Title : HPNS RESRAD-BUILD Child Resident Risk
Input File : C:\Users\Craig\Desktop\HPNS BUILD Child Am to Pu_25Sep19_9pt3m2_risk.bld

==========
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=== ===
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=== ===
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Title : HPNS RESRAD-BUILD Child Resident Risk
Input File : C:\Users\Craig\Desktop\HPNS BUILD Child Am to Pu_25Sep19_9pt3m2_risk.bld

```
==================================================
==================================================
===                                          ===
===     RESRAD-BUILD Input Parameters        ===
===                                          ===
==================================================
==================================================
```

Number of Sources : 10
Number of Receptors: 1
Total Time : 2.190000E+03 days
Fraction Inside : 9.600000E-01

========== Receptor Information ==========

Receptor	Room	x [m]	y [m]	z [m]	FracTime	Inhalation [m3/day]	Ingestion(Dust) [m2/hr]
1	1	1.500	1.500	1.000	1.000	1.00E+01	2.00E-04

=== Receptor-Source Shielding Relationship ===

Receptor	Source	Density [g/cm3]	Thickness [cm]	Material
1	1	2.40E+00	0.00E+00	Concrete
1	2	2.40E+00	0.00E+00	Concrete
1	3	2.40E+00	0.00E+00	Concrete
1	4	2.40E+00	0.00E+00	Concrete
1	5	2.40E+00	0.00E+00	Concrete
1	6	2.40E+00	0.00E+00	Concrete
1	7	2.40E+00	0.00E+00	Concrete
1	8	2.40E+00	0.00E+00	Concrete
1	9	2.40E+00	0.00E+00	Concrete
1	10	2.40E+00	0.00E+00	Concrete

Title : HPNS RESRAD-BUILD Child Resident Risk
Input File : C:\Users\Craig\Desktop\HPNS BUILD Child Am to Pu_25Sep19_9pt3m2_risk.bld

======== Building Information ========

Building Air Exchange Rate: 4.50E-01 1/hr

```
Height[m]       Air Exchanges [m3/hr]
Area [m2]
          ******************************
          *                            *
          *                            *
          *                            <=Q01: 1.28E+01
H1:  3.050    *        Room  1        *    Q10 :  1.28E+01
          *  LAMBDA: 4.50E-01          *
Area  9.300    *                            *
          *                            *
          ******************************
```

Deposition velocity: 1.00E-02 [m/s] Resuspension Rate: 5.00E-07 [1/s]

Title : HPNS RESRAD-BUILD Child Resident Risk
Input File : C:\Users\Craig\Desktop\HPNS BUILD Child Am to Pu_25Sep19_9pt3m2_risk.bld

======== Source Information ========

Source: 1
Location:: Room : 1 x: 1.50 y: 1.50 z: 0.00[m]
Geometry:: Type: Area Length[m]:3.05E+00 Width[m]:3.05E+00 Direction: z
Pathway ::
Direct Ingestion Rate: 0.000E+00 [1/hr]
Fraction released to air: 1.000E-01
Removable fraction: 2.000E-01
Time to Remove: 9.490E+03 [day]

Contamination::

Nuclide	Concentration [dpm/m2]	Slope Factor Ingestion [Risk/dpm]	Slope Factor Inhalation [Risk/dpm]
AM-241	9.990E+03	9.775E-11	1.266E-08
NP-237	0.000E+00	7.293E-11	7.979E-09
U-233	0.000E+00	7.207E-11	5.225E-09
TH-229	0.000E+00	5.802E-10	1.012E-07

Source: 2
Location:: Room : 1 x: 1.50 y: 1.50 z: 0.00[m]
Geometry:: Type: Area Length[m]:3.05E+00 Width[m]:3.05E+00 Direction: z
Pathway ::
Direct Ingestion Rate: 0.000E+00 [1/hr]
Fraction released to air: 1.000E-01
Removable fraction: 2.000E-01
Time to Remove: 9.490E+03 [day]

Contamination::

Nuclide	Concentration [dpm/m2]	Slope Factor Ingestion [Risk/dpm]	Slope Factor Inhalation [Risk/dpm]
CO-60	5.000E+05	1.815E-11	1.613E-11

Source: 3

Location:: Room : 1 x: 1.50 y: 1.50 z: 0.00[m]

Geometry:: Type: Area Length[m]:3.05E+00 Width[m]:3.05E+00 Direction: z

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 2.000E-01

Time to Remove: 9.490E+03 [day]

Contamination::

Nuclide	Concentration [dpm/m2]	Slope Factor Ingestion [Risk/dpm]	Slope Factor Inhalation [Risk/dpm]
CS-137	5.000E+05	1.950E-11	5.360E-12

Source: 4

Location:: Room : 1 x: 1.50 y: 1.50 z: 0.00[m]

Geometry:: Type: Area Length[m]:3.05E+00 Width[m]:3.05E+00 Direction: z

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 2.000E-01

Time to Remove: 9.490E+03 [day]

Contamination::

Nuclide	Concentration [dpm/m2]	Slope Factor Ingestion [Risk/dpm]	Slope Factor Inhalation [Risk/dpm]
GD-152	0.000E+00	2.833E-11	4.099E-09
EU-152	5.000E+05	7.297E-12	4.099E-11

Source: 5

Location:: Room : 1 x: 1.50 y: 1.50 z: 0.00[m]

Geometry:: Type: Area Length[m]:3.05E+00 Width[m]:3.05E+00 Direction: z

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 2.000E-01

Time to Remove: 9.490E+03 [day]

Contamination::

Nuclide	Concentration [dpm/m2]	Slope Factor Ingestion [Risk/dpm]	Slope Factor Inhalation [Risk/dpm]
EU-154	5.000E+05	1.284E-11	5.180E-11

Source: 6

Location:: Room : 1 x: 1.50 y: 1.50 z: 0.00[m]

Geometry:: Type: Area Length[m]:3.05E+00 Width[m]:3.05E+00 Direction: z

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 2.000E-01

Time to Remove: 9.490E+03 [day]

Contamination::

Nuclide	Concentration [dpm/m2]	Slope Factor Ingestion [Risk/dpm]	Slope Factor Inhalation [Risk/dpm]
H-3	5.000E+05	9.910E-14	8.964E-14

Source: 7

Location:: Room : 1 x: 1.50 y: 1.50 z: 0.00[m]

Geometry:: Type: Area Length[m]:3.05E+00 Width[m]:3.05E+00 Direction: z

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 2.000E-01

Time to Remove: 9.490E+03 [day]

Contamination::

Nuclide	Concentration [dpm/m2]	Slope Factor Ingestion [Risk/dpm]	Slope Factor Inhalation [Risk/dpm]
PU-239	9.990E+03	1.243E-10	1.500E-08
U-235	0.000E+00	7.359E-11	4.550E-09
PA-231	0.000E+00	1.685E-10	2.050E-08
AC-227	0.000E+00	5.232E-10	9.399E-08

Source: 8

Location:: Room : 1 x: 1.50 y: 1.50 z: 0.00[m]

Geometry:: Type: Area Length[m]:3.05E+00 Width[m]:3.05E+00 Direction: z

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 2.000E-01

Time to Remove: 9.490E+03 [day]

Radon Release Fraction: 4.000E-01

Contamination::

Nuclide	Concentration [dpm/m2]	Slope Factor Ingestion [Risk/dpm]	Slope Factor Inhalation [Risk/dpm]
PO-210	9.990E+03	3.586E-10	4.865E-09
RA-226	9.990E+03	3.290E-10	5.210E-09
PB-210	9.990E+03	8.403E-10	1.391E-09

Source: 9

Location:: Room : 1 x: 1.50 y: 1.50 z: 0.00[m]

Geometry:: Type: Area Length[m]:3.05E+00 Width[m]:3.05E+00 Direction: z

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 2.000E-01

Time to Remove: 9.490E+03 [day]

Contamination::

Nuclide	Concentration [dpm/m2]	Slope Factor Ingestion [Risk/dpm]	Slope Factor Inhalation [Risk/dpm]
SR-90	9.990E+04	6.500E-11	5.108E-11

Source: 10

Location:: Room : 1 x: 1.50 y: 1.50 z: 0.00[m]

Geometry:: Type: Area Length[m]:3.05E+00 Width[m]:3.05E+00 Direction: z

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 2.000E-01

Time to Remove: 9.490E+03 [day]

Radon Release Fraction: 2.000E-02

Contamination::

Nuclide	Concentration [dpm/m2]	Slope Factor Ingestion [Risk/dpm]	Slope Factor Inhalation [Risk/dpm]
TH-232	3.640E+03	1.041E-10	1.950E-08
TH-228	3.640E+03	3.643E-10	6.425E-08
RA-228	3.640E+03	1.030E-09	2.355E-09

Title : HPNS RESRAD-BUILD Child Resident Risk
Input File : C:\Users\Craig\Desktop\HPNS BUILD Child Am to Pu_25Sep19_9pt3m2_risk.bld
Evaluation Time: 0.00000000E+00 years

```
==================================================
==================================================
===     Assessment for Time:  1          ===
===          Time =0.00E+00 yr          ===
==================================================
==================================================
```

======== Source Information ========

Source: 1
Location:: Room : 1 x: 1.50 y: 1.50 z: 0.00 [m]
Geometry:: Type: Area Length[m]:3.05E+00 Width[m]:3.05E+00 Direction: z
Pathway ::
Direct Ingestion Rate: 0.000E+00 [1/hr]
Fraction released to air: 1.000E-01
Removable fraction: 2.000E-01
Time to Remove: 9.490E+03 [day]

Contamination::	Nuclide	Concentration [dpm/m2]
	AM-241	9.990E+03
	NP-237	0.000E+00
	U-233	0.000E+00
	TH-229	0.000E+00

Source: 2
Location:: Room : 1 x: 1.50 y: 1.50 z: 0.00 [m]
Geometry:: Type: Area Length[m]:3.05E+00 Width[m]:3.05E+00 Direction: z
Pathway ::
Direct Ingestion Rate: 0.000E+00 [1/hr]
Fraction released to air: 1.000E-01
Removable fraction: 2.000E-01
Time to Remove: 9.490E+03 [day]

Contamination::	Nuclide	Concentration [dpm/m2]
	CO-60	5.000E+05

Title : HPNS RESRAD-BUILD Child Resident Risk
Input File : C:\Users\Craig\Desktop\HPNS BUILD Child Am to Pu_25Sep19_9pt3m2_risk.bld
Evaluation Time: 0.00000000E+00 years

Source: 3
Location:: Room : 1 x: 1.50 y: 1.50 z: 0.00 [m]
Geometry:: Type: Area Length[m]:3.05E+00 Width[m]:3.05E+00 Direction: z
Pathway ::
Direct Ingestion Rate: 0.000E+00 [1/hr]
Fraction released to air: 1.000E-01
Removable fraction: 2.000E-01
Time to Remove: 9.490E+03 [day]

Contamination:: Nuclide Concentration
[dpm/m2]
CS-137 5.000E+05

Source: 4
Location:: Room : 1 x: 1.50 y: 1.50 z: 0.00 [m]
Geometry:: Type: Area Length[m]:3.05E+00 Width[m]:3.05E+00 Direction: z
Pathway ::
Direct Ingestion Rate: 0.000E+00 [1/hr]
Fraction released to air: 1.000E-01
Removable fraction: 2.000E-01
Time to Remove: 9.490E+03 [day]

Contamination:: Nuclide Concentration
[dpm/m2]
GD-152 0.000E+00
EU-152 5.000E+05

Source: 5
Location:: Room : 1 x: 1.50 y: 1.50 z: 0.00 [m]
Geometry:: Type: Area Length[m]:3.05E+00 Width[m]:3.05E+00 Direction: z
Pathway ::
Direct Ingestion Rate: 0.000E+00 [1/hr]
Fraction released to air: 1.000E-01
Removable fraction: 2.000E-01
Time to Remove: 9.490E+03 [day]

Contamination:: Nuclide Concentration
[dpm/m2]
EU-154 5.000E+05

Title : HPNS RESRAD-BUILD Child Resident Risk
Input File : C:\Users\Craig\Desktop\HPNS BUILD Child Am to Pu_25Sep19_9pt3m2_risk.bld
Evaluation Time: 0.00000000E+00 years

Source: 6
Location:: Room : 1 x: 1.50 y: 1.50 z: 0.00 [m]
Geometry:: Type: Area Length[m]:3.05E+00 Width[m]:3.05E+00 Direction: z
Pathway ::
Direct Ingestion Rate: 0.000E+00 [1/hr]
Fraction released to air: 1.000E-01
Removable fraction: 2.000E-01
Time to Remove: 9.490E+03 [day]

Contamination:: Nuclide Concentration
[dpm/m2]
H-3 5.000E+05

Source: 7
Location:: Room : 1 x: 1.50 y: 1.50 z: 0.00 [m]
Geometry:: Type: Area Length[m]:3.05E+00 Width[m]:3.05E+00 Direction: z
Pathway ::
Direct Ingestion Rate: 0.000E+00 [1/hr]
Fraction released to air: 1.000E-01
Removable fraction: 2.000E-01
Time to Remove: 9.490E+03 [day]

Contamination:: Nuclide Concentration
[dpm/m2]
PU-239 9.990E+03
U-235 0.000E+00
PA-231 0.000E+00
AC-227 0.000E+00

Title : HPNS RESRAD-BUILD Child Resident Risk
Input File : C:\Users\Craig\Desktop\HPNS BUILD Child Am to Pu_25Sep19_9pt3m2_risk.bld
Evaluation Time: 0.00000000E+00 years

Source: 8
Location:: Room : 1 x: 1.50 y: 1.50 z: 0.00 [m]
Geometry:: Type: Area Length[m]:3.05E+00 Width[m]:3.05E+00 Direction: z
Pathway ::
Direct Ingestion Rate: 0.000E+00 [1/hr]
Fraction released to air: 1.000E-01
Removable fraction: 2.000E-01
Time to Remove: 9.490E+03 [day]

Contamination:: Nuclide Concentration
[dpm/m2]
PO-210 9.990E+03
RA-226 9.990E+03
PB-210 9.990E+03

Source: 9
Location:: Room : 1 x: 1.50 y: 1.50 z: 0.00 [m]
Geometry:: Type: Area Length[m]:3.05E+00 Width[m]:3.05E+00 Direction: z
Pathway ::
Direct Ingestion Rate: 0.000E+00 [1/hr]
Fraction released to air: 1.000E-01
Removable fraction: 2.000E-01
Time to Remove: 9.490E+03 [day]

Contamination:: Nuclide Concentration
[dpm/m2]
SR-90 9.990E+04

Source: 10
Location:: Room : 1 x: 1.50 y: 1.50 z: 0.00 [m]
Geometry:: Type: Area Length[m]:3.05E+00 Width[m]:3.05E+00 Direction: z
Pathway ::
Direct Ingestion Rate: 0.000E+00 [1/hr]
Fraction released to air: 1.000E-01
Removable fraction: 2.000E-01
Time to Remove: 9.490E+03 [day]

Contamination:: Nuclide Concentration
[dpm/m2]

TH-232	3.640E+03
TH-228	3.640E+03
RA-228	3.640E+03

Title : HPNS RESRAD-BUILD Child Resident Risk

Input File : C:\Users\Craig\Desktop\HPNS BUILD Child Am to Pu_25Sep19_9pt3m2_risk.bld

Evaluation Time: 0.00000000E+00 years

```
==============================================
==============================================
===                                      ===
===      RESRAD-BUILD Risk Tables        ===
===                                      ===
==============================================
==============================================
```

Source Contributions to Receptor Risks

==========

[Risk]

	Source 1	Source 2	Source 3	Source 4	Source 5	Source 6	Source 7	Source 8	Source 9	Source 10	Total
Receptor 1	1.91E-07	2.38E-05	7.53E-06	1.40E-05	1.40E-05	5.66E-10	2.18E-07	1.38E-06	9.72E-08	6.73E-07	6.18E-05
Total	1.91E-07	2.38E-05	7.53E-06	1.40E-05	1.40E-05	5.66E-10	2.18E-07	1.38E-06	9.72E-08	6.73E-07	6.18E-05

Title : HPNS RESRAD-BUILD Child Resident Risk
Input File : C:\Users\Craig\Desktop\HPNS BUILD Child Am to Pu_25Sep19_9pt3m2_risk.bld
Evaluation Time: 0.00000000E+00 years

Pathway Detail of Risks
==========
[Risk]

Source: 1

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	1.00E-08	1.31E-11	9.95E-14	1.69E-07	0.00E+00	1.25E-08
Total	1.00E-08	1.31E-11	9.95E-14	1.69E-07	0.00E+00	1.25E-08

Source: 2

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	2.37E-05	2.52E-08	5.32E-10	6.17E-09	0.00E+00	6.61E-08
Total	2.37E-05	2.52E-08	5.32E-10	6.17E-09	0.00E+00	6.61E-08

Source: 3

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	7.40E-06	9.31E-09	1.77E-10	3.24E-09	0.00E+00	1.13E-07
Total	7.40E-06	9.31E-09	1.77E-10	3.24E-09	0.00E+00	1.13E-07

Source: 4

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	1.39E-05	1.67E-08	3.28E-10	2.18E-08	0.00E+00	3.71E-08
Total	1.39E-05	1.67E-08	3.28E-10	2.18E-08	0.00E+00	3.71E-08

Source: 5

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	1.39E-05	1.60E-08	3.19E-10	2.46E-08	0.00E+00	5.82E-08
Total	1.39E-05	1.60E-08	3.19E-10	2.46E-08	0.00E+00	5.82E-08

Source: 6

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	0.00E+00	0.00E+00	0.00E+00	7.03E-11	0.00E+00	4.96E-10
Total	0.00E+00	0.00E+00	0.00E+00	7.03E-11	0.00E+00	4.96E-10

Source: 7

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	4.34E-10	5.69E-13	5.58E-16	2.02E-07	0.00E+00	1.60E-08
Total	4.34E-10	5.69E-13	5.58E-16	2.02E-07	0.00E+00	1.60E-08

Title : HPNS RESRAD-BUILD Child Resident Risk
Input File : C:\Users\Craig\Desktop\HPNS BUILD Child Am to Pu_25Sep19_9pt3m2_risk.bld
Evaluation Time: 0.00000000E+00 years

Source: 8

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	5.06E-07	6.38E-10	1.30E-11	8.93E-08	6.42E-07	1.46E-07
Total	5.06E-07	6.38E-10	1.30E-11	8.93E-08	6.42E-07	1.46E-07

Source: 9

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	1.60E-08	2.01E-11	2.73E-13	6.15E-09	0.00E+00	7.51E-08
Total	1.60E-08	2.01E-11	2.73E-13	6.15E-09	0.00E+00	7.51E-08

Source: 10

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	2.46E-07	2.25E-10	4.85E-12	3.03E-07	6.90E-08	5.55E-08
Total	2.46E-07	2.25E-10	4.85E-12	3.03E-07	6.90E-08	5.55E-08

Title : HPNS RESRAD-BUILD Child Resident Risk
Input File : C:\Users\Craig\Desktop\HPNS BUILD Child Am to Pu_25Sep19_9pt3m2_risk.bld
Evaluation Time: 0.00000000E+00 years

Nuclide Detail of Risks
==========
[Risk]

Source: 1

Nuclide	Receptor 1	Total
AM-241	1.91E-07	1.91E-07
NP-237	1.77E-13	1.77E-13
U-233	6.75E-19	6.75E-19
TH-229	1.83E-21	1.83E-21

Source: 2

Nuclide	Receptor 1	Total
CO-60	2.38E-05	2.38E-05

Source: 3

Nuclide	Receptor 1	Total
CS-137	7.53E-06	7.53E-06

Source: 4

Nuclide	Receptor 1	Total
GD-152	5.11E-20	5.11E-20
EU-152	1.40E-05	1.40E-05

Title : HPNS RESRAD-BUILD Child Resident Risk
Input File : C:\Users\Craig\Desktop\HPNS BUILD Child Am to Pu_25Sep19_9pt3m2_risk.bld
Evaluation Time: 0.00000000E+00 years

Source: 5

Nuclide	Receptor 1	Total
EU-154	1.40E-05	1.40E-05

Source: 6

Nuclide	Receptor 1	Total
H-3	5.66E-10	5.66E-10

Source: 7

Nuclide	Receptor 1	Total
PU-239	2.18E-07	2.18E-07
U-235	3.50E-16	3.50E-16
PA-231	3.88E-20	3.88E-20
AC-227	7.85E-21	7.85E-21

Source: 8

Nuclide	Receptor 1	Total
PO-210	2.68E-08	2.68E-08
RA-226	1.23E-06	1.23E-06
PB-210	1.06E-08	1.06E-08
PB-210	1.12E-07	1.12E-07

Title : HPNS RESRAD-BUILD Child Resident Risk
Input File : C:\Users\Craig\Desktop\HPNS BUILD Child Am to Pu_25Sep19_9pt3m2_risk.bld
Evaluation Time: 0.00000000E+00 years

Source: 9

Nuclide	Receptor 1	Total
SR-90	9.72E-08	9.72E-08

Source: 10

Nuclide	Receptor 1	Total
TH-232	1.01E-07	1.01E-07
TH-228	5.73E-08	5.73E-08
RA-228	4.26E-08	4.26E-08
TH-228	1.74E-07	1.74E-07
TH-228	1.93E-07	1.93E-07
RA-228	1.06E-07	1.06E-07

Title : HPNS RESRAD-BUILD Child Resident Risk
Input File : C:\Users\Craig\Desktop\HPNS BUILD Child Am to Pu_25Sep19_9pt3m2_risk.bld
Evaluation Time: 6.00000000 years

```
==================================================
==================================================
===     Assessment for Time:  2          ===
===          Time =6.00E+00 yr          ===
==================================================
==================================================
```

======== Source Information ========

Source: 1
Location:: Room : 1 x: 1.50 y: 1.50 z: 0.00 [m]
Geometry:: Type: Area Length[m]:3.05E+00 Width[m]:3.05E+00 Direction: z
Pathway ::
Direct Ingestion Rate: 0.000E+00 [1/hr]
Fraction released to air: 1.000E-01
Removable fraction: 1.613E-01
Time to Remove: 9.490E+03 [day]

Contamination::	Nuclide	Concentration [dpm/m2]
	AM-241	9.437E+03
	NP-237	1.843E-02
	U-233	2.414E-07
	TH-229	4.562E-11

Source: 2
Location:: Room : 1 x: 1.50 y: 1.50 z: 0.00 [m]
Geometry:: Type: Area Length[m]:3.05E+00 Width[m]:3.05E+00 Direction: z
Pathway ::
Direct Ingestion Rate: 0.000E+00 [1/hr]
Fraction released to air: 1.000E-01
Removable fraction: 1.613E-01
Time to Remove: 9.490E+03 [day]

Contamination::	Nuclide	Concentration [dpm/m2]
	CO-60	2.166E+05

Title : HPNS RESRAD-BUILD Child Resident Risk
Input File : C:\Users\Craig\Desktop\HPNS BUILD Child Am to Pu_25Sep19_9pt3m2_risk.bld
Evaluation Time: 6.00000000 years

Source: 3
Location:: Room : 1 x: 1.50 y: 1.50 z: 0.00 [m]
Geometry:: Type: Area Length[m]:3.05E+00 Width[m]:3.05E+00 Direction: z
Pathway ::
Direct Ingestion Rate: 0.000E+00 [1/hr]
Fraction released to air: 1.000E-01
Removable fraction: 1.613E-01
Time to Remove: 9.490E+03 [day]

Contamination:: Nuclide Concentration
[dpm/m2]
CS-137 4.152E+05

Source: 4
Location:: Room : 1 x: 1.50 y: 1.50 z: 0.00 [m]
Geometry:: Type: Area Length[m]:3.05E+00 Width[m]:3.05E+00 Direction: z
Pathway ::
Direct Ingestion Rate: 0.000E+00 [1/hr]
Fraction released to air: 1.000E-01
Removable fraction: 1.613E-01
Time to Remove: 9.490E+03 [day]

Contamination:: Nuclide Concentration
[dpm/m2]
GD-152 1.577E-08
EU-152 3.488E+05

Source: 5
Location:: Room : 1 x: 1.50 y: 1.50 z: 0.00 [m]
Geometry:: Type: Area Length[m]:3.05E+00 Width[m]:3.05E+00 Direction: z
Pathway ::
Direct Ingestion Rate: 0.000E+00 [1/hr]
Fraction released to air: 1.000E-01
Removable fraction: 1.613E-01
Time to Remove: 9.490E+03 [day]

Contamination:: Nuclide Concentration
[dpm/m2]
EU-154 2.973E+05

Title : HPNS RESRAD-BUILD Child Resident Risk
Input File : C:\Users\Craig\Desktop\HPNS BUILD Child Am to Pu_25Sep19_9pt3m2_risk.bld
Evaluation Time: 6.00000000 years

Source: 6
Location:: Room : 1 x: 1.50 y: 1.50 z: 0.00 [m]
Geometry:: Type: Area Length[m]:3.05E+00 Width[m]:3.05E+00 Direction: z
Pathway ::
Direct Ingestion Rate: 0.000E+00 [1/hr]
Fraction released to air: 1.000E-01
Removable fraction: 1.613E-01
Time to Remove: 9.490E+03 [day]

Contamination:: Nuclide Concentration
[dpm/m2]
H-3 3.410E+05

Source: 7
Location:: Room : 1 x: 1.50 y: 1.50 z: 0.00 [m]
Geometry:: Type: Area Length[m]:3.05E+00 Width[m]:3.05E+00 Direction: z
Pathway ::
Direct Ingestion Rate: 0.000E+00 [1/hr]
Fraction released to air: 1.000E-01
Removable fraction: 1.613E-01
Time to Remove: 9.490E+03 [day]

Contamination:: Nuclide Concentration
[dpm/m2]
PU-239 9.527E+03
U-235 5.629E-05
PA-231 3.568E-09
AC-227 2.165E-10

Title : HPNS RESRAD-BUILD Child Resident Risk
Input File : C:\Users\Craig\Desktop\HPNS BUILD Child Am to Pu_25Sep19_9pt3m2_risk.bld
Evaluation Time: 6.00000000 years

Source: 8
Location:: Room : 1 x: 1.50 y: 1.50 z: 0.00 [m]
Geometry:: Type: Area Length[m]:3.05E+00 Width[m]:3.05E+00 Direction: z
Pathway ::
Direct Ingestion Rate: 0.000E+00 [1/hr]
Fraction released to air: 1.000E-01
Removable fraction: 1.613E-01
Time to Remove: 9.490E+03 [day]

Contamination:: Nuclide Concentration
[dpm/m2]
PO-210 1.634E-01
RA-226 9.504E+03
PB-210 9.526E+03

Source: 9
Location:: Room : 1 x: 1.50 y: 1.50 z: 0.00 [m]
Geometry:: Type: Area Length[m]:3.05E+00 Width[m]:3.05E+00 Direction: z
Pathway ::
Direct Ingestion Rate: 0.000E+00 [1/hr]
Fraction released to air: 1.000E-01
Removable fraction: 1.613E-01
Time to Remove: 9.490E+03 [day]

Contamination:: Nuclide Concentration
[dpm/m2]
SR-90 8.260E+04

Source: 10
Location:: Room : 1 x: 1.50 y: 1.50 z: 0.00 [m]
Geometry:: Type: Area Length[m]:3.05E+00 Width[m]:3.05E+00 Direction: z
Pathway ::
Direct Ingestion Rate: 0.000E+00 [1/hr]
Fraction released to air: 1.000E-01
Removable fraction: 1.613E-01
Time to Remove: 9.490E+03 [day]

Contamination:: Nuclide Concentration
[dpm/m2]

TH-232	3.472E+03
TH-228	3.472E+03
RA-228	3.472E+03

Title : HPNS RESRAD-BUILD Child Resident Risk

Input File : C:\Users\Craig\Desktop\HPNS BUILD Child Am to Pu_25Sep19_9pt3m2_risk.bld

Evaluation Time: 6.00000000 years

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==============================================
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===                                      ===
===      RESRAD-BUILD Risk Tables        ===
===                                      ===
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```

Source Contributions to Receptor Risks

==========

[Risk]

	Source 1	Source 2	Source 3	Source 4	Source 5	Source 6	Source 7	Source 8	Source 9	Source 10	Total
Receptor 1	1.89E-07	1.03E-05	6.25E-06	9.74E-06	8.32E-06	4.05E-10	2.18E-07	1.30E-06	8.36E-08	6.58E-07	3.71E-05
Total	1.89E-07	1.03E-05	6.25E-06	9.74E-06	8.32E-06	4.05E-10	2.18E-07	1.30E-06	8.36E-08	6.58E-07	3.71E-05

Title : HPNS RESRAD-BUILD Child Resident Risk
Input File : C:\Users\Craig\Desktop\HPNS BUILD Child Am to Pu_25Sep19_9pt3m2_risk.bld
Evaluation Time: 6.00000000 years

Pathway Detail of Risks
==========
[Risk]

Source: 1

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	9.45E-09	1.29E-11	9.85E-14	1.67E-07	0.00E+00	1.24E-08
Total	9.45E-09	1.29E-11	9.85E-14	1.67E-07	0.00E+00	1.24E-08

Source: 2

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	1.03E-05	1.15E-08	2.42E-10	2.80E-09	0.00E+00	3.00E-08
Total	1.03E-05	1.15E-08	2.42E-10	2.80E-09	0.00E+00	3.00E-08

Source: 3

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	6.14E-06	8.11E-09	1.54E-10	2.82E-09	0.00E+00	9.85E-08
Total	6.14E-06	8.11E-09	1.54E-10	2.82E-09	0.00E+00	9.85E-08

Source: 4

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	9.69E-06	1.22E-08	2.40E-10	1.59E-08	0.00E+00	2.72E-08
Total	9.69E-06	1.22E-08	2.40E-10	1.59E-08	0.00E+00	2.72E-08

Source: 5

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	8.26E-06	9.97E-09	1.99E-10	1.53E-08	0.00E+00	3.63E-08
Total	8.26E-06	9.97E-09	1.99E-10	1.53E-08	0.00E+00	3.63E-08

Source: 6

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	0.00E+00	0.00E+00	0.00E+00	5.03E-11	0.00E+00	3.55E-10
Total	0.00E+00	0.00E+00	0.00E+00	5.03E-11	0.00E+00	3.55E-10

Source: 7

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	4.14E-10	5.69E-13	5.57E-16	2.02E-07	0.00E+00	1.60E-08
Total	4.14E-10	5.69E-13	5.57E-16	2.02E-07	0.00E+00	1.60E-08

Title : HPNS RESRAD-BUILD Child Resident Risk
Input File : C:\Users\Craig\Desktop\HPNS BUILD Child Am to Pu_25Sep19_9pt3m2_risk.bld
Evaluation Time: 6.00000000 years

Source: 8

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	4.58E-07	6.29E-10	1.30E-11	8.75E-08	6.10E-07	1.45E-07
Total	4.58E-07	6.29E-10	1.30E-11	8.75E-08	6.10E-07	1.45E-07

Source: 9

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	1.32E-08	1.74E-11	2.37E-13	5.34E-09	0.00E+00	6.51E-08
Total	1.32E-08	1.74E-11	2.37E-13	5.34E-09	0.00E+00	6.51E-08

Source: 10

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	2.34E-07	2.25E-10	4.85E-12	3.03E-07	6.58E-08	5.55E-08
Total	2.34E-07	2.25E-10	4.85E-12	3.03E-07	6.58E-08	5.55E-08

Title : HPNS RESRAD-BUILD Child Resident Risk
Input File : C:\Users\Craig\Desktop\HPNS BUILD Child Am to Pu_25Sep19_9pt3m2_risk.bld
Evaluation Time: 6.00000000 years

Nuclide Detail of Risks
==========
[Risk]

Source: 1

Nuclide	Receptor 1	Total
AM-241	1.89E-07	1.89E-07
NP-237	5.21E-13	5.21E-13
U-233	4.71E-18	4.71E-18
TH-229	2.73E-20	2.73E-20

Source: 2

Nuclide	Receptor 1	Total
CO-60	1.03E-05	1.03E-05

Source: 3

Nuclide	Receptor 1	Total
CS-137	6.25E-06	6.25E-06

Source: 4

Nuclide	Receptor 1	Total
GD-152	1.35E-19	1.35E-19
EU-152	9.74E-06	9.74E-06

Title : HPNS RESRAD-BUILD Child Resident Risk
Input File : C:\Users\Craig\Desktop\HPNS BUILD Child Am to Pu_25Sep19_9pt3m2_risk.bld
Evaluation Time: 6.00000000 years

Source: 5

Nuclide	Receptor 1	Total
EU-154	8.32E-06	8.32E-06

Source: 6

Nuclide	Receptor 1	Total
H-3	4.05E-10	4.05E-10

Source: 7

Nuclide	Receptor 1	Total
PU-239	2.18E-07	2.18E-07
U-235	1.03E-15	1.03E-15
PA-231	2.71E-19	2.71E-19
AC-227	1.13E-19	1.13E-19

Source: 8

Nuclide	Receptor 1	Total
PO-210	4.41E-13	4.41E-13
RA-226	1.18E-06	1.18E-06
PB-210	2.96E-08	2.96E-08
PB-210	9.28E-08	9.28E-08

Title : HPNS RESRAD-BUILD Child Resident Risk
Input File : C:\Users\Craig\Desktop\HPNS BUILD Child Am to Pu_25Sep19_9pt3m2_risk.bld
Evaluation Time: 6.00000000 years

Source: 9

Nuclide	Receptor 1	Total
SR-90	8.36E-08	8.36E-08

Source: 10

Nuclide	Receptor 1	Total
TH-232	1.01E-07	1.01E-07
TH-228	2.09E-07	2.09E-07
RA-228	9.42E-08	9.42E-08
TH-228	1.93E-08	1.93E-08
TH-228	1.86E-07	1.86E-07
RA-228	4.99E-08	4.99E-08