C A P 8 8 - P C

Version 3.0

Clean Air Act Assessment Package - 1988

S Y N O P S I S R E P O R T

Non-Radon Population Assessment
Nov 18, 2010 08:04 pm

Facility: White Mesa
Address:
City: San Juan
State: UT Zip: 84511

Source Category: Rn-222
Source Type: Stack
Emission Year: 2010

Comments: NA
NA

Effective Dose Equivalent (mrem/year)
5.79E-03

At This Location: 1500 Meters South Southeast

Dataset Name: White Mesa
Dataset Date: 11/18/2010 7:57:00 PM
Wind File: C:\Documents and Settings\Administrator.SC&A
Population File: C:\Program Files\CAP88-PC30\PopFiles\White M

MAXIMALLY EXPOSED INDIVIDUAL

Location Of The Individual: 1500 Meters South Southeast
Lifetime Fatal Cancer Risk: 3.06E-09

ORGAN DOSE EQUIVALENT SUMMARY

Organ	Selected Individual (mrem/y)	Collective Population (person-rem/y)
Adrenals	2.52E-03	1.14E-03
B Surfac	5.88E-03	2.81E-03
Breasts	2.95E-03	1.34E-03
St Wall	2.72E-03	1.23E-03
ULI Wall	2.71E-03	1.23E-03
Kidneys	3.11E-03	1.44E-03
Lungs	3.37E-03	1.42E-03
Ovaries	2.64E-03	1.19E-03
R Marrow	3.10E-03	1.42E-03
Spleen	2.99E-03	1.38E-03
Thymus	2.70E-03	1.22E-03
Uterus	2.65E-03	1.20E-03
Bld Wall	2.81E-03	1.27E-03
Brain	2.70E-03	1.22E-03
Esophagu	3.16E-03	1.29E-03
SI Wall	2.69E-03	1.22E-03
LLI Wall	2.77E-03	1.25E-03
Liver	2.90E-03	1.33E-03
Muscle	3.06E-03	1.39E-03
Pancreas	2.56E-03	1.16E-03
Skin	1.69E-02	7.63E-03
Testes	3.07E-03	1.39E-03
Thyroid	2.81E-03	1.27E-03
EFFEC	5.79E-03	2.43E-03

FREQUENCY DISTRIBUTION OF LIFETIME FATAL CANCER RISKS

Risk Range	# of People	# of People in This Risk Range or Higher	Deaths/Year in This Risk Range	Deaths/Year in This Risk Range or Higher

1.0E+00 TO 1.0E-01	0	0	0.00E+00	0.00E+00
1.0E-01 TO 1.0E-02	0	0	0.00E+00	0.00E+00
1.0E-02 TO 1.0E-03	0	0	0.00E+00	0.00E+00
1.0E-03 TO 1.0E-04	0	0	0.00E+00	0.00E+00
1.0E-04 TO 1.0E-05	0	0	0.00E+00	0.00E+00
1.0E-05 TO 1.0E-06	0	0	0.00E+00	0.00E+00
LESS THAN 1.0E-06	20675	20675	1.58E-08	1.58E-08

RADIONUCLIDE EMISSIONS DURING THE YEAR 2010

Nuclide	Type	Size	Source #1 Ci/y	TOTAL Ci/y
Rn-222	G	0	1.0E+00	1.0E+00
Po-218	M	1	0.0E+00	0.0E+00
Pb-214	M	1	0.0E+00	0.0E+00
At-218	M	1	0.0E+00	0.0E+00
Bi-214	M	1	0.0E+00	0.0E+00
Po-214	M	1	0.0E+00	0.0E+00
Pb-210	M	1	0.0E+00	0.0E+00
Bi-210	M	1	0.0E+00	0.0E+00
Po-210	M	1	0.0E+00	0.0E+00

SITE INFORMATION

Temperature:	10	degrees C
Precipitation:	100	cm/y
Humidity:	8	g/cu m
Mixing Height:	1000	m

SOURCE INFORMATION

Source Number: 1

Stack Height (m): 0.00
Diameter (m): 1.00

Plume Rise Pasquill Cat:	A	B	C	D	E	F	G
Zero:	0.00	0.00	0.00	0.00	0.00	0.00	0.00

AGRICULTURAL DATA

	Vegetable	Milk	Meat
Fraction Home Produced:	0.700	0.400	0.440
Fraction From Assessment Area:	0.300	0.600	0.560
Fraction Imported:	0.000	0.000	0.000

Beef Cattle Density: 2.84E-02
Milk Cattle Density: 4.46E-03
Land Fraction Cultivated for Vegetable Crops: 1.83E-03

POPULATION DATA

Direction	Distance (m) 500	1500	2500	3500	4500	7500	15000
N	0	0	3	69	567	2813	73
NNW	0	0	0	0	0	24	0
NW	0	0	52	0	0	0	0
WNW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WSW	0	0	0	0	0	1	0
SW	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
S	0	0	0	0	0	7	247
SSE	0	5	0	0	0	0	40
SE	0	0	0	0	0	0	12
ESE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ENE	0	14	0	0	0	0	0
NE	0	0	0	0	180	0	1
NNE	0	0	0	79	0	25	16

Direction	Distance (m) 25000	35000	45000	55000	65000	75000
N	0	0	6	4	0	28
NNW	0	0	0	0	16	0
NW	0	0	0	0	0	0
WNW	0	0	0	0	0	0
W	0	8	8	2	0	2
WSW	0	0	0	0	0	0
SW	0	2	0	88	352	195
SSW	0	195	163	19	175	367
S	1	307	105	264	488	617
SSE	62	710	431	116	159	539
SE	83	232	860	340	14	5
ESE	3	8	22	140	231	3045
E	0	2	135	130	463	1361
ENE	7	26	88	1046	168	6

NE	10	100	91	165	66	6
NNE	61	2035	51	9	8	1