02 1.7E-03 1.6E-03

TOTALS

ADULT 2.7E-03 1.8E-03 2.5E-03 3.1E-03 2.2E-03 6.7E-03 1.9E-03 2.2E-03
TEEN 2.6E-03 1.8E-03 3.0E-03 4.0E-03 2.5E-03 7.7E-03 2.1E-03 2.2E-03
CHILD 2.4E-03 1.8E-03 4.9E-03 5.5E-03 3.0E-03 1.2E-02 2.2E-03 2.2E-03
INFNT 1.9E-03 1.7E-03 3.5E-03 4.2E-03 2.4E-03 2.0E-02 2.0E-03 2.2E-03

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT
FOR DATES 91 4 1 1 THRU 91 63024

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

PLUME PATHWAY, DIST GP= 1, 1747. METERS, WINDS TOWARD ENE
ADULT 9.2E-05 9.2E-05 9.2E-05 9.2E-05 9.2E-05 9.2E-05 9.3E-05 2.2E-04
TEEN 9.2E-05 9.2E-05 9.2E-05 9.2E-05 9.2E-05 9.2E-05 9.3E-05 2.2E-04
CHILD 9.2E-05 9.2E-05 9.2E-05 9.2E-05 9.2E-05 9.2E-05 9.3E-05 2.2E-04
INFNT 9.2E-05 9.2E-05 9.2E-05 9.2E-05 9.2E-05 9.2E-05 9.3E-05 2.2E-04

GROUND PATHWAY, DIST GP= 1, 1747. METERS, WINDS TOWARD ENE
ADULT 4.2E-04 4.2E-04 4.2E-04 4.2E-04 4.2E-04 4.2E-04 4.2E-04 4.9E-04
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 4.2E-04 4.2E-04 4.2E-04 4.2E-04 4.2E-04 4.2E-04 4.2E-04 4.9E-04
INFNT 4.2E-04 4.2E-04 4.2E-04 4.2E-04 4.2E-04 4.2E-04 4.2E-04 4.9E-04

VEGET PATHWAY, DIST GP= 1, 1852. METERS, WINDS TOWARD ENE
ADULT 2.4E-04 4.1E-05 1.9E-04 3.2E-04 1.2E-04 6.4E-04 5.4E-05 0.0E+00
TEEN 2.1E-04 4.5E-05 3.0E-04 4.9E-04 1.8E-04 5.4E-04 8.3E-05 0.0E+00
CHILD 1.7E-04 5.0E-05 6.9E-04 8.0E-04 2.9E-04 8.2E-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, 3862. METERS, WINDS TOWARD ENE
ADULT 8.0E-06 2.7E-06 5.9E-06 1.1E-05 4.3E-06 2.4E-05 2.0E-06 0.0E+00
TEEN 3.7E-06 1.5E-06 4.9E-06 8.3E-06 3.2E-06 1.8E-05 1.6E-06 0.0E+00
CHILD 2.6E-06 1.2E-06 8.9E-06 1.1E-05 4.0E-06 2.6E-05 1.8E-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, 3556. METERS, WINDS TOWARD ENE
ADULT 7.0E-05 5.4E-06 5.8E-05 9.7E-05 3.7E-05 7.4E-04 1.3E-05 0.0E+00
TEEN 6.9E-05 6.9E-06 1.0E-04 1.7E-04 6.4E-05 1.2E-03 2.4E-05 0.0E+00
CHILD 5.6E-05 8.0E-06 2.5E-04 2.8E-04 1.0E-04 2.3E-03 3.7E-05 0.0E+00
INFNT 5.8E-05 1.1E-05 4.0E-04 5.4E-04 1.7E-04 5.6E-03 6.4E-05 0.0E+00

GOAT PATHWAY, DIST GP= 1, 3556. METERS, WINDS TOWARD ENE
ADULT 2.0E-04 1.1E-05 1.7E-04 2.8E-04 1.0E-04 8.9E-04 3.6E-05 0.0E+00
TEEN 2.0E-04 1.5E-05 3.1E-04 4.9E-04 1.8E-04 1.4E-03 6.9E-05 0.0E+00
CHILD 1.5E-04 1.7E-05 7.4E-04 8.3E-04 2.9E-04 2.8E-03 1.0E-04 0.0E+00
INFNT 1.5E-04 2.2E-05 1.2E-03 1.6E-03 4.5E-04 6.7E-03 1.8E-04 0.0E+00

INHAL PATHWAY, DIST GP= 1, 1747. METERS, WINDS TOWARD ENE
ADULT 1.5E-05 1.3E-05 2.2E-06 1.6E-05 1.4E-05 8.3E-05 1.7E-05 0.0E+00
TEEN 1.4E-05 1.3E-05 3.1E-06 1.7E-05 1.5E-05 1.0E-04 1.9E-05 0.0E+00
CHILD 1.2E-05 1.1E-05 4.1E-06 1.5E-05 1.3E-05 1.1E-04 1.7E-05 0.0E+00
INFNT 6.7E-06 6.4E-06 2.6E-06 9.6E-06 7.5E-06 9.8E-05 9.9E-06 0.0E+00

SUBTOTALS (NO PLUME)

ADULT 9.5E-04 4.9E-04 8.4E-04 1.1E-03 7.0E-04 2.8E-03 5.4E-04 4.9E-04
TEEN 9.1E-04 5.0E-04 1.1E-03 1.6E-03 8.5E-04 3.6E-03 6.1E-04 4.9E-04
CHILD 8.1E-04 5.0E-04 2.1E-03 2.4E-03 1.1E-03 6.5E-03 7.0E-04 4.9E-04
INFNT 6.3E-04 4.6E-04 2.0E-03 2.6E-03 1.0E-03 1.3E-02 6.7E-04 4.9E-04

TOTALS

ADULT 1.0E-03 5.8E-04 9.4E-04 1.2E-03 7.9E-04 2.9E-03 6.3E-04 7.1E-04
TEEN 1.0E-03 5.9E-04 1.2E-03 1.7E-03 9.5E-04 3.7E-03 7.1E-04 7.1E-04
CHILD 9.0E-04 6.0E-04 2.2E-03 2.5E-03 1.2E-03 6.5E-03 7.9E-04 7.1E-04
INFNT 7.3E-04 5.5E-04 2.1E-03 2.7E-03 1.1E-03 1.3E-02 7.7E-04 7.1E-04

INDIVIDUAL DOSES(MREM) DUE TO GASEOUS EFFLUENT
FOR DATES 91 4 1 1 THRU 91 63024

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

PLUME PATHWAY, DIST GP= 1, 1716. METERS, WINDS TOWARD E
ADULT 6.8E-05 6.8E-05 6.8E-05 6.8E-05 6.8E-05 6.8E-05 6.9E-05 1.6E-04
TEEN 6.8E-05 6.8E-05 6.8E-05 6.8E-05 6.8E-05 6.8E-05 6.9E-05 1.6E-04
CHILD 6.8E-05 6.8E-05 6.8E-05 6.8E-05 6.8E-05 6.8E-05 6.9E-05 1.6E-04
INFNT 6.8E-05 6.8E-05 6.8E-05 6.8E-05 6.8E-05 6.8E-05 6.9E-05 1.6E-04

GROUND PATHWAY, DIST GP= 1, 1716. METERS, WINDS TOWARD E
ADULT 2.3E-04 2.3E-04 2.3E-04 2.3E-04 2.3E-04 2.3E-04 2.3E-04 2.7E-04
TEEN 2.3E-04 2.3E-04 2.3E-04 2.3E-04 2.3E-04 2.3E-04 2.3E-04 2.7E-04
CHILD 2.3E-04 2.3E-04 2.3E-04 2.3E-04 2.3E-04 2.3E-04 2.3E-04 2.7E-04
INFNT 2.3E-04 2.3E-04 2.3E-04 2.3E-04 2.3E-04 2.3E-04 2.3E-04 2.7E-04

VEGET PATHWAY, DIST GP= 1, 1705. METERS, WINDS TOWARD E
ADULT 1.6E-04 3.2E-05 1.2E-04 2.1E-04 8.6E-05 5.0E-04 4.0E-05 0.0E+00
TEEN 1.4E-04 3.5E-05 1.9E-04 3.2E-04 1.2E-04 4.2E-04 6.0E-05 0.0E+00
CHILD 1.2E-04 4.3E-05 4.4E-04 5.2E-04 1.9E-04 6.3E-04 9.0E-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

MEAT PATHWAY, DIST GP= 1, 6810. METERS, WINDS TOWARD E
ADULT 1.7E-06 6.9E-07 1.1E-06 2.3E-06 1.0E-06 5.8E-06 5.8E-07 0.0E+00
TEEN 8.3E-07 3.9E-07 9.4E-07 1.7E-06 7.4E-07 4.2E-06 4.1E-07 0.0E+00
CHILD 6.4E-07 3.5E-07 1.7E-06 2.2E-06 9.1E-07 6.2E-06 4.9E-07 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, 3556. METERS, WINDS TOWARD E
ADULT 4.0E-05 3.8E-06 3.2E-05 5.5E-05 2.2E-05 4.9E-04 7.9E-06 0.0E+00
TEEN 4.0E-05 4.9E-06 5.8E-05 9.5E-05 3.7E-05 7.8E-04 1.4E-05 0.0E+00
CHILD 3.3E-05 6.1E-06 1.4E-04 1.6E-04 6.1E-05 1.5E-03 2.2E-05 0.0E+00
INFNT 3.6E-05 8.4E-06 2.2E-04 3.1E-04 9.6E-05 3.7E-03 3.8E-05 0.0E+00

GOAT PATHWAY, DIST GP= 1, 3556. METERS, WINDS TOWARD E
ADULT 1.2E-04 8.0E-06 9.5E-05 1.6E-04 5.9E-05 5.9E-04 2.2E-05 0.0E+00
TEEN 1.1E-04 1.0E-05 1.7E-04 2.8E-04 1.0E-04 9.4E-04 4.0E-05 0.0E+00
CHILD 9.0E-05 1.3E-05 4.1E-04 4.7E-04 1.6E-04 1.8E-03 6.1E-05 0.0E+00
INFNT 9.2E-05 1.7E-05 6.5E-04 8.9E-04 2.6E-04 4.5E-03 1.1E-04 0.0E+00

INHAL PATHWAY, DIST GP= 1, 1716. METERS, WINDS TOWARD E
ADULT 1.3E-05 1.1E-05 1.8E-06 1.3E-05 1.2E-05 7.6E-05 1.4E-05 0.0E+00
TEEN 1.2E-05 1.1E-05 2.5E-06 1.4E-05 1.2E-05 9.2E-05 1.6E-05 0.0E+00
CHILD 1.0E-05 9.5E-06 3.3E-06 1.3E-05 1.1E-05 1.0E-04 1.4E-05 0.0E+00
INFNT 5.7E-06 5.4E-06 2.1E-06 8.1E-06 6.4E-06 9.0E-05 8.1E-06 0.0E+00

SUBTOTALS (NO PLUME)

ADULT 5.6E-04 2.9E-04 4.8E-04 6.8E-04 4.1E-04 1.9E-03 3.1E-04 2.7E-04
TEEN 5.4E-04 3.0E-04 6.5E-04 9.4E-04 5.1E-04 2.5E-03 3.6E-04 2.7E-04
CHILD 4.9E-04 3.1E-04 1.2E-03 1.4E-03 6.6E-04 4.4E-03 4.2E-04 2.7E-04
INFNT 3.7E-04 2.7E-04 1.1E-03 1.4E-03 5.9E-04 8.5E-03 3.9E-04 2.7E-04

TOTALS

ADULT 6.3E-04 3.6E-04 5.5E-04 7.5E-04 4.8E-04 2.0E-03 3.9E-04 4.4E-04
TEEN 6.1E-04 3.6E-04 7.2E-04 1.0E-03 5.7E-04 2.5E-03 4.3E-04 4.4E-04
CHILD 5.6E-04 3.7E-04 1.3E-03 1.5E-03 7.3E-04 4.4E-03 4.9E-04 4.4E-04
INFNT 4.4E-04 3.3E-04 1.2E-03 1.5E-03 6.6E-04 8.6E-03 4.6E-04 4.4E-04

INDIVIDUAL DOSES(MREM) DUE TO GASEOUS EFFLUENT
FOR DATES 91 4 1 1 THRU 91 63024

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

PLUME PATHWAY, DIST GP= 1, 1643. METERS, WINDS TOWARD ESE
ADULT 4.7E-05 4.7E-05 4.7E-05 4.7E-05 4.7E-05 4.7E-05 4.8E-05 1.1E-04
TEEN 4.7E-05 4.7E-05 4.7E-05 4.7E-05 4.7E-05 4.7E-05 4.8E-05 1.1E-04
CHILD 4.7E-05 4.7E-05 4.7E-05 4.7E-05 4.7E-05 4.7E-05 4.8E-05 1.1E-04
INFNT 4.7E-05 4.7E-05 4.7E-05 4.7E-05 4.7E-05 4.7E-05 4.8E-05 1.1E-04

GROUND PATHWAY, DIST GP= 1, 1643. METERS, WINDS TOWARD ESE
ADULT 2.3E-04 2.3E-04 2.3E-04 2.3E-04 2.3E-04 2.3E-04 3E-04 2.7E-04
TEEN 2.3E-04 2.3E-04 2.3E-04 2.3E-04 2.3E-04 2.3E-04 3E-04 2.7E-04
CHILD 2.3E-04 2.3E-04 2.3E-04 2.3E-04 2.3E-04 2.3E-04 3E-04 2.7E-04
INFNT 2.3E-04 2.3E-04 2.3E-04 2.3E-04 2.3E-04 2.3E-04 3E-04 2.7E-04

VEGET PATHWAY, DIST GP= 1, 1628. METERS, WINDS TOWARD ESE
ADULT 1.6E-04 3.2E-05 1.2E-04 2.1E-04 8.7E-05 5.9E-04 4.2E-05 0.0E+00
TEEN 1.4E-04 3.6E-05 1.8E-04 3.2E-04 1.2E-04 4.9E-04 6.1E-05 0.0E+00
CHILD 1.2E-04 4.4E-05 4.3E-04 5.2E-04 1.9E-04 7.5E-04 9.2E-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

MEAT PATHWAY, DIST GP= 1, 2434. METERS, WINDS TOWARD ESE
ADULT 9.0E-06 3.1E-06 6.1E-06 1.2E-05 5.1E-06 3.7E-05 2.7E-06 0.0E+00
TEEN 4.3E-06 1.8E-06 5.0E-06 9.1E-06 3.7E-06 2.6E-05 2.0E-06 0.0E+00
CHILD 3.2E-06 1.6E-06 9.1E-06 1.2E-05 4.6E-06 4.0E-05 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, 3556. METERS, WINDS TOWARD ESE
ADULT 3.7E-05 3.7E-06 3.0E-05 5.1E-05 2.1E-05 5.4E-04 7.4E-06 0.0E+00
TEEN 3.7E-05 4.8E-06 5.3E-05 8.8E-05 3.5E-05 8.6E-04 1.3E-05 0.0E+00
CHILD 3.2E-05 6.0E-06 1.3E-04 1.5E-04 5.8E-05 1.7E-03 2.0E-05 0.0E+00
INFNT 3.5E-05 8.3E-06 2.1E-04 2.8E-04 9.2E-05 4.1E-03 3.5E-05 0.0E+00

GOAT PATHWAY, DIST GP= 1, 3556. METERS, WINDS TOWARD ESE
ADULT 1.1E-04 7.8E-06 8.7E-05 1.5E-04 5.5E-05 6.5E-04 2.0E-05 0.0E+00
TEEN 1.1E-04 1.0E-05 1.6E-04 2.6E-04 9.4E-05 1.0E-03 3.7E-05 0.0E+00
CHILD 8.6E-05 1.2E-05 3.7E-04 4.3E-04 1.5E-04 2.0E-03 5.7E-05 0.0E+00
INFNT 8.7E-05 1.7E-05 6.0E-04 8.2E-04 2.4E-04 5.0E-03 9.9E-05 0.0E+00

INHAL PATHWAY, DIST GP= 1, 1643. METERS, WINDS TOWARD ESE
ADULT 1.3E-05 1.1E-05 1.7E-06 1.4E-05 1.2E-05 8.5E-05 1.4E-05 0.0E+00
TEEN 1.3E-05 1.1E-05 2.4E-06 1.5E-05 1.3E-05 1.0E-04 1.5E-05 0.0E+00
CHILD 1.1E-05 1.0E-05 3.2E-06 1.3E-05 1.2E-05 1.1E-04 1.3E-05 0.0E+00
INFNT 6.1E-06 5.8E-06 2.0E-06 8.3E-06 6.7E-06 1.0E-04 7.9E-06 0.0E+00

SUBTOTALS (NO PLUME)

ADULT 5.5E-04 2.9E-04 7E-04 6.7E-04 4.1E-04 2.1E-03 3.1E-04 2.7E-04
TEEN 5.3E-04 2.9E-04 3E-04 9.1E-04 5.0E-04 2.7E-03 3.6E-04 2.7E-04
CHILD 4.8E-04 3.0E-04 1.2E-03 1.4E-03 6.5E-04 4.9E-03 4.1E-04 2.7E-04
INFNT 3.5E-04 2.6E-04 1.0E-03 1.3E-03 5.7E-04 9.4E-03 3.7E-04 2.7E-04

TOTALS

ADULT 6.0E-04 3.3E-04 5.2E-04 7.1E-04 4.5E-04 2.2E-03 3.6E-04 3.8E-04
TEEN 5.7E-04 3.4E-04 6.7E-04 9.6E-04 5.4E-04 2.8E-03 4.0E-04 3.8E-04
CHILD 5.3E-04 3.5E-04 1.2E-03 1.4E-03 7.0E-04 4.9E-03 4.6E-04 3.8E-04
INFNT 4.0E-04 3.1E-04 1.1E-03 1.4E-03 6.1E-04 9.4E-03 4.2E-04 3.8E-04

INDIVIDUAL DOSES(MREM) DUE TO GASEOUS EFFLUENT
FOR DATES 91 4 1 1 THRU 91 63024

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

PLUME PATHWAY, DIST GP= 1, 1136. METERS, WINDS TOWARD SE
ADULT 7.9E-05 7.9E-05 7.9E-05 7.9E-05 7.9E-05 7.9E-05 8.1E-05 2.3E-04
TEEN 7.9E-05 7.9E-05 7.9E-05 7.9E-05 7.9E-05 7.9E-05 8.1E-05 2.3E-04
CHILD 7.9E-05 7.9E-05 7.9E-05 7.9E-05 7.9E-05 7.9E-05 8.1E-05 2.3E-04
INFNT 7.9E-05 7.9E-05 7.9E-05 7.9E-05 7.9E-05 7.9E-05 8.1E-05 2.3E-04

GROUND PATHWAY, DIST GP= 1, 1136. METERS, WINDS TOWARD SE
ADULT 5.1E-04 5.1E-04 5.1E-04 5.1E-04 5.1E-04 5.1E-04 5.1E-04 6.0E-04
TEEN 5.1E-04 5.1E-04 5.1E-04 5.1E-04 5.1E-04 5.1E-04 5.1E-04 6.0E-04
CHILD 5.1E-04 5.1E-04 5.1E-04 5.1E-04 5.1E-04 5.1E-04 5.1E-04 6.0E-04
INFNT 5.1E-04 5.1E-04 5.1E-04 5.1E-04 5.1E-04 5.1E-04 5.1E-04 6.0E-04

VEGET PATHWAY, DIST GP= 1, 914. METERS, WINDS TOWARD SE
ADULT 4.8E-04 8.3E-05 3.7E-04 6.5E-04 2.5E-04 1.7E-03 1.1E-04 0.0E+00
TEEN 4.2E-04 9.1E-05 5.9E-04 9.8E-04 3.7E-04 1.4E-03 1.7E-04 0.0E+00
CHILD 3.5E-04 1.1E-04 1.4E-03 1.6E-03 5.8E-04 2.2E-03 2.6E-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

MEAT PATHWAY, DIST GP= 1, 4354. METERS, WINDS TOWARD SE
ADULT 4.1E-06 1.4E-06 2.9E-06 5.4E-06 2.3E-06 1.6E-05 1.1E-06 0.0E+00
TEEN 1.9E-06 7.7E-07 2.4E-06 4.2E-06 1.7E-06 1.2E-05 8.4E-07 0.0E+00
CHILD 1.4E-06 6.4E-07 4.4E-06 5.4E-06 2.1E-06 1.7E-05 9.9E-07 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, 3556. METERS, WINDS TOWARD SE
ADULT 4.4E-05 3.7E-06 3.6E-05 6.1E-05 2.4E-05 6.1E-04 8.2E-06 0.0E+00
TEEN 4.4E-05 4.7E-06 6.4E-05 1.1E-04 4.1E-05 9.6E-04 1.5E-05 0.0E+00
CHILD 3.6E-05 5.6E-06 1.5E-04 1.8E-04 6.7E-05 1.9E-03 2.3E-05 0.0E+00
INFNT 3.9E-05 7.5E-06 2.5E-04 3.4E-04 1.1E-04 4.6E-03 4.0E-05 0.0E+00

GOAT PATHWAY, DIST GP= 1, 3556. METERS, WINDS TOWARD SE
ADULT 1.3E-04 7.7E-06 1.1E-04 1.8E-04 6.5E-05 7.3E-04 2.3E-05 0.0E+00
TEEN 1.3E-04 1.0E-05 1.9E-04 3.1E-04 1.1E-04 1.2E-03 4.3E-05 0.0E+00
CHILD 9.9E-05 1.2E-05 4.5E-04 5.2E-04 1.8E-04 2.3E-03 6.6E-05 0.0E+00
INFNT 9.9E-05 1.6E-05 7.2E-04 9.9E-04 2.9E-04 5.5E-03 1.2E-04 0.0E+00

INHAL PATHWAY, DIST GP= 1, 1136. METERS, WINDS TOWARD SE
ADULT 2.1E-05 1.8E-05 3.0E-06 2.2E-05 2.0E-05 1.0E-04 2.3E-05 0.0E+00
TEEN 2.0E-05 1.8E-05 4.1E-06 2.4E-05 2.0E-05 1.2E-04 2.6E-05 0.0E+00
CHILD 1.7E-05 1.6E-05 5.5E-06 2.2E-05 1.8E-05 1.4E-04 2.2E-05 0.0E+00
INFNT 9.5E-06 9.0E-06 3.4E-06 1.3E-05 1.1E-05 1.2E-04 1.3E-05 0.0E+00

SUBTOTALS (NO PLUME)

ADULT 1.2E-03 6.2E-04 1.0E-03 1.4E-03 8.8E-04 3.7E-03 6.8E-04 6.0E-04
TEEN 1.1E-03 6.3E-04 1.4E-03 1.9E-03 1.1E-03 4.2E-03 7.7E-04 6.0E-04
CHILD 1.0E-03 6.5E-04 2.5E-03 2.8E-03 1.4E-03 7.0E-03 8.8E-04 6.0E-04
INFNT 6.6E-04 5.4E-04 1.5E-03 1.9E-03 9.1E-04 1.1E-02 6.8E-04 6.0E-04

TOTALS

ADULT 1.3E-03 7.0E-04 1.1E-03 1.5E-03 9.6E-04 3.7E-03 7.6E-04 8.2E-04
TEEN 1.2E-03 7.1E-04 1.4E-03 2.0E-03 1.1E-03 4.3E-03 8.5E-04 8.2E-04
CHILD 1.1E-03 7.3E-04 2.6E-03 2.9E-03 1.4E-03 7.1E-03 9.6E-04 8.2E-04
INFNT 7.4E-04 6.2E-04 1.6E-03 1.9E-03 9.9E-04 1.1E-02 7.6E-04 8.2E-04

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT
FOR DATES 91 4 1 1 THRU 91 63024

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

PLUME PATHWAY, DIST GP= 1, 1507. METERS, WINDS TOWARD SSE
ADULT 4.9E-05 4.9E-05 4.9E-05 4.9E-05 4.9E-05 4.9E-05 5.0E-05 1.2E-04
TEEN 4.9E-05 4.9E-05 4.9E-05 4.9E-05 4.9E-05 4.9E-05 5.0E-05 1.2E-04
CHILD 4.9E-05 4.9E-05 4.9E-05 4.9E-05 4.9E-05 4.9E-05 5.0E-05 1.2E-04
INFNT 4.9E-05 4.9E-05 4.9E-05 4.9E-05 4.9E-05 4.9E-05 5.0E-05 1.2E-04

GROUND PATHWAY, DIST GP= 1, 1507. METERS, WINDS TOWARD SSE
ADULT 4.4E-04 4.4E-04 4.4E-04 4.4E-04 4.4E-04 4.4E-04 4.4E-04 5.1E-04
TEEN 4.4E-04 4.4E-04 4.4E-04 4.4E-04 4.4E-04 4.4E-04 4.4E-04 5.1E-04
CHILD 4.4E-04 4.4E-04 4.4E-04 4.4E-04 4.4E-04 4.4E-04 4.4E-04 5.1E-04
INFNT 4.4E-04 4.4E-04 4.4E-04 4.4E-04 4.4E-04 4.4E-04 4.4E-04 5.1E-04

VEGET PATHWAY, DIST GP= 1, 1093. METERS, WINDS TOWARD SSE
ADULT 4.5E-04 6.8E-05 3.7E-04 6.2E-04 2.3E-04 1.5E-03 9.2E-05 0.0E+00
TEEN 3.9E-04 7.3E-05 5.7E-04 9.4E-04 3.4E-04 1.2E-03 1.5E-04 0.0E+00
CHILD 3.1E-04 7.6E-05 1.3E-03 1.6E-03 5.4E-04 1.9E-03 2.2E-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, 1093. METERS, WINDS TOWARD SSE
ADULT 4.8E-05 1.5E-05 3.7E-05 6.5E-05 2.5E-05 1.8E-04 1.1E-05 0.0E+00
TEEN 2.2E-05 8.2E-06 3.0E-05 5.1E-05 1.9E-05 1.3E-04 8.5E-06 0.0E+00
CHILD 1.5E-05 5.8E-06 5.5E-05 6.6E-05 2.4E-05 1.9E-04 9.9E-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, 3556. METERS, WINDS TOWARD SSE
ADULT 5.7E-05 3.8E-06 4.7E-05 7.9E-05 3.0E-05 7.1E-04 9.8E-06 0.0E+00
TEEN 5.6E-05 4.9E-06 8.5E-05 1.4E-04 5.2E-05 1.1E-03 1.9E-05 0.0E+00
CHILD 4.5E-05 5.3E-06 2.0E-04 2.3E-04 8.5E-05 2.2E-03 2.8E-05 0.0E+00
INFNT 4.7E-05 6.8E-06 3.3E-04 4.4E-04 1.4E-04 5.4E-03 5.0E-05 0.0E+00

GOAT PATHWAY, DIST GP= 1, 3556. METERS, WINDS TOWARD SSE
ADULT 1.7E-04 8.1E-06 1.4E-04 2.3E-04 8.3E-05 8.6E-04 2.8E-05 0.0E+00
TEEN 1.6E-04 1.0E-05 2.5E-04 4.0E-04 1.4E-04 1.4E-03 5.4E-05 0.0E+00
CHILD 1.2E-04 1.1E-05 5.9E-04 6.8E-04 2.3E-04 2.7E-03 8.2E-05 0.0E+00
INFNT 1.2E-04 1.4E-05 9.5E-04 1.3E-03 3.7E-04 6.5E-03 1.5E-04 0.0E+00

INHAL PATHWAY, DIST GP= 1, 1507. METERS, WINDS TOWARD SSE
ADULT 1.1E-05 9.2E-06 1.5E-06 1.1E-05 1.0E-05 5.7E-05 1.2E-05 0.0E+00
TEEN 1.0E-05 9.3E-06 2.1E-06 1.2E-05 1.1E-05 6.9E-05 1.3E-05 0.0E+00
CHILD 8.7E-06 8.1E-06 2.8E-06 1.1E-05 9.4E-06 7.7E-05 1.2E-05 0.0E+00
INFNT 4.9E-06 4.6E-06 1.8E-06 6.9E-06 5.4E-06 6.7E-05 6.9E-06 0.0E+00

SUBTOTALS (NO PLUME)
ADULT 1.2E-03 5.4E-04 1.0E-03 1.4E-03 8.2E-04 3.7E-03 5.9E-04 5.1E-04
TEEN 1.1E-03 5.4E-04 1.4E-03 2.0E-03 1.0E-03 4.4E-03 6.8E-04 5.1E-04
CHILD 9.5E-04 5.4E-04 2.6E-03 3.0E-03 1.3E-03 7.5E-03 7.9E-04 5.1E-04
INFNT 6.1E-04 4.6E-04 1.7E-03 2.2E-03 9.5E-04 1.2E-02 6.4E-04 5.1E-04

TOTALS
ADULT 1.2E-03 5.9E-04 1.1E-03 1.5E-03 8.7E-04 3.8E-03 6.4E-04 6.3E-04
TEEN 1.1E-03 5.9E-04 1.4E-03 2.0E-03 1.1E-03 4.4E-03 7.3E-04 6.3E-04
CHILD 1.0E-03 5.9E-04 2.7E-03 3.0E-03 1.4E-03 7.5E-03 8.4E-04 6.3E-04
INFNT 6.6E-04 5.1E-04 1.8E-03 2.2E-03 1.0E-03 1.2E-02 6.9E-04 6.3E-04

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT
FOR DATES 91 4 1 1 THRU 91 63024

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

PLUME PATHWAY, DIST GP= 1, 1507. METERS, WINDS TOWARD SSE
ADULT 4.9E-05 4.9E-05 4.9E-05 4.9E-05 4.9E-05 4.9E-05 5.0E-05 1.2E-04
TEEN 4.9E-05 4.9E-05 4.9E-05 4.9E-05 4.9E-05 4.9E-05 5.0E-05 1.2E-04
CHILD 4.9E-05 4.9E-05 4.9E-05 4.9E-05 4.9E-05 4.9E-05 5.0E-05 1.2E-04
INFNT 4.9E-05 4.9E-05 4.9E-05 4.9E-05 4.9E-05 4.9E-05 5.0E-05 1.2E-04

GROUND PATHWAY, DIST GP= 1, 1507. METERS, WINDS TOWARD SSE
ADULT 4.4E-04 4.4E-04 4.4E-04 4.4E-04 4.4E-04 4.4E-04 4.4E-04 5.1E-04
TEEN 4.4E-04 4.4E-04 4.4E-04 4.4E-04 4.4E-04 4.4E-04 4.4E-04 5.1E-04
CHILD 4.4E-04 4.4E-04 4.4E-04 4.4E-04 4.4E-04 4.4E-04 4.4E-04 5.1E-04
INFNT 4.4E-04 4.4E-04 4.4E-04 4.4E-04 4.4E-04 4.4E-04 4.4E-04 5.1E-04

VEGET PATHWAY, DIST GP= 1, 1093. METERS, WINDS TOWARD SSE
ADULT 4.5E-04 6.8E-05 3.7E-04 6.2E-04 2.3E-04 1.5E-03 9.2E-05 0.0E+00
TEEN 3.9E-04 7.3E-05 5.7E-04 9.4E-04 3.4E-04 1.2E-03 1.5E-04 0.0E+00
CHILD 3.1E-04 7.6E-05 1.3E-03 1.6E-03 5.4E-04 1.9E-03 2.2E-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, 1093. METERS, WINDS TOWARD SSE
ADULT 4.8E-05 1.5E-05 3.7E-05 6.5E-05 2.5E-05 1.8E-04 1.1E-04 0.0E+00
TEEN 2.2E-05 8.2E-06 3.0E-05 5.1E-05 1.9E-05 1.3E-04 8.5E-05 0.0E+00
CHILD 1.5E-05 5.8E-06 5.5E-05 6.6E-05 2.4E-05 1.9E-04 9.9E-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, 3556. METERS, WINDS TOWARD SSE
ADULT 5.7E-05 3.8E-06 4.7E-05 7.9E-05 3.0E-05 7.1E-04 9.8E-06 0.0E+00
TEEN 1.6E-05 4.9E-06 8.5E-05 1.4E-04 5.2E-05 1.1E-03 1.9E-05 0.0E+00
CHILD 4.5E-05 5.3E-06 2.0E-04 2.3E-04 8.5E-05 2.2E-03 2.8E-05 0.0E+00
INFNT 4.7E-05 6.8E-06 3.3E-04 4.4E-04 1.4E-04 5.4E-03 5.0E-05 0.0E+00

GOAT PATHWAY, DIST GP= 1, 3556. METERS, WINDS TOWARD SSE
ADULT 1.7E-04 8.1E-06 1.4E-04 2.3E-04 8.3E-05 8.6E-04 2.8E-05 0.0E+00
TEEN 1.6E-04 1.0E-05 2.5E-04 4.0E-04 1.1E-04 1.4E-03 5.4E-05 0.0E+00
CHILD 1.2E-04 1.1E-05 5.9E-04 6.8E-04 2.3E-04 2.7E-03 8.2E-05 0.0E+00
INFNT 1.2E-04 1.4E-05 9.5E-04 1.3E-03 3.7E-04 6.5E-03 1.5E-04 0.0E+00

INHAL PATHWAY, DIST GP= 1, 1507. METERS, WINDS TOWARD SSE
ADULT 1.1E-05 9.2E-06 1.5E-06 1.1E-05 1.0E-05 5.7E-05 1.2E-05 0.0E+00
TEEN 1.0E-05 9.3E-06 1.1E-06 1.2E-05 1.1E-05 6.9E-05 1.3E-05 0.0E+00
CHILD 8.7E-06 8.1E-06 2.8E-06 1.1E-05 9.4E-06 7.7E-05 1.2E-05 0.0E+00
INFNT 4.9E-06 4.6E-06 1.8E-06 6.9E-06 5.4E-06 6.7E-05 6.9E-06 0.0E+00

SUBTOTALS (NO PLUME)
ADULT 1.2E-03 5.4E-04 1.0E-03 1.4E-03 8.2E-04 3.7E-03 5.9E-04 5.1E-04
TEEN 1.1E-03 5.4E-04 1.4E-03 2.0E-03 1.0E-03 4.4E-03 6.8E-04 5.1E-04
CHILD 9.5E-04 5.4E-04 2.6E-03 3.0E-03 1.3E-03 7.5E-03 7.9E-04 5.1E-04
INFNT 6.1E-04 4.6E-04 1.7E-03 2.2E-03 9.5E-04 1.2E-02 6.4E-04 5.1E-04

TOTALS
ADULT 1.2E-03 5.9E-04 1.1E-03 1.5E-03 8.7E-04 3.8E-03 6.4E-04 6.3E-04
TEEN 1.1E-03 5.9E-04 1.4E-03 2.0E-03 1.1E-03 4.4E-03 7.3E-04 6.3E-04
CHILD 1.0E-03 5.9E-04 2.7E-03 3.0E-03 1.4E-03 7.5E-03 8.4E-04 6.3E-04
INFNT 6.6E-04 5.1E-04 1.8E-03 2.2E-03 1.0E-03 1.2E-02 6.9E-04 6.3E-04

INDIVIDUAL DOSES(MREM) DUE TO GASEOUS EFFLUENT
FOR DATES 91 4 1 1 THRU 91 63024

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

PLUME PATHWAY, DIST GP= 1, 1026. METERS, WINDS TOWARD S
ADULT 5.3E-03 5.3E-04 5.3E-04 5.3E-04 5.3E-04 5.3E-04 5.4E-04 1.1E-03
TEEN 5.3E-04 5.3E-04 5.3E-04 5.3E-04 5.3E-04 5.3E-04 5.4E-04 1.1E-03
CHILD 5.3E-04 5.3E-04 5.3E-04 5.3E-04 5.3E-04 5.3E-04 5.4E-04 1.1E-03
INFNT 5.3E-04 5.3E-04 5.3E-04 5.3E-04 5.3E-04 5.3E-04 5.4E-04 1.1E-03

GROUND PATHWAY, DIST GP= 1, 1026. METERS, WINDS TOWARD S
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, 863. METERS, WINDS TOWARD S
ADULT 1.1E-03 3.1E-04 8.4E-04 1.5E-03 6.4E-04 3.6E-03 3.2E-04 0.0E+00
TEEN 1.0E-03 3.4E-04 1.3E-03 2.3E-03 9.0E-04 3.0E-03 4.6E-04 0.0E+00
CHILD 9.2E-04 4.0E-04 3.1E-03 3.7E-03 1.4E-03 4.6E-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, 6115. METERS, WINDS TOWARD S
ADULT 5.0E-06 2.6E-06 3.1E-06 6.4E-06 3.0E-06 1.6E-05 1.7E-06 0.0E+00
TEEN 2.4E-06 1.5E-06 2.6E-06 4.8E-06 2.1E-06 1.2E-05 1.2E-06 0.0E+00
CHILD 2.0E-06 1.2E-06 4.7E-06 6.2E-06 2.6E-06 1.7E-05 1.5E-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, 3556. METERS, WINDS TOWARD S
ADULT 9.1E-05 1.0E-05 7.3E-05 1.3E-04 5.1E-05 1.1E-03 1.9E-05 0.0E+00
TEEN 9.1E-05 1.3E-05 1.3E-04 2.2E-04 8.6E-05 1.8E-03 3.4E-05 0.0E+00
CHILD 7.8E-05 1.7E-05 3.1E-04 3.6E-04 1.4E-04 3.5E-03 5.2E-05 0.0E+00
INFNT 1.5E-05 2.4E-05 5.1E-04 6.9E-04 2.2E-04 8.6E-03 9.0E-05 0.0E+00

GOAT PATHWAY, DIST GP= 1, 3556. METERS, WINDS TOWARD S
ADULT 2.6E-04 2.7E-05 2.1E-04 3.6E-04 1.4E-04 1.4E-03 5.1E-05 0.0E+00
TEEN 2.6E-04 2.7E-05 3.9E-04 6.3E-04 2.3E-04 2.2E-03 9.4E-05 0.0E+00
CHILD 2.1E-04 3.5E-05 9.2E-04 1.1E-03 3.7E-04 4.1E-03 1.4E-04 0.0E+00
INFNT 2.1E-04 4.9E-05 1.5E-03 2.0E-03 5.9E-04 1.0E-02 2.5E-04 0.0E+00

INHAL PATHWAY, DIST GP= 1, 1026. METERS, WINDS TOWARD S
ADULT 8.2E-05 7.4E-05 7.5E-06 8.5E-05 7.8E-05 3.0E-04 9.7E-05 0.0E+00
TEEN 8.0E-05 7.5E-05 1.0E-05 8.9E-05 8.0E-05 3.6E-04 1.1E-04 0.0E+00
CHILD 6.8E-05 6.6E-05 1.4E-05 8.0E-05 7.1E-05 3.9E-04 9.4E-05 0.0E+00
INFNT 3.9E-05 3.8E-05 8.7E-05 4.8E-05 4.1E-05 3.4E-04 5.6E-05 0.0E+00

SUBTOTALS (NO PLUME)

ADULT 3.1E-03 1.9E-03 2.6E-03 3.6E-03 2.4E-03 7.9E-03 2.0E-03 1.8E-03
TEEN 2.9E-03 2.0E-03 3.3E-03 4.7E-03 2.1E-03 8.8E-03 2.2E-03 1.8E-03
CHILD 2.8E-03 2.0E-03 5.8E-03 6.7E-03 3.5E-03 1.4E-02 2.5E-03 1.8E-03
INFNT 1.8E-03 1.6E-03 3.5E-03 4.3E-03 2.4E-03 2.1E-02 1.9E-03 1.8E-03

TOTALS

ADULT 3.6E-03 2.4E-03 3.2E-03 4.1E-03 2.9E-03 8.4E-03 2.5E-03 2.9E-03
TEEN 3.5E-03 2.5E-03 3.9E-03 5.2E-03 3.3E-03 9.4E-03 2.7E-03 2.2E-03
CHILD 3.3E-03 2.5E-03 6.4E-03 7.3E-03 4.0E-03 1.5E-02 3.0E-03 2.9E-03
INFNT 2.4E-03 2.1E-03 4.0E-03 4.8E-03 2.9E-03 2.1E-02 2.4E-03 2.9E-03

INDIVIDUAL DOSES(MREM) DUE TO GASEOUS EFFLUENT
FOR DATES 91 4 1 1 THRU 91 63024

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

PLUME 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 3.4E-04 7.9E-04
TEEN 3.3E-04 3.3E-04 3.3E-04 3.3E-04 3.3E-04 3.3E-04 3.4E-04 7.9E-04
CHILD 3.3E-04 3.3E-04 3.3E-04 3.3E-04 3.3E-04 3.3E-04 3.4E-04 7.9E-04
INFNT 3.3E-04 3.3E-04 3.3E-04 3.3E-04 3.3E-04 3.3E-04 3.4E-04 7.9E-04

GROUND PATHWAY, DIST GP= 1, 942. METERS, WINDS TOWARD SSW
ADULT 5.9E-04 5.9E-04 5.9E-04 5.9E-04 5.9E-04 5.9E-04 5.9E-04 6.9E-04
TEEN 5.9E-04 5.9E-04 5.9E-04 5.9E-04 5.9E-04 5.9E-04 5.9E-04 6.9E-04
CHILD 5.9E-04 5.9E-04 5.9E-04 5.9E-04 5.9E-04 5.9E-04 5.9E-04 6.9E-04
INFNT 5.9E-04 5.9E-04 5.9E-04 5.9E-04 5.9E-04 5.9E-04 5.9E-04 6.9E-04

VEGET PATHWAY, DIST GP= 1, 770. METERS, WINDS TOWARD SSW
ADULT 5.7E-04 1.3E-04 4.1E-04 7.6E-04 3.2E-04 1.9E-03 1.6E-04 0.0E+00
TEEN 5.1E-04 1.4E-04 6.5E-04 1.1E-03 4.5E-04 1.6E-03 2.3E-04 0.0E+00
CHILD 4.5E-04 1.8E-04 1.5E-03 1.9E-03 7.0E-04 2.5E-03 3.4E-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 1.5E-06 6.1E-07 7.9E-07 1.7E-06 8.4E-07 4.6E-06 5.3E-07 0.0E+00
TEEN 6.6E-07 3.5E-07 6.5E-07 1.3E-06 5.9E-07 3.3E-06 3.6E-07 0.0E+00
CHILD 5.4E-07 3.4E-07 1.2E-06 1.6E-06 7.3E-07 4.9E-06 4.3E-07 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, 3556. METERS, WINDS TOWARD SSW
ADULT 3.8E-05 4.4E-06 3.0E-05 5.2E-05 2.1E-05 5.1E-04 8.2E-06 0.0E+00
TEEN 3.8E-05 5.7E-06 5.4E-05 9.0E-05 3.6E-05 8.1E-04 1.4E-05 0.0E+00
CHILD 3.3E-05 7.4E-06 1.3E-04 1.5E-04 5.9E-05 1.6E-03 2.2E-05 0.0E+00
INFNT 3.7E-05 1.0E-05 2.1E-04 2.9E-04 9.3E-05 3.9E-03 3.8E-05 0.0E+00

GOAT PATHWAY, DIST GP= 1, 3556. METERS, WINDS TOWARD SSW
ADULT 1.1E-04 9.2E-06 3.8E-05 1.5E-04 5.7E-05 6.1E-04 2.2E-05 0.0E+00
TEEN 1.1E-04 1.2E-05 1.6E-04 2.6E-04 9.6E-05 9.7E-04 4.0E-05 0.0E+00
CHILD 8.8E-05 1.5E-05 3.7E-04 4.4E-04 1.6E-04 1.9E-03 6.0E-05 0.0E+00
INFNT 9.1E-05 2.2E-05 6.0E-04 8.3E-04 2.5E-04 4.7E-03 1.0E-04 0.0E+00

INHAL PATHWAY, DIST GP= 1, 942. METERS, WINDS TOWARD SSW
ADULT 4.2E-05 3.6E-05 6.7E-06 4.5E-05 3.9E-05 2.5E-04 4.9E-05 0.0E+00
TEEN 4.1E-05 3.6E-05 9.7E-06 4.9E-05 4.1E-05 3.0E-04 5.6E-05 0.0E+00
CHILD 3.4E-05 3.1E-05 3.2E-05 4.4E-05 3.7E-05 3.3E-04 4.8E-05 0.0E+00
INFNT 1.9E-05 1.8E-05 7.7E-06 2.8E-05 2.1E-05 2.9E-04 2.9E-05 0.0E+00

SUBTOTALS (NO PLUME)

ADULT 1.4E-03 7.7E-04 1.1E-03 1.6E-03 1.0E-03 3.9E-03 8.3E-04 6.9E-04
TEEN 1.3E-03 7.9E-04 1.5E-03 2.1E-03 1.2E-03 4.3E-03 9.3E-04 6.9E-04
CHILD 1.2E-03 8.2E-04 2.6E-03 3.1E-03 1.5E-03 6.9E-03 1.1E-03 6.9E-04
INFNT 7.4E-04 6.4E-04 1.4E-03 1.7E-03 9.5E-04 9.4E-03 7.6E-04 6.9E-04

TOTALS

ADULT 1.7E-03 1.1E-03 1.5E-03 1.9E-03 1.4E-03 4.2E-03 1.2E-03 1.5E-03
TEEN 1.6E-03 1.1E-03 1.8E-03 2.5E-03 1.5E-03 4.6E-03 1.3E-03 1.5E-03
CHILD 1.5E-03 1.2E-03 2.9E-03 3.4E-03 1.9E-03 7.3E-03 1.4E-03 1.5E-03
INFNT 1.1E-03 9.7E-04 1.7E-03 2.1E-03 1.3E-03 9.7E-03 1.1E-03 1.5E-03

INDIVIDUAL DOSES(MREM) DUE TO GASEOUS EFFLUENT
FOR DATES 91 4 1 1 THRU 91 63024

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

PLUME PATHWAY, DIST GP= 1, 8045. METERS, WINDS TOWARD SW
ADULT 1.8E-05 1.8E-05 1.8E-05 1.8E-05 1.8E-05 1.8E-05 1.9E-05 4.5E-05
TEEN 1.8E-05 1.8E-05 1.8E-05 1.8E-05 1.8E-05 1.8E-05 1.9E-05 4.5E-05
CHILD 1.8E-05 1.8E-05 1.8E-05 1.8E-05 1.8E-05 1.8E-05 1.9E-05 4.5E-05
INFNT 1.8E-05 1.8E-05 1.8E-05 1.8E-05 1.8E-05 1.8E-05 1.9E-05 4.5E-05

GROUND PATHWAY, DIST GP= 1, 8045. METERS, WINDS TOWARD SW
ADULT 2.1E-05 2.1E-05 2.1E-05 2.1E-05 2.1E-05 2.1E-05 2.1E-05 2.5E-05
TEEN 2.1E-05 2.1E-05 2.1E-05 2.1E-05 2.1E-05 2.1E-05 2.1E-05 2.5E-05
CHILD 2.1E-05 2.1E-05 2.1E-05 2.1E-05 2.1E-05 2.1E-05 2.1E-05 2.5E-05
INFNT 2.1E-05 2.1E-05 2.1E-05 2.1E-05 2.1E-05 2.1E-05 2.1E-05 2.5E-05

VEGET PATHWAY, DIST GP= 1, 8045. METERS, WINDS TOWARD SW
ADULT 1.7E-05 5.8E-06 1.0E-05 2.1E-05 1.0E-05 4.5E-05 6.5E-06 0.0E+00
TEEN 1.5E-05 6.5E-06 1.6E-05 3.1E-05 1.4E-05 3.9E-05 8.6E-06 0.0E+00
CHILD 1.6E-05 9.0E-06 3.8E-05 5.0E-05 2.2E-05 6.0E-05 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

MEAT PATHWAY, DIST GP= 1, 8045. METERS, WINDS TOWARD SW
ADULT 1.9E-06 9.8E-07 1.0E-06 2.4E-06 1.3E-06 5.6E-06 8.5E-07 0.0E+00
TEEN 9.6E-07 5.7E-07 8.5E-07 1.8E-06 8.7E-07 4.0E-06 5.7E-07 0.0E+00
CHILD 8.3E-07 5.7E-07 1.6E-06 2.2E-06 1.1E-06 5.9E-06 6.8E-07 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, 8045. METERS, WINDS TOWARD SW
ADULT 1.2E-05 2.0E-06 9.0E-06 1.6E-05 7.1E-06 1.4E-04 3.2E-06 0.0E+00
TEEN 1.2E-05 2.6E-06 1.6E-05 2.8E-05 1.2E-05 2.2E-04 5.2E-06 0.0E+00
CHILD 1.1E-05 3.6E-06 3.9E-05 4.7E-05 1.9E-05 4.3E-04 8.1E-06 0.0E+00
INFNT 1.3E-05 5.3E-06 6.2E-05 8.9E-05 3.0E-05 1.0E-03 1.4E-05 0.0E+00

GOAT PATHWAY, DIST GP= 1, 8045. METERS, WINDS TOWARD SW
ADULT 3.4E-05 4.2E-06 2.7E-05 4.7E-05 1.8E-05 1.7E-04 8.0E-06 0.0E+00
TEEN 3.4E-05 5.4E-06 4.8E-05 8.0E-05 3.1E-05 2.3E-04 1.4E-05 0.0E+00
CHILD 2.9E-05 7.5E-06 1.1E-04 1.3E-04 5.0E-05 5.2E-04 2.1E-05 0.0E+00
INFNT 3.2E-05 1.1E-05 1.8E-04 2.6E-04 7.8E-05 1.3E-03 3.6E-05 0.0E+00

INHAL PATHWAY, DIST GP= 1, 8045. METERS, WINDS TOWARD SW
ADULT 3.0E-06 2.6E-06 4.0E-07 3.2E-06 2.9E-06 1.6E-05 3.4E-06 0.0E+00
TEEN 2.9E-06 2.6E-06 5.5E-07 3.4E-06 3.0E-06 1.9E-05 3.8E-06 0.0E+00
CHILD 2.5E-06 2.3E-06 7.4E-07 3.1E-06 2.6E-06 2.1E-05 3.3E-06 0.0E+00
INFNT 1.4E-06 1.3E-06 4.6E-07 1.9E-06 1.5E-06 1.9E-05 2.0E-06 0.0E+00

SUBTOTALS (NO PLUME)

ADULT 8.9E-05 3.7E-05 6.8E-05 1.1E-04 6.1E-05 3.9E-04 4.3E-05 2.5E-05
TEEN 8.7E-05 3.9E-05 1.0E-04 1.7E-04 8.1E-05 5.6E-04 5.3E-05 2.5E-05
CHILD 8.1E-05 4.4E-05 2.1E-04 2.6E-04 1.2E-04 1.1E-03 6.7E-05 2.5E-05
INFNT 6.7E-05 3.9E-05 2.7E-04 3.7E-04 1.3E-04 2.3E-03 7.3E-05 2.5E-05

TOTALS

ADULT 1.1E-04 5.5E-05 8.7E-05 1.3E-04 7.9E-05 4.1E-04 6.2E-05 7.0E-05
TEEN 1.1E-04 5.7E-05 1.2E-04 1.8E-04 9.9E-05 5.8E-04 7.2E-05 7.0E-05
CHILD 9.9E-05 6.2E-05 2.3E-04 2.8E-04 1.3E-04 1.1E-03 8.6E-05 7.0E-05
INFNT 8.5E-05 5.7E-05 2.8E-04 3.0E-04 1.5E-04 2.4E-03 9.1E-05 7.0E-05

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT
FOR DATES 91 1 1 1 THRU 91 33124

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

PLUME PATHWAY, DIST GP= 1, 8045. METERS, WINDS TOWARD SW
ADULT 2.6E-06 2.6E-06 2.6E-06 2.6E-06 2.6E-06 2.6E-06 2.6E-06 4.9E-06
TEEN 2.6E-06 2.6E-06 2.6E-06 2.6E-06 2.6E-06 2.6E-06 2.6E-06 4.9E-06
CHILD 2.6E-06 2.6E-06 2.5E-06 2.6E-06 2.6E-06 2.6E-06 2.6E-06 4.9E-06
INFNT 2.6E-06 2.6E-06 2.6E-06 2.6E-06 2.6E-06 2.6E-06 2.6E-06 4.9E-06

GROUND PATHWAY, DIST GP= 1, 8045. METERS, WINDS TOWARD SW
ADULT 3.0E-05 3.0E-05 3.0E-05 3.0E-05 3.0E-05 3.0E-05 3.0E-05 3.5E-05
TEEN 3.0E-05 3.0E-05 3.0E-05 3.0E-05 3.0E-05 3.0E-05 3.0E-05 3.5E-05
CHILD 3.0E-05 3.0E-05 3.0E-05 3.0E-05 3.0E-05 3.0E-05 3.0E-05 3.5E-05
INFNT 3.0E-05 3.0E-05 3.0E-05 3.0E-05 3.0E-05 3.0E-05 3.0E-05 3.5E-05

VEGET PATHWAY, DIST GP= 1, 8045. METERS, WINDS TOWARD SW
ADULT 1.8E-05 6.1E-06 1.3E-05 2.4E-05 1.1E-05 4.3E-06 6.3E-06 0.0E+00
TEEN 1.6E-05 6.8E-06 2.1E-05 3.5E-05 1.5E-05 4.9E-06 8.7E-06 0.0E+00
CHILD 1.6E-05 8.7E-06 4.9E-05 5.8E-05 2.4E-05 7.6E-06 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

MEAT PATHWAY, DIST GP= 1, 8045. METERS, WINDS TOWARD SW
ADULT 2.0E-06 1.2E-06 1.3E-06 2.5E-06 1.3E-06 6.0E-07 8.2E-07 0.0E+00
TEEN 9.9E-07 6.8E-07 1.1E-06 2.0E-06 8.9E-07 3.6E-07 5.6E-07 0.0E+00
CHILD 8.4E-07 5.9E-07 2.0E-06 2.5E-06 1.1E-06 4.4E-07 6.7E-07 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, 8045. METERS, WINDS TOWARD SW
ADULT 1.3E-05 1.8E-06 1.1E-05 1.8E-05 7.0E-06 1.7E-06 3.3E-06 0.0E+00
TEEN 1.3E-05 2.4E-06 2.0E-05 3.1E-05 1.2E-05 2.4E-06 5.6E-06 0.0E+00
CHILD 1.1E-05 3.3E-06 4.8E-05 5.3E-05 1.9E-05 4.1E-06 8.7E-06 0.0E+00
INFNT 1.2E-05 4.8E-06 7.7E-05 1.0E-04 3.0E-05 7.3E-06 1.5E-05 0.0E+00

GOAT PATHWAY, DIST GP= 1, 8045. METERS, WINDS TOWARD SW
ADULT 3.7E-05 3.8E-06 3.3E-05 5.3E-05 2.0E-05 3.3E-06 8.5E-06 0.0E+00
TEEN 3.6E-05 5.0E-06 6.0E-05 9.2E-05 3.3E-05 4.4E-06 1.5E-05 0.0E+00
CHILD 3.0E-05 6.8E-06 1.4E-04 1.6E-04 5.4E-05 7.3E-06 2.3E-05 0.0E+00
INFNT 3.1E-05 9.8E-06 2.3E-04 3.0E-04 8.6E-05 1.2E-05 4.0E-05 0.0E+00

INHAL PATHWAY, DIST GP= 1, 8045. METERS, WINDS TOWARD SW
ADULT 2.5E-06 2.3E-06 1.7E-07 2.5E-06 2.4E-06 2.4E-06 2.9E-06 0.0E+00
TEEN 2.4E-06 2.3E-06 2.3E-07 2.6E-06 2.4E-06 2.5E-06 3.1E-06 0.0E+00
CHILD 2.1E-06 2.1E-06 3.1E-07 2.4E-06 2.4E-06 2.3E-06 2.7E-06 0.0E+00
INFNT 1.2E-06 1.2E-06 1.9E-07 1.4E-06 1.2E-06 1.4E-06 1.6E-06 0.0E+00

SUBTOTALS (NO PLUME)

ADULT 1.0E-04 4.6E-05 8.9E-05 1.3E-04 7.1E-05 4.3E-05 5.2E-05 3.5E-05
TEEN 9.9E-05 4.7E-05 1.3E-04 1.9E-04 9.3E-05 4.5E-05 6.3E-05 3.5E-05
CHILD 9.0E-05 5.2E-05 2.7E-04 3.0E-04 1.3E-04 5.2E-05 7.9E-05 3.5E-05
INFNT 7.4E-05 4.0E-05 3.4E-04 4.3E-04 1.5E-04 5.1E-05 8.7E-05 3.5E-05

TOTALS

ADULT 1.1E-04 4.8E-05 9.2E-05 1.3E-04 7.4E-05 4.5E-05 5.5E-05 4.0E-05
TEEN 1.0E-04 5.0E-05 1.3E-04 2.0E-04 9.6E-05 4.7E-05 6.6E-05 4.0E-05
CHILD 9.2E-05 5.4E-05 2.8E-04 3.0E-04 1.3E-04 5.4E-05 8.1E-05 4.0E-05
INFNT 7.7E-05 4.9E-05 3.4E-04 4.3E-04 1.5E-04 5.4E-05 8.9E-05 4.0E-05

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT
FOR DATES 91 1 1 1 THRU 91 33124

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

PLUME PATHWAY, DIST GP= 1, 8045. METERS, WINDS TOWARD WSW
ADULT 2.2E-06 2.2E-06 2.2E-06 2.2E-06 2.2E-06 2.2E-06 2.2E-06 4.2E-06
TEEN 2.2E-06 2.2E-06 2.2E-06 2.2E-06 2.2E-06 2.2E-06 2.2E-06 4.2E-06
CHILD 2.2E-06 2.2E-06 2.2E-06 2.2E-06 2.2E-06 2.2E-06 2.2E-06 4.2E-06
INFNT 2.2E-06 2.2E-06 2.2E-06 2.2E-06 2.2E-06 2.2E-06 2.2E-06 4.2E-06

GROUND PATHWAY, DIST GP= 1, 8045. METERS, WINDS TOWARD WSW
ADULT 2.6E-05 2.6E-05 2.6E-05 2.6E-05 2.6E-05 2.6E-05 2.6E-05 3.1E-05
TEEN 2.6E-05 2.6E-05 2.6E-05 2.6E-05 2.6E-05 2.6E-05 2.6E-05 3.1E-05
CHILD 2.6E-05 2.6E-05 2.6E-05 2.6E-05 2.6E-05 2.6E-05 2.6E-05 3.1E-05
INFNT 2.6E-05 2.6E-05 2.6E-05 2.6E-05 2.6E-05 2.6E-05 2.6E-05 3.1E-05

VEGET PATHWAY, DIST GP= 1, 8045. METERS, WINDS TOWARD WSW
ADULT 1.6E-05 5.3E-06 1.2E-05 2.1E-05 9.6E-06 3.8E-06 5.7E-06 0.0E+00
TEEN 1.5E-05 5.9E-06 1.9E-05 3.2E-05 1.3E-05 4.3E-06 7.8E-06 0.0E+00
CHILD 1.4E-05 7.7E-06 4.4E-05 5.2E-05 2.1E-05 6.7E-06 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

MEAT PATHWAY, DIST GP= 1, 8045. METERS, WINDS TOWARD WSW
ADULT 1.8E-06 1.0E-06 1.2E-06 2.3E-06 1.1E-06 5.4E-07 7.3E-07 0.0E+00
TEEN 8.9E-07 5.7E-07 9.7E-07 1.8E-06 8.0E-07 3.2E-07 5.0E-07 0.0E+00
CHILD 7.4E-07 5.2E-07 1.8E-06 2.3E-06 9.8E-07 3.9E-07 6.0E-07 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, 8045. METERS, WINDS TOWARD WSW
ADULT 1.2E-05 1.6E-06 1.0E-05 1.6E-05 6.3E-06 1.5E-06 2.9E-06 0.0E+00
TEEN 1.2E-05 2.1E-06 1.8E-05 2.8E-05 1.1E-05 2.0E-06 5.1E-06 0.0E+00
CHILD 9.9E-06 2.9E-06 4.3E-05 4.8E-05 1.7E-05 1.4E-06 7.8E-06 0.0E+00
INFNT 1.1E-05 4.2E-06 6.9E-05 9.1E-05 2.7E-05 5.8E-06 1.3E-05 0.0E+00

GOAT PATHWAY, DIST GP= 1, 8045. METERS, WINDS TOWARD WSW
ADULT 3.4E-05 3.4E-06 3.0E-05 4.8E-05 1.8E-05 2.8E-06 7.6E-06 0.0E+00
TEEN 3.3E-05 4.4E-06 5.4E-05 8.3E-05 3.0E-05 3.8E-06 1.4E-05 0.0E+00
CHILD 2.7E-05 6.1E-06 1.3E-04 1.4E-04 4.9E-05 6.2E-06 2.1E-05 0.0E+00
INFNT 2.8E-05 8.8E-06 2.1E-04 2.7E-04 7.7E-05 1.0E-05 3.6E-05 0.0E+00

INHAL PATHWAY, DIST GP= 1, 8045. METERS, WINDS TOWARD WSW
ADULT 2.2E-06 2.1E-06 1.5E-07 2.3E-06 2.1E-06 2.2E-06 2.6E-06 0.0E+00
TEEN 2.2E-06 2.1E-06 2.1E-07 2.4E-06 2.2E-06 2.2E-06 2.8E-06 0.0E+00
CHILD 1.9E-06 1.8E-06 2.8E-07 2.1E-06 1.9E-06 2.1E-06 2.4E-06 0.0E+00
INFNT 1.1E-06 1.1E-06 1.7E-07 1.3E-06 1.1E-06 1.3E-06 1.4E-06 0.0E+00

SUBTOTALS (NO PLUME)
ADULT 9.2E-05 4.0E-05 7.9E-05 1.2E-04 6.3E-05 3.7E-05 4.6E-05 3.1E-05
TEEN 8.8E-05 4.1E-05 1.2E-04 1.7E-04 8.3E-05 3.9E-05 5.6E-05 3.1E-05
CHILD 8.0E-05 4.5E-05 2.4E-04 2.7E-04 1.2E-04 4.5E-05 7.0E-05 3.1E-05
INFNT 6.6E-05 4.0E-05 3.0E-04 3.9E-04 1.3E-04 4.3E-05 7.7E-05 3.1E-05

TOTALS
ADULT 9.4E-05 4.2E-05 8.1E-05 1.2E-04 6.5E-05 3.9E-05 4.8E-05 3.5E-05
TEEN 9.0E-05 4.3E-05 1.2E-04 1.7E-04 8.5E-05 4.1E-05 5.8E-05 3.5E-05
CHILD 8.2E-05 4.7E-05 2.5E-04 2.7E-04 1.2E-04 4.7E-05 7.2E-05 3.5E-05
INFNT 6.8E-05 4.2E-05 3.0E-04 3.9E-04 1.3E-04 4.6E-05 7.9E-05 3.5E-05

INDIVIDUAL DOSES(MREM) DUE TO GASEOUS EFFLUENT
FOR DATES 91 4 1 1 THRU 91 63024

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

PLUME PATHWAY, DIST GP= 1, 8045. METERS, WINDS TOWARD SW
ADULT 1.8E-05 1.8E-05 1.8E-05 1.8E-05 1.8E-05 1.8E-05 1.9E-05 4.5E-05
TEEN 1.8E-05 1.8E-05 1.8E-05 1.8E-05 1.8E-05 1.8E-05 1.9E-05 4.5E-05
CHILD 1.8E-05 1.8E-05 1.8E-05 1.8E-05 1.8E-05 1.8E-05 1.9E-05 4.5E-05
INFNT 1.8E-05 1.8E-05 1.8E-05 1.8E-05 1.8E-05 1.8E-05 1.9E-05 4.5E-05

GROUND PATHWAY, DIST GP= 1, 8045. METERS, WINDS TOWARD SW
ADULT 2.1E-05 2.1E-05 2.1E-05 2.1E-05 2.1E-05 2.1E-05 2.1E-05 2.5E-05
TEEN 2.1E-05 2.1E-05 2.1E-05 2.1E-05 2.1E-05 2.1E-05 2.1E-05 2.5E-05
CHILD 2.1E-05 2.1E-05 2.1E-05 2.1E-05 2.1E-05 2.1E-05 2.1E-05 2.5E-05
INFNT 2.1E-05 2.1E-05 2.1E-05 2.1E-05 2.1E-05 2.1E-05 2.1E-05 2.5E-05

VEGET PATHWAY, DIST GP= 1, 8045. METERS, WINDS TOWARD SW
ADULT 1.7E-05 5.8E-06 1.0E-05 2.1E-05 1.0E-05 4.5E-05 6.5E-06 0.0E+00
TEEN 1.5E-05 6.5E-06 1.6E-05 3.1E-05 1.4E-05 3.9E-05 8.6E-06 0.0E+00
CHILD 1.6E-05 9.0E-06 3.8E-05 5.0E-05 2.2E-05 6.0E-05 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

MEAT PATHWAY, DIST GP= 1, 8045. METERS, WINDS TOWARD SW
ADULT 1.9E-06 9.8E-07 1.0E-06 2.4E-06 1.3E-06 5.6E-06 8.5E-07 0.0E+00
TEEN 9.6E-07 5.7E-07 8.5E-07 1.8E-06 8.7E-07 4.0E-06 5.7E-07 0.0E+00
CHILD 8.3E-07 5.7E-07 1.6E-06 2.2E-06 1.1E-06 5.9E-06 6.8E-07 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, 8045. METERS, WINDS TOWARD SW
ADULT 1.2E-05 2.0E-06 9.0E-06 1.6E-05 7.1E-06 1.4E-04 3.2E-06 0.0E+00
TEEN 1.2E-05 2.6E-06 1.6E-05 2.8E-05 1.2E-05 2.2E-04 5.2E-06 0.0E+00
CHILD 1.1E-05 3.6E-06 3.9E-05 4.7E-05 1.9E-05 4.3E-04 8.1E-06 0.0E+00
INFNT 1.3E-05 5.3E-06 6.2E-05 8.9E-05 3.0E-05 1.0E-03 1.4E-05 0.0E+00

GOAT PATHWAY, DIST GP= 1, 8045. METERS, WINDS TOWARD SW
ADULT 3.4E-05 4.2E-06 2.7E-05 4.7E-05 1.8E-05 1.7E-04 8.0E-06 0.0E+00
TEEN 3.4E-05 5.4E-06 4.8E-05 8.0E-05 3.1E-05 2.6E-04 1.4E-05 0.0E+00
CHILD 2.9E-05 7.5E-06 1.1E-04 1.3E-04 5.0E-05 5.2E-04 2.1E-05 0.0E+00
INFNT 3.2E-05 1.1E-05 1.8E-04 2.6E-04 7.8E-05 1.3E-03 3.6E-05 0.0E+00

INHAL PATHWAY, DIST GP= 1, 8045. METERS, WINDS TOWARD SW
ADULT 3.0E-06 2.6E-06 4.0E-07 3.2E-06 2.9E-06 1.6E-05 3.4E-06 0.0E+00
TEEN 2.9E-06 2.6E-06 5.5E-07 3.4E-06 3.0E-06 1.9E-05 3.8E-06 0.0E+00
CHILD 2.5E-06 2.3E-06 7.4E-07 3.1E-06 2.6E-06 2.1E-05 3.3E-06 0.0E+00
INFNT 1.4E-06 1.3E-06 4.6E-07 1.9E-06 1.5E-06 1.9E-05 2.0E-06 0.0E+00

SUBTOTALS (NO PLUME)
ADULT 8.9E-05 3.7E-05 6.8E-05 1.1E-04 6.1E-05 3.9E-04 4.3E-05 2.5E-05
TEEN 8.7E-05 3.9E-05 1.0E-04 1.7E-04 8.1E-05 5.6E-04 5.3E-05 2.5E-05
CHILD 8.1E-05 4.4E-05 2.1E-04 2.6E-04 1.2E-04 1.1E-03 6.7E-05 2.5E-05
INFNT 6.7E-05 3.9E-05 2.7E-04 3.7E-04 1.3E-04 2.3E-03 7.3E-05 2.5E-05

TOTALS
ADULT 1.1E-04 5.5E-05 8.7E-05 1.3E-04 7.9E-05 4.1E-04 6.2E-05 7.0E-05
TEEN 1.1E-04 5.7E-05 1.2E-04 1.8E-04 9.9E-05 5.8E-04 7.2E-05 7.0E-05
CHILD 9.9E-05 6.2E-05 2.3E-04 2.8E-04 1.3E-04 1.1E-03 8.6E-05 7.0E-05
INFNT 8.5E-05 5.7E-05 2.8E-04 3.9E-04 1.5E-04 2.4E-03 9.1E-05 7.0E-05

INDIVIDUAL DOSES (MREM) DUE TO GASEOUS EFFLUENT
FOR DATES 91 4 1 1 THRU 91 63024

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

PLUME PATHWAY, DIST GP= 1, 8045. METERS, WINDS TOWARD WSW
ADULT 3.2E-05 3.2E-05 3.2E-05 3.2E-05 3.2E-05 3.2E-05 3.3E-05 8.0E-05
TEEN 3.2E-05 3.2E-05 3.2E-05 3.2E-05 3.2E-05 3.2E-05 3.3E-05 8.0E-05
CHILD 3.2E-05 3.2E-05 3.2E-05 3.2E-05 3.2E-05 3.2E-05 3.3E-05 8.0E-05
INFNT 3.2E-05 3.2E-05 3.2E-05 3.2E-05 3.2E-05 3.2E-05 3.3E-05 8.0E-05

GROUND PATHWAY, DIST GP= 1, 8045. METERS, WINDS TOWARD WSW
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 3.5E-05 3.5E-05 3.5E-05 3.5E-05 3.5E-05 3.5E-05 3.5E-05 4.1E-05
CHILD 3.5E-05 3.5E-05 3.5E-05 3.5E-05 3.5E-05 3.5E-05 3.5E-05 4.1E-05
INFNT 3.5E-05 3.5E-05 3.5E-05 3.5E-05 3.5E-05 3.5E-05 3.5E-05 4.1E-05

VEGET PATHWAY, DIST GP= 1, 8045. METERS, WINDS TOWARD WSW
ADULT 2.8E-05 1.0E-05 1.7E-05 3.6E-05 1.8E-05 7.1E-05 1.1E-05 0.0E+00
TEEN 2.6E-05 1.1E-05 2.7E-05 5.2E-05 2.4E-05 6.2E-05 1.5E-05 0.0E+00
CHILD 2.7E-05 1.6E-05 6.3E-05 8.4E-05 3.7E-05 9.4E-05 2.2E-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

MEAT PATHWAY, DIST GP= 1, 8045. METERS, WINDS TOWARD WSW
ADULT 3.2E-06 1.7E-06 1.7E-06 4.0E-06 2.1E-06 8.8E-06 1.5E-06 0.0E+00
TEEN 1.6E-06 9.7E-07 1.4E-06 3.0E-06 1.5E-06 6.2E-06 9.8E-07 0.0E+00
CHILD 1.4E-06 9.8E-07 2.6E-06 3.8E-06 1.8E-06 9.2E-06 1.2E-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, 8045. METERS, WINDS TOWARD WSW
ADULT 2.0E-05 3.4E-06 1.5E-05 2.7E-05 1.2E-05 2.1E-04 5.4E-06 0.0E+00
TEEN 2.1E-05 4.5E-06 2.7E-05 4.6E-05 1.9E-05 3.4E-04 8.9E-06 0.0E+00
CHILD 1.9E-05 6.3E-06 6.4E-05 7.8E-05 3.1E-05 6.7E-04 1.4E-05 0.0E+00
INFNT 2.2E-05 9.1E-06 1.0E-04 1.5E-04 5.0E-05 1.6E-03 2.3E-05 0.0E+00

GOAT PATHWAY, DIST GP= 1, 8045. METERS, WINDS TOWARD WSW
ADULT 5.7E-05 7.1E-06 4.4E-05 7.8E-05 3.1E-05 2.6E-04 1.3E-05 0.0E+00
TEEN 5.7E-05 9.2E-06 7.9E-05 1.3E-04 5.1E-05 4.1E-04 2.3E-05 0.0E+00
CHILD 4.9E-05 1.3E-05 1.9E-04 2.2E-04 8.3E-05 8.0E-04 3.6E-05 0.0E+00
INFNT 5.3E-05 1.9E-05 3.0E-04 4.3E-04 1.3E-04 1.9E-03 6.1E-05 0.0E+00

INHAL PATHWAY, DIST GP= 1, 8045. METERS, WINDS TOWARD WSW
ADULT 5.3E-06 4.6E-06 7.3E-07 5.6E-06 5.0E-06 2.5E-05 6.1E-06 0.0E+00
TEEN 5.1E-06 4.6E-06 1.0E-06 6.0E-06 5.2E-06 3.0E-05 6.9E-06 0.0E+00
CHILD 4.3E-06 4.0E-06 1.4E-06 5.4E-06 4.6E-06 3.3E-05 5.9E-06 0.0E+00
INFNT 2.4E-06 2.3E-06 8.4E-07 3.4E-06 2.7E-06 2.9E-05 3.5E-06 0.0E+00

SUBTOTALS (NO PLUME)

ADULT 1.5E-04 6.2E-05 1.1E-04 1.9E-04 1.0E-04 6.1E-04 7.2E-05 4.1E-05
TEEN 1.5E-04 6.5E-05 1.7E-04 2.8E-04 1.4E-04 8.8E-04 9.0E-05 4.1E-05
CHILD 1.3E-04 7.5E-05 3.6E-04 4.3E-04 1.9E-04 1.6E-03 1.1E-04 4.1E-05
INFNT 1.1E-04 6.5E-05 4.4E-04 6.1E-04 2.2E-04 3.6E-03 1.2E-04 4.1E-05

TOTALS

ADULT 1.8E-04 9.4E-05 1.5E-04 2.2E-04 1.3E-04 6.5E-04 1.1E-04 1.2E-04
TEEN 1.8E-04 9.8E-05 2.0E-04 3.1E-04 1.7E-04 9.1E-04 1.2E-04 1.2E-04
CHILD 1.7E-04 1.1E-04 3.9E-04 4.6E-04 2.2E-04 1.7E-03 1.5E-04 1.2E-04
INFNT 1.4E-04 9.7E-05 4.8E-04 6.4E-04 2.5E-04 3.7E-03 1.5E-04 1.2E-04

APPENDIX 2.1

Summary of Hourly Meteorological Data
First Quarter, 1991

HOURS AT EACH WIND SPEED AND DIRECTION
 PERIOD OF RECORD = 91010101-91033124
 STABILITY CLASS: A DT/DZ
 ELEVATION: SPEED:SPD10M DIRECTION:DIR10M LAPSE:DT60M

WIND DIRECTION	WIND SPEED(MPH)						TOTAL
	1-3	4-7	8-12	13-19	19-24	>24	
N	0	10	12	4	0	0	26
NNE	0	1	5	0	0	0	6
NE	0	4	4	3	0	0	11
ENE	0	2	2	0	0	0	4
E	0	1	3	2	0	0	6
ESE	0	3	9	2	0	0	14
SE	1	2	8	0	0	0	11
SSE	1	12	11	3	0	0	27
S	0	3	21	7	0	0	31
SSW	0	0	10	7	0	0	17
SW	0	0	20	3	0	0	23
WSW	0	1	33	2	0	0	36
W	0	8	22	3	1	0	34
WNW	0	7	10	0	0	0	17
NW	0	18	17	0	0	0	35
NNW	0	10	16	0	0	0	26
TOTAL	2	82	203	36	1	0	324

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

HOURS AT EACH WIND SPEED AND DIRECTION
 PERIOD OF RECORD = 91010101-91033124
 STABILITY CLASS: B LT/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	4	4	1	0	0	9
NNE	0	3	3	1	0	0	7
NE	0	2	2	0	0	0	4
ENE	0	1	3	0	0	0	4
E	0	2	6	0	0	0	8
ESE	1	1	1	2	0	0	5
SE	0	5	1	0	0	0	6
SSE	0	2	4	0	0	0	6
S	1	2	6	1	0	0	10
SSW	0	1	3	2	0	0	6
SW	0	1	6	4	0	0	11
WSW	0	4	6	0	0	0	10
W	0	2	8	4	1	0	15
WNW	0	3	4	0	0	0	7
NW	1	3	3	2	0	0	9
NNW	0	3	7	1	0	0	11
TOTAL	3	39	67	18	1	0	128

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

HOURS AT EACH WIND SPEED AND DIRECTION
 PERIOD OF RECORD = 91010101-91033124
 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	0	4	2	0	0	0	6
NNE	0	6	8	0	0	0	14
NE	0	4	4	1	0	0	9
ENE	0	0	4	4	1	0	9
E	0	3	5	3	0	0	11
ESE	0	3	3	1	0	0	7
SE	0	1	0	0	0	0	1
SSE	0	3	2	1	0	0	6
S	1	2	2	1	0	0	6
SSW	0	2	5	3	0	0	10
SW	0	1	4	4	0	0	9
WSW	0	2	9	1	0	0	12
W	0	3	12	1	0	0	16
WNW	0	8	9	1	0	0	18
NW	0	8	9	6	0	0	23
NNW	1	7	10	6	0	0	24
TOTAL	2	57	88	33	1	0	181

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

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 91010101-91033124

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	6	42	19	1	0	0	68
NNE	5	22	11	1	0	0	39
NE	5	18	14	5	0	0	42
ENE	4	14	3	5	2	0	28
E	3	20	11	15	0	0	49
ESE	5	13	23	5	0	0	46
SE	10	13	4	2	0	0	29
SSE	3	13	11	7	0	0	34
S	3	18	29	14	0	1	65
SSW	1	18	33	29	4	1	86
SW	2	23	39	22	1	0	87
WSW	2	14	47	11	2	1	77
W	2	15	14	14	1	0	87
WNW	3	23	1	1	0	0	58
NW	5	31	5	5	0	0	61
NNW	5	54	16	15	0	0	90
TOTAL	64	351	366	152	10	3	946

PERIODS OF CALM(HOURS): 0

VARIABLE DIRECTION 0

HOURS OF MISSING DATA: 4

HOURS AT EACH WIND SPEED AND DIRECTION
 PERIOD OF RECORD = 91010101-91033124
 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	3	10	11	2	0	0	26
NNE	2	10	3	0	0	0	15
NE	4	13	10	0	0	0	27
ENE	1	25	3	0	0	0	29
E	4	17	6	0	0	0	27
ESE	3	13	4	0	0	0	20
SE	4	13	9	1	0	0	27
SSE	5	9	11	1	0	0	26
S	2	20	31	3	0	0	56
SSW	5	25	26	5	1	0	62
SW	2	8	8	1	0	0	19
WSW	6	7	17	3	2	0	35
W	5	2	7	0	0	0	14
WNW	5	4	2	0	0	0	11
NW	1	2	0	0	0	0	3
NNW	2	7	3	1	0	0	13
TOTAL	54	185	151	17	3	0	410

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

HOURS AT EACH WIND SPEED AND DIRECTION
 PERIOD OF RECORD = 91010101-91033124
 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	1	0	0	1
NNE	0	1	0	0	0	0	1
NE	1	9	0	0	0	0	10
ENE	2	2	0	0	0	0	4
E	3	8	1	0	0	0	12
ESE	3	7	0	0	0	0	10
SE	7	2	3	0	0	0	12
SSE	12	15	3	0	0	0	30
S	2	11	3	0	0	0	16
SSW	2	11	2	0	0	0	15
SW	1	1	1	0	0	0	3
WSW	0	2	4	0	0	0	6
W	0	2	0	0	0	0	2
WNW	0	2	0	0	0	0	2
NW	1	0	0	0	0	0	1
NNW	0	1	0	0	0	0	1
TOTAL	34	74	17	1	0	0	126

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

HOURS AT EACH WIND SPEED AND DIRECTION
 PERIOD OF RECORD = 91010101-91033124
 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	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	1	4	0	0	0	0	5
ESE	2	1	0	0	0	0	3
SE	3	1	0	0	0	0	4
SSE	6	3	0	0	0	0	9
S	4	8	2	0	0	0	14
SSW	0	3	0	0	0	0	3
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
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	1	0	0	0	0	0	1
TOTAL	19	20	2	0	0	0	41

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

HOURS AT EACH WIND SPEED AND DIRECTION
 PERIOD OF RECORD = 91010101-91033124
 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	9	70	48	2	0	0	136
NNE	7	43	30	2	0	0	82
NE	10	50	34	9	0	0	103
ENE	9	44	15	9	3	0	80
E	11	55	32	20	0	0	118
ESE	14	41	40	10	0	0	105
SE	25	37	25	3	0	0	90
SSE	27	57	42	12	0	0	138
S	13	64	94	26	0	1	198
SSW	8	60	79	46	5	1	199
SW	5	34	78	34	1	0	152
WSW	8	30	116	17	4	1	176
W	7	32	104	22	3	0	168
WNW	8	47	56	2	0	0	113
NW	8	62	49	13	0	0	132
NNW	9	82	52	23	0	0	166
TOTAL	178	808	894	257	16	3	2156

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

APPENDIX 2.2

Summary of Hourly Data Meteorological Data
Second Quarter, 1991

HOURS AT EACH WIND SPEED AND DIRECTION
 PERIOD OF RECORD = 91040101-91063024
 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	30	34	1	0	0	66
NNE	0	0	0	0	0	0	0
NE	1	4	4	2	0	0	11
ENE	0	13	18	0	0	0	31
E	1	10	21	1	0	0	33
ESE	0	13	13	0	0	0	26
SE	1	6	9	0	0	0	16
SSE	0	12	5	0	0	0	17
S	0	9	8	0	0	0	17
SSW	0	4	4	0	0	0	8
SW	0	24	22	8	0	0	54
WSW	1	31	22	9	0	0	63
W	0	23	8	0	0	0	31
WNW	2	14	2	0	0	0	18
NW	3	25	7	0	0	0	35
NNW	3	67	16	0	0	0	86
TOTAL	13	285	193	21	0	0	512

PERIODS OF CALM(HOURS): 0
 VARIABLE DIRECTION 0
 HOURS OF MISSING DATA: 53

HOURS AT EACH WIND SPEED AND DIRECTION
 PERIOD OF RECORD = 91040101-91063024
 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	7	2	0	0	0	10
NNE	0	0	1	0	0	0	1
N	1	2	0	2	0	0	5
NNE	1	2	2	0	0	0	5
E	0	3	6	3	0	0	12
ESE	0	2	2	0	0	0	4
SE	0	7	2	0	0	0	9
SSE	0	2	1	0	0	0	3
S	0	3	1	1	0	0	5
SSW	1	1	4	0	0	0	6
SW	0	9	7	3	0	0	19
WSW	1	9	2	1	0	0	13
W	0	2	0	0	0	0	2
WNW	0	3	0	0	0	0	3
NW	1	3	0	0	0	0	4
NNW	1	4	1	0	0	0	6
TOTAL	7	59	31	10	0	0	107

PERIODS OF CALM(HOURS): 0
 VARIABLE DIRECTION 0
 HOURS OF MISSING DATA: 53

HOURS AT EACH WIND SPEED AND DIRECTION
 PERIOD OF RECORD = 91040101-91063024
 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	12	3	0	0	0	17
NNE	0	2	0	1	0	0	3
NE	0	2	0	1	0	0	3
ENE	1	2	2	0	0	0	5
E	0	2	2	1	0	0	5
ESE	1	1	4	0	0	0	6
SE	0	1	2	0	0	0	3
SSE	1	4	1	0	0	0	6
S	0	3	1	1	0	0	5
SSW	1	2	0	1	0	0	4
SW	1	5	4	2	0	0	12
WSW	0	4	4	1	0	0	9
W	0	0	1	0	0	0	1
WNW	0	1	1	0	0	0	2
NW	0	4	2	0	0	0	6
NNW	1	3	0	0	0	0	4
TOTAL	8	48	27	8	0	0	91

PERIODS OF CALM(HOURS): 0
 VARIABLE DIRECTION 0
 HOURS OF MISSING DATA: 53

HOURS AT EACH WIND SPEED AND DIRECTION
 PERIOD OF RECORD = 91040101-91063024
 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	4	27	7	0	0	0	38
NNE	1	15	13	1	0	0	30
NE	1	16	13	1	0	0	31
ENE	2	16	26	1	0	0	45
E	1	14	28	4	0	0	47
ESE	5	9	13	1	0	0	28
SE	2	7	3	0	0	0	12
SSE	3	7	0	0	0	0	10
S	1	15	16	3	0	0	35
SSW	1	15	17	1	0	0	34
SW	5	14	16	3	0	0	38
WSW	3	11	18	9	0	0	41
W	2	6	6	0	0	0	14
WNW	2	4	11	3	0	0	17
NW	4	9	2	0	0	0	15
NNW	3	14	0	0	0	0	17
TOTAL	40	199	189	24	0	0	452

PERIODS OF CALM(hOURS): 0
 VARIABLE DIRECTION 0
 HOURS OF MISSING DATA: 53

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 91040101-91063024

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	9	8	1	0	0	0	18
NNE	5	10	2	0	0	0	17
NE	7	9	0	0	0	0	16
ENE	8	20	3	0	0	0	31
E	4	19	13	0	0	0	36
ESE	12	31	8	0	0	0	51
SE	12	23	7	0	0	0	42
SSE	13	15	3	0	0	0	31
S	11	45	29	2	0	0	87
SSW	2	46	21	2	0	0	71
SW	4	21	9	0	0	0	34
WSW	5	8	3	0	0	0	16
W	3	9	8	2	0	0	22
WNW	2	2	10	0	0	0	14
NW	1	5	0	2	0	0	8
NNW	3	5	1	0	0	0	9
TOTAL	101	276	118	8	0	0	503

PERIODS OF CALM(HOURS): 0

VARIABLE DIRECTION 0

HOURS OF MISSING DATA: 53

HOURS AT EACH WIND SPEED AND DIRECTION
 PERIOD OF RECORD = 91040101-91063024
 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	3	2	2	0	0	0	7
NNE	12	0	1	0	0	0	13
NE	21	7	1	0	0	0	29
ENE	14	7	0	0	0	0	21
E	17	9	1	0	0	0	27
ESE	11	12	3	0	0	0	26
SE	9	5	3	0	0	0	17
SSE	13	6	1	0	0	0	20
S	16	22	2	0	0	0	40
SSW	9	3	0	0	0	0	12
SW	6	9	2	0	0	0	17
WSW	2	5	0	0	0	0	7
W	3	1	0	0	0	0	4
WNW	2	3	0	0	0	0	5
NW	1	3	0	0	0	0	4
NNW	2	0	0	0	0	0	2
TOTAL	141	94	16	0	0	0	251

PERIODS OF CALM(HOURS): 0
 VARIABLE DIRECTION 0
 HOURS OF MISSING DATA: 53

HOURS AT EACH WIND SPEED AND DIRECTION
 PERIOD OF RECORD = 91040101-91063024
 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	4	0	0	0	0	0	4
NNE	6	0	0	0	0	0	6
NE	11	1	0	0	0	0	12
ENE	39	1	0	0	0	0	40
E	25	3	0	0	0	0	28
ESE	14	0	0	0	0	0	14
SE	25	0	0	0	0	0	25
SSE	31	7	0	0	0	0	38
S	17	4	0	0	0	0	21
SSW	7	0	0	0	0	0	7
SW	0	1	0	0	0	0	1
WSW	4	0	0	0	0	0	4
W	3	0	0	0	0	0	3
WNW	2	1	0	0	0	0	3
NW	6	1	0	0	0	0	7
NNW	2	0	0	0	0	0	2
TOTAL	196	19	0	0	0	0	215

PERIODS OF CALM(HOURS): 0
 VARIABLE DIRECTION 0
 HOURS OF MISSING DATA: 53

HOURS AT EACH WIND SPEED AND DIRECTION
 PERIOD OF RECORD = 91040101-91063024
 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	24	36	49	1	0	0	160
NNE	24	27	17	2	0	0	70
NE	42	41	18	6	0	0	107
E	65	61	51	1	0	0	178
ESE	48	60	71	9	0	0	188
SE	43	68	43	1	0	0	155
SSE	49	49	26	0	0	0	124
S	61	53	11	0	0	0	125
SSW	45	101	57	7	0	0	210
SW	21	71	46	4	0	0	142
WSW	16	83	60	16	0	0	175
W	16	68	49	20	0	0	153
WNW	11	41	23	2	0	0	77
NW	10	28	24	0	0	0	62
NNW	16	50	11	2	0	0	79
	15	93	18	0	0	0	126
TOTAL	506	980	574	71	0	0	2131

PERIODS OF CALM(HOURS): 0
 VARIABLE DIRECTION 0
 HOURS OF MISSING DATA: 53

APPENDIX 3.0

Process Control Program (PCP) Changes

PROCESS CONTROL PROGRAM (PCP) CHANGES

The Radioactive Waste Process Control Manual 12 PMP 3150 PCP.001 and PCP.100 were not revised during this reporting period.

APPENDIX 4.0

Offsite Calculation Manual (ODCM) Changes

INDIANA MICHIGAN POWER COMPANY

DONALD C. COOK NUCLEAR PLANT
INSTRUCTION AND PROCEDURE CHANGE SHEET

INSTRUCTION OR PROCEDURE NO. PMP 6010 OSD.001 REVISION NO. 3 CHANGE SHEET NO. 1
TITLE Offsite Dose Calculation Manual PAGE 1 OF 1

ORIGINATED BY <u>Charles F. N. Gage</u>	DATE <u>3-5-91</u>
MANAGEMENT STAFF <u>[Signature]</u>	DATE <u>3/6/91</u>
SENIOR REACTOR OPERATOR _____	DATE _____
PROCEDURE SUB-COMMITTEE _____	DATE _____
QA SUPERINTENDENT <u>[Signature]</u>	DATE <u>3/12/91</u>
PNSRC <u>#2490</u>	DATE <u>3-14-91</u>
PLANT MANAGER <u>[Signature]</u>	DATE <u>3/14/91</u>

EXPIRATION DATE N/A

DESCRIPTION OF CHANGE

1) Change Step 4.2.3.1 Plant Unit Vent -- Change Unit Vent Flow Rates (Fp) to Unit 1 from 159,600 cfm to 139,600 cfm and Unit 2 from 123,500 cfm to 103,500 cfm. 2) Change Attachment 3.13 to new flow rates above. In addition, change Containment Purge System flow rates for each Unit from 32,000 cfm to 12,000 cfm. 3) Attachment 3.37 - Delete update of 12 THP 6010 RAD.335 (Gaseous Releases) with X/Q value. Added flow rates of Start Up Flash Tank.

REASON(S) FOR CHANGE

1) & 2): Implementation of new flow rates as discussed in C. Flis memo to J. L. St. Armand, Containment Purge History and Future Development, 2/26/90. Start Up Flash Tanks not addressed in Attachment. 3) 12 THP 6010 RAD.335 (Gaseous Releases) has been cancelled. Its replacement does not contain the value.

INSTRUCTIONS FOR INCORPORATING CHANGE

Replace the following:

List of Effective Pages, Page 2 of 6 and Page 5 of 6, Rev. 3 with Page 2 of 6 and Page 5 of 6, Rev. 3, CS-2. Page 3 of 6, Rev. 3 with Page 3 of 6, Rev. 3, CS-2. Page 28 of 41, Rev. 2 with Page 28 of 41, Rev. 3, CS-2. Attachment 3.13, Rev. 2 with Attachment 3.13, Rev. 3, CS-2. Attachment 3.37, Rev. 3 with Attachment 3.37, Rev. 3, CS-2.

Date February 26, 1990

Subject Containment Purge History and Future Development

From C. Flis

To J.L. St.Amand

The inability of the containment purge system to operate at design specifications has been studied and documented since 1981. This report summarizes data taken on the purge system, documents current operating capability, and makes recommendations for future use of the system.

DATA HISTORY

<u>DATE</u>	<u>DESCRIPTION</u>	FAN HV-CPX-1	FAN HV-CPX-2	<u>BOTH</u>
	Design airflow (cfm)	16,000	16,000	----
1973	U1 Pre-Op Airflow (cfm)	9875	9628	----
1981	U1 As-found flow (cfm)	----	----	11,100
1981	U1 Flow after balance (cfm)	----	----	14,100
AUG 1987	U1 Flow (cfm) at JO 714874 request.	8770	11,170	11,230
DEC 1987	U1 As-found flow before adjustment with ductwork off-shroud on.	12,000	10,000	16,000
DEC 1987	U1 As-found flow before adjustment with ductwork off-shroud off.	12,000	16,000	----
DEC 1987	Flow after blade pitch adjustment ductwork off-shroud on	12,000	16,000	16,000
	U2 Design airflow (cfm)	16,000	16,000	----
	U2 Pre-Op airflow (cfm)	14,683	14,678	----
APR 1987	U2 Flow @ Ops request	12,000	4000	----
JAN 1988	U2 As-found flow before adjustment-ductwork off.	16,000	14,000	28,000
JAN 1988	U2 As-left flow after blade pitch adjustment-duct off.	18,000	17,000	26,000
JAN 1990	U2 Flow to and from lower containment only.	5263	OFF	----
JAN 1990	U2 Flow-both fans on, to and from both upper and lower	----	----	11,400
JAN 1990	U2 Flow after adjusting supply damper to upper to 50% closed.	----	----	10,000

CURRENT OPERATING CAPABILITY

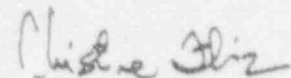
Based on testing, the approximate airflow that can be achieved in each of the following operating conditions is listed below. These values are to be used for revision of design basis documents.

<u>Equipment Configuration</u>	<u>Exhaust Airflow (cfm)</u>
2 CPS and 2 CPX fans on, upper and lower purge (full purge)	12,000
1 CPS and 1 CPX fan on, purging lower only (half purge)	6,000
1 CPS and 1 CPX fan on, purging both upper and lower	10,000

Correction of the design basis documents will provide more accurate use of the off-site dose calculation manual, as well as other applicable operating procedures.

While it is desirable to improve the purge system to its original design configuration, cost may be limiting and will have to be evaluated along with ALARA concerns.

Design change, cost, and ALARA studies will be documented in future reports.



C. Flis

/tfs

c: J.B. Droste
B.A. Olssonson
S.P. Lodge
D.C. Loope
S.P. Klementowicz
M.R. Sanghavi
H.W. Young

INDIANA MICHIGAN POWER COMPANY

DONALD C. COOK NUCLEAR PLANT
INSTRUCTION AND PROCEDURE CHANGE SHEET

INSTRUCTION OR PROCEDURE NO. PMP 6010 OSD.001 REVISION NO. 3 CHANGE SHEET NO. 1
TITLE Off-Site Dose Calculation Manual PAGE 1 OF 1

ORIGINATED BY <u>Charles Noble</u>	DATE <u>2-15-91</u>
MANAGEMENT STAFF <u>[Signature]</u>	DATE <u>2-15-91</u>
SENIOR REACTOR OPERATOR <u>[Signature]</u>	DATE <u>2-15-91</u>
PROCEDURE SUB-COMMITTEE <u>[Signature]</u>	DATE <u>2-19-91</u>
QA SUPERINTENDENT <u>[Signature]</u>	DATE <u>2/19/91</u>
PNSRC <u>#24841</u>	DATE <u>2-21-91</u>
PLANT MANAGER <u>[Signature]</u>	DATE <u>2/2/91</u>

EXPIRATION DATE Receipt of new X/Q and D/Q Values

DESCRIPTION OF CHANGE

Change Attachment 3.17 to new X/Q values provided by AEPSC. Change Attachment 3.18 to new D/Q values provided by AEPSC.

REASON(S) FOR CHANGE

Values are updated annually. Values provide parameters for off-site dose calculations and gaseous monitor setpoints.

INSTRUCTIONS FOR INCORPORATING CHANGE

Replace the following:

List of Effective Pages, Page 4 of 6, Rev. 3 with Page 4 of 6, Rev. 3, CS-1
Attachment 3.17, Page 1 of 1, Rev. 3 with Page 1 of 1, Rev. 3, CS-1
Attachment 3.18, Page 1 of 1, Rev. 3 with Page 1 of 1, Rev. 3, CS-1