

**MILDOS-AREA
RADIATION DOSES FROM
CAMECO RESOURCES
MARSLAND EXPANSION AREA
IN-SITU URANIUM RECOVERY OPERATION**

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September 24, 2013

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EXECUTIVE SUMMARY

Radiation dose rates were determined using the Nuclear Regulatory Commission (NRC) computer code MILDOS-AREA for the Cameco Resources, Crow Butte Resources Marsland Expansion Area (MEA) in-situ uranium recovery (ISR) facility near Marsland Nebraska. Conceptually the operation is expected to have 11 mine units (MUs), with approximately 30 years required to complete restoration.

The MILDOS-AREA evaluation of radiation dose rates from the MEA MU 1-5 and the other ISR operations within 80 km of the MEA showed the following combined doses:

- All dose rates to the public at the property boundaries, the cities and towns within an 80-km radius from the MEA, and at the nearest residence were below the 100 mrem/yr limit specified in 10 CFR 20 (total effective dose equivalent).
- The highest boundary dose rate was 65 mrem/yr at the south property boundary.
- The highest dose rate at a residence occupied at the time of application was 21 mrem/yr at residence #1.
- The dose rate at the nearest occupiable residence (#1) was 25 mrem/yr.
- The highest dose rate at cities and towns within an 80- km radius from the MEA was 6 mrem/yr at the town of Crawford.
- The average dose rate from the nearby ISR facilities was 2 mrem/yr.
- The 10 CFR 190 dose rate was 0 mrem/yr which was below the 10 mrem/yr dose rate limit for emissions that exclude radon and its progeny.
- The total population effective dose rate was 3,060 person-rem/yr.

For MU A-F, which will be placed in operation after MU 1-5, all dose rate to the public at the property boundaries, the cities and towns within an 80-km radius from the MEA, and at the nearest residence were below the 100 mrem/yr limit specified in 10 CFR 20 (total effective dose equivalent).

For comparison naturally occurring background radiation, from cosmic and terrestrial sources, is approximately 365 mrem/yr.

Different distributions of radon released on site had only minor affects on the calculated radiation doses.

The maximum 2000 hour/yr occupational dose rate was 43 mrem/yr at MU-2 which is within the 5000 mrem/yr limit in 10 CFR 20.

Dose rates were calculated for a waste water flow rate of 315 gallons per minute and a radon distribution of 25% of the radon released at the well heads and 75% released at the satellite plant which uses sealed fixed bed down-flow ion exchange columns and tanks, and a deep disposal well to manage waste water.

OBJECTIVE

Determine the radiation doses to members of the public within an 80-km radius of the Marsland Expansion Area (MEA) using the Nuclear Regulatory Commission (NRC) computer code MILDOS-AREA. Determine the additional radiation dose from nearby uranium extraction facilities. Determine the potential annual dose rate to workers on the site. Determine the sensitivity of radon release points on the MILDOS-AREA estimates of radiation dose.

PROJECT DESCRIPTION

The MEA is located in northwestern Nebraska in Dawes County near Crawford Nebraska. See Figure 1.

Figure 2 is the site layout map of the MEA which shows Mine Units (MU)s 1 through 5 and A through F.

The wells in each mine unit will pump oxygenated water through the underground ore zone to extract uranium. The pregnant lixiviant is then pumped to an ion exchange column for removal of the uranium, and then back underground to extract additional uranium. The resin from the MEA will be trucked to the Crow Butte Resources Central Processing facility near Crawford, Nebraska for removal of the uranium from the resin, after which the resin is returned to the MEA.

RADIOACTIVE EFFLUENTS

Radon-222 gas and its decay products are the only radioactive effluents from the MEA under normal operating conditions. Radon is released into the atmosphere at the following locations:

- New Well Fields - When 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 of radon-222 released from new well fields is much less than 1% of the radon-222 released during well field production.
- Production Well Fields - Radon-222 is released from the well fields in each mining units and from the satellite ventilation stack.
- Restoration Well Fields – Radon is released during restoration of the well fields.
- Land Application – The MEA site does not use land application or evaporation ponds.

Figure 1. Significant Population Centers within 80-km (50-mile) Radius of the Marsland Site

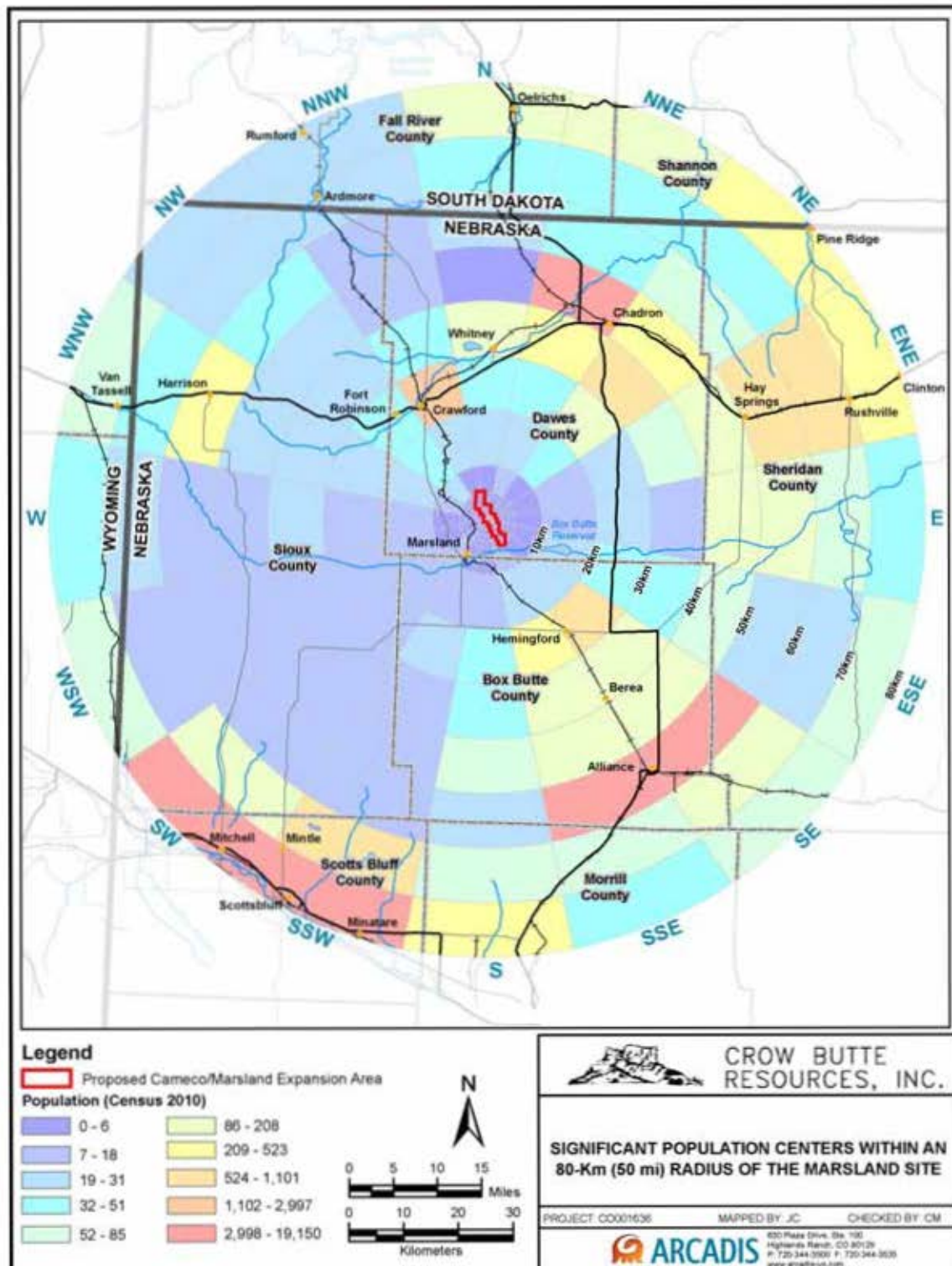
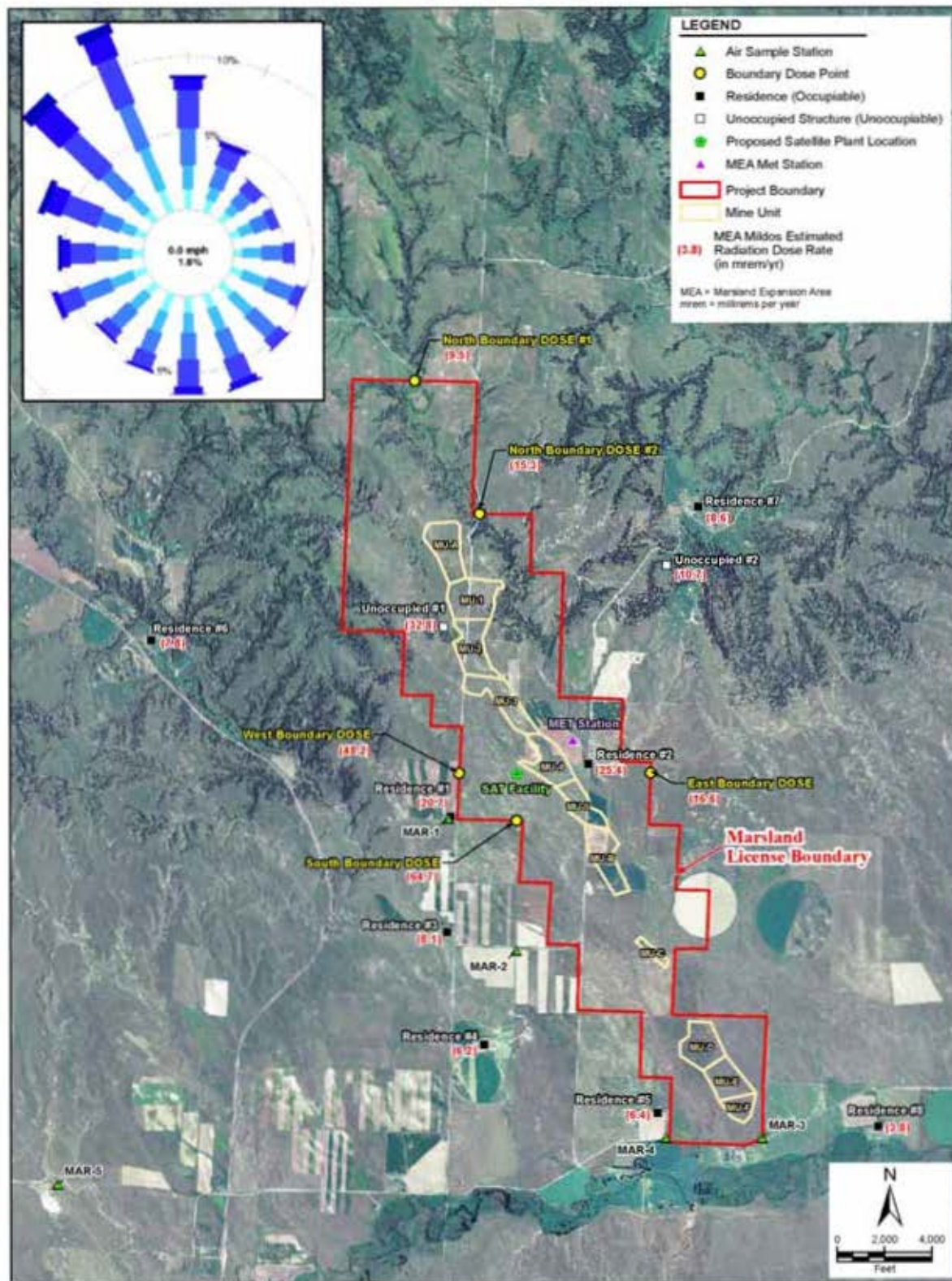


Figure 2 Marsland Expansion Area Map



Under accident conditions where process water escapes from the process piping and/or tanks, uranium and radium-226 are released on the ground and radon into the air. Those releases are anticipated to be within the process area, are cleaned up locally, and release small amounts of radon similar in magnitude to the radon released by drill cuttings from new well installations.

MARSLAND EXPANSION AREA OPERATIONS

Eleven mining units are planned for the MEA. MUs 1 through 5 and then A through F will be brought into production sequentially. Details are presented in the Application for Amendment of USNRC Source Materials License SUA 1534, Marsland Expansion Area, Crawford Nebraska (31 May, 2012). Radon production was calculated for MU 1-5 by MILDOS-AREA and then for MU A-F. Consistent with the water balance presented in the application, the maximum impact for each set of mine units at the MEA is in years 9-20 when the waste flow peaks at 315 gpm.

MILDOS-AREA

The computer code MILDOS-AREA 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 include the impacts of uranium in-situ leaching operations using a MS Windows format. The code was developed by Argonne National Laboratory for the NRC to assess the radiological impacts and regulatory compliance of a release. The code is a Gaussian-plumb, air-dispersion model which utilizes user-provided wind frequency data. Mechanisms such as radioactive decay and ingrowth of daughter radionuclides are included in the code. The code calculates the radiation doses at any location within an 80-km radius in 16 compass directions for up to 10 radiological sources.

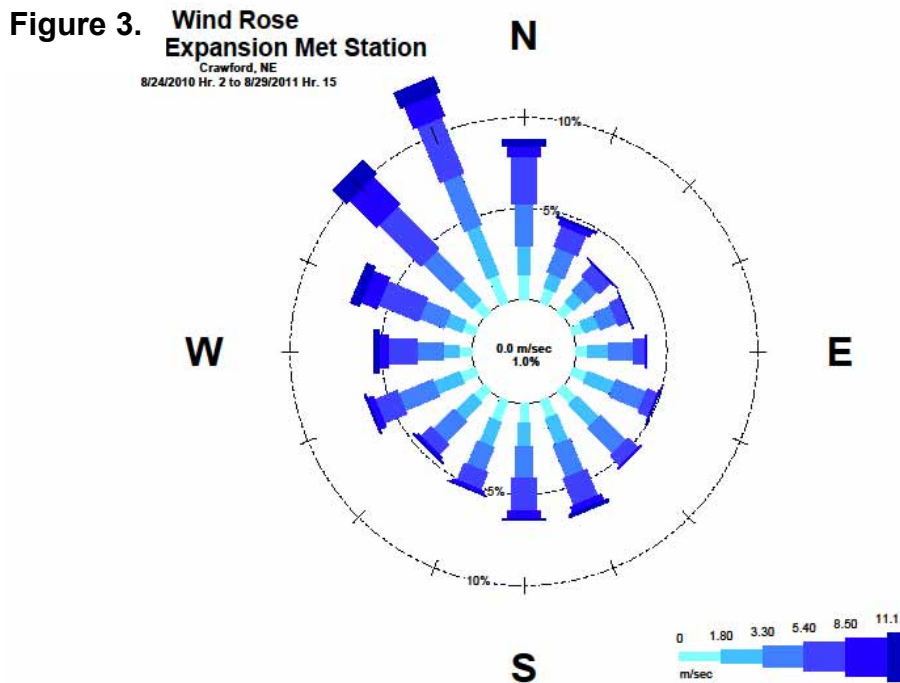
MILDOS-AREA INPUT – WEATHER DATA

The MEA is located in northwestern Nebraska in Dawes County near Crawford, Nebraska. Weather data was collected onsite from 8/24/2010 to 8/29/2011.

“The High Plains are a subregion of the Great Plains mostly in the Western United States, but also partly in the Midwest states of Nebraska, Kansas, and South Dakota, generally encompassing the western part of the Great Plains before the region reaches the Rocky Mountains. From east to west, the High Plains rise in elevation from around 1,160 feet (350 m) to over 7,800 feet (2,400 m). The High Plains are semi-arid, receiving between 10–20 inches (250–510 mm) of precipitation annually. Shortgrass prairie, prickly pear cacti and scrub vegetation cover the region, with occasional buttes or other rocky outcrops. Agriculture in the forms of cattle ranching and the growing of

wheat, cotton and sunflowers is the primary economic activity in the region. The High Plains has one of the lowest population densities of any region in the continental United States. Due to low moisture and high elevation, the High Plains commonly experiences wide ranges and extremes in temperature. The temperature range from day to night commonly exceeds 59 °F (15 °C), and 24-hour temperature shifts of 68 to 77 °F (20 to 25 °C) are not unknown. The region is known for the steady, and sometimes intense, winds that prevail from the west. [At the MEA the prevailing wind direction is from the NNW.] The winds add a considerable wind chill factor in the winter. The development of wind farms in the High Plains is one of the newest areas of economic development.” (Wikipedia)

The MEA weather data were collected using an on-site meteorological station consistent with NRC Regulatory Guide 3.63 and converted to the STAR (STBability ABay) format using the NRC speed classes for seasonal-wind-frequency distributions. Radiation doses were calculated by MILDOS-AREA using that MEA weather data. (See Appendix A).



MILDOS-AREA INPUT – OPERATIONAL DATA FROM MEA

The MEA operational data are presented in Table 1. The mine unit locations are presented as a grid system with the MEA satellite facility as the center, km east as positive values, km west as negative values, km north as positive values, km south as negative values, meters elevation as positive values, and meters depression as negative values. The circulation volume is the volume of the entire extraction circuit from the injection well to the IX column and return.

MILDOS-AREA calculates the amount of radon released from the MEA facility using the parameters listed in Table 1. One of those parameters is the rate of radon venting which is the “fractional daily rate of radon release due to occasional venting from well heads, valves and leaking transport piping during circulation,” (MILDOS-AREA User’s Guide, Argonne National Laboratory, 1998). The rate of radon venting in Table 1 is 0.01 per day or the release of 1% of the radon in the uranium extraction circuit each day. (The 1% value is specified in the User’s Guide and in “MILDOS-AREA: An Update with Incorporation of *In Situ* Leach Uranium Recovery Technology” by E. R. Faillace, et. al.).

Where and how is the radon released? The 1% radon is released from two locations, at the mine well field header houses and at the satellite plant.

A down-flow ion exchange system and deep disposal wells will be used at the MEA. In the down-flow system radon enters the lixiviant in the ore body, and is transported in the lixiviant to the ion exchange columns. The lixiviant is then piped back to the ore body to extract more uranium. Radon that is dissolved in the lixiviant will be released in small amounts from leaks, resin changes, and repairs because the down-flow ion exchange system and the deep disposal well circuit are pressurized enclosed piping systems. (See Section 2.7.1 of NUREG-1910).

The one percent of the radon in the lixiviant is released from the down-flow uranium extraction circuit as follows:

25% is released from the mine well field header houses, and
75% is released from the satellite plant.

The waste water flow rate of 315 gallons per minute is used for normal operations of the down-flow system.

MILDOS-AREA uses the amount of radon released at each release point, the annual average atmospheric conditions; and the direction and distance to the exposed person to calculate the radiation dose to that person.

MILDOS-AREA INPUT – ADJACENT URANIUM SITES

Three in-situ uranium recovery (ISR) facilities and MEA are within 80 km of the MEA as shown in Figure 4.

Table 1 Operational Data for Marsland Mine Units 1–5 and A-F

Location	X km	Y km	Z m *	Ra pCi/g	Em FR	Thick m	DEN g/cm ³	AREA m ²	FR Rn	COL VOL L	Rn vent/d	COL UTIL	POR	Op days	CIR VOL L	PURG L/d
MU-1	-0.56	2.23	27	481	0.25	7.6	1.89	3.02E+05	0.8	1.41E+05	0.01	5.00E-01	0.29	365	3.40E+08	315
MU-2	-0.55	1.65	16	481	0.25	7.6	1.89	2.70E+05	0.8	1.41E+05	0.01	5.00E-01	0.29	365	3.40E+08	315
MU-3	-0.15	0.95	13	481	0.25	7.6	1.89	1.71E+05	0.8	1.41E+05	0.01	5.00E-01	0.29	365	3.40E+08	315
MU-4	0.43	0.13	-4	481	0.25	7.6	1.89	2.43E+05	0.8	1.41E+05	0.01	5.00E-01	0.29	365	3.40E+08	315
MU-5	0.84	-0.45	-14	481	0.25	7.6	1.89	1.82E+05	0.8	1.41E+05	0.01	5.00E-01	0.29	365	3.40E+08	315
MU-A	-0.86	2.88	45	481	0.25	7.6	1.89	2.66E+05	0.8	1.41E+05	0.01	5.00E-01	0.29	365	3.40E+08	315
MU-B	1.12	-1.02	-15	481	0.25	7.6	1.89	2.48E+05	0.8	1.41E+05	0.01	5.00E-01	0.29	365	3.40E+08	315
MU-C	1.74	-2.33	-25	481	0.25	7.6	1.89	4.58E+04	0.8	1.41E+05	0.01	5.00E-01	0.29	365	3.40E+08	315
MU-D	2.42	-3.56	-36	481	0.25	7.6	1.89	2.45E+05	0.8	1.41E+05	0.01	5.00E-01	0.29	365	3.40E+08	315
MU-E	2.74	-3.98	-42	481	0.25	7.6	1.89	2.08E+05	0.8	1.41E+05	0.01	5.00E-01	0.29	365	3.40E+08	315
MU-F	2.90	-4.30	-47	481	0.25	7.6	1.89	1.06E+05	0.8	1.41E+05	0.01	5.00E-01	0.29	365	3.40E+08	315

X = Km from Marsland satellite (+) = East, (-) = West

Y = Km from Marsland satellite (+) = North, (-) = South

Z = m elevation (+) = above the satellite, (-) = below the satellite

Ra = Radium concentration

EM. FR = Radon emanation fraction

THICK = Thickness of ore in m

DEN = Density of ore in g/cm³

AREA = Area of well unit

FR Rn = Fraction of Radon in process water

COL VOL = Ion-Exchange column volume in L

Rn VENT = Rate of Radon venting from well heads, valves and leaking transport piping during circulation

Col Util = Ion-Exchange column unloading rate

POR = Porosity of ion exchange resin

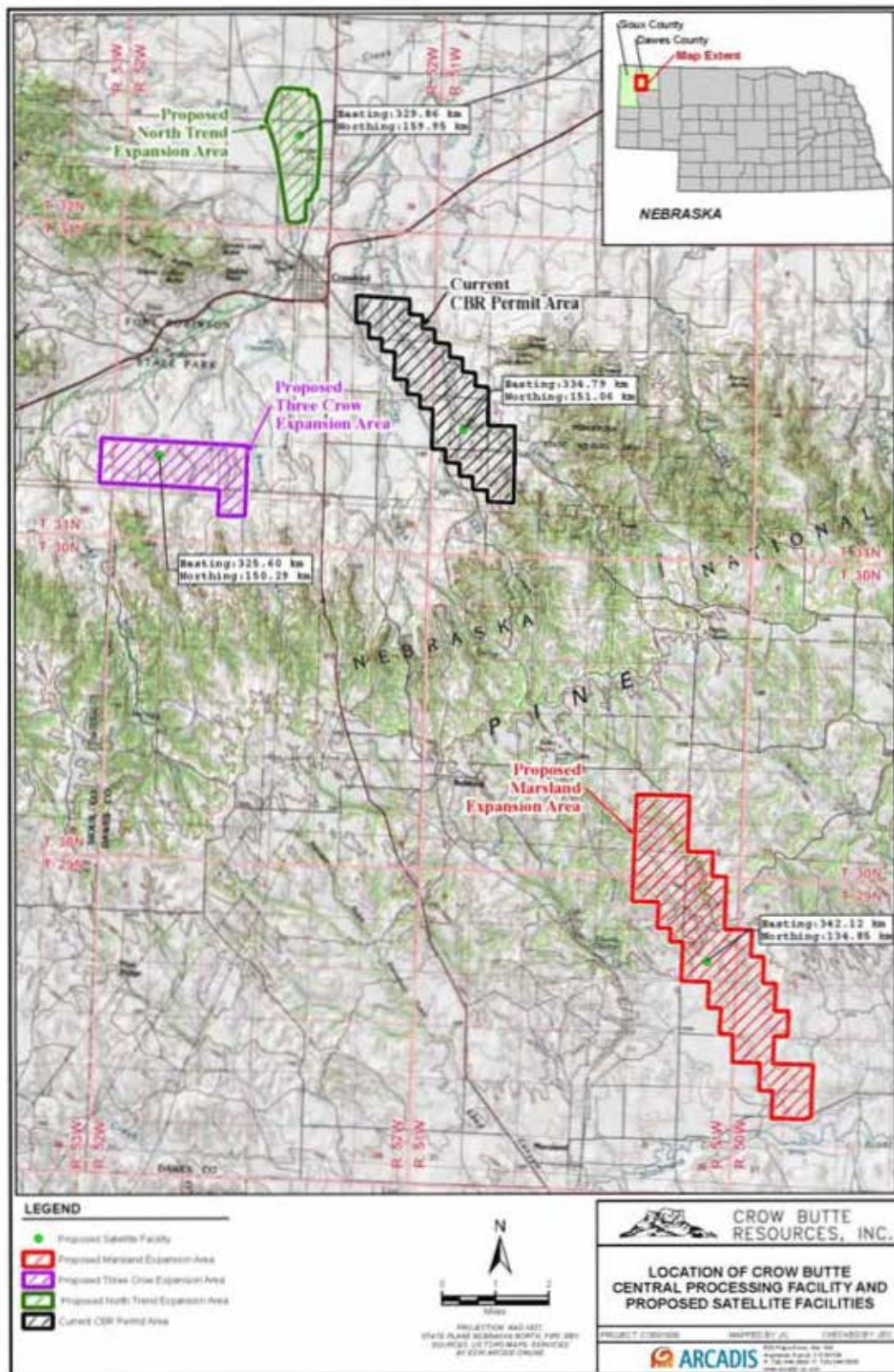
Op Days = Days of operation in days

CIR VOL = Volume of process water in circulation in L

PURG = Treated water purge rate in L/d = waste water flow rate

* = MILDOS-AREA accepts heights -20 to 30

Figure 4 MEA and Adjacent In-Situ Uranium Recovery Sites



FF

Table 2 presents the location of each ISR on an X-Y-Z coordinate system with Marsland at the center, and the radon emissions from each site as documented in the licensing documents and technical reports. The radon emissions were modeled as a satellite-plant-stack point source from the central location within each mine unit with a stack exit velocity of 10 m/sec.

Table 2 In-Situ Uranium Recovery Sites within 80 km of the MEA.

ISR Site	East-West km	North-West km	Height m	Radon Emission in Ci/yr
North Trend Expansion Area	-12.3	25.3	0	8885
Crow Butte Resources Permit Area	-7.3	16.2	0	7223
Three Crow Expansion Area	-16.5	15.4	0	7662

MILDOS-AREA INPUT - RADIATION DOSE LOCATIONS DATA

Radiation doses were calculated using MILDOS-AREA at:

- Cities and towns within 80 km radius of MEA.
- The north, south, east and west boundaries of MEA using the grid system with the center point at the MEA satellite facility.
- The northern boundary dose location #1 in Figure 2 is on the northern most property line above MU-A.
- The northern boundary dose location #2 in Figure 2 is on the access road at the license boundary northeast of MU-A.
- Eight residences on the MEA. Residence 2 was the nearest downwind residence.
- Two unoccupied structures on the MEA

The X, Y, and Z coordinates in for each of those locations with MEA at the center are shown in Table 3.

Table 3 Radiation Dose Locations From MEA Central Location

Location	X (km)	Y(km)	Z (m)*
Alliance	30.0	-45.4	-50
Berea	21.5	-32.6	-50
Chadron	22.3	35.8	-50
Clinton	75.4	26.5	-50
Crawford	-12.1	20.8	-50
Harrison	-50.5	22.9	-50
Hay Springs	47.1	18.8	-50
Hemmingford	14.3	-20.4	36
Marsland	-3.8	-6.1	-50
Minatare	-23.4	-75.6	-41.
Mitchell	-48.5	-60.0	-50
Oelrichs	4.9	75.3	-50
Rushville	66.0	22.0	-50
Scottsbluff	-36.3	-68.9	-50
Van Tassell	-67.5	21.0	49
Whitney	1.2	31.4	-50
Residence 1	-0.9	-0.6	3
Residence 2	1.0	0.3	-4
Residence 3	-0.8	-1.9	-16
Residence 4	0.4	-3.4	-31
Residence 5	1.9	-4.2	-36
Residence 6	-4.7	1.9	22
Residence 7	2.4	3.6	76
Residence 8	4.7	-4.4	-50
Unoccupied 1	-0.9	1.9	16
Unoccupied 2	2.0	2.8	69
N Boundary #1	-1.3	5.1	35
N Boundary #2	-0.5	3.3	20
E Boundary	1.7	0.0	-3
S Boundary	0.0	-0.6	13
W boundary	-0.7	0.0	12
North Trend	-12.3	25.3	0

* Minimum value for MILDOS-AREA is -50 m.

MILDOS-AREA INPUT – VEGETATION PATHWAY

The vegetation pathway of radiation exposure was assessed using the agricultural values in Table 4 from the Crow Butte Resources Permit Area license application.

Table 4 MEA Agricultural Pathway Parameters

Vegetables	FPR(1)	8700 Kg/yr per km ²
Meat	FRP(2)	4000 Kg/yr per km ²
Milk	FRP(3)	0
Individual Pasture Grass*	FFORI	0.9
Individual Hay*	FHAYI	0.1
Population Pas*ture Grass	FFORP	0.9
Population Hay*	FHAYP	0.1

* Fraction of total annual livestock feed requirement.

The radiation dose assessment by MILDOS-AREA uses annual average meteorological data to calculate annual exposures. The growing season for agricultural products is within and shorter than the annual exposure period

MILDOS-AREA INPUT - POPULATION PARAMETERS

Table 4 presents the population within an 80-km radius of the MEA. The largest values in Table 4 designate cities, e.g., Scottsbluff is approximately 80 km SSW of the MEA.

The fraction of radon from offsite sources (FRADON) = 1 because Casper, WY is closer to the Marsland site than Falls City TX, Grants, NM, or Wellpinit, WA. FRADON 2, 3, and 4 = 0.

PAJUST is the ratio of U.S. population during each time step to that during the base year. PAJUST is not used when only one time step is used.

MILDOS-AREA INPUT - OCCUPATIONAL DOSE RATE

Occupational dose rates at MEA were evaluated using the following criteria:

- Radon is the main source of radiation.
- Radon is released at the header house for each mine unit and from the satellite vent stack.
- The header houses are continuously vented using fans.
- Locations 0.1 km east of the header houses and 0.1 km east of the satellite plant are locations on site where radon from the header houses and satellite plant vent stack mix. These locations are considered representative of the radon concentration present on the MEA.

Table 5 Population Distribution Within 80 km Radius of the Site

Compass Directions	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5
Kilometers																
1.0 - 2.0																
2.0 - 3.0																
3.0 - 4.0																
4.0 - 5.0																
5.0 - 10.0																
10.0 - 20.0																
20.0 - 30.0							993									1107
30.0 - 40.0	87															
40.0 - 50.0		5634														
50.0 - 60.0				652				8959						279		
60.0 - 70.0				999												
70.0 - 80.0	145		14	30						15542	1831			19		
0-80.0	232	5634	14	1681	0	0	993	8959	0	15542	1831	0	0	298	0	1107

MILDOS-AREA OUTPUT – RADIATION DOSE RATES FROM MEA AND THE NEARBY ISR OPERATIONS

Table 6 presents the dose rates from MU 1-5 calculated for the major cities and towns within 80-km radius of the MEA, 8 residences, 2 unoccupied structures, and for the north, south, east, and west property boundaries. The dose rates were calculated using the MEA weather data and using a waste water flow rate of 315 gallon per minute for the down-flow, closed, and pressurized uranium extraction and deep disposal well circuit used at the MEA site. Table 6 column 2 presents the doses from the 25% well field and 75% satellite radon distribution from MU 1-5. Table 6 column 3 presents the doses from the 3 in-situ uranium recovery (ISR) operations within the 80-km radius of the MEA. Those facilities were all modeled as being in full operation emitting radon from the satellite stacks at 10 m/sec. Table 6 column 4 presents the combined doses from MU 1-5 and the ISR operations and is the TOTAL DOSE to the locations listed in column 1.

Conclusions from Table 6 and the MILDOS-AREA calculations are:

- All dose rates from mine units MU 1-5 and the nearby ISR operations to the public at the property boundaries, the cities and towns within an 80-km radius from the MEA, and at the nearest residence were below the 100 mrem/yr limit specified in 10 CFR 20 (total effective dose equivalent).
- The highest boundary dose rate was 65 mrem/yr at the south property boundary.
- The highest dose rate at a residence occupied at the time of application was 21 mrem/yr at residence #1.
- The highest dose rate at the nearest occupiable residence #2 was 25 mrem/yr.
- The highest dose rate at cities and towns within an 80- km radius from the MEA was 6 mrem/yr at the town of Crawford.
- The average dose rate from the nearby ISR facilities was 2 mrem/yr.
- The 10 CFR 190 dose rate was 0 mrem/yr which was below the 10 mrem/yr dose rate limit for emissions that exclude radon and its progeny.
- The total population effective dose rate was 3,060 person-rem/yr.

For comparison naturally occurring background radiation, from cosmic and terrestrial sources, is approximately 365 mrem/yr.

The dose rate at residences #1 and #2 were 21 and 25 mrem/yr respectively. Those dose rates were higher than the dose rates at residences 3-8. Those high dose rates were likely the result of those residences being close to both the satellite plant and MUs 1-5. Residence #1 was occupied whereas residence #2 was not.

Table 7 presents the radiation dose rates calculated for MU A-F which are scheduled to go into operation sequentially after restoration is completed at each mine unit MU 1-5. The data in Table 7 is very similar to the data in Table 6.

MILDOS-AREA OUTPUT – DOSE DISTRIBUTION

Table 8 demonstrates the effect of using different radon distributions in the MILDOS-AREA dose calculations. Table 8 column 1 presents the radiation doses from MU 1-5 distributed as 0.25 from the well field and 0.75 from the satellite plant stack plus the dose from the nearby ISRs. Table 8 column 2 presents the radiation doses from MU 1-5 distributed as 0.10 from the well field and 0.90 from the satellite plant stack plus the dose from the nearby ISRs. The averages and standard deviations the two different radon distributions are very similar.

Table 6 MEA Radiation Dose Rates from MU 1-5 and Nearby ISR Operations.

Radon Sources	MEA	Nearby	MEA
Dose Distribution	MU 1-5	ISR	MU 1-5 +ISR
	0.25+0.75		0.25+0.75+ISR
	mrem/yr	mrem/yr	mrem/yr
Alliance	0.3	0.7	1.0
Berea	0.5	0.9	1.4
Chadron	0.3	0.9	1.2
Clinton	0.1	0.3	0.4
Crawford	0.5	5.5	6.0
Harrison	0.2	0.7	0.9
Hay Springs	0.2	0.5	0.7
Hemingford	1.0	1.4	2.4
Marsland	1.0	2.2	3.2
Minatare	0.1	0.5	0.6
Mitchell	0.1	0.3	0.4
Oelrichs	0.2	0.6	0.8
Rushville	0.2	0.4	0.6
Scottsbluff	0.1	0.5	0.6
Van Tassell	0.2	0.5	0.7
Whitney	0.4	1.8	2.2
Residence 1	17.3	3.4	20.7
Residence 2	22.3	3.1	25.4
Residence 3	5.1	3.0	8.1
Residence 4	3.6	2.6	6.2
Residence 5	4.1	2.3	6.4
Residence 6	3.6	4.2	7.8
Residence 7	5.5	3.1	8.6
Residence 8	1.9	1.9	3.8
Unoccupied 1	29.0	3.8	32.8
Unoccupied 2	7.5	3.2	10.7
N Boundary #1	5.0	4.5	9.5
N Boundary #2	11.4	3.9	15.3
East Boundary	13.5	3.1	16.6
South Boundary	61.4	3.3	64.7
West boundary	44.6	3.6	48.2
Average	7.8	2.2	9.9
Std, Dev,	14.2	1.5	14.9

Table 7 MEA Radiation Dose Rates from MU A-F and Nearby ISR Operations

Radon Sources	MEA MU A-F 0.25+0.75 mrem/yr	Nearby ISR mrem/yr	MEA Total Dose 0.25+0.75+ISR mrem/yr
Dose Distribution			
Alliance	0.3	0.7	1.0
Berea	0.4	0.9	1.3
Chadron	0.2	0.9	1.1
Clinton	0.1	0.3	0.4
Crawford	0.4	5.5	5.9
Harrison	0.1	0.7	0.8
Hay Springs	0.2	0.5	0.7
Hemingford	0.8	1.4	2.2
Marsland	0.8	2.2	3.0
Minatare	0.1	0.5	0.6
Mitchell	0.1	0.3	0.4
Oelrichs	0.1	0.6	0.7
Rushville	0.1	0.4	0.5
Scottsbluff	0.1	0.5	0.6
Van Tassell	0.1	0.5	0.6
Whitney	0.3	1.8	2.1
Residence 1	8.4	3.4	11.8
Residence 2	10.8	3.1	13.9
Residence 3	3.9	3.0	6.9
Residence 4	3.2	2.6	5.8
Residence 5	5.6	2.3	7.9
Residence 6	2.8	4.2	7.0
Residence 7	4.0	3.1	7.1
Residence 8	2.1	1.9	4.0
Unoccupied 1	10.9	3.8	14.7
Unoccupied 2	5.3	3.2	8.5
N Boundary #1	3.7	4.5	8.2
N Boundary #2	8.4	3.9	12.3
East Boundary	7.5	3.1	10.6
South Boundary	29.1	3.3	32.4
West boundary	22.4	3.6	26.0
Average	4.3	2.2	6.4
Std, Dev,	6.7	1.5	7.6

Table 8 Effect of Different Radon Distributions on MEA Radiation Dose Rates

Radon Sources	MEA	MEA +
Dose Distribution	MU 1-5 +ISR	MU 1-5 + ISR
	0.25+0.75+ISR	0.01+0.9+ISR
	mrem/yr	mrem/yr
Alliance	1.0	1.0
Berea	1.4	1.4
Chadron	1.2	1.2
Clinton	0.4	0.4
Crawford	6.0	6.0
Harrison	0.9	0.9
Hay Springs	0.7	0.7
Hemingford	2.4	2.4
Marsland	3.2	3.1
Minatare	0.6	0.6
Mitchell	0.4	0.4
Oelrichs	0.8	0.8
Rushville	0.6	0.6
Scottsbluff	0.6	0.6
Van Tassell	0.7	0.7
Whitney	2.2	2.2
Residence 1	20.7	21.3
Residence 2	25.4	20.4
Residence 3	8.1	7.6
Residence 4	6.2	6.0
Residence 5	6.4	6.2
Residence 6	7.8	7.8
Residence 7	8.6	8.4
Residence 8	3.8	3.7
Unoccupied 1	32.8	24.2
Unoccupied 2	10.7	10.4
N Boundary #1	9.5	9.2
N Boundary #2	15.3	13.4
East Boundary	16.6	15.4
South Boundary	64.7	70.6
West boundary	48.2	52.1
Average	9.9	9.7
Std, Dev,	14.9	15.5

MILDOS-AREA OUTPUT – OCCUPATIONAL RADIATION DOSE RATES

The occupational dose rates at MEA were calculated for exposures of 2000 hours per year. The calculations were based on:

- Waste water flow rate of 315 gallons per minute for a down-flow ion exchange system with a deep disposal well.
- Twenty five percent of the radon is vented by continuously operating fans from the header house for each mine unit. Seventy five percent of the radon is released at the satellite plant vent stack.
- Doses from these two sources were calculated at locations 0.1 km east of the header houses, 0.1 km east of the site boundaries, and 0.1 km east of the satellite vent stack as being representative of the radon/radon progeny doses onsite.
- The occupational factor for being present onsite one hour is equal (1hr / 8760 hours in a year) or 1.14E-4.
- Doses include the contribution from the adjacent ISR facilities within 80 km of MEA.

Table 9 shows the occupational dose rate for working 2000 hours per year at the MEA. The maximum occupational dose rate was 43 mrem/yr at MU-2. All dose rates are within the 5000 mrem/yr limit in 10 CFR 20.

Table 9 Occupational Dose Rates for 2000 hours per year at MEA

Radon Source Location of Dose	MU 1-5 0.25+.075+ISR mrem/yr	Occupancy Factor per hr	Occupational mrem/2000 hrs/yr
N Boundary #1	9.5	1.14E-04	2.2
N Boundary #2	15.3	1.14E-04	3.5
E Boundary	16.6	1.14E-04	3.8
S Boundary	64.7	1.14E-04	14.8
W Boundary	48.2	1.14E-04	11.0
MU-1	113.4	1.14E-04	25.9
MU-2	186.7	1.14E-04	42.6
MU-3	141.8	1.14E-04	32.3
MU-4	161.3	1.14E-04	36.8
MU-5	113.1	1.14E-04	25.8
Satellite	137.5	1.14E-04	31.3
Average			20.9
Std. Dev.			14.5

APPENDIX A - MEA WEATHER DATA IN STAR FORMAT

Column	1	Blank
	2-4	Wind Direction
	5	Blank
	6	Stability Category
	7	Blank
	8	Start of the Wind Speed Categories (knots)
	8-14	Wind Speed 1-3 (knots)
	15-21	Wind Speed 4-6 (knots)
	22-28	Wind Speed 7-10 (knots)
	29-35	Wind Speed 11-16 (knots)
	36-42	Wind Speed 17-21 (knots)
	43-49	Wind Speed >21 (knots)

The MEA weather data used for dose evaluation (8-24-2010/8-29-2011) is printed below:

```

N A 0.001410.002360.000000.000000.000000.000000
NNE A 0.000240.001530.000000.000000.000000.000000
NE A 0.000710.001890.000000.000000.000000.000000
ENE A 0.000820.001770.000000.000000.000000.000000
E A 0.000940.001770.000000.000000.000000.000000
ESE A 0.001300.002590.000000.000000.000000.000000
SE A 0.001060.002000.000000.000000.000000.000000
SSE A 0.002120.002120.000000.000000.000000.000000
S A 0.001770.002120.000000.000000.000000.000000
SSW A 0.003540.002590.000000.000000.000000.000000
SW A 0.001410.002240.000000.000000.000000.000000
WSW A 0.000940.004010.000000.000000.000000.000000
W A 0.001180.001180.000000.000000.000000.000000
WNW A 0.000820.001180.000000.000000.000000.000000
NW A 0.000590.002000.000000.000000.000000.000000
NNW A 0.000590.002120.000000.000000.000000.000000
N B 0.000000.002000.000240.000000.000000.000000
NNE B 0.000000.002240.000000.000000.000000.000000
NE B 0.000000.002470.000120.000000.000000.000000
ENE B 0.000000.001770.000000.000000.000000.000000
E B 0.000000.001770.000120.000000.000000.000000
ESE B 0.000350.002470.000350.000000.000000.000000
SE B 0.000120.003420.000350.000000.000000.000000
SSE B 0.000470.002470.000240.000000.000000.000000
S B 0.000470.002360.000710.000000.000000.000000
SSW B 0.000940.003180.000590.000000.000000.000000
SW B 0.000120.003060.000000.000000.000000.000000
WSW B 0.000000.002590.000470.000000.000000.000000

```

W B 0.000120.001300.000240.000000.000000.000000
WNW B 0.000120.001650.000120.000000.000000.000000
NW B 0.000000.002360.000710.000000.000000.000000
NNW B 0.000000.002120.000470.000000.000000.000000
N C 0.000120.000590.010250.000000.000000.000000
NNE C 0.000000.000590.004710.000000.000000.000000
NE C 0.000000.000590.002950.000000.000000.000000
ENE C 0.000000.000820.003420.000000.000000.000000
E C 0.000000.001180.003300.000000.000000.000000
ESE C 0.000000.001770.005540.000000.000000.000000
SE C 0.000350.001890.004120.000000.000000.000000
SSE C 0.000120.001530.004360.000000.000000.000000
S C 0.000350.001530.004950.000000.000000.000000
SSW C 0.000240.001410.004360.000000.000000.000000
SW C 0.000120.001890.005660.000000.000000.000000
WSW C 0.000000.000820.006600.000000.000000.000000
W C 0.000000.000710.004360.000000.000000.000000
WNW C 0.000000.000470.004710.000000.000000.000000
NW C 0.000000.000590.008130.000000.000000.000000
NNW C 0.000000.000940.007780.000000.000000.000000
N D 0.000240.007310.019090.017800.004120.00141
NNE D 0.000240.004710.010720.008600.002240.00012
NE D 0.000000.001890.009190.003060.000120.00000
ENE D 0.000000.003060.007310.002000.000000.00012
E D 0.000120.005770.010370.003180.000120.00000
ESE D 0.000470.008840.009190.003060.000240.00012
SE D 0.000240.010490.012140.003890.000350.00000
SSE D 0.000120.007540.016500.009550.003420.00012
S D 0.000120.005190.013080.013790.002830.00012
SSW D 0.000120.003890.008960.006720.001180.00000
SW D 0.000240.004830.007900.003650.001410.00000
WSW D 0.000120.005070.014610.008720.002470.00024
W D 0.000000.004120.012730.012610.002950.00236
WNW D 0.000120.003770.014850.019560.007190.00295
NW D 0.000120.006840.019090.030050.016970.00589
NNW D 0.000710.013550.023690.028170.012370.00448
N E 0.001530.002360.000470.000000.000000.00000
NNE E 0.000710.001300.000350.000000.000000.00000
NE E 0.000000.001650.000240.000000.000000.00000
ENE E 0.000000.002000.000470.000000.000000.00000
E E 0.000590.001530.000590.000000.000000.00000
ESE E 0.000350.003060.000240.000000.000000.00000
SE E 0.000820.002000.000240.000000.000000.00000
SSE E 0.000710.002470.000470.000000.000000.00000
S E 0.000350.002710.000240.000000.000000.00000
SSW E 0.000000.002000.000240.000000.000000.00000

SW E 0.000350.002950.000590.000000.000000.000000
WSW E 0.000350.002830.001060.000000.000000.000000
W E 0.000120.002000.000940.000000.000000.000000
WNW E 0.000710.001300.000820.000000.000000.000000
NW E 0.000590.003540.001410.000000.000000.000000
NNW E 0.000940.009660.001890.000000.000000.000000
N F 0.009780.007070.000000.000000.000000.000000
NNE F 0.006950.002830.000000.000000.000000.000000
NE F 0.006360.001180.000000.000000.000000.000000
ENE F 0.005420.002590.000000.000000.000000.000000
E F 0.004480.003540.000000.000000.000000.000000
ESE F 0.005190.003180.000000.000000.000000.000000
SE F 0.006720.003420.000000.000000.000000.000000
SSE F 0.006130.004830.000000.000000.000000.000000
S F 0.007540.003420.000000.000000.000000.000000
SSW F 0.006600.004950.000000.000000.000000.000000
SW F 0.005770.004360.000000.000000.000000.000000
WSW F 0.007310.004710.000000.000000.000000.000000
W F 0.005660.002950.000000.000000.000000.000000
WNW F 0.005770.005540.000000.000000.000000.000000
NW F 0.006720.004600.000000.000000.000000.000000
NNW F 0.013320.008370.000000.000000.000000.000000

APPENDIX B - RADIATION DOSE RATES FROM MILDOS-AREA

Appendix B contains the print out from the computer program MILDOS-AREA in the following order:

Appendix	Title	Radon Source	Weather Data	Waste Water Flow Rate
B1	MARMU315	MU 1-5	MEA	315
B2	MARST315	SATELLITE 1-5	MEA	315
B3	MARISR	NORTH TREND CROW BUTTE RES THREE CROW	MEA	315
B4	MARMU A-F	MU A-F	MEA	315
B5	MARST A-F	SATELLITE A-F	MEA	315
B6	MAROCMU	MU 1-5 OCCUPATIONAL	MEA	315
B7	MAROCST	SATELLITE 1-5 OCCUPATIONAL	MEA	315
B8	MAROCISR	ISR OCCUPATIONAL	MEA	315

**MILDOS-AREA
RADIATION DOSES FROM
CAMECO RESOURCES
MARSLAND EXPANSION AREA
IN-SITU URANIUM RECOVERY OPERATION**

Appendices B

**By
Noel Savignac, Ph.D.**

September 24, 2013

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**MILDOS-AREA
RADIATION DOSES FROM
CAMECO RESOURCES
MARSLAND EXPANSION AREA
IN-SITU URANIUM RECOVERY OPERATION**

Appendices B1 – B4

**By
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**MILDOS-AREA
RADIATION DOSES FROM
CAMECO RESOURCES
MARSLAND EXPANSION AREA
IN-SITU URANIUM RECOVERY OPERATION**

Appendix B1

September 24, 2013

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Appendix	Title	Radon Source	Weather Data	Waste Water Flow Rate
B1	MARMU315	MU 1-5	MEA	315

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INDIVIDUAL RECEPTORS & MISCELLANEOUS INPUT DATA	3
POPULATION DISTRIBUTION	4
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ANNUAL POPULATION DOSE COMMITMENTS, PERSON-REM PER YEAR	
POPULATION DOSE SUMMARY	6
INDIVIDUAL RECEPTOR ALC CHECK AND/OR ANNUAL DOSE COMMITMENTS	7

REGION: Marsland All Well Field CODE: MILDOS-AREA (02/12)

PAGE 2

METSET:

DATA: MarMU315.MIL

09/18/13

JOINT FREQUENCY IN PERCENT, DIRECTION INDICATES WHERE WIND IS FROM FREQWS=0.14427,0.29579,0.30967,0.17441,0.05798,0.01793

MPH	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTALS
STABILITY CLASS 1																	
1.5	0.1410	0.0240	0.0710	0.0820	0.0940	0.1300	0.1060	0.2120	0.1770	0.3540	0.1410	0.0940	0.1180	0.0820	0.0590	0.0590	1.9440
5.5	0.2360	0.1530	0.1890	0.1770	0.1770	0.2590	0.2000	0.2120	0.2120	0.2590	0.2240	0.4010	0.1180	0.1180	0.2000	0.2120	3.3470
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	0.3770	0.1770	0.2600	0.2590	0.2710	0.3890	0.3060	0.4240	0.3890	0.6130	0.3650	0.4950	0.2360	0.2000	0.2590	0.2710	5.2910

STABILITY CLASS 2																	
1.5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0350	0.0120	0.0470	0.0470	0.0940	0.0120	0.0000	0.0120	0.0120	0.0000	0.0000	0.2710
5.5	0.2000	0.2240	0.2470	0.1770	0.1770	0.2470	0.3420	0.2470	0.2360	0.3180	0.3060	0.2590	0.1300	0.1650	0.2360	0.2120	3.7230
10.0	0.0240	0.0000	0.0120	0.0000	0.0120	0.0350	0.0350	0.0240	0.0710	0.0590	0.0000	0.0470	0.0240	0.0120	0.0710	0.0470	0.4730
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	0.2240	0.2240	0.2590	0.1770	0.1890	0.3170	0.3890	0.3180	0.3540	0.4710	0.3180	0.3060	0.1660	0.1890	0.3070	0.2590	4.4670

STABILITY CLASS 3																	
1.5	0.0120	0.0000	0.0000	0.0000	0.0000	0.0000	0.0350	0.0120	0.0350	0.0240	0.0120	0.0000	0.0000	0.0000	0.0000	0.0000	0.1300
5.5	0.0590	0.0590	0.0590	0.0820	0.1180	0.1770	0.1890	0.1530	0.1530	0.1410	0.1890	0.0820	0.0710	0.0470	0.0590	0.0940	1.7320
10.0	1.0300	0.4710	0.2950	0.3420	0.3300	0.5540	0.4120	0.4360	0.4950	0.4360	0.5660	0.6600	0.4360	0.4710	0.8130	0.7780	8.5250
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	1.1010	0.5300	0.3540	0.4240	0.4480	0.7310	0.6360	0.6010	0.6830	0.6010	0.7670	0.7420	0.5070	0.5180	0.8720	0.8720	10.3870

STABILITY CLASS 4																	
1.5	0.0240	0.0240	0.0000	0.0000	0.0120	0.0470	0.0240	0.0120	0.0120	0.0120	0.0240	0.0120	0.0000	0.0120	0.0120	0.0710	0.2980
5.5	0.7310	0.4710	0.1890	0.3060	0.5770	0.8840	1.0490	0.7540	0.5190	0.3890	0.4830	0.5070	0.4120	0.3770	0.6840	1.3550	9.6870
10.0	1.9100	1.0720	0.9190	0.7310	1.0370	0.9190	1.2140	1.6500	1.3080	0.8960	0.7900	1.4610	1.2730	1.4850	1.9090	2.3690	20.9430
15.5	1.7800	0.8600	0.3060	0.2000	0.3180	0.3060	0.3890	0.9550	1.3790	0.6720	0.3650	0.8720	1.2610	1.9560	3.0050	2.8170	17.4410
21.5	0.4120	0.2240	0.0120	0.0000	0.0120	0.0240	0.0350	0.3420	0.2830	0.1180	0.1410	0.2470	0.2950	0.7190	1.6970	1.2370	5.7980
28.0	0.1410	0.0120	0.0000	0.0120	0.0000	0.0120	0.0000	0.0120	0.0120	0.0000	0.0000	0.0240	0.2360	0.2950	0.5890	0.4480	1.7930
ALL	4.9980	2.6630	1.4260	1.2490	1.9560	2.1920	2.7110	3.7250	3.5130	2.0870	1.8030	3.1230	3.4770	4.8440	7.8960	8.2970	55.9600

STABILITY CLASS 5																	
1.5	0.1530	0.0710	0.0000	0.0000	0.0590	0.0350	0.0820	0.0710	0.0350	0.0000	0.0350	0.0350	0.0120	0.0710	0.0590	0.0940	0.8120
5.5	0.2360	0.1300	0.1650	0.2000	0.1530	0.3060	0.2000	0.2470	0.2710	0.2000	0.2950	0.2830	0.2000	0.1300	0.3540	0.9660	4.3360
10.0	0.0470	0.0350	0.0240	0.0470	0.0590	0.0240	0.0240	0.0470	0.0240	0.0240	0.0590	0.1060	0.0940	0.0820	0.1410	0.1890	1.0260
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	0.4360	0.2360	0.1890	0.2470	0.2710	0.3650	0.3060	0.3650	0.3300	0.2240	0.3890	0.4240	0.3060	0.2830	0.5540	1.2490	6.1740

STABILITY CLASS 6																	
1.5	0.9780	0.6950	0.6360	0.5420	0.4480	0.5190	0.6720	0.6130	0.7540	0.6600	0.5770	0.7310	0.5660	0.5770	0.6720	1.3320	10.9720
5.5	0.7070	0.2830	0.1180	0.2590	0.3540	0.3180	0.3420	0.4830	0.3420	0.4950	0.4360	0.4710	0.2950	0.5540	0.4600	0.8370	6.7540
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	1.6850	0.9780	0.7540	0.8010	0.8020	0.8370	1.0140	1.0960	1.0960	1.1550	1.0130	1.2020	0.8610	1.1310	1.1320	2.1690	17.7260

ALL	8.8210	4.8080	3.2420	3.1570	3.9370	4.8310	5.3620	6.5290	6.3650	5.1510	4.6550	6.2920	5.5530	7.1650	11.0200	13.1170	100.0050
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-----INDIVIDUAL RECEPTOR LOCATION DATA, 31 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	Alliance	30.00	-45.40	-50.00	54.42	1	17	Residence 2	1.00	0.30	-4.00	1.04	1
2	Berea	21.50	-32.60	-50.00	39.05	1	18	Residence 3	-0.80	-1.90	-16.00	2.06	1
3	Chardon	22.30	35.80	-50.00	42.18	1	19	Residence 4	-0.40	-3.40	-31.00	3.42	1
4	Clinton	75.40	26.50	-50.00	79.92	1	20	Residence 5	1.90	-4.30	-36.00	4.70	1
5	Crawford	-12.10	20.80	-50.00	24.06	1	21	Residence 6	-4.70	1.86	22.00	5.05	1
6	Harrison	-50.50	22.50	-50.00	55.29	1	22	Residence 7	2.40	3.60	76.00	4.33	1
7	Hay Springs	47.10	18.80	-50.00	50.71	1	23	Residence 8	4.70	-4.40	-50.00	6.44	1
8	Hemmingford	14.30	-20.40	36.00	24.91	1	24	Unoccupied 1	-0.90	1.90	15.70	2.10	1
9	Marsland	-3.80	-6.10	-50.00	7.19	1	25	Unoccupied 2	2.00	2.80	69.00	3.44	1
10	Mitchell	-48.50	-60.00	-50.00	77.15	1	26	N Boundary #1	-1.30	5.10	35.00	5.26	1
11	Oelrichs	4.90	75.30	-50.00	75.46	1	27	East Boundary	1.70	0.00	-2.60	1.70	1
12	Rushville	66.00	22.00	-50.00	69.57	1	28	South Boundary	0.00	-0.60	0.50	0.60	1
13	Scottsbluff	-36.30	-68.90	-50.00	77.88	1	29	West Boundary	-0.70	0.00	12.20	0.70	1
14	Van Tassell	-67.50	21.00	49.00	70.69	1	30	Minatare	-22.40	-75.60	-41.40	78.85	1
15	Whitney	1.20	31.40	-50.00	31.42	1	31	N Boundary #2	-0.50	3.30	20.00	3.34	1
16	Residence 1	-0.90	-0.60	3.40	1.08	1							

MISCELLANEOUS INPUTABLE PARAMETER VALUES

DMM	DMA	TSTART	FFORI	FHAYI	FFORP	FHAYP	FPR(1)	FPR(2)	FPR(3)	ACTRAT
100.0	100.0	1.00	0.90	0.10	0.90	0.10	87000.00	4000.00	0.00	2.50

IPACT EQUALS 0, 0, 0, 0, 0,

JC EQUALS 0, 0, 0, 0, 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

POPULATION DISTRIBUTION

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
KILOMETERS	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	0	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	0	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	0	0	0	0	0	0	0	0	0	0	0	0
10.0-20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20.0-30.0	0	0	0	0	0	0	993	0	0	0	0	0	0	0	0	1107
30.0-40.0	87	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40.0-50.0	0	5634	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50.0-60.0	0	0	0	652	0	0	0	9859	0	0	0	0	0	279	0	0
60.0-70.0	0	0	0	999	0	0	0	0	0	0	0	0	0	0	0	0
70.0-80.0	145	0	14	30	0	0	0	0	0	15542	1831	0	0	19	0	0
1.0-80.0	232	5634	14	1681	0	0	993	9859	0	15542	1831	0	0	298	0	1107

TOTAL 1-80 KM POPULATION IS 37191 PERSONS

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REGION:  Marsland All Well Field      CODE:  MILDOS-AREA (02/12)           PAGE   5
METSET:   DATA:  MarMU315.MIL              09/18/13

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NUMBER OF SOURCES= 5

NO.	KM	KM	M	KM2	CI/YEAR					PSIZE	M/SEC		SOURCE NAME
	X	Y	Z	AREA	U-238	Th-230	Ra-226	Pb-210	Rn-222	ID	SET	EXIT VEL	
1	-0.56	2.23	27.00	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.13E+03	1001	1	0.00E+00	MU-1
2	-0.55	1.65	16.00	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+03	1002	1	0.00E+00	MU-2
3	-0.15	0.95	13.00	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E+03	1003	1	0.00E+00	MU-3
4	0.44	0.13	-4.00	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.71E+03	1004	1	0.00E+00	MU-4
5	0.84	-0.45	-15.00	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E+03	1005	1	0.00E+00	MU-5

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

[illegible][illegible]

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.	3.782E-01	3.063E+00	4.945E-02	2.297E+00	1.105E+00	1.457E+02
GROUND	2.061E-02	2.061E-02	2.061E-02	2.061E-02	2.061E-02	2.061E-02
CLOUD	1.248E+00	1.248E+00	1.248E+00	1.248E+00	1.248E+00	1.248E+00
VEG. ING	1.776E+00	2.052E+01	1.776E+00	6.099E+00	4.967E+00	1.776E+00
MEAT ING	1.235E-01	1.427E+00	1.235E-01	4.242E-01	3.455E-01	1.235E-01
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	3.546E+00	2.628E+01	3.217E+00	1.009E+01	7.686E+00	1.489E+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	3.000E+02	3.467E+03	3.000E+02	1.030E+03	8.393E+02	3.000E+02
MEAT ING	2.474E+00	2.859E+01	2.474E+00	8.497E+00	6.921E+00	2.474E+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	3.025E+02	3.495E+03	3.025E+02	1.039E+03	8.462E+02	3.025E+02

TOTAL DOSES COMPUTED OVER ALL POPULATIONS

PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INHAL.	3.782E-01	3.063E+00	4.945E-02	2.297E+00	1.105E+00	1.457E+02
GROUND	2.061E-02	2.061E-02	2.061E-02	2.061E-02	2.061E-02	2.061E-02
CLOUD	1.248E+00	1.248E+00	1.248E+00	1.248E+00	1.248E+00	1.248E+00
VEG. ING	3.018E+02	3.487E+03	3.018E+02	1.036E+03	8.442E+02	3.018E+02
MEAT ING	2.598E+00	3.002E+01	2.598E+00	8.921E+00	7.267E+00	2.598E+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	3.060E+02	3.522E+03	3.057E+02	1.049E+03	8.539E+02	4.514E+02

REGION: Marsland All Well Field CODE: MILDOS-AREA (02/12)

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METSET:

DATA: MarMU315.MIL

09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 1 NAME=Alliance X= 30.0KM, Y= -45.4KM, Z= -50.0M, DIST= 54.4KM, 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	3.66E-01	1.19E-01	5.12E-02	4.36E-01	1.96E-01	5.02E+00
CHILD	TOTALS	3.60E-01	1.72E-01	6.81E-02	2.39E-01	1.32E-01	5.02E+00
TEENAGE	TOTALS	3.64E-01	3.02E-01	7.98E-02	1.53E-01	1.08E-01	5.02E+00
ADULT	TOTALS	3.67E-01	2.96E-01	9.49E-02	1.56E-01	1.14E-01	5.02E+00

NUMBER 2 NAME=Berea X= 21.5KM, Y= -32.6KM, Z= -50.0M, DIST= 39.1KM, 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	5.19E-01	1.37E-01	6.82E-02	4.60E-01	2.16E-01	7.29E+00
CHILD	TOTALS	5.13E-01	1.91E-01	8.56E-02	2.59E-01	1.51E-01	7.29E+00
TEENAGE	TOTALS	5.17E-01	3.24E-01	9.76E-02	1.72E-01	1.26E-01	7.29E+00
ADULT	TOTALS	5.19E-01	3.17E-01	1.13E-01	1.75E-01	1.33E-01	7.29E+00

REGION: Marsland All Well Field CODE: MILDOS-AREA (02/12)

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METSET:

DATA: MarMU315.MIL

09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 3 NAME=Chardon

X= 22.3KM, Y= 35.8KM, Z= -50.0M, DIST= 42.2KM, 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	2.96E-01	9.45E-02	4.14E-02	3.42E-01	1.55E-01	4.07E+00
CHILD	TOTALS	2.92E-01	1.36E-01	5.48E-02	1.88E-01	1.05E-01	4.07E+00
TEENAGE	TOTALS	2.95E-01	2.38E-01	6.40E-02	1.21E-01	8.58E-02	4.07E+00
ADULT	TOTALS	2.97E-01	2.33E-01	7.58E-02	1.24E-01	9.10E-02	4.07E+00

NUMBER 4 NAME=Clinton

X= 75.4KM, Y= 26.5KM, Z= -50.0M, DIST= 79.9KM, 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	1.48E-01	6.61E-02	2.26E-02	2.71E-01	1.16E-01	1.93E+00
CHILD	TOTALS	1.44E-01	1.00E-01	3.34E-02	1.44E-01	7.49E-02	1.93E+00
TEENAGE	TOTALS	1.47E-01	1.85E-01	4.09E-02	8.82E-02	5.88E-02	1.93E+00
ADULT	TOTALS	1.48E-01	1.81E-01	5.07E-02	9.01E-02	6.31E-02	1.93E+00

REGION: Marsland All Well Field CODE: MILDOS-AREA (02/12)

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METSET:

DATA: MarMU315.MIL

09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 5 NAME=Crawford

X= -12.1KM, Y= 20.8KM, Z= -50.0M, DIST= 24.1KM, 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	5.98E-01	1.24E-01	7.39E-02	3.58E-01	1.81E-01	8.59E+00
CHILD	TOTALS	5.93E-01	1.63E-01	8.67E-02	2.13E-01	1.34E-01	8.59E+00
TEENAGE	TOTALS	5.96E-01	2.60E-01	9.54E-02	1.49E-01	1.16E-01	8.59E+00
ADULT	TOTALS	5.98E-01	2.55E-01	1.07E-01	1.52E-01	1.21E-01	8.59E+00

NUMBER 6 NAME=Harrison

X= -50.5KM, Y= 22.5KM, Z= -50.0M, DIST= 55.3KM, 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	2.01E-01	7.24E-02	2.91E-02	2.75E-01	1.22E-01	2.71E+00
CHILD	TOTALS	1.97E-01	1.06E-01	3.99E-02	1.49E-01	8.11E-02	2.71E+00
TEENAGE	TOTALS	2.00E-01	1.90E-01	4.74E-02	9.43E-02	6.53E-02	2.71E+00
ADULT	TOTALS	2.01E-01	1.86E-01	5.71E-02	9.62E-02	6.95E-02	2.71E+00

METSET:

DATA: MarMU315.MIL

09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 7 NAME=Hay Springs X= 47.1KM, Y= 18.8KM, Z= -50.0M, DIST= 50.7KM, 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	2.45E-01	8.13E-02	3.46E-02	3.00E-01	1.35E-01	3.34E+00
CHILD	TOTALS	2.41E-01	1.18E-01	4.63E-02	1.64E-01	9.07E-02	3.34E+00
TEENAGE	TOTALS	2.43E-01	2.08E-01	5.44E-02	1.05E-01	7.36E-02	3.34E+00
ADULT	TOTALS	2.45E-01	2.04E-01	6.49E-02	1.07E-01	7.82E-02	3.34E+00

NUMBER 8 NAME=Hemmingford X= 14.3KM, Y= -20.4KM, Z= 36.0M, DIST= 24.9KM, 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	9.79E-01	2.13E-01	1.20E-01	6.48E-01	3.19E-01	1.40E+01
CHILD	TOTALS	9.71E-01	2.86E-01	1.43E-01	3.78E-01	2.32E-01	1.40E+01
TEENAGE	TOTALS	9.76E-01	4.65E-01	1.60E-01	2.60E-01	1.98E-01	1.40E+01
ADULT	TOTALS	9.80E-01	4.56E-01	1.80E-01	2.64E-01	2.07E-01	1.40E+01

METSET:

DATA: MarMU315.MIL

09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 9 NAME=Marsland X= -3.8KM, Y= -6.1KM, Z= -50.0M, DIST= 7.2KM, 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	1.18E+00	1.34E-01	1.07E-01	2.58E-01	1.64E-01	1.79E+01
CHILD	TOTALS	1.18E+00	1.55E-01	1.14E-01	1.81E-01	1.39E-01	1.79E+01
TEENAGE	TOTALS	1.18E+00	2.06E-01	1.19E-01	1.47E-01	1.30E-01	1.79E+01
ADULT	TOTALS	1.18E+00	2.03E-01	1.25E-01	1.48E-01	1.32E-01	1.79E+01

NUMBER 10 NAME=Mitchell X= -48.5KM, Y= -60.0KM, Z= -50.0M, DIST= 77.2KM, 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-01	5.28E-02	1.69E-02	2.22E-01	9.40E-02	1.39E+00
CHILD	TOTALS	1.05E-01	8.11E-02	2.58E-02	1.17E-01	6.00E-02	1.39E+00
TEENAGE	TOTALS	1.07E-01	1.51E-01	3.20E-02	7.10E-02	4.68E-02	1.39E+00
ADULT	TOTALS	1.09E-01	1.47E-01	4.01E-02	7.26E-02	5.03E-02	1.39E+00

METSET:

DATA: MarMU315.MIL

09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 11 NAME=Oelrichs X= 4.9KM, Y= 75.3KM, Z= -50.0M, DIST= 75.5KM, 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	1.75E-01	8.07E-02	2.69E-02	3.34E-01	1.42E-01	2.27E+00
CHILD	TOTALS	1.70E-01	1.23E-01	4.02E-02	1.77E-01	9.15E-02	2.27E+00
TEENAGE	TOTALS	1.73E-01	2.27E-01	4.95E-02	1.08E-01	7.17E-02	2.27E+00
ADULT	TOTALS	1.75E-01	2.22E-01	6.16E-02	1.10E-01	7.70E-02	2.27E+00

NUMBER 12 NAME=Rushville X= 66.0KM, Y= 22.0KM, Z= -50.0M, DIST= 69.6KM, 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	1.71E-01	6.96E-02	2.55E-02	2.77E-01	1.20E-01	2.27E+00
CHILD	TOTALS	1.67E-01	1.04E-01	3.65E-02	1.48E-01	7.85E-02	2.27E+00
TEENAGE	TOTALS	1.70E-01	1.90E-01	4.41E-02	9.19E-02	6.23E-02	2.27E+00
ADULT	TOTALS	1.72E-01	1.86E-01	5.40E-02	9.39E-02	6.66E-02	2.27E+00

METSET:

DATA: MarMU315.MIL

09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 13 NAME=Scottsbluff X= -36.3KM, Y= -68.9KM, Z= -50.0M, DIST= 77.9KM, 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	1.21E-01	5.74E-02	1.87E-02	2.40E-01	1.02E-01	1.56E+00
CHILD	TOTALS	1.17E-01	8.79E-02	2.83E-02	1.26E-01	6.52E-02	1.56E+00
TEENAGE	TOTALS	1.20E-01	1.63E-01	3.50E-02	7.70E-02	5.10E-02	1.56E+00
ADULT	TOTALS	1.21E-01	1.59E-01	4.37E-02	7.87E-02	5.48E-02	1.56E+00

NUMBER 14 NAME=Van Tassell X= -67.5KM, Y= 21.0KM, Z= 49.0M, DIST= 70.7KM, 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	1.63E-01	7.12E-02	2.47E-02	2.90E-01	1.25E-01	2.14E+00
CHILD	TOTALS	1.59E-01	1.08E-01	3.63E-02	1.54E-01	8.06E-02	2.14E+00
TEENAGE	TOTALS	1.62E-01	1.98E-01	4.43E-02	9.48E-02	6.35E-02	2.14E+00
ADULT	TOTALS	1.63E-01	1.94E-01	5.48E-02	9.69E-02	6.81E-02	2.14E+00

METSET:

DATA: MarMU315.MIL

09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 15 NAME=Whitney

X= 1.2KM, Y= 31.4KM, Z= -50.0M, DIST= 31.4KM, 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	4.44E-01	1.14E-01	5.80E-02	3.72E-01	1.76E-01	6.26E+00
CHILD	TOTALS	4.39E-01	1.57E-01	7.20E-02	2.12E-01	1.25E-01	6.26E+00
TEENAGE	TOTALS	4.42E-01	2.63E-01	8.16E-02	1.41E-01	1.04E-01	6.26E+00
ADULT	TOTALS	4.44E-01	2.58E-01	9.40E-02	1.44E-01	1.10E-01	6.26E+00

NUMBER 16 NAME=Residence 1

X= -0.9KM, Y= -0.6KM, Z= 3.4M, 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	1.42E+01	6.23E-01	5.96E-01	7.47E-01	6.53E-01	2.27E+02
CHILD	TOTALS	1.42E+01	6.44E-01	6.03E-01	6.70E-01	6.28E-01	2.27E+02
TEENAGE	TOTALS	1.42E+01	6.95E-01	6.07E-01	6.36E-01	6.18E-01	2.27E+02
ADULT	TOTALS	1.42E+01	6.92E-01	6.13E-01	6.37E-01	6.21E-01	2.27E+02

METSET:

DATA: MarMU315.MIL

09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 17 NAME=Residence 2 X= 1.0KM, Y= 0.3KM, Z= -4.0M, DIST= 1.0KM, 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	4.74E+01	6.30E-01	6.17E-01	6.92E-01	6.45E-01	7.81E+02
CHILD	TOTALS	4.74E+01	6.40E-01	6.20E-01	6.54E-01	6.33E-01	7.81E+02
TEENAGE	TOTALS	4.74E+01	6.66E-01	6.22E-01	6.37E-01	6.28E-01	7.81E+02
ADULT	TOTALS	4.74E+01	6.65E-01	6.25E-01	6.37E-01	6.29E-01	7.81E+02

NUMBER 18 NAME=Residence 3 X= -0.8KM, Y= -1.9KM, Z= -16.0M, DIST= 2.1KM, 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	7.31E+00	4.58E-01	4.27E-01	6.05E-01	4.94E-01	1.15E+02
CHILD	TOTALS	7.30E+00	4.83E-01	4.35E-01	5.14E-01	4.65E-01	1.15E+02
TEENAGE	TOTALS	7.30E+00	5.43E-01	4.40E-01	4.74E-01	4.53E-01	1.15E+02
ADULT	TOTALS	7.31E+00	5.40E-01	4.47E-01	4.75E-01	4.56E-01	1.15E+02

REGION: Marsland All Well Field CODE: MILDOS-AREA (02/12)

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METSET:

DATA: MarMU315.MIL

09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 19 NAME=Residence 4 X= -0.4KM, Y= -3.4KM, Z= -31.0M, DIST= 3.4KM, 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	4.43E+00	3.46E-01	3.10E-01	5.13E-01	3.87E-01	6.88E+01
CHILD	TOTALS	4.43E+00	3.74E-01	3.20E-01	4.10E-01	3.54E-01	6.88E+01
TEENAGE	TOTALS	4.43E+00	4.43E-01	3.26E-01	3.64E-01	3.41E-01	6.88E+01
ADULT	TOTALS	4.43E+00	4.40E-01	3.34E-01	3.66E-01	3.44E-01	6.88E+01

NUMBER 20 NAME=Residence 5 X= 1.9KM, Y= -4.3KM, Z= -36.0M, DIST= 4.7KM, 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	5.16E+00	4.32E-01	3.77E-01	6.88E-01	4.94E-01	7.99E+01
CHILD	TOTALS	5.16E+00	4.75E-01	3.91E-01	5.29E-01	4.43E-01	7.99E+01
TEENAGE	TOTALS	5.16E+00	5.80E-01	4.00E-01	4.60E-01	4.23E-01	7.99E+01
ADULT	TOTALS	5.16E+00	5.75E-01	4.13E-01	4.62E-01	4.28E-01	7.99E+01

METSET:

DATA: MarMU315.MIL

09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 21 NAME=Residence 6 X= -4.7KM, Y= 1.9KM, Z= 22.0M, DIST= 5.1KM, 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	3.68E+00	3.39E-01	2.99E-01	5.28E-01	3.85E-01	5.64E+01
CHILD	TOTALS	3.67E+00	3.71E-01	3.09E-01	4.11E-01	3.48E-01	5.64E+01
TEENAGE	TOTALS	3.68E+00	4.49E-01	3.16E-01	3.60E-01	3.33E-01	5.64E+01
ADULT	TOTALS	3.68E+00	4.45E-01	3.25E-01	3.62E-01	3.37E-01	5.64E+01

NUMBER 22 NAME=Residence 7 X= 2.4KM, Y= 3.6KM, Z= 76.0M, 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	6.57E+00	5.20E-01	4.73E-01	7.35E-01	5.72E-01	1.02E+02
CHILD	TOTALS	6.57E+00	5.56E-01	4.85E-01	6.01E-01	5.29E-01	1.02E+02
TEENAGE	TOTALS	6.57E+00	6.44E-01	4.93E-01	5.43E-01	5.12E-01	1.02E+02
ADULT	TOTALS	6.57E+00	6.40E-01	5.04E-01	5.45E-01	5.17E-01	1.02E+02

METSET:

DATA: MarMU315.MIL

09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 23 NAME=Residence 8 X= 4.7KM, Y= -4.4KM, Z= -50.0M, DIST= 6.4KM, 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	2.27E+00	1.77E-01	1.50E-01	3.03E-01	2.08E-01	3.54E+01
CHILD	TOTALS	2.27E+00	1.98E-01	1.57E-01	2.25E-01	1.82E-01	3.54E+01
TEENAGE	TOTALS	2.27E+00	2.50E-01	1.61E-01	1.91E-01	1.73E-01	3.54E+01
ADULT	TOTALS	2.27E+00	2.48E-01	1.68E-01	1.92E-01	1.75E-01	3.54E+01

NUMBER 24 NAME=Unoccupied 1 X= -0.9KM, Y= 1.9KM, Z= 15.7M, DIST= 2.1KM, 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	7.18E+01	6.78E-01	6.62E-01	7.52E-01	6.96E-01	1.19E+03
CHILD	TOTALS	7.18E+01	6.90E-01	6.66E-01	7.06E-01	6.81E-01	1.19E+03
TEENAGE	TOTALS	7.18E+01	7.21E-01	6.69E-01	6.86E-01	6.75E-01	1.19E+03
ADULT	TOTALS	7.18E+01	7.19E-01	6.72E-01	6.86E-01	6.77E-01	1.19E+03

METSET:

DATA: MarMU315.MIL

09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 25 NAME=Unoccupied 2 X= 2.0KM, Y= 2.8KM, Z= 69.0M, DIST= 3.4KM, 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	9.17E+00	5.88E-01	5.49E-01	7.67E-01	6.31E-01	1.44E+02
CHILD	TOTALS	9.17E+00	6.18E-01	5.59E-01	6.55E-01	5.95E-01	1.44E+02
TEENAGE	TOTALS	9.17E+00	6.91E-01	5.65E-01	6.07E-01	5.81E-01	1.44E+02
ADULT	TOTALS	9.17E+00	6.88E-01	5.74E-01	6.09E-01	5.85E-01	1.44E+02

NUMBER 26 NAME=N Boundary #1 X= -1.3KM, Y= 5.1KM, Z= 35.0M, DIST= 5.3KM, 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	6.55E+00	5.15E-01	4.64E-01	7.51E-01	5.72E-01	1.02E+02
CHILD	TOTALS	6.55E+00	5.55E-01	4.77E-01	6.05E-01	5.25E-01	1.02E+02
TEENAGE	TOTALS	6.55E+00	6.52E-01	4.86E-01	5.41E-01	5.07E-01	1.02E+02
ADULT	TOTALS	6.55E+00	6.47E-01	4.97E-01	5.43E-01	5.12E-01	1.02E+02

METSET:

DATA: MarMU315.MIL

09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 27 NAME=East Boundary X= 1.7KM, Y= 0.0KM, Z= -2.6M, DIST= 1.7KM, 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	1.99E+01	5.45E-01	5.24E-01	6.41E-01	5.68E-01	3.23E+02
CHILD	TOTALS	1.99E+01	5.61E-01	5.30E-01	5.81E-01	5.49E-01	3.23E+02
TEENAGE	TOTALS	1.99E+01	6.00E-01	5.33E-01	5.55E-01	5.42E-01	3.23E+02
ADULT	TOTALS	1.99E+01	5.99E-01	5.38E-01	5.56E-01	5.44E-01	3.23E+02

NUMBER 28 NAME=South Boundary X= 0.0KM, Y= -0.6KM, Z= 0.5M, DIST= 0.6KM, 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	3.17E+01	8.25E-01	7.96E-01	9.59E-01	8.58E-01	5.16E+02
CHILD	TOTALS	3.17E+01	8.48E-01	8.04E-01	8.76E-01	8.31E-01	5.16E+02
TEENAGE	TOTALS	3.17E+01	9.02E-01	8.09E-01	8.40E-01	8.21E-01	5.16E+02
ADULT	TOTALS	3.17E+01	9.00E-01	8.15E-01	8.41E-01	8.23E-01	5.16E+02

METSET:

DATA: MarMU315.MIL

09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 29 NAME=West Boundary X= -0.7KM, Y= 0.0KM, Z= 12.2M, DIST= 0.7KM, 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	2.49E+01	7.66E-01	7.43E-01	8.74E-01	7.92E-01	4.03E+02
CHILD	TOTALS	2.49E+01	7.84E-01	7.49E-01	8.07E-01	7.71E-01	4.03E+02
TEENAGE	TOTALS	2.49E+01	8.29E-01	7.53E-01	7.78E-01	7.63E-01	4.03E+02
ADULT	TOTALS	2.49E+01	8.26E-01	7.58E-01	7.79E-01	7.65E-01	4.03E+02

NUMBER 30 NAME=Minatare X= -22.4KM, Y= -75.6KM, Z= -41.4M, DIST= 78.8KM, 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	1.53E-01	7.19E-02	2.37E-02	3.00E-01	1.27E-01	1.99E+00
CHILD	TOTALS	1.49E-01	1.10E-01	3.57E-02	1.58E-01	8.17E-02	1.99E+00
TEENAGE	TOTALS	1.52E-01	2.04E-01	4.40E-02	9.65E-02	6.39E-02	1.99E+00
ADULT	TOTALS	1.54E-01	1.99E-01	5.49E-02	9.86E-02	6.87E-02	1.99E+00

REGION: Marsland All Well Field CODE: MILDOS-AREA (02/12)

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METSET:

DATA: MarMU315.MIL

09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 31 NAME=N Boundary #2 X= -0.5KM, Y= 3.3KM, Z= 20.0M, DIST= 3.3KM, 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	2.05E+01	6.97E-01	6.65E-01	8.40E-01	7.32E-01	3.31E+02
CHILD	TOTALS	2.05E+01	7.21E-01	6.73E-01	7.51E-01	7.03E-01	3.31E+02
TEENAGE	TOTALS	2.05E+01	7.80E-01	6.79E-01	7.12E-01	6.92E-01	3.31E+02
ADULT	TOTALS	2.05E+01	7.77E-01	6.86E-01	7.13E-01	6.95E-01	3.31E+02

Program execution time = 0.40 seconds

**MILDOS-AREA
RADIATION DOSES FROM
CAMECO RESOURCES
MARSLAND EXPANSION AREA
IN-SITU URANIUM RECOVERY OPERATION**

Appendix B2

September 24, 2013

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Appendix	Title	Radon Source	Weather Data	Waste Water Flow Rate
B2	MARST315	SATELLITE 1-5	MEA	315

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REGION: Marsland All Well Field CODE: MILDOS-AREA (02/12)

PAGE 2

METSET:

DATA: MARST315.MIL

09/18/13

JOINT FREQUENCY IN PERCENT, DIRECTION INDICATES WHERE WIND IS FROM FREQWS=0.14427,0.29579,0.30967,0.17441,0.05798,0.01793

MPH	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTALS
STABILITY CLASS 1																	
1.5	0.1410	0.0240	0.0710	0.0820	0.0940	0.1300	0.1060	0.2120	0.1770	0.3540	0.1410	0.0940	0.1180	0.0820	0.0590	0.0590	1.9440
5.5	0.2360	0.1530	0.1890	0.1770	0.1770	0.2590	0.2000	0.2120	0.2120	0.2590	0.2240	0.4010	0.1180	0.1180	0.2000	0.2120	3.3470
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	0.3770	0.1770	0.2600	0.2590	0.2710	0.3890	0.3060	0.4240	0.3890	0.6130	0.3650	0.4950	0.2360	0.2000	0.2590	0.2710	5.2910

STABILITY CLASS 2																	
1.5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0350	0.0120	0.0470	0.0470	0.0940	0.0120	0.0000	0.0120	0.0120	0.0000	0.0000	0.2710
5.5	0.2000	0.2240	0.2470	0.1770	0.1770	0.2470	0.3420	0.2470	0.2360	0.3180	0.3060	0.2590	0.1300	0.1650	0.2360	0.2120	3.7230
10.0	0.0240	0.0000	0.0120	0.0000	0.0120	0.0350	0.0350	0.0240	0.0710	0.0590	0.0000	0.0470	0.0240	0.0120	0.0710	0.0470	0.4730
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	0.2240	0.2240	0.2590	0.1770	0.1890	0.3170	0.3890	0.3180	0.3540	0.4710	0.3180	0.3060	0.1660	0.1890	0.3070	0.2590	4.4670

STABILITY CLASS 3																	
1.5	0.0120	0.0000	0.0000	0.0000	0.0000	0.0000	0.0350	0.0120	0.0350	0.0240	0.0120	0.0000	0.0000	0.0000	0.0000	0.0000	0.1300
5.5	0.0590	0.0590	0.0590	0.0820	0.1180	0.1770	0.1890	0.1530	0.1530	0.1410	0.1890	0.0820	0.0710	0.0470	0.0590	0.0940	1.7320
10.0	1.0300	0.4710	0.2950	0.3420	0.3300	0.5540	0.4120	0.4360	0.4950	0.4360	0.5660	0.6600	0.4360	0.4710	0.8130	0.7780	8.5250
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	1.1010	0.5300	0.3540	0.4240	0.4480	0.7310	0.6360	0.6010	0.6830	0.6010	0.7670	0.7420	0.5070	0.5180	0.8720	0.8720	10.3870

STABILITY CLASS 4																	
1.5	0.0240	0.0240	0.0000	0.0000	0.0120	0.0470	0.0240	0.0120	0.0120	0.0120	0.0240	0.0120	0.0000	0.0120	0.0120	0.0710	0.2980
5.5	0.7310	0.4710	0.1890	0.3060	0.5770	0.8840	1.0490	0.7540	0.5190	0.3890	0.4830	0.5070	0.4120	0.3770	0.6840	1.3550	9.6870
10.0	1.9100	1.0720	0.9190	0.7310	1.0370	0.9190	1.2140	1.6500	1.3080	0.8960	0.7900	1.4610	1.2730	1.4850	1.9090	2.3690	20.9430
15.5	1.7800	0.8600	0.3060	0.2000	0.3180	0.3060	0.3890	0.9550	1.3790	0.6720	0.3650	0.8720	1.2610	1.9560	3.0050	2.8170	17.4410
21.5	0.4120	0.2240	0.0120	0.0000	0.0120	0.0240	0.0350	0.3420	0.2830	0.1180	0.1410	0.2470	0.2950	0.7190	1.6970	1.2370	5.7980
28.0	0.1410	0.0120	0.0000	0.0120	0.0000	0.0120	0.0000	0.0120	0.0120	0.0000	0.0000	0.0240	0.2360	0.2950	0.5890	0.4480	1.7930
ALL	4.9980	2.6630	1.4260	1.2490	1.9560	2.1920	2.7110	3.7250	3.5130	2.0870	1.8030	3.1230	3.4770	4.8440	7.8960	8.2970	55.9600

STABILITY CLASS 5																	
1.5	0.1530	0.0710	0.0000	0.0000	0.0590	0.0350	0.0820	0.0710	0.0350	0.0000	0.0350	0.0350	0.0120	0.0710	0.0590	0.0940	0.8120
5.5	0.2360	0.1300	0.1650	0.2000	0.1530	0.3060	0.2000	0.2470	0.2710	0.2000	0.2950	0.2830	0.2000	0.1300	0.3540	0.9660	4.3360
10.0	0.0470	0.0350	0.0240	0.0470	0.0590	0.0240	0.0240	0.0470	0.0240	0.0240	0.0590	0.1060	0.0940	0.0820	0.1410	0.1890	1.0260
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	0.4360	0.2360	0.1890	0.2470	0.2710	0.3650	0.3060	0.3650	0.3300	0.2240	0.3890	0.4240	0.3060	0.2830	0.5540	1.2490	6.1740

STABILITY CLASS 6																	
1.5	0.9780	0.6950	0.6360	0.5420	0.4480	0.5190	0.6720	0.6130	0.7540	0.6600	0.5770	0.7310	0.5660	0.5770	0.6720	1.3320	10.9720
5.5	0.7070	0.2830	0.1180	0.2590	0.3540	0.3180	0.3420	0.4830	0.3420	0.4950	0.4360	0.4710	0.2950	0.5540	0.4600	0.8370	6.7540
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	1.6850	0.9780	0.7540	0.8010	0.8020	0.8370	1.0140	1.0960	1.0960	1.1550	1.0130	1.2020	0.8610	1.1310	1.1320	2.1690	17.7260

ALL	8.8210	4.8080	3.2420	3.1570	3.9370	4.8310	5.3620	6.5290	6.3650	5.1510	4.6550	6.2920	5.5530	7.1650	11.0200	13.1170	100.0050
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-----INDIVIDUAL RECEPTOR LOCATION DATA, 31 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	Alliance	30.00	-45.40	-50.00	54.42	1	17	Residence 2	1.00	0.30	-4.00	1.04	1
2	Berea	21.50	-32.60	-50.00	39.05	1	18	Residence 3	-0.80	-1.90	-16.00	2.06	1
3	Chardon	22.30	35.80	-50.00	42.18	1	19	Residence 4	-0.40	-3.40	-31.00	3.42	1
4	Clinton	75.40	26.50	-50.00	79.92	1	20	Residence 5	1.90	-4.30	-36.00	4.70	1
5	Crawford	-12.10	20.80	-50.00	24.06	1	21	Residence 6	-4.70	1.86	22.00	5.05	1
6	Harrison	-50.50	22.50	-50.00	55.29	1	22	Residence 7	2.40	3.60	76.00	4.33	1
7	Hay Springs	47.10	18.80	-50.00	50.71	1	23	Residence 8	4.70	-4.40	-50.00	6.44	1
8	Hemmingford	14.30	-20.40	36.00	24.91	1	24	Unoccupied 1	-0.90	1.90	15.70	2.10	1
9	Marsland	-3.80	-6.10	-50.00	7.19	1	25	Unoccupied 2	2.00	2.80	69.00	3.44	1
10	Mitchell	-48.50	-60.00	-50.00	77.15	1	26	N Boundary #1	-1.30	5.10	35.00	5.26	1
11	Oelrichs	4.90	75.30	-50.00	75.46	1	27	East Boundary	1.70	0.00	-2.60	1.70	1
12	Rushville	66.00	22.00	-50.00	69.57	1	28	South Boundary	0.00	-0.60	0.50	0.60	1
13	Scottsbluff	-36.30	-68.90	-50.00	77.88	1	29	West Boundary	-0.70	0.00	12.20	0.70	1
14	Van Tassell	-67.50	21.00	49.00	70.69	1	30	Minatare	-22.40	-75.60	-41.40	78.85	1
15	Whitney	1.20	31.40	-50.00	31.42	1	31	N Boundary #2	-0.50	3.30	20.00	3.34	1
16	Residence 1	-0.90	-0.60	3.40	1.08	1							

MISCELLANEOUS INPUTABLE PARAMETER VALUES

DMM	DMA	TSTART	FFORI	FHAYI	FFORP	FHAYP	FPR(1)	FPR(2)	FPR(3)	ACTRAT
100.0	100.0	1.00	0.90	0.10	0.90	0.10	87000.00	4000.00	0.00	2.50

IPACT EQUALS 0,

JC EQUALS 1, 0, 0, 0, 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

POPULATION DISTRIBUTION

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
KILOMETERS	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	0	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	0	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	0	0	0	0	0	0	0	0	0	0	0	0
10.0-20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20.0-30.0	0	0	0	0	0	0	993	0	0	0	0	0	0	0	0	1107
30.0-40.0	87	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40.0-50.0	0	5634	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50.0-60.0	0	0	0	652	0	0	0	9859	0	0	0	0	0	279	0	0
60.0-70.0	0	0	0	999	0	0	0	0	0	0	0	0	0	0	0	0
70.0-80.0	145	0	14	30	0	0	0	0	0	15542	1831	0	0	19	0	0
1.0-80.0	232	5634	14	1681	0	0	993	9859	0	15542	1831	0	0	298	0	1107

TOTAL 1-80 KM POPULATION IS 37191 PERSONS

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NO.	KM	KM	M	KM2	CI/YEAR					PSIZE	M/SEC		SOURCE NAME
	X	Y	Z	AREA	U-238	Th-230	Ra-226	Pb-210	Rn-222	ID	SET	EXIT VEL	
1	0.00	0.00	0.00	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.22E+03	1001	1	1.00E+01	Satellite

AMAD AND FRACTIONAL DISTRIBUTION				
SET	1.5	3.0	7.7	54.0
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

[illegible]

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.	3.842E-01	3.111E+00	5.016E-02	2.333E+00	1.122E+00	1.496E+02
GROUND	2.112E-02	2.112E-02	2.112E-02	2.112E-02	2.112E-02	2.112E-02
CLOUD	1.280E+00	1.280E+00	1.280E+00	1.280E+00	1.280E+00	1.280E+00
VEG. ING	1.800E+00	2.080E+01	1.800E+00	6.181E+00	5.035E+00	1.800E+00
MEAT ING	1.252E-01	1.446E+00	1.252E-01	4.299E-01	3.502E-01	1.252E-01
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	3.611E+00	2.666E+01	3.277E+00	1.025E+01	7.808E+00	1.528E+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	3.041E+02	3.514E+03	3.041E+02	1.044E+03	8.506E+02	3.041E+02
MEAT ING	2.508E+00	2.898E+01	2.508E+00	8.612E+00	7.015E+00	2.508E+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	3.066E+02	3.543E+03	3.066E+02	1.053E+03	8.576E+02	3.066E+02

TOTAL DOSES COMPUTED OVER ALL POPULATIONS

PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INHAL.	3.842E-01	3.111E+00	5.016E-02	2.333E+00	1.122E+00	1.496E+02
GROUND	2.112E-02	2.112E-02	2.112E-02	2.112E-02	2.112E-02	2.112E-02
CLOUD	1.280E+00	1.280E+00	1.280E+00	1.280E+00	1.280E+00	1.280E+00
VEG. ING	3.059E+02	3.534E+03	3.059E+02	1.050E+03	8.557E+02	3.059E+02
MEAT ING	2.633E+00	3.042E+01	2.633E+00	9.042E+00	7.365E+00	2.633E+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	3.102E+02	3.569E+03	3.099E+02	1.063E+03	8.654E+02	4.594E+02

REGION: Marsland All Well Field CODE: MILDOS-AREA (02/12)

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METSET:

DATA: MARST315.MIL

09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 1 NAME=Alliance X= 30.0KM, Y= -45.4KM, Z= -50.0M, DIST= 54.4KM, 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	3.56E-01	1.10E-01	4.92E-02	3.97E-01	1.80E-01	4.90E+00
CHILD	TOTALS	3.50E-01	1.58E-01	6.45E-02	2.19E-01	1.23E-01	4.90E+00
TEENAGE	TOTALS	3.54E-01	2.76E-01	7.51E-02	1.41E-01	1.00E-01	4.90E+00
ADULT	TOTALS	3.56E-01	2.71E-01	8.88E-02	1.44E-01	1.06E-01	4.90E+00

NUMBER 2 NAME=Berea X= 21.5KM, Y= -32.6KM, Z= -50.0M, DIST= 39.1KM, 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	5.00E-01	1.25E-01	6.48E-02	4.08E-01	1.94E-01	7.05E+00
CHILD	TOTALS	4.94E-01	1.73E-01	8.01E-02	2.32E-01	1.37E-01	7.05E+00
TEENAGE	TOTALS	4.98E-01	2.89E-01	9.06E-02	1.56E-01	1.15E-01	7.05E+00
ADULT	TOTALS	5.00E-01	2.83E-01	1.04E-01	1.59E-01	1.21E-01	7.05E+00

REGION: Marsland All Well Field CODE: MILDOS-AREA (02/12)

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METSET:

DATA: MARST315.MIL

09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 3 NAME=Chardon

X= 22.3KM, Y= 35.8KM, Z= -50.0M, DIST= 42.2KM, 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	2.80E-01	8.89E-02	3.91E-02	3.21E-01	1.45E-01	3.84E+00
CHILD	TOTALS	2.76E-01	1.28E-01	5.17E-02	1.77E-01	9.88E-02	3.84E+00
TEENAGE	TOTALS	2.79E-01	2.23E-01	6.02E-02	1.14E-01	8.07E-02	3.84E+00
ADULT	TOTALS	2.80E-01	2.19E-01	7.14E-02	1.16E-01	8.55E-02	3.84E+00

NUMBER 4 NAME=Clinton

X= 75.4KM, Y= 26.5KM, Z= -50.0M, DIST= 79.9KM, 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	1.43E-01	6.26E-02	2.17E-02	2.55E-01	1.10E-01	1.87E+00
CHILD	TOTALS	1.39E-01	9.49E-02	3.19E-02	1.36E-01	7.09E-02	1.87E+00
TEENAGE	TOTALS	1.42E-01	1.74E-01	3.89E-02	8.34E-02	5.58E-02	1.87E+00
ADULT	TOTALS	1.43E-01	1.70E-01	4.81E-02	8.52E-02	5.98E-02	1.87E+00

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TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 5 NAME=Crawford

X= -12.1KM, Y= 20.8KM, Z= -50.0M, DIST= 24.1KM, 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	5.43E-01	1.12E-01	6.71E-02	3.20E-01	1.63E-01	7.80E+00
CHILD	TOTALS	5.39E-01	1.47E-01	7.85E-02	1.91E-01	1.21E-01	7.80E+00
TEENAGE	TOTALS	5.41E-01	2.32E-01	8.62E-02	1.34E-01	1.05E-01	7.80E+00
ADULT	TOTALS	5.43E-01	2.28E-01	9.62E-02	1.36E-01	1.09E-01	7.80E+00

NUMBER 6 NAME=Harrison

X= -50.5KM, Y= 22.5KM, Z= -50.0M, DIST= 55.3KM, 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	1.91E-01	6.76E-02	2.75E-02	2.55E-01	1.13E-01	2.58E+00
CHILD	TOTALS	1.87E-01	9.91E-02	3.75E-02	1.39E-01	7.56E-02	2.58E+00
TEENAGE	TOTALS	1.89E-01	1.76E-01	4.44E-02	8.78E-02	6.10E-02	2.58E+00
ADULT	TOTALS	1.91E-01	1.73E-01	5.35E-02	8.96E-02	6.49E-02	2.58E+00

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 TIME STEP NUMBER 1, DURATION IN YRS IS... 5.0

NUMBER 7 NAME=Hay Springs X= 47.1KM, Y= 18.8KM, Z= -50.0M, DIST= 50.7KM, 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	2.34E-01	7.60E-02	3.29E-02	2.78E-01	1.25E-01	3.20E+00
CHILD	TOTALS	2.30E-01	1.10E-01	4.38E-02	1.52E-01	8.46E-02	3.20E+00
TEENAGE	TOTALS	2.32E-01	1.93E-01	5.12E-02	9.77E-02	6.89E-02	3.20E+00
ADULT	TOTALS	2.34E-01	1.89E-01	6.08E-02	9.96E-02	7.31E-02	3.20E+00

NUMBER 8 NAME=Hemmingford X= 14.3KM, Y= -20.4KM, Z= 36.0M, DIST= 24.9KM, 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	9.93E-01	2.11E-01	1.20E-01	6.31E-01	3.13E-01	1.43E+01
CHILD	TOTALS	9.85E-01	2.81E-01	1.43E-01	3.70E-01	2.29E-01	1.43E+01
TEENAGE	TOTALS	9.90E-01	4.54E-01	1.59E-01	2.56E-01	1.96E-01	1.43E+01
ADULT	TOTALS	9.93E-01	4.46E-01	1.79E-01	2.60E-01	2.05E-01	1.43E+01

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METSET:

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TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 9 NAME=Marsland

X= -3.8KM, Y= -6.1KM, Z= -50.0M, DIST= 7.2KM, 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	1.01E+00	9.08E-02	7.60E-02	1.60E-01	1.08E-01	1.56E+01
CHILD	TOTALS	1.01E+00	1.02E-01	7.97E-02	1.17E-01	9.38E-02	1.56E+01
TEENAGE	TOTALS	1.01E+00	1.31E-01	8.23E-02	9.83E-02	8.84E-02	1.56E+01
ADULT	TOTALS	1.01E+00	1.29E-01	8.56E-02	9.89E-02	8.98E-02	1.56E+01

NUMBER 10 NAME=Mitchell

X= -48.5KM, Y= -60.0KM, Z= -50.0M, DIST= 77.2KM, 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-01	4.92E-02	1.61E-02	2.05E-01	8.72E-02	1.34E+00
CHILD	TOTALS	1.01E-01	7.53E-02	2.43E-02	1.08E-01	5.59E-02	1.34E+00
TEENAGE	TOTALS	1.03E-01	1.39E-01	3.00E-02	6.60E-02	4.37E-02	1.34E+00
ADULT	TOTALS	1.04E-01	1.36E-01	3.74E-02	6.74E-02	4.69E-02	1.34E+00

METSET:

DATA: MARST315.MIL

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TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 11 NAME=Oelrichs X= 4.9KM, Y= 75.3KM, Z= -50.0M, DIST= 75.5KM, 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	1.67E-01	7.63E-02	2.56E-02	3.15E-01	1.35E-01	2.17E+00
CHILD	TOTALS	1.62E-01	1.16E-01	3.82E-02	1.67E-01	8.65E-02	2.17E+00
TEENAGE	TOTALS	1.65E-01	2.15E-01	4.69E-02	1.02E-01	6.79E-02	2.17E+00
ADULT	TOTALS	1.67E-01	2.10E-01	5.83E-02	1.04E-01	7.28E-02	2.17E+00

NUMBER 12 NAME=Rushville X= 66.0KM, Y= 22.0KM, Z= -50.0M, DIST= 69.6KM, 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	1.65E-01	6.57E-02	2.45E-02	2.60E-01	1.13E-01	2.20E+00
CHILD	TOTALS	1.61E-01	9.82E-02	3.48E-02	1.39E-01	7.40E-02	2.20E+00
TEENAGE	TOTALS	1.64E-01	1.78E-01	4.18E-02	8.66E-02	5.89E-02	2.20E+00
ADULT	TOTALS	1.65E-01	1.74E-01	5.11E-02	8.84E-02	6.29E-02	2.20E+00

METSET:

DATA: MARST315.MIL

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TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 13 NAME=Scottsbluff X= -36.3KM, Y= -68.9KM, Z= -50.0M, DIST= 77.9KM, 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	1.17E-01	5.39E-02	1.80E-02	2.23E-01	9.52E-02	1.52E+00
CHILD	TOTALS	1.14E-01	8.23E-02	2.69E-02	1.18E-01	6.12E-02	1.52E+00
TEENAGE	TOTALS	1.16E-01	1.52E-01	3.31E-02	7.22E-02	4.80E-02	1.52E+00
ADULT	TOTALS	1.17E-01	1.49E-01	4.12E-02	7.38E-02	5.15E-02	1.52E+00

NUMBER 14 NAME=Van Tassell

X= -67.5KM, Y= 21.0KM, Z= 49.0M, DIST= 70.7KM, 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	1.63E-01	7.14E-02	2.47E-02	2.91E-01	1.25E-01	2.13E+00
CHILD	TOTALS	1.59E-01	1.08E-01	3.63E-02	1.55E-01	8.09E-02	2.13E+00
TEENAGE	TOTALS	1.61E-01	1.99E-01	4.44E-02	9.52E-02	6.37E-02	2.13E+00
ADULT	TOTALS	1.63E-01	1.94E-01	5.49E-02	9.72E-02	6.83E-02	2.13E+00

METSET:

DATA: MARST315.MIL

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TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 15 NAME=Whitney

X= 1.2KM, Y= 31.4KM, Z= -50.0M, DIST= 31.4KM, 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	4.04E-01	1.03E-01	5.28E-02	3.34E-01	1.59E-01	5.70E+00
CHILD	TOTALS	4.00E-01	1.41E-01	6.53E-02	1.90E-01	1.12E-01	5.70E+00
TEENAGE	TOTALS	4.03E-01	2.37E-01	7.39E-02	1.28E-01	9.44E-02	5.70E+00
ADULT	TOTALS	4.04E-01	2.32E-01	8.51E-02	1.30E-01	9.92E-02	5.70E+00

NUMBER 16 NAME=Residence 1

X= -0.9KM, Y= -0.6KM, Z= 3.4M, 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	1.83E+01	3.10E-01	3.06E-01	3.33E-01	3.16E-01	3.00E+02
CHILD	TOTALS	1.83E+01	3.14E-01	3.07E-01	3.19E-01	3.11E-01	3.00E+02
TEENAGE	TOTALS	1.83E+01	3.23E-01	3.08E-01	3.13E-01	3.10E-01	3.00E+02
ADULT	TOTALS	1.83E+01	3.23E-01	3.09E-01	3.13E-01	3.10E-01	3.00E+02

METSET:

DATA: MARST315.MIL

09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 17 NAME=Residence 2 X= 1.0KM, Y= 0.3KM, Z= -4.0M, DIST= 1.0KM, 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+01	2.08E-01	2.05E-01	2.20E-01	2.11E-01	3.53E+02
CHILD	TOTALS	2.14E+01	2.10E-01	2.06E-01	2.13E-01	2.09E-01	3.53E+02
TEENAGE	TOTALS	2.14E+01	2.15E-01	2.07E-01	2.09E-01	2.08E-01	3.53E+02
ADULT	TOTALS	2.14E+01	2.15E-01	2.07E-01	2.09E-01	2.08E-01	3.53E+02

NUMBER 18 NAME=Residence 3 X= -0.8KM, Y= -1.9KM, Z= -16.0M, DIST= 2.1KM, 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	6.18E+00	2.04E-01	1.96E-01	2.41E-01	2.13E-01	9.99E+01
CHILD	TOTALS	6.18E+00	2.10E-01	1.98E-01	2.18E-01	2.06E-01	9.99E+01
TEENAGE	TOTALS	6.18E+00	2.26E-01	2.00E-01	2.08E-01	2.03E-01	9.99E+01
ADULT	TOTALS	6.18E+00	2.25E-01	2.01E-01	2.08E-01	2.04E-01	9.99E+01

METSET:

DATA: MARST315.MIL

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TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 19 NAME=Residence 4 X= -0.4KM, Y= -3.4KM, Z= -31.0M, DIST= 3.4KM, 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	4.07E+00	2.08E-01	1.93E-01	2.78E-01	2.25E-01	6.48E+01
CHILD	TOTALS	4.07E+00	2.20E-01	1.96E-01	2.35E-01	2.11E-01	6.48E+01
TEENAGE	TOTALS	4.07E+00	2.49E-01	1.99E-01	2.15E-01	2.05E-01	6.48E+01
ADULT	TOTALS	4.07E+00	2.47E-01	2.02E-01	2.16E-01	2.07E-01	6.48E+01

NUMBER 20 NAME=Residence 5 X= 1.9KM, Y= -4.3KM, Z= -36.0M, DIST= 4.7KM, 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	4.47E+00	2.74E-01	2.46E-01	4.05E-01	3.06E-01	7.05E+01
CHILD	TOTALS	4.47E+00	2.96E-01	2.53E-01	3.24E-01	2.80E-01	7.05E+01
TEENAGE	TOTALS	4.47E+00	3.50E-01	2.58E-01	2.88E-01	2.70E-01	7.05E+01
ADULT	TOTALS	4.47E+00	3.47E-01	2.64E-01	2.90E-01	2.72E-01	7.05E+01

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METSET:

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TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 21 NAME=Residence 6 X= -4.7KM, Y= 1.9KM, Z= 22.0M, DIST= 5.1KM, 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	3.63E+00	3.52E-01	3.06E-01	5.63E-01	4.03E-01	5.54E+01
CHILD	TOTALS	3.62E+00	3.87E-01	3.18E-01	4.32E-01	3.61E-01	5.54E+01
TEENAGE	TOTALS	3.63E+00	4.74E-01	3.26E-01	3.75E-01	3.44E-01	5.54E+01
ADULT	TOTALS	3.63E+00	4.70E-01	3.36E-01	3.77E-01	3.49E-01	5.54E+01

NUMBER 22 NAME=Residence 7 X= 2.4KM, Y= 3.6KM, Z= 76.0M, 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	5.17E+00	4.73E-01	4.22E-01	7.09E-01	5.30E-01	7.94E+01
CHILD	TOTALS	5.17E+00	5.12E-01	4.35E-01	5.62E-01	4.83E-01	7.94E+01
TEENAGE	TOTALS	5.17E+00	6.09E-01	4.44E-01	4.98E-01	4.64E-01	7.94E+01
ADULT	TOTALS	5.17E+00	6.05E-01	4.55E-01	5.00E-01	4.69E-01	7.94E+01

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 TIME STEP NUMBER 1, DURATION IN YRS IS... 5.0

NUMBER 23 NAME=Residence 8 X= 4.7KM, Y= -4.4KM, Z= -50.0M, DIST= 6.4KM, 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	1.94E+00	1.12E-01	9.81E-02	1.77E-01	1.28E-01	3.07E+01
CHILD	TOTALS	1.94E+00	1.23E-01	1.02E-01	1.37E-01	1.15E-01	3.07E+01
TEENAGE	TOTALS	1.94E+00	1.49E-01	1.04E-01	1.19E-01	1.10E-01	3.07E+01
ADULT	TOTALS	1.94E+00	1.48E-01	1.07E-01	1.20E-01	1.11E-01	3.07E+01

NUMBER 24 NAME=Unoccupied 1 X= -0.9KM, Y= 1.9KM, Z= 15.7M, DIST= 2.1KM, 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	1.47E+01	6.43E-01	6.16E-01	7.69E-01	6.74E-01	2.36E+02
CHILD	TOTALS	1.47E+01	6.64E-01	6.23E-01	6.91E-01	6.49E-01	2.36E+02
TEENAGE	TOTALS	1.47E+01	7.16E-01	6.28E-01	6.57E-01	6.39E-01	2.36E+02
ADULT	TOTALS	1.47E+01	7.13E-01	6.34E-01	6.58E-01	6.42E-01	2.36E+02

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TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 25 NAME=Unoccupied 2 X= 2.0KM, Y= 2.8KM, Z= 69.0M, DIST= 3.4KM, 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	6.97E+00	5.29E-01	4.87E-01	7.27E-01	5.77E-01	1.08E+02
CHILD	TOTALS	6.96E+00	5.63E-01	4.98E-01	6.04E-01	5.38E-01	1.08E+02
TEENAGE	TOTALS	6.97E+00	6.44E-01	5.05E-01	5.51E-01	5.22E-01	1.08E+02
ADULT	TOTALS	6.97E+00	6.40E-01	5.14E-01	5.53E-01	5.27E-01	1.08E+02

NUMBER 26 NAME=N Boundary #1 X= -1.3KM, Y= 5.1KM, Z= 35.0M, DIST= 5.3KM, 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	4.47E+00	4.46E-01	3.86E-01	7.27E-01	5.14E-01	6.83E+01
CHILD	TOTALS	4.47E+00	4.93E-01	4.01E-01	5.52E-01	4.58E-01	6.83E+01
TEENAGE	TOTALS	4.47E+00	6.08E-01	4.12E-01	4.76E-01	4.36E-01	6.83E+01
ADULT	TOTALS	4.47E+00	6.03E-01	4.25E-01	4.79E-01	4.42E-01	6.83E+01

METSET:

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TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 27 NAME=East Boundary X= 1.7KM, Y= 0.0KM, Z= -2.6M, DIST= 1.7KM, 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	3.11E-01	3.02E-01	3.55E-01	3.22E-01	1.85E+02
CHILD	TOTALS	1.14E+01	3.19E-01	3.04E-01	3.28E-01	3.13E-01	1.85E+02
TEENAGE	TOTALS	1.14E+01	3.37E-01	3.06E-01	3.16E-01	3.10E-01	1.85E+02
ADULT	TOTALS	1.14E+01	3.36E-01	3.08E-01	3.16E-01	3.11E-01	1.85E+02

NUMBER 28 NAME=South Boundary X= 0.0KM, Y= -0.6KM, Z= 0.5M, DIST= 0.6KM, 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	7.13E+01	2.38E-01	2.37E-01	2.43E-01	2.39E-01	1.18E+03
CHILD	TOTALS	7.13E+01	2.39E-01	2.38E-01	2.40E-01	2.39E-01	1.18E+03
TEENAGE	TOTALS	7.13E+01	2.41E-01	2.38E-01	2.39E-01	2.38E-01	1.18E+03
ADULT	TOTALS	7.13E+01	2.41E-01	2.38E-01	2.39E-01	2.38E-01	1.18E+03

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TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 29 NAME=West Boundary X= -0.7KM, Y= 0.0KM, Z= 12.2M, DIST= 0.7KM, 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	5.11E+01	4.47E-01	4.44E-01	4.62E-01	4.51E-01	8.46E+02
CHILD	TOTALS	5.11E+01	4.50E-01	4.44E-01	4.53E-01	4.48E-01	8.46E+02
TEENAGE	TOTALS	5.11E+01	4.56E-01	4.45E-01	4.49E-01	4.46E-01	8.46E+02
ADULT	TOTALS	5.11E+01	4.56E-01	4.46E-01	4.49E-01	4.47E-01	8.46E+02

NUMBER 30 NAME=Minatare X= -22.4KM, Y= -75.6KM, Z= -41.4M, DIST= 78.8KM, 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	1.49E-01	6.82E-02	2.29E-02	2.82E-01	1.20E-01	1.94E+00
CHILD	TOTALS	1.45E-01	1.04E-01	3.42E-02	1.49E-01	7.74E-02	1.94E+00
TEENAGE	TOTALS	1.48E-01	1.92E-01	4.19E-02	9.12E-02	6.07E-02	1.94E+00
ADULT	TOTALS	1.50E-01	1.88E-01	5.22E-02	9.32E-02	6.51E-02	1.94E+00

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TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 31 NAME=N Boundary #2 X= -0.5KM, Y= 3.3KM, Z= 20.0M, DIST= 3.3KM, 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	8.28E+00	6.05E-01	5.58E-01	8.24E-01	6.58E-01	1.29E+02
CHILD	TOTALS	8.27E+00	6.42E-01	5.70E-01	6.88E-01	6.14E-01	1.29E+02
TEENAGE	TOTALS	8.28E+00	7.32E-01	5.78E-01	6.29E-01	5.97E-01	1.29E+02
ADULT	TOTALS	8.28E+00	7.27E-01	5.88E-01	6.31E-01	6.02E-01	1.29E+02

Program execution time = 0.07 seconds

**MILDOS-AREA
RADIATION DOSES FROM
CAMECO RESOURCES
MARSLAND EXPANSION AREA
IN-SITU URANIUM RECOVERY OPERATION**

Appendix B3

September 24, 2013

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Appendix	Title	Radon Source	Weather Data	Waste Water Flow Rate
B3	MARISR	NORTH TREND CROW BUTTE RES THREE CROW	MEA	315

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METSET:

DATA: Mar3ISR.MIL

09/17/13

JOINT FREQUENCY IN PERCENT, DIRECTION INDICATES WHERE WIND IS FROM FREQWS=0.14427,0.29579,0.30967,0.17441,0.05798,0.01793

MPH	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTALS
STABILITY CLASS 1																	
1.5	0.1410	0.0240	0.0710	0.0820	0.0940	0.1300	0.1060	0.2120	0.1770	0.3540	0.1410	0.0940	0.1180	0.0820	0.0590	0.0590	1.9440
5.5	0.2360	0.1530	0.1890	0.1770	0.1770	0.2590	0.2000	0.2120	0.2120	0.2590	0.2240	0.4010	0.1180	0.1180	0.2000	0.2120	3.3470
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	0.3770	0.1770	0.2600	0.2590	0.2710	0.3890	0.3060	0.4240	0.3890	0.6130	0.3650	0.4950	0.2360	0.2000	0.2590	0.2710	5.2910
STABILITY CLASS 2																	
1.5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0350	0.0120	0.0470	0.0470	0.0940	0.0120	0.0000	0.0120	0.0120	0.0000	0.0000	0.2710
5.5	0.2000	0.2240	0.2470	0.1770	0.1770	0.2470	0.3420	0.2470	0.2360	0.3180	0.3060	0.2590	0.1300	0.1650	0.2360	0.2120	3.7230
10.0	0.0240	0.0000	0.0120	0.0000	0.0120	0.0350	0.0350	0.0240	0.0710	0.0590	0.0000	0.0470	0.0240	0.0120	0.0710	0.0470	0.4730
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	0.2240	0.2240	0.2590	0.1770	0.1890	0.3170	0.3890	0.3180	0.3540	0.4710	0.3180	0.3060	0.1660	0.1890	0.3070	0.2590	4.4670
STABILITY CLASS 3																	
1.5	0.0120	0.0000	0.0000	0.0000	0.0000	0.0000	0.0350	0.0120	0.0350	0.0240	0.0120	0.0000	0.0000	0.0000	0.0000	0.0000	0.1300
5.5	0.0590	0.0590	0.0590	0.0820	0.1180	0.1770	0.1890	0.1530	0.1530	0.1410	0.1890	0.0820	0.0710	0.0470	0.0590	0.0940	1.7320
10.0	1.0300	0.4710	0.2950	0.3420	0.3300	0.5540	0.4120	0.4360	0.4950	0.4360	0.5660	0.6600	0.4360	0.4710	0.8130	0.7780	8.5250
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	1.1010	0.5300	0.3540	0.4240	0.4480	0.7310	0.6360	0.6010	0.6830	0.6010	0.7670	0.7420	0.5070	0.5180	0.8720	0.8720	10.3870
STABILITY CLASS 4																	
1.5	0.0240	0.0240	0.0000	0.0000	0.0120	0.0470	0.0240	0.0120	0.0120	0.0120	0.0240	0.0120	0.0000	0.0120	0.0120	0.0710	0.2980
5.5	0.7310	0.4710	0.1890	0.3060	0.5770	0.8840	1.0490	0.7540	0.5190	0.3890	0.4830	0.5070	0.4120	0.3770	0.6840	1.3550	9.6870
10.0	1.9100	1.0720	0.9190	0.7310	1.0370	0.9190	1.2140	1.6500	1.3080	0.8960	0.7900	1.4610	1.2730	1.4850	1.9090	2.3690	20.9430
15.5	1.7800	0.8600	0.3060	0.2000	0.3180	0.3060	0.3890	0.9550	1.3790	0.6720	0.3650	0.8720	1.2610	1.9560	3.0050	2.8170	17.4410
21.5	0.4120	0.2240	0.0120	0.0000	0.0120	0.0240	0.0350	0.3420	0.2830	0.1180	0.1410	0.2470	0.2950	0.7190	1.6970	1.2370	5.7980
28.0	0.1410	0.0120	0.0000	0.0120	0.0000	0.0120	0.0000	0.0120	0.0120	0.0000	0.0000	0.0240	0.2360	0.2950	0.5890	0.4480	1.7930
ALL	4.9980	2.6630	1.4260	1.2490	1.9560	2.1920	2.7110	3.7250	3.5130	2.0870	1.8030	3.1230	3.4770	4.8440	7.8960	8.2970	55.9600
STABILITY CLASS 5																	
1.5	0.1530	0.0710	0.0000	0.0000	0.0590	0.0350	0.0820	0.0710	0.0350	0.0000	0.0350	0.0350	0.0120	0.0710	0.0590	0.0940	0.8120
5.5	0.2360	0.1300	0.1650	0.2000	0.1530	0.3060	0.2000	0.2470	0.2710	0.2000	0.2950	0.2830	0.2000	0.1300	0.3540	0.9660	4.3360
10.0	0.0470	0.0350	0.0240	0.0470	0.0590	0.0240	0.0240	0.0470	0.0240	0.0240	0.0590	0.1060	0.0940	0.0820	0.1410	0.1890	1.0260
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	0.4360	0.2360	0.1890	0.2470	0.2710	0.3650	0.3060	0.3650	0.3300	0.2240	0.3890	0.4240	0.3060	0.2830	0.5540	1.2490	6.1740
STABILITY CLASS 6																	
1.5	0.9780	0.6950	0.6360	0.5420	0.4480	0.5190	0.6720	0.6130	0.7540	0.6600	0.5770	0.7310	0.5660	0.5770	0.6720	1.3320	10.9720
5.5	0.7070	0.2830	0.1180	0.2590	0.3540	0.3180	0.3420	0.4830	0.3420	0.4950	0.4360	0.4710	0.2950	0.5540	0.4600	0.8370	6.7540
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	1.6850	0.9780	0.7540	0.8010	0.8020	0.8370	1.0140	1.0960	1.0960	1.1550	1.0130	1.2020	0.8610	1.1310	1.1320	2.1690	17.7260
ALL	8.8210	4.8080	3.2420	3.1570	3.9370	4.8310	5.3620	6.5290	6.3650	5.1510	4.6550	6.2920	5.5530	7.1650	11.0200	13.1170	100.0050

REGION: Marsland All Well Field CODE: MILDOS-AREA (02/12)
METSET: DATA: Mar3ISR.MIL

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-----INDIVIDUAL RECEPTOR LOCATION DATA, 31 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	Alliance	30.00	-45.40	-50.00	54.42	1	17	Residence 2	1.00	0.30	-4.00	1.04	1
2	Berea	21.50	-32.60	-50.00	39.05	1	18	Residence 3	-0.80	-1.90	-16.00	2.06	1
3	Chardon	22.30	35.80	-50.00	42.18	1	19	Residence 4	-0.40	-3.40	-31.00	3.42	1
4	Clinton	75.40	26.50	-50.00	79.92	1	20	Residence 5	1.90	-4.30	-36.00	4.70	1
5	Crawford	-12.10	20.80	-50.00	24.06	1	21	Residence 6	-4.70	1.86	22.00	5.05	1
6	Harrison	-50.50	22.50	-50.50	55.29	1	22	Residence 7	2.40	3.60	76.00	4.33	1
7	Hay Springs	47.10	18.80	-50.00	50.71	1	23	Residence 8	4.70	-4.40	-50.00	6.44	1
8	Hemmingford	14.30	-20.40	36.00	24.91	1	24	Unoccupied 1	-0.90	1.90	15.70	2.10	1
9	Marsland	-3.80	-6.10	-50.00	7.19	1	25	Unoccupied 2	2.00	2.80	69.00	3.44	1
10	Mitchell	-48.50	-60.00	-50.00	77.15	1	26	North Boundary #1	-1.30	5.10	35.00	5.26	1
11	Oelrichs	4.90	75.30	-50.00	75.46	1	27	East Boundary	1.70	0.00	-2.60	1.70	1
12	Rushville	66.00	22.00	-50.00	69.57	1	28	South Boundary	0.00	-0.60	0.50	0.60	1
13	Scottsbluff	-36.30	-68.90	-50.00	77.88	1	29	West Boundary	-0.70	0.00	12.20	0.70	1
14	Van Tassell	-67.50	21.00	49.00	70.69	1	30	Minatare	-22.40	-75.60	-41.40	78.85	1
15	Whitney	1.20	31.40	-50.00	31.42	1	31	North Boundary #2	-0.50	3.30	20.00	3.34	1
16	Residence 1	-0.90	-0.60	3.40	1.08	1							

MISCELLANEOUS INPUTABLE PARAMETER VALUES

DMM	DMA	TSTART	FFORI	FHAYI	FFORP	FHAYP	FPR(1)	FPR(2)	FPR(3)	ACTRAT
100.0	100.0	1.00	0.90	0.10	0.90	0.10	87000.00	4000.00	0.00	2.50

IPACT EQUALS 0, 0, 0,

JC EQUALS 1, 0, 0, 0, 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

POPULATION DISTRIBUTION

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
KILOMETERS	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	0	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	0	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	0	0	0	0	0	0	0	0	0	0	0	0
10.0-20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20.0-30.0	0	0	0	0	0	0	993	0	0	0	0	0	0	0	0	1107
30.0-40.0	87	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40.0-50.0	0	5634	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50.0-60.0	0	0	0	652	0	0	0	9859	0	0	0	0	0	279	0	0
60.0-70.0	0	0	0	999	0	0	0	0	0	0	0	0	0	0	0	0
70.0-80.0	145	0	14	30	0	0	0	0	0	15542	1831	0	0	19	0	0
1.0-80.0	232	5634	14	1681	0	0	993	9859	0	15542	1831	0	0	298	0	1107

TOTAL 1-80 KM POPULATION IS 37191 PERSONS

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NO.	KM	KM	M	KM2	CI/YEAR					PSIZE	M/SEC	SOURCE NAME	
	X	Y	Z	AREA	U-238	Th-230	Ra-226	Pb-210	Rn-222	ID	SET		EXIT VEL
1	-12.30	25.30	0.00	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.89E+03	1001	1	0.00E+00	N TREND
2	-7.33	16.21	0.00	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.22E+03	1002	1	0.00E+00	Crow Butte Resource
3	-16.52	15.44	0.00	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.66E+03	1003	1	0.00E+00	Three Crow

AMAD AND FRACTIONAL DISTRIBUTION				
SET	1.5	3.0	7.7	54.0
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

[illegible][illegible]

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.	1.105E+00	8.942E+00	1.488E-01	6.706E+00	3.226E+00	5.541E+02
GROUND	7.423E-02	7.423E-02	7.423E-02	7.423E-02	7.423E-02	7.423E-02
CLOUD	3.928E+00	3.928E+00	3.928E+00	3.928E+00	3.928E+00	3.928E+00
VEG. ING	5.368E+00	6.203E+01	5.368E+00	1.844E+01	1.502E+01	5.368E+00
MEAT ING	3.734E-01	4.314E+00	3.734E-01	1.282E+00	1.044E+00	3.734E-01
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	1.085E+01	7.929E+01	9.893E+00	3.043E+01	2.329E+01	5.639E+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	9.070E+02	1.048E+04	9.070E+02	3.115E+03	2.537E+03	9.070E+02
MEAT ING	7.479E+00	8.643E+01	7.479E+00	2.569E+01	2.092E+01	7.479E+00
MILK ING	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
RNPLUS50	2.092E+02	2.852E+03	4.754E+01	2.092E+02	2.092E+02	1.331E+03
TOTALS	1.124E+03	1.342E+04	9.620E+02	3.350E+03	2.767E+03	2.246E+03

TOTAL DOSES COMPUTED OVER ALL POPULATIONS

PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INHAL.	1.105E+00	8.942E+00	1.488E-01	6.706E+00	3.226E+00	5.541E+02
GROUND	7.423E-02	7.423E-02	7.423E-02	7.423E-02	7.423E-02	7.423E-02
CLOUD	3.928E+00	3.928E+00	3.928E+00	3.928E+00	3.928E+00	3.928E+00
VEG. ING	9.123E+02	1.054E+04	9.123E+02	3.133E+03	2.552E+03	9.123E+02
MEAT ING	7.853E+00	9.074E+01	7.853E+00	2.697E+01	2.197E+01	7.853E+00
MILK ING	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
RNPLUS50	2.092E+02	2.852E+03	4.754E+01	2.092E+02	2.092E+02	1.331E+03
TOTALS	1.134E+03	1.350E+04	9.719E+02	3.380E+03	2.791E+03	2.809E+03

METSET:

DATA: Mar3ISR.MIL

09/17/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 1 NAME=Alliance

X= 30.0KM, Y= -45.4KM, Z= -50.0M, DIST= 54.4KM, 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	7.59E-01	3.10E-01	1.13E-01	1.24E+00	5.36E-01	1.01E+01
CHILD	TOTALS	7.41E-01	4.65E-01	1.62E-01	6.61E-01	3.50E-01	1.01E+01
TEENAGE	TOTALS	7.53E-01	8.46E-01	1.96E-01	4.10E-01	2.77E-01	1.01E+01
ADULT	TOTALS	7.60E-01	8.28E-01	2.40E-01	4.18E-01	2.96E-01	1.01E+01

NUMBER 2 NAME=Berea

X= 21.5KM, Y= -32.6KM, Z= -50.0M, DIST= 39.1KM, 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	9.66E-01	3.42E-01	1.38E-01	1.30E+00	5.76E-01	1.31E+01
CHILD	TOTALS	9.47E-01	5.03E-01	1.89E-01	7.06E-01	3.83E-01	1.31E+01
TEENAGE	TOTALS	9.60E-01	8.97E-01	2.24E-01	4.46E-01	3.09E-01	1.31E+01
ADULT	TOTALS	9.67E-01	8.78E-01	2.70E-01	4.55E-01	3.29E-01	1.31E+01

REGION: Marsland All Well Field CODE: MILDOS-AREA (02/12)

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METSET:

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TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 3 NAME=Chardon

X= 22.3KM, Y= 35.8KM, Z= -50.0M, DIST= 42.2KM, 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	9.78E-01	2.78E-01	1.33E-01	9.55E-01	4.42E-01	1.36E+01
CHILD	TOTALS	9.65E-01	3.91E-01	1.69E-01	5.34E-01	3.07E-01	1.36E+01
TEENAGE	TOTALS	9.73E-01	6.69E-01	1.94E-01	3.51E-01	2.54E-01	1.36E+01
ADULT	TOTALS	9.79E-01	6.56E-01	2.27E-01	3.57E-01	2.68E-01	1.36E+01

NUMBER 4 NAME=Clinton

X= 75.4KM, Y= 26.5KM, Z= -50.0M, DIST= 79.9KM, 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	3.47E-01	1.66E-01	5.42E-02	6.96E-01	2.95E-01	4.48E+00
CHILD	TOTALS	3.37E-01	2.55E-01	8.19E-02	3.67E-01	1.89E-01	4.48E+00
TEENAGE	TOTALS	3.44E-01	4.73E-01	1.01E-01	2.23E-01	1.48E-01	4.48E+00
ADULT	TOTALS	3.48E-01	4.63E-01	1.26E-01	2.28E-01	1.59E-01	4.48E+00

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TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 5 NAME=Crawford

X= -12.1KM, Y= 20.8KM, Z= -50.0M, DIST= 24.1KM, 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	7.57E+00	6.59E-01	5.66E-01	1.09E+00	7.63E-01	1.17E+02
CHILD	TOTALS	7.56E+00	7.31E-01	5.90E-01	8.22E-01	6.77E-01	1.17E+02
TEENAGE	TOTALS	7.56E+00	9.07E-01	6.06E-01	7.05E-01	6.44E-01	1.17E+02
ADULT	TOTALS	7.57E+00	8.99E-01	6.27E-01	7.09E-01	6.53E-01	1.17E+02

NUMBER 6 NAME=Harrison

X= -50.5KM, Y= 22.5KM, Z= -50.5M, DIST= 55.3KM, 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	7.54E-01	2.17E-01	1.03E-01	7.45E-01	3.45E-01	1.05E+01
CHILD	TOTALS	7.44E-01	3.05E-01	1.32E-01	4.17E-01	2.39E-01	1.05E+01
TEENAGE	TOTALS	7.51E-01	5.22E-01	1.52E-01	2.74E-01	1.98E-01	1.05E+01
ADULT	TOTALS	7.55E-01	5.12E-01	1.77E-01	2.79E-01	2.09E-01	1.05E+01

METSET:

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TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 7 NAME=Hay Springs X= 47.1KM, Y= 18.8KM, Z= -50.0M, DIST= 50.7KM, 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	5.22E-01	1.91E-01	7.52E-02	7.36E-01	3.24E-01	7.03E+00
CHILD	TOTALS	5.11E-01	2.83E-01	1.04E-01	3.98E-01	2.15E-01	7.03E+00
TEENAGE	TOTALS	5.18E-01	5.06E-01	1.24E-01	2.50E-01	1.72E-01	7.03E+00
ADULT	TOTALS	5.22E-01	4.96E-01	1.50E-01	2.55E-01	1.83E-01	7.03E+00

NUMBER 8 NAME=Hemmingford X= 14.3KM, Y= -20.4KM, Z= 36.0M, DIST= 24.9KM, 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	1.38E+00	4.33E-01	1.90E-01	1.57E+00	7.09E-01	1.91E+01
CHILD	TOTALS	1.36E+00	6.23E-01	2.51E-01	8.63E-01	4.81E-01	1.91E+01
TEENAGE	TOTALS	1.38E+00	1.09E+00	2.93E-01	5.55E-01	3.93E-01	1.91E+01
ADULT	TOTALS	1.39E+00	1.07E+00	3.47E-01	5.66E-01	4.17E-01	1.91E+01

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TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 9 NAME=Marsland X= -3.8KM, Y= -6.1KM, Z= -50.0M, DIST= 7.2KM, 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+00	5.51E-01	3.09E-01	1.68E+00	8.24E-01	3.59E+01
CHILD	TOTALS	2.49E+00	7.39E-01	3.70E-01	9.77E-01	5.99E-01	3.59E+01
TEENAGE	TOTALS	2.50E+00	1.20E+00	4.12E-01	6.72E-01	5.11E-01	3.59E+01
ADULT	TOTALS	2.51E+00	1.18E+00	4.66E-01	6.83E-01	5.34E-01	3.59E+01

NUMBER 10 NAME=Mitchell X= -48.5KM, Y= -60.0KM, Z= -50.0M, DIST= 77.2KM, 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	3.32E-01	1.71E-01	5.28E-02	7.29E-01	3.07E-01	4.23E+00
CHILD	TOTALS	3.22E-01	2.64E-01	8.20E-02	3.82E-01	1.95E-01	4.23E+00
TEENAGE	TOTALS	3.29E-01	4.94E-01	1.02E-01	2.31E-01	1.51E-01	4.23E+00
ADULT	TOTALS	3.33E-01	4.83E-01	1.29E-01	2.36E-01	1.63E-01	4.23E+00

METSET:

DATA: Mar3ISR.MIL

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TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 11 NAME=Oelrichs X= 4.9KM, Y= 75.3KM, Z= -50.0M, DIST= 75.5KM, 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	6.65E-01	2.74E-01	9.87E-02	1.10E+00	4.74E-01	8.80E+00
CHILD	TOTALS	6.49E-01	4.12E-01	1.43E-01	5.86E-01	3.09E-01	8.80E+00
TEENAGE	TOTALS	6.60E-01	7.50E-01	1.73E-01	3.63E-01	2.45E-01	8.80E+00
ADULT	TOTALS	6.66E-01	7.34E-01	2.12E-01	3.70E-01	2.62E-01	8.80E+00

NUMBER 12 NAME=Rushville X= 66.0KM, Y= 22.0KM, Z= -50.0M, DIST= 69.6KM, 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	3.86E-01	1.71E-01	5.87E-02	6.98E-01	2.99E-01	5.05E+00
CHILD	TOTALS	3.76E-01	2.59E-01	8.65E-02	3.71E-01	1.93E-01	5.05E+00
TEENAGE	TOTALS	3.82E-01	4.76E-01	1.06E-01	2.27E-01	1.52E-01	5.05E+00
ADULT	TOTALS	3.86E-01	4.66E-01	1.31E-01	2.32E-01	1.63E-01	5.05E+00

METSET:

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TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 13 NAME=Scottsbluff X= -36.3KM, Y= -68.9KM, Z= -50.0M, DIST= 77.9KM, 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	3.95E-01	2.03E-01	6.29E-02	8.66E-01	3.65E-01	5.03E+00
CHILD	TOTALS	3.82E-01	3.14E-01	9.75E-02	4.54E-01	2.31E-01	5.03E+00
TEENAGE	TOTALS	3.91E-01	5.87E-01	1.22E-01	2.74E-01	1.80E-01	5.03E+00
ADULT	TOTALS	3.96E-01	5.74E-01	1.53E-01	2.81E-01	1.93E-01	5.03E+00

NUMBER 14 NAME=Van Tassell X= -67.5KM, Y= 21.0KM, Z= 49.0M, DIST= 70.7KM, 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	5.31E-01	1.98E-01	7.72E-02	7.64E-01	3.36E-01	7.13E+00
CHILD	TOTALS	5.20E-01	2.93E-01	1.08E-01	4.12E-01	2.22E-01	7.13E+00
TEENAGE	TOTALS	5.27E-01	5.25E-01	1.28E-01	2.59E-01	1.78E-01	7.13E+00
ADULT	TOTALS	5.31E-01	5.14E-01	1.55E-01	2.64E-01	1.90E-01	7.13E+00

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TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 15 NAME=Whitney

X= 1.2KM, Y= 31.4KM, Z= -50.0M, DIST= 31.4KM, 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	2.14E+00	3.94E-01	2.50E-01	1.06E+00	5.56E-01	3.12E+01
CHILD	TOTALS	2.13E+00	5.06E-01	2.87E-01	6.46E-01	4.22E-01	3.12E+01
TEENAGE	TOTALS	2.14E+00	7.80E-01	3.12E-01	4.66E-01	3.70E-01	3.12E+01
ADULT	TOTALS	2.14E+00	7.67E-01	3.44E-01	4.72E-01	3.84E-01	3.12E+01

NUMBER 16 NAME=Residence 1

X= -0.9KM, Y= -0.6KM, Z= 3.4M, 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	3.42E+00	7.04E-01	4.10E-01	2.07E+00	1.04E+00	4.93E+01
CHILD	TOTALS	3.39E+00	9.33E-01	4.84E-01	1.22E+00	7.62E-01	4.93E+01
TEENAGE	TOTALS	3.41E+00	1.49E+00	5.35E-01	8.51E-01	6.55E-01	4.93E+01
ADULT	TOTALS	3.42E+00	1.47E+00	6.01E-01	8.64E-01	6.84E-01	4.93E+01

METSET:

DATA: Mar3ISR.MIL

09/17/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 17 NAME=Residence 2 X= 1.0KM, Y= 0.3KM, Z= -4.0M, DIST= 1.0KM, 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	3.25E+00	6.60E-01	3.87E-01	1.93E+00	9.69E-01	4.69E+01
CHILD	TOTALS	3.23E+00	8.73E-01	4.56E-01	1.14E+00	7.14E-01	4.69E+01
TEENAGE	TOTALS	3.24E+00	1.40E+00	5.03E-01	7.97E-01	6.15E-01	4.69E+01
ADULT	TOTALS	3.25E+00	1.37E+00	5.64E-01	8.09E-01	6.42E-01	4.69E+01

NUMBER 18 NAME=Residence 3 X= -0.8KM, Y= -1.9KM, Z= -16.0M, DIST= 2.1KM, 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	3.22E+00	6.83E-01	3.91E-01	2.04E+00	1.01E+00	4.63E+01
CHILD	TOTALS	3.20E+00	9.11E-01	4.65E-01	1.20E+00	7.41E-01	4.63E+01
TEENAGE	TOTALS	3.21E+00	1.47E+00	5.15E-01	8.30E-01	6.35E-01	4.63E+01
ADULT	TOTALS	3.22E+00	1.44E+00	5.81E-01	8.42E-01	6.63E-01	4.63E+01

METSET:

DATA: Mar3ISR.MIL

09/17/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 19 NAME=Residence 4 X= -0.4KM, Y= -3.4KM, Z= -31.0M, DIST= 3.4KM, 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	2.91E+00	6.33E-01	3.57E-01	1.92E+00	9.46E-01	4.18E+01
CHILD	TOTALS	2.89E+00	8.49E-01	4.27E-01	1.12E+00	6.88E-01	4.18E+01
TEENAGE	TOTALS	2.91E+00	1.38E+00	4.74E-01	7.72E-01	5.88E-01	4.18E+01
ADULT	TOTALS	2.92E+00	1.35E+00	5.36E-01	7.84E-01	6.14E-01	4.18E+01

NUMBER 20 NAME=Residence 5 X= 1.9KM, Y= -4.3KM, Z= -36.0M, DIST= 4.7KM, 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	2.52E+00	5.61E-01	3.11E-01	1.72E+00	8.43E-01	3.60E+01
CHILD	TOTALS	2.50E+00	7.55E-01	3.74E-01	1.00E+00	6.10E-01	3.60E+01
TEENAGE	TOTALS	2.51E+00	1.23E+00	4.17E-01	6.86E-01	5.20E-01	3.60E+01
ADULT	TOTALS	2.52E+00	1.21E+00	4.73E-01	6.97E-01	5.44E-01	3.60E+01

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TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 21 NAME=Residence 6 X= -4.7KM, Y= 1.9KM, Z= 22.0M, DIST= 5.1KM, 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	4.20E+00	7.80E-01	4.84E-01	2.16E+00	1.11E+00	6.12E+01
CHILD	TOTALS	4.17E+00	1.01E+00	5.59E-01	1.30E+00	8.39E-01	6.12E+01
TEENAGE	TOTALS	4.19E+00	1.58E+00	6.10E-01	9.29E-01	7.32E-01	6.12E+01
ADULT	TOTALS	4.20E+00	1.55E+00	6.76E-01	9.42E-01	7.60E-01	6.12E+01

NUMBER 22 NAME=Residence 7 X= 2.4KM, Y= 3.6KM, Z= 76.0M, 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	3.13E+00	5.91E-01	3.59E-01	1.67E+00	8.53E-01	4.56E+01
CHILD	TOTALS	3.11E+00	7.72E-01	4.18E-01	1.00E+00	6.37E-01	4.56E+01
TEENAGE	TOTALS	3.13E+00	1.21E+00	4.58E-01	7.07E-01	5.53E-01	4.56E+01
ADULT	TOTALS	3.14E+00	1.19E+00	5.10E-01	7.17E-01	5.76E-01	4.56E+01

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TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 23 NAME=Residence 8 X= 4.7KM, Y= -4.4KM, Z= -50.0M, DIST= 6.4KM, 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	2.09E+00	4.58E-01	2.56E-01	1.40E+00	6.87E-01	3.00E+01
CHILD	TOTALS	2.07E+00	6.16E-01	3.07E-01	8.15E-01	4.99E-01	3.00E+01
TEENAGE	TOTALS	2.09E+00	1.00E+00	3.42E-01	5.60E-01	4.25E-01	3.00E+01
ADULT	TOTALS	2.09E+00	9.84E-01	3.87E-01	5.69E-01	4.45E-01	3.00E+01

NUMBER 24 NAME=Unoccupied 1 X= -0.9KM, Y= 1.9KM, Z= 15.7M, DIST= 2.1KM, 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	3.83E+00	7.36E-01	4.46E-01	2.08E+00	1.06E+00	5.55E+01
CHILD	TOTALS	3.80E+00	9.62E-01	5.20E-01	1.25E+00	7.94E-01	5.55E+01
TEENAGE	TOTALS	3.82E+00	1.51E+00	5.70E-01	8.81E-01	6.89E-01	5.55E+01
ADULT	TOTALS	3.83E+00	1.49E+00	6.35E-01	8.94E-01	7.17E-01	5.55E+01

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TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 25 NAME=Unoccupied 2 X= 2.0KM, Y= 2.8KM, Z= 69.0M, DIST= 3.4KM, 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	3.22E+00	6.18E-01	3.73E-01	1.76E+00	8.95E-01	4.68E+01
CHILD	TOTALS	3.20E+00	8.09E-01	4.35E-01	1.05E+00	6.66E-01	4.68E+01
TEENAGE	TOTALS	3.21E+00	1.28E+00	4.77E-01	7.40E-01	5.78E-01	4.68E+01
ADULT	TOTALS	3.22E+00	1.25E+00	5.32E-01	7.51E-01	6.01E-01	4.68E+01

NUMBER 26 NAME=North Boundary #1 X= -1.3KM, Y= 5.1KM, Z= 35.0M, DIST= 5.3KM, 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	4.45E+00	7.70E-01	4.95E-01	2.05E+00	1.08E+00	6.52E+01
CHILD	TOTALS	4.43E+00	9.85E-01	5.65E-01	1.25E+00	8.25E-01	6.52E+01
TEENAGE	TOTALS	4.44E+00	1.51E+00	6.13E-01	9.08E-01	7.25E-01	6.52E+01
ADULT	TOTALS	4.45E+00	1.49E+00	6.74E-01	9.20E-01	7.52E-01	6.52E+01

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TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 27 NAME=East Boundary X= 1.7KM, Y= 0.0KM, Z= -2.6M, DIST= 1.7KM, 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	3.10E+00	6.37E-01	3.70E-01	1.88E+00	9.39E-01	4.47E+01
CHILD	TOTALS	3.08E+00	8.46E-01	4.38E-01	1.11E+00	6.90E-01	4.47E+01
TEENAGE	TOTALS	3.09E+00	1.36E+00	4.84E-01	7.71E-01	5.94E-01	4.47E+01
ADULT	TOTALS	3.10E+00	1.33E+00	5.44E-01	7.83E-01	6.19E-01	4.47E+01

NUMBER 28 NAME=South Boundary X= 0.0KM, Y= -0.6KM, Z= 0.5M, DIST= 0.6KM, 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	3.32E+00	6.89E-01	3.99E-01	2.03E+00	1.02E+00	4.79E+01
CHILD	TOTALS	3.30E+00	9.14E-01	4.73E-01	1.20E+00	7.46E-01	4.79E+01
TEENAGE	TOTALS	3.32E+00	1.47E+00	5.23E-01	8.34E-01	6.41E-01	4.79E+01
ADULT	TOTALS	3.33E+00	1.44E+00	5.87E-01	8.47E-01	6.69E-01	4.79E+01

METSET:

DATA: Mar3ISR.MIL

09/17/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 29 NAME=West Boundary X= -0.7KM, Y= 0.0KM, Z= 12.2M, DIST= 0.7KM, 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	3.56E+00	7.21E-01	4.24E-01	2.10E+00	1.06E+00	5.14E+01
CHILD	TOTALS	3.53E+00	9.52E-01	4.99E-01	1.24E+00	7.80E-01	5.14E+01
TEENAGE	TOTALS	3.55E+00	1.52E+00	5.50E-01	8.69E-01	6.72E-01	5.14E+01
ADULT	TOTALS	3.56E+00	1.49E+00	6.17E-01	8.82E-01	7.01E-01	5.14E+01

NUMBER 30 NAME=Minatare X= -22.4KM, Y= -75.6KM, Z= -41.4M, DIST= 78.8KM, 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	4.74E-01	2.50E-01	7.61E-02	1.07E+00	4.50E-01	5.99E+00
CHILD	TOTALS	4.57E-01	3.87E-01	1.19E-01	5.61E-01	2.85E-01	5.99E+00
TEENAGE	TOTALS	4.68E-01	7.26E-01	1.49E-01	3.38E-01	2.21E-01	5.99E+00
ADULT	TOTALS	4.74E-01	7.10E-01	1.88E-01	3.46E-01	2.38E-01	5.99E+00

REGION: Marsland All Well Field CODE: MILDOS-AREA (02/12)

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METSET:

DATA: Mar3ISR.MIL

09/17/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 31 NAME=North Boundary #2 X= -0.5KM, Y= 3.3KM, Z= 20.0M, DIST= 3.3KM, 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	3.93E+00	7.27E-01	4.50E-01	2.01E+00	1.04E+00	5.73E+01
CHILD	TOTALS	3.91E+00	9.42E-01	5.20E-01	1.21E+00	7.81E-01	5.73E+01
TEENAGE	TOTALS	3.92E+00	1.47E+00	5.68E-01	8.65E-01	6.81E-01	5.73E+01
ADULT	TOTALS	3.93E+00	1.44E+00	6.30E-01	8.77E-01	7.08E-01	5.73E+01

Program execution time = 0.35 seconds

**MILDOS-AREA
RADIATION DOSES FROM
CAMECO RESOURCES
MARSLAND EXPANSION AREA
IN-SITU URANIUM RECOVERY OPERATION**

Appendix B4

September 24, 2013

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Appendix	Title	Radon Source	Weather Data	Waste Water Flow Rate
B4	MARMU A-F	MU A-F	MEA	315

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METSET:

DATA: MarMUA-F.MIL

09/18/13

JOINT FREQUENCY IN PERCENT, DIRECTION INDICATES WHERE WIND IS FROM FREQWS=0.11872,0.21958,0.27611,0.26217,0.08349,0.04013

MPH	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTALS
STABILITY CLASS 1																	
1.5	0.1150	0.0260	0.0770	0.0770	0.0890	0.0770	0.1150	0.1660	0.1400	0.3060	0.1150	0.0770	0.1020	0.0890	0.0640	0.0510	1.6860
5.5	0.2670	0.1510	0.1860	0.1860	0.1860	0.3140	0.1980	0.2670	0.2560	0.3260	0.2560	0.4190	0.1400	0.1160	0.1980	0.2210	3.6870
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	0.3820	0.1770	0.2630	0.2630	0.2750	0.3910	0.3130	0.4330	0.3960	0.6320	0.3710	0.4960	0.2420	0.2050	0.2620	0.2720	5.3730
STABILITY CLASS 2																	
1.5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0260	0.0130	0.0380	0.0380	0.0640	0.0000	0.0000	0.0000	0.0130	0.0000	0.0000	0.1920
5.5	0.0350	0.0230	0.0930	0.0350	0.0580	0.1160	0.1280	0.1280	0.0810	0.1980	0.0930	0.0930	0.0470	0.0470	0.0810	0.0230	1.2790
10.0	0.1860	0.1980	0.1630	0.1400	0.1280	0.1740	0.2440	0.1630	0.2440	0.2210	0.2330	0.2090	0.1160	0.1280	0.2210	0.2330	3.0010
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	0.2210	0.2210	0.2560	0.1750	0.1860	0.3160	0.3850	0.3290	0.3630	0.4830	0.3260	0.3020	0.1630	0.1880	0.3020	0.2560	4.4720
STABILITY CLASS 3																	
1.5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0130	0.0130	0.0130	0.0260	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0650
5.5	0.0120	0.0120	0.0470	0.0230	0.0700	0.0700	0.0700	0.0700	0.0930	0.0470	0.0700	0.0350	0.0470	0.0000	0.0230	0.0120	0.7010
10.0	0.6980	0.3490	0.2090	0.2560	0.2790	0.5230	0.4770	0.4190	0.3840	0.3950	0.4540	0.5120	0.3140	0.3020	0.4300	0.5120	6.5130
15.5	0.3720	0.1630	0.0930	0.1400	0.0930	0.1280	0.0700	0.1050	0.2210	0.1630	0.2330	0.1860	0.1400	0.2090	0.4070	0.3370	3.0600
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	1.0820	0.5240	0.3490	0.4190	0.4420	0.7210	0.6300	0.6070	0.7110	0.6310	0.7570	0.7330	0.5010	0.5110	0.8600	0.8610	10.3390
STABILITY CLASS 4																	
1.5	0.0260	0.0260	0.0000	0.0000	0.0000	0.0260	0.0130	0.0130	0.0130	0.0130	0.0130	0.0130	0.0000	0.0130	0.0130	0.0260	0.2080
5.5	0.3020	0.1980	0.0810	0.1400	0.3020	0.4190	0.4650	0.3020	0.2210	0.1740	0.1160	0.1860	0.1400	0.0930	0.2790	0.7910	4.2090
10.0	1.2700	0.7440	0.4880	0.5000	0.8020	1.0470	1.3370	1.1860	0.9420	0.6860	0.7790	1.0470	0.7330	0.8260	1.2210	1.8140	15.4220
15.5	2.3400	1.2210	0.7680	0.5470	0.7680	0.5810	0.7680	1.5930	1.6750	0.9190	0.6630	1.3370	1.6860	2.3140	2.8720	3.1050	23.1570
21.5	0.6400	0.3370	0.0580	0.0350	0.0580	0.0810	0.0930	0.3950	0.5580	0.2330	0.1740	0.3950	0.5580	1.0120	2.2100	1.5120	8.3490
28.0	0.3840	0.1160	0.0120	0.0120	0.0000	0.0120	0.0000	0.1860	0.1050	0.0350	0.0350	0.1160	0.3140	0.5230	1.2090	0.9540	4.0130
ALL	4.9620	2.6420	1.4070	1.2340	1.9300	2.1660	2.6760	3.6750	3.5140	2.0600	1.7800	3.0940	3.4310	4.7810	7.8040	8.2020	55.3580
STABILITY CLASS 5																	
1.5	0.1280	0.0640	0.0000	0.0000	0.0260	0.0380	0.0640	0.0640	0.0260	0.0000	0.0380	0.0130	0.0130	0.0260	0.0380	0.0640	0.6020
5.5	0.1510	0.0930	0.0930	0.1160	0.1400	0.2330	0.1630	0.1740	0.1740	0.1050	0.1510	0.1740	0.1280	0.1400	0.2670	0.5810	2.8830
10.0	0.1630	0.0810	0.0930	0.1280	0.1050	0.0930	0.0810	0.1280	0.1280	0.1160	0.1980	0.2330	0.1630	0.1160	0.2560	0.5930	2.6750
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	0.4420	0.2380	0.1860	0.2440	0.2710	0.3640	0.3080	0.3660	0.3280	0.2210	0.3870	0.4200	0.3040	0.2820	0.5610	1.2380	6.1600
STABILITY CLASS 6																	
1.5	0.8160	0.6500	0.5610	0.4850	0.4210	0.4340	0.5610	0.4850	0.6380	0.5740	0.4460	0.5740	0.5230	0.5230	0.4460	0.9820	9.1190
5.5	0.9190	0.3720	0.2330	0.3490	0.4070	0.4300	0.5000	0.6400	0.5120	0.6160	0.5930	0.6630	0.3720	0.6400	0.7090	1.2440	9.1990
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	1.7350	1.0220	0.7940	0.8340	0.8280	0.8640	1.0610	1.1250	1.1500	1.1900	1.0390	1.2370	0.8950	1.1630	1.1550	2.2260	18.3180
ALL	8.8240	4.8240	3.2550	3.1690	3.9320	4.8220	5.3730	6.5350	6.4620	5.2170	4.6600	6.2820	5.5360	7.1300	10.9440	13.0550	100.0200

REGION: Marsland All Well Field CODE: MILDOS-AREA (02/12)
 METSET: DATA: MarMUA-F.MIL

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 09/18/13

-----INDIVIDUAL RECEPTOR LOCATION DATA, 31 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	Alliance	30.00	-45.40	-50.00	54.42	1	17	Residence 2	1.00	0.30	-4.00	1.04	1
2	Berea	21.50	-32.60	-50.00	39.05	1	18	Residence 3	-0.80	-1.90	-16.00	2.06	1
3	Chardon	22.30	35.80	-50.00	42.18	1	19	Residence 4	-0.40	-3.40	-31.00	3.42	1
4	Clinton	75.40	26.50	-50.00	79.92	1	20	Residence 5	1.90	-4.30	-36.00	4.70	1
5	Crawford	-12.10	20.80	-50.00	24.06	1	21	Residence 6	-4.70	1.86	22.00	5.05	1
6	Harrison	-50.50	22.50	-50.00	55.29	1	22	Residence 7	2.40	3.60	76.00	4.33	1
7	Hay Springs	47.10	18.80	-50.00	50.71	1	23	Residence 8	4.70	-4.40	-50.00	6.44	1
8	Hemmingford	14.30	-20.40	36.00	24.91	1	24	Unoccupied 1	-0.90	1.90	15.70	2.10	1
9	Marsland	-3.80	-6.10	-50.00	7.19	1	25	Unoccupied 2	2.00	2.80	69.00	3.44	1
10	Mitchell	-48.50	-60.00	-50.00	77.15	1	26	North Boundary #1	-1.30	5.10	34.70	5.26	1
11	Oelrichs	4.90	75.30	-50.00	75.46	1	27	East Boundary	1.70	0.00	-2.60	1.70	1
12	Rushville	66.00	22.00	-50.00	69.57	1	28	South Boundary	0.00	-0.60	0.50	0.60	1
13	Scottsbluff	-36.30	-68.90	-50.00	77.88	1	29	West Boundary	-0.70	0.00	12.20	0.70	1
14	Van Tassell	-67.50	21.00	49.00	70.69	1	30	Minatare	-22.40	-75.60	-41.40	78.85	1
15	Whitney	1.20	31.40	-50.00	31.42	1	31	North Boundary #2	-0.50	3.30	19.70	3.34	1
16	Residence 1	-0.80	-0.60	3.40	1.00	1							

MISCELLANEOUS INPUTABLE PARAMETER VALUES

DMM	DMA	TSTART	FFORI	FHAYI	FFORP	FHAYP	FPR(1)	FPR(2)	FPR(3)	ACTRAT
100.0	100.0	1.00	0.90	0.10	0.90	0.10	87000.00	4000.00	0.00	2.50

IPACT EQUALS 0, 0, 0, 0, 0, 0,

JC EQUALS 1, 0, 0, 0, 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: Marsland All Well Field
METSET:

CODE: MILDOS-AREA (02/12)
DATA: MarMUA-F.MIL

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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	0	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	0	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	0	0	0	0	0	0	0	0	0	0	0	0
10.0-20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20.0-30.0	0	0	0	0	0	0	993	0	0	0	0	0	0	0	0	1107
30.0-40.0	87	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40.0-50.0	0	5634	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50.0-60.0	0	0	0	652	0	0	0	9859	0	0	0	0	0	279	0	0
60.0-70.0	0	0	0	999	0	0	0	0	0	0	0	0	0	0	0	0
70.0-80.0	145	0	14	30	0	0	0	0	0	15542	1831	0	0	19	0	0
1.0-80.0	232	5634	14	1681	0	0	993	9859	0	15542	1831	0	0	298	0	1107

TOTAL 1-80 KM POPULATION IS 37191 PERSONS

NUMBER OF SOURCES= 6

NO.	KM	KM	M	KM2	CI/YEAR					PSIZE		M/SEC	SOURCE NAME
	X	Y	Z	AREA	U-238	Th-230	Ra-226	Pb-210	Rn-222	ID	SET	EXIT VEL	
1	-0.86	2.88	30.00	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.68E+03	1001	1	0.00E+00	MU-A
2	1.12	-1.02	-15.00	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.23E+03	1002	1	0.00E+00	MU-B
3	1.74	-2.33	-20.00	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.88E+02	1003	1	0.00E+00	MU-C
4	2.42	-3.56	-20.00	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.54E+03	1004	1	0.00E+00	MU-D
5	2.74	-3.98	-20.00	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.31E+03	1005	1	0.00E+00	MU-E
6	2.90	-4.30	-20.00	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.31E+03	1006	1	0.00E+00	MU-F

	INPUT TAILS ACTIVITIES, PCI/G			
SET	URANIUM	THORIUM	RADIUM	LEAD
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

AMAD AND FRACTIONAL DISTRIBUTION				
SET	1.5	3.0	7.7	54.0
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

[illegible][illegible]

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.	2.754E-01	2.230E+00	3.595E-02	1.672E+00	8.041E-01	1.156E+02
GROUND	1.609E-02	1.609E-02	1.609E-02	1.609E-02	1.609E-02	1.609E-02
CLOUD	9.727E-01	9.727E-01	9.727E-01	9.727E-01	9.727E-01	9.727E-01
VEG. ING	1.302E+00	1.504E+01	1.302E+00	4.472E+00	3.642E+00	1.302E+00
MEAT ING	9.056E-02	1.046E+00	9.056E-02	3.110E-01	2.533E-01	9.056E-02
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	2.657E+00	1.931E+01	2.417E+00	7.444E+00	5.689E+00	1.180E+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	2.200E+02	2.542E+03	2.200E+02	7.555E+02	6.154E+02	2.200E+02
MEAT ING	1.814E+00	2.096E+01	1.814E+00	6.231E+00	5.075E+00	1.814E+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	2.218E+02	2.563E+03	2.218E+02	7.617E+02	6.205E+02	2.218E+02

TOTAL DOSES COMPUTED OVER ALL POPULATIONS

PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INHAL.	2.754E-01	2.230E+00	3.595E-02	1.672E+00	8.041E-01	1.156E+02
GROUND	1.609E-02	1.609E-02	1.609E-02	1.609E-02	1.609E-02	1.609E-02
CLOUD	9.727E-01	9.727E-01	9.727E-01	9.727E-01	9.727E-01	9.727E-01
VEG. ING	2.213E+02	2.557E+03	2.213E+02	7.600E+02	6.190E+02	2.213E+02
MEAT ING	1.905E+00	2.201E+01	1.905E+00	6.542E+00	5.328E+00	1.905E+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	2.245E+02	2.582E+03	2.242E+02	7.692E+02	6.262E+02	3.398E+02

REGION: Marsland All Well Field CODE: MILDOS-AREA (02/12)

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METSET:

DATA: MarMUA-F.MIL

09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 1 NAME=Alliance X= 30.0KM, Y= -45.4KM, Z= -50.0M, DIST= 54.4KM, 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	3.07E-01	9.02E-02	4.14E-02	3.18E-01	1.46E-01	4.26E+00
CHILD	TOTALS	3.02E-01	1.28E-01	5.37E-02	1.77E-01	1.00E-01	4.26E+00
TEENAGE	TOTALS	3.05E-01	2.22E-01	6.21E-02	1.15E-01	8.22E-02	4.26E+00
ADULT	TOTALS	3.07E-01	2.18E-01	7.30E-02	1.17E-01	8.69E-02	4.26E+00

NUMBER 2 NAME=Berea X= 21.5KM, Y= -32.6KM, Z= -50.0M, DIST= 39.1KM, 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	4.54E-01	1.08E-01	5.69E-02	3.44E-01	1.65E-01	6.45E+00
CHILD	TOTALS	4.49E-01	1.47E-01	6.97E-02	1.97E-01	1.18E-01	6.45E+00
TEENAGE	TOTALS	4.52E-01	2.44E-01	7.85E-02	1.33E-01	9.93E-02	6.45E+00
ADULT	TOTALS	4.54E-01	2.40E-01	8.98E-02	1.35E-01	1.04E-01	6.45E+00

METSET:

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09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 3 NAME=Chardon

X= 22.3KM, Y= 35.8KM, Z= -50.0M, DIST= 42.2KM, 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	2.39E-01	7.84E-02	3.34E-02	2.89E-01	1.30E-01	3.28E+00
CHILD	TOTALS	2.35E-01	1.14E-01	4.48E-02	1.58E-01	8.74E-02	3.28E+00
TEENAGE	TOTALS	2.38E-01	2.00E-01	5.25E-02	1.01E-01	7.10E-02	3.28E+00
ADULT	TOTALS	2.40E-01	1.96E-01	6.26E-02	1.03E-01	7.54E-02	3.28E+00

NUMBER 4 NAME=Clinton

X= 75.4KM, Y= 26.5KM, Z= -50.0M, DIST= 79.9KM, 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	1.21E-01	5.26E-02	1.84E-02	2.14E-01	9.19E-02	1.59E+00
CHILD	TOTALS	1.18E-01	7.96E-02	2.69E-02	1.14E-01	5.95E-02	1.59E+00
TEENAGE	TOTALS	1.20E-01	1.46E-01	3.28E-02	7.00E-02	4.69E-02	1.59E+00
ADULT	TOTALS	1.22E-01	1.43E-01	4.05E-02	7.15E-02	5.03E-02	1.59E+00

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TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 5 NAME=Crawford

X= -12.1KM, Y= 20.8KM, Z= -50.0M, DIST= 24.1KM, 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	4.32E-01	9.52E-02	5.34E-02	2.90E-01	1.43E-01	6.18E+00
CHILD	TOTALS	4.28E-01	1.28E-01	6.40E-02	1.69E-01	1.04E-01	6.18E+00
TEENAGE	TOTALS	4.30E-01	2.08E-01	7.12E-02	1.16E-01	8.84E-02	6.18E+00
ADULT	TOTALS	4.32E-01	2.04E-01	8.05E-02	1.18E-01	9.24E-02	6.18E+00

NUMBER 6 NAME=Harrison

X= -50.5KM, Y= 22.5KM, Z= -50.0M, DIST= 55.3KM, 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	1.53E-01	5.50E-02	2.21E-02	2.09E-01	9.26E-02	2.07E+00
CHILD	TOTALS	1.50E-01	8.09E-02	3.03E-02	1.14E-01	6.16E-02	2.07E+00
TEENAGE	TOTALS	1.52E-01	1.44E-01	3.60E-02	7.17E-02	4.96E-02	2.07E+00
ADULT	TOTALS	1.53E-01	1.41E-01	4.34E-02	7.31E-02	5.28E-02	2.07E+00

METSET:

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TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 7 NAME=Hay Springs

X= 47.1KM, Y= 18.8KM, Z= -50.0M, DIST= 50.7KM, 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	1.97E-01	6.37E-02	2.75E-02	2.33E-01	1.05E-01	2.70E+00
CHILD	TOTALS	1.94E-01	9.20E-02	3.66E-02	1.28E-01	7.09E-02	2.70E+00
TEENAGE	TOTALS	1.96E-01	1.61E-01	4.28E-02	8.19E-02	5.77E-02	2.70E+00
ADULT	TOTALS	1.97E-01	1.58E-01	5.09E-02	8.35E-02	6.12E-02	2.70E+00

NUMBER 8 NAME=Hemmingford

X= 14.3KM, Y= -20.4KM, Z= 36.0M, DIST= 24.9KM, 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	8.48E-01	1.55E-01	9.52E-02	4.35E-01	2.23E-01	1.24E+01
CHILD	TOTALS	8.43E-01	2.02E-01	1.10E-01	2.61E-01	1.67E-01	1.24E+01
TEENAGE	TOTALS	8.47E-01	3.17E-01	1.21E-01	1.85E-01	1.45E-01	1.24E+01
ADULT	TOTALS	8.49E-01	3.12E-01	1.34E-01	1.88E-01	1.51E-01	1.24E+01

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METSET:

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TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 9 NAME=Marsland

X= -3.8KM, Y= -6.1KM, Z= -50.0M, DIST= 7.2KM, 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	1.19E+00	1.37E-01	1.11E-01	2.57E-01	1.66E-01	1.80E+01
CHILD	TOTALS	1.19E+00	1.57E-01	1.17E-01	1.82E-01	1.42E-01	1.80E+01
TEENAGE	TOTALS	1.19E+00	2.06E-01	1.22E-01	1.50E-01	1.33E-01	1.80E+01
ADULT	TOTALS	1.19E+00	2.04E-01	1.28E-01	1.51E-01	1.35E-01	1.80E+01

NUMBER 10 NAME=Mitchell

X= -48.5KM, Y= -60.0KM, Z= -50.0M, DIST= 77.2KM, 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	8.83E-02	4.39E-02	1.38E-02	1.86E-01	7.85E-02	1.13E+00
CHILD	TOTALS	8.55E-02	6.76E-02	2.13E-02	9.76E-02	5.00E-02	1.13E+00
TEENAGE	TOTALS	8.73E-02	1.26E-01	2.64E-02	5.92E-02	3.89E-02	1.13E+00
ADULT	TOTALS	8.84E-02	1.23E-01	3.32E-02	6.05E-02	4.18E-02	1.13E+00

METSET:

DATA: MarMUA-F.MIL

09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 11 NAME=Oelrichs X= 4.9KM, Y= 75.3KM, Z= -50.0M, DIST= 75.5KM, 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	1.35E-01	6.19E-02	2.07E-02	2.57E-01	1.09E-01	1.75E+00
CHILD	TOTALS	1.31E-01	9.45E-02	3.09E-02	1.36E-01	7.03E-02	1.75E+00
TEENAGE	TOTALS	1.33E-01	1.74E-01	3.80E-02	8.29E-02	5.51E-02	1.75E+00
ADULT	TOTALS	1.35E-01	1.71E-01	4.73E-02	8.47E-02	5.91E-02	1.75E+00

NUMBER 12 NAME=Rushville X= 66.0KM, Y= 22.0KM, Z= -50.0M, DIST= 69.6KM, 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	1.42E-01	5.60E-02	2.09E-02	2.21E-01	9.62E-02	1.89E+00
CHILD	TOTALS	1.38E-01	8.37E-02	2.97E-02	1.19E-01	6.31E-02	1.89E+00
TEENAGE	TOTALS	1.41E-01	1.52E-01	3.57E-02	7.38E-02	5.02E-02	1.89E+00
ADULT	TOTALS	1.42E-01	1.48E-01	4.36E-02	7.53E-02	5.36E-02	1.89E+00

METSET:

DATA: MarMUA-F.MIL

09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 13 NAME=Scottsbluff X= -36.3KM, Y= -68.9KM, Z= -50.0M, DIST= 77.9KM, 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	1.03E-01	4.96E-02	1.60E-02	2.08E-01	8.83E-02	1.33E+00
CHILD	TOTALS	9.99E-02	7.62E-02	2.43E-02	1.10E-01	5.64E-02	1.33E+00
TEENAGE	TOTALS	1.02E-01	1.41E-01	3.01E-02	6.67E-02	4.40E-02	1.33E+00
ADULT	TOTALS	1.03E-01	1.38E-01	3.77E-02	6.82E-02	4.73E-02	1.33E+00

NUMBER 14 NAME=Van Tassell X= -67.5KM, Y= 21.0KM, Z= 49.0M, DIST= 70.7KM, 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	1.21E-01	5.16E-02	1.82E-02	2.09E-01	8.99E-02	1.59E+00
CHILD	TOTALS	1.18E-01	7.79E-02	2.65E-02	1.11E-01	5.83E-02	1.59E+00
TEENAGE	TOTALS	1.20E-01	1.43E-01	3.22E-02	6.85E-02	4.60E-02	1.59E+00
ADULT	TOTALS	1.21E-01	1.39E-01	3.98E-02	7.00E-02	4.93E-02	1.59E+00

METSET:

DATA: MarMUA-F.MIL

09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 15 NAME=Whitney

X= 1.2KM, Y= 31.4KM, Z= -50.0M, DIST= 31.4KM, 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	3.40E-01	8.98E-02	4.42E-02	3.03E-01	1.42E-01	4.77E+00
CHILD	TOTALS	3.35E-01	1.25E-01	5.57E-02	1.70E-01	9.89E-02	4.77E+00
TEENAGE	TOTALS	3.38E-01	2.13E-01	6.36E-02	1.13E-01	8.23E-02	4.77E+00
ADULT	TOTALS	3.40E-01	2.09E-01	7.38E-02	1.15E-01	8.67E-02	4.77E+00

NUMBER 16 NAME=Residence 1

X= -0.8KM, Y= -0.6KM, Z= 3.4M, DIST= 1.0KM, 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	5.47E+00	3.73E-01	3.38E-01	5.38E-01	4.13E-01	8.58E+01
CHILD	TOTALS	5.47E+00	4.01E-01	3.47E-01	4.36E-01	3.80E-01	8.58E+01
TEENAGE	TOTALS	5.47E+00	4.68E-01	3.53E-01	3.91E-01	3.68E-01	8.58E+01
ADULT	TOTALS	5.47E+00	4.65E-01	3.61E-01	3.93E-01	3.71E-01	8.58E+01

METSET:

DATA: MarMUA-F.MIL

09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 17 NAME=Residence 2 X= 1.0KM, Y= 0.3KM, Z= -4.0M, DIST= 1.0KM, 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	8.22E+00	3.78E-01	3.49E-01	5.15E-01	4.11E-01	1.31E+02
CHILD	TOTALS	8.22E+00	4.01E-01	3.56E-01	4.30E-01	3.84E-01	1.31E+02
TEENAGE	TOTALS	8.22E+00	4.57E-01	3.61E-01	3.93E-01	3.73E-01	1.31E+02
ADULT	TOTALS	8.22E+00	4.54E-01	3.68E-01	3.94E-01	3.76E-01	1.31E+02

NUMBER 18 NAME=Residence 3 X= -0.8KM, Y= -1.9KM, Z= -16.0M, DIST= 2.1KM, 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	4.73E+00	3.25E-01	2.97E-01	4.57E-01	3.57E-01	7.40E+01
CHILD	TOTALS	4.73E+00	3.47E-01	3.04E-01	3.75E-01	3.31E-01	7.40E+01
TEENAGE	TOTALS	4.73E+00	4.01E-01	3.09E-01	3.39E-01	3.20E-01	7.40E+01
ADULT	TOTALS	4.73E+00	3.99E-01	3.15E-01	3.41E-01	3.23E-01	7.40E+01

METSET:

DATA: MarMUA-F.MIL

09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 19 NAME=Residence 4 X= -0.4KM, Y= -3.4KM, Z= -31.0M, DIST= 3.4KM, 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	4.48E+00	2.92E-01	2.69E-01	3.98E-01	3.18E-01	7.03E+01
CHILD	TOTALS	4.47E+00	3.10E-01	2.75E-01	3.32E-01	2.97E-01	7.03E+01
TEENAGE	TOTALS	4.48E+00	3.53E-01	2.79E-01	3.04E-01	2.88E-01	7.03E+01
ADULT	TOTALS	4.48E+00	3.51E-01	2.84E-01	3.05E-01	2.91E-01	7.03E+01

NUMBER 20 NAME=Residence 5 X= 1.9KM, Y= -4.3KM, Z= -36.0M, DIST= 4.7KM, 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	1.33E+01	3.07E-01	2.91E-01	3.80E-01	3.25E-01	2.18E+02
CHILD	TOTALS	1.33E+01	3.19E-01	2.95E-01	3.35E-01	3.10E-01	2.18E+02
TEENAGE	TOTALS	1.33E+01	3.49E-01	2.98E-01	3.15E-01	3.04E-01	2.18E+02
ADULT	TOTALS	1.33E+01	3.48E-01	3.01E-01	3.16E-01	3.06E-01	2.18E+02

REGION: Marsland All Well Field CODE: MILDOS-AREA (02/12)

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METSET:

DATA: MarMUA-F.MIL

09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 21 NAME=Residence 6 X= -4.7KM, Y= 1.9KM, Z= 22.0M, DIST= 5.1KM, 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	2.09E+00	2.29E-01	1.87E-01	4.25E-01	2.77E-01	3.17E+01
CHILD	TOTALS	2.09E+00	2.62E-01	1.98E-01	3.03E-01	2.37E-01	3.17E+01
TEENAGE	TOTALS	2.09E+00	3.42E-01	2.05E-01	2.50E-01	2.22E-01	3.17E+01
ADULT	TOTALS	2.09E+00	3.39E-01	2.14E-01	2.52E-01	2.26E-01	3.17E+01

NUMBER 22 NAME=Residence 7 X= 2.4KM, Y= 3.6KM, Z= 76.0M, 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	3.39E+00	3.19E-01	2.71E-01	5.41E-01	3.73E-01	5.20E+01
CHILD	TOTALS	3.38E+00	3.56E-01	2.84E-01	4.03E-01	3.29E-01	5.20E+01
TEENAGE	TOTALS	3.38E+00	4.47E-01	2.92E-01	3.43E-01	3.11E-01	5.20E+01
ADULT	TOTALS	3.39E+00	4.43E-01	3.03E-01	3.45E-01	3.16E-01	5.20E+01

METSET:

DATA: MarMUA-F.MIL

09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 23 NAME=Residence 8 X= 4.7KM, Y= -4.4KM, Z= -50.0M, DIST= 6.4KM, 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	4.27E+00	1.76E-01	1.63E-01	2.33E-01	1.89E-01	6.85E+01
CHILD	TOTALS	4.27E+00	1.85E-01	1.66E-01	1.97E-01	1.78E-01	6.85E+01
TEENAGE	TOTALS	4.27E+00	2.09E-01	1.68E-01	1.82E-01	1.74E-01	6.85E+01
ADULT	TOTALS	4.27E+00	2.08E-01	1.71E-01	1.82E-01	1.75E-01	6.85E+01

NUMBER 24 NAME=Unoccupied 1 X= -0.9KM, Y= 1.9KM, Z= 15.7M, DIST= 2.1KM, 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	1.12E+01	3.64E-01	3.28E-01	5.30E-01	4.04E-01	1.81E+02
CHILD	TOTALS	1.12E+01	3.92E-01	3.37E-01	4.27E-01	3.71E-01	1.81E+02
TEENAGE	TOTALS	1.12E+01	4.60E-01	3.43E-01	3.82E-01	3.58E-01	1.81E+02
ADULT	TOTALS	1.12E+01	4.57E-01	3.51E-01	3.83E-01	3.62E-01	1.81E+02

METSET:

DATA: MarMUA-F.MIL

09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 25 NAME=Unoccupied 2 X= 2.0KM, Y= 2.8KM, Z= 69.0M, DIST= 3.4KM, 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	3.89E+00	3.37E-01	2.93E-01	5.41E-01	3.87E-01	6.01E+01
CHILD	TOTALS	3.89E+00	3.71E-01	3.05E-01	4.14E-01	3.46E-01	6.01E+01
TEENAGE	TOTALS	3.89E+00	4.55E-01	3.12E-01	3.59E-01	3.30E-01	6.01E+01
ADULT	TOTALS	3.89E+00	4.51E-01	3.22E-01	3.61E-01	3.34E-01	6.01E+01

NUMBER 26 NAME=North Boundary #1 X= -1.3KM, Y= 5.1KM, Z= 34.7M, DIST= 5.3KM, 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	3.92E+00	2.83E-01	2.41E-01	4.79E-01	3.31E-01	6.13E+01
CHILD	TOTALS	3.91E+00	3.16E-01	2.51E-01	3.57E-01	2.91E-01	6.13E+01
TEENAGE	TOTALS	3.91E+00	3.96E-01	2.59E-01	3.04E-01	2.76E-01	6.13E+01
ADULT	TOTALS	3.92E+00	3.93E-01	2.68E-01	3.06E-01	2.80E-01	6.13E+01

METSET:

DATA: MarMUA-F.MIL

09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 27 NAME=East Boundary X= 1.7KM, Y= 0.0KM, Z= -2.6M, DIST= 1.7KM, 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	8.82E+00	3.92E-01	3.63E-01	5.26E-01	4.25E-01	1.41E+02
CHILD	TOTALS	8.82E+00	4.15E-01	3.71E-01	4.43E-01	3.98E-01	1.41E+02
TEENAGE	TOTALS	8.82E+00	4.70E-01	3.76E-01	4.07E-01	3.88E-01	1.41E+02
ADULT	TOTALS	8.82E+00	4.67E-01	3.82E-01	4.08E-01	3.90E-01	1.41E+02

NUMBER 28 NAME=South Boundary X= 0.0KM, Y= -0.6KM, Z= 0.5M, DIST= 0.6KM, 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	8.26E+00	4.07E-01	3.75E-01	5.58E-01	4.44E-01	1.32E+02
CHILD	TOTALS	8.26E+00	4.33E-01	3.83E-01	4.65E-01	4.14E-01	1.32E+02
TEENAGE	TOTALS	8.26E+00	4.95E-01	3.89E-01	4.24E-01	4.02E-01	1.32E+02
ADULT	TOTALS	8.26E+00	4.92E-01	3.96E-01	4.25E-01	4.05E-01	1.32E+02

METSET:

DATA: MarMUA-F.MIL

09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 29 NAME=West Boundary X= -0.7KM, Y= 0.0KM, Z= 12.2M, DIST= 0.7KM, 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	6.11E+00	4.03E-01	3.66E-01	5.75E-01	4.45E-01	9.59E+01
CHILD	TOTALS	6.11E+00	4.32E-01	3.76E-01	4.68E-01	4.11E-01	9.59E+01
TEENAGE	TOTALS	6.11E+00	5.03E-01	3.82E-01	4.22E-01	3.97E-01	9.59E+01
ADULT	TOTALS	6.11E+00	4.99E-01	3.90E-01	4.23E-01	4.01E-01	9.59E+01

NUMBER 30 NAME=Minatare X= -22.4KM, Y= -75.6KM, Z= -41.4M, DIST= 78.8KM, 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	1.22E-01	5.76E-02	1.89E-02	2.41E-01	1.02E-01	1.58E+00
CHILD	TOTALS	1.19E-01	8.83E-02	2.85E-02	1.27E-01	6.55E-02	1.58E+00
TEENAGE	TOTALS	1.21E-01	1.63E-01	3.52E-02	7.74E-02	5.12E-02	1.58E+00
ADULT	TOTALS	1.23E-01	1.60E-01	4.39E-02	7.91E-02	5.50E-02	1.58E+00

REGION: Marsland All Well Field CODE: MILDOS-AREA (02/12)

PAGE 22

METSET:

DATA: MarMUA-F.MIL

09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 31 NAME=North Boundary #2 X= -0.5KM, Y= 3.3KM, Z= 19.7M, DIST= 3.3KM, 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	1.44E+01	2.72E-01	2.37E-01	4.35E-01	3.12E-01	2.35E+02
CHILD	TOTALS	1.44E+01	3.00E-01	2.46E-01	3.34E-01	2.79E-01	2.35E+02
TEENAGE	TOTALS	1.44E+01	3.66E-01	2.52E-01	2.90E-01	2.67E-01	2.35E+02
ADULT	TOTALS	1.44E+01	3.63E-01	2.60E-01	2.91E-01	2.70E-01	2.35E+02

Program execution time = 0.64 seconds

**MILDOS-AREA
RADIATION DOSES FROM
CAMECO RESOURCES
MARSLAND EXPANSION AREA
IN-SITU URANIUM RECOVERY OPERATION**

Appendices B5 – B8

**By
Noel Savignac, Ph.D.**

September 24, 2013

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**MILDOS-AREA
RADIATION DOSES FROM
CAMECO RESOURCES
MARSLAND EXPANSION AREA
IN-SITU URANIUM RECOVERY OPERATION**

Appendix B5

September 24, 2013

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Appendix	Title	Radon Source	Weather Data	Waste Water Flow Rate
B5	MARST A-F	SATELLITE A-F	MEA	315

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METSET:

DATA: MarSTA-F.MIL

09/18/13

JOINT FREQUENCY IN PERCENT, DIRECTION INDICATES WHERE WIND IS FROM FREQWS=0.11872,0.21958,0.27611,0.26217,0.08349,0.04013

MPH	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTALS
STABILITY CLASS 1																	
1.5	0.1150	0.0260	0.0770	0.0770	0.0890	0.0770	0.1150	0.1660	0.1400	0.3060	0.1150	0.0770	0.1020	0.0890	0.0640	0.0510	1.6860
5.5	0.2670	0.1510	0.1860	0.1860	0.1860	0.3140	0.1980	0.2670	0.2560	0.3260	0.2560	0.4190	0.1400	0.1160	0.1980	0.2210	3.6870
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	0.3820	0.1770	0.2630	0.2630	0.2750	0.3910	0.3130	0.4330	0.3960	0.6320	0.3710	0.4960	0.2420	0.2050	0.2620	0.2720	5.3730

STABILITY CLASS 2																	
1.5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0260	0.0130	0.0380	0.0380	0.0640	0.0000	0.0000	0.0000	0.0130	0.0000	0.0000	0.1920
5.5	0.0350	0.0230	0.0930	0.0350	0.0580	0.1160	0.1280	0.1280	0.0810	0.1980	0.0930	0.0930	0.0470	0.0470	0.0810	0.0230	1.2790
10.0	0.1860	0.1980	0.1630	0.1400	0.1280	0.1740	0.2440	0.1630	0.2440	0.2210	0.2330	0.2090	0.1160	0.1280	0.2210	0.2330	3.0010
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	0.2210	0.2210	0.2560	0.1750	0.1860	0.3160	0.3850	0.3290	0.3630	0.4830	0.3260	0.3020	0.1630	0.1880	0.3020	0.2560	4.4720

STABILITY CLASS 3																	
1.5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0130	0.0130	0.0130	0.0260	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0650
5.5	0.0120	0.0120	0.0470	0.0230	0.0700	0.0700	0.0700	0.0700	0.0930	0.0470	0.0700	0.0350	0.0470	0.0000	0.0230	0.0120	0.7010
10.0	0.6980	0.3490	0.2090	0.2560	0.2790	0.5230	0.4770	0.4190	0.3840	0.3950	0.4540	0.5120	0.3140	0.3020	0.4300	0.5120	6.5130
15.5	0.3720	0.1630	0.0930	0.1400	0.0930	0.1280	0.0700	0.1050	0.2210	0.1630	0.2330	0.1860	0.1400	0.2090	0.4070	0.3370	3.0600
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	1.0820	0.5240	0.3490	0.4190	0.4420	0.7210	0.6300	0.6070	0.7110	0.6310	0.7570	0.7330	0.5010	0.5110	0.8600	0.8610	10.3390

STABILITY CLASS 4																	
1.5	0.0260	0.0260	0.0000	0.0000	0.0000	0.0260	0.0130	0.0130	0.0130	0.0130	0.0130	0.0130	0.0000	0.0130	0.0130	0.0260	0.2080
5.5	0.3020	0.1980	0.0810	0.1400	0.3020	0.4190	0.4650	0.3020	0.2210	0.1740	0.1160	0.1860	0.1400	0.0930	0.2790	0.7910	4.2090
10.0	1.2700	0.7440	0.4880	0.5000	0.8020	1.0470	1.3370	1.1860	0.9420	0.6860	0.7790	1.0470	0.7330	0.8260	1.2210	1.8140	15.4220
15.5	2.3400	1.2210	0.7680	0.5470	0.7680	0.5810	0.7680	1.5930	1.6750	0.9190	0.6630	1.3370	1.6860	2.3140	2.8720	3.1050	23.1570
21.5	0.6400	0.3370	0.0580	0.0350	0.0580	0.0810	0.0930	0.3950	0.5580	0.2330	0.1740	0.3950	0.5580	1.0120	2.2100	1.5120	8.3490
28.0	0.3840	0.1160	0.0120	0.0120	0.0000	0.0120	0.0000	0.1860	0.1050	0.0350	0.0350	0.1160	0.3140	0.5230	1.2090	0.9540	4.0130
ALL	4.9620	2.6420	1.4070	1.2340	1.9300	2.1660	2.6760	3.6750	3.5140	2.0600	1.7800	3.0940	3.4310	4.7810	7.8040	8.2020	55.3580

STABILITY CLASS 5																	
1.5	0.1280	0.0640	0.0000	0.0000	0.0260	0.0380	0.0640	0.0640	0.0260	0.0000	0.0380	0.0130	0.0130	0.0260	0.0380	0.0640	0.6020
5.5	0.1510	0.0930	0.0930	0.1160	0.1400	0.2330	0.1630	0.1740	0.1740	0.1050	0.1510	0.1740	0.1280	0.1400	0.2670	0.5810	2.8830
10.0	0.1630	0.0810	0.0930	0.1280	0.1050	0.0930	0.0810	0.1280	0.1280	0.1160	0.1980	0.2330	0.1630	0.1160	0.2560	0.5930	2.6750
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	0.4420	0.2380	0.1860	0.2440	0.2710	0.3640	0.3080	0.3660	0.3280	0.2210	0.3870	0.4200	0.3040	0.2820	0.5610	1.2380	6.1600

STABILITY CLASS 6																	
1.5	0.8160	0.6500	0.5610	0.4850	0.4210	0.4340	0.5610	0.4850	0.6380	0.5740	0.4460	0.5740	0.5230	0.5230	0.4460	0.9820	9.1190
5.5	0.9190	0.3720	0.2330	0.3490	0.4070	0.4300	0.5000	0.6400	0.5120	0.6160	0.5930	0.6630	0.3720	0.6400	0.7090	1.2440	9.1990
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	1.7350	1.0220	0.7940	0.8340	0.8280	0.8640	1.0610	1.1250	1.1500	1.1900	1.0390	1.2370	0.8950	1.1630	1.1550	2.2260	18.3180

ALL	8.8240	4.8240	3.2550	3.1690	3.9320	4.8220	5.3730	6.5350	6.4620	5.2170	4.6600	6.2820	5.5360	7.1300	10.9440	13.0550	100.0200
-----	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	---------	---------	----------

-----INDIVIDUAL RECEPTOR LOCATION DATA, 31 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	Alliance	30.00	-45.40	-50.00	54.42	1	17	Residence 2	1.00	0.30	-4.00	1.04	1
2	Berea	21.50	-32.60	-50.00	39.05	1	18	Residence 3	-0.80	-1.90	-16.00	2.06	1
3	Chardon	22.30	35.80	-50.00	42.18	1	19	Residence 4	-0.40	-3.40	-31.00	3.42	1
4	Clinton	75.40	26.50	-50.00	79.92	1	20	Residence 5	1.90	-4.30	-36.00	4.70	1
5	Crawford	-12.10	20.80	-50.00	24.06	1	21	Residence 6	-4.70	1.86	22.00	5.05	1
6	Harrison	-50.50	22.50	-50.00	55.29	1	22	Residence 7	2.40	3.60	76.00	4.33	1
7	Hay Springs	47.10	18.80	-50.00	50.71	1	23	Residence 8	4.70	-4.40	-50.00	6.44	1
8	Hemmingford	14.30	-20.40	36.00	24.91	1	24	Unoccupied 1	-0.90	1.90	15.70	2.10	1
9	Marsland	-3.80	-6.10	-50.00	7.19	1	25	Unoccupied 2	2.00	2.80	69.00	3.44	1
10	Mitchell	-48.50	-60.00	-50.00	77.15	1	26	North Boundary #1	-1.30	5.10	34.70	5.26	1
11	Oelrichs	4.90	75.30	-50.00	75.46	1	27	East Boundary	1.70	0.00	-2.60	1.70	1
12	Rushville	66.00	22.00	-50.00	69.57	1	28	South Boundary	0.00	-0.60	0.50	0.60	1
13	Scottsbluff	-36.30	-68.90	-50.00	77.88	1	29	West Boundary	-0.70	0.00	12.20	0.70	1
14	Van Tassell	-67.50	21.00	49.00	70.69	1	30	Minatare	-22.40	-75.60	-41.40	78.85	1
15	Whitney	1.20	31.40	-50.00	31.42	1	31	North Boundary #2	-0.60	3.30	19.70	3.35	1
16	Residence 1	-0.90	-0.60	3.40	1.08	1							

MISCELLANEOUS INPUTABLE PARAMETER VALUES

DMM	DMA	TSTART	FFORI	FHAYI	FFORP	FHAYP	FPR(1)	FPR(2)	FPR(3)	ACTRAT
100.0	100.0	1.00	0.90	0.10	0.90	0.10	8700.00	4000.00	0.00	2.50

IPACT EQUALS 0,

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

POPULATION DISTRIBUTION

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
KILOMETERS	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	0	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	0	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	0	0	0	0	0	0	0	0	0	0	0	0
10.0-20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20.0-30.0	0	0	0	0	0	0	993	0	0	0	0	0	0	0	0	1107
30.0-40.0	87	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40.0-50.0	0	5634	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50.0-60.0	0	0	0	652	0	0	0	9859	0	0	0	0	0	279	0	0
60.0-70.0	0	0	0	999	0	0	0	0	0	0	0	0	0	0	0	0
70.0-80.0	145	0	14	30	0	0	0	0	0	15542	1831	0	0	19	0	0
1.0-80.0	232	5634	14	1681	0	0	993	9859	0	15542	1831	0	0	298	0	1107

TOTAL 1-80 KM POPULATION IS 37191 PERSONS

09/18/13

NUMBER OF SOURCES= 1

	KM	KM	M	KM2	CI/YEAR					PSIZE	M/SEC		
NO.	X	Y	Z	AREA	U-238	Th-230	Ra-226	Pb-210	Rn-222	ID	SET	EXIT VEL	SOURCE NAME
1	0.00	0.00	10.00	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.69E+03	1001	1	1.00E+01	Satellite

INPUT TAILS ACTIVITIES, PCI/G				
SET	URANIUM	THORIUM	RADIUM	LEAD
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

AMAD AND FRACTIONAL DISTRIBUTION				
SET	1.5	3.0	7.7	54.0
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

[illegible][illegible]

REGION: Marsland All Well Field CODE: MILDOS-AREA (02/12)
METSET: DATA: MarSTA-F.MIL

PAGE 6
09/18/13

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.	2.847E-01	2.306E+00	3.725E-02	1.729E+00	8.315E-01	1.188E+02
GROUND	1.654E-02	1.654E-02	1.654E-02	1.654E-02	1.654E-02	1.654E-02
CLOUD	1.003E+00	1.003E+00	1.003E+00	1.003E+00	1.003E+00	1.003E+00
VEG. ING	1.328E+00	1.535E+01	1.328E+00	4.563E+00	3.716E+00	1.328E+00
MEAT ING	9.240E-02	1.068E+00	9.240E-02	3.173E-01	2.585E-01	9.240E-02
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	2.725E+00	1.974E+01	2.477E+00	7.628E+00	5.826E+00	1.212E+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	2.125E+01	2.455E+02	2.125E+01	7.298E+01	5.945E+01	2.125E+01
MEAT ING	1.851E+00	2.139E+01	1.851E+00	6.357E+00	5.178E+00	1.851E+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	2.310E+01	2.669E+02	2.310E+01	7.934E+01	6.462E+01	2.310E+01

TOTAL DOSES COMPUTED OVER ALL POPULATIONS

PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INHAL.	2.847E-01	2.306E+00	3.725E-02	1.729E+00	8.315E-01	1.188E+02
GROUND	1.654E-02	1.654E-02	1.654E-02	1.654E-02	1.654E-02	1.654E-02
CLOUD	1.003E+00	1.003E+00	1.003E+00	1.003E+00	1.003E+00	1.003E+00
VEG. ING	2.258E+01	2.609E+02	2.258E+01	7.754E+01	6.316E+01	2.258E+01
MEAT ING	1.943E+00	2.246E+01	1.943E+00	6.675E+00	5.437E+00	1.943E+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	2.583E+01	2.867E+02	2.558E+01	8.697E+01	7.045E+01	1.443E+02

REGION: Marsland All Well Field CODE: MILDOS-AREA (02/12)

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METSET:

DATA: MarSTA-F.MIL

09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 1 NAME=Alliance

X= 30.0KM, Y= -45.4KM, Z= -50.0M, DIST= 54.4KM, 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	2.66E-01	7.39E-02	3.56E-02	2.53E-01	1.18E-01	3.71E+00
CHILD	TOTALS	2.62E-01	1.04E-01	4.52E-02	1.42E-01	8.16E-02	3.71E+00
TEENAGE	TOTALS	2.64E-01	1.78E-01	5.18E-02	9.32E-02	6.76E-02	3.71E+00
ADULT	TOTALS	2.66E-01	1.74E-01	6.04E-02	9.49E-02	7.13E-02	3.71E+00

NUMBER 2 NAME=Berea

X= 21.5KM, Y= -32.6KM, Z= -50.0M, DIST= 39.1KM, 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	3.70E-01	8.29E-02	4.59E-02	2.55E-01	1.25E-01	5.28E+00
CHILD	TOTALS	3.66E-01	1.12E-01	5.53E-02	1.48E-01	9.03E-02	5.28E+00
TEENAGE	TOTALS	3.69E-01	1.83E-01	6.17E-02	1.02E-01	7.69E-02	5.28E+00
ADULT	TOTALS	3.70E-01	1.79E-01	6.99E-02	1.03E-01	8.04E-02	5.28E+00

REGION: Marsland All Well Field CODE: MILDOS-AREA (02/12)

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METSET:

DATA: MarSTA-F.MIL

09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 3 NAME=Chardon

X= 22.3KM, Y= 35.8KM, Z= -50.0M, DIST= 42.2KM, 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-01	6.45E-02	2.94E-02	2.28E-01	1.04E-01	2.96E+00
CHILD	TOTALS	2.11E-01	9.19E-02	3.82E-02	1.27E-01	7.15E-02	2.96E+00
TEENAGE	TOTALS	2.13E-01	1.59E-01	4.43E-02	8.21E-02	5.87E-02	2.96E+00
ADULT	TOTALS	2.15E-01	1.56E-01	5.21E-02	8.37E-02	6.21E-02	2.96E+00

NUMBER 4 NAME=Clinton

X= 75.4KM, Y= 26.5KM, Z= -50.0M, DIST= 79.9KM, 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	1.10E-01	4.48E-02	1.64E-02	1.79E-01	7.75E-02	1.46E+00
CHILD	TOTALS	1.07E-01	6.73E-02	2.35E-02	9.56E-02	5.06E-02	1.46E+00
TEENAGE	TOTALS	1.09E-01	1.22E-01	2.84E-02	5.93E-02	4.01E-02	1.46E+00
ADULT	TOTALS	1.10E-01	1.20E-01	3.48E-02	6.05E-02	4.29E-02	1.46E+00

METSET:

DATA: MarSTA-F.MIL

09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 5 NAME=Crawford

X= -12.1KM, Y= 20.8KM, Z= -50.0M, DIST= 24.1KM, 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	4.05E-01	7.77E-02	4.77E-02	2.17E-01	1.12E-01	5.87E+00
CHILD	TOTALS	4.02E-01	1.01E-01	5.53E-02	1.31E-01	8.37E-02	5.87E+00
TEENAGE	TOTALS	4.04E-01	1.58E-01	6.05E-02	9.27E-02	7.28E-02	5.87E+00
ADULT	TOTALS	4.05E-01	1.56E-01	6.72E-02	9.41E-02	7.57E-02	5.87E+00

NUMBER 6 NAME=Harrison

X= -50.5KM, Y= 22.5KM, Z= -50.0M, DIST= 55.3KM, 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	1.44E-01	4.75E-02	2.05E-02	1.74E-01	7.84E-02	1.97E+00
CHILD	TOTALS	1.42E-01	6.88E-02	2.73E-02	9.56E-02	5.30E-02	1.97E+00
TEENAGE	TOTALS	1.43E-01	1.21E-01	3.19E-02	6.12E-02	4.31E-02	1.97E+00
ADULT	TOTALS	1.44E-01	1.18E-01	3.80E-02	6.24E-02	4.57E-02	1.97E+00

REGION: Marsland All Well Field CODE: MILDOS-AREA (02/12)

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METSET:

DATA: MarSTA-F.MIL

09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 7 NAME=Hay Springs

X= 47.1KM, Y= 18.8KM, Z= -50.0M, DIST= 50.7KM, 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	1.77E-01	5.34E-02	2.45E-02	1.89E-01	8.64E-02	2.45E+00
CHILD	TOTALS	1.75E-01	7.61E-02	3.17E-02	1.05E-01	5.92E-02	2.45E+00
TEENAGE	TOTALS	1.77E-01	1.32E-01	3.67E-02	6.80E-02	4.86E-02	2.45E+00
ADULT	TOTALS	1.78E-01	1.29E-01	4.32E-02	6.93E-02	5.15E-02	2.45E+00

NUMBER 8 NAME=Hemmingford

X= 14.3KM, Y= -20.4KM, Z= 36.0M, DIST= 24.9KM, 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	7.65E-01	1.50E-01	8.85E-02	4.34E-01	2.19E-01	1.11E+01
CHILD	TOTALS	7.59E-01	1.97E-01	1.04E-01	2.58E-01	1.62E-01	1.11E+01
TEENAGE	TOTALS	7.63E-01	3.14E-01	1.15E-01	1.80E-01	1.40E-01	1.11E+01
ADULT	TOTALS	7.65E-01	3.09E-01	1.28E-01	1.83E-01	1.46E-01	1.11E+01

REGION: Marsland All Well Field CODE: MILDOS-AREA (02/12)

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METSET:

DATA: MarSTA-F.MIL

09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 9 NAME=Marsland

X= -3.8KM, Y= -6.1KM, Z= -50.0M, DIST= 7.2KM, 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	7.05E-01	5.56E-02	4.66E-02	9.72E-02	6.57E-02	1.10E+01
CHILD	TOTALS	7.04E-01	6.25E-02	4.88E-02	7.13E-02	5.73E-02	1.10E+01
TEENAGE	TOTALS	7.04E-01	7.96E-02	5.04E-02	6.00E-02	5.41E-02	1.10E+01
ADULT	TOTALS	7.05E-01	7.88E-02	5.24E-02	6.04E-02	5.49E-02	1.10E+01

NUMBER 10 NAME=Mitchell

X= -48.5KM, Y= -60.0KM, Z= -50.0M, DIST= 77.2KM, 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	8.22E-02	3.81E-02	1.26E-02	1.58E-01	6.73E-02	1.07E+00
CHILD	TOTALS	7.99E-02	5.82E-02	1.90E-02	8.35E-02	4.32E-02	1.07E+00
TEENAGE	TOTALS	8.14E-02	1.07E-01	2.33E-02	5.10E-02	3.39E-02	1.07E+00
ADULT	TOTALS	8.23E-02	1.05E-01	2.91E-02	5.21E-02	3.63E-02	1.07E+00

METSET:

DATA: MarSTA-F.MIL

09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 11 NAME=Oelrichs X= 4.9KM, Y= 75.3KM, Z= -50.0M, DIST= 75.5KM, 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	1.31E-01	5.62E-02	1.97E-02	2.28E-01	9.81E-02	1.72E+00
CHILD	TOTALS	1.27E-01	8.50E-02	2.88E-02	1.21E-01	6.36E-02	1.72E+00
TEENAGE	TOTALS	1.30E-01	1.56E-01	3.51E-02	7.47E-02	5.02E-02	1.72E+00
ADULT	TOTALS	1.31E-01	1.52E-01	4.33E-02	7.64E-02	5.37E-02	1.72E+00

NUMBER 12 NAME=Rushville X= 66.0KM, Y= 22.0KM, Z= -50.0M, DIST= 69.6KM, 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	1.27E-01	4.70E-02	1.84E-02	1.81E-01	7.97E-02	1.71E+00
CHILD	TOTALS	1.24E-01	6.95E-02	2.56E-02	9.79E-02	5.28E-02	1.71E+00
TEENAGE	TOTALS	1.26E-01	1.25E-01	3.05E-02	6.15E-02	4.23E-02	1.71E+00
ADULT	TOTALS	1.27E-01	1.22E-01	3.69E-02	6.28E-02	4.51E-02	1.71E+00

METSET:

DATA: MarSTA-F.MIL

09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 13 NAME=Scottsbluff X= -36.3KM, Y= -68.9KM, Z= -50.0M, DIST= 77.9KM, 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	9.30E-02	4.21E-02	1.42E-02	1.74E-01	7.42E-02	1.21E+00
CHILD	TOTALS	9.05E-02	6.42E-02	2.12E-02	9.20E-02	4.78E-02	1.21E+00
TEENAGE	TOTALS	9.21E-02	1.18E-01	2.59E-02	5.63E-02	3.75E-02	1.21E+00
ADULT	TOTALS	9.32E-02	1.16E-01	3.22E-02	5.76E-02	4.02E-02	1.21E+00

NUMBER 14 NAME=Van Tassell X= -67.5KM, Y= 21.0KM, Z= 49.0M, DIST= 70.7KM, 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	1.30E-01	5.46E-02	1.95E-02	2.20E-01	9.48E-02	1.72E+00
CHILD	TOTALS	1.27E-01	8.22E-02	2.82E-02	1.17E-01	6.16E-02	1.72E+00
TEENAGE	TOTALS	1.29E-01	1.50E-01	3.43E-02	7.23E-02	4.88E-02	1.72E+00
ADULT	TOTALS	1.30E-01	1.47E-01	4.22E-02	7.39E-02	5.22E-02	1.72E+00

METSET:

DATA: MarSTA-F.MIL

09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 15 NAME=Whitney

X= 1.2KM, Y= 31.4KM, Z= -50.0M, DIST= 31.4KM, 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	3.08E-01	7.28E-02	3.88E-02	2.31E-01	1.11E-01	4.38E+00
CHILD	TOTALS	3.05E-01	9.93E-02	4.74E-02	1.33E-01	7.96E-02	4.38E+00
TEENAGE	TOTALS	3.07E-01	1.64E-01	5.33E-02	8.99E-02	6.72E-02	4.38E+00
ADULT	TOTALS	3.08E-01	1.61E-01	6.08E-02	9.14E-02	7.05E-02	4.38E+00

NUMBER 16 NAME=Residence 1

X= -0.9KM, Y= -0.6KM, Z= 3.4M, 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	9.32E+00	1.03E-01	1.01E-01	1.09E-01	1.04E-01	1.54E+02
CHILD	TOTALS	9.32E+00	1.04E-01	1.02E-01	1.05E-01	1.03E-01	1.54E+02
TEENAGE	TOTALS	9.32E+00	1.07E-01	1.02E-01	1.04E-01	1.03E-01	1.54E+02
ADULT	TOTALS	9.32E+00	1.07E-01	1.02E-01	1.04E-01	1.03E-01	1.54E+02

METSET:

DATA: MarSTA-F.MIL

09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 17 NAME=Residence 2 X= 1.0KM, Y= 0.3KM, Z= -4.0M, DIST= 1.0KM, 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	1.16E+01	6.30E-02	6.24E-02	6.59E-02	6.37E-02	1.93E+02
CHILD	TOTALS	1.16E+01	6.35E-02	6.26E-02	6.41E-02	6.32E-02	1.93E+02
TEENAGE	TOTALS	1.16E+01	6.47E-02	6.27E-02	6.33E-02	6.29E-02	1.93E+02
ADULT	TOTALS	1.16E+01	6.46E-02	6.28E-02	6.34E-02	6.30E-02	1.93E+02

NUMBER 18 NAME=Residence 3 X= -0.8KM, Y= -1.9KM, Z= -16.0M, DIST= 2.1KM, 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	3.63E+00	9.30E-02	8.95E-02	1.09E-01	9.69E-02	5.90E+01
CHILD	TOTALS	3.63E+00	9.57E-02	9.03E-02	9.91E-02	9.37E-02	5.90E+01
TEENAGE	TOTALS	3.63E+00	1.02E-01	9.10E-02	9.47E-02	9.24E-02	5.90E+01
ADULT	TOTALS	3.63E+00	1.02E-01	9.17E-02	9.49E-02	9.27E-02	5.90E+01

METSET:

DATA: MarSTA-F.MIL

09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 19 NAME=Residence 4 X= -0.4KM, Y= -3.4KM, Z= -31.0M, DIST= 3.4KM, 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	2.65E+00	1.08E-01	1.00E-01	1.43E-01	1.16E-01	4.26E+01
CHILD	TOTALS	2.65E+00	1.14E-01	1.02E-01	1.21E-01	1.09E-01	4.26E+01
TEENAGE	TOTALS	2.65E+00	1.28E-01	1.03E-01	1.11E-01	1.06E-01	4.26E+01
ADULT	TOTALS	2.66E+00	1.27E-01	1.05E-01	1.12E-01	1.07E-01	4.26E+01

NUMBER 20 NAME=Residence 5 X= 1.9KM, Y= -4.3KM, Z= -36.0M, DIST= 4.7KM, 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	2.96E+00	1.34E-01	1.22E-01	1.91E-01	1.48E-01	4.74E+01
CHILD	TOTALS	2.96E+00	1.44E-01	1.25E-01	1.56E-01	1.37E-01	4.74E+01
TEENAGE	TOTALS	2.96E+00	1.67E-01	1.27E-01	1.41E-01	1.32E-01	4.74E+01
ADULT	TOTALS	2.96E+00	1.66E-01	1.30E-01	1.41E-01	1.34E-01	4.74E+01

METSET:

DATA: MarSTA-F.MIL

09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 21 NAME=Residence 6 X= -4.7KM, Y= 1.9KM, Z= 22.0M, DIST= 5.1KM, 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	2.89E+00	2.63E-01	2.29E-01	4.18E-01	3.00E-01	4.44E+01
CHILD	TOTALS	2.88E+00	2.89E-01	2.37E-01	3.21E-01	2.69E-01	4.44E+01
TEENAGE	TOTALS	2.88E+00	3.53E-01	2.43E-01	2.79E-01	2.57E-01	4.44E+01
ADULT	TOTALS	2.89E+00	3.49E-01	2.51E-01	2.81E-01	2.60E-01	4.44E+01

NUMBER 22 NAME=Residence 7 X= 2.4KM, Y= 3.6KM, Z= 76.0M, 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	4.23E+00	3.67E-01	3.28E-01	5.49E-01	4.11E-01	6.52E+01
CHILD	TOTALS	4.23E+00	3.97E-01	3.38E-01	4.36E-01	3.75E-01	6.52E+01
TEENAGE	TOTALS	4.23E+00	4.72E-01	3.45E-01	3.87E-01	3.61E-01	6.52E+01
ADULT	TOTALS	4.23E+00	4.69E-01	3.53E-01	3.88E-01	3.64E-01	6.52E+01

METSET:

DATA: MarSTA-F.MIL

09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 23 NAME=Residence 8 X= 4.7KM, Y= -4.4KM, Z= -50.0M, DIST= 6.4KM, 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	1.39E+00	6.22E-02	5.53E-02	9.45E-02	7.01E-02	2.22E+01
CHILD	TOTALS	1.39E+00	6.77E-02	5.71E-02	7.45E-02	6.36E-02	2.22E+01
TEENAGE	TOTALS	1.39E+00	8.09E-02	5.83E-02	6.57E-02	6.11E-02	2.22E+01
ADULT	TOTALS	1.39E+00	8.03E-02	5.98E-02	6.60E-02	6.18E-02	2.22E+01

NUMBER 24 NAME=Unoccupied 1 X= -0.9KM, Y= 1.9KM, Z= 15.7M, DIST= 2.1KM, 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	1.08E+01	4.10E-01	3.94E-01	4.88E-01	4.29E-01	1.73E+02
CHILD	TOTALS	1.08E+01	4.23E-01	3.98E-01	4.40E-01	4.14E-01	1.73E+02
TEENAGE	TOTALS	1.08E+01	4.56E-01	4.01E-01	4.19E-01	4.08E-01	1.73E+02
ADULT	TOTALS	1.08E+01	4.54E-01	4.04E-01	4.20E-01	4.09E-01	1.73E+02

METSET:

DATA: MarSTA-F.MIL

09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 25 NAME=Unoccupied 2 X= 2.0KM, Y= 2.8KM, Z= 69.0M, DIST= 3.4KM, 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	5.67E+00	4.07E-01	3.74E-01	5.58E-01	4.44E-01	8.84E+01
CHILD	TOTALS	5.66E+00	4.32E-01	3.83E-01	4.64E-01	4.13E-01	8.84E+01
TEENAGE	TOTALS	5.67E+00	4.94E-01	3.88E-01	4.23E-01	4.02E-01	8.84E+01
ADULT	TOTALS	5.67E+00	4.91E-01	3.96E-01	4.25E-01	4.05E-01	8.84E+01

NUMBER 26 NAME=North Boundary #1 X= -1.3KM, Y= 5.1KM, Z= 34.7M, DIST= 5.3KM, 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	3.64E+00	3.44E-01	2.98E-01	5.57E-01	3.96E-01	5.58E+01
CHILD	TOTALS	3.63E+00	3.80E-01	3.09E-01	4.25E-01	3.53E-01	5.58E+01
TEENAGE	TOTALS	3.64E+00	4.67E-01	3.17E-01	3.67E-01	3.36E-01	5.58E+01
ADULT	TOTALS	3.64E+00	4.63E-01	3.28E-01	3.69E-01	3.41E-01	5.58E+01

REGION: Marsland All Well Field CODE: MILDOS-AREA (02/12)

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METSET:

DATA: MarSTA-F.MIL

09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 27 NAME=East Boundary X= 1.7KM, Y= 0.0KM, Z= -2.6M, DIST= 1.7KM, 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+00	1.46E-01	1.41E-01	1.65E-01	1.50E-01	1.14E+02
CHILD	TOTALS	6.96E+00	1.49E-01	1.43E-01	1.53E-01	1.46E-01	1.14E+02
TEENAGE	TOTALS	6.96E+00	1.57E-01	1.43E-01	1.48E-01	1.45E-01	1.14E+02
ADULT	TOTALS	6.96E+00	1.57E-01	1.44E-01	1.48E-01	1.45E-01	1.14E+02

NUMBER 28 NAME=South Boundary X= 0.0KM, Y= -0.6KM, Z= 0.5M, DIST= 0.6KM, 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	3.59E+01	6.91E-02	6.89E-02	6.99E-02	6.93E-02	5.97E+02
CHILD	TOTALS	3.59E+01	6.92E-02	6.89E-02	6.94E-02	6.91E-02	5.97E+02
TEENAGE	TOTALS	3.59E+01	6.96E-02	6.90E-02	6.92E-02	6.90E-02	5.97E+02
ADULT	TOTALS	3.59E+01	6.95E-02	6.90E-02	6.92E-02	6.91E-02	5.97E+02

REGION: Marsland All Well Field CODE: MILDOS-AREA (02/12)

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METSET:

DATA: MarSTA-F.MIL

09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 29 NAME=West Boundary X= -0.7KM, Y= 0.0KM, Z= 12.2M, DIST= 0.7KM, 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	2.78E+01	1.37E-01	1.36E-01	1.41E-01	1.38E-01	4.61E+02
CHILD	TOTALS	2.78E+01	1.38E-01	1.37E-01	1.39E-01	1.37E-01	4.61E+02
TEENAGE	TOTALS	2.78E+01	1.39E-01	1.37E-01	1.38E-01	1.37E-01	4.61E+02
ADULT	TOTALS	2.78E+01	1.39E-01	1.37E-01	1.38E-01	1.37E-01	4.61E+02

NUMBER 30 NAME=Minatare X= -22.4KM, Y= -75.6KM, Z= -41.4M, DIST= 78.8KM, 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	1.18E-01	5.26E-02	1.80E-02	2.16E-01	9.24E-02	1.54E+00
CHILD	TOTALS	1.15E-01	8.00E-02	2.66E-02	1.14E-01	5.96E-02	1.54E+00
TEENAGE	TOTALS	1.17E-01	1.47E-01	3.25E-02	7.02E-02	4.69E-02	1.54E+00
ADULT	TOTALS	1.18E-01	1.44E-01	4.03E-02	7.17E-02	5.03E-02	1.54E+00

REGION: Marsland All Well Field CODE: MILDOS-AREA (02/12)

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METSET: DATA: MarSTA-F.MIL

09/18/13

TIME STEP NUMBER 1,

DURATION IN YRS IS... 5.0

NUMBER 31 NAME=North Boundary #2 X= -0.6KM, Y= 3.3KM, Z= 19.7M, DIST= 3.4KM, 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	6.41E+00	4.31E-01	3.98E-01	5.85E-01	4.68E-01	1.00E+02
CHILD	TOTALS	6.41E+00	4.57E-01	4.06E-01	4.89E-01	4.38E-01	1.00E+02
TEENAGE	TOTALS	6.41E+00	5.20E-01	4.12E-01	4.48E-01	4.26E-01	1.00E+02
ADULT	TOTALS	6.41E+00	5.17E-01	4.19E-01	4.49E-01	4.29E-01	1.00E+02

Program execution time = 0.04 seconds

**MILDOS-AREA
RADIATION DOSES FROM
CAMECO RESOURCES
MARSLAND EXPANSION AREA
IN-SITU URANIUM RECOVERY OPERATION**

Appendix B6

September 24, 2013

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Appendix	Title	Radon Source	Weather Data	Waste Water Flow Rate
B6	MAROCMU	MU 1-5 OCCUPATIONAL	MEA	315

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METSET: DATA: MAROCMU.MIL 08/16/13

JOINT FREQUENCY IN PERCENT, DIRECTION INDICATES WHERE WIND IS FROM FREQWS=0.14427,0.29579,0.30967,0.17441,0.05798,0.01793

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

STABILITY CLASS 1

1.5	0.1410	0.0240	0.0710	0.0820	0.0940	0.1300	0.1060	0.2120	0.1770	0.3540	0.1410	0.0940	0.1180	0.0820	0.0590	0.0590	1.9440
5.5	0.2360	0.1530	0.1890	0.1770	0.1770	0.2590	0.2000	0.2120	0.2120	0.2590	0.2240	0.4010	0.1180	0.1180	0.2000	0.2120	3.3470
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	0.3770	0.1770	0.2600	0.2590	0.2710	0.3890	0.3060	0.4240	0.3890	0.6130	0.3850	0.4950	0.2360	0.2000	0.2590	0.2710	5.2910

STABILITY CLASS 2

1.5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0350	0.0120	0.0470	0.0470	0.0940	0.0120	0.0000	0.0120	0.0120	0.0000	0.0000	0.2710
5.5	0.2000	0.2240	0.2470	0.1770	0.1770	0.2470	0.3420	0.2470	0.2360	0.3180	0.3060	0.2590	0.1300	0.1650	0.2360	0.2120	3.7230
10.0	0.0240	0.0000	0.0120	0.0000	0.0120	0.0350	0.0350	0.0240	0.0710	0.0590	0.0000	0.0470	0.0240	0.0120	0.0710	0.0470	0.4730
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	0.2240	0.2240	0.2590	0.1770	0.1890	0.3170	0.3890	0.3180	0.3540	0.4710	0.3180	0.3060	0.1660	0.1890	0.3070	0.2590	4.4670

STABILITY CLASS 3

1.5	0.0120	0.0000	0.0000	0.0000	0.0000	0.0000	0.0350	0.0120	0.0350	0.0240	0.0120	0.0000	0.0000	0.0000	0.0000	0.0000	0.1300
5.5	0.0590	0.0590	0.0590	0.0820	0.1180	0.1770	0.1890	0.1530	0.1530	0.1410	0.1890	0.0820	0.0710	0.0470	0.0590	0.0940	1.7320
10.0	1.0300	0.4710	0.2950	0.3420	0.3300	0.5540	0.4120	0.4360	0.4950	0.4360	0.5660	0.6600	0.4360	0.4710	0.8130	0.7780	8.5250
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	1.1010	0.5300	0.3540	0.4240	0.4480	0.7310	0.6360	0.6010	0.6830	0.6010	0.7670	0.7420	0.5070	0.5180	0.8720	0.8720	10.3870

STABILITY CLASS 4

1.5	0.0240	0.0240	0.0000	0.0000	0.0120	0.0470	0.0240	0.0120	0.0120	0.0120	0.0240	0.0120	0.0000	0.0120	0.0120	0.0710	0.2980
5.5	0.7310	0.4710	0.1890	0.3060	0.5770	0.8840	1.0490	0.7540	0.5190	0.3890	0.4830	0.5070	0.4120	0.3770	0.6840	1.3550	9.6870
10.0	1.9100	1.0720	0.9190	0.7310	1.0370	0.9190	1.2140	1.6500	1.3080	0.8960	0.7900	1.4610	1.2730	1.4850	1.9090	2.3690	20.9430
15.5	1.7800	0.8600	0.3060	0.2000	0.3180	0.3060	0.3890	0.9550	1.3790	0.6720	0.3650	0.8720	1.2610	1.9560	3.0050	2.8170	17.4410
21.5	0.4120	0.2240	0.0120	0.0000	0.0120	0.0240	0.0350	0.3420	0.2830	0.1180	0.1410	0.2470	0.2950	0.7190	1.6970	1.2370	5.7980
28.0	0.1410	0.0120	0.0000	0.0120	0.0000	0.0120	0.0000	0.0120	0.0120	0.0000	0.0000	0.0240	0.2360	0.2950	0.5890	0.4480	1.7930
ALL	4.9980	2.6630	1.4260	1.2490	1.9560	2.1920	2.7110	3.7250	3.5130	2.0870	1.8030	3.1230	3.4770	4.8440	7.8960	8.2970	55.9600

STABILITY CLASS 5

1.5	0.1530	0.0710	0.0000	0.0000	0.0590	0.0350	0.0820	0.0710	0.0350	0.0000	0.0350	0.0350	0.0120	0.0710	0.0590	0.0940	0.8120
5.5	0.2360	0.1300	0.1650	0.2000	0.1530	0.3060	0.2000	0.2470	0.2710	0.2000	0.2950	0.2830	0.2000	0.1300	0.3540	0.9660	4.3360
10.0	0.0470	0.0350	0.0240	0.0470	0.0590	0.0240	0.0240	0.0470	0.0240	0.0240	0.0590	0.1060	0.0940	0.0820	0.1410	0.1890	1.0260
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	0.4360	0.2360	0.1890	0.2470	0.2710	0.3650	0.3060	0.3650	0.3300	0.2240	0.3890	0.4240	0.3060	0.2830	0.5540	1.2490	6.1740

STABILITY CLASS 6

1.5	0.9780	0.6950	0.6360	0.5420	0.4480	0.5190	0.6720	0.6130	0.7540	0.6600	0.5770	0.7310	0.5660	0.5770	0.6720	1.3320	10.9720
5.5	0.7070	0.2830	0.1180	0.2590	0.3540	0.3180	0.3420	0.4830	0.3420	0.4950	0.4360	0.4710	0.2950	0.5540	0.4600	0.8370	6.7540
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	1.6850	0.9780	0.7540	0.8010	0.8020	0.8370	1.0140	1.0960	1.0960	1.1550	1.0130	1.2020	0.8610	1.1310	1.1320	2.1690	17.7260

ALL	8.8210	4.8080	3.2420	3.1570	3.9370	4.8310	5.3620	6.5290	6.3650	5.1510	4.6550	6.2920	5.5530	7.1650	11.0200	13.1170	100.0050
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-----INDIVIDUAL RECEPTOR LOCATION DATA, 17 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	East Boundary	1.40	0.30	-20.00	1.43	1	10	MU-C	1.84	-2.33	-25.00	2.97	1
2	South Boundary	0.00	-0.50	13.00	0.50	1	11	MU-D	2.52	-3.56	-36.00	4.36	1
3	West Boundary	-0.70	0.00	49.00	0.70	1	12	MU-E	2.84	-3.98	-42.00	4.89	1
4	MU-1	-0.46	2.33	27.00	2.37	1	13	MU-F	3.00	-4.30	-47.00	5.24	1
5	MU-2	-0.45	1.65	16.00	1.71	1	14	MU-4	0.54	0.13	-4.00	0.56	1
6	MU-3	-0.05	0.95	13.00	0.95	1	15	Satellite	0.00	0.00	0.00	0.00	1
7	MU-5	0.94	-0.45	-15.00	1.04	1	16	N Boundary #1	-1.30	5.10	35.00	5.26	1
8	MU-A	-0.76	2.88	45.00	2.98	1	17	N Boundary #2	-0.50	3.30	20.00	3.34	1
9	MU-B	1.22	-1.02	-15.00	1.59	1							

MISCELLANEOUS INPUTABLE PARAMETER VALUES

DMM	DMA	TSTART	FFORI	FHAYI	FFORP	FHAYP	FPR(1)	FPR(2)	FPR(3)	ACTRAT
100.0	100.0	1.00	0.90	0.10	0.90	0.10	87000.00	4000.00	0.00	2.50

IPACT EQUALS 0, 0, 0, 0, 0,

JC EQUALS 1, 0, 0, 0, 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

POPULATION DISTRIBUTION

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
KILOMETERS	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	0	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	0	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	0	0	0	0	0	0	0	0	0	0	0	0
10.0-20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20.0-30.0	0	0	0	0	0	0	993	0	0	0	0	0	0	0	0	1107
30.0-40.0	87	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40.0-50.0	0	5634	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50.0-60.0	0	0	0	652	0	0	0	9859	0	0	0	0	0	279	0	0
60.0-70.0	0	0	0	999	0	0	0	0	0	0	0	0	0	0	0	0
70.0-80.0	145	0	14	30	0	0	0	0	0	15542	1831	0	0	19	0	0

1.0-80.0	232	5634	14	1681	0	0	993	9859	0	15542	1831	0	0	298	0	1107
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TOTAL 1-80 KM POPULATION IS 37191 PERSONS

NUMBER OF SOURCES= 5

NO.	KM	KM	M	KM2	CI/YEAR				PSIZE	M/SEC	ID	SET	EXIT VEL	SOURCE NAME
	X	Y	Z	AREA	U-238	Th-230	Ra-226	Pb-210	Rn-222					
1	-0.56	2.23	27.00	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.13E+03	1001	1	0.00E+00	MU-1
2	-0.55	1.65	16.00	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+03	1002	1	0.00E+00	MU-2
3	-0.15	0.95	13.00	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E+03	1003	1	0.00E+00	MU-3
4	0.44	0.13	-4.00	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.71E+03	1004	1	0.00E+00	MU-4
5	0.84	-0.45	-15.00	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E+03	1005	1	0.00E+00	MU-5

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 NUMBER	TSTEP 1 5.00YRS	TSTEP 2 5.00YRS	TSTEP 3 5.00YRS	TSTEP 4 5.00YRS	TSTEP 5 5.00YRS	TSTEP 6 5.00YRS	TSTEP 7 5.00YRS	TSTEP 8 5.00YRS	TSTEP 9 5.00YRS	TSTEP10 5.00YRS
1	1.00E+00									
2	1.00E+00									
3	1.00E+00									
4	1.00E+00									
5	1.00E+00									

[illegible]

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 YEAF

DOSES RECEIVED BY PEOPLE WITHIN 80 KILOMETERS

PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INHAL.	3.782E-01	3.063E+00	4.945E-02	2.297E+00	1.105E+00	1.457E+02
GROUND	2.061E-02	2.061E-02	2.061E-02	2.061E-02	2.061E-02	2.061E-02
CLOUD	1.248E+00	1.248E+00	1.248E+00	1.248E+00	1.248E+00	1.248E+00
VEG. ING	1.776E+00	2.052E+01	1.776E+00	6.099E+00	4.967E+00	1.776E+00
MEAT ING	1.235E-01	1.427E+00	1.235E-01	4.242E-01	3.455E-01	1.235E-01
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	3.546E+00	2.628E+01	3.217E+00	1.009E+01	7.688E+00	1.489E+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	3.000E+02	3.467E+03	3.000E+02	1.030E+03	8.393E+02	3.000E+02
MEAT ING	2.474E+00	2.859E+01	2.474E+00	8.497E+00	6.921E+00	2.474E+00
MILK ING	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
RNPLUS50	7.234E+01	9.864E+02	1.644E+01	7.234E+01	7.234E+01	4.603E+02
TOTALS	3.748E+02	4.482E+03	3.189E+02	1.111E+03	9.185E+02	7.628E+02

TOTAL DOSES COMPUTED OVER ALL POPULATIONS

PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INHAL.	3.782E-01	3.063E+00	4.945E-02	2.297E+00	1.105E+00	1.457E+02
GROUND	2.061E-02	2.061E-02	2.061E-02	2.061E-02	2.061E-02	2.061E-02
CLOUD	1.248E+00	1.248E+00	1.248E+00	1.248E+00	1.248E+00	1.248E+00
VEG. ING	3.018E+02	3.487E+03	3.018E+02	1.036E+03	8.442E+02	3.018E+02
MEAT ING	2.598E+00	3.002E+01	2.598E+00	8.921E+00	7.267E+00	2.598E+00
MILK ING	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
RNPLUS50	7.234E+01	9.864E+02	1.644E+01	7.234E+01	7.234E+01	4.603E+02
TOTALS	3.784E+02	4.508E+03	3.221E+02	1.121E+03	9.262E+02	9.117E+02

REGION: Marsland MU1-5 Occupati CODE: MILDOS-AREA (02/12) PAGE 7
 METSET: DATA: MAROCMU.MIL 08/16/13
 TIME STEP NUMBER 1, DURATION IN YRS IS... 5.0

NUMBER 1 NAME=East Boundary X= 1.4KM, Y= 0.3KM, Z= -20.0M, 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	1.78E+01	3.32E-01	3.24E-01	3.71E-01	3.42E-01	2.91E+02
CHILD	TOTALS	1.78E+01	3.39E-01	3.26E-01	3.47E-01	3.34E-01	2.91E+02
TEENAGE	TOTALS	1.78E+01	3.55E-01	3.27E-01	3.36E-01	3.31E-01	2.91E+02
ADULT	TOTALS	1.78E+01	3.54E-01	3.29E-01	3.37E-01	3.32E-01	2.91E+02

NUMBER 2 NAME=South Boundary X= 0.0KM, Y= -0.5KM, Z= 13.0M, DIST= 0.5KM, 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	3.73E+01	9.75E-01	9.40E-01	1.13E+00	1.01E+00	6.07E+02
CHILD	TOTALS	3.73E+01	1.00E+00	9.49E-01	1.04E+00	9.82E-01	6.07E+02
TEENAGE	TOTALS	3.73E+01	1.07E+00	9.55E-01	9.92E-01	9.69E-01	6.07E+02
ADULT	TOTALS	3.73E+01	1.06E+00	9.63E-01	9.94E-01	9.73E-01	6.07E+02

REGION: Marsland MU1-5 Occupati CODE: MILDOS-AREA (02/12) PAGE 8
 METSET: DATA: MAROCMU.MIL 08/16/13
 TIME STEP NUMBER 1, DURATION IN YRS IS... 5.0

NUMBER 3 NAME=West Boundary X= -0.7KM, Y= 0.0KM, Z= 49.0M, DIST= 0.7KM, 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	2.56E+01	8.09E-01	7.84E-01	9.26E-01	8.38E-01	4.15E+02
CHILD	TOTALS	2.56E+01	8.29E-01	7.91E-01	8.54E-01	8.14E-01	4.15E+02
TEENAGE	TOTALS	2.56E+01	8.77E-01	7.95E-01	8.22E-01	8.05E-01	4.15E+02
ADULT	TOTALS	2.56E+01	8.75E-01	8.01E-01	8.23E-01	8.08E-01	4.15E+02

NUMBER 4 NAME=MU-1 X= -0.5KM, Y= 2.3KM, Z= 27.0M, DIST= 2.4KM, 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	3.98E+02	1.01E+00	9.94E-01	1.09E+00	1.03E+00	6.62E+03
CHILD	TOTALS	3.98E+02	1.02E+00	9.98E-01	1.04E+00	1.01E+00	6.62E+03
TEENAGE	TOTALS	3.98E+02	1.06E+00	1.00E+00	1.02E+00	1.01E+00	6.62E+03
ADULT	TOTALS	3.98E+02	1.06E+00	1.01E+00	1.02E+00	1.01E+00	6.62E+03

NUMBER 5 NAME=MU-2 X= -0.4KM, Y= 1.6KM, Z= 16.0M, DIST= 1.7KM, 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	6.69E+02	1.09E+00	1.08E+00	1.15E+00	1.11E+00	1.11E+04
CHILD	TOTALS	6.69E+02	1.10E+00	1.09E+00	1.12E+00	1.10E+00	1.11E+04
TEENAGE	TOTALS	6.69E+02	1.13E+00	1.09E+00	1.10E+00	1.09E+00	1.11E+04
ADULT	TOTALS	6.69E+02	1.13E+00	1.09E+00	1.10E+00	1.09E+00	1.11E+04

NUMBER 6 NAME=MU-3 X= -0.1KM, Y= 0.9KM, Z= 13.0M, DIST= 1.0KM, 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	4.08E+02	1.16E+00	1.15E+00	1.23E+00	1.18E+00	6.78E+03
CHILD	TOTALS	4.08E+02	1.17E+00	1.15E+00	1.19E+00	1.17E+00	6.78E+03
TEENAGE	TOTALS	4.08E+02	1.20E+00	1.15E+00	1.17E+00	1.16E+00	6.78E+03
ADULT	TOTALS	4.08E+02	1.20E+00	1.16E+00	1.17E+00	1.16E+00	6.78E+03

NUMBER 7 NAME=MU-5 X= 0.9KM, Y= -0.4KM, Z= -15.0M, DIST= 1.0KM, 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	3.96E+02	7.13E-01	6.98E-01	7.83E-01	7.30E-01	6.59E+03
CHILD	TOTALS	3.96E+02	7.25E-01	7.02E-01	7.40E-01	7.16E-01	6.59E+03
TEENAGE	TOTALS	3.96E+02	7.54E-01	7.05E-01	7.21E-01	7.11E-01	6.59E+03
ADULT	TOTALS	3.96E+02	7.52E-01	7.08E-01	7.22E-01	7.12E-01	6.59E+03

NUMBER 8 NAME=MU-A X= -0.8KM, Y= 2.9KM, Z= 45.0M, DIST= 3.0KM, 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	3.92E+01	7.37E-01	7.12E-01	8.52E-01	7.65E-01	6.43E+02
CHILD	TOTALS	3.92E+01	7.56E-01	7.18E-01	7.81E-01	7.42E-01	6.43E+02
TEENAGE	TOTALS	3.92E+01	8.04E-01	7.22E-01	7.49E-01	7.33E-01	6.43E+02
ADULT	TOTALS	3.92E+01	8.01E-01	7.28E-01	7.50E-01	7.35E-01	6.43E+02

REGION: Marsland MU1-5 Occupati CODE: MILDOS-AREA (02/12) PAGE 11
 METSET: DATA: MAROCMU.MIL 08/16/13
 TIME STEP NUMBER 1, DURATION IN YRS IS... 5.0

NUMBER 9 NAME=MU-B X= 1.2KM, Y= -1.0KM, Z= -15.0M, DIST= 1.6KM, 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	3.87E+01	7.14E-01	6.87E-01	8.38E-01	7.44E-01	6.34E+02
CHILD	TOTALS	3.87E+01	7.35E-01	6.94E-01	7.61E-01	7.19E-01	6.34E+02
TEENAGE	TOTALS	3.87E+01	7.86E-01	6.99E-01	7.28E-01	7.10E-01	6.34E+02
ADULT	TOTALS	3.87E+01	7.83E-01	7.05E-01	7.29E-01	7.12E-01	6.34E+02

NUMBER 10 NAME=MU-C X= 1.8KM, Y= -2.3KM, Z= -25.0M, DIST= 3.0KM, 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	1.01E+01	5.58E-01	5.16E-01	7.53E-01	6.06E-01	1.60E+02
CHILD	TOTALS	1.01E+01	5.91E-01	5.27E-01	6.32E-01	5.67E-01	1.60E+02
TEENAGE	TOTALS	1.01E+01	6.71E-01	5.34E-01	5.79E-01	5.52E-01	1.60E+02
ADULT	TOTALS	1.01E+01	6.67E-01	5.44E-01	5.81E-01	5.56E-01	1.60E+02

REGION: Marsland MU1-5 Occupati CODE: MILDOS-AREA (02/12) PAGE 12
 METSET: DATA: MAROCMU.MIL 08/16/13
 TIME STEP NUMBER 1, DURATION IN YRS IS... 5.0

NUMBER 11 NAME=MU-D X= 2.5KM, Y= -3.6KM, Z= -36.0M, DIST= 4.4KM, 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	5.33E+00	3.96E-01	3.51E-01	6.03E-01	4.46E-01	8.31E+01
CHILD	TOTALS	5.32E+00	4.31E-01	3.62E-01	4.74E-01	4.05E-01	8.31E+01
TEENAGE	TOTALS	5.32E+00	5.16E-01	3.70E-01	4.18E-01	3.89E-01	8.31E+01
ADULT	TOTALS	5.33E+00	5.12E-01	3.80E-01	4.20E-01	3.93E-01	8.31E+01

NUMBER 12 NAME=MU-E X= 2.8KM, Y= -4.0KM, Z= -42.0M, DIST= 4.9KM, 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	4.27E+00	3.28E-01	2.87E-01	5.17E-01	3.74E-01	6.64E+01
CHILD	TOTALS	4.26E+00	3.60E-01	2.98E-01	4.00E-01	3.36E-01	6.64E+01
TEENAGE	TOTALS	4.27E+00	4.38E-01	3.05E-01	3.48E-01	3.21E-01	6.64E+01
ADULT	TOTALS	4.27E+00	4.34E-01	3.14E-01	3.50E-01	3.25E-01	6.64E+01

REGION: Marsland MU1-5 Occupati CODE: MILDOS-AREA (02/12) PAGE 13
 METSET: DATA: MAROCMU.MIL 08/16/13
 TIME STEP NUMBER 1, DURATION IN YRS IS... 5.0

NUMBER 13 NAME=MU-F X= 3.0KM, Y= -4.3KM, Z= -47.0M, DIST= 5.2KM, 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	3.72E+00	2.88E-01	2.51E-01	4.64E-01	3.31E-01	5.78E+01
CHILD	TOTALS	3.71E+00	3.18E-01	2.60E-01	3.55E-01	2.96E-01	5.78E+01
TEENAGE	TOTALS	3.71E+00	3.90E-01	2.67E-01	3.07E-01	2.82E-01	5.78E+01
ADULT	TOTALS	3.72E+00	3.87E-01	2.75E-01	3.09E-01	2.86E-01	5.78E+01

NUMBER 14 NAME=MU-4 X= 0.5KM, Y= 0.1KM, Z= -4.0M, DIST= 0.6KM, 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	5.05E+02	9.25E-01	9.10E-01	9.92E-01	9.41E-01	8.40E+03
CHILD	TOTALS	5.05E+02	9.36E-01	9.14E-01	9.50E-01	9.28E-01	8.40E+03
TEENAGE	TOTALS	5.05E+02	9.63E-01	9.17E-01	9.32E-01	9.22E-01	8.40E+03
ADULT	TOTALS	5.05E+02	9.62E-01	9.20E-01	9.33E-01	9.24E-01	8.40E+03

REGION: Marsland MU1-5 Occupati CODE: MILDOS-AREA (02/12) PAGE 14
 METSET: DATA: MAROCMU.MIL 08/16/13
 TIME STEP NUMBER 1, DURATION IN YRS IS... 5.0

NUMBER 15 NAME=Satellite X= 0.0KM, Y= 0.0KM, Z= 0.0M, DIST= 0.0KM, 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	5.66E+01	8.28E-01	8.09E-01	9.19E-01	8.50E-01	9.30E+02
CHILD	TOTALS	5.66E+01	8.43E-01	8.14E-01	8.63E-01	8.32E-01	9.30E+02
TEENAGE	TOTALS	5.66E+01	8.81E-01	8.17E-01	8.38E-01	8.25E-01	9.30E+02
ADULT	TOTALS	5.66E+01	8.79E-01	8.21E-01	8.39E-01	8.27E-01	9.30E+02

NUMBER 16 NAME=N Boundary #1 X= -1.3KM, Y= 5.1KM, Z= 35.0M, DIST= 5.3KM, 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	6.55E+00	5.15E-01	4.64E-01	7.51E-01	5.72E-01	1.02E+02
CHILD	TOTALS	6.55E+00	5.55E-01	4.77E-01	6.05E-01	5.25E-01	1.02E+02
TEENAGE	TOTALS	6.55E+00	6.52E-01	4.86E-01	5.41E-01	5.07E-01	1.02E+02
ADULT	TOTALS	6.55E+00	6.47E-01	4.97E-01	5.43E-01	5.12E-01	1.02E+02

REGION: Marsland MU1-5 Occupati CODE: MILDOS-AREA (02/12) PAGE 15
 METSET: DATA: MAROCMU.MIL 08/16/13
 TIME STEP NUMBER 1, DURATION IN YRS IS... 5.0

NUMBER 17 NAME=N Boundary #2 X= -0.5KM, Y= 3.3KM, Z= 20.0M, DIST= 3.3KM, 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	2.05E+01	6.97E-01	6.66E-01	8.40E-01	7.32E-01	3.31E+02
CHILD	TOTALS	2.05E+01	7.21E-01	6.73E-01	7.51E-01	7.03E-01	3.31E+02
TEENAGE	TOTALS	2.05E+01	7.80E-01	6.79E-01	7.12E-01	6.92E-01	3.31E+02
ADULT	TOTALS	2.05E+01	7.77E-01	6.86E-01	7.13E-01	6.95E-01	3.31E+02

Program execution time = 0.37 seconds

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**MILDOS-AREA
RADIATION DOSES FROM
CAMECO RESOURCES
MARSLAND EXPANSION AREA
IN-SITU URANIUM RECOVERY OPERATION**

Appendix B7

September 24, 2013

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Appendix	Title	Radon Source	Weather Data	Waste Water Flow Rate
B7	MAROCST	SATELLITE 1-5 OCCUPATIONAL	MEA	315

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METSET: DATA: MAROCST.MIL 08/16/13

JOINT FREQUENCY IN PERCENT, DIRECTION INDICATES WHERE WIND IS FROM FREQWS=0.14427,0.29579,0.30967,0.17441,0.05798,0.01793

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

STABILITY CLASS 1

1.5	0.1410	0.0240	0.0710	0.0820	0.0940	0.1300	0.1060	0.2120	0.1770	0.3540	0.1410	0.0940	0.1180	0.0820	0.0590	0.0590	1.9440
5.5	0.2360	0.1530	0.1890	0.1770	0.1770	0.2590	0.2000	0.2120	0.2120	0.2590	0.2240	0.4010	0.1180	0.1180	0.2000	0.2120	3.3470
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	0.3770	0.1770	0.2600	0.2590	0.2710	0.3890	0.3060	0.4240	0.3890	0.6130	0.3650	0.4950	0.2360	0.2000	0.2590	0.2710	5.2910

STABILITY CLASS 2

1.5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0350	0.0120	0.0470	0.0470	0.0940	0.0120	0.0000	0.0120	0.0120	0.0000	0.0000	0.2710
5.5	0.2000	0.2240	0.2470	0.1770	0.1770	0.2470	0.3420	0.2470	0.2360	0.3180	0.3060	0.2590	0.1300	0.1650	0.2360	0.2120	3.7230
10.0	0.0240	0.0000	0.0120	0.0000	0.0120	0.0350	0.0350	0.0240	0.0710	0.0590	0.0000	0.0470	0.0240	0.0120	0.0710	0.0470	0.4730
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	0.2240	0.2240	0.2590	0.1770	0.1890	0.3170	0.3890	0.3180	0.3540	0.4710	0.3180	0.3060	0.1660	0.1890	0.3070	0.2590	4.4670

STABILITY CLASS 3

1.5	0.0120	0.0000	0.0000	0.0000	0.0000	0.0000	0.0350	0.0120	0.0350	0.0240	0.0120	0.0000	0.0000	0.0000	0.0000	0.0000	0.1300
5.5	0.0590	0.0590	0.0590	0.0820	0.1180	0.1770	0.1890	0.1530	0.1530	0.1410	0.1890	0.0820	0.0710	0.0470	0.0590	0.0940	1.7320
10.0	1.0300	0.4710	0.2950	0.3420	0.3300	0.5540	0.4120	0.4360	0.4950	0.4360	0.5660	0.6600	0.4360	0.4710	0.8130	0.7780	8.5250
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	1.1010	0.5300	0.3540	0.4240	0.4480	0.7310	0.6360	0.6010	0.6830	0.6010	0.7670	0.7420	0.5070	0.5180	0.8720	0.8720	10.3870

STABILITY CLASS 4

1.5	0.0240	0.0240	0.0000	0.0000	0.0120	0.0470	0.0240	0.0120	0.0120	0.0120	0.0240	0.0120	0.0000	0.0120	0.0120	0.0710	0.2980
5.5	0.7310	0.4710	0.1890	0.3060	0.5770	0.8840	1.0490	0.7540	0.5190	0.3890	0.4830	0.5070	0.4120	0.3770	0.6840	1.3550	9.6870
10.0	1.9100	1.0720	0.9190	0.7310	1.0370	0.9190	1.2140	1.6500	1.3080	0.8960	0.7900	1.4610	1.2730	1.4850	1.9090	2.3690	20.9430
15.5	1.7800	0.8600	0.3060	0.2000	0.3180	0.3060	0.3890	0.9550	1.3790	0.6720	0.3650	0.8720	1.2610	1.9560	3.0050	2.8170	17.4410
21.5	0.4120	0.2240	0.0120	0.0000	0.0120	0.0240	0.0350	0.3420	0.2830	0.1180	0.1410	0.2470	0.2950	0.7190	1.6970	1.2370	5.7980
28.0	0.1410	0.0120	0.0000	0.0120	0.0000	0.0120	0.0000	0.0120	0.0120	0.0000	0.0000	0.0240	0.2360	0.2950	0.5890	0.4480	1.7930
ALL	4.9980	2.6630	1.4260	1.2490	1.9560	2.1920	2.7110	3.7250	3.5130	2.0870	1.8030	3.1230	3.4770	4.8440	7.8960	8.2970	55.9600

STABILITY CLASS 5

1.5	0.1530	0.0710	0.0000	0.0000	0.0590	0.0350	0.0820	0.0710	0.0350	0.0000	0.0350	0.0350	0.0120	0.0710	0.0590	0.0940	0.8120
5.5	0.2360	0.1300	0.1650	0.2000	0.1530	0.3060	0.2000	0.2470	0.2710	0.2000	0.2950	0.2830	0.2000	0.1300	0.3540	0.9660	4.3360
10.0	0.0470	0.0350	0.0240	0.0470	0.0590	0.0240	0.0240	0.0470	0.0240	0.0240	0.0590	0.1060	0.0940	0.0820	0.1410	0.1890	1.0260
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	0.4360	0.2360	0.1890	0.2470	0.2710	0.3650	0.3060	0.3650	0.3300	0.2240	0.3890	0.4240	0.3060	0.2830	0.5540	1.2490	6.1740

STABILITY CLASS 6

1.5	0.9780	0.6950	0.6360	0.5420	0.4480	0.5190	0.6720	0.6130	0.7540	0.6600	0.5770	0.7310	0.5660	0.5770	0.6720	1.3320	10.9720
5.5	0.7070	0.2830	0.1180	0.2590	0.3540	0.3180	0.3420	0.4830	0.3420	0.4950	0.4360	0.4710	0.2950	0.5540	0.4600	0.8370	6.7540
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	1.6850	0.9780	0.7540	0.8010	0.8020	0.8370	1.0140	1.0960	1.0960	1.1550	1.0130	1.2020	0.8610	1.1310	1.1320	2.1690	17.7260

ALL 8.8210 4.8080 3.2420 3.1570 3.9370 4.8310 5.3620 6.5290 6.3650 5.1510 4.6550 6.2920 5.5530 7.1650 11.0200 13.1170 100.0050

-----INDIVIDUAL RECEPTOR LOCATION DATA, 17 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	East Boundary	1.40	0.30	-20.00	1.43	1 10 MU-C		1.84	-2.33	-25.00	2.97	1	
2	South Boundary	0.00	-0.50	13.00	0.50	1 11 MU-D		2.52	-3.56	-36.00	4.36	1	
3	West Boundary	-0.70	0.00	49.00	0.70	1 12 MU-E		2.84	-3.98	-42.00	4.89	1	
4	MU-1	-0.46	2.33	27.00	2.37	1 13 MU-F		3.00	-4.30	-47.00	5.24	1	
5	MU-2	-0.45	1.65	16.00	1.71	1 14 MU-4		0.54	0.13	-4.00	0.56	1	
6	MU-3	-0.05	0.95	13.00	0.95	1 15 Satellite		0.00	0.00	0.00	0.00	1	
7	MU-5	0.94	-0.45	-15.00	1.04	1 16 N Boundary #1		-1.30	5.10	35.00	5.26	1	
8	MU-A	-0.76	2.88	45.00	2.98	1 17 N Boundary #2		-0.50	3.30	20.00	3.34	1	
9	MU-B	1.22	-1.02	-15.00	1.59	1							

MISCELLANEOUS INPUTABLE PARAMETER VALUES

DMM	DMA	TSTART	FFORI	FHAYI	FFORP	FHAYP	FPR(1)	FPR(2)	FPR(3)	ACTRAT
100.0	100.0	1.00	0.90	0.10	0.90	0.10	87000.00	4000.00	0.00	2.50

IPACT EQUALS 0,

JC EQUALS 1, 0, 0, 0, 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

POPULATION DISTRIBUTION

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
KILOMETERS	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	0	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	0	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	0	0	0	0	0	0	0	0	0	0	0	0
10.0-20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20.0-30.0	0	0	0	0	0	0	993	0	0	0	0	0	0	0	0	1107
30.0-40.0	87	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40.0-50.0	0	5634	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50.0-60.0	0	0	0	652	0	0	0	9859	0	0	0	0	0	279	0	0
60.0-70.0	0	0	0	999	0	0	0	0	0	0	0	0	0	0	0	0
70.0-80.0	145	0	14	30	0	0	0	0	0	15542	1831	0	0	19	0	0

1.0-80.0	232	5634	14	1681	0	0	993	9859	0	15542	1831	0	0	298	0	1107
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TOTAL 1-80 KM POPULATION IS 37191 PERSONS

METSET: DATA: MAROCST.MIL 08/16/13

NUMBER OF SOURCES= 1

KM	KM	M	KM2	CI/YEAR					PSIZE	M/SEC				
NO.	X	Y	Z	AREA	U-238	Th-230	Ra-226	Pb-210	Rn-222	ID	SET	EXIT	VEL	SOURCE NAME
1	0.00	0.00	0.00	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.22E+03	1001	1	1.00E+01		Satellite

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	5.00YRS	5.00YRS	5.00YRS	5.00YRS	5.00YRS	5.00YRS	5.00YRS	5.00YRS	5.00YRS

1 1.000E+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	5.00YRS	5.00YRS	5.00YRS	5.00YRS	5.00YRS	5.00YRS	5.00YRS	5.00YRS	5.00YRS

1 1.000E+00

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 YEAF

DOSES RECEIVED BY PEOPLE WITHIN 80 KILOMETERS

PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INHAL.	3.842E-01	3.111E+00	5.016E-02	2.333E+00	1.122E+00	1.496E+02
GROUND	2.112E-02	2.112E-02	2.112E-02	2.112E-02	2.112E-02	2.112E-02
CLOUD	1.280E+00	1.280E+00	1.280E+00	1.280E+00	1.280E+00	1.280E+00
VEG. ING	1.800E+00	2.080E+01	1.800E+00	6.181E+00	5.035E+00	1.800E+00
MEAT ING	1.252E-01	1.446E+00	1.252E-01	4.299E-01	3.502E-01	1.252E-01
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	3.611E+00	2.666E+01	3.277E+00	1.025E+01	7.808E+00	1.528E+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	3.041E+02	3.514E+03	3.041E+02	1.044E+03	8.506E+02	3.041E+02
MEAT ING	2.508E+00	2.898E+01	2.508E+00	8.612E+00	7.015E+00	2.508E+00
MILK ING	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
RNPLUS50	7.234E+01	9.864E+02	1.644E+01	7.234E+01	7.234E+01	4.603E+02
TOTALS	3.789E+02	4.529E+03	3.230E+02	1.125E+03	9.300E+02	7.669E+02

TOTAL DOSES COMPUTED OVER ALL POPULATIONS

PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INHAL.	3.842E-01	3.111E+00	5.016E-02	2.333E+00	1.122E+00	1.496E+02
GROUND	2.112E-02	2.112E-02	2.112E-02	2.112E-02	2.112E-02	2.112E-02
CLOUD	1.280E+00	1.280E+00	1.280E+00	1.280E+00	1.280E+00	1.280E+00
VEG. ING	3.059E+02	3.534E+03	3.059E+02	1.050E+03	8.557E+02	3.059E+02
MEAT ING	2.633E+00	3.042E+01	2.633E+00	9.042E+00	7.365E+00	2.633E+00
MILK ING	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
RNPLUS50	7.234E+01	9.864E+02	1.644E+01	7.234E+01	7.234E+01	4.603E+02
TOTALS	3.825E+02	4.556E+03	3.263E+02	1.136E+03	9.378E+02	9.197E+02

NUMBER 1 NAME=East Boundary X= 1.4KM, Y= 0.3KM, Z= -20.0M, 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	8.32E+00	9.14E-02	8.97E-02	9.92E-02	9.33E-02	1.37E+02
CHILD	TOTALS	8.32E+00	9.27E-02	9.02E-02	9.44E-02	9.18E-02	1.37E+02
TEENAGE	TOTALS	8.32E+00	9.59E-02	9.05E-02	9.23E-02	9.12E-02	1.37E+02
ADULT	TOTALS	8.32E+00	9.58E-02	9.08E-02	9.23E-02	9.13E-02	1.37E+02

NUMBER 2 NAME=South Boundary X= 0.0KM, Y= -0.5KM, Z= 13.0M, DIST= 0.5KM, 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	1.74E+02	9.04E-01	9.00E-01	9.21E-01	9.08E-01	2.89E+03
CHILD	TOTALS	1.74E+02	9.07E-01	9.01E-01	9.10E-01	9.05E-01	2.89E+03
TEENAGE	TOTALS	1.74E+02	9.14E-01	9.02E-01	9.06E-01	9.03E-01	2.89E+03
ADULT	TOTALS	1.74E+02	9.13E-01	9.03E-01	9.06E-01	9.04E-01	2.89E+03

NUMBER 3 NAME=West Boundary X= -0.7KM, Y= 0.0KM, Z= 49.0M, DIST= 0.7KM, 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	6.50E+01	6.55E-01	6.50E-01	6.79E-01	6.61E-01	1.07E+03
CHILD	TOTALS	6.50E+01	6.59E-01	6.51E-01	6.64E-01	6.56E-01	1.07E+03
TEENAGE	TOTALS	6.50E+01	6.69E-01	6.52E-01	6.57E-01	6.54E-01	1.07E+03
ADULT	TOTALS	6.50E+01	6.68E-01	6.53E-01	6.58E-01	6.54E-01	1.07E+03

NUMBER 4 NAME=MU-1 X= -0.5KM, Y= 2.3KM, Z= 27.0M, DIST= 2.4KM, 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	1.35E+01	6.98E-01	6.63E-01	8.57E-01	7.36E-01	2.14E+02
CHILD	TOTALS	1.34E+01	7.24E-01	6.72E-01	7.58E-01	7.04E-01	2.14E+02
TEENAGE	TOTALS	1.34E+01	7.90E-01	6.78E-01	7.15E-01	6.92E-01	2.14E+02
ADULT	TOTALS	1.35E+01	7.87E-01	6.85E-01	7.16E-01	6.95E-01	2.14E+02

NUMBER 5 NAME=MU-2 X= -0.4KM, Y= 1.6KM, Z= 16.0M, DIST= 1.7KM, 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	2.10E+01	7.20E-01	6.97E-01	8.23E-01	7.45E-01	3.39E+02
CHILD	TOTALS	2.10E+01	7.37E-01	7.03E-01	7.59E-01	7.24E-01	3.39E+02
TEENAGE	TOTALS	2.10E+01	7.80E-01	7.07E-01	7.31E-01	7.16E-01	3.39E+02
ADULT	TOTALS	2.10E+01	7.78E-01	7.12E-01	7.32E-01	7.18E-01	3.39E+02

NUMBER 6 NAME=MU-3 X= -0.1KM, Y= 0.9KM, Z= 13.0M, DIST= 1.0KM, 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	4.84E+01	7.49E-01	7.39E-01	7.94E-01	7.60E-01	7.96E+02
CHILD	TOTALS	4.84E+01	7.56E-01	7.41E-01	7.66E-01	7.51E-01	7.96E+02
TEENAGE	TOTALS	4.84E+01	7.75E-01	7.43E-01	7.54E-01	7.47E-01	7.96E+02
ADULT	TOTALS	4.84E+01	7.74E-01	7.45E-01	7.54E-01	7.48E-01	7.96E+02

NUMBER 7 NAME=MU-5 X= 0.9KM, Y= -0.4KM, Z= -15.0M, DIST= 1.0KM, 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	1.49E+01	7.92E-02	7.84E-02	8.28E-02	8.00E-02	2.47E+02
CHILD	TOTALS	1.49E+01	7.98E-02	7.86E-02	8.05E-02	7.93E-02	2.47E+02
TEENAGE	TOTALS	1.49E+01	8.13E-02	7.87E-02	7.95E-02	7.90E-02	2.47E+02
ADULT	TOTALS	1.49E+01	8.12E-02	7.89E-02	7.96E-02	7.91E-02	2.47E+02

NUMBER 8 NAME=MU-A X= -0.8KM, Y= 2.9KM, Z= 45.0M, DIST= 3.0KM, 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	9.58E+00	6.18E-01	5.77E-01	8.10E-01	6.65E-01	1.50E+02
CHILD	TOTALS	9.57E+00	6.50E-01	5.87E-01	6.91E-01	6.26E-01	1.50E+02
TEENAGE	TOTALS	9.68E+00	7.29E-01	5.95E-01	6.39E-01	6.12E-01	1.50E+02
ADULT	TOTALS	9.58E+00	7.25E-01	6.04E-01	6.41E-01	6.16E-01	1.50E+02

REGION: Marsland MU1-5 Occupati CODE: MILDOS-AREA (02/12) PAGE 11
 METSET: DATA: MAROCST.MIL 08/16/13
 TIME STEP NUMBER 1, DURATION IN YRS IS... 5.0

NUMBER 9 NAME=MU-B X= 1.2KM, Y= -1.0KM, Z= -15.0M, DIST= 1.6KM, 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	1.26E+01	1.69E-01	1.65E-01	1.86E-01	1.73E-01	2.08E+02
CHILD	TOTALS	1.26E+01	1.72E-01	1.66E-01	1.75E-01	1.69E-01	2.08E+02
TEENAGE	TOTALS	1.26E+01	1.79E-01	1.66E-01	1.70E-01	1.68E-01	2.08E+02
ADULT	TOTALS	1.26E+01	1.79E-01	1.67E-01	1.71E-01	1.68E-01	2.08E+02

NUMBER 10 NAME=MU-C X= 1.8KM, Y= -2.3KM, Z= -25.0M, DIST= 3.0KM, 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	6.46E+00	2.27E-01	2.14E-01	2.87E-01	2.42E-01	1.04E+02
CHILD	TOTALS	6.45E+00	2.37E-01	2.17E-01	2.50E-01	2.30E-01	1.04E+02
TEENAGE	TOTALS	6.45E+00	2.62E-01	2.20E-01	2.33E-01	2.25E-01	1.04E+02
ADULT	TOTALS	6.46E+00	2.60E-01	2.22E-01	2.34E-01	2.26E-01	1.04E+02

NUMBER 11 NAME=MU-D X= 2.5KM, Y= -3.6KM, Z= -36.0M, DIST= 4.4KM, 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	4.02E+00	2.02E-01	1.84E-01	2.86E-01	2.22E-01	6.40E+01
CHILD	TOTALS	4.01E+00	2.16E-01	1.89E-01	2.34E-01	2.06E-01	6.40E+01
TEENAGE	TOTALS	4.02E+00	2.50E-01	1.92E-01	2.11E-01	1.99E-01	6.40E+01
ADULT	TOTALS	4.02E+00	2.49E-01	1.96E-01	2.12E-01	2.01E-01	6.40E+01

NUMBER 12 NAME=MU-E X= 2.8KM, Y= -4.0KM, Z= -42.0M, DIST= 4.9KM, 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	3.33E+00	1.73E-01	1.56E-01	2.52E-01	1.93E-01	5.30E+01
CHILD	TOTALS	3.33E+00	1.87E-01	1.61E-01	2.03E-01	1.77E-01	5.30E+01
TEENAGE	TOTALS	3.33E+00	2.19E-01	1.64E-01	1.82E-01	1.71E-01	5.30E+01
ADULT	TOTALS	3.33E+00	2.18E-01	1.68E-01	1.83E-01	1.72E-01	5.30E+01

NUMBER 13 NAME=MU-F X= 3.0KM, Y= -4.3KM, Z= -47.0M, DIST= 5.2KM, 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	2.98E+00	1.57E-01	1.41E-01	2.31E-01	1.75E-01	4.73E+01
CHILD	TOTALS	2.97E+00	1.69E-01	1.45E-01	1.85E-01	1.60E-01	4.73E+01
TEENAGE	TOTALS	2.98E+00	2.00E-01	1.47E-01	1.65E-01	1.54E-01	4.73E+01
ADULT	TOTALS	2.98E+00	1.98E-01	1.51E-01	1.65E-01	1.55E-01	4.73E+01

NUMBER 14 NAME=MU-4 X= 0.5KM, Y= 0.1KM, Z= -4.0M, DIST= 0.6KM, 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	4.24E+01	7.74E-02	7.73E-02	7.81E-02	7.76E-02	7.05E+02
CHILD	TOTALS	4.24E+01	7.75E-02	7.73E-02	7.77E-02	7.74E-02	7.05E+02
TEENAGE	TOTALS	4.24E+01	7.78E-02	7.73E-02	7.75E-02	7.74E-02	7.05E+02
ADULT	TOTALS	4.24E+01	7.78E-02	7.74E-02	7.75E-02	7.74E-02	7.05E+02

NUMBER 15 NAME=Satellite X= 0.0KM, Y= 0.0KM, Z= 0.0M, DIST= 0.0KM, 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	1.60E+02	6.26E-03	6.26E-03	6.26E-03	6.26E-03	2.67E+03
CHILD	TOTALS	1.60E+02	6.26E-03	6.26E-03	6.26E-03	6.26E-03	2.67E+03
TEENAGE	TOTALS	1.60E+02	6.26E-03	6.26E-03	6.26E-03	6.26E-03	2.67E+03
ADULT	TOTALS	1.60E+02	6.26E-03	6.26E-03	6.26E-03	6.26E-03	2.67E+03

NUMBER 16 NAME=N Boundary #1 X= -1.3KM, Y= 5.1KM, Z= 35.0M, DIST= 5.3KM, 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	4.47E+00	4.46E-01	3.86E-01	7.27E-01	5.14E-01	6.83E+01
CHILD	TOTALS	4.47E+00	4.93E-01	4.01E-01	5.52E-01	4.58E-01	6.83E+01
TEENAGE	TOTALS	4.47E+00	6.08E-01	4.12E-01	4.76E-01	4.36E-01	6.83E+01
ADULT	TOTALS	4.47E+00	6.03E-01	4.25E-01	4.79E-01	4.42E-01	6.83E+01

REGION: Marsland MU1-5 Occupati CODE: MILDOS-AREA (02/12) PAGE 15
 METSET: DATA: MAROCST.MIL 08/16/13
 TIME STEP NUMBER 1, DURATION IN YRS IS... 5.0

NUMBER 17 NAME=N Boundary #2 X= -0.5KM, Y= 3.3KM, Z= 20.0M, DIST= 3.3KM, 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	8.28E+00	6.05E-01	5.58E-01	8.24E-01	6.58E-01	1.29E+02
CHILD	TOTALS	8.27E+00	6.42E-01	5.70E-01	6.88E-01	6.14E-01	1.29E+02
TEENAGE	TOTALS	8.28E+00	7.32E-01	5.78E-01	6.29E-01	5.97E-01	1.29E+02
ADULT	TOTALS	8.28E+00	7.27E-01	5.88E-01	6.31E-01	6.02E-01	1.29E+02

Program execution time = 0.05 seconds

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**MILDOS-AREA
RADIATION DOSES FROM
CAMECO RESOURCES
MARSLAND EXPANSION AREA
IN-SITU URANIUM RECOVERY OPERATION**

Appendix B8

September 24, 2013

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Appendix	Title	Radon Source	Weather Data	Waste Water Flow Rate
B8	MAROCISR	ISR OCCUPATIONAL	MEA	315

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METSET: DATA: MAROCISR.MIL 08/16/13

JOINT FREQUENCY IN PERCENT, DIRECTION INDICATES WHERE WIND IS FROM FREQWS=0.14427,0.29579,0.30967,0.17441,0.05798,0.01793

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

STABILITY CLASS 1

1.5	0.1410	0.0240	0.0710	0.0820	0.0940	0.1300	0.1060	0.2120	0.1770	0.3540	0.1410	0.0940	0.1180	0.0820	0.0590	0.0590	1.9440
5.5	0.2360	0.1630	0.1890	0.1770	0.1770	0.2590	0.2000	0.2120	0.2120	0.2590	0.2240	0.4010	0.1180	0.1180	0.2000	0.2120	3.3470
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	0.3770	0.1770	0.2600	0.2590	0.2710	0.3890	0.3060	0.4240	0.3890	0.6130	0.3650	0.4950	0.2360	0.2000	0.2590	0.2710	5.2910

STABILITY CLASS 2

1.5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0350	0.0120	0.0470	0.0470	0.0940	0.0120	0.0000	0.0120	0.0120	0.0000	0.0000	0.2710
5.5	0.2000	0.2240	0.2470	0.1770	0.1770	0.2470	0.3420	0.2470	0.2360	0.3180	0.3060	0.2590	0.1300	0.1650	0.2360	0.2120	3.7230
10.0	0.0240	0.0000	0.0120	0.0000	0.0120	0.0350	0.0350	0.0240	0.0710	0.0590	0.0000	0.0470	0.0240	0.0120	0.0710	0.0470	0.4730
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	0.2240	0.2240	0.2590	0.1770	0.1890	0.3170	0.3890	0.3180	0.3540	0.4710	0.3180	0.3060	0.1660	0.1890	0.3070	0.2590	4.4670

STABILITY CLASS 3

1.5	0.0120	0.0000	0.0000	0.0000	0.0000	0.0000	0.0350	0.0120	0.0350	0.0240	0.0120	0.0000	0.0000	0.0000	0.0000	0.0000	0.1300
5.5	0.0590	0.0590	0.0590	0.0820	0.1180	0.1770	0.1890	0.1530	0.1530	0.1410	0.1890	0.0820	0.0710	0.0470	0.0590	0.0940	1.7320
10.0	1.0300	0.4710	0.2950	0.3420	0.3300	0.5540	0.4120	0.4360	0.4950	0.4360	0.5660	0.6600	0.4360	0.4710	0.8130	0.7780	8.5250
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	1.1010	0.5300	0.3540	0.4240	0.4480	0.7310	0.6360	0.6010	0.6830	0.6010	0.7670	0.7420	0.5070	0.5180	0.8720	0.8720	10.3870

STABILITY CLASS 4

1.5	0.0240	0.0240	0.0000	0.0000	0.0120	0.0470	0.0240	0.0120	0.0120	0.0120	0.0240	0.0120	0.0000	0.0120	0.0120	0.0710	0.2980
5.5	0.7310	0.4710	0.1890	0.3060	0.5770	0.8840	1.0490	0.7540	0.5190	0.3890	0.4830	0.5070	0.4120	0.3770	0.6840	1.3550	9.6870
10.0	1.9100	1.0720	0.9190	0.7310	1.0370	0.9190	1.2140	1.6500	1.3080	0.8960	0.7900	1.4610	1.2730	1.4850	1.9090	2.3690	20.9430
15.5	1.7800	0.8600	0.3060	0.2000	0.3180	0.3060	0.3890	0.9550	1.3790	0.6720	0.3650	0.8720	1.2610	1.9560	3.0050	2.8170	17.4410
21.5	0.4120	0.2240	0.0120	0.0000	0.0120	0.0240	0.0350	0.3420	0.2830	0.1180	0.1410	0.2470	0.2950	0.7190	1.6970	1.2370	5.7980
28.0	0.1410	0.0120	0.0000	0.0120	0.0000	0.0120	0.0000	0.0120	0.0120	0.0000	0.0000	0.0240	0.2360	0.2950	0.5890	0.4480	1.7930
ALL	4.9980	2.6630	1.4260	1.2490	1.9560	2.1920	2.7110	3.7250	3.5130	2.0870	1.8030	3.1230	3.4770	4.8440	7.8960	8.2970	55.9600

STABILITY CLASS 5

1.5	0.1530	0.0710	0.0000	0.0000	0.0590	0.0350	0.0820	0.0710	0.0350	0.0000	0.0350	0.0350	0.0120	0.0710	0.0590	0.0940	0.8120
5.5	0.2360	0.1300	0.1650	0.2000	0.1530	0.3060	0.2000	0.2470	0.2710	0.2000	0.2950	0.2830	0.2000	0.1300	0.3540	0.9660	4.3360
10.0	0.0470	0.0350	0.0240	0.0470	0.0590	0.0240	0.0240	0.0470	0.0240	0.0240	0.0590	0.1060	0.0940	0.0820	0.1410	0.1890	1.0260
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	0.4360	0.2360	0.1890	0.2470	0.2710	0.3650	0.3060	0.3650	0.3300	0.2240	0.3890	0.4240	0.3060	0.2830	0.5540	1.2490	6.1740

STABILITY CLASS 6

1.5	0.9780	0.6950	0.6360	0.5420	0.4480	0.5190	0.6720	0.6130	0.7540	0.6600	0.5770	0.7310	0.5660	0.5770	0.6720	1.3320	10.9720
5.5	0.7070	0.2830	0.1180	0.2590	0.3540	0.3180	0.3420	0.4830	0.3420	0.4950	0.4360	0.4710	0.2950	0.5540	0.4600	0.8370	6.7540
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	1.6850	0.9780	0.7540	0.8010	0.8020	0.8370	1.0140	1.0960	1.0960	1.1550	1.0130	1.2020	0.8610	1.1310	1.1320	2.1690	17.7260

ALL 8.8210 4.8080 3.2420 3.1570 3.9370 4.8310 5.3620 6.5290 6.3650 5.1510 4.6550 6.2920 5.5530 7.1650 11.0200 13.1170 100.0050

-----INDIVIDUAL RECEPTOR LOCATION DATA, 17 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	East Boundary	1.40	0.30	-20.00	1.43	1 10 MU-C		1.84	-2.33	-25.00	2.97	1	
2	South Boundary	0.00	-0.50	13.00	0.50	1 11 MU-D		2.52	-3.56	-36.00	4.36	1	
3	West Boundary	-0.70	0.00	49.00	0.70	1 12 MU-E		2.84	-3.98	-42.00	4.89	1	
4	MU-1	-0.46	2.33	27.00	2.37	1 13 MU-F		3.00	-4.30	-47.00	5.24	1	
5	MU-2	-0.45	1.65	16.00	1.71	1 14 MU-4		0.54	0.13	-4.00	0.56	1	
6	MU-3	-0.05	0.95	13.00	0.95	1 15 Satellite		0.00	0.00	0.00	0.00	1	
7	MU-5	0.94	-0.45	-15.00	1.04	1 16 N Boundary #1		-1.30	5.10	35.00	5.26	1	
8	MU-A	-0.76	2.88	45.00	2.98	1 17 N Boundary #2		-0.50	3.30	20.00	3.34	1	
9	MU-B	1.22	-1.02	-15.00	1.59	1							

MISCELLANEOUS INPUTABLE PARAMETER VALUES

DMM	DMA	TSTART	FFORI	FHAYI	FFORP	FHAYP	FPR(1)	FPR(2)	FPR(3)	ACTRAT
100.0	100.0	1.00	0.90	0.10	0.90	0.10	87000.00	4000.00	0.00	2.50

IPACT EQUALS 0, 0, 0,

JC EQUALS 1, 0, 0, 0, 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

POPULATION DISTRIBUTION

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
KILOMETERS	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	0	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	0	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	0	0	0	0	0	0	0	0	0	0	0	0
10.0-20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20.0-30.0	0	0	0	0	0	0	993	0	0	0	0	0	0	0	0	1107
30.0-40.0	87	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40.0-50.0	0	5634	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50.0-60.0	0	0	0	652	0	0	0	9859	0	0	0	0	0	279	0	0
60.0-70.0	0	0	0	999	0	0	0	0	0	0	0	0	0	0	0	0
70.0-80.0	145	0	14	30	0	0	0	0	0	15542	1831	0	0	19	0	0

1.0-80.0	232	5634	14	1681	0	0	993	9859	0	15542	1831	0	0	298	0	1107
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TOTAL 1-80 KM POPULATION IS . 37191 PERSONS

METSET: DATA: MAROCISR.MIL 08/16/13

NUMBER OF SOURCES= 3

NO.	KM		M	KM2	CI/YEAR				PSIZE	M/SEC	ID	SET	EXIT	VEL	SOURCE NAME
	X	Y	Z	AREA	U-238	Th-230	Ra-226	Pb-210	Rn-222						
1	-12.30	25.30	0.00	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.89E+03	1001	1	1.00E+01	N TREND		
2	-16.52	15.44	0.00	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.66E+03	1002	1	1.00E+01	Three Crow		
3	-7.33	16.10	0.00	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.22E+03	1003	1	1.00E+01	Crow Butte Resource		

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
--------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------

1	1.000E+00
2	1.000E+00
3	1.000E+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
--------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------

1	1.000E+00
2	1.000E+00
3	1.000E+00

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 YEAF

DOSES RECEIVED BY PEOPLE WITHIN 80 KILOMETERS

PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INHAL.	1.074E+00	8.695E+00	1.447E-01	6.522E+00	3.137E+00	5.256E+02
GROUND	7.067E-02	7.067E-02	7.067E-02	7.067E-02	7.067E-02	7.067E-02
CLOUD	3.730E+00	3.730E+00	3.730E+00	3.730E+00	3.730E+00	3.730E+00
VEG. ING	5.192E+00	6.000E+01	5.192E+00	1.783E+01	1.452E+01	5.192E+00
MEAT ING	3.611E-01	4.173E+00	3.611E-01	1.240E+00	1.010E+00	3.611E-01
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	1.043E+01	7.666E+01	9.498E+00	2.939E+01	2.247E+01	5.350E+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	8.772E+02	1.014E+04	8.772E+02	3.013E+03	2.454E+03	8.772E+02
MEAT ING	7.234E+00	8.359E+01	7.234E+00	2.485E+01	2.024E+01	7.234E+00
MILK ING	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
RNPLUS50	2.092E+02	2.852E+03	4.754E+01	2.092E+02	2.092E+02	1.331E+03
TOTALS	1.094E+03	1.307E+04	9.320E+02	3.247E+03	2.683E+03	2.216E+03

TOTAL DOSES COMPUTED OVER ALL POPULATIONS

PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INHAL.	1.074E+00	8.695E+00	1.447E-01	6.522E+00	3.137E+00	5.256E+02
GROUND	7.067E-02	7.067E-02	7.067E-02	7.067E-02	7.067E-02	7.067E-02
CLOUD	3.730E+00	3.730E+00	3.730E+00	3.730E+00	3.730E+00	3.730E+00
VEG. ING	8.824E+02	1.020E+04	8.824E+02	3.031E+03	2.469E+03	8.824E+02
MEAT ING	7.595E+00	8.777E+01	7.595E+00	2.609E+01	2.125E+01	7.595E+00
MILK ING	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
RNPLUS50	2.092E+02	2.852E+03	4.754E+01	2.092E+02	2.092E+02	1.331E+03
TOTALS	1.104E+03	1.315E+04	9.415E+02	3.276E+03	2.706E+03	2.751E+03

REGION: Marsland MU1-5 Occupati CODE: MILDOS-AREA (02/12) PAGE 7
 METSET: DATA: MAROCISR.MIL 08/16/13
 TIME STEP NUMBER 1, DURATION IN YRS IS... 5.0

NUMBER 1 NAME=East Boundary X= 1.4KM, Y= 0.3KM, Z= -20.0M, 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	2.85E+00	5.54E-01	3.33E-01	1.58E+00	8.03E-01	4.14E+01
CHILD	TOTALS	2.83E+00	7.26E-01	3.89E-01	9.43E-01	5.97E-01	4.14E+01
TEENAGE	TOTALS	2.84E+00	1.15E+00	4.27E-01	6.64E-01	5.17E-01	4.14E+01
ADULT	TOTALS	2.85E+00	1.13E+00	4.76E-01	6.74E-01	5.39E-01	4.14E+01

NUMBER 2 NAME=South Boundary X= 0.0KM, Y= -0.5KM, Z= 13.0M, DIST= 0.5KM, 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	3.32E+00	6.84E-01	3.98E-01	2.01E+00	1.01E+00	4.79E+01
CHILD	TOTALS	3.30E+00	9.06E-01	4.70E-01	1.19E+00	7.40E-01	4.79E+01
TEENAGE	TOTALS	3.31E+00	1.45E+00	5.20E-01	8.27E-01	6.37E-01	4.79E+01
ADULT	TOTALS	3.32E+00	1.43E+00	5.83E-01	8.39E-01	6.64E-01	4.79E+01

REGION: Marsland MU1-5 Occupati CODE: MILDOS-AREA (02/12) PAGE 8
 METSET: DATA: MAROCISR.MIL 08/16/13
 TIME STEP NUMBER 1, DURATION IN YRS IS... 5.0

NUMBER 3 NAME=West Boundary X= -0.7KM, Y= 0.0KM, Z= 49.0M, DIST= 0.7KM, 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	3.58E+00	7.24E-01	4.26E-01	2.11E+00	1.06E+00	5.17E+01
CHILD	TOTALS	3.55E+00	9.56E-01	5.01E-01	1.25E+00	7.83E-01	5.17E+01
TEENAGE	TOTALS	3.57E+00	1.52E+00	5.53E-01	8.73E-01	6.75E-01	5.17E+01
ADULT	TOTALS	3.58E+00	1.50E+00	6.19E-01	8.86E-01	7.04E-01	5.17E+01

NUMBER 4 NAME=MU-1 X= -0.5KM, Y= 2.3KM, Z= 27.0M, DIST= 2.4KM, 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	3.80E+00	7.22E-01	4.40E-01	2.03E+00	1.04E+00	5.52E+01
CHILD	TOTALS	3.78E+00	9.41E-01	5.12E-01	1.22E+00	7.78E-01	5.52E+01
TEENAGE	TOTALS	3.79E+00	1.48E+00	5.60E-01	8.63E-01	6.76E-01	5.52E+01
ADULT	TOTALS	3.80E+00	1.45E+00	6.23E-01	8.75E-01	7.03E-01	5.52E+01

REGION: Marsland MU1-5 Occupati CODE: MILDOS-AREA (02/12) PAGE 9
 METSET: DATA: MAROCISR.MIL 08/16/13
 TIME STEP NUMBER 1, DURATION IN YRS IS... 5.0

NUMBER 5 NAME=MU-2 X= -0.4KM, Y= 1.6KM, Z= 16.0M, DIST= 1.7KM, 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	3.69E+00	7.15E-01	4.32E-01	2.03E+00	1.04E+00	5.36E+01
CHILD	TOTALS	3.67E+00	9.36E-01	5.03E-01	1.21E+00	7.71E-01	5.36E+01
TEENAGE	TOTALS	3.69E+00	1.48E+00	5.52E-01	8.57E-01	6.69E-01	5.36E+01
ADULT	TOTALS	3.70E+00	1.45E+00	6.16E-01	8.69E-01	6.96E-01	5.36E+01

NUMBER 6 NAME=MU-3 X= -0.1KM, Y= 0.9KM, Z= 13.0M, DIST= 1.0KM, 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+00	6.94E-01	4.13E-01	2.00E+00	1.01E+00	5.08E+01
CHILD	TOTALS	3.48E+00	9.12E-01	4.84E-01	1.19E+00	7.49E-01	5.08E+01
TEENAGE	TOTALS	3.50E+00	1.45E+00	5.33E-01	8.34E-01	6.48E-01	5.08E+01
ADULT	TOTALS	3.51E+00	1.42E+00	5.95E-01	8.46E-01	6.75E-01	5.08E+01

NUMBER 7 NAME=MU-5 X= 0.9KM, Y= -0.4KM, Z= -15.0M, DIST= 1.0KM, 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	2.93E+00	5.85E-01	3.46E-01	1.69E+00	8.55E-01	4.24E+01
CHILD	TOTALS	2.91E+00	7.71E-01	4.07E-01	1.01E+00	6.32E-01	4.24E+01
TEENAGE	TOTALS	2.92E+00	1.23E+00	4.48E-01	7.05E-01	5.46E-01	4.24E+01
ADULT	TOTALS	2.93E+00	1.21E+00	5.01E-01	7.15E-01	5.69E-01	4.24E+01

NUMBER 8 NAME=MU-A X= -0.8KM, Y= 2.9KM, Z= 45.0M, DIST= 3.0KM, 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	3.95E+00	7.37E-01	4.55E-01	2.05E+00	1.06E+00	5.76E+01
CHILD	TOTALS	3.93E+00	9.57E-01	5.26E-01	1.23E+00	7.93E-01	5.76E+01
TEENAGE	TOTALS	3.94E+00	1.50E+00	5.75E-01	8.78E-01	6.91E-01	5.76E+01
ADULT	TOTALS	3.95E+00	1.47E+00	6.38E-01	8.91E-01	7.18E-01	5.76E+01

REGION: Marsland MU1-5 Occupati CODE: MILDOS-AREA (02/12) PAGE 11
 METSET: DATA: MAROCISR.MIL 08/16/13
 TIME STEP NUMBER 1, DURATION IN YRS IS... 5.0

NUMBER 9 NAME=MU-B X= 1.2KM, Y= -1.0KM, Z= -15.0M, DIST= 1.6KM, 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	2.84E+00	5.77E-01	3.38E-01	1.69E+00	8.47E-01	4.11E+01
CHILD	TOTALS	2.82E+00	7.63E-01	3.99E-01	9.98E-01	6.25E-01	4.11E+01
TEENAGE	TOTALS	2.84E+00	1.22E+00	4.40E-01	6.97E-01	5.38E-01	4.11E+01
ADULT	TOTALS	2.85E+00	1.20E+00	4.93E-01	7.07E-01	5.61E-01	4.11E+01

NUMBER 10 NAME=MU-C X= 1.8KM, Y= -2.3KM, Z= -25.0M, DIST= 3.0KM, 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	2.54E+00	5.25E-01	3.05E-01	1.55E+00	7.73E-01	3.67E+01
CHILD	TOTALS	2.52E+00	6.96E-01	3.60E-01	9.12E-01	5.68E-01	3.67E+01
TEENAGE	TOTALS	2.54E+00	1.12E+00	3.98E-01	6.35E-01	4.89E-01	3.67E+01
ADULT	TOTALS	2.54E+00	1.10E+00	4.47E-01	6.44E-01	5.10E-01	3.67E+01

REGION: Marstand MU1-5 Occupati CODE: MILDOS-AREA (02/12) PAGE 12
 METSET: DATA: MAROCISR.MIL 08/16/13
 TIME STEP NUMBER 1, DURATION IN YRS IS... 5.0

NUMBER 11 NAME=MU-D X= 2.5KM, Y= -3.6KM, Z= -36.0M, DIST= 4.4KM, 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	2.28E+00	4.73E-01	2.74E-01	1.40E+00	6.97E-01	3.28E+01
CHILD	TOTALS	2.26E+00	6.28E-01	3.24E-01	8.23E-01	5.12E-01	3.28E+01
TEENAGE	TOTALS	2.27E+00	1.01E+00	3.59E-01	5.72E-01	4.40E-01	3.28E+01
ADULT	TOTALS	2.28E+00	9.89E-01	4.03E-01	5.81E-01	4.59E-01	3.28E+01

NUMBER 12 NAME=MU-E X= 2.8KM, Y= -4.0KM, Z= -42.0M, DIST= 4.9KM, 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	2.15E+00	4.44E-01	2.58E-01	1.31E+00	6.54E-01	3.10E+01
CHILD	TOTALS	2.13E+00	5.89E-01	3.05E-01	7.71E-01	4.81E-01	3.10E+01
TEENAGE	TOTALS	2.14E+00	9.43E-01	3.37E-01	5.37E-01	4.13E-01	3.10E+01
ADULT	TOTALS	2.15E+00	9.26E-01	3.79E-01	5.45E-01	4.31E-01	3.10E+01

NUMBER 13 NAME=MU-F X= 3.0KM, Y= -4.3KM, Z= -47.0M, DIST= 5.2KM, 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	2.05E+00	4.21E-01	2.46E-01	1.23E+00	6.19E-01	2.96E+01
CHILD	TOTALS	2.04E+00	5.57E-01	2.91E-01	7.29E-01	4.56E-01	2.96E+01
TEENAGE	TOTALS	2.05E+00	8.92E-01	3.21E-01	5.09E-01	3.92E-01	2.96E+01
ADULT	TOTALS	2.05E+00	8.76E-01	3.60E-01	5.16E-01	4.09E-01	2.96E+01

NUMBER 14 NAME=MU-4 X= 0.5KM, Y= 0.1KM, Z= -4.0M, DIST= 0.6KM, 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	3.18E+00	6.35E-01	3.76E-01	1.84E+00	9.28E-01	4.60E+01
CHILD	TOTALS	3.16E+00	8.37E-01	4.42E-01	1.09E+00	6.87E-01	4.60E+01
TEENAGE	TOTALS	3.17E+00	1.33E+00	4.87E-01	7.65E-01	5.93E-01	4.60E+01
ADULT	TOTALS	3.18E+00	1.31E+00	5.44E-01	7.76E-01	6.18E-01	4.60E+01

NUMBER 15 NAME=Satellite X= 0.0KM, Y= 0.0KM, Z= 0.0M, DIST= 0.0KM, 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	3.30E+00	6.62E-01	3.91E-01	1.92E+00	9.68E-01	4.76E+01
CHILD	TOTALS	3.27E+00	8.73E-01	4.60E-01	1.14E+00	7.16E-01	4.76E+01
TEENAGE	TOTALS	3.29E+00	1.39E+00	5.06E-01	7.98E-01	6.17E-01	4.76E+01
ADULT	TOTALS	3.30E+00	1.37E+00	5.67E-01	8.09E-01	6.44E-01	4.76E+01

NUMBER 16 NAME=N Boundary #1 X= -1.3KM, Y= 5.1KM, Z= 35.0M, DIST= 5.3KM, 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	4.48E+00	7.71E-01	4.96E-01	2.05E+00	1.08E+00	6.54E+01
CHILD	TOTALS	4.44E+00	9.84E-01	5.65E-01	1.25E+00	8.25E-01	6.54E+01
TEENAGE	TOTALS	4.45E+00	1.51E+00	6.13E-01	9.08E-01	7.26E-01	6.54E+01
ADULT	TOTALS	4.46E+00	1.48E+00	6.74E-01	9.20E-01	7.52E-01	6.54E+01

REGION: Marsland MU1-5 Occupati CODE: MILDOS-AREA (02/12) PAGE 15
 METSET: DATA: MAROCISR.MIL 08/16/13
 TIME STEP NUMBER 1, DURATION IN YRS IS... 5.0

NUMBER 17 NAME=N Boundary #2 X= -0.5KM, Y= 3.3KM, Z= 20.0M, DIST= 3.3KM, 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	3.94E+00	7.26E-01	4.50E-01	2.01E+00	1.04E+00	5.74E+01
CHILD	TOTALS	3.92E+00	9.41E-01	5.20E-01	1.21E+00	7.81E-01	5.74E+01
TEENAGE	TOTALS	3.93E+00	1.47E+00	5.68E-01	8.65E-01	6.81E-01	5.74E+01
ADULT	TOTALS	3.94E+00	1.44E+00	6.30E-01	8.77E-01	7.08E-01	5.74E+01

Program execution time = 0.24 seconds