

Radiation Protection Consultant

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**MILDOS DETERMINATION OF  
RADIATION DOSES FROM  
POWER RESOURCES INC.  
SMITH RANCH-HIGHLANDS URANIUM  
IN-SITU LEACHING OPERATION**

By:

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## **EXECUTIVE SUMMARY**

Radiation doses from the release of radon-222 at the proposed Smith Ranch-Highlands Uranium In-Situ Leaching Operation near Glenrock Wyoming were estimated using the computer code MILDOS written for the Nuclear Regulatory Commission. The code used weather data from Casper, Wyoming to calculate annual average concentrations and radiation doses at nearby residences, ranches, towns, and population centers. Results include:

- The maximum annual radiation dose at the nearest residence (Sunquest Ranch) from the release of radon-222 is 18 mrem/year which is 18% of the 100 mrem/yr dose limit for the general public specified in 10 CFR 20.
- The maximum annual radiation dose at the nearest downwind resident (Vollman Ranch) is 13 mrem/yr which is 13 % of the 100 mrem/yr dose limit for the general public.
- The 40CFR190 annual dose commitment is zero because 40CFR190 excludes the dose from radon-222 and its progeny and radon-222 and its progeny are the only effluents from the in-situ leaching operation.
- The maximum population dose for all populations is 305 person-rem/yr for all populations around the facility.
- The maximum property boundary dose is 11 mrem/yr.
- The maximum radiation dose occurs in the first 4 years of the project (2007-2010).

## **OBJECTIVE**

Model the dispersion of radon-222 from the Power Resources Inc. Smith Ranch-Highlands Uranium in-situ leaching operation using the computer code MILDOS to predict the radiation doses to people in the vicinity of the project.

## **PROJECT DESCRIPTION**

Twenty well fields have or will be developed for injection and recovery of uranium leaching solutions over the life of the project, approximately 25 years. The leaching solution is pumped into the underground uranium ore body to oxidize the uranium to a soluble and stable form. The leach solution will consist of oxygen ( $O_2$ ), carbon dioxide ( $CO_2$ ) and native groundwater. The solution is removed in extraction wells and passed over ion exchange resins to remove the uranium. The resins are then removed and transported by truck to the Smith Ranch Central Processing Facility where the uranium is removed from the resin and dried. The resin is returned to the individual ion exchange columns.

## **RADIOACTIVE EFFLUENTS**

In the ore body uranium-238 decays to form radium-226 and then to radon-222. Both uranium and radon are soluble in the leach solution that is pumped through the ore body

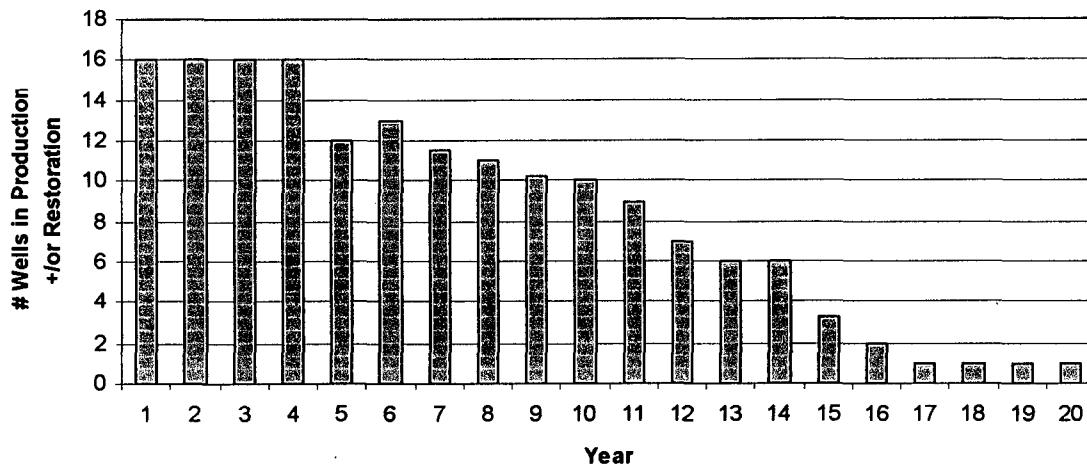
to the ground surface. Radioactive effluents from an operating in-situ uranium recovery facility include:

- Radon-222 from new well fields. When the wells are drilled into the ore body, ore cuttings are transported to the ground surface in the drilling mud. The cuttings are temporarily stored in mud pits where radon-222 is released from the radium-226 in the cuttings. The quantity radon-222 released from new well fields is less than 1% of the radon-222 released during well field production.
- Radon-222 from the production well fields. Radon-222 that is dissolved in the leach solution is released from the purge water which is water in excess of the water that is injected back into the ore body. Radon-222 is only released from the purge water during storage in tanks prior to being injected down deep disposal wells. As a result, only a portion of radon-222 carried in the purge water is released. Therefore, estimates generated from MILDOS for radon-222 releases from purge water are considered conservative and include releases from satellite mine water collection facilities. In addition radon-222 is released from occasional venting of the wellheads and from the removal of resin from the ion exchange columns.
- Uranium from the drying of yellowcake. Drying of yellowcake will take place at the Smith Ranch Central Processing Facility using a vacuum dryer which releases negligible quantities of yellowcake into the atmosphere.
- Radon-222 from the pumping of fresh water during the restoration of the well fields. The primary source of radon-222 during restoration is from the water circulating within and discharged from the wells. These releases are equal to the radon releases during uranium production. For example for well field SW at the Smith Ranch-Highlands Uranium operation MILDOS calculated the total radon release during production to be 8.3E3 Ci/yr. The total radon release during restoration was calculated to be 8.3 E3 Ci/yr.
- Radon-222 from land application areas. Purge water from production wells or restoration wells is sometimes treated and released for irrigation. This source of radon-222 is not applicable at the Smith Ranch-Highlands Uranium operation because uranium and radium are removed from the water before discharge from the irrigator.

## **SMITH RANCH-HIGHLANDS URANIUM OPERATIONS**

Of the 20 minefield units that are or will be developed on the Smith Ranch-Highlands Uranium operation, the number of units that are in production and/or in restoration during any given year is presented in Figure 1. For the first 4 years of operation, 16 mine units will be in production and/or restoration. After the first 4 years of the project the number of mine units in production and/or restoration range from 13 down to 1 in the 20<sup>th</sup> year of the project.

**Figure 1 Smith Ranch - Highland Uranium Project**



### **YEAR OF MAXIMAL RADON-222 RELEASE**

Radon-222 releases during the drilling, production, and restoration phases of the operation are calculated by the computer program MILDOS from the input parameters to the program. Production and restoration account for nearly all of the releases of radon-222 from the Mine Units. Drilling releases are very small, e.g. 0.001% of the total radon-222 releases. Radon-222 from land applications such as an irrigator is minimal because the uranium and radium have been removed from the water.

The maximum number of units in production and/or restoration for any year of the project is 16 mine units in years 1-4 of the project. During years 1-4 the maximum amount of radon-222 is released from the project (2007-2010).

### **MILDOS**

The computer code MILDOS was used to determine the impact of radon-222 release on the surrounding populations. The code was originally designed to address the impacts of uranium mill operations but was subsequently updated in 1998 to address the impacts of uranium in-situ leaching operations using a MS Windows format. The code was developed by Argonne National Laboratory for the Nuclear Regulatory Commission to assess the radiological impacts and regulatory compliance of a release. To determine the maximal impact the code was run for year 1 which is one of four years during which the most number of well units will be in production and/or restoration and the most radon-222 will be released from the project.

## INPUT DATA

The weather data entered into the MILDOS computer code were the joint frequency of wind speed by direction and stability class in the STAR format collected by the National Oceanic and Atmospheric Administration for Casper, WY. For example the wind blew from the north at a speed of 1.5 mph 0.007 percent of the year for stability class 1. The data were in the file "cpr0335.str." Local data for the Reynolds Ranch were not available in the STAR format. The Casper data is considered representative of the Smith Ranch-Highlands Uranium project since it was from the closest meteorological station and no significant barriers such as a mountain range exist between the two sites to significantly alter weather patterns. The printout of the weather data is presented in the attached MILDOS printouts.

Table 1 presents the locations where radiation doses around the Smith Ranch-Highland Uranium project were calculated by MILDOS. The Sunquest Ranch is the nearest residence approximately 1 km South. The Vollman Ranch is the nearest downwind residence approximately 6 km West. The nearest communities within 80 km are presented in Table 1 with their respective East-West and North-South distances from the Highland Central Processing facility.

**Table 1. Locations around the Smith Ranch-Highland Uranium Project where MILDOS calculated radiation doses.**

Location	KM East West (-)	KM North South (-)
Casper	-54	-23.0
Douglas	22	-32
Evansville	-50	-22
Glenrock	-16	-20
Midwest	-60	41
<b>Sunquest Ranch (nearest Residence)</b>	0.0	-1.1
<b>Vollman Ranch (nearest downwind residence)</b>	-6.4	0.1
Wright	12	80
<b>North Project Boundary</b>	3.9	6.4
<b>South Project Boundary</b>	-7.6	-6.1
<b>East Project Boundary</b>	15.5	3.0
<b>West Project Boundary</b>	-4.0	1.8

Table 2 presents the population distribution within 80 km of the Smith Ranch-Highland Uranium Project that was entered into MILDOS.

Table 3 presents the well field operational data that were entered into MILDOS. The well fields were those that will be in production and/or restoration during year 1 of the project. As shown in Figure 1 the largest number of wells will be in production or restoration during years 1-4. Since the amount of radon-222 emitted during production and

restoration is much greater than during well development or reclamation, years 1-4 are the years of greatest radon-222 production from all the well fields over the 25-year lifetime of the project.

The East-West, North-South distances in km from the Smith Ranch Central Processing facility are presented in Table 3. The well field unit, its location relative to the Smith Ranch-Highlands Uranium Central Processing Facility, the radium-226 concentration, the radon-222 emanation fraction, the thickness of the ore, the ore density, and the area of the well unit are presented for each mine unit. The volume of process water in circulation, the fraction of radon in the process water, the rate of radon venting from the process water, and the purge rate (in liters per day, not gallons per day) are presented. The ion-exchange column volume, the column unloading rate, and the porosity of the ion exchange resin are presented in Table 3.

Figure 2 is a map that shows the proximity of the mine units to the Central Processing Facility and the project boundary locations where MILDOS calculated radiation doses.

Table 4 shows the well field data needed to calculate the radon emissions and radiation doses during restoration of the well fields. During restoration water is being circulated through the well fields in a closed loop except for a small portion of the water that is routed to the reverse osmosis (RO) units and then to open tanks where radon is released. Four out of the five RO units receive water from more than one well field. Table 4 shows the five RO units and the well fields that send water to each RO unit. For example the SAT2 RO unit receives water from well fields C, D, E, H, I, and Dext. The X-Y coordinates of each RO units and the other operational values require as entry into MILDOS are presented in Table 4.

**Table 2. Population distributions within 80 km of the Smith Ranch Central Processing Facility.**

Distance from Smith Ranch Central Processing Facility (km)													
	1	2	3	4	5	10	20	30	40	50	60	70	80
<b>N</b>	0	0	0	0	0	4	4	4	4	4	4	4	4
<b>NE</b>	0	0	0	0	0	0	4	4	4	4	4	8	1500
<b>E</b>	0	0	0	0	4	0	4	4	4	4	4	4	4
<b>SE</b>	0	0	0	0	4	8	10	100	5300	100	50	10	8
<b>S</b>	4	0	0	0	0	4	10	8	10	1	8	4	4
<b>SW</b>	0	0	4	0	4	10	20	3000	2500	50000	1000	100	20
<b>W</b>	0	0	0	0	4	8	8	10	10	10	10	8	8
<b>NW</b>	0	0	0	0	4	4	4	8	10	10	10	10	500

**Table 3. Well field operational data.**

UNIT <sup>a</sup>	X	Y	[Ra] pCi/ g	EM FR.	THICK m	DEN. g/cm <sup>3</sup>	AREA m <sup>2</sup>	CIR. VOL. L	FR Rn	Rn VENT /d	PURGE L/d	COL L	COL UL /d	POR
C	8.2	4.3	574	0.2	3	1.93	8.4E5	5.1E8	0.8	0.01	6.3E4	18903	1	0.4
D	6.4	2.7	574	0.2	3	1.93	1.4E5	8.4E7	0.8	0.01	2.1E4	18903	1	0.4
Dext	7.3	2.7	574	0.2	3	1.93	4.2E5	2.5E8	0.8	0.01	1.4E4	18903	1	0.4
E	3.4	6.7	574	0.2	3	1.93	5.5E5	3.3E8	0.8	0.01	7.1E3	18903	1	0.4
F	2.4	4.6	574	0.2	3	1.93	2.3E6	1.4E9	0.8	0.01	2.8E4	18903	1	0.4
H	4.3	10.4	574	0.2	3	1.93	1.2E6	7.2E8	0.8	0.01	2.8E3	18903	1	0.4
I	9.5	2.1	574	0.2	3	1.93	1.2E6	7.2E8	0.8	0.01	9.2E4	18903	1	0.4
1	2.4	-3.1	574	0.2	3	1.93	5.4E5	8.5E7	0.8	0.01	1.6E5	18903	1	0.4
2	-0.3	2.4	574	0.2	3	1.93	3.7E5	1.5E8	0.8	0.01	2.8E5	18903	1	0.4
3	0.9	-1.5	574	0.2	3	1.93	7.0E5	1.4E8	0.8	0.01	2.6E5	18903	1	0.4
4/4A	-1.2	-2.1	574	0.2	3	1.93	5.5E5	9.2E7	0.8	0.01	1.7E5	18903	1	0.4
(SR)15	-3.0	-4.3	574	0.2	3	1.93	1.4E6	8.3E8	0.8	0.01	2.0E5	18903	1	0.4
(SR)15A	-1.5	-3.9	574	0.2	3	1.93	1.3E6	8.3E8	0.8	0.01	2.0E5	18903	1	0.4
(HUP)J	3.9	3.4	574	0.2	3	1.93	1.3E6	8.3E8	0.8	0.01	1.4E5	18903	1	0.4
(HUP)K	0.9	0.9	574	0.2	3	1.93	4.6E5	2.7E8	0.8	0.01	1.3E5	18903	1	0.4
SW	-6.1	-4.9	574	0.2	3	1.93	2.1E6	2.6E9	0.8	0.01	3.4E7	18903	1	0.4

<sup>a</sup> Table 3 key to columns:

UNIT = Well unit

X = Km from Smith Ranch Central Processing

Facility (+) = East, (-) = West

Y = Km from Smith Ranch Central Processing

Facility (+) = North, (-) = South

[Ra] = Radium concentration

EM. FR = Radon emanation fraction

THICK = Thickness of ore

DEN = Density of ore

AREA = Area of well unit

CIR VOL = Volume of process water in circulation

FR Rn = Fraction of Radon in process water

Rn VENT = Rate of Radon venting from process  
water

PURGE = Treated water purge rate

COL = Ion-Exchange column volume

COL UN = Ion-Exchange column unloading rate

POR = Porosity of ion exchange resin

**Table 4. Well field reclamation data.**

<b>RO UNIT a</b>	<b>X</b>	<b>Y</b>	<b>[Ra] pCi/ g</b>	<b>EM FR.</b>	<b>THICK m</b>	<b>DEN. g/cm<sup>3</sup></b>	<b>WELL FIELD</b>	<b>AREA m<sup>2</sup></b>	<b>CIR. VOL. L</b>	<b>FR Rn</b>	<b>Rn VENT /d</b>	<b>PURGE L/d</b>	<b>COL VOL L</b>	<b>OP DAYS</b>
<b>SAT2</b>			574	0.2	3	1.93	<b>C</b>	8.5E5	5.1E8	0.8	0.01		18903	365
			574	0.2	3	1.93	<b>D</b>	1.4E4	8.4E7	0.8	0.01		18903	365
			574	0.2	3	1.93	<b>E</b>	5.5E5	3.3E8	0.8	0.01		18903	365
			574	0.2	3	1.93	<b>H</b>	1.2E6	7.2E8	0.8	0.01		18903	365
			574	0.2	3	1.93	<b>I</b>	1.2E6	7.2E8	0.8	0.01		18903	365
			574	0.2	3	1.93	<b>Dext</b>	4.2E5	2.5E8	0.8	0.01		18903	365
	8.4	4.4	574	0.2	3	1.93	<b>Total</b>	4.4E6	2.6E9	0.8	0.01	2.7E6	1.1E5	365
<b>SAT3</b>			574	0.2	3	1.93	<b>F</b>	2.3E6	1.4E9	0.8	0.01		18903	365
			574	0.2	3	1.93	<b>(HUP)J</b>	1.3E6	8.3E8	0.8	0.01		18903	365
			574	0.2	3	1.93	<b>(HUP)K</b>	4.6E5	2.7E8	0.8	0.01		18903	365
	4.0	2.0	574	0.2	3	1.93	<b>Total</b>	4.1E6	2.5E9	0.8	0.01	2.7E6	5.7E4	365
<b>CPP</b>			574	0.2	3	1.93	<b>#1</b>	5.4E5	8.5E7	0.8	0.01		18903	365
			574	0.2	3	1.93	<b>#2</b>	3.7E5	1.5E8	0.8	0.01		18903	365
			574	0.2	3	1.93	<b>#3</b>	6.9E5	1.4E8	0.8	0.01		18903	365
0.0	0.0	574	0.2	3	1.93	<b>Total</b>	1.6E6	3.4E8	0.8	0.01	2.1E6	5.7E4	365	
<b>SR1</b>			574	0.2	3	1.93	<b>#4</b>	5.6E5	4.6E7	0.8	0.01		18903	365
			574	0.2	3	1.93	<b>#4A</b>	5.1E5	4.6E7	0.8	0.01		18903	365
			574	0.2	3	1.93	<b>(SR)15</b>	1.4E8	8.3E8	0.8	0.01		18903	365
		574	0.2	3	1.93	<b>#15A</b>	1.3E6	8.3E8	0.8	0.01		18903	365	
-2.9	0.8	574	0.2	3	1.93	<b>Total</b>	3.8E6	1.8E9	0.8	0.01	2.1E6	7.6E4	365	
<b>SW(S R2)</b>	-6.1	-4.9	574	0.2	3	1.93	<b>SW</b>	2.1E6	2.6E9	0.8	0.01	2.1E6	18903	365

<sup>a</sup> Table 4 key to columns:

RO UNIT = Reverse osmosis unit

X = Km from Smith Ranch Central Processing Facility (+) = East, (-) = West

Y = Km from Smith Ranch Central Processing Facility (+) = North, (-) = South

[Ra] = Radium concentration

EM. FR = Radon emanation fraction

THICK = Thickness of ore

DEN = Density of ore

AREA = Area of well unit

CIR VOL = Volume of process water in circulation

FR Rn = Fraction of Radon in process water

Rn VENT = Rate of Radon venting from process water

PURGE = Treated water purge rate

COL = Ion-Exchange column volume

OP DAYS = Operating days

**PLEASE INSERT FIGURE 2, THE MAP OF THE  
FACILITY HERE**

**BE SURE TO MARK THE LOCATIONS (N, E, S, W)  
ON THE PROPERTY BOUNDARIES WHERE  
MILDOS CALCULATED THE RADIATION DOSES.**

## MILDOS OUTPUT

The MILDOS computer model calculated the radiological doses to people in the vicinity of the Smith Ranch-Highland Uranium Project from radon-222. The attached MILDOS output presents the radiation doses and population doses from each of the 16 well fields in production and/or restoration during year 1. The MILDOS output report from each well field contains the following information:

- Page 2 presents the meteorological data as the fraction of time the wind blows from a given compass direction by wind speed category by stability class.
- Page 3 presents the locations where the radiation doses are calculated (receptor locations).
- Page 4 presents the population distribution within 80 km of the Smith Ranch-Highland Uranium Central processing facility.
- Page 5 presents the well field locations and radon emissions.
- Page 18 presents the 100-year effective population doses for all populations.
- Page 19 or 20 presents the total annual dose commitments by location in mrem/yr for adults.

Table 4 presents the maximum radiation dose from the Smith Ranch-Highland Uranium Facility at the nearest residence, at the nearest downwind residence, and to the nearby communities. At the bottom of Table 4 the radiation doses from each well field are totaled for each location. Note: At any location each well field contributes its own radiation dose. Those doses are independent of each other and are additive to produce a total dose at each location.

The doses presented in Table 5 are from all 16 well fields in full production. However some of those well fields are in restoration. The well fields that are in restoration are assumed to releases radon in quantities that are equal to or less than the releases from well fields that are in production. The radiation doses from well fields in restoration are likewise assumed to be less than or equal to the dose from well fields in production. Those assumptions maximizes the calculated doses in Table 5 because the radiation doses during restoration may be smaller than the doses during production.

**Table 5. Maximum Radiation doses and population doses from the Power Resources Inc. Smith Ranch-Highland Uranium project during production or restoration.**

Well Field	Casper	Douglas	Evansville	Glenrock	Midwest	Sunquest Ranch	Vollman Ranch	Wright	Population Dose
	mrem/yr	mrem/yr	mrem/yr	mrem/yr	mrem/yr	mrem/yr	mrem/yr	mrem/yr	person-rem/yr
C	0.02	0.04	0.02	0.04	0.02	0.17	0.15	0.01	14.00
D	0.00	0.01	0.00	0.01	0.00	0.04	0.03	0.00	2.38
Dext	0.01	0.02	0.01	0.02	0.01	0.10	0.08	0.01	6.97
E	0.01	0.02	0.01	0.04	0.01	0.18	0.16	0.01	9.09
F	0.05	0.11	0.06	0.15	0.04	1.10	0.95	0.04	37.90
H	0.03	0.05	0.03	0.07	0.02	0.26	0.24	0.03	19.80
I	0.02	0.07	0.03	0.06	0.02	0.22	0.21	0.02	20.00
1	0.02	0.03	0.02	0.05	0.01	0.31	0.25	0.02	10.50
2	0.01	0.02	0.01	0.03	0.01	0.52	0.51	0.01	7.19
3	0.02	0.04	0.02	0.07	0.01	3.10	1.30	0.02	15.00
4/4A	0.02	0.03	0.02	0.06	0.01	3.80	2.70	0.01	12.30
SR15	0.04	0.06	0.04	0.14	0.02	1.30	1.30	0.03	23.80
SR15A	0.03	0.06	0.04	0.08	0.02	1.40	1.10	0.02	22.00
(HUP)J	0.03	0.06	0.03	0.12	0.02	0.52	0.43	0.02	21.80
(HUP)K	0.01	0.02	0.01	0.04	0.01	1.40	0.53	0.01	7.95
SW	0.13	0.18	0.13	0.58	0.06	3.14	3.31	0.09	74.92
<b>Total</b>	<b>0.4</b>	<b>0.9</b>	<b>0.4</b>	<b>1.58</b>	<b>0.3</b>	<b>17.5</b>	<b>13.2</b>	<b>0.4</b>	<b>305.6</b>

To verify that the radon releases and doses during restoration are equal to or smaller than the releases and doses during production, MILDOS was used to calculate the radiation doses during restoration. The restoration well field data in Table 4 was entered into MILDOS as a “restoration well field source.” Radon releases during restoration were from the open tanks the received water from the RO units. The radiation doses from restoration releases are shown in Table 6. The maximum radiation dose of 2 mrem/yr during restoration occurs at the Sunquest Ranch. For comparison the maximum radiation dose at the Sunquest Ranch during production is 18 mrem/yr. Thus the data in Table 6 validates the assumption that the radon releases and doses during restoration are equal to or less than the releases and doses during production. See the MILDOS printout for restoration that is attached to this report.

**Table 6. Maximum Radiation doses and population doses from the Power Resources Inc. Smith Ranch-Highland Uranium project during restoration.**

Reverse Osmosis Facility	Casper mrem/yr	Douglas mrem/yr	Evansville mrem/yr	Glenrock mrem/yr	Midwest mrem/yr	Sunquest Ranch mrem/yr	Vollman Ranch mrem/yr	Wright Ranch mrem/yr
SAT1	0.1	0.2	0.1	0.3	0.1	0.9	0.8	0.1
SAT3	0.1	0.1	0.1	0.1	0.0	1.1	0.8	0.0
CPP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SR1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SW(SR2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total</b>	<b>0.1</b>	<b>0.4</b>	<b>0.2</b>	<b>0.4</b>	<b>0.1</b>	<b>2.0</b>	<b>1.7</b>	<b>0.1</b>

Table 7 presents the maximum radiation dose are the property boundary. Figure 2 shows the locations on the property boundaries where the radiation doses were calculated. The locations were selected on the North, East, South, and West boundaries that were the closest to the well fields. The highest radiation dose of 11 mrem/yr was at the North property boundary. That value is 11% of the maximum allowable dose to the general public specified in 10 CFR 20. Monitoring radon emissions at the property boundaries of the Smith Ranch-Highland Uranium project is not recommended due to the low doses calculated at the project boundaries. See the MILDOS printout for the project boundary doses, attached to this report.

**Table 7. Radiation doses at the property boundaries.**

Well Field	North	East	South	West
	mrem/yr	mrem/yr	mrem/yr	mrem/yr
SW + C	1	0.9	7.9	1.7
D + Dext	0.04	0.09	0.02	0.01
E + F	7.4	0.1	0.07	0.4
H + I	1.2	0.2	0.1	0.5
#1 + #2	0.1	0.2	0.1	0.3
#3 + #4/4A	0.2	0.3	0.2	0.7
(SR)15	0.3	0.3	0.5	0.6
(HIP)J + (HUP)K	0.8	0.6	0.2	5.4
<b>Total</b>	<b>11.04</b>	<b>2.69</b>	<b>9.09</b>	<b>9.61</b>

**THE MAXIMUM RADIATION DOSES FROM THE RELEASE OF RADON-222 IN YEAR 1 OF THE PROJECT ARE:**

- The maximum annual radiation dose is 18 mrem/yr to the people at the Sunquest Ranch 1 km South of the Central Processing Facility from radon-222. That dose is 18 % of the 100 mrem/yr dose limit for the public specified in 10 CFR 20.

- The maximum annual radiation dose at the nearest downwind resident (Vollman Ranch) is 13 mrem/yr which is 13 % of the 100 mrem/yr dose limit for the general public.
- Population dose (the number of people exposed times their dose in mrem/yr) for the project is 305 people-rem/yr for all populations around the facility.
- The 40CFR190 annual dose commitment is zero because 40CFR190 excludes the dose from radon-222 and its progeny and radon-222 and its progeny are the only effluents from the in-situ leaching operation.

**THE MAXIMUM RADIATION DOSES FROM THE RELEASE OF RADON-222 IN YEARS 2-25 OF THE PROJECT ARE:**

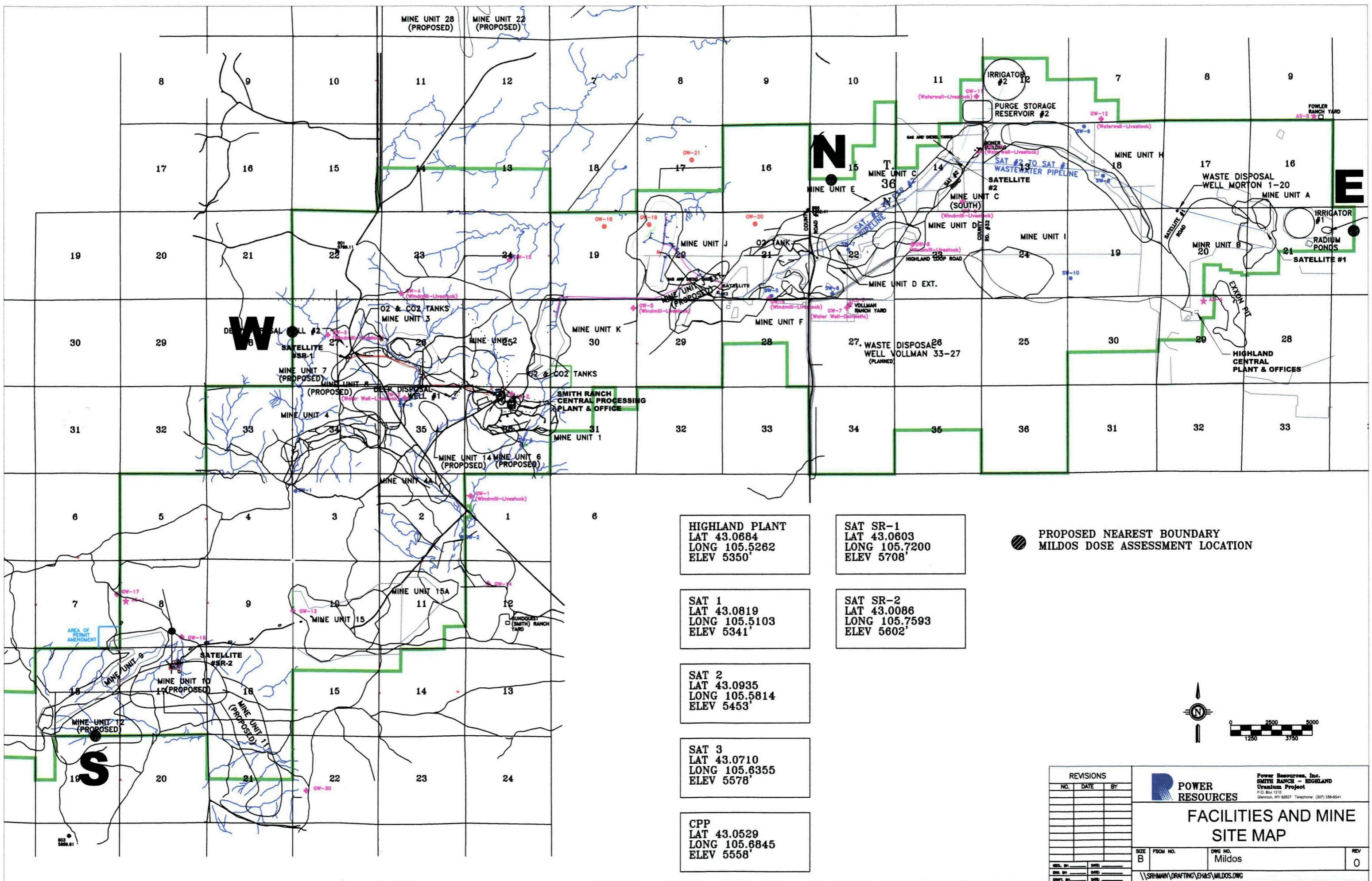
- For years 2-4 the doses are the same as presented for year 1.
- For years 5-25 the doses are less than for years 1-4.

**DOSE COMPARISONS**

The maximum radiation dose of 18 mrem/yr to the people at the Sunquest Ranch and the 13 mrem/yr to people at the Vollman Ranch may be compared to:

- 3 mrem/trip for an airplane flight from San Francisco to New York.
- 10 mrem/chest X ray
- 365 mrem/yr average background radiation in U.S.

# MILDOS BOUNDARY DOSES



# MILDOS RESTORATION DOSES

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## TIME STEP 1,

## 100-YEAR ENVIRONMENTAL DOSE COMMITMENTS, PERSON-REM/YEAR

INHALATION PATHWAY .....	6
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*Restoration doses  
Source  
SAT2 - Ro*

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JOINT FREQUENCY IN PERCENT, DIRECTION INDICATES WHERE WIND IS FROM FREQWS=0.05735,0.21076,0.28172,0.26136,0.13155,0.05735

MPH	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTALS
-----	---	-----	----	-----	---	-----	----	-----	---	-----	----	-----	---	-----	----	-----	--------

## STABILITY CLASS 1

1.5	0.0070	0.0240	0.0100	0.0240	0.0170	0.0100	0.0070	0.0410	0.0140	0.0210	0.0240	0.0240	0.0380	0.0170	0.0210	0.0100	0.3090
5.5	0.0140	0.0270	0.0210	0.0070	0.0140	0.0210	0.0140	0.0620	0.0070	0.0210	0.0070	0.0270	0.0550	0.0340	0.0000	0.0210	0.3520
10.0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
15.5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
21.5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
28.0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
ALL	0.0210	0.0510	0.0310	0.0310	0.0210	0.1030	0.0210	0.0420	0.0310	0.0510	0.0930	0.0510	0.0210	0.0310		0.6610	

## STABILITY CLASS 2

1.5	0.0550	0.0510	0.0370	0.0420	0.0960	0.0420	0.0660	0.0650	0.0980	0.0410	0.0620	0.0450	0.1130	0.0400	0.0210	0.0640	0.9380
5.5	0.0960	0.1230	0.0690	0.0410	0.1230	0.1160	0.1300	0.1160	0.2120	0.1030	0.1580	0.1370	0.1370	0.0960	0.0550	0.1100	1.8220
10.0	0.0690	0.0620	0.0690	0.0410	0.0620	0.0210	0.0550	0.0270	0.0550	0.0690	0.0820	0.1100	0.1780	0.0690	0.0750	0.0820	1.1260
15.5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
21.5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
28.0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
ALL	0.2200	0.2360	0.1750	0.1240	0.2810	0.1790	0.2510	0.2080	0.3650	0.2130	0.3020	0.2920	0.4280	0.2050	0.1510	0.2560	3.8860

## STABILITY CLASS 3

1.5	0.0190	0.0130	0.0110	0.0120	0.0370	0.0190	0.0130	0.0040	0.0280	0.0190	0.0190	0.0290	0.0180	0.0270	0.0320	0.0030	0.3030
5.5	0.0960	0.1370	0.0960	0.1030	0.1780	0.0960	0.1230	0.0820	0.1510	0.0960	0.0960	0.1710	0.2400	0.1300	0.0750	0.0620	1.9320
10.0	0.2530	0.1850	0.1580	0.1710	0.2330	0.1920	0.1230	0.0820	0.1230	0.1990	0.3700	0.6440	0.4730	0.2260	0.1640	0.1580	3.7540
15.5	0.0270	0.0140	0.0140	0.0140	0.0340	0.0340	0.0140	0.0000	0.0340	0.0960	0.2060	0.1710	0.1920	0.0340	0.0410	0.0690	0.9940
21.5	0.0000	0.0070	0.0000	0.0000	0.0000	0.0000	0.0000	0.0140	0.0070	0.0340	0.0340	0.0410	0.0210	0.0000	0.0000	0.1580	0.0280
28.0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
ALL	0.3950	0.3560	0.2790	0.3000	0.4820	0.3410	0.2730	0.1680	0.3500	0.4170	0.7320	1.0630	0.9710	0.4380	0.3120	0.2920	7.1690

## STABILITY CLASS 4

1.5	0.0790	0.1050	0.0850	0.0740	0.0600	0.0590	0.0550	0.0270	0.0550	0.0340	0.0410	0.0530	0.0680	0.0820	0.0430	0.1010	1.0210
5.5	0.5410	0.5820	0.4450	0.3220	0.4110	0.3220	0.1920	0.1300	0.1920	0.1230	0.2060	0.3360	0.3360	0.2400	0.1440	0.4520	4.9740
10.0	1.1400	1.4250	1.0210	0.8770	0.9250	0.4930	0.3010	0.1370	0.2120	0.6300	1.4180	2.1300	1.7470	0.5410	0.5210	0.5000	14.0180
15.5	1.1100	1.4870	1.0280	0.6510	1.0000	0.5480	0.1990	0.0550	0.3700	3.0830	6.5420	5.1990	1.9320	0.9450	0.5890	0.4040	25.1420
21.5	0.2810	0.3770	0.1710	0.0620	0.2260	0.0820	0.0410	0.0140	0.1780	2.6720	5.0080	2.2130	0.9250	0.4040	0.2400	0.1030	12.9970
28.0	0.1030	0.1030	0.0270	0.0000	0.0140	0.0070	0.0000	0.0000	0.0410	1.4800	2.2470	0.9730	0.5210	0.1160	0.0410	0.0340	5.7070
ALL	3.2540	4.0790	2.7770	1.9860	2.6360	1.5110	0.7880	0.3630	1.0480	8.0220	15.4620	10.9040	5.5290	2.3280	1.5780	1.5940	63.8590

## STABILITY CLASS 5

1.5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5.5	0.4180	0.3360	0.2880	0.1920	0.2600	0.1580	0.1510	0.1030	0.1370	0.1160	0.2470	0.4930	0.7470	0.3630	0.3290	0.3290	4.6670
10.0	0.3430	0.3010	0.2810	0.2880	0.4040	0.3080	0.1160	0.0480	0.0550	0.4040	1.0890	2.8220	1.9040	0.4040	0.2470	0.2600	9.2740
15.5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
21.5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
28.0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
ALL	0.7610	0.6370	0.5690	0.4800	0.6640	0.4660	0.2670	0.1510	0.1920	0.5200	1.3360	3.3150	2.6510	0.7670	0.5760	0.5890	13.9410

## STABILITY CLASS 6

1.5	0.3720	0.1670	0.1430	0.1100	0.1610	0.1120	0.0630	0.0580	0.1220	0.1120	0.1450	0.3000	0.5750	0.2610	0.2020	0.2610	3.1640
5.5	0.6920	0.5620	0.3560	0.3560	0.3630	0.1990	0.1580	0.0890	0.1640	0.1990	0.2810	0.7810	1.2670	0.6230	0.5750	0.6640	7.3290
10.0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
15.5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
21.5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
28.0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
ALL	1.0640	0.7290	0.4990	0.4660	0.5240	0.3110	0.2210	0.1470	0.2860	0.3110	0.4260	1.0810	1.8420	0.8840	0.7770	0.9250	10.4930

ALL	5.7150	6.0880	4.3300	3.3870	4.6180	2.8390	1.8210	1.1400	2.2620	9.5250	18.2890	16.7060	11.5140	4.6730	3.4150	3.6870	100.0090
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## ----- INDIVIDUAL RECEPTOR LOCATION DATA, 8 LOCATIONS INPUT THIS RUN -----

I	LOCATION NAMES	X (KM)	Y (KM)	Z (M)	DIST (KM)	TYPE	I	LOCATION NAMES	X (KM)	Y (KM)	Z (M)	DIST (KM)	TYPE
1	Casper	-54.00	-23.00	0.00	58.69	1	5	Midwest	-60.00	41.00	0.00	72.67	1
2	Douglas	22.00	-32.00	0.00	38.83	1	6	Sunquest Ranch neare	0.00	-1.10	0.00	1.10	1
3	Evansville	-50.00	-22.00	0.00	54.63	1	7	Vollman Ranch neares	-1.00	-1.00	0.00	1.41	1
4	Glenrock	-16.00	-20.00	0.00	25.61	1	8	Wright	12.00	80.00	0.00	80.89	1

## MISCELLANEOUS INPUTABLE PARAMETER VALUES

DMM	DMA	TSTART	FFORI	FHAYI	FFORP	FHAYP	FPR(1)	FPR(2)	FPR(3)	ACTRAT
100.0	100.0	2007.00	0.50	0.50	0.50	0.50	0.00	0.00	0.00	2.50

IPACT EQUALS 0,

JC EQUALS 0, 1, 0, 1, 0, 0, 1, 0, 0, 0

TIME STEP DATA.... STEP NAMES LENGTH, YRS IFTODO  
1 5.00 1

XRHO EQUALS 1.5, 2.5, 3.5, 4.5, 7.5, 15.0, 25.0, 35.0, 45.0, 55.0, 65.0, 75.0,

HDP EQUALS 50.0

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## POPULATION DISTRIBUTION

KILOMETERS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
	0.0	22.5	45.0	67.5	90.0	112.5	135.0	157.5	180.0	202.5	225.0	247.5	270.0	292.5	315.0	337.5
1.0- 2.0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0
2.0- 3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.0- 4.0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0
4.0- 5.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5.0-10.0	0	0	0	0	4	0	4	0	0	0	4	0	4	0	4	0
10.0-20.0	4	0	0	0	0	0	8	0	4	0	10	0	0	0	4	0
20.0-30.0	4	0	4	0	4	0	10	0	10	0	20	0	8	0	4	0
30.0-40.0	4	0	4	0	4	0	100	0	8	0	3000	0	8	0	8	0
40.0-50.0	4	0	4	0	4	0	5300	0	10	0	2500	0	10	0	10	0
50.0-60.0	4	0	4	0	4	0	100	0	1	0	50000	0	10	0	10	0
60.0-70.0	4	0	4	0	4	0	50	0	8	0	1000	0	10	0	10	0
70.0-80.0	4	0	8	0	4	0	10	0	4	0	100	0	8	0	0	0
1.0-80.0	28	0	28	0	28	0	5582	0	49	0	56638	0	58	0	50	0

TOTAL 1-80 KM POPULATION IS 62461 PERSONS

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NUMBER OF SOURCES= 1

NO.	KM	KM	M	KM2		CI/YEAR				PSIZE		M/SEC	
	X	Y	Z	AREA	U-238	Th-230	Ra-226	Pb-210	Rn-222	ID	SET	EXIT VEL	SOURCE NAME
1	8.43	4.44	0.00	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.88E+03	1001	1	0.00E+00	SAT2R0
INPUT TAILS ACTIVITIES, PCI/G										AMAD AND FRACTIONAL DISTRIBUTION			
SET	URANIUM	THORIUM	RADIUM	LEAD			SET	1.5	3.0	7.7	54.0		
1	0.00E+00	0.00E+00	0.00E+00	0.00E+00			1	0.000	1.000	0.000	0.000		
2	0.00E+00	0.00E+00	0.00E+00	0.00E+00			2	1.000	0.000	0.000	0.000		
3	0.00E+00	0.00E+00	0.00E+00	0.00E+00			3	0.000	0.000	0.300	0.700		
PARTICULATE SOURCE STRENGTH MULTIPLIERS BY TIME STEP, 1 TIME STEP(S) USED FOR THIS RUN													
SOURCE	TSTEP 1	TSTEP 2	TSTEP 3	TSTEP 4	TSTEP 5	TSTEP 6	TSTEP 7	TSTEP 8	TSTEP 9	TSTEP10			
NUMBER	5.00YRS												
1	1.000E+00	1.000E+00	0.000E+00										
RADON SOURCE STRENGTH MULTIPLIERS BY TIME STEP, 1 TIME STEP(S) USED FOR THIS RUN													
SOURCE	TSTEP 1	TSTEP 2	TSTEP 3	TSTEP 4	TSTEP 5	TSTEP 6	TSTEP 7	TSTEP 8	TSTEP 9	TSTEP10			
NUMBER	5.00YRS												
1	1.000E+00	1.000E+00	0.000E+00										

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TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

EXPOSURE PATHWAY IS INHAL.

EXPOSED ORGAN IS EFFECTIV

DOSES SHOWN BELOW ARE 100-YEAR ENVIRONMENTAL DOSE COMMITMENTS, PERSON-REM/YEAR

DIRECTION	XRHO											
	1.5	2.5	3.5	4.5	7.5	15.0	25.0	35.0	45.0	55.0	65.0	75.0
N	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.945E-06	8.776E-06	1.075E-05	1.186E-05	1.238E-05	1.262E-05	1.270E-05
NNE	0.000E+00											
NE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.341E-05	1.485E-05	1.555E-05	1.593E-05	1.615E-05	3.253E-05
ENE	0.000E+00											
E	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.577E-05	0.000E+00	2.931E-05	3.489E-05	3.647E-05	3.677E-05	3.657E-05	3.615E-05
ESE	0.000E+00											
SE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.882E-05	5.317E-05	5.844E-05	5.261E-04	2.607E-02	4.639E-04	2.204E-04	4.213E-05
SSE	0.000E+00											
S	1.293E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.886E-05	5.526E-05	4.714E-05	5.993E-05	5.984E-06	4.742E-05	2.339E-05
SSW	0.000E+00											
SW	0.000E+00	0.000E+00	1.332E-05	0.000E+00	1.416E-05	3.705E-05	7.520E-05	1.124E-02	9.273E-03	1.830E-01	3.608E-03	3.554E-04
WSW	0.000E+00											
W	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.452E-05	0.000E+00	3.467E-05	3.525E-05	4.414E-05	4.390E-05	4.351E-05	3.443E-05
WNW	0.000E+00											
NW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.684E-05	1.334E-05	1.201E-05	2.335E-05	2.833E-05	2.754E-05	2.682E-05	0.000E+00
NNW	0.000E+00											

TOTAL DOSE COMMITMENT IS 2.362E-01 PERSON-REM/YR

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TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

EXPOSURE PATHWAY IS INHAL.

EXPOSED ORGAN IS BONE

DOSES SHOWN BELOW ARE 100-YEAR ENVIRONMENTAL DOSE COMMITMENTS, PERSON-REM/YEAR

DIRECTION	XRHO											
N	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.256E-05	7.117E-05	8.715E-05	9.614E-05	1.003E-04	1.022E-04	1.028E-04
NNE	0.000E+00											
NE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.088E-04	1.204E-04	1.260E-04	1.291E-04	1.309E-04	2.635E-04
ENE	0.000E+00											
E	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.280E-04	0.000E+00	2.378E-04	2.829E-04	2.956E-04	2.980E-04	2.962E-04	2.927E-04
ESE	0.000E+00											
SE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.527E-04	4.313E-04	4.739E-04	4.265E-03	2.113E-01	3.758E-03	1.785E-03	3.411E-04
SSE	0.000E+00											
S	1.049E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.530E-04	4.481E-04	3.821E-04	4.855E-04	4.847E-05	3.839E-04	1.893E-04
SSW	0.000E+00											
SW	0.000E+00	0.000E+00	1.081E-04	0.000E+00	1.148E-04	3.005E-04	6.096E-04	9.111E-02	7.512E-02	1.482E+00	2.921E-02	2.876E-03
WSW	0.000E+00											
W	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.178E-04	0.000E+00	2.810E-04	2.857E-04	3.575E-04	3.555E-04	3.522E-04	2.786E-04
WNW	0.000E+00											
NW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.366E-04	1.082E-04	9.737E-05	1.893E-04	2.296E-04	2.231E-04	2.172E-04	0.000E+00
NNW	0.000E+00											

TOTAL DOSE COMMITMENT IS 1.913E+00 PERSON-REM/YR

REGION:  
METSET:

CODE: MILDOS-AREA (02/97)  
DATA: SHRO1.MIL

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05/01/07

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

EXPOSURE PATHWAY IS INHAL.

EXPOSED ORGAN IS AVG.LUNG

DOSES SHOWN BELOW ARE 100-YEAR ENVIRONMENTAL DOSE COMMITMENTS, PERSON-REM/YEAR

DIRECTION	XRHO											
N	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.049E-06	1.052E-06	1.315E-06	1.484E-06	1.583E-06	1.649E-06	1.697E-06
NNE	0.000E+00											
NE	0.000E+00	1.581E-06	1.786E-06	1.903E-06	1.984E-06	2.045E-06						
ENE	0.000E+00											
E	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.813E-06	0.000E+00	3.466E-06	4.216E-06	4.502E-06	4.637E-06	4.708E-06	4.749E-06
ESE	0.000E+00											
SE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.190E-06	6.261E-06	7.023E-06	6.450E-05	3.262E-03	5.925E-05	2.873E-05	5.605E-06
SSE	0.000E+00											
S	1.504E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.247E-06	6.715E-06	5.848E-06	7.589E-06	7.736E-07	6.256E-06	3.148E-06
SSW	0.000E+00											
SW	0.000E+00	0.000E+00	1.560E-06	0.000E+00	1.671E-06	4.444E-06	9.208E-06	1.405E-03	1.182E-03	2.379E-02	4.779E-04	4.798E-05
WSW	0.000E+00											
W	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.714E-06	0.000E+00	4.246E-06	4.409E-06	5.636E-06	5.722E-06	5.787E-06	4.671E-06
WNW	0.000E+00											
NW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.976E-06	1.587E-06	1.458E-06	2.893E-06	3.582E-06	3.554E-06	3.533E-06	0.000E+00
NNW	0.000E+00											

TOTAL DOSE COMMITMENT IS 3.049E-02 PERSON-REM/YR

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

EXPOSURE PATHWAY IS INHAL.

EXPOSED ORGAN IS BRONCHI

DOSES SHOWN BELOW ARE 100-YEAR ENVIRONMENTAL DOSE COMMITMENTS, PERSON-REM/YEAR

DIRECTION	XRHO											
	1.5	2.5	3.5	4.5	7.5	15.0	25.0	35.0	45.0	55.0	65.0	75.0

N	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.059E-02	9.169E-03	7.597E-03	6.195E-03	5.093E-03	4.269E-03	3.644E-03
NNE	0.000E+00											
NE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.788E-02	3.714E-02	2.692E-02	2.096E-02	1.708E-02	2.875E-02
ENE	0.000E+00											
E	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.384E-01	0.000E+00	5.461E-02	3.809E-02	2.783E-02	2.152E-02	1.734E-02	1.440E-02
ESE	0.000E+00											
SE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.120E-02	1.064E-01	6.215E-02	3.914E-01	1.476E+01	2.111E-01	8.362E-02	1.369E-02
SSE	0.000E+00											
S	5.470E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.236E-02	5.695E-02	3.394E-02	3.302E-02	2.665E-03	1.770E-02	7.513E-03
SSW	0.000E+00											
SW	0.000E+00	0.000E+00	4.094E-02	0.000E+00	3.066E-02	5.074E-02	6.836E-02	7.621E+00	5.006E+00	8.206E+01	1.383E+00	1.190E-01
WSW	0.000E+00											
W	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.076E-02	0.000E+00	2.990E-02	2.245E-02	2.224E-02	1.827E-02	1.542E-02	1.062E-02
WNW	0.000E+00											
NW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.310E-02	2.087E-02	1.153E-02	1.595E-02	1.485E-02	1.164E-02	9.468E-03	0.000E+00
NNW	0.000E+00											

TOTAL DOSE COMMITMENT IS 1.133E+02 PERSON-REM/YR

REGION:  
METSET:CODE: MILDOS-AREA (02/97)  
DATA: SHRO1.MILPAGE 10  
05/01/07

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

EXPOSURE PATHWAY IS GROUND

EXPOSED ORGAN IS EFFECTIV

DOSES SHOWN BELOW ARE 100-YEAR ENVIRONMENTAL DOSE COMMITMENTS, PERSON-REM/YEAR

DIRECTION	XRHO											
N	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.810E-06	1.507E-06	1.434E-06	1.335E-06	1.237E-06	1.156E-06	1.090E-06	
NNE	0.000E+00											
NE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.269E-06	5.001E-06	3.879E-06	3.225E-06	2.797E-06	4.992E-06
ENE	0.000E+00											
E	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.754E-05	0.000E+00	7.752E-06	6.178E-06	5.099E-06	4.400E-06	3.915E-06	3.559E-06
ESE	0.000E+00											
SE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.020E-05	1.489E-05	1.016E-05	7.242E-05	3.064E-03	4.865E-05	2.122E-05	3.797E-06
SSE	0.000E+00											
S	6.885E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.674E-06	9.402E-06	6.361E-06	6.938E-06	6.211E-07	4.533E-06	2.097E-06
SSW	0.000E+00											
SW	0.000E+00	0.000E+00	5.349E-06	0.000E+00	4.229E-06	7.727E-06	1.176E-05	1.463E-03	1.062E-03	1.906E-02	3.490E-04	3.241E-05
WSW	0.000E+00											
W	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.260E-06	0.000E+00	5.238E-06	4.425E-06	4.873E-06	4.411E-06	4.066E-06	3.038E-06
WNW	0.000E+00											
NW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.782E-06	3.076E-06	1.947E-06	3.053E-06	3.194E-06	2.788E-06	2.503E-06	0.000E+00
NNW	0.000E+00											

TOTAL DOSE COMMITMENT IS 2.543E-02 PERSON-REM/YR

REGION:

CODE: MILDOS-AREA (02/97)

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METSET:

DATA: SHRO1.MIL

05/01/07

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

EXPOSURE PATHWAY IS CLOUD

EXPOSED ORGAN IS EFFECTIV

DOSES SHOWN BELOW ARE 100-YEAR ENVIRONMENTAL DOSE COMMITMENTS, PERSON-REM/YEAR

DIRECTION	XRHO											
	1.5	2.5	3.5	4.5	7.5	15.0	25.0	35.0	45.0	55.0	65.0	75.0
N	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.432E-04	7.553E-05	6.440E-05	5.339E-05	4.431E-05	3.736E-05	3.200E-05
NNE	0.000E+00											
NE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.601E-04	2.180E-04	1.844E-04	1.576E-04	1.361E-04	2.375E-04
ENE	0.000E+00											
E	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.985E-04	0.000E+00	3.822E-04	2.981E-04	2.297E-04	1.826E-04	1.495E-04	1.253E-04
ESE	0.000E+00											
SE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.480E-04	7.507E-04	5.063E-04	3.304E-03	1.270E-01	1.834E-03	7.313E-04	1.202E-04
SSE	0.000E+00											
S	3.036E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.357E-04	4.577E-04	2.853E-04	2.837E-04	2.317E-05	1.549E-04	6.600E-05
SSW	0.000E+00											
SW	0.000E+00	0.000E+00	2.521E-04	0.000E+00	2.095E-04	3.885E-04	5.620E-04	6.480E-02	4.330E-02	7.164E-01	1.214E-02	1.047E-03
WSW	0.000E+00											
W	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.114E-04	0.000E+00	2.464E-04	1.912E-04	1.925E-04	1.596E-04	1.353E-04	9.346E-05
WNW	0.000E+00											
NW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.787E-04	1.544E-04	9.400E-05	1.355E-04	1.286E-04	1.018E-04	8.318E-05	0.000E+00
NNW	0.000E+00											

TOTAL DOSE COMMITMENT IS 9.817E-01 PERSON-REM/YR

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

EXPOSURE PATHWAY IS VEG. ING

EXPOSED ORGAN IS EFFECTIV

DOSES SHOWN BELOW ARE 100-YEAR ENVIRONMENTAL DOSE COMMITMENTS, PERSON-REM/YEAR

DIRECTION	XRHO											
	1.5	2.5	3.5	4.5	7.5	15.0	25.0	35.0	45.0	55.0	65.0	75.0
N	0.000E+00											
NNE	0.000E+00											
NE	0.000E+00											
ENE	0.000E+00											
E	0.000E+00											
ESE	0.000E+00											
SE	0.000E+00											
SSE	0.000E+00											
S	0.000E+00											
SSW	0.000E+00											
SW	0.000E+00											
WSW	0.000E+00											
W	0.000E+00											
WNW	0.000E+00											
NW	0.000E+00											
NNW	0.000E+00											

TOTAL DOSE COMMITMENT IS 0.000E+00 PERSON-REM/YR

WARNING--POPULATION FOOD INGESTION DOSES SHOWN  
 ABOVE HAVE NOT BEEN CORRECTED TO REFLECT POTENTIAL  
 FOOD EXPORT AND MAY EXCEED DOSES ACTUALLY RECEIVED  
 BY THE POPULATION OF THIS REGION. SEE SUMMARY  
 TABLE FOR THIS INFORMATION.

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

EXPOSURE PATHWAY IS VEG. ING

EXPOSED ORGAN IS BONE

DOSES SHOWN BELOW ARE 100-YEAR ENVIRONMENTAL DOSE COMMITMENTS, PERSON-REM/YEAR

DIRECTION	XRHO											
	1.5	2.5	3.5	4.5	7.5	15.0	25.0	35.0	45.0	55.0	65.0	75.0
N	0.000E+00											
NNE	0.000E+00											
NE	0.000E+00											
ENE	0.000E+00											
E	0.000E+00											
ESE	0.000E+00											
SE	0.000E+00											
SSE	0.000E+00											
S	0.000E+00											
SSW	0.000E+00											
SW	0.000E+00											
WSW	0.000E+00											
W	0.000E+00											
WNW	0.000E+00											
NW	0.000E+00											
NNW	0.000E+00											

TOTAL DOSE COMMITMENT IS 0.000E+00 PERSON-REM/YR

WARNING--POPULATION FOOD INGESTION DOSES SHOWN  
ABOVE HAVE NOT BEEN CORRECTED TO REFLECT POTENTIAL  
FOOD EXPORT AND MAY EXCEED DOSES ACTUALLY RECEIVED  
BY THE POPULATION OF THIS REGION. SEE SUMMARY  
TABLE FOR THIS INFORMATION.

REGION:  
METSET:

CODE: MILDOS-AREA (02/91)  
DATA: SHRO1.MIL

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TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

EXPOSURE PATHWAY IS MEAT ING

EXPOSED ORGAN IS EFFECTIV

DOSES SHOWN BELOW ARE 100-YEAR ENVIRONMENTAL DOSE COMMITMENTS, PERSON-REM/YEAR

DIRECTION	XRHO											
	1.5	2.5	3.5	4.5	7.5	15.0	25.0	35.0	45.0	55.0	65.0	75.0
N	0.000E+00											
NNE	0.000E+00											
NE	0.000E+00											
ENE	0.000E+00											
E	0.000E+00											
ESE	0.000E+00											
SE	0.000E+00											
SSE	0.000E+00											
S	0.000E+00											
SSW	0.000E+00											
SW	0.000E+00											
WSW	0.000E+00											
W	0.000E+00											
WNW	0.000E+00											
NW	0.000E+00											
NNW	0.000E+00											

TOTAL DOSE COMMITMENT IS 0.000E+00 PERSON-REM/YR

WARNING--POPULATION FOOD INGESTION DOSES SHOWN  
ABOVE HAVE NOT BEEN CORRECTED TO REFLECT POTENTIAL  
FOOD EXPORT AND MAY EXCEED DOSES ACTUALLY RECEIVED  
BY THE POPULATION OF THIS REGION. SEE SUMMARY  
TABLE FOR THIS INFORMATION.

REGION:  
METSET:

CODE: MILDUS-AREA (02/97)  
DATA: SHRO1.MIL

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TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

EXPOSURE PATHWAY IS MEAT ING

EXPOSED ORGAN IS BONE

DOSES SHOWN BELOW ARE 100-YEAR ENVIRONMENTAL DOSE COMMITMENTS, PERSON-REM/YEAR

| DIRECTION | XRHO      |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| N         | 0.000E+00 |
| NNE       | 0.000E+00 |
| NE        | 0.000E+00 |
| ENE       | 0.000E+00 |
| E         | 0.000E+00 |
| ESE       | 0.000E+00 |
| SE        | 0.000E+00 |
| SSE       | 0.000E+00 |
| S         | 0.000E+00 |
| SSW       | 0.000E+00 |
| SW        | 0.000E+00 |
| WSW       | 0.000E+00 |
| W         | 0.000E+00 |
| WNW       | 0.000E+00 |
| NW        | 0.000E+00 |
| NNW       | 0.000E+00 |

TOTAL DOSE COMMITMENT IS 0.000E+00 PERSON-REM/YR

WARNING--POPULATION FOOD INGESTION DOSES SHOWN  
ABOVE HAVE NOT BEEN CORRECTED TO REFLECT POTENTIAL  
FOOD EXPORT AND MAY EXCEED DOSES ACTUALLY RECEIVED  
BY THE POPULATION OF THIS REGION. SEE SUMMARY  
TABLE FOR THIS INFORMATION.

REGION:  
METSET:

CODE: MILDOS-AREA (02/97)  
DATA: SHRO1.MIL

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TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

EXPOSURE PATHWAY IS MILK ING

EXPOSED ORGAN IS EFFECTIV

DOSES SHOWN BELOW ARE 100-YEAR ENVIRONMENTAL DOSE COMMITMENTS, PERSON-REM/YEAR

| DIRECTION | XRHO      |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| N         | 0.000E+00 |
| NNE       | 0.000E+00 |
| NE        | 0.000E+00 |
| ENE       | 0.000E+00 |
| E         | 0.000E+00 |
| ESE       | 0.000E+00 |
| SE        | 0.000E+00 |
| SSE       | 0.000E+00 |
| S         | 0.000E+00 |
| SSW       | 0.000E+00 |
| SW        | 0.000E+00 |
| WSW       | 0.000E+00 |
| W         | 0.000E+00 |
| WNW       | 0.000E+00 |
| NW        | 0.000E+00 |
| NNW       | 0.000E+00 |

TOTAL DOSE COMMITMENT IS 0.000E+00 PERSON-REM/YR

WARNING--POPULATION FOOD INGESTION DOSES SHOWN  
ABOVE HAVE NOT BEEN CORRECTED TO REFLECT POTENTIAL  
FOOD EXPORT AND MAY EXCEED DOSES ACTUALLY RECEIVED  
BY THE POPULATION OF THIS REGION. SEE SUMMARY  
TABLE FOR THIS INFORMATION.

REGION:  
METSET:CODE: MILDOS-AREA (02/97)  
DATA: SHRO1.MILPAGE 1/  
05/01/07

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

EXPOSURE PATHWAY IS MILK ING

EXPOSED ORGAN IS BONE

DOSES SHOWN BELOW ARE 100-YEAR ENVIRONMENTAL DOSE COMMITMENTS, PERSON-REM/YEAR

| DIRECTION | XRHO      |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| N         | 0.000E+00 |
| NNE       | 0.000E+00 |
| NE        | 0.000E+00 |
| ENE       | 0.000E+00 |
| E         | 0.000E+00 |
| ESE       | 0.000E+00 |
| SE        | 0.000E+00 |
| SSE       | 0.000E+00 |
| S         | 0.000E+00 |
| SSW       | 0.000E+00 |
| SW        | 0.000E+00 |
| WSW       | 0.000E+00 |
| W         | 0.000E+00 |
| WNW       | 0.000E+00 |
| NW        | 0.000E+00 |
| NNW       | 0.000E+00 |

TOTAL DOSE COMMITMENT IS 0.000E+00 PERSON-REM/YR

WARNING--POPULATION FOOD INGESTION DOSES SHOWN  
ABOVE HAVE NOT BEEN CORRECTED TO REFLECT POTENTIAL  
FOOD EXPORT AND MAY EXCEED DOSES ACTUALLY RECEIVED  
BY THE POPULATION OF THIS REGION. SEE SUMMARY  
TABLE FOR THIS INFORMATION.

REGION:

CODE: MILDOUS-AREA (02/27)

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METSET:

DATA: SHRO1.MIL

05/01/07

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

SUMMARY PRINT OF POPULATION DOSES COMPUTED FOR TSTEP 1--DOSES SHOWN ARE 100-YEAR ENVIRONMENTAL DOSE COMMITMENTS, PERSON-REM/YEAR

## DOSES RECEIVED BY PEOPLE WITHIN 80 KILOMETERS

PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INHAL.	2.362E-01	1.913E+00	3.049E-02	1.435E+00	6.897E-01	1.133E+02
GROUND	2.543E-02	2.543E-02	2.543E-02	2.543E-02	2.543E-02	2.543E-02
CLOUD	9.817E-01	9.817E-01	9.817E-01	9.817E-01	9.817E-01	9.817E-01
VEG. ING	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
MEAT ING	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
MILK ING	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
RNPLUS50	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
TOTALS	1.243E+00	2.920E+00	1.038E+00	2.442E+00	1.697E+00	1.143E+02

## DOSES RECEIVED BY PEOPLE BEYOND 80 KILOMETERS

PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INHAL.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
GROUND	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CLOUD	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
VEG. ING	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
MEAT ING	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
MILK ING	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
RNPLUS50	7.819E+01	1.066E+03	1.777E+01	7.819E+01	7.819E+01	4.976E+02
TOTALS	7.819E+01	1.066E+03	1.777E+01	7.819E+01	7.819E+01	4.976E+02

## TOTAL DOSES COMPUTED OVER ALL POPULATIONS

PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INHAL.	2.362E-01	1.913E+00	3.049E-02	1.435E+00	6.897E-01	1.133E+02
GROUND	2.543E-02	2.543E-02	2.543E-02	2.543E-02	2.543E-02	2.543E-02
CLOUD	9.817E-01	9.817E-01	9.817E-01	9.817E-01	9.817E-01	9.817E-01
VEG. ING	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
MEAT ING	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
MILK ING	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
RNPLUS50	7.819E+01	1.066E+03	1.777E+01	7.819E+01	7.819E+01	4.976E+02
TOTALS	7.943E+01	1.069E+03	1.881E+01	8.063E+01	7.988E+01	6.118E+02

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COMPLETE SUMMARY OF COMPUTED ENVIRONMENTAL DOSE COMMITMENTS, INTEGRATED OVER ALL TIME STEPS

100-YEAR ENVIRONMENTAL DOSE COMMITMENTS RECEIVED BY PEOPLE WITHIN 80 KILOMETERS, PERSON-REM

NO.	T-START	T-END	T-LONG	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI	
1	2007.00	2012.00	5.00	TOTALS	6.217E+00	1.460E+01	5.188E+00	1.221E+01	8.484E+00	5.714E+02	
				TOTALS OVER ALL 1 TIME STEPS		6.217E+00	1.460E+01	5.188E+00	1.221E+01	8.484E+00	5.714E+02

100-YEAR ENVIRONMENTAL DOSE COMMITMENTS RECEIVED BY PEOPLE BEYOND 80 KILOMETERS, PERSON-REM

NO.	T-START	T-END	T-LONG	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI	
1	2007.00	2012.00	5.00	TOTALS	3.909E+02	5.331E+03	8.885E+01	3.909E+02	3.909E+02	2.488E+03	
				TOTALS OVER ALL 1 TIME STEPS		3.909E+02	5.331E+03	8.885E+01	3.909E+02	3.909E+02	2.488E+03

GRAND TOTAL 100-YEAR ENVIRONMENTAL DOSE COMMITMENTS RECEIVED OVER ALL POPULATIONS, PERSON-REM

NO.	T-START	T-END	T-LONG	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI	
1	2007.00	2012.00	5.00	TOTALS	3.972E+02	5.346E+03	9.404E+01	4.031E+02	3.994E+02	3.059E+03	
				TOTALS OVER ALL 1 TIME STEPS		3.972E+02	5.346E+03	9.404E+01	4.031E+02	3.994E+02	3.059E+03

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TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 1 NAME=Casper

X= -54.0KM, Y= -23.0KM, Z= 0.0M, DIST= 58.7KM, IRTYPE= 1

## 40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

## TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	9.51E-02	3.49E-02	1.38E-02	1.34E-01	5.91E-02	1.28E+00
CHILD	TOTALS	9.31E-02	5.07E-02	1.89E-02	7.22E-02	3.90E-02	1.28E+00
TEENAGE	TOTALS	9.43E-02	9.10E-02	2.24E-02	4.52E-02	3.11E-02	1.28E+00
ADULT	TOTALS	9.50E-02	8.81E-02	2.68E-02	4.59E-02	3.30E-02	1.28E+00

NUMBER 2 NAME=Douglas

X= 22.0KM, Y= -32.0KM, Z= 0.0M, DIST= 38.8KM, IRTYPE= 1

## 40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

## TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	2.47E-01	7.09E-02	3.39E-02	2.44E-01	1.13E-01	3.44E+00
CHILD	TOTALS	2.44E-01	9.84E-02	4.28E-02	1.36E-01	7.79E-02	3.44E+00
TEENAGE	TOTALS	2.46E-01	1.69E-01	4.89E-02	8.88E-02	6.43E-02	3.44E+00
ADULT	TOTALS	2.47E-01	1.63E-01	5.67E-02	9.00E-02	6.74E-02	3.44E+00

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TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 3 NAME=Evansville

X= -50.0KM, Y= -22.0KM, Z= 0.0M, DIST= 54.6KM, IRTYPE= 1

## 40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

## TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	1.03E-01	3.63E-02	1.49E-02	1.37E-01	6.08E-02	1.40E+00
CHILD	TOTALS	1.01E-01	5.23E-02	2.00E-02	7.41E-02	4.04E-02	1.40E+00
TEENAGE	TOTALS	1.02E-01	9.31E-02	2.35E-02	4.67E-02	3.24E-02	1.40E+00
ADULT	TOTALS	1.03E-01	9.02E-02	2.80E-02	4.74E-02	3.43E-02	1.40E+00

NUMBER 4 NAME=Glenrock

X= -16.0KM, Y= -20.0KM, Z= 0.0M, DIST= 25.6KM, IRTYPE= 1

## 40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

## TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	2.51E-01	5.88E-02	3.25E-02	1.81E-01	8.85E-02	3.57E+00
CHILD	TOTALS	2.49E-01	7.83E-02	3.88E-02	1.05E-01	6.37E-02	3.57E+00
TEENAGE	TOTALS	2.50E-01	1.28E-01	4.32E-02	7.15E-02	5.41E-02	3.57E+00
ADULT	TOTALS	2.51E-01	1.24E-01	4.87E-02	7.23E-02	5.63E-02	3.57E+00

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TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 5 NAME=Midwest

X= -60.0KM, Y= 41.0KM, Z= 0.0M, DIST= 72.7KM, IRTYPE= 1

## 40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

## TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	6.96E-02	2.91E-02	1.05E-02	1.17E-01	5.05E-02	9.19E-01
CHILD	TOTALS	6.78E-02	4.31E-02	1.49E-02	6.22E-02	3.27E-02	9.19E-01
TEENAGE	TOTALS	6.89E-02	7.88E-02	1.80E-02	3.82E-02	2.57E-02	9.19E-01
ADULT	TOTALS	6.95E-02	7.62E-02	2.19E-02	3.88E-02	2.74E-02	9.19E-01

NUMBER 6 NAME=Sunquest Ranch neare X= 0.0KM, Y= -1.1KM, Z= 0.0M, DIST= 1.1KM, IRTYPE= 1

## 40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

## TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	9.16E-01	1.01E-01	8.00E-02	1.99E-01	1.25E-01	1.39E+01
CHILD	TOTALS	9.14E-01	1.17E-01	8.51E-02	1.38E-01	1.05E-01	1.39E+01
TEENAGE	TOTALS	9.15E-01	1.57E-01	8.87E-02	1.11E-01	9.74E-02	1.39E+01
ADULT	TOTALS	9.16E-01	1.54E-01	9.31E-02	1.12E-01	9.92E-02	1.39E+01

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TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 7 NAME=Vollman Ranch neares X= -1.0KM, Y= -1.0KM, Z= 0.0M, DIST= 1.4KM, IRTYPE= 1

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	8.11E-01	9.45E-02	7.35E-02	1.92E-01	1.18E-01	1.23E+01
CHILD	TOTALS	8.09E-01	1.10E-01	7.86E-02	1.31E-01	9.84E-02	1.23E+01
TEENAGE	TOTALS	8.10E-01	1.50E-01	8.21E-02	1.05E-01	9.07E-02	1.23E+01
ADULT	TOTALS	8.11E-01	1.47E-01	8.65E-02	1.05E-01	9.25E-02	1.23E+01

NUMBER 8 NAME=Wright X= 12.0KM, Y= 80.0KM, Z= 0.0M, DIST= 80.9KM, IRTYPE= 1

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	7.84E-02	3.45E-02	1.18E-02	1.41E-01	6.05E-02	1.03E+00
CHILD	TOTALS	7.62E-02	5.15E-02	1.72E-02	7.47E-02	3.89E-02	1.03E+00
TEENAGE	TOTALS	7.75E-02	9.48E-02	2.10E-02	4.56E-02	3.04E-02	1.03E+00
ADULT	TOTALS	7.83E-02	9.17E-02	2.58E-02	4.63E-02	3.24E-02	1.03E+00

Program execution time = 2.75 seconds

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DURATION IN YRS IS... 5.0

NUMBER 1 NAME=Casper

X= -54.0KM, Y= -23.0KM, Z= 0.0M, DIST= 58.7KM, IRTYPE= 1

*Particulation Dose  
Source  
SAT 3*

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	5.20E-02	1.82E-02	7.48E-03	6.84E-02	3.04E-02	7.04E-01
CHILD	TOTALS	5.10E-02	2.62E-02	1.00E-02	3.71E-02	2.02E-02	7.04E-01
TEENAGE	TOTALS	5.16E-02	4.66E-02	1.18E-02	2.34E-02	1.63E-02	7.04E-01
ADULT	TOTALS	5.19E-02	4.51E-02	1.41E-02	2.37E-02	1.72E-02	7.04E-01

NUMBER 2 NAME=Douglas X= 22.0KM, Y= -32.0KM, Z= 0.0M, DIST= 38.8KM, IRTYPE= 1

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	1.20E-01	3.38E-02	1.64E-02	1.15E-01	5.37E-02	1.67E+00
CHILD	TOTALS	1.18E-01	4.68E-02	2.06E-02	6.45E-02	3.72E-02	1.67E+00
TEENAGE	TOTALS	1.19E-01	7.99E-02	2.35E-02	4.23E-02	3.07E-02	1.67E+00
ADULT	TOTALS	1.20E-01	7.75E-02	2.71E-02	4.28E-02	3.22E-02	1.67E+00

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TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 3 NAME=Evansville

X= -50.0KM, Y= -22.0KM, Z= 0.0M, DIST= 54.6KM, IRTYPE= 1

## 40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

## TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	5.58E-02	1.87E-02	7.94E-03	6.89E-02	3.09E-02	7.60E-01
CHILD	TOTALS	5.48E-02	2.67E-02	1.05E-02	3.76E-02	2.07E-02	7.60E-01
TEENAGE	TOTALS	5.54E-02	4.71E-02	1.23E-02	2.39E-02	1.67E-02	7.60E-01
ADULT	TOTALS	5.57E-02	4.56E-02	1.45E-02	2.42E-02	1.77E-02	7.60E-01

NUMBER 4 NAME=Glenrock

X= -16.0KM, Y= -20.0KM, Z= 0.0M, DIST= 25.6KM, IRTYPE= 1

## 40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

## TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	1.48E-01	3.14E-02	1.85E-02	9.16E-02	4.61E-02	2.12E+00
CHILD	TOTALS	1.47E-01	4.10E-02	2.16E-02	5.41E-02	3.39E-02	2.12E+00
TEENAGE	TOTALS	1.48E-01	6.54E-02	2.38E-02	3.77E-02	2.91E-02	2.12E+00
ADULT	TOTALS	1.48E-01	6.37E-02	2.65E-02	3.81E-02	3.02E-02	2.12E+00

REGION:

CODE: MILDUS-AREA (02/97)

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05/01/07

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 5 NAME=Midwest

X= -60.0KM, Y= 41.0KM, Z= 0.0M, DIST= 72.7KM, IRTYPE= 1

## 40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

## TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	3.51E-02	1.44E-02	5.25E-03	5.77E-02	2.50E-02	4.65E-01
CHILD	TOTALS	3.42E-02	2.13E-02	7.43E-03	3.07E-02	1.62E-02	4.65E-01
TEENAGE	TOTALS	3.48E-02	3.89E-02	8.95E-03	1.89E-02	1.28E-02	4.65E-01
ADULT	TOTALS	3.51E-02	3.76E-02	1.09E-02	1.92E-02	1.36E-02	4.65E-01

NUMBER 6 NAME=Sunquest Ranch neare X= 0.0KM, Y= -1.1KM, Z= 0.0M, DIST= 1.1KM, IRTYPE= 1

## 40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

## TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	1.05E+00	7.27E-02	6.46E-02	1.10E-01	8.19E-02	1.64E+01
CHILD	TOTALS	1.05E+00	7.87E-02	6.66E-02	8.69E-02	7.42E-02	1.64E+01
TEENAGE	TOTALS	1.05E+00	9.40E-02	6.79E-02	7.66E-02	7.13E-02	1.64E+01
ADULT	TOTALS	1.05E+00	9.29E-02	6.96E-02	7.69E-02	7.20E-02	1.64E+01

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TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 7 NAME=Vollman Ranch neares X= -1.0KM, Y= -1.0KM, Z= 0.0M, DIST= 1.4KM, IRTYPE= 1

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	8.41E-01	6.48E-02	5.64E-02	1.04E-01	7.42E-02	1.31E+01
CHILD	TOTALS	8.40E-01	7.10E-02	5.84E-02	7.94E-02	6.64E-02	1.31E+01
TEENAGE	TOTALS	8.41E-01	8.68E-02	5.98E-02	6.88E-02	6.33E-02	1.31E+01
ADULT	TOTALS	8.41E-01	8.56E-02	6.16E-02	6.91E-02	6.40E-02	1.31E+01

NUMBER 8 NAME=Wright X= 12.0KM, Y= 80.0KM, Z= 0.0M, DIST= 80.9KM, IRTYPE= 1

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	4.28E-02	1.74E-02	6.34E-03	6.98E-02	3.02E-02	5.68E-01
CHILD	TOTALS	4.18E-02	2.58E-02	8.98E-03	3.71E-02	1.96E-02	5.68E-01
TEENAGE	TOTALS	4.24E-02	4.70E-02	1.08E-02	2.29E-02	1.54E-02	5.68E-01
ADULT	TOTALS	4.28E-02	4.55E-02	1.32E-02	2.32E-02	1.64E-02	5.68E-01

Program execution time = 1.87 seconds

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TIME STEP NUMBER 2, 10-Year Restoration

DURATION IN YRS IS... 5.0

NUMBER 1 NAME=Casper

X= -54.0KM, Y= -23.0KM, Z= 0.0M, DIST= 58.7KM, IRTYPE= 1

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

*Restoration  
Source  
COP*

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	1.49E-05	1.49E-05	1.49E-05	1.49E-05	1.49E-05	1.49E-05
CHILD	TOTALS	4.46E-05	3.58E-04	1.17E-04	1.17E-04	9.79E-05	1.49E-05
TEENAGE	TOTALS	6.24E-05	5.63E-04	1.78E-04	1.78E-04	1.48E-04	1.49E-05
ADULT	TOTALS	8.49E-05	8.24E-04	2.55E-04	2.55E-04	2.11E-04	1.49E-05

NUMBER 2 NAME=Douglas X= 22.0KM, Y= -32.0KM, Z= 0.0M, DIST= 38.8KM, IRTYPE= 1

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	2.18E-05	2.18E-05	2.18E-05	2.18E-05	2.18E-05	2.18E-05
CHILD	TOTALS	6.53E-05	5.24E-04	1.71E-04	1.71E-04	1.43E-04	2.18E-05
TEENAGE	TOTALS	9.13E-05	8.25E-04	2.60E-04	2.60E-04	2.16E-04	2.18E-05
ADULT	TOTALS	1.24E-04	1.21E-03	3.74E-04	3.74E-04	3.09E-04	2.18E-05

REGION:

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TIME STEP NUMBER 2, 10-Year Restoration

DURATION IN YRS IS... 5.0

NUMBER 3 NAME=Evansville

X= -50.0KM, Y= -22.0KM, Z= 0.0M, DIST= 54.6KM, IRTYPE= 1

## 40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

## TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	1.47E-05	1.47E-05	1.47E-05	1.47E-05	1.47E-05	1.47E-05
CHILD	TOTALS	4.39E-05	3.53E-04	1.15E-04	1.15E-04	9.65E-05	1.47E-05
TEENAGE	TOTALS	6.15E-05	5.55E-04	1.75E-04	1.75E-04	1.46E-04	1.47E-05
ADULT	TOTALS	8.37E-05	8.12E-04	2.52E-04	2.52E-04	2.08E-04	1.47E-05

NUMBER 4 NAME=Glenrock

X= -16.0KM, Y= -20.0KM, Z= 0.0M, DIST= 25.6KM, IRTYPE= 1

## 40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

## TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	1.86E-05	1.86E-05	1.86E-05	1.86E-05	1.86E-05	1.86E-05
CHILD	TOTALS	5.56E-05	4.46E-04	1.46E-04	1.46E-04	1.22E-04	1.86E-05
TEENAGE	TOTALS	7.78E-05	7.03E-04	2.22E-04	2.22E-04	1.84E-04	1.86E-05
ADULT	TOTALS	1.06E-04	1.03E-03	3.18E-04	3.18E-04	2.63E-04	1.86E-05

REGION:

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METSET:

DATA: SHRO1.MIL

05/01/07

TIME STEP NUMBER 2, 10-Year Restoration

DURATION IN YRS IS... 5.0

NUMBER 5 NAME=Midwest

X= -60.0KM, Y= 41.0KM, Z= 0.0M, DIST= 72.7KM, IRTYPE= 1

## 40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

## TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	1.24E-05	1.24E-05	1.24E-05	1.24E-05	1.24E-05	1.24E-05
CHILD	TOTALS	3.70E-05	2.97E-04	9.69E-05	9.69E-05	8.12E-05	1.24E-05
TEENAGE	TOTALS	5.17E-05	4.67E-04	1.48E-04	1.48E-04	1.23E-04	1.24E-05
ADULT	TOTALS	7.05E-05	6.84E-04	2.12E-04	2.12E-04	1.75E-04	1.24E-05

NUMBER 6 NAME=Sunquest Ranch neare X= 0.0KM, Y= -1.1KM, Z= 0.0M, DIST= 1.1KM, IRTYPE= 1

## 40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

## TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	5.92E-06	5.92E-06	5.92E-06	5.92E-06	5.92E-06	5.92E-06
CHILD	TOTALS	1.77E-05	1.42E-04	4.64E-05	4.64E-05	3.89E-05	5.92E-06
TEENAGE	TOTALS	2.48E-05	2.24E-04	7.06E-05	7.06E-05	5.86E-05	5.92E-06
ADULT	TOTALS	3.37E-05	3.27E-04	1.01E-04	1.01E-04	8.37E-05	5.92E-06

REGION:  
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CODE: MILDOSE-AREA (02/97)

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TIME STEP NUMBER 2, 10-Year Restoration

DURATION IN YRS IS... 5.0

NUMBER 7 NAME=Vollman Ranch neares X= -1.0KM, Y= -1.0KM, Z= 0.0M, DIST= 1.4KM, IRTYPE= 1

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	3.71E-06	3.71E-06	3.71E-06	3.71E-06	3.71E-06	3.71E-06
CHILD	TOTALS	1.11E-05	8.90E-05	2.91E-05	2.91E-05	2.44E-05	3.71E-06
TEENAGE	TOTALS	1.55E-05	1.40E-04	4.43E-05	4.43E-05	3.67E-05	3.71E-06
ADULT	TOTALS	2.11E-05	2.05E-04	6.35E-05	6.35E-05	5.24E-05	3.71E-06

NUMBER 8 NAME=Wright X= 12.0KM, Y= 80.0KM, Z= 0.0M, DIST= 80.9KM, IRTYPE= 1

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	1.50E-05	1.50E-05	1.50E-05	1.50E-05	1.50E-05	1.50E-05
CHILD	TOTALS	4.48E-05	3.59E-04	1.17E-04	1.17E-04	9.83E-05	1.50E-05
TEENAGE	TOTALS	6.26E-05	5.66E-04	1.79E-04	1.79E-04	1.48E-04	1.50E-05
ADULT	TOTALS	8.53E-05	8.27E-04	2.56E-04	2.56E-04	2.12E-04	1.50E-05

Program execution time = 0.93 seconds

REGION:  
METSET:

CODE: MILDOS-AREA (02/97)  
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TIME STEP NUMBER 2, 10-Year Restoration

DURATION IN YRS IS... 5.0

NUMBER 1 NAME=Casper

X= -54.0KM, Y= -23.0KM, Z= 0.0M, DIST= 58.7KM, IRTYPE= 1

*Restoration Dose  
Source  
SRI*

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	2.51E-05	2.51E-05	2.51E-05	2.51E-05	2.51E-05	2.51E-05
CHILD	TOTALS	7.50E-05	6.02E-04	1.97E-04	1.97E-04	1.65E-04	2.51E-05
TEENAGE	TOTALS	1.05E-04	9.48E-04	2.99E-04	2.99E-04	2.49E-04	2.51E-05
ADULT	TOTALS	1.43E-04	1.39E-03	4.30E-04	4.30E-04	3.55E-04	2.51E-05

NUMBER 2 NAME=Douglas X= 22.0KM, Y= -32.0KM, Z= 0.0M, DIST= 38.8KM, IRTYPE= 1

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	3.49E-05	3.49E-05	3.49E-05	3.49E-05	3.49E-05	3.49E-05
CHILD	TOTALS	1.04E-04	8.38E-04	2.73E-04	2.73E-04	2.29E-04	3.49E-05
TEENAGE	TOTALS	1.46E-04	1.32E-03	4.17E-04	4.17E-04	3.46E-04	3.49E-05
ADULT	TOTALS	1.99E-04	1.93E-03	5.98E-04	5.98E-04	4.93E-04	3.49E-05

REGION:

CODE: MILDUS-AREA (02/91)

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METSET:

DATA: SHRO1.MIL

05/02/07

TIME STEP NUMBER 2, 10-Year Restoration

DURATION IN YRS IS... 5.0

NUMBER 3 NAME=Evansville

X= -50.0KM, Y= -22.0KM, Z= 0.0M, DIST= 54.6KM, IRTYPE= 1

## 40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

## TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	2.55E-05	2.55E-05	2.55E-05	2.55E-05	2.55E-05	2.55E-05
CHILD	TOTALS	7.62E-05	6.12E-04	2.00E-04	2.00E-04	1.67E-04	2.55E-05
TEENAGE	TOTALS	1.07E-04	9.63E-04	3.04E-04	3.04E-04	2.53E-04	2.55E-05
ADULT	TOTALS	1.45E-04	1.41E-03	4.37E-04	4.37E-04	3.60E-04	2.55E-05

NUMBER 4 NAME=Glenrock

X= -16.0KM, Y= -20.0KM, Z= 0.0M, DIST= 25.6KM, IRTYPE= 1

## 40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

## TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	3.38E-05	3.38E-05	3.38E-05	3.38E-05	3.38E-05	3.38E-05
CHILD	TOTALS	1.01E-04	8.11E-04	2.65E-04	2.65E-04	2.22E-04	3.38E-05
TEENAGE	TOTALS	1.41E-04	1.28E-03	4.03E-04	4.03E-04	3.35E-04	3.38E-05
ADULT	TOTALS	1.93E-04	1.87E-03	5.79E-04	5.79E-04	4.78E-04	3.38E-05

REGION:

CODE: MILDUS-AREA (02/71)

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METSET:

DATA: SHRO1.MIL

05/02/07

TIME STEP NUMBER 2, 10-Year Restoration

DURATION IN YRS IS... 5.0

NUMBER 5 NAME=Midwest

X= -60.0KM, Y= 41.0KM, Z= 0.0M, DIST= 72.7KM, IRTYPE= 1

## 40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

## TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	2.07E-05	2.07E-05	2.07E-05	2.07E-05	2.07E-05	2.07E-05
CHILD	TOTALS	6.20E-05	4.98E-04	1.62E-04	1.62E-04	1.36E-04	2.07E-05
TEENAGE	TOTALS	8.68E-05	7.84E-04	2.47E-04	2.47E-04	2.05E-04	2.07E-05
ADULT	TOTALS	1.18E-04	1.15E-03	3.55E-04	3.55E-04	2.93E-04	2.07E-05

NUMBER 6 NAME=Sunquest Ranch neare X= 0.0KM, Y= -1.1KM, Z= 0.0M, DIST= 1.1KM, IRTYPE= 1

## 40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

## TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	2.14E-05	2.14E-05	2.14E-05	2.14E-05	2.14E-05	2.14E-05
CHILD	TOTALS	6.39E-05	5.13E-04	1.67E-04	1.67E-04	1.40E-04	2.14E-05
TEENAGE	TOTALS	8.94E-05	8.07E-04	2.55E-04	2.55E-04	2.12E-04	2.14E-05
ADULT	TOTALS	1.22E-04	1.18E-03	3.66E-04	3.66E-04	3.02E-04	2.14E-05

REGION:

CODE: MILDOS-AREA (02/91)

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METSET:

DATA: SHRO1.MIL

05/02/07

TIME STEP NUMBER 2, 10-Year Restoration

DURATION IN YRS IS... 5.0

NUMBER 7 NAME=Vollman Ranch neares X= -1.0KM, Y= -1.0KM, Z= 0.0M, DIST= 1.4KM, IRTYPE= 1

*Restoration Dose  
Source  
S R I.*

## 40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

## TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	1.42E-05	1.42E-05	1.42E-05	1.42E-05	1.42E-05	1.42E-05
CHILD	TOTALS	4.24E-05	3.40E-04	1.11E-04	1.11E-04	9.31E-05	1.42E-05
TEENAGE	TOTALS	5.93E-05	5.36E-04	1.69E-04	1.69E-04	1.40E-04	1.42E-05
ADULT	TOTALS	8.07E-05	7.83E-04	2.43E-04	2.43E-04	2.00E-04	1.42E-05

NUMBER 8 NAME=Wright X= 12.0KM, Y= 80.0KM, Z= 0.0M, DIST= 80.9KM, IRTYPE= 1

## 40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

## TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	2.48E-05	2.48E-05	2.48E-05	2.48E-05	2.48E-05	2.48E-05
CHILD	TOTALS	7.41E-05	5.95E-04	1.94E-04	1.94E-04	1.63E-04	2.48E-05
TEENAGE	TOTALS	1.04E-04	9.37E-04	2.96E-04	2.96E-04	2.46E-04	2.48E-05
ADULT	TOTALS	1.41E-04	1.37E-03	4.24E-04	4.24E-04	3.50E-04	2.48E-05

Program execution time = 1.21 seconds

REGION:  
METSET:

CODE: MILDOS-AREA (02/97)

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DATA: SHRO1.MIL

05/01/07

TIME STEP NUMBER 2, 10-Year Restoration

DURATION IN YRS IS... 5.0

NUMBER 1 NAME=Casper

X= -54.0KM, Y= -23.0KM, Z= 0.0M, DIST= 58.7KM, IRTYPE= 1

*Restoration  
Source  
SW(SR2)*

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	1.35E-05	1.35E-05	1.35E-05	1.35E-05	1.35E-05	1.35E-05
CHILD	TOTALS	4.05E-05	3.25E-04	1.06E-04	1.06E-04	8.89E-05	1.35E-05
TEENAGE	TOTALS	5.67E-05	5.12E-04	1.62E-04	1.62E-04	1.34E-04	1.35E-05
ADULT	TOTALS	7.71E-05	7.48E-04	2.32E-04	2.32E-04	1.91E-04	1.35E-05

NUMBER 2 NAME=Douglas X= 22.0KM, Y= -32.0KM, Z= 0.0M, DIST= 38.8KM, IRTYPE= 1

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	1.61E-05	1.61E-05	1.61E-05	1.61E-05	1.61E-05	1.61E-05
CHILD	TOTALS	4.83E-05	3.87E-04	1.26E-04	1.26E-04	1.06E-04	1.61E-05
TEENAGE	TOTALS	6.75E-05	6.10E-04	1.93E-04	1.93E-04	1.60E-04	1.61E-05
ADULT	TOTALS	9.19E-05	8.92E-04	2.76E-04	2.76E-04	2.28E-04	1.61E-05

REGION:  
METSET:

CODE: MILDOUS-AREA (02/97)

DATA: SHRO1.MIL

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TIME STEP NUMBER 2, 10-Year Restoration

DURATION IN YRS IS... 5.0

NUMBER 3 NAME=Evansville

X= -50.0KM, Y= -22.0KM, Z= 0.0M, DIST= 54.6KM, IRTYPE= 1

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	1.34E-05	1.34E-05	1.34E-05	1.34E-05	1.34E-05	1.34E-05
CHILD	TOTALS	4.00E-05	3.21E-04	1.05E-04	1.05E-04	8.79E-05	1.34E-05
TEENAGE	TOTALS	5.60E-05	5.06E-04	1.60E-04	1.60E-04	1.33E-04	1.34E-05
ADULT	TOTALS	7.62E-05	7.39E-04	2.29E-04	2.29E-04	1.89E-04	1.34E-05

NUMBER 4 NAME=Glenrock

X= -16.0KM, Y= -20.0KM, Z= 0.0M, DIST= 25.6KM, IRTYPE= 1

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	1.74E-05	1.74E-05	1.74E-05	1.74E-05	1.74E-05	1.74E-05
CHILD	TOTALS	5.22E-05	4.19E-04	1.37E-04	1.37E-04	1.15E-04	1.74E-05
TEENAGE	TOTALS	7.30E-05	6.59E-04	2.08E-04	2.08E-04	1.73E-04	1.74E-05
ADULT	TOTALS	9.94E-05	9.64E-04	2.99E-04	2.99E-04	2.47E-04	1.74E-05

REGION:  
METSET:

CODE: MILDOSE-AREA (02/97)

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TIME STEP NUMBER 2, 10-Year Restoration

DURATION IN YRS IS... 5.0

NUMBER 5 NAME=Midwest

X= -60.0KM, Y= 41.0KM, Z= 0.0M, DIST= 72.7KM, IRTYPE= 1

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	1.04E-05	1.04E-05	1.04E-05	1.04E-05	1.04E-05	1.04E-05
CHILD	TOTALS	3.12E-05	2.50E-04	8.17E-05	8.17E-05	6.85E-05	1.04E-05
TEENAGE	TOTALS	4.36E-05	3.94E-04	1.24E-04	1.24E-04	1.03E-04	1.04E-05
ADULT	TOTALS	5.94E-05	5.76E-04	1.79E-04	1.79E-04	1.47E-04	1.04E-05

NUMBER 6 NAME=Sunquest Ranch neare X= 0.0KM, Y= -1.1KM, Z= 0.0M, DIST= 1.1KM, IRTYPE= 1

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	1.79E-05	1.79E-05	1.79E-05	1.79E-05	1.79E-05	1.79E-05
CHILD	TOTALS	5.37E-05	4.31E-04	1.41E-04	1.41E-04	1.18E-04	1.79E-05
TEENAGE	TOTALS	7.51E-05	6.78E-04	2.14E-04	2.14E-04	1.78E-04	1.79E-05
ADULT	TOTALS	1.02E-04	9.92E-04	3.07E-04	3.07E-04	2.54E-04	1.79E-05

REGION:

CODE: MILDOS-AREA (02/97)

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METSET:

DATA: SHRO1.MIL

05/01/07

TIME STEP NUMBER 2, 10-Year Restoration

DURATION IN YRS IS... 5.0

NUMBER 7 NAME=Vollman Ranch neares X= -1.0KM, Y= -1.0KM, Z= 0.0M, DIST= 1.4KM, IRTYPE= 1

## 40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

## TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	1.48E-05	1.48E-05	1.48E-05	1.48E-05	1.48E-05	1.48E-05
CHILD	TOTALS	4.41E-05	3.54E-04	1.16E-04	1.16E-04	9.69E-05	1.48E-05
TEENAGE	TOTALS	6.17E-05	5.58E-04	1.76E-04	1.76E-04	1.46E-04	1.48E-05
ADULT	TOTALS	8.41E-05	8.16E-04	2.53E-04	2.53E-04	2.09E-04	1.48E-05

NUMBER 8 NAME=Wright X= 12.0KM, Y= 80.0KM, Z= 0.0M, DIST= 80.9KM, IRTYPE= 1

## 40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

## TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	1.30E-05	1.30E-05	1.30E-05	1.30E-05	1.30E-05	1.30E-05
CHILD	TOTALS	3.89E-05	3.12E-04	1.02E-04	1.02E-04	8.55E-05	1.30E-05
TEENAGE	TOTALS	5.44E-05	4.92E-04	1.55E-04	1.55E-04	1.29E-04	1.30E-05
ADULT	TOTALS	7.41E-05	7.19E-04	2.23E-04	2.23E-04	1.84E-04	1.30E-05

Program execution time = 1.21 seconds

# MILDOS BOUNDARY DOSES

REGION:  
METSET:

CODE: MILDOS-AREA (02/97)

PAGE 19

DATA: SHB1.MIL

05/01/07

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 1 NAME=North Boundary X= 4.0KM, Y= 6.4KM, Z= 0.0M, DIST= 7.5KM, IRTYPE= 1

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

*Boundary doses  
Sources  
(HUP) J  
(HUP) K*

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	8.10E-01	4.57E-02	4.27E-02	5.97E-02	4.91E-02	1.28E+01
CHILD	TOTALS	8.10E-01	4.79E-02	4.34E-02	5.10E-02	4.63E-02	1.28E+01
TEENAGE	TOTALS	8.10E-01	5.36E-02	4.39E-02	4.71E-02	4.52E-02	1.28E+01
ADULT	TOTALS	8.10E-01	5.32E-02	4.45E-02	4.72E-02	4.54E-02	1.28E+01

NUMBER 2 NAME=East Boundary X= 15.5KM, Y= 3.0KM, Z= 0.0M, DIST= 15.8KM, IRTYPE= 1

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	5.94E-01	7.49E-02	5.62E-02	1.61E-01	9.59E-02	8.94E+00
CHILD	TOTALS	5.92E-01	8.87E-02	6.07E-02	1.07E-01	7.84E-02	8.94E+00
TEENAGE	TOTALS	5.93E-01	1.24E-01	6.39E-02	8.39E-02	7.16E-02	8.94E+00
ADULT	TOTALS	5.94E-01	1.21E-01	6.78E-02	8.44E-02	7.31E-02	8.94E+00

REGION:

CODE: MILBOST-AREA (02/21)

PAGE 20

METSET:

DATA: SHB1.MIL

05/01/07

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 3 NAME=South Bounday

X= -7.6KM, Y= -6.1KM, Z= 0.0M, DIST= 9.7KM, IRTYPE= 1

## 40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

## TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	1.66E-01	2.35E-02	1.70E-02	5.35E-02	3.08E-02	2.48E+00
CHILD	TOTALS	1.66E-01	2.83E-02	1.86E-02	3.48E-02	2.47E-02	2.48E+00
TEENAGE	TOTALS	1.66E-01	4.05E-02	1.97E-02	2.66E-02	2.23E-02	2.48E+00
ADULT	TOTALS	1.66E-01	3.96E-02	2.10E-02	2.68E-02	2.29E-02	2.48E+00

NUMBER 4 NAME=West Boundary

X= 3.9KM, Y= 1.8KM, Z= 0.0M, DIST= 4.3KM, IRTYPE= 1

## 40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

## TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	5.44E+00	1.39E-01	1.35E-01	1.56E-01	1.43E-01	8.85E+01
CHILD	TOTALS	5.44E+00	1.42E-01	1.36E-01	1.45E-01	1.39E-01	8.85E+01
TEENAGE	TOTALS	5.44E+00	1.49E-01	1.36E-01	1.41E-01	1.38E-01	8.85E+01
ADULT	TOTALS	5.44E+00	1.48E-01	1.37E-01	1.41E-01	1.38E-01	8.85E+01

Program execution time = 4.83 seconds

REGION:  
METSET:

CODE: MILDOS-AREA (02/97)  
DATA: SHB1.MIL

PAGE 19  
05/01/07

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 1 NAME=North Boundary X= 4.0KM, Y= 6.4KM, Z= 0.0M, DIST= 7.5KM, IRTYPE= 1

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

Boundary Doses  
Sources  
(SR) 1S  
(SR) 1SA

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	3.43E-01	2.85E-02	2.22E-02	5.74E-02	3.55E-02	5.34E+00
CHILD	TOTALS	3.43E-01	3.31E-02	2.37E-02	3.94E-02	2.96E-02	5.34E+00
TEENAGE	TOTALS	3.43E-01	4.48E-02	2.48E-02	3.15E-02	2.74E-02	5.34E+00
ADULT	TOTALS	3.43E-01	4.40E-02	2.61E-02	3.17E-02	2.79E-02	5.34E+00

NUMBER 2 NAME=East Boundary X= 15.5KM, Y= 3.0KM, Z= 0.0M, DIST= 15.8KM, IRTYPE= 1

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	3.28E-01	4.42E-02	3.18E-02	1.02E-01	5.83E-02	4.91E+00
CHILD	TOTALS	3.27E-01	5.35E-02	3.48E-02	6.60E-02	4.66E-02	4.91E+00
TEENAGE	TOTALS	3.28E-01	7.70E-02	3.69E-02	5.03E-02	4.20E-02	4.91E+00
ADULT	TOTALS	3.28E-01	7.53E-02	3.95E-02	5.06E-02	4.31E-02	4.91E+00

REGION:  
METSET:

CODE: MILDOS-AREA (02/97)  
DATA: SHB1.MIL

PAGE 20  
05/01/07

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 3 NAME=South Bounday X= -7.6KM, Y= -6.1KM, Z= 0.0M, DIST= 9.7KM, IRTYPE= 1

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	5.44E-01	3.77E-02	3.35E-02	5.69E-02	4.24E-02	8.52E+00
CHILD	TOTALS	5.43E-01	4.07E-02	3.45E-02	4.49E-02	3.85E-02	8.52E+00
TEENAGE	TOTALS	5.44E-01	4.86E-02	3.52E-02	3.97E-02	3.69E-02	8.52E+00
ADULT	TOTALS	5.44E-01	4.80E-02	3.61E-02	3.98E-02	3.73E-02	8.52E+00

NUMBER 4 NAME=West Boundary X= 3.9KM, Y= 1.8KM, Z= 0.0M, DIST= 4.3KM, IRTYPE= 1

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	6.39E-01	4.14E-02	3.43E-02	7.45E-02	4.95E-02	1.01E+01
CHILD	TOTALS	6.38E-01	4.67E-02	3.60E-02	5.39E-02	4.28E-02	1.01E+01
TEENAGE	TOTALS	6.39E-01	6.01E-02	3.72E-02	4.49E-02	4.02E-02	1.01E+01
ADULT	TOTALS	6.39E-01	5.92E-02	3.87E-02	4.51E-02	4.08E-02	1.01E+01

Program execution time = 5.16 seconds

REGION:

CODE: MILDOS-AREA (02/97)

PAGE 19

METSET:

DATA: SHB1.MIL

05/01/07

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 1 NAME=North Boundary X= 4.0KM, Y= 6.4KM, Z= 0.0M, DIST= 7.5KM, IRTYPE= 1

*Boundary Pass  
Sources*

#3

#4/4A

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	2.14E-01	1.51E-02	1.23E-02	2.78E-02	1.82E-02	3.36E+00
CHILD	TOTALS	2.14E-01	1.71E-02	1.30E-02	1.99E-02	1.56E-02	3.36E+00
TEENAGE	TOTALS	2.14E-01	2.23E-02	1.34E-02	1.64E-02	1.46E-02	3.36E+00
ADULT	TOTALS	2.14E-01	2.19E-02	1.40E-02	1.65E-02	1.48E-02	3.36E+00

NUMBER 2 NAME=East Boundary X= 15.5KM, Y= 3.0KM, Z= 0.0M, DIST= 15.8KM, IRTYPE= 1

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	2.68E-01	3.23E-02	2.40E-02	7.08E-02	4.17E-02	4.05E+00
CHILD	TOTALS	2.67E-01	3.84E-02	2.60E-02	4.68E-02	3.39E-02	4.05E+00
TEENAGE	TOTALS	2.67E-01	5.41E-02	2.74E-02	3.63E-02	3.08E-02	4.05E+00
ADULT	TOTALS	2.67E-01	5.30E-02	2.91E-02	3.65E-02	3.15E-02	4.05E+00

REGION:  
METSET:

CODE: MILDOUS-AREA (02/91)

PAGE 20

DATA: SHB1.MIL

05/01/07

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 3 NAME=South Bounday X= -7.6KM, Y= -6.1KM, Z= 0.0M, DIST= 9.7KM, IRTYPE= 1

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	1.56E-01	1.68E-02	1.34E-02	3.27E-02	2.07E-02	2.37E+00
CHILD	TOTALS	1.55E-01	1.94E-02	1.42E-02	2.28E-02	1.75E-02	2.37E+00
TEENAGE	TOTALS	1.55E-01	2.58E-02	1.48E-02	1.85E-02	1.62E-02	2.37E+00
ADULT	TOTALS	1.56E-01	2.53E-02	1.55E-02	1.86E-02	1.65E-02	2.37E+00

NUMBER 4 NAME=West Boundary X= 3.9KM, Y= 1.8KM, Z= 0.0M, DIST= 4.3KM, IRTYPE= 1

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	7.36E-01	2.81E-02	2.55E-02	4.02E-02	3.10E-02	1.18E+01
CHILD	TOTALS	7.35E-01	3.00E-02	2.61E-02	3.27E-02	2.86E-02	1.18E+01
TEENAGE	TOTALS	7.36E-01	3.49E-02	2.66E-02	2.94E-02	2.76E-02	1.18E+01
ADULT	TOTALS	7.36E-01	3.46E-02	2.71E-02	2.94E-02	2.79E-02	1.18E+01

Program execution time = 4.88 seconds

REGION:  
METSET:

CODE: MILDOS-AREA (02/97)  
DATA: SHB1.MIL  
TIME STEP NUMBER 1,

PAGE 19  
05/01/07  
DURATION IN YRS IS... 5.0

*Boundary doses  
Sources*

NUMBER 1 NAME=North Boundary X= 4.0KM, Y= 6.4KM, Z= 0.0M, DIST= 7.5KM, IRTYPE= 1

#1  
#2

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	1.21E-01	1.22E-02	9.50E-03	2.46E-02	1.52E-02	1.85E+00
CHILD	TOTALS	1.20E-01	1.42E-02	1.02E-02	1.69E-02	1.27E-02	1.85E+00
TEENAGE	TOTALS	1.21E-01	1.92E-02	1.06E-02	1.35E-02	1.17E-02	1.85E+00
ADULT	TOTALS	1.21E-01	1.88E-02	1.12E-02	1.35E-02	1.19E-02	1.85E+00

NUMBER 2 NAME=East Boundary X= 15.5KM, Y= 3.0KM, Z= 0.0M, DIST= 15.8KM, IRTYPE= 1

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	2.08E-01	2.24E-02	1.71E-02	4.68E-02	2.83E-02	3.18E+00
CHILD	TOTALS	2.08E-01	2.63E-02	1.84E-02	3.16E-02	2.34E-02	3.18E+00
TEENAGE	TOTALS	2.08E-01	3.62E-02	1.93E-02	2.49E-02	2.14E-02	3.18E+00
ADULT	TOTALS	2.08E-01	3.55E-02	2.04E-02	2.51E-02	2.19E-02	3.18E+00

REGION:  
METSET:

CODE: MILDOUS-AREA (02/97)  
DATA: SHB1.MIL

PAGE 20  
05/01/07

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 3 NAME=South Bounday X= -7.6KM, Y= -6.1KM, Z= 0.0M, DIST= 9.7KM, IRTYPE= 1

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	1.14E-01	1.31E-02	1.03E-02	2.64E-02	1.64E-02	1.73E+00
CHILD	TOTALS	1.14E-01	1.53E-02	1.10E-02	1.81E-02	1.37E-02	1.73E+00
TEENAGE	TOTALS	1.14E-01	2.07E-02	1.14E-02	1.45E-02	1.26E-02	1.73E+00
ADULT	TOTALS	1.14E-01	2.03E-02	1.20E-02	1.46E-02	1.29E-02	1.73E+00

NUMBER 4 NAME=West Boundary X= 3.9KM, Y= 1.8KM, Z= 0.0M, DIST= 4.3KM, IRTYPE= 1

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	2.78E-01	1.59E-02	1.40E-02	2.45E-02	1.80E-02	4.41E+00
CHILD	TOTALS	2.78E-01	1.73E-02	1.45E-02	1.91E-02	1.62E-02	4.41E+00
TEENAGE	TOTALS	2.78E-01	2.07E-02	1.48E-02	1.68E-02	1.56E-02	4.41E+00
ADULT	TOTALS	2.78E-01	2.05E-02	1.52E-02	1.68E-02	1.57E-02	4.41E+00

Program execution time = 5.05 seconds

REGION:  
METSET:

CODE: MILDOS-AREA (02/97)

PAGE 19

DATA: SHB1.MIL

05/01/07

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

*Boundary Doses  
Sources*

NUMBER 1 NAME=North Boundary X= 4.0KM, Y= 6.4KM, Z= 0.0M, DIST= 7.5KM, IRTYPE= 1

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40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	1.20E+00	7.98E-02	7.25E-02	1.13E-01	8.80E-02	1.88E+01
CHILD	TOTALS	1.20E+00	8.52E-02	7.43E-02	9.25E-02	8.12E-02	1.88E+01
TEENAGE	TOTALS	1.20E+00	9.88E-02	7.55E-02	8.33E-02	7.85E-02	1.88E+01
ADULT	TOTALS	1.20E+00	9.79E-02	7.70E-02	8.35E-02	7.91E-02	1.88E+01

NUMBER 2 NAME=East Boundary X= 15.5KM, Y= 3.0KM, Z= 0.0M, DIST= 15.8KM, IRTYPE= 1

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	2.02E-01	2.91E-02	2.10E-02	6.65E-02	3.82E-02	3.00E+00
CHILD	TOTALS	2.01E-01	3.50E-02	2.29E-02	4.32E-02	3.06E-02	3.00E+00
TEENAGE	TOTALS	2.01E-01	5.03E-02	2.43E-02	3.30E-02	2.76E-02	3.00E+00
ADULT	TOTALS	2.02E-01	4.92E-02	2.60E-02	3.32E-02	2.83E-02	3.00E+00

REGION:

CODE: MILDOS-AREA (02/97)

PAGE 20

METSET:

DATA: SHB1.MIL

05/01/07

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 3 NAME=South Bounday X= -7.6KM, Y= -6.1KM, Z= 0.0M, DIST= 9.7KM, IRTYPE= 1

## 40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

## TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	1.29E-01	2.16E-02	1.45E-02	5.42E-02	2.95E-02	1.90E+00
CHILD	TOTALS	1.29E-01	2.68E-02	1.62E-02	3.38E-02	2.29E-02	1.90E+00
TEENAGE	TOTALS	1.29E-01	4.00E-02	1.74E-02	2.49E-02	2.03E-02	1.90E+00
ADULT	TOTALS	1.29E-01	3.90E-02	1.89E-02	2.52E-02	2.09E-02	1.90E+00

NUMBER 4 NAME=West Boundary X= 3.9KM, Y= 1.8KM, Z= 0.0M, DIST= 4.3KM, IRTYPE= 1

## 40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

## TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	4.64E-01	5.20E-02	4.14E-02	1.01E-01	6.38E-02	7.05E+00
CHILD	TOTALS	4.64E-01	5.98E-02	4.40E-02	7.03E-02	5.40E-02	7.05E+00
TEENAGE	TOTALS	4.64E-01	7.96E-02	4.58E-02	5.70E-02	5.01E-02	7.05E+00
ADULT	TOTALS	4.64E-01	7.81E-02	4.80E-02	5.74E-02	5.10E-02	7.05E+00

Program execution time = 5.22 seconds

REGION:  
METSET:

CODE: MILDOS-AREA (02/97)  
DATA: SHB1.MIL

TIME STEP NUMBER 1,

PAGE 19  
05/01/07

DURATION IN YRS IS... 5.0

NUMBER 1 NAME=North Boundary X= 4.0KM, Y= 6.4KM, Z= 0.0M, DIST= 7.5KM, IRTYPE= 1

Boundary Doses  
Sources

E

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40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	7.40E+00	5.19E-02	5.16E-02	5.35E-02	5.23E-02	1.23E+02
CHILD	TOTALS	7.40E+00	5.22E-02	5.17E-02	5.25E-02	5.20E-02	1.23E+02
TEENAGE	TOTALS	7.40E+00	5.28E-02	5.17E-02	5.21E-02	5.19E-02	1.23E+02
ADULT	TOTALS	7.40E+00	5.28E-02	5.18E-02	5.21E-02	5.19E-02	1.23E+02

NUMBER 2 NAME=East Boundary X= 15.5KM, Y= 3.0KM, Z= 0.0M, DIST= 15.8KM, IRTYPE= 1

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	1.40E-01	1.90E-02	1.39E-02	4.24E-02	2.47E-02	2.09E+00
CHILD	TOTALS	1.39E-01	2.27E-02	1.52E-02	2.78E-02	1.99E-02	2.09E+00
TEENAGE	TOTALS	1.39E-01	3.22E-02	1.60E-02	2.14E-02	1.81E-02	2.09E+00
ADULT	TOTALS	1.40E-01	3.15E-02	1.71E-02	2.16E-02	1.85E-02	2.09E+00

REGION:  
METSET:

CODE: MILDOUS-AREA (02/97)

DATA: SHB1.MIL

PAGE 20

05/01/07

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 3 NAME=South Bounday X= -7.6KM, Y= -6.1KM, Z= 0.0M, DIST= 9.7KM, IRTYPE= 1

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	6.63E-02	9.98E-03	7.04E-03	2.36E-02	1.33E-02	9.82E-01
CHILD	TOTALS	6.60E-02	1.22E-02	7.75E-03	1.51E-02	1.05E-02	9.82E-01
TEENAGE	TOTALS	6.62E-02	1.77E-02	8.24E-03	1.14E-02	9.45E-03	9.82E-01
ADULT	TOTALS	6.63E-02	1.73E-02	8.85E-03	1.15E-02	9.70E-03	9.82E-01

NUMBER 4 NAME=West Boundary X= 3.9KM, Y= 1.8KM, Z= 0.0M, DIST= 4.3KM, IRTYPE= 1

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	4.17E-01	3.33E-02	2.94E-02	5.11E-02	3.76E-02	6.47E+00
CHILD	TOTALS	4.17E-01	3.61E-02	3.04E-02	4.00E-02	3.40E-02	6.47E+00
TEENAGE	TOTALS	4.17E-01	4.34E-02	3.10E-02	3.51E-02	3.26E-02	6.47E+00
ADULT	TOTALS	4.17E-01	4.29E-02	3.18E-02	3.52E-02	3.29E-02	6.47E+00

Program execution time = 5.21 seconds

REGION:  
METSET:

CODE: MILDOS-AREA (02/97)  
DATA: SHB1.MIL

TIME STEP NUMBER 1,

PAGE 19  
05/01/07

DURATION IN YRS IS... 5.0

*Boundary Dose Sources*

NUMBER 1 NAME=North Boundary X= 4.0KM, Y= 6.4KM, Z= 0.0M, DIST= 7.5KM, IRTYPE= 1

*D  
Dex7*

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	3.51E-02	2.61E-03	2.35E-03	3.83E-03	2.91E-03	5.48E-01
CHILD	TOTALS	3.51E-02	2.81E-03	2.41E-03	3.07E-03	2.66E-03	5.48E-01
TEENAGE	TOTALS	3.51E-02	3.30E-03	2.46E-03	2.74E-03	2.57E-03	5.48E-01
ADULT	TOTALS	3.51E-02	3.27E-03	2.51E-03	2.75E-03	2.59E-03	5.48E-01

NUMBER 2 NAME=East Boundary X= 15.5KM, Y= 3.0KM, Z= 0.0M, DIST= 15.8KM, IRTYPE= 1

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	8.93E-02	9.57E-03	7.59E-03	1.87E-02	1.18E-02	1.36E+00
CHILD	TOTALS	8.91E-02	1.10E-02	8.07E-03	1.30E-02	9.94E-03	1.36E+00
TEENAGE	TOTALS	8.93E-02	1.47E-02	8.40E-03	1.05E-02	9.22E-03	1.36E+00
ADULT	TOTALS	8.93E-02	1.45E-02	8.81E-03	1.06E-02	9.38E-03	1.36E+00

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METSET: DATA: SHB1.MIL 05/01/07  
TIME STEP NUMBER 1, DURATION IN YRS IS... 5.0

NUMBER 3 NAME=South Bounday X= -7.6KM, Y= -6.1KM, Z= 0.0M, DIST= 9.7KM, IRTYPE= 1

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	1.55E-02	2.34E-03	1.65E-03	5.54E-03	3.12E-03	2.30E-01
CHILD	TOTALS	1.55E-02	2.85E-03	1.82E-03	3.55E-03	2.47E-03	2.30E-01
TEENAGE	TOTALS	1.55E-02	4.15E-03	1.94E-03	2.68E-03	2.22E-03	2.30E-01
ADULT	TOTALS	1.55E-02	4.06E-03	2.08E-03	2.70E-03	2.28E-03	2.30E-01

NUMBER 4 NAME=West Boundary X= 3.9KM, Y= 1.8KM, Z= 0.0M, DIST= 4.3KM, IRTYPE= 1

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	1.35E-01	5.21E-03	4.94E-03	6.46E-03	5.51E-03	2.17E+00
CHILD	TOTALS	1.35E-01	5.41E-03	5.00E-03	5.68E-03	5.26E-03	2.17E+00
TEENAGE	TOTALS	1.35E-01	5.91E-03	5.05E-03	5.34E-03	5.16E-03	2.17E+00
ADULT	TOTALS	1.35E-01	5.88E-03	5.10E-03	5.34E-03	5.18E-03	2.17E+00

Program execution time = 5.11 seconds

REGION:  
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TIME STEP 1,

ANNUAL POPULATION DOSE COMMITMENTS, PERSON-REM PER YEAR

INHALATION PATHWAY .....	6
GROUND PATHWAY .....	10
CLOUD PATHWAY .....	11
VEGETATION INGESTION PATHWAY .....	12
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Boundary doses  
Sources  
SW  
C

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JOINT FREQUENCY IN PERCENT, DIRECTION INDICATES WHERE WIND IS FROM FREQWS=0.05735,0.21076,0.28172,0.26136,0.13155,0.05735

MPH	N	NNNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTALS
-----	---	------	----	-----	---	-----	----	-----	---	-----	----	-----	---	-----	----	-----	--------

## STABILITY CLASS 1

1.5	0.0070	0.0240	0.0100	0.0240	0.0170	0.0100	0.0070	0.0410	0.0140	0.0210	0.0240	0.0240	0.0380	0.0170	0.0210	0.0100	0.3090
5.5	0.0140	0.0270	0.0210	0.0070	0.0140	0.0210	0.0140	0.0620	0.0070	0.0210	0.0070	0.0270	0.0550	0.0340	0.0000	0.0210	0.3520
10.0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
15.5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
21.5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
28.0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
ALL	0.0210	0.0510	0.0310	0.0310	0.0210	0.1030	0.0210	0.0420	0.0310	0.0510	0.0930	0.0510	0.0210	0.0310	0.06610		

## STABILITY CLASS 2

1.5	0.0550	0.0510	0.0370	0.0420	0.0960	0.0420	0.0660	0.0650	0.0980	0.0410	0.0620	0.0450	0.1130	0.0400	0.0210	0.0640	0.9380
5.5	0.0960	0.1230	0.0690	0.0410	0.1230	0.1160	0.1300	0.1160	0.2120	0.1030	0.1580	0.1370	0.1370	0.0960	0.0550	0.1100	1.8220
10.0	0.0690	0.0620	0.0690	0.0410	0.0620	0.0210	0.0550	0.0270	0.0550	0.0690	0.0820	0.1100	0.1780	0.0690	0.0750	0.0820	1.1260
15.5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
21.5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
28.0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
ALL	0.2200	0.2360	0.1750	0.1240	0.2810	0.1790	0.2510	0.2080	0.3650	0.2130	0.3020	0.2920	0.4280	0.2050	0.1510	0.2560	3.8860

## STABILITY CLASS 3

1.5	0.0190	0.0130	0.0110	0.0120	0.0370	0.0190	0.0130	0.0040	0.0280	0.0190	0.0290	0.0180	0.0270	0.0320	0.0030	0.3030	
5.5	0.0960	0.1370	0.0960	0.1030	0.1780	0.0960	0.1230	0.0820	0.1510	0.0960	0.0960	0.1710	0.2400	0.1300	0.0750	0.0620	1.9320
10.0	0.2530	0.1850	0.1580	0.1710	0.2330	0.1920	0.1230	0.0820	0.1230	0.1990	0.3700	0.6440	0.4730	0.2260	0.1640	0.1580	3.7540
15.5	0.0270	0.0140	0.0140	0.0340	0.0340	0.0140	0.0000	0.0340	0.0960	0.2060	0.1710	0.1920	0.0340	0.0410	0.0690	0.9940	
21.5	0.0000	0.0070	0.0000	0.0000	0.0000	0.0000	0.0000	0.0140	0.0070	0.0340	0.0340	0.0410	0.0210	0.0000	0.0000	0.1580	
28.0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0280	
ALL	0.3950	0.3560	0.2790	0.3000	0.4820	0.3410	0.2730	0.1680	0.3500	0.4170	0.7320	1.0630	0.9710	0.4380	0.3120	0.2920	7.1690

## STABILITY CLASS 4

1.5	0.0790	0.1050	0.0850	0.0740	0.0600	0.0590	0.0550	0.0270	0.0550	0.0340	0.0410	0.0530	0.0680	0.0820	0.0430	0.1010	1.0210
5.5	0.5410	0.5820	0.4450	0.3220	0.4110	0.3220	0.1920	0.1300	0.1920	0.1230	0.2060	0.3360	0.3360	0.2400	0.1440	0.4520	4.9740
10.0	1.1400	1.4250	1.0210	0.8770	0.9250	0.4930	0.3010	0.1370	0.2120	0.6300	1.4180	2.1300	1.7470	0.5410	0.5210	0.5000	14.0180
15.5	1.1100	1.4870	1.0280	0.6510	1.0000	0.5480	0.1990	0.0550	0.3700	3.0830	6.5420	5.1990	1.9320	0.9450	0.5890	0.4040	25.1420
21.5	0.2810	0.3770	0.1710	0.0620	0.2260	0.0820	0.0410	0.0140	0.1780	2.6720	5.0080	2.2130	0.9250	0.4040	0.2400	0.1030	12.9970
28.0	0.1030	0.1030	0.0270	0.0000	0.0140	0.0070	0.0000	0.0410	1.4800	2.2470	0.9730	0.5210	0.1160	0.0410	0.0340	5.7070	
ALL	3.2540	4.0790	2.7770	1.9860	2.6360	1.5110	0.7880	0.3630	1.0480	8.0220	15.4620	10.9040	5.5290	2.3280	1.5780	1.5940	63.8590

## STABILITY CLASS 5

1.5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5.5	0.4180	0.3360	0.2880	0.1920	0.2600	0.1580	0.1510	0.1030	0.1370	0.1160	0.2470	0.4930	0.7470	0.3630	0.3290	0.3290	4.6670
10.0	0.3430	0.3010	0.2810	0.2880	0.4040	0.3080	0.1160	0.0480	0.0550	0.4040	1.0890	2.8220	1.9040	0.4040	0.2470	0.2600	9.2740
15.5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
21.5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
28.0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
ALL	0.7610	0.6370	0.5690	0.4800	0.6640	0.4660	0.2670	0.1510	0.1920	0.5200	1.3360	3.3150	2.6510	0.7670	0.5760	0.5890	13.9410

## STABILITY CLASS 6

1.5	0.3720	0.1670	0.1430	0.1100	0.1610	0.1120	0.0630	0.0580	0.1220	0.1120	0.1450	0.3000	0.5750	0.2610	0.2020	0.2610	3.1640
5.5	0.6920	0.5620	0.3560	0.3560	0.1990	0.1580	0.0890	0.1640	0.1990	0.2810	0.7810	1.2670	0.6230	0.5750	0.6640	7.3290	
10.0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
15.5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
21.5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
28.0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
ALL	1.0640	0.7290	0.4990	0.4660	0.5240	0.3110	0.2210	0.1470	0.2860	0.3110	0.4260	1.0810	1.8420	0.8840	0.7770	0.9250	10.4930

ALL	5.7150	6.0880	4.3300	3.3870	4.6180	2.8390	1.8210	1.1400	2.2620	9.5250	18.2890	16.7060	11.5140	4.6730	3.4150	3.6870	100.0090
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REGION:  
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-----INDIVIDUAL RECEPTOR LOCATION DATA, 4 LOCATIONS INPUT THIS RUN-----

I	LOCATION NAMES	X(KM)	Y(KM)	Z(M)	DIST(KM)	TYPE	I	LOCATION NAMES	X(KM)	Y(KM)	Z(M)	DIST(KM)	TYPE
1	North Boundary	4.00	6.40	0.00	7.55	1	3	South Bounday	-7.60	-6.10	0.00	9.75	1
2	East Boundary	15.50	3.00	0.00	15.79	1	4	West Boundary	3.90	1.80	0.00	4.30	1

MISCELLANEOUS INPUTABLE PARAMETER VALUES

DMM	DMA	TSTART	FFORI	FHAYI	FFORP	FHAYP	FPR(1)	FPR(2)	FPR(3)	ACTRAT
100.0	100.0	2007.00	0.50	0.50	0.50	0.50	0.00	0.00	0.00	2.50

IPACT EQUALS 0, 0,

JC EQUALS 0, 0, 0, 1, 0, 0, 1, 0, 0, 0

TIME STEP DATA.... STEP NAMES LENGTH, YRS IFTODO  
1 5.00 1

XRHO EQUALS 1.5, 2.5, 3.5, 4.5, 7.5, 15.0, 25.0, 35.0, 45.0, 55.0, 65.0, 75.0,

HDP EQUALS 50.0

REGION:  
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## POPULATION DISTRIBUTION

KILOMETERS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
	0.0	22.5	45.0	67.5	90.0	112.5	135.0	157.5	180.0	202.5	225.0	247.5	270.0	292.5	315.0	337.5
1.0- 2.0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0
2.0- 3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.0- 4.0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0
4.0- 5.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5.0-10.0	0	0	0	0	4	0	4	0	0	0	4	0	4	0	4	0
10.0-20.0	4	0	0	0	0	0	8	0	4	0	10	0	0	0	4	0
20.0-30.0	4	0	4	0	4	0	10	0	10	0	20	0	8	0	4	0
30.0-40.0	4	0	4	0	4	0	100	0	8	0	3000	0	8	0	8	0
40.0-50.0	4	0	4	0	4	0	5300	0	10	0	2500	0	10	0	10	0
50.0-60.0	4	0	4	0	4	0	100	0	1	0	50000	0	10	0	10	0
60.0-70.0	4	0	4	0	4	0	50	0	8	0	1000	0	10	0	10	0
70.0-80.0	4	0	8	0	4	0	10	0	4	0	100	0	8	0	0	0
1.0-80.0	28	0	28	0	28	0	5582	0	49	0	56638	0	58	0	50	0

TOTAL 1-80 KM POPULATION IS 62461 PERSONS

REGION:  
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NUMBER OF SOURCES= 2

NO.	KM	KM	M	KM2			CI/YEAR				PSIZE		M/SEC	
	X	Y	Z	AREA	U-238	Th-230	Ra-226	Pb-210	Rn-222	ID	SET	EXIT	VEL	SOURCE
1	-6.10	-4.90	0.00	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.34E+03	1001	1	0.00E+00		SW
2	8.20	4.30	0.00	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.58E+03	1002	1	0.00E+00		C

#### INPUT TAILS ACTIVITIES - PCT/C

AMAR AND FRACTIONAL DISTRIBUTION

SET URANIUM      THORIUM      RADIUM      LEAD

SET 1 5 3 0 3 7 54 0

```

1  0.00E+00  0.00E+00  0.00E+00  0.00E+00
2  0.00E+00  0.00E+00  0.00E+00  0.00E+00
3  0.00E+00  0.00E+00  0.00E+00  0.00E+00

```

1	0.000	1.000	0.000	0.000
2	1.000	0.000	0.000	0.000
3	0.000	0.000	0.300	0.700

PARTICULATE SOURCE STRENGTH MULTIPLIERS BY TIME STEP, 1 TIME STEP(S) USED FOR THIS RUN

RADON SOURCE STRENGTH MULTIPLIERS BY TIME STEP, 1 TIME STEP(S) USED FOR THIS RUN

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TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

EXPOSURE PATHWAY IS INHAL.

EXPOSED ORGAN IS EFFECTIV

DOSES SHOWN BELOW ARE ANNUAL POPULATION DOSE COMMITMENTS, PERSON-REM PER YEAR

DIRECTION	XRHO											
N	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.150E-05	1.269E-05	1.307E-05	1.314E-05	1.308E-05	1.296E-05	1.281E-05
NNE	0.000E+00											
NE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.520E-05	1.529E-05	1.550E-05	1.567E-05	1.576E-05	3.157E-05
ENE	0.000E+00											
E	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.458E-05	0.000E+00	3.451E-05	3.522E-05	3.515E-05	3.475E-05	3.422E-05	3.363E-05
ESE	0.000E+00											
SE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.824E-05	4.674E-05	4.906E-05	4.590E-04	2.294E-02	4.112E-04	1.966E-04	3.777E-05
SSE	0.000E+00											
S	1.746E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.882E-05	5.712E-05	4.832E-05	6.051E-05	5.969E-06	4.687E-05	2.295E-05
SSW	0.000E+00											
SW	0.000E+00	0.000E+00	1.219E-05	0.000E+00	2.557E-06	3.063E-05	7.072E-05	1.075E-02	8.892E-03	1.757E-01	3.502E-03	3.473E-04
WSW	0.000E+00											
W	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.376E-06	0.000E+00	2.725E-05	3.077E-05	4.006E-05	4.060E-05	4.066E-05	3.238E-05
WNW	0.000E+00											
NW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.212E-05	9.422E-06	8.384E-06	1.781E-05	2.268E-05	2.274E-05	2.263E-05	0.000E+00
NNW	0.000E+00											

TOTAL DOSE COMMITMENT IS 2.246E-01 PERSON-REM/YR

REGION:  
METSET:

CODE: MILDOS-AREA (02/97)  
DATA: SHB1.MIL

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05/01/07

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

EXPOSURE PATHWAY IS INHAL.

EXPOSED ORGAN IS BONE

DOSES SHOWN BELOW ARE ANNUAL POPULATION DOSE COMMITMENTS, PERSON-REM PER YEAR

DIRECTION	XRHO											
N	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.323E-05	1.029E-04	1.059E-04	1.065E-04	1.060E-04	1.049E-04	1.037E-04
NNE	0.000E+00											
NE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.233E-04	1.239E-04	1.256E-04	1.270E-04	1.276E-04	2.556E-04
ENE	0.000E+00											
E	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.994E-04	0.000E+00	2.798E-04	2.854E-04	2.847E-04	2.814E-04	2.770E-04	2.721E-04
ESE	0.000E+00											
SE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.103E-04	3.791E-04	3.978E-04	3.721E-03	1.859E-01	3.330E-03	1.591E-03	3.057E-04
SSE	0.000E+00											
S	1.417E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.526E-04	4.633E-04	3.917E-04	4.904E-04	4.836E-05	3.795E-04	1.858E-04
SSW	0.000E+00											
SW	0.000E+00	0.000E+00	9.892E-05	0.000E+00	2.075E-05	2.486E-04	5.737E-04	8.717E-02	7.208E-02	1.424E+00	2.837E-02	2.813E-03
WSW	0.000E+00											
W	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.174E-05	0.000E+00	2.210E-04	2.495E-04	3.247E-04	3.290E-04	3.293E-04	2.622E-04
WNW	0.000E+00											
NW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.837E-05	7.643E-05	6.799E-05	1.444E-04	1.838E-04	1.842E-04	1.833E-04	0.000E+00
NNW	0.000E+00											

TOTAL DOSE COMMITMENT IS 1.820E+00 PERSON-REM/YR

REGION:  
METSET:

CODE: MILDOS-AREA (02/97)  
DATA: SHB1.MIL

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05/01/07

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

EXPOSURE PATHWAY IS INHAL.

EXPOSED ORGAN IS AVG.LUNG

DOSES SHOWN BELOW ARE ANNUAL POPULATION DOSE COMMITMENTS, PERSON-REM PER YEAR

DIRECTION	XRHO											
	1.5	2.5	3.5	4.5	7.5	15.0	25.0	35.0	45.0	55.0	65.0	75.0

N	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.371E-06	1.546E-06	1.627E-06	1.673E-06	1.702E-06	1.724E-06	1.741E-06
NNE	0.000E+00											
NE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.850E-06	1.894E-06	1.952E-06	2.006E-06	2.049E-06	4.168E-06
ENE	0.000E+00											
E	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.886E-06	0.000E+00	4.204E-06	4.382E-06	4.464E-06	4.505E-06	4.527E-06	4.538E-06
ESE	0.000E+00											
SE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.466E-06	5.534E-06	5.932E-06	5.666E-05	2.890E-03	5.289E-05	2.581E-05	5.060E-06
SSE	0.000E+00											
S	2.018E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.198E-06	6.815E-06	5.888E-06	7.532E-06	7.589E-07	6.083E-06	3.041E-06
SSW	0.000E+00											
SW	0.000E+00	0.000E+00	1.401E-06	0.000E+00	2.920E-07	3.541E-06	8.359E-06	1.298E-03	1.096E-03	2.210E-02	4.492E-04	4.543E-05
WSW	0.000E+00											
W	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.338E-07	0.000E+00	3.238E-06	3.734E-06	4.966E-06	5.138E-06	5.253E-06	4.268E-06
WNW	0.000E+00											
NW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.412E-06	1.112E-06	1.011E-06	2.192E-06	2.851E-06	2.919E-06	2.966E-06	0.000E+00
NNW	0.000E+00											

TOTAL DOSE COMMITMENT IS 2.818E-02 PERSON-REM/YR

REGION:  
METSET:

CODE: MILDOS-AREA (02/97)  
DATA: SHB1.MIL

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05/01/07

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

EXPOSURE PATHWAY IS INHAL.

EXPOSED ORGAN IS BRONCHI

DOSES SHOWN BELOW ARE ANNUAL POPULATION DOSE COMMITMENTS, PERSON-REM PER YEAR

DIRECTION	XRHO											
	1.5	2.5	3.5	4.5	7.5	15.0	25.0	35.0	45.0	55.0	65.0	75.0

N	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.542E-02	1.486E-02	1.005E-02	7.400E-03	5.761E-03	4.660E-03	3.876E-03	
NNE	0.000E+00												
NE	0.000E+00	2.979E-02	2.213E-02	1.769E-02	1.473E-02	1.259E-02	2.195E-02						
ENE	0.000E+00												
E	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.181E-02	0.000E+00	3.808E-02	2.715E-02	2.074E-02	1.658E-02	1.369E-02	1.158E-02	
ESE	0.000E+00												
SE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.245E-01	8.131E-02	4.955E-02	3.277E-01	1.256E+01	1.820E-01	7.285E-02	1.203E-02	
SSE	0.000E+00												
S	2.101E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.261E-02	7.418E-02	4.081E-02	3.752E-02	2.918E-03	1.890E-02	7.872E-03	
SSW	0.000E+00												
SW	0.000E+00	0.000E+00	3.517E-01	0.000E+00	2.432E+00	2.294E-01	1.502E-01	1.283E+01	7.322E+00	1.103E+02	1.776E+00	1.478E-01	
WSW	0.000E+00												
W	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.999E-02	0.000E+00	4.449E-02	3.074E-02	2.849E-02	2.234E-02	1.821E-02	1.222E-02	
WNW	0.000E+00												
NW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.181E-02	1.517E-02	7.857E-03	1.193E-02	1.164E-02	9.414E-03	7.829E-03	0.000E+00	
NNW	0.000E+00												

TOTAL DOSE COMMITMENT IS 1.501E+02 PERSON-REM/YR

REGION:  
METSET:

CODE: MILDOS-AREA (02/97)  
DATA: SHB1.MIL

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TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

EXPOSURE PATHWAY IS GROUND

EXPOSED ORGAN IS EFFECTIV

DOSES SHOWN BELOW ARE ANNUAL POPULATION DOSE COMMITMENTS, PERSON-REM PER YEAR

DIRECTION	XRHO											
	1.5	2.5	3.5	4.5	7.5	15.0	25.0	35.0	45.0	55.0	65.0	75.0

N	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.005E-06	1.822E-06	1.280E-06	9.811E-07	7.947E-07	6.686E-07	5.781E-07
NNE	0.000E+00											
NE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.540E-06	2.673E-06	2.172E-06	1.840E-06	1.598E-06	2.829E-06
ENE	0.000E+00											
E	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.066E-05	0.000E+00	4.689E-06	3.459E-06	2.731E-06	2.255E-06	1.922E-06	1.677E-06
ESE	0.000E+00											
SE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.451E-05	9.719E-06	6.147E-06	4.211E-05	1.672E-03	2.508E-05	1.039E-05	1.772E-06
SSE	0.000E+00											
S	2.368E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.164E-06	9.025E-06	5.149E-06	4.908E-06	3.954E-07	2.649E-06	1.141E-06
SSW	0.000E+00											
SW	0.000E+00	0.000E+00	3.804E-05	0.000E+00	2.191E-04	2.624E-05	1.779E-05	1.570E-03	9.262E-04	1.440E-02	2.393E-04	2.052E-05
WSW	0.000E+00											
W	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.836E-06	0.000E+00	5.336E-06	3.817E-06	3.663E-06	2.972E-06	2.505E-06	1.736E-06
WNW	0.000E+00											
NW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.856E-06	1.821E-06	9.813E-07	1.545E-06	1.565E-06	1.313E-06	1.133E-06	0.000E+00
NNW	0.000E+00											

TOTAL DOSE COMMITMENT IS 1.938E-02 PERSON-REM/YR

REGION:  
METSET:

CODE: MILDOS-AREA (02/97)  
DATA: SHB1.MIL

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TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

EXPOSURE PATHWAY IS CLOUD

EXPOSED ORGAN IS EFFECTIV

DOSES SHOWN BELOW ARE ANNUAL POPULATION DOSE COMMITMENTS, PERSON-REM PER YEAR

DIRECTION	XRHO											
N	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.479E-04	1.060E-04	7.875E-05	6.096E-05	4.880E-05	4.013E-05	3.371E-05
NNNE	0.000E+00											
NE	0.000E+00	1.966E-04	1.626E-04	1.389E-04	1.206E-04	1.058E-04						
ENE	0.000E+00											
E	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.872E-04	0.000E+00	2.942E-04	2.229E-04	1.756E-04	1.428E-04	1.191E-04	1.013E-04
ESE	0.000E+00											
SE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.404E-04	5.810E-04	3.957E-04	2.737E-03	1.074E-01	1.577E-03	6.362E-04	1.055E-04
SSE	0.000E+00											
S	6.730E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.467E-04	5.806E-04	3.381E-04	3.198E-04	2.525E-05	1.649E-04	6.903E-05
SSW	0.000E+00											
SW	0.000E+00	0.000E+00	7.913E-04	0.000E+00	1.336E-03	1.048E-03	1.030E-03	1.008E-01	6.095E-02	9.435E-01	1.542E-02	1.293E-03
WSW	0.000E+00											
W	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.932E-04	0.000E+00	3.255E-04	2.476E-04	2.398E-04	1.922E-04	1.585E-04	1.070E-04
WNW	0.000E+00											
NW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.414E-04	1.148E-04	6.536E-05	1.022E-04	1.013E-04	8.248E-05	6.886E-05	0.000E+00
NNW	0.000E+00											

TOTAL DOSE COMMITMENT IS 1.248E+00 PERSON-REM/YR

REGION:  
METSET:

CODE: MILDOS-AREA (02/97)  
DATA: SHB1.MIL

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05/01/07

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

EXPOSURE PATHWAY IS VEG. ING

EXPOSED ORGAN IS EFFECTIV

DOSES SHOWN BELOW ARE ANNUAL POPULATION DOSE COMMITMENTS, PERSON-REM PER YEAR

| DIRECTION | XRHO      |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| N         | 0.000E+00 |
| NNE       | 0.000E+00 |
| NE        | 0.000E+00 |
| ENE       | 0.000E+00 |
| E         | 0.000E+00 |
| ESE       | 0.000E+00 |
| SE        | 0.000E+00 |
| SSE       | 0.000E+00 |
| S         | 0.000E+00 |
| SSW       | 0.000E+00 |
| SW        | 0.000E+00 |
| WSW       | 0.000E+00 |
| W         | 0.000E+00 |
| WNW       | 0.000E+00 |
| NW        | 0.000E+00 |
| NNW       | 0.000E+00 |

TOTAL DOSE COMMITMENT IS 0.000E+00 PERSON-REM/YR

WARNING--POPULATION FOOD INGESTION DOSES SHOWN  
ABOVE HAVE NOT BEEN CORRECTED TO REFLECT POTENTIAL  
FOOD EXPORT AND MAY EXCEED DOSES ACTUALLY RECEIVED  
BY THE POPULATION OF THIS REGION. SEE SUMMARY  
TABLE FOR THIS INFORMATION.

REGION:  
METSET:

CODE: MILDOS-AREA (02/97)  
DATA: SHB1.MIL

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05/01/07

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

EXPOSURE PATHWAY IS VEG. ING

EXPOSED ORGAN IS BONE

DOSES SHOWN BELOW ARE ANNUAL POPULATION DOSE COMMITMENTS, PERSON-REM PER YEAR

DIRECTION	XRHO											
	1.5	2.5	3.5	4.5	7.5	15.0	25.0	35.0	45.0	55.0	65.0	75.0

N	0.000E+00											
NNE	0.000E+00											
NE	0.000E+00											
ENE	0.000E+00											
E	0.000E+00											
ESE	0.000E+00											
SE	0.000E+00											
SSE	0.000E+00											
S	0.000E+00											
SSW	0.000E+00											
SW	0.000E+00											
WSW	0.000E+00											
W	0.000E+00											
WNW	0.000E+00											
NW	0.000E+00											
NNW	0.000E+00											

TOTAL DOSE COMMITMENT IS 0.000E+00 PERSON-REM/YR

WARNING--POPULATION FOOD INGESTION DOSES SHOWN  
ABOVE HAVE NOT BEEN CORRECTED TO REFLECT POTENTIAL  
FOOD EXPORT AND MAY EXCEED DOSES ACTUALLY RECEIVED  
BY THE POPULATION OF THIS REGION. SEE SUMMARY  
TABLE FOR THIS INFORMATION.

REGION:  
METSET:

CODE: MILDOS-AREA (02/97)  
DATA: SHB1.MIL

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05/01/07

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

EXPOSURE PATHWAY IS MEAT ING

EXPOSED ORGAN IS EFFECTIV

DOSES SHOWN BELOW ARE ANNUAL POPULATION DOSE COMMITMENTS, PERSON-REM PER YEAR

| DIRECTION | XRHO      |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| N         | 0.000E+00 |
| NNE       | 0.000E+00 |
| NE        | 0.000E+00 |
| ENE       | 0.000E+00 |
| E         | 0.000E+00 |
| ESE       | 0.000E+00 |
| SE        | 0.000E+00 |
| SSE       | 0.000E+00 |
| S         | 0.000E+00 |
| SSW       | 0.000E+00 |
| SW        | 0.000E+00 |
| WSW       | 0.000E+00 |
| W         | 0.000E+00 |
| WNW       | 0.000E+00 |
| NW        | 0.000E+00 |
| NNW       | 0.000E+00 |

TOTAL DOSE COMMITMENT IS 0.000E+00 PERSON-REM/YR

WARNING--POPULATION FOOD INGESTION DOSES SHOWN  
ABOVE HAVE NOT BEEN CORRECTED TO REFLECT POTENTIAL  
FOOD EXPORT AND MAY EXCEED DOSES ACTUALLY RECEIVED  
BY THE POPULATION OF THIS REGION. SEE SUMMARY  
TABLE FOR THIS INFORMATION.

REGION:  
METSET:

CODE: MILDOS-AREA (02/97)  
DATA: SHB1.MIL

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05/01/07

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

EXPOSURE PATHWAY IS MEAT ING EXPOSED ORGAN IS BONE

DOSES SHOWN BELOW ARE ANNUAL POPULATION DOSE COMMITMENTS, PERSON-REM PER YEAR

DIRECTION	XRHO											
	1.5	2.5	3.5	4.5	7.5	15.0	25.0	35.0	45.0	55.0	65.0	75.0

N	0.000E+00											
NNE	0.000E+00											
NE	0.000E+00											
ENE	0.000E+00											
E	0.000E+00											
ESE	0.000E+00											
SE	0.000E+00											
SSE	0.000E+00											
S	0.000E+00											
SSW	0.000E+00											
SW	0.000E+00											
WSW	0.000E+00											
W	0.000E+00											
WNW	0.000E+00											
NW	0.000E+00											
NNW	0.000E+00											

TOTAL DOSE COMMITMENT IS 0.000E+00 PERSON-REM/YR

WARNING--POPULATION FOOD INGESTION DOSES SHOWN  
ABOVE HAVE NOT BEEN CORRECTED TO REFLECT POTENTIAL  
FOOD EXPORT AND MAY EXCEED DOSES ACTUALLY RECEIVED  
BY THE POPULATION OF THIS REGION. SEE SUMMARY  
TABLE FOR THIS INFORMATION.

REGION:  
METSET:

CODE: MILDOS-AREA (02/97)  
DATA: SHB1.MIL

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TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

EXPOSURE PATHWAY IS MILK ING

EXPOSED ORGAN IS EFFECTIV

DOSES SHOWN BELOW ARE ANNUAL POPULATION DOSE COMMITMENTS, PERSON-REM PER YEAR

DIRECTION	XRHO											
	1.5	2.5	3.5	4.5	7.5	15.0	25.0	35.0	45.0	55.0	65.0	75.0

N	0.000E+00											
NNE	0.000E+00											
NE	0.000E+00											
ENE	0.000E+00											
E	0.000E+00											
ESE	0.000E+00											
SE	0.000E+00											
SSE	0.000E+00											
S	0.000E+00											
SSW	0.000E+00											
SW	0.000E+00											
WSW	0.000E+00											
W	0.000E+00											
WNW	0.000E+00											
NW	0.000E+00											
NNW	0.000E+00											

TOTAL DOSE COMMITMENT IS 0.000E+00 PERSON-REM/YR

WARNING--POPULATION FOOD INGESTION DOSES SHOWN  
ABOVE HAVE NOT BEEN CORRECTED TO REFLECT POTENTIAL  
FOOD EXPORT AND MAY EXCEED DOSES ACTUALLY RECEIVED  
BY THE POPULATION OF THIS REGION. SEE SUMMARY  
TABLE FOR THIS INFORMATION.

REGION:  
METSET:

CODE: MILDOS-AREA (02/97)  
DATA: SHB1.MIL

PAGE 1/  
05/01/07

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

EXPOSURE PATHWAY IS MILK ING

EXPOSED ORGAN IS BONE

DOSES SHOWN BELOW ARE ANNUAL POPULATION DOSE COMMITMENTS, PERSON-REM PER YEAR

DIRECTION	XRHO											
	1.5	2.5	3.5	4.5	7.5	15.0	25.0	35.0	45.0	55.0	65.0	75.0

N	0.000E+00											
NNE	0.000E+00											
NE	0.000E+00											
ENE	0.000E+00											
E	0.000E+00											
ESE	0.000E+00											
SE	0.000E+00											
SSE	0.000E+00											
S	0.000E+00											
SSW	0.000E+00											
SW	0.000E+00											
WSW	0.000E+00											
W	0.000E+00											
WNW	0.000E+00											
NW	0.000E+00											
NNW	0.000E+00											

TOTAL DOSE COMMITMENT IS 0.000E+00 PERSON-REM/YR

WARNING--POPULATION FOOD INGESTION DOSES SHOWN  
ABOVE HAVE NOT BEEN CORRECTED TO REFLECT POTENTIAL  
FOOD EXPORT AND MAY EXCEED DOSES ACTUALLY RECEIVED  
BY THE POPULATION OF THIS REGION. SEE SUMMARY  
TABLE FOR THIS INFORMATION.

REGION:  
METSET:

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DATA: SHB1.MIL

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TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

SUMMARY PRINT OF POPULATION DOSES COMPUTED FOR TSTEP 1--DOSES SHOWN ARE ANNUAL POPULATION DOSE COMMITMENTS, PERSON-REM PER YEAR

DOSES RECEIVED BY PEOPLE WITHIN 80 KILOMETERS

PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INHAL.	2.246E-01	1.820E+00	2.818E-02	1.365E+00	6.560E-01	1.501E+02
GROUND	1.938E-02	1.938E-02	1.938E-02	1.938E-02	1.938E-02	1.938E-02
CLOUD	1.248E+00	1.248E+00	1.248E+00	1.248E+00	1.248E+00	1.248E+00
VEG. ING	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
MEAT ING	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
MILK ING	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
RNPLUS50	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
TOTALS	1.492E+00	3.087E+00	1.296E+00	2.632E+00	1.924E+00	1.514E+02

DOSES RECEIVED BY PEOPLE BEYOND 80 KILOMETERS

PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INHAL.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
GROUND	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CLOUD	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
VEG. ING	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
MEAT ING	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
MILK ING	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
RNPLUS50	7.342E+01	1.001E+03	1.669E+01	7.342E+01	7.342E+01	4.672E+02
TOTALS	7.342E+01	1.001E+03	1.669E+01	7.342E+01	7.342E+01	4.672E+02

TOTAL DOSES COMPUTED OVER ALL POPULATIONS

PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INHAL.	2.246E-01	1.820E+00	2.818E-02	1.365E+00	6.560E-01	1.501E+02
GROUND	1.938E-02	1.938E-02	1.938E-02	1.938E-02	1.938E-02	1.938E-02
CLOUD	1.248E+00	1.248E+00	1.248E+00	1.248E+00	1.248E+00	1.248E+00
VEG. ING	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
MEAT ING	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
MILK ING	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
RNPLUS50	7.342E+01	1.001E+03	1.669E+01	7.342E+01	7.342E+01	4.672E+02
TOTALS	7.491E+01	1.004E+03	1.798E+01	7.605E+01	7.534E+01	6.186E+02

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NUMBER 1 NAME=North Boundary X= 4.0KM, Y= 6.4KM, Z= 0.0M, DIST= 7.5KM, IRTYPE= 1

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	1.08E+00	9.74E-02	7.51E-02	2.01E-01	1.23E-01	1.67E+01
CHILD	TOTALS	1.08E+00	1.14E-01	8.05E-02	1.36E-01	1.02E-01	1.67E+01
TEENAGE	TOTALS	1.08E+00	1.56E-01	8.42E-02	1.08E-01	9.34E-02	1.67E+01
ADULT	TOTALS	1.08E+00	1.53E-01	8.89E-02	1.09E-01	9.54E-02	1.67E+01

NUMBER 2 NAME=East Boundary X= 15.5KM, Y= 3.0KM, Z= 0.0M, DIST= 15.8KM, IRTYPE= 1

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	8.96E-01	1.35E-01	9.31E-02	3.30E-01	1.82E-01	1.33E+01
CHILD	TOTALS	8.92E-01	1.66E-01	1.03E-01	2.08E-01	1.43E-01	1.33E+01
TEENAGE	TOTALS	8.95E-01	2.45E-01	1.10E-01	1.55E-01	1.28E-01	1.33E+01
ADULT	TOTALS	8.96E-01	2.40E-01	1.19E-01	1.57E-01	1.31E-01	1.33E+01

REGION:  
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TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 3 NAME=South Bounday X= -7.6KM, Y= -6.1KM, Z= 0.0M, DIST= 9.7KM, IRTYPE= 1

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	7.92E+00	2.05E-01	1.98E-01	2.36E-01	2.13E-01	1.29E+02
CHILD	TOTALS	7.92E+00	2.10E-01	2.00E-01	2.17E-01	2.06E-01	1.29E+02
TEENAGE	TOTALS	7.92E+00	2.23E-01	2.01E-01	2.08E-01	2.04E-01	1.29E+02
ADULT	TOTALS	7.92E+00	2.22E-01	2.02E-01	2.08E-01	2.04E-01	1.29E+02

NUMBER 4 NAME=West Boundary X= 3.9KM, Y= 1.8KM, Z= 0.0M, DIST= 4.3KM, IRTYPE= 1

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	TOTALS	1.71E+00	1.47E-01	1.17E-01	2.88E-01	1.82E-01	2.66E+01
CHILD	TOTALS	1.71E+00	1.70E-01	1.24E-01	2.00E-01	1.53E-01	2.66E+01
TEENAGE	TOTALS	1.71E+00	2.27E-01	1.29E-01	1.62E-01	1.42E-01	2.66E+01
ADULT	TOTALS	1.71E+00	2.23E-01	1.36E-01	1.63E-01	1.45E-01	2.66E+01

Program execution time = 5.22 seconds