

```

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iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iii          RESRAD-BUILD Input Parameters          iii
iii          iii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
  
```

```

Number of Sources : 5
Number of Receptors: 1
Total Time : 3.652500E+02 days
Fraction Inside : 2.670000E-01
  
```

iiiiiiiiiii Receptor Information iiiiiiiiiii

| Receptor | Room | x [m] | y [m] | z [m] | FracTime | Inhalation [m3/day] | Ingestion (Dust) [m2/hr] |
|----------|------|----------|----------|----------|----------|------------------------|-----------------------------|
| 1 | 1 | 2.220 | 2.220 | 1.000 | 1.000 | 3.36E+01 | 0.00E+00 |

iii Receptor-Source Shielding Relationship iii

| 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 |

íííííííí Building Information íííííííí

Building Air Exchange Rate: 1.52E+00 1/hr

| Height[m] | Air Exchanges [m3/hr] | |
|-------------|-----------------------|------------------|
| Area [m2] | | |
| | ***** | |
| | * | * |
| | * | * |
| | * | <=Q01: 1.05E+02 |
| H1: 3.510 | * Room 1 | * Q10 : 1.05E+02 |
| | * LAMBDA: 1.52E+00 | * |
| Area 19.710 | * | * |
| | * | * |
| | ***** | |

Deposition velocity: 4.79E-04 [m/s] Resuspension Rate: 6.75E-10 [1/s]

iiiiiii Source Information iiiiii

Source: 1

Location:: Room : 1 x: 2.22 y: 2.22 z: 0.00[m]
 Geometry:: Type: Area Area:1.97E+01 [m2] Direction: z
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|------------|----------------------------------|-----------|-----------|
| [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ | (pCi/m3)] |
| AG-108m | 1.000E+00 | 7.620E-06 | 2.830E-04 | 9.140E-03 |

Source: 2

Location:: Room : 1 x: 0.00 y: 2.22 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|------------|----------------------------------|-----------|-----------|
| [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ | (pCi/m3)] |
| AG-108m | 1.000E+00 | 7.620E-06 | 2.830E-04 | 9.140E-03 |

Source: 3

Location:: Room : 1 x: 2.22 y: 4.44 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|------------|----------------------------------|------------------------|-----------|
| [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] | |
| AG-108m | 1.000E+00 | 7.620E-06 | 2.830E-04 | 9.140E-03 |

Source: 4

Location:: Room : 1 x: 4.44 y: 2.22 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|------------|----------------------------------|------------------------|-----------|
| [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] | |
| AG-108m | 1.000E+00 | 7.620E-06 | 2.830E-04 | 9.140E-03 |

Source: 5

Location:: Room : 1 x: 2.22 y: 0.00 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| AG-108m | 1.000E+00 | 7.620E-06 | 2.830E-04 | 9.140E-03 |

```

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

iiiiiiii Source Information iiiiiiiii

Source: 1

```

Location:: Room : 1 x: 2.22 y: 2.22 z: 0.00 [m]
Geometry:: Type: Area Area:1.97E+01 [m2] Direction: z
Pathway ::
Direct Ingestion Rate: 1.340E-06 [1/hr]
Fraction released to air: 7.000E-02
Removable fraction: 1.000E-01
Time to Remove: 5.278E+04 [day]
    
```

```

Contamination:: Nuclide Concentration
                  [pCi/m2]
AG-108m          1.000E+00
    
```

Source: 2

```

Location:: Room : 1 x: 0.00 y: 2.22 z: 1.76 [m]
Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
Pathway ::
Direct Ingestion Rate: 1.340E-06 [1/hr]
Fraction released to air: 7.000E-02
Removable fraction: 1.000E-01
Time to Remove: 5.278E+04 [day]
    
```

```

Contamination:: Nuclide Concentration
                  [pCi/m2]
AG-108m          1.000E+00
    
```

Source: 3

Location:: Room : 1 x: 2.22 y: 4.44 z: 1.76 [m]
Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
Pathway ::
Direct Ingestion Rate: 1.340E-06 [1/hr]
Fraction released to air: 7.000E-02
Removable fraction: 1.000E-01
Time to Remove: 5.278E+04 [day]

| Contamination:: | Nuclide | Concentration |
|-----------------|---------|---------------|
| | | [pCi/m2] |
| | AG-108m | 1.000E+00 |

Source: 4

Location:: Room : 1 x: 4.44 y: 2.22 z: 1.76 [m]
Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
Pathway ::
Direct Ingestion Rate: 1.340E-06 [1/hr]
Fraction released to air: 7.000E-02
Removable fraction: 1.000E-01
Time to Remove: 5.278E+04 [day]

| Contamination:: | Nuclide | Concentration |
|-----------------|---------|---------------|
| | | [pCi/m2] |
| | AG-108m | 1.000E+00 |

Source: 5

Location:: Room : 1 x: 2.22 y: 0.00 z: 1.76 [m]
Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
Pathway ::
Direct Ingestion Rate: 1.340E-06 [1/hr]
Fraction released to air: 7.000E-02
Removable fraction: 1.000E-01
Time to Remove: 5.278E+04 [day]

| Contamination:: | Nuclide | Concentration |
|-----------------|---------|---------------|
| | | [pCi/m2] |
| | AG-108m | 1.000E+00 |

```

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iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iii                                     iii
iii          RESRAD-BUILDDose Tables          iii
iii                                     iii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
    
```

Source Contributions to Receptor Doses
 iii
 [mrem]

| | Source 1 | Source 2 | Source 3 | Source 4 | Source 5 | Total |
|------------|-------------|-------------|-------------|-------------|-------------|----------|
| Receptor 1 | 9.46E-06 | 3.20E-06 | 3.20E-06 | 3.20E-06 | 3.20E-06 | 2.22E-05 |
| Total | 9.46E-06 | 3.20E-06 | 3.20E-06 | 3.20E-06 | 3.20E-06 | 2.22E-05 |


```

iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iii          RESRAD-BUILD Input Parameters          iii
iii          iii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
  
```

```

Number of Sources : 5
Number of Receptors: 1
Total Time : 3.652500E+02 days
Fraction Inside : 2.670000E-01
  
```

iiiiiiiiiii Receptor Information iiiiiiiiiii

| Receptor | Room | x [m] | y [m] | z [m] | FracTime | Inhalation [m3/day] | Ingestion (Dust) [m2/hr] |
|----------|------|----------|----------|----------|----------|------------------------|-----------------------------|
| 1 | 1 | 2.220 | 2.220 | 1.000 | 1.000 | 3.36E+01 | 0.00E+00 |

iii Receptor-Source Shielding Relationship iii

| 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 |

íííííííí Building Information íííííííí

Building Air Exchange Rate: 1.52E+00 1/hr

| Height[m] | Air Exchanges [m3/hr] | |
|-------------|-----------------------|------------------|
| Area [m2] | | |
| | ***** | |
| | * | * |
| | * | * |
| | * | <=Q01: 1.05E+02 |
| H1: 3.510 | * Room 1 | * Q10 : 1.05E+02 |
| | * LAMBDA: 1.52E+00 | * |
| Area 19.710 | * | * |
| | * | * |
| | ***** | |

Deposition velocity: 8.53E-05 [m/s] Resuspension Rate: 1.83E-08 [1/s]

iiiiiiii Source Information iiiiiiiii

Source: 1

Location:: Room : 1 x: 2.22 y: 2.22 z: 0.00[m]
 Geometry:: Type: Area Area:1.97E+01 [m2] Direction: z
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 1.824E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| AM-241 | 1.000E+00 | 3.640E-03 | 4.440E-01 | 9.570E-05 |
| NP-237 | 0.000E+00 | 4.440E-03 | 5.400E-01 | 1.210E-03 |
| U-233 | 0.000E+00 | 2.890E-04 | 1.350E-01 | 1.910E-06 |
| TH-229 | 0.000E+00 | 4.030E-03 | 2.160E+00 | 1.720E-03 |

Source: 2

Location:: Room : 1 x: 0.00 y: 2.22 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 1.824E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| AM-241 | 1.000E+00 | 3.640E-03 | 4.440E-01 | 9.570E-05 |
| NP-237 | 0.000E+00 | 4.440E-03 | 5.400E-01 | 1.210E-03 |

| | | | | |
|--------|-----------|-----------|-----------|-----------|
| U-233 | 0.000E+00 | 2.890E-04 | 1.350E-01 | 1.910E-06 |
| TH-229 | 0.000E+00 | 4.030E-03 | 2.160E+00 | 1.720E-03 |

Source: 3

Location:: Room : 1 x: 2.22 y: 4.44 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 1.824E+04 [day]

Contamination::

| | Nuclide Concentration | Dose Conversion Factor (Library: | | |
|--------|-----------------------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| AM-241 | 1.000E+00 | 3.640E-03 | 4.440E-01 | 9.570E-05 |
| NP-237 | 0.000E+00 | 4.440E-03 | 5.400E-01 | 1.210E-03 |
| U-233 | 0.000E+00 | 2.890E-04 | 1.350E-01 | 1.910E-06 |
| TH-229 | 0.000E+00 | 4.030E-03 | 2.160E+00 | 1.720E-03 |

Source: 4

Location:: Room : 1 x: 4.44 y: 2.22 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 1.824E+04 [day]

Contamination::

| | Nuclide Concentration | Dose Conversion Factor (Library: | | |
|--------|-----------------------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| AM-241 | 1.000E+00 | 3.640E-03 | 4.440E-01 | 9.570E-05 |
| NP-237 | 0.000E+00 | 4.440E-03 | 5.400E-01 | 1.210E-03 |
| U-233 | 0.000E+00 | 2.890E-04 | 1.350E-01 | 1.910E-06 |

TH-229 0.000E+00 4.030E-03 2.160E+00 1.720E-03

Source: 5

Location:: Room : 1 x: 2.22 y: 0.00 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 1.824E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| AM-241 | 1.000E+00 | 3.640E-03 | 4.440E-01 | 9.570E-05 |
| NP-237 | 0.000E+00 | 4.440E-03 | 5.400E-01 | 1.210E-03 |
| U-233 | 0.000E+00 | 2.890E-04 | 1.350E-01 | 1.910E-06 |
| TH-229 | 0.000E+00 | 4.030E-03 | 2.160E+00 | 1.720E-03 |

```

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iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iii          RESRAD-BUILD Input Parameters          iii
iii          iii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
  
```

```

Number of Sources : 5
Number of Receptors: 1
Total Time : 3.652500E+02 days
Fraction Inside : 2.670000E-01
  
```

iiiiiiiiiii Receptor Information iiiiiiiiiii

| Receptor | Room | x [m] | y [m] | z [m] | FracTime | Inhalation [m3/day] | Ingestion (Dust) [m2/hr] |
|----------|------|----------|----------|----------|----------|------------------------|-----------------------------|
| 1 | 1 | 2.220 | 2.220 | 1.000 | 1.000 | 3.36E+01 | 0.00E+00 |

iii Receptor-Source Shielding Relationship iii

| 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 |

íííííííí Building Information íííííííí

Building Air Exchange Rate: 1.52E+00 1/hr

| Height[m] | Air Exchanges [m3/hr] | |
|-------------|-----------------------|------------------|
| Area [m2] | | |
| | ***** | |
| | * | * |
| | * | * |
| | * | <=Q01: 1.05E+02 |
| H1: 3.510 | * Room 1 | * Q10 : 1.05E+02 |
| | * LAMBDA: 1.52E+00 | * |
| Area 19.710 | * | * |
| | * | * |
| | ***** | |

Deposition velocity: 8.53E-05 [m/s] Resuspension Rate: 1.83E-08 [1/s]

iiiiiii Source Information iiiiii

Source: 1

Location:: Room : 1 x: 2.22 y: 2.22 z: 0.00[m]
 Geometry:: Type: Area Area:1.97E+01 [m2] Direction: z
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| C-14 | 1.000E+00 | 2.090E-06 | 2.090E-06 | 2.620E-08 |

Source: 2

Location:: Room : 1 x: 0.00 y: 2.22 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| C-14 | 1.000E+00 | 2.090E-06 | 2.090E-06 | 2.620E-08 |

Source: 3

Location:: Room : 1 x: 2.22 y: 4.44 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|--------------------------|--------------------------------------|
| | [pCi/m2] | Ingestion [mrem/pCi] | Inhalation [mrem/pCi] | Submersion [mrem/yr/ (pCi/m3)] |
| C-14 | 1.000E+00 | 2.090E-06 | 2.090E-06 | 2.620E-08 |

Source: 4

Location:: Room : 1 x: 4.44 y: 2.22 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|--------------------------|--------------------------------------|
| | [pCi/m2] | Ingestion [mrem/pCi] | Inhalation [mrem/pCi] | Submersion [mrem/yr/ (pCi/m3)] |
| C-14 | 1.000E+00 | 2.090E-06 | 2.090E-06 | 2.620E-08 |

Source: 5

Location:: Room : 1 x: 2.22 y: 0.00 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

Nuclide Concentration Dose Conversion Factor (Library:

| | | Dose Conversion Factor (Library: | | |
|------|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| C-14 | 1.000E+00 | 2.090E-06 | 2.090E-06 | 2.620E-08 |

```

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iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iii          RESRAD-BUILD Input Parameters          iii
iii          iii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
  
```

```

Number of Sources : 5
Number of Receptors: 1
Total Time : 3.652500E+02 days
Fraction Inside : 2.670000E-01
  
```

iiiiiiiiiiii Receptor Information iiiiiiiiiiiii

| Receptor | Room | x [m] | y [m] | z [m] | FracTime | Inhalation [m3/day] | Ingestion (Dust) [m2/hr] |
|----------|------|----------|----------|----------|----------|------------------------|-----------------------------|
| 1 | 1 | 2.220 | 2.220 | 1.000 | 1.000 | 3.36E+01 | 0.00E+00 |

iii Receptor-Source Shielding Relationship iii

| 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 |

íííííííí Building Information íííííííí

Building Air Exchange Rate: 1.52E+00 1/hr

| Height[m] | Air Exchanges [m3/hr] | |
|-------------|-----------------------|------------------|
| Area [m2] | | |
| | ***** | |
| | * | * |
| | * | * |
| | * | <=Q01: 1.05E+02 |
| H1: 3.510 | * Room 1 | * Q10 : 1.05E+02 |
| | * LAMBDA: 1.52E+00 | * |
| Area 19.710 | * | * |
| | * | * |
| | ***** | |

Deposition velocity: 1.51E-05 [m/s] Resuspension Rate: 1.02E-06 [1/s]

iiiiiiii Source Information iiiiiiiii

Source: 1

Location:: Room : 1 x: 2.22 y: 2.22 z: 0.00[m]
Geometry:: Type: Area Area:1.97E+01 [m2] Direction: z
Pathway ::
Direct Ingestion Rate: 1.340E-06 [1/hr]
Fraction released to air: 7.000E-02
Removable fraction: 1.000E-01
Time to Remove: 1.824E+04 [day]

Contamination::

Nuclide Concentration Dose Conversion Factor (Library:

oo

| | AAAAAAAA | AAAAAAAAAAAAAA | AA | | | |
|--------|-----------|----------------|--|------------------------|--|--|
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | Submersion | | |
| | | | | [mrem/yr/ (pCi/m3)] | | |
| CM-243 | 1.000E+00 | 2.510E-03 | 3.070E-01 | 6.880E-04 | | |
| PU-239 | 0.000E+00 | 3.540E-03 | 4.290E-01 | 4.960E-07 | | |
| U-235 | 0.000E+00 | 2.670E-04 | 1.230E-01 | 9.030E-04 | | |
| PA-231 | 0.000E+00 | 1.060E-02 | 1.280E+00 | 2.010E-04 | | |
| AC-227 | 0.000E+00 | 1.480E-02 | 6.720E+00 | 2.160E-03 | | |

Source: 2

Location:: Room : 1 x: 0.00 y: 2.22 z: 1.76[m]
Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
Pathway ::
Direct Ingestion Rate: 1.340E-06 [1/hr]
Fraction released to air: 7.000E-02
Removable fraction: 1.000E-01
Time to Remove: 1.824E+04 [day]

Contamination::

Nuclide Concentration Dose Conversion Factor (Library:

oo

| | AAAAAAAA | AAAAAAAAAAAAAA | AA | | | |
|--------|-----------|----------------|--|------------------------|--|--|
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | Submersion | | |
| | | | | [mrem/yr/ (pCi/m3)] | | |
| CM-243 | 1.000E+00 | 2.510E-03 | 3.070E-01 | 6.880E-04 | | |

| | | | | |
|--------|-----------|-----------|-----------|-----------|
| PU-239 | 0.000E+00 | 3.540E-03 | 4.290E-01 | 4.960E-07 |
| U-235 | 0.000E+00 | 2.670E-04 | 1.230E-01 | 9.030E-04 |
| PA-231 | 0.000E+00 | 1.060E-02 | 1.280E+00 | 2.010E-04 |
| AC-227 | 0.000E+00 | 1.480E-02 | 6.720E+00 | 2.160E-03 |

Source: 3

Location:: Room : 1 x: 2.22 y: 4.44 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 1.824E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|------------|------------------------|
| | | | | |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| CM-243 | 1.000E+00 | 2.510E-03 | 3.070E-01 | 6.880E-04 |
| PU-239 | 0.000E+00 | 3.540E-03 | 4.290E-01 | 4.960E-07 |
| U-235 | 0.000E+00 | 2.670E-04 | 1.230E-01 | 9.030E-04 |
| PA-231 | 0.000E+00 | 1.060E-02 | 1.280E+00 | 2.010E-04 |
| AC-227 | 0.000E+00 | 1.480E-02 | 6.720E+00 | 2.160E-03 |

Source: 4

Location:: Room : 1 x: 4.44 y: 2.22 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 1.824E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|----------|----------------------------------|------------|------------------------|
| | | | | |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |

| | | | | |
|--------|-----------|-----------|-----------|-----------|
| CM-243 | 1.000E+00 | 2.510E-03 | 3.070E-01 | 6.880E-04 |
| PU-239 | 0.000E+00 | 3.540E-03 | 4.290E-01 | 4.960E-07 |
| U-235 | 0.000E+00 | 2.670E-04 | 1.230E-01 | 9.030E-04 |
| PA-231 | 0.000E+00 | 1.060E-02 | 1.280E+00 | 2.010E-04 |
| AC-227 | 0.000E+00 | 1.480E-02 | 6.720E+00 | 2.160E-03 |

Source: 5

Location:: Room : 1 x: 2.22 y: 0.00 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 1.824E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| CM-243 | 1.000E+00 | 2.510E-03 | 3.070E-01 | 6.880E-04 |
| PU-239 | 0.000E+00 | 3.540E-03 | 4.290E-01 | 4.960E-07 |
| U-235 | 0.000E+00 | 2.670E-04 | 1.230E-01 | 9.030E-04 |
| PA-231 | 0.000E+00 | 1.060E-02 | 1.280E+00 | 2.010E-04 |
| AC-227 | 0.000E+00 | 1.480E-02 | 6.720E+00 | 2.160E-03 |

Source: 3

Location:: Room : 1 x: 2.22 y: 4.44 z: 1.76 [m]
Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
Pathway ::
Direct Ingestion Rate: 1.340E-06 [1/hr]
Fraction released to air: 7.000E-02
Removable fraction: 1.000E-01
Time to Remove: 1.824E+04 [day]

| Contamination:: | Nuclide | Concentration |
|-----------------|---------|---------------|
| | | [pCi/m2] |
| | CM-243 | 1.000E+00 |
| | PU-239 | 0.000E+00 |
| | U-235 | 0.000E+00 |
| | PA-231 | 0.000E+00 |
| | AC-227 | 0.000E+00 |

Source: 4

Location:: Room : 1 x: 4.44 y: 2.22 z: 1.76 [m]
Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
Pathway ::
Direct Ingestion Rate: 1.340E-06 [1/hr]
Fraction released to air: 7.000E-02
Removable fraction: 1.000E-01
Time to Remove: 1.824E+04 [day]

| Contamination:: | Nuclide | Concentration |
|-----------------|---------|---------------|
| | | [pCi/m2] |
| | CM-243 | 1.000E+00 |
| | PU-239 | 0.000E+00 |
| | U-235 | 0.000E+00 |
| | PA-231 | 0.000E+00 |
| | AC-227 | 0.000E+00 |

** RESRAD-BUILD Program Output, Version 3.21 12/01/03 12:48:27 Page: 9 **
Title : Yankee Rowe DCGL Cm-243
Input File : C:\Program Files\RESRAD_Family\BUILD\Cm-243-DCGL_Build_nov28.bld
Evaluation Time: 0.00000000E+00 years

Source: 5

Location:: Room : 1 x: 2.22 y: 0.00 z: 1.76 [m]
Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
Pathway ::
Direct Ingestion Rate: 1.340E-06 [1/hr]
Fraction released to air: 7.000E-02
Removable fraction: 1.000E-01
Time to Remove: 1.824E+04 [day]

| Contamination:: | Nuclide | Concentration [pCi/m2] |
|-----------------|---------|---------------------------|
| | CM-243 | 1.000E+00 |
| | PU-239 | 0.000E+00 |
| | U-235 | 0.000E+00 |
| | PA-231 | 0.000E+00 |
| | AC-227 | 0.000E+00 |

```

iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iii                                     iii
iii           RESRAD-BUILDDose Tables           iii
iii                                     iii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
    
```

Source Contributions to Receptor Doses
 iii
 [mrem]

| | Source 1 | Source 2 | Source 3 | Source 4 | Source 5 | Total |
|------------|-------------|-------------|-------------|-------------|-------------|----------|
| Receptor 1 | 1.89E-05 | 1.46E-05 | 1.46E-05 | 1.46E-05 | 1.46E-05 | 7.73E-05 |
| Total | 1.89E-05 | 1.46E-05 | 1.46E-05 | 1.46E-05 | 1.46E-05 | 7.73E-05 |

```

iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iii          RESRAD-BUILD Input Parameters          iii
iii          iii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
  
```

```

Number of Sources : 5
Number of Receptors: 1
Total Time : 3.652500E+02 days
Fraction Inside : 2.670000E-01
  
```

iiiiiiiiiii Receptor Information iiiiiiiiiii

| Receptor | Room | x [m] | y [m] | z [m] | FracTime | Inhalation [m3/day] | Ingestion (Dust) [m2/hr] |
|----------|------|----------|----------|----------|----------|------------------------|-----------------------------|
| 1 | 1 | 2.220 | 2.220 | 1.000 | 1.000 | 3.36E+01 | 0.00E+00 |

iii Receptor-Source Shielding Relationship iii

| 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 |

íííííííí Building Information íííííííí

Building Air Exchange Rate: 1.52E+00 1/hr

| Height[m] | Air Exchanges [m3/hr] | |
|-------------|-----------------------|------------------|
| Area [m2] | | |
| | ***** | |
| | * | * |
| | * | * |
| | * | <=Q01: 1.05E+02 |
| H1: 3.510 | * Room 1 | * Q10 : 1.05E+02 |
| | * LAMBDA: 1.52E+00 | * |
| Area 19.710 | * | * |
| | * | * |
| | ***** | |

Deposition velocity: 4.79E-04 [m/s] Resuspension Rate: 6.75E-10 [1/s]

iiiiiii Source Information iiiiii

Source: 1

Location:: Room : 1 x: 2.22 y: 2.22 z: 0.00[m]
 Geometry:: Type: Area Area:1.97E+01 [m2] Direction: z
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| CO-60 | 1.000E+00 | 2.690E-05 | 2.190E-04 | 1.470E-02 |

Source: 2

Location:: Room : 1 x: 0.00 y: 2.22 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| CO-60 | 1.000E+00 | 2.690E-05 | 2.190E-04 | 1.470E-02 |

Source: 3

Location:: Room : 1 x: 2.22 y: 4.44 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|--------------------------|--------------------------------------|
| | [pCi/m2] | Ingestion [mrem/pCi] | Inhalation [mrem/pCi] | Submersion [mrem/yr/ (pCi/m3)] |
| CO-60 | 1.000E+00 | 2.690E-05 | 2.190E-04 | 1.470E-02 |

Source: 4

Location:: Room : 1 x: 4.44 y: 2.22 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|--------------------------|--------------------------------------|
| | [pCi/m2] | Ingestion [mrem/pCi] | Inhalation [mrem/pCi] | Submersion [mrem/yr/ (pCi/m3)] |
| CO-60 | 1.000E+00 | 2.690E-05 | 2.190E-04 | 1.470E-02 |

Source: 5

Location:: Room : 1 x: 2.22 y: 0.00 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

Nuclide Concentration Dose Conversion Factor (Library:

| | | Dose Conversion Factor (Library: | | |
|-------|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| CO-60 | 1.000E+00 | 2.690E-05 | 2.190E-04 | 1.470E-02 |

** RESRAD-BUILD Program Output, Version 3.21 11/28/03 15:25:11 Page: 7 **
 Title : Yankee Rowe DCGL Co-60
 Input File : C:\Program Files\RESRAD_Family\BUILD\Co-60-DCGL_Build_nov28.bld
 Evaluation Time: 0.00000000E+00 years

```

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

iiiiiiii Source Information iiiiiiiii

Source: 1

```

Location:: Room : 1 x: 2.22 y: 2.22 z: 0.00 [m]
Geometry:: Type: Area Area:1.97E+01 [m2] Direction: z
Pathway ::
  Direct Ingestion Rate: 1.340E-06 [1/hr]
  Fraction released to air: 7.000E-02
  Removable fraction: 1.000E-01
  Time to Remove: 5.278E+04 [day]
  
```

| Contamination:: | Nuclide | Concentration [pCi/m2] |
|-----------------|---------|---------------------------|
| | CO-60 | 1.000E+00 |

Source: 2

```

Location:: Room : 1 x: 0.00 y: 2.22 z: 1.76 [m]
Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
Pathway ::
  Direct Ingestion Rate: 1.340E-06 [1/hr]
  Fraction released to air: 7.000E-02
  Removable fraction: 1.000E-01
  Time to Remove: 5.278E+04 [day]
  
```

| Contamination:: | Nuclide | Concentration [pCi/m2] |
|-----------------|---------|---------------------------|
| | CO-60 | 1.000E+00 |

Source: 3

Location:: Room : 1 x: 2.22 y: 4.44 z: 1.76 [m]
Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
Pathway ::
Direct Ingestion Rate: 1.340E-06 [1/hr]
Fraction released to air: 7.000E-02
Removable fraction: 1.000E-01
Time to Remove: 5.278E+04 [day]

| Contamination:: | Nuclide | Concentration |
|-----------------|---------|---------------|
| | | [pCi/m2] |
| | CO-60 | 1.000E+00 |

Source: 4

Location:: Room : 1 x: 4.44 y: 2.22 z: 1.76 [m]
Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
Pathway ::
Direct Ingestion Rate: 1.340E-06 [1/hr]
Fraction released to air: 7.000E-02
Removable fraction: 1.000E-01
Time to Remove: 5.278E+04 [day]

| Contamination:: | Nuclide | Concentration |
|-----------------|---------|---------------|
| | | [pCi/m2] |
| | CO-60 | 1.000E+00 |

Source: 5

Location:: Room : 1 x: 2.22 y: 0.00 z: 1.76 [m]
Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
Pathway ::
Direct Ingestion Rate: 1.340E-06 [1/hr]
Fraction released to air: 7.000E-02
Removable fraction: 1.000E-01
Time to Remove: 5.278E+04 [day]

| Contamination:: | Nuclide | Concentration |
|-----------------|---------|---------------|
| | | [pCi/m2] |
| | CO-60 | 1.000E+00 |


```

iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iii                iii
iii    RESRAD-BUILD Input Parameters    iii
iii                iii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
  
```

```

Number of Sources : 5
Number of Receptors: 1
Total Time : 3.652500E+02 days
Fraction Inside : 2.670000E-01
  
```

iiiiiiiiiiii Receptor Information iiiiiiiiiiiii

| Receptor | Room | x [m] | y [m] | z [m] | FracTime | Inhalation [m3/day] | Ingestion (Dust) [m2/hr] |
|----------|------|----------|----------|----------|----------|------------------------|-----------------------------|
| 1 | 1 | 2.220 | 2.220 | 1.000 | 1.000 | 3.36E+01 | 0.00E+00 |

iii Receptor-Source Shielding Relationship iii

| 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 |

íííííííí Building Information íííííííí

Building Air Exchange Rate: 1.52E+00 1/hr

| Height[m] | Air Exchanges [m3/hr] | |
|-------------|-----------------------|------------------|
| Area [m2] | | |
| | ***** | |
| | * | * |
| | * | * |
| | * | <=Q01: 1.05E+02 |
| H1: 3.510 | * Room 1 | * Q10 : 1.05E+02 |
| | * LAMBDA: 1.52E+00 | * |
| Area 19.710 | * | * |
| | * | * |
| | ***** | |

Deposition velocity: 4.79E-04 [m/s] Resuspension Rate: 6.75E-10 [1/s]

iiiiiii Source Information iiiiii

Source: 1

Location:: Room : 1 x: 2.22 y: 2.22 z: 0.00[m]
 Geometry:: Type: Area Area:1.97E+01 [m2] Direction: z
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| CS-134 | 1.000E+00 | 7.330E-05 | 4.630E-05 | 8.860E-03 |

Source: 2

Location:: Room : 1 x: 0.00 y: 2.22 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| CS-134 | 1.000E+00 | 7.330E-05 | 4.630E-05 | 8.860E-03 |

Source: 3

Location:: Room : 1 x: 2.22 y: 4.44 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|--------------------------|--------------------------------------|
| | [pCi/m2] | Ingestion [mrem/pCi] | Inhalation [mrem/pCi] | Submersion [mrem/yr/ (pCi/m3)] |
| CS-134 | 1.000E+00 | 7.330E-05 | 4.630E-05 | 8.860E-03 |

Source: 4

Location:: Room : 1 x: 4.44 y: 2.22 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|--------------------------|--------------------------------------|
| | [pCi/m2] | Ingestion [mrem/pCi] | Inhalation [mrem/pCi] | Submersion [mrem/yr/ (pCi/m3)] |
| CS-134 | 1.000E+00 | 7.330E-05 | 4.630E-05 | 8.860E-03 |

Source: 5

Location:: Room : 1 x: 2.22 y: 0.00 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

Nuclide Concentration Dose Conversion Factor (Library:

| | | Dose Conversion Factor (Library: | | |
|--------|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| CS-134 | 1.000E+00 | 7.330E-05 | 4.630E-05 | 8.860E-03 |

Source: 3

Location:: Room : 1 x: 2.22 y: 4.44 z: 1.76 [m]
Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
Pathway ::
Direct Ingestion Rate: 1.340E-06 [1/hr]
Fraction released to air: 7.000E-02
Removable fraction: 1.000E-01
Time to Remove: 5.278E+04 [day]

| Contamination:: | Nuclide | Concentration |
|-----------------|---------|---------------|
| | | [pCi/m2] |
| | CS-134 | 1.000E+00 |

Source: 4

Location:: Room : 1 x: 4.44 y: 2.22 z: 1.76 [m]
Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
Pathway ::
Direct Ingestion Rate: 1.340E-06 [1/hr]
Fraction released to air: 7.000E-02
Removable fraction: 1.000E-01
Time to Remove: 5.278E+04 [day]

| Contamination:: | Nuclide | Concentration |
|-----------------|---------|---------------|
| | | [pCi/m2] |
| | CS-134 | 1.000E+00 |

Source: 5

Location:: Room : 1 x: 2.22 y: 0.00 z: 1.76 [m]
Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
Pathway ::
Direct Ingestion Rate: 1.340E-06 [1/hr]
Fraction released to air: 7.000E-02
Removable fraction: 1.000E-01
Time to Remove: 5.278E+04 [day]

| Contamination:: | Nuclide | Concentration |
|-----------------|---------|---------------|
| | | [pCi/m2] |
| | CS-134 | 1.000E+00 |


```

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iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iii          RESRAD-BUILD Input Parameters          iii
iii          iii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
  
```

```

Number of Sources : 5
Number of Receptors: 1
Total Time : 3.652500E+02 days
Fraction Inside : 2.670000E-01
  
```

iiiiiiiiiii Receptor Information iiiiiiiiiii

| Receptor | Room | x [m] | y [m] | z [m] | FracTime | Inhalation [m3/day] | Ingestion (Dust) [m2/hr] |
|----------|------|----------|----------|----------|----------|------------------------|-----------------------------|
| 1 | 1 | 2.220 | 2.220 | 1.000 | 1.000 | 3.36E+01 | 0.00E+00 |

iii Receptor-Source Shielding Relationship iii

| 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 |

íííííííí Building Information íííííííí

Building Air Exchange Rate: 1.52E+00 1/hr

| Height[m] | Air Exchanges [m3/hr] | |
|-------------|-----------------------|------------------|
| Area [m2] | | |
| | ***** | |
| | * | * |
| | * | * |
| | * | <=Q01: 1.05E+02 |
| H1: 3.510 | * Room 1 | * Q10 : 1.05E+02 |
| | * LAMBDA: 1.52E+00 | * |
| Area 19.710 | * | * |
| | * | * |
| | ***** | |

Deposition velocity: 4.79E-04 [m/s] Resuspension Rate: 6.75E-10 [1/s]

íííííííí Source Information íííííííí

Source: 1

Location:: Room : 1 x: 2.22 y: 2.22 z: 0.00[m]
 Geometry:: Type: Area Area:1.97E+01 [m2] Direction: z
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| CS-137 | 1.000E+00 | 5.000E-05 | 3.190E-05 | 3.190E-03 |

Source: 2

Location:: Room : 1 x: 0.00 y: 2.22 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| CS-137 | 1.000E+00 | 5.000E-05 | 3.190E-05 | 3.190E-03 |

Source: 3

Location:: Room : 1 x: 2.22 y: 4.44 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|--------------------------|--------------------------------------|
| | [pCi/m2] | Ingestion [mrem/pCi] | Inhalation [mrem/pCi] | Submersion [mrem/yr/ (pCi/m3)] |
| CS-137 | 1.000E+00 | 5.000E-05 | 3.190E-05 | 3.190E-03 |

Source: 4

Location:: Room : 1 x: 4.44 y: 2.22 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|--------------------------|--------------------------------------|
| | [pCi/m2] | Ingestion [mrem/pCi] | Inhalation [mrem/pCi] | Submersion [mrem/yr/ (pCi/m3)] |
| CS-137 | 1.000E+00 | 5.000E-05 | 3.190E-05 | 3.190E-03 |

Source: 5

Location:: Room : 1 x: 2.22 y: 0.00 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

Nuclide Concentration Dose Conversion Factor (Library:

| | | Dose Conversion Factor (Library: | | |
|--------|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| CS-137 | 1.000E+00 | 5.000E-05 | 3.190E-05 | 3.190E-03 |


```

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

iiiiiii Source Information iiiiii

Source: 1

```

Location:: Room : 1 x: 2.22 y: 2.22 z: 0.00 [m]
Geometry:: Type: Area Area:1.97E+01 [m2] Direction: z
Pathway ::
  Direct Ingestion Rate: 1.340E-06 [1/hr]
  Fraction released to air: 7.000E-02
  Removable fraction: 1.000E-01
  Time to Remove: 5.278E+04 [day]
  
```

```

Contamination:: Nuclide Concentration
                  [pCi/m2]
                  CS-137 1.000E+00
  
```

Source: 2

```

Location:: Room : 1 x: 0.00 y: 2.22 z: 1.76 [m]
Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
Pathway ::
  Direct Ingestion Rate: 1.340E-06 [1/hr]
  Fraction released to air: 7.000E-02
  Removable fraction: 1.000E-01
  Time to Remove: 5.278E+04 [day]
  
```

```

Contamination:: Nuclide Concentration
                  [pCi/m2]
                  CS-137 1.000E+00
  
```

Source: 3

Location:: Room : 1 x: 2.22 y: 4.44 z: 1.76 [m]
Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
Pathway ::
Direct Ingestion Rate: 1.340E-06 [1/hr]
Fraction released to air: 7.000E-02
Removable fraction: 1.000E-01
Time to Remove: 5.278E+04 [day]

| Contamination:: | Nuclide | Concentration |
|-----------------|---------|---------------|
| | | [pCi/m2] |
| | CS-137 | 1.000E+00 |

Source: 4

Location:: Room : 1 x: 4.44 y: 2.22 z: 1.76 [m]
Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
Pathway ::
Direct Ingestion Rate: 1.340E-06 [1/hr]
Fraction released to air: 7.000E-02
Removable fraction: 1.000E-01
Time to Remove: 5.278E+04 [day]

| Contamination:: | Nuclide | Concentration |
|-----------------|---------|---------------|
| | | [pCi/m2] |
| | CS-137 | 1.000E+00 |

Source: 5

Location:: Room : 1 x: 2.22 y: 0.00 z: 1.76 [m]
Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
Pathway ::
Direct Ingestion Rate: 1.340E-06 [1/hr]
Fraction released to air: 7.000E-02
Removable fraction: 1.000E-01
Time to Remove: 5.278E+04 [day]

| Contamination:: | Nuclide | Concentration |
|-----------------|---------|---------------|
| | | [pCi/m2] |
| | CS-137 | 1.000E+00 |


```

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iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iii          RESRAD-BUILD Input Parameters          iii
iii          iii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
  
```

```

Number of Sources : 5
Number of Receptors: 1
Total Time : 3.652500E+02 days
Fraction Inside : 2.670000E-01
  
```

iiiiiiiiiii Receptor Information iiiiiiiiiii

| Receptor | Room | x [m] | y [m] | z [m] | FracTime | Inhalation [m3/day] | Ingestion (Dust) [m2/hr] |
|----------|------|----------|----------|----------|----------|------------------------|-----------------------------|
| 1 | 1 | 2.220 | 2.220 | 1.000 | 1.000 | 3.36E+01 | 0.00E+00 |

iii Receptor-Source Shielding Relationship iii

| 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 |

íííííííí Building Information íííííííí

Building Air Exchange Rate: 1.52E+00 1/hr

| Height[m] | Air Exchanges [m3/hr] | |
|-------------|-----------------------|------------------|
| Area [m2] | | |
| | ***** | |
| | * | * |
| | * | * |
| | * | <=Q01: 1.05E+02 |
| H1: 3.510 | * Room 1 | * Q10 : 1.05E+02 |
| | * LAMBDA: 1.52E+00 | * |
| Area 19.710 | * | * |
| | * | * |
| | ***** | |

Deposition velocity: 8.53E-05 [m/s] Resuspension Rate: 1.83E-08 [1/s]

íííííííí Source Information íííííííí

Source: 1

Location:: Room : 1 x: 2.22 y: 2.22 z: 0.00[m]
 Geometry:: Type: Area Area:1.97E+01 [m2] Direction: z
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| GD-152 | 0.000E+00 | 1.610E-04 | 2.430E-01 | 0.000E+00 |
| EU-152 | 1.000E+00 | 6.480E-06 | 2.210E-04 | 6.610E-03 |

Source: 2

Location:: Room : 1 x: 0.00 y: 2.22 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| GD-152 | 0.000E+00 | 1.610E-04 | 2.430E-01 | 0.000E+00 |
| EU-152 | 1.000E+00 | 6.480E-06 | 2.210E-04 | 6.610E-03 |

Source: 3

Location:: Room : 1 x: 2.22 y: 4.44 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|--------------------------|--------------------------------------|
| | [pCi/m2] | Ingestion [mrem/pCi] | Inhalation [mrem/pCi] | Submersion [mrem/yr/ (pCi/m3)] |
| GD-152 | 0.000E+00 | 1.610E-04 | 2.430E-01 | 0.000E+00 |
| EU-152 | 1.000E+00 | 6.480E-06 | 2.210E-04 | 6.610E-03 |

Source: 4

Location:: Room : 1 x: 4.44 y: 2.22 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|--------------------------|--------------------------------------|
| | [pCi/m2] | Ingestion [mrem/pCi] | Inhalation [mrem/pCi] | Submersion [mrem/yr/ (pCi/m3)] |
| GD-152 | 0.000E+00 | 1.610E-04 | 2.430E-01 | 0.000E+00 |
| EU-152 | 1.000E+00 | 6.480E-06 | 2.210E-04 | 6.610E-03 |

Source: 5

Location:: Room : 1 x: 2.22 y: 0.00 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|--------------------------|--------------------------------------|
| | [pCi/m2] | Ingestion [mrem/pCi] | Inhalation [mrem/pCi] | Submersion [mrem/yr/ (pCi/m3)] |
| GD-152 | 0.000E+00 | 1.610E-04 | 2.430E-01 | 0.000E+00 |
| EU-152 | 1.000E+00 | 6.480E-06 | 2.210E-04 | 6.610E-03 |


```

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iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iii          RESRAD-BUILD Input Parameters          iii
iii          iii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
  
```

```

Number of Sources : 5
Number of Receptors: 1
Total Time : 3.652500E+02 days
Fraction Inside : 2.670000E-01
  
```

iiiiiiiiiiii Receptor Information iiiiiiiiiiiii

| Receptor | Room | x [m] | y [m] | z [m] | FracTime | Inhalation [m3/day] | Ingestion (Dust) [m2/hr] |
|----------|------|----------|----------|----------|----------|------------------------|-----------------------------|
| 1 | 1 | 2.220 | 2.220 | 1.000 | 1.000 | 3.36E+01 | 0.00E+00 |

iii Receptor-Source Shielding Relationship iii

| 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 |

íííííííí Building Information íííííííí

Building Air Exchange Rate: 1.52E+00 1/hr

| Height[m] | Air Exchanges [m3/hr] | |
|-------------|-----------------------|------------------|
| Area [m2] | | |
| | ***** | |
| | * | * |
| | * | * |
| | * | <=Q01: 1.05E+02 |
| H1: 3.510 | * Room 1 | * Q10 : 1.05E+02 |
| | * LAMBDA: 1.52E+00 | * |
| Area 19.710 | * | * |
| | * | * |
| | ***** | |

Deposition velocity: 4.79E-04 [m/s] Resuspension Rate: 6.75E-10 [1/s]

iiiiiii Source Information iiiiii

Source: 1

Location:: Room : 1 x: 2.22 y: 2.22 z: 0.00[m]
 Geometry:: Type: Area Area:1.97E+01 [m2] Direction: z
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| EU-154 | 1.000E+00 | 9.550E-06 | 2.860E-04 | 7.180E-03 |

Source: 2

Location:: Room : 1 x: 0.00 y: 2.22 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| EU-154 | 1.000E+00 | 9.550E-06 | 2.860E-04 | 7.180E-03 |

Source: 3

Location:: Room : 1 x: 2.22 y: 4.44 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|--------------------------|--------------------------------------|
| | [pCi/m2] | Ingestion [mrem/pCi] | Inhalation [mrem/pCi] | Submersion [mrem/yr/ (pCi/m3)] |
| EU-154 | 1.000E+00 | 9.550E-06 | 2.860E-04 | 7.180E-03 |

Source: 4

Location:: Room : 1 x: 4.44 y: 2.22 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|--------------------------|--------------------------------------|
| | [pCi/m2] | Ingestion [mrem/pCi] | Inhalation [mrem/pCi] | Submersion [mrem/yr/ (pCi/m3)] |
| EU-154 | 1.000E+00 | 9.550E-06 | 2.860E-04 | 7.180E-03 |

Source: 5

Location:: Room : 1 x: 2.22 y: 0.00 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

Nuclide Concentration Dose Conversion Factor (Library:

| | | Dose Conversion Factor (Library: | | |
|--------|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| EU-154 | 1.000E+00 | 9.550E-06 | 2.860E-04 | 7.180E-03 |

```

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

Source Information

Source: 1
 Location:: Room : 1 x: 2.22 y: 2.22 z: 0.00 [m]
 Geometry:: Type: Area Area:1.97E+01 [m2] Direction: z
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

| Contamination:: | Nuclide | Concentration |
|-----------------|---------|---------------|
| | | [pCi/m2] |
| | EU-154 | 1.000E+00 |

Source: 2
 Location:: Room : 1 x: 0.00 y: 2.22 z: 1.76 [m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

| Contamination:: | Nuclide | Concentration |
|-----------------|---------|---------------|
| | | [pCi/m2] |
| | EU-154 | 1.000E+00 |

Source: 3

Location:: Room : 1 x: 2.22 y: 4.44 z: 1.76 [m]
Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
Pathway ::
Direct Ingestion Rate: 1.340E-06 [1/hr]
Fraction released to air: 7.000E-02
Removable fraction: 1.000E-01
Time to Remove: 5.278E+04 [day]

| Contamination:: | Nuclide | Concentration |
|-----------------|---------|---------------|
| | | [pCi/m2] |
| | EU-154 | 1.000E+00 |

Source: 4

Location:: Room : 1 x: 4.44 y: 2.22 z: 1.76 [m]
Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
Pathway ::
Direct Ingestion Rate: 1.340E-06 [1/hr]
Fraction released to air: 7.000E-02
Removable fraction: 1.000E-01
Time to Remove: 5.278E+04 [day]

| Contamination:: | Nuclide | Concentration |
|-----------------|---------|---------------|
| | | [pCi/m2] |
| | EU-154 | 1.000E+00 |

Source: 5

Location:: Room : 1 x: 2.22 y: 0.00 z: 1.76 [m]
Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
Pathway ::
Direct Ingestion Rate: 1.340E-06 [1/hr]
Fraction released to air: 7.000E-02
Removable fraction: 1.000E-01
Time to Remove: 5.278E+04 [day]

| Contamination:: | Nuclide | Concentration |
|-----------------|---------|---------------|
| | | [pCi/m2] |
| | EU-154 | 1.000E+00 |


```

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iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iii          RESRAD-BUILD Input Parameters          iii
iii          iii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
  
```

```

Number of Sources : 5
Number of Receptors: 1
Total Time : 3.652500E+02 days
Fraction Inside : 2.670000E-01
  
```

iiiiiiiiiiii Receptor Information iiiiiiiiiiiii

| Receptor | Room | x [m] | y [m] | z [m] | FracTime | Inhalation [m3/day] | Ingestion (Dust) [m2/hr] |
|----------|------|----------|----------|----------|----------|------------------------|-----------------------------|
| 1 | 1 | 2.220 | 2.220 | 1.000 | 1.000 | 3.36E+01 | 0.00E+00 |

iii Receptor-Source Shielding Relationship iii

| 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 |

íííííííííí Building Information íííííííííí

Building Air Exchange Rate: 1.52E+00 1/hr

| Height[m] | Air Exchanges [m3/hr] | |
|-------------|-----------------------|------------------|
| Area [m2] | | |
| | ***** | |
| | * | * |
| | * | * |
| | * | <=Q01: 1.05E+02 |
| H1: 3.510 | * Room 1 | * Q10 : 1.05E+02 |
| | * LAMBDA: 1.52E+00 | * |
| Area 19.710 | * | * |
| | * | * |
| | ***** | |

Deposition velocity: 8.53E-05 [m/s] Resuspension Rate: 1.83E-08 [1/s]

iiiiiii Source Information iiiiii

Source: 1

Location:: Room : 1 x: 2.22 y: 2.22 z: 0.00[m]
 Geometry:: Type: Area Area:1.97E+01 [m2] Direction: z
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 1.824E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| EU-155 | 1.000E+00 | 1.530E-06 | 4.140E-05 | 2.910E-04 |

Source: 2

Location:: Room : 1 x: 0.00 y: 2.22 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 1.824E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| EU-155 | 1.000E+00 | 1.530E-06 | 4.140E-05 | 2.910E-04 |

Source: 3

Location:: Room : 1 x: 2.22 y: 4.44 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 1.824E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|--------------------------|--------------------------------------|
| | [pCi/m2] | Ingestion [mrem/pCi] | Inhalation [mrem/pCi] | Submersion [mrem/yr/ (pCi/m3)] |
| EU-155 | 1.000E+00 | 1.530E-06 | 4.140E-05 | 2.910E-04 |

Source: 4

Location:: Room : 1 x: 4.44 y: 2.22 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 1.824E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|--------------------------|--------------------------------------|
| | [pCi/m2] | Ingestion [mrem/pCi] | Inhalation [mrem/pCi] | Submersion [mrem/yr/ (pCi/m3)] |
| EU-155 | 1.000E+00 | 1.530E-06 | 4.140E-05 | 2.910E-04 |

Source: 5

Location:: Room : 1 x: 2.22 y: 0.00 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 1.824E+04 [day]

Contamination::

Nuclide Concentration Dose Conversion Factor (Library:

| | | Dose Conversion Factor (Library: | | |
|--------|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| EU-155 | 1.000E+00 | 1.530E-06 | 4.140E-05 | 2.910E-04 |

```

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iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iii          RESRAD-BUILD Input Parameters          iii
iii          iii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
  
```

```

Number of Sources : 5
Number of Receptors: 1
Total Time : 3.652500E+02 days
Fraction Inside : 2.670000E-01
  
```

iiiiiiiiiii Receptor Information iiiiiiiiiii

| Receptor | Room | x [m] | y [m] | z [m] | FracTime | Inhalation [m3/day] | Ingestion (Dust) [m2/hr] |
|----------|------|----------|----------|----------|----------|------------------------|-----------------------------|
| 1 | 1 | 2.220 | 2.220 | 1.000 | 1.000 | 3.36E+01 | 0.00E+00 |

iii Receptor-Source Shielding Relationship iii

| 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 |

íííííííííí Building Information íííííííííí

Building Air Exchange Rate: 1.52E+00 1/hr

| Height[m] | Air Exchanges [m3/hr] | |
|-------------|-----------------------|------------------|
| Area [m2] | | |
| | ***** | |
| | * | * |
| | * | * |
| | * | <=Q01: 1.05E+02 |
| H1: 3.510 | * Room 1 | * Q10 : 1.05E+02 |
| | * LAMBDA: 1.52E+00 | * |
| Area 19.710 | * | * |
| | * | * |
| | ***** | |

Deposition velocity: 1.51E-05 [m/s] Resuspension Rate: 1.02E-06 [1/s]

iiiiiii Source Information iiiiii

Source: 1

Location:: Room : 1 x: 2.22 y: 2.22 z: 0.00[m]
 Geometry:: Type: Area Area:1.97E+01 [m2] Direction: z
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| FE-55 | 1.000E+00 | 6.070E-07 | 2.690E-06 | 0.000E+00 |

Source: 2

Location:: Room : 1 x: 0.00 y: 2.22 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| FE-55 | 1.000E+00 | 6.070E-07 | 2.690E-06 | 0.000E+00 |

Source: 3

Location:: Room : 1 x: 2.22 y: 4.44 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|-----------------------|--------------------------------|
| | [pCi/m2] | Ingestion [mrem/pCi] | Inhalation [mrem/pCi] | Submersion [mrem/yr/ (pCi/m3)] |
| FE-55 | 1.000E+00 | 6.070E-07 | 2.690E-06 | 0.000E+00 |

Source: 4

Location:: Room : 1 x: 4.44 y: 2.22 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|-----------------------|--------------------------------|
| | [pCi/m2] | Ingestion [mrem/pCi] | Inhalation [mrem/pCi] | Submersion [mrem/yr/ (pCi/m3)] |
| FE-55 | 1.000E+00 | 6.070E-07 | 2.690E-06 | 0.000E+00 |

Source: 5

Location:: Room : 1 x: 2.22 y: 0.00 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

Nuclide Concentration Dose Conversion Factor (Library:

| | | Dose Conversion Factor (Library: | | |
|-------|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| FE-55 | 1.000E+00 | 6.070E-07 | 2.690E-06 | 0.000E+00 |

Source: 3

Location:: Room : 1 x: 2.22 y: 4.44 z: 1.76 [m]
Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
Pathway ::
Direct Ingestion Rate: 1.340E-06 [1/hr]
Fraction released to air: 7.000E-02
Removable fraction: 1.000E-01
Time to Remove: 5.278E+04 [day]

| Contamination:: | Nuclide | Concentration |
|-----------------|---------|---------------|
| | | [pCi/m2] |
| | FE-55 | 1.000E+00 |

Source: 4

Location:: Room : 1 x: 4.44 y: 2.22 z: 1.76 [m]
Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
Pathway ::
Direct Ingestion Rate: 1.340E-06 [1/hr]
Fraction released to air: 7.000E-02
Removable fraction: 1.000E-01
Time to Remove: 5.278E+04 [day]

| Contamination:: | Nuclide | Concentration |
|-----------------|---------|---------------|
| | | [pCi/m2] |
| | FE-55 | 1.000E+00 |

Source: 5

Location:: Room : 1 x: 2.22 y: 0.00 z: 1.76 [m]
Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
Pathway ::
Direct Ingestion Rate: 1.340E-06 [1/hr]
Fraction released to air: 7.000E-02
Removable fraction: 1.000E-01
Time to Remove: 5.278E+04 [day]

| Contamination:: | Nuclide | Concentration |
|-----------------|---------|---------------|
| | | [pCi/m2] |
| | FE-55 | 1.000E+00 |


```

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iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iii          RESRAD-BUILD Input Parameters          iii
iii          iii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
  
```

```

Number of Sources : 5
Number of Receptors: 1
Total Time : 3.652500E+02 days
Fraction Inside : 2.670000E-01
  
```

iiiiiiiiiii Receptor Information iiiiiiiiiii

| Receptor | Room | x [m] | y [m] | z [m] | FracTime | Inhalation [m3/day] | Ingestion (Dust) [m2/hr] |
|----------|------|----------|----------|----------|----------|------------------------|-----------------------------|
| 1 | 1 | 2.220 | 2.220 | 1.000 | 1.000 | 3.36E+01 | 0.00E+00 |

iii Receptor-Source Shielding Relationship iii

| 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 |

íííííííí Building Information íííííííí

Building Air Exchange Rate: 1.52E+00 1/hr

| Height[m] | Air Exchanges [m3/hr] | |
|-------------|-----------------------|------------------|
| Area [m2] | | |
| | ***** | |
| | * | * |
| | * | * |
| | * | <=Q01: 1.05E+02 |
| H1: 3.510 | * Room 1 | * Q10 : 1.05E+02 |
| | * LAMBDA: 1.52E+00 | * |
| Area 19.710 | * | * |
| | * | * |
| | ***** | |

Deposition velocity: 1.51E-05 [m/s] Resuspension Rate: 1.02E-06 [1/s]

iiiiiii Source Information iiiiii

Source: 1

Location:: Room : 1 x: 2.22 y: 2.22 z: 0.00[m]
 Geometry:: Type: Area Area:1.97E+01 [m2] Direction: z
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 1.000E+00
 Removable fraction: 1.000E-01
 Time to Remove: 1.824E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| H-3 | 1.000E+00 | 6.400E-08 | 6.400E-08 | 0.000E+00 |

Source: 2

Location:: Room : 1 x: 0.00 y: 2.22 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 1.000E+00
 Removable fraction: 1.000E-01
 Time to Remove: 1.824E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| H-3 | 1.000E+00 | 6.400E-08 | 6.400E-08 | 0.000E+00 |

Source: 3

Location:: Room : 1 x: 2.22 y: 4.44 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 1.000E+00
 Removable fraction: 1.000E-01
 Time to Remove: 1.824E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|--------------------------|--------------------------------------|
| | [pCi/m2] | Ingestion [mrem/pCi] | Inhalation [mrem/pCi] | Submersion [mrem/yr/ (pCi/m3)] |
| H-3 | 1.000E+00 | 6.400E-08 | 6.400E-08 | 0.000E+00 |

Source: 4

Location:: Room : 1 x: 4.44 y: 2.22 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 1.000E+00
 Removable fraction: 1.000E-01
 Time to Remove: 1.824E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|--------------------------|--------------------------------------|
| | [pCi/m2] | Ingestion [mrem/pCi] | Inhalation [mrem/pCi] | Submersion [mrem/yr/ (pCi/m3)] |
| H-3 | 1.000E+00 | 6.400E-08 | 6.400E-08 | 0.000E+00 |

Source: 5

Location:: Room : 1 x: 2.22 y: 0.00 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 1.000E+00
 Removable fraction: 1.000E-01
 Time to Remove: 1.824E+04 [day]

Contamination::

Nuclide Concentration Dose Conversion Factor (Library:

| | | Dose Conversion Factor (Library: | | |
|-----|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| H-3 | 1.000E+00 | 6.400E-08 | 6.400E-08 | 0.000E+00 |

Source: 3

Location:: Room : 1 x: 2.22 y: 4.44 z: 1.76 [m]
Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
Pathway ::
Direct Ingestion Rate: 1.340E-06 [1/hr]
Fraction released to air: 1.000E+00
Removable fraction: 1.000E-01
Time to Remove: 1.824E+04 [day]

| Contamination:: | Nuclide | Concentration |
|-----------------|---------|---------------|
| | | [pCi/m2] |
| | H-3 | 1.000E+00 |

Source: 4

Location:: Room : 1 x: 4.44 y: 2.22 z: 1.76 [m]
Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
Pathway ::
Direct Ingestion Rate: 1.340E-06 [1/hr]
Fraction released to air: 1.000E+00
Removable fraction: 1.000E-01
Time to Remove: 1.824E+04 [day]

| Contamination:: | Nuclide | Concentration |
|-----------------|---------|---------------|
| | | [pCi/m2] |
| | H-3 | 1.000E+00 |

Source: 5

Location:: Room : 1 x: 2.22 y: 0.00 z: 1.76 [m]
Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
Pathway ::
Direct Ingestion Rate: 1.340E-06 [1/hr]
Fraction released to air: 1.000E+00
Removable fraction: 1.000E-01
Time to Remove: 1.824E+04 [day]

| Contamination:: | Nuclide | Concentration |
|-----------------|---------|---------------|
| | | [pCi/m2] |
| | H-3 | 1.000E+00 |


```

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iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iii          RESRAD-BUILD Input Parameters          iii
iii          iii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
  
```

```

Number of Sources : 5
Number of Receptors: 1
Total Time : 3.652500E+02 days
Fraction Inside : 2.670000E-01
  
```

iiiiiiiiiiii Receptor Information iiiiiiiiiiiii

| Receptor | Room | x [m] | y [m] | z [m] | FracTime | Inhalation [m3/day] | Ingestion (Dust) [m2/hr] |
|----------|------|----------|----------|----------|----------|------------------------|-----------------------------|
| 1 | 1 | 2.220 | 2.220 | 1.000 | 1.000 | 3.36E+01 | 0.00E+00 |

iii Receptor-Source Shielding Relationship iii

| 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 |

íííííííí Building Information íííííííí

Building Air Exchange Rate: 1.52E+00 1/hr

| Height[m] | Air Exchanges [m3/hr] | |
|-------------|-----------------------|------------------|
| Area [m2] | | |
| | ***** | |
| | * | * |
| | * | * |
| | * | <=Q01: 1.05E+02 |
| H1: 3.510 | * Room 1 | * Q10 : 1.05E+02 |
| | * LAMBDA: 1.52E+00 | * |
| Area 19.710 | * | * |
| | * | * |
| | ***** | |

Deposition velocity: 4.79E-04 [m/s] Resuspension Rate: 6.75E-10 [1/s]

iiiiiiii Source Information iiiiiiiii

Source: 1

Location:: Room : 1 x: 2.22 y: 2.22 z: 0.00[m]
 Geometry:: Type: Area Area:1.97E+01 [m2] Direction: z
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| NB-94 | 1.000E+00 | 7.140E-06 | 4.140E-04 | 9.010E-03 |

Source: 2

Location:: Room : 1 x: 0.00 y: 2.22 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| NB-94 | 1.000E+00 | 7.140E-06 | 4.140E-04 | 9.010E-03 |

Source: 3

Location:: Room : 1 x: 2.22 y: 4.44 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|--------------------------|--------------------------------------|
| | [pCi/m2] | Ingestion [mrem/pCi] | Inhalation [mrem/pCi] | Submersion [mrem/yr/ (pCi/m3)] |
| NB-94 | 1.000E+00 | 7.140E-06 | 4.140E-04 | 9.010E-03 |

Source: 4

Location:: Room : 1 x: 4.44 y: 2.22 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|--------------------------|--------------------------------------|
| | [pCi/m2] | Ingestion [mrem/pCi] | Inhalation [mrem/pCi] | Submersion [mrem/yr/ (pCi/m3)] |
| NB-94 | 1.000E+00 | 7.140E-06 | 4.140E-04 | 9.010E-03 |

Source: 5

Location:: Room : 1 x: 2.22 y: 0.00 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

Nuclide Concentration Dose Conversion Factor (Library:

| | | Dose Conversion Factor (Library: | | |
|-------|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| NB-94 | 1.000E+00 | 7.140E-06 | 4.140E-04 | 9.010E-03 |

```

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

Source Information

Source: 1

```

Location:: Room : 1 x: 2.22 y: 2.22 z: 0.00 [m]
Geometry:: Type: Area Area:1.97E+01 [m2] Direction: z
Pathway ::
  Direct Ingestion Rate: 1.340E-06 [1/hr]
  Fraction released to air: 7.000E-02
  Removable fraction: 1.000E-01
  Time to Remove: 5.278E+04 [day]
  
```

```

Contamination:: Nuclide Concentration
                  [pCi/m2]
                  NB-94 1.000E+00
  
```

Source: 2

```

Location:: Room : 1 x: 0.00 y: 2.22 z: 1.76 [m]
Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
Pathway ::
  Direct Ingestion Rate: 1.340E-06 [1/hr]
  Fraction released to air: 7.000E-02
  Removable fraction: 1.000E-01
  Time to Remove: 5.278E+04 [day]
  
```

```

Contamination:: Nuclide Concentration
                  [pCi/m2]
                  NB-94 1.000E+00
  
```

Source: 3

Location:: Room : 1 x: 2.22 y: 4.44 z: 1.76 [m]
Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
Pathway ::
Direct Ingestion Rate: 1.340E-06 [1/hr]
Fraction released to air: 7.000E-02
Removable fraction: 1.000E-01
Time to Remove: 5.278E+04 [day]

| Contamination:: | Nuclide | Concentration |
|-----------------|---------|---------------|
| | | [pCi/m2] |
| | NB-94 | 1.000E+00 |

Source: 4

Location:: Room : 1 x: 4.44 y: 2.22 z: 1.76 [m]
Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
Pathway ::
Direct Ingestion Rate: 1.340E-06 [1/hr]
Fraction released to air: 7.000E-02
Removable fraction: 1.000E-01
Time to Remove: 5.278E+04 [day]

| Contamination:: | Nuclide | Concentration |
|-----------------|---------|---------------|
| | | [pCi/m2] |
| | NB-94 | 1.000E+00 |

Source: 5

Location:: Room : 1 x: 2.22 y: 0.00 z: 1.76 [m]
Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
Pathway ::
Direct Ingestion Rate: 1.340E-06 [1/hr]
Fraction released to air: 7.000E-02
Removable fraction: 1.000E-01
Time to Remove: 5.278E+04 [day]

| Contamination:: | Nuclide | Concentration |
|-----------------|---------|---------------|
| | | [pCi/m2] |
| | NB-94 | 1.000E+00 |

```

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iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iii                                     iii
iii          RESRAD-BUILDDose Tables          iii
iii                                     iii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
    
```

Source Contributions to Receptor Doses
 [mrem]

| | Source 1 | Source 2 | Source 3 | Source 4 | Source 5 | Total |
|------------|----------|----------|----------|----------|----------|----------|
| Receptor 1 | 9.09E-06 | 3.07E-06 | 3.07E-06 | 3.07E-06 | 3.07E-06 | 2.14E-05 |
| Total | 9.09E-06 | 3.07E-06 | 3.07E-06 | 3.07E-06 | 3.07E-06 | 2.14E-05 |

```

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iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iii          RESRAD-BUILD Input Parameters          iii
iii          iii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
  
```

```

Number of Sources : 5
Number of Receptors: 1
Total Time : 3.652500E+02 days
Fraction Inside : 2.670000E-01
  
```

iiiiiiiiiii Receptor Information iiiiiiiiiii

| Receptor | Room | x [m] | y [m] | z [m] | FracTime | Inhalation [m3/day] | Ingestion (Dust) [m2/hr] |
|----------|------|----------|----------|----------|----------|------------------------|-----------------------------|
| 1 | 1 | 2.220 | 2.220 | 1.000 | 1.000 | 3.36E+01 | 0.00E+00 |

iii Receptor-Source Shielding Relationship iii

| 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 |

íííííííí Building Information íííííííí

Building Air Exchange Rate: 1.52E+00 1/hr

| Height[m] | Air Exchanges [m3/hr] | |
|-------------|-----------------------|------------------|
| Area [m2] | | |
| | ***** | |
| | * | * |
| | * | * |
| | * | <=Q01: 1.05E+02 |
| H1: 3.510 | * Room 1 | * Q10 : 1.05E+02 |
| | * LAMBDA: 1.52E+00 | * |
| Area 19.710 | * | * |
| | * | * |
| | ***** | |

Deposition velocity: 8.53E-05 [m/s] Resuspension Rate: 1.02E-06 [1/s]

iiiiiii Source Information iiiiii

Source: 1

Location:: Room : 1 x: 2.22 y: 2.22 z: 0.00[m]
 Geometry:: Type: Area Area:1.97E+01 [m2] Direction: z
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 1.824E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| NI-63 | 1.000E+00 | 5.770E-07 | 6.290E-06 | 0.000E+00 |

Source: 2

Location:: Room : 1 x: 0.00 y: 2.22 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 1.824E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| NI-63 | 1.000E+00 | 5.770E-07 | 6.290E-06 | 0.000E+00 |

Source: 3

Location:: Room : 1 x: 2.22 y: 4.44 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 1.824E+04 [day]

Contamination::

| Nuclide Concentration | Dose Conversion Factor (Library: | | |
|-----------------------|----------------------------------|------------|------------------------|
| | Ingestion | Inhalation | Submersion |
| [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| NI-63 1.000E+00 | 5.770E-07 | 6.290E-06 | 0.000E+00 |

Source: 4

Location:: Room : 1 x: 4.44 y: 2.22 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 1.824E+04 [day]

Contamination::

| Nuclide Concentration | Dose Conversion Factor (Library: | | |
|-----------------------|----------------------------------|------------|------------------------|
| | Ingestion | Inhalation | Submersion |
| [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| NI-63 1.000E+00 | 5.770E-07 | 6.290E-06 | 0.000E+00 |

Source: 5

Location:: Room : 1 x: 2.22 y: 0.00 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 1.824E+04 [day]

Contamination::

Nuclide Concentration Dose Conversion Factor (Library:

| | | Dose Conversion Factor (Library: | | |
|-------|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| NI-63 | 1.000E+00 | 5.770E-07 | 6.290E-06 | 0.000E+00 |

```

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iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iii          RESRAD-BUILD Input Parameters          iii
iii          iii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
  
```

```

Number of Sources : 5
Number of Receptors: 1
Total Time : 3.652500E+02 days
Fraction Inside : 2.670000E-01
  
```

iiiiiiiiiii Receptor Information iiiiiiiiiii

| Receptor | Room | x [m] | y [m] | z [m] | FracTime | Inhalation [m3/day] | Ingestion (Dust) [m2/hr] |
|----------|------|----------|----------|----------|----------|------------------------|-----------------------------|
| 1 | 1 | 2.220 | 2.220 | 1.000 | 1.000 | 3.36E+01 | 0.00E+00 |

iii Receptor-Source Shielding Relationship iii

| 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 |

íííííííí Building Information íííííííí

Building Air Exchange Rate: 1.52E+00 1/hr

| Height[m] | Air Exchanges [m3/hr] | |
|-------------|-----------------------|------------------|
| Area [m2] | | |
| | ***** | |
| | * | * |
| | * | * |
| | * | <=Q01: 1.05E+02 |
| H1: 3.510 | * Room 1 | * Q10 : 1.05E+02 |
| | * LAMBDA: 1.52E+00 | * |
| Area 19.710 | * | * |
| | * | * |
| | ***** | |

Deposition velocity: 8.53E-05 [m/s] Resuspension Rate: 1.02E-06 [1/s]

iiiiiiii Source Information iiiiiiiii

Source: 1

Location:: Room : 1 x: 2.22 y: 2.22 z: 0.00[m]
 Geometry:: Type: Area Area:1.97E+01 [m2] Direction: z
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 1.824E+04 [day]
 Radon Release Fraction: 1.000E-01

Contamination::

| Nuclide Concentration | Dose Conversion Factor (Library: | | | |
|-----------------------|----------------------------------|------------|------------------------|-----------|
| | Ingestion | Inhalation | Submersion | |
| [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] | |
| PU-238 | 1.000E+00 | 3.200E-03 | 3.920E-01 | 5.710E-07 |
| U-234 | 0.000E+00 | 2.830E-04 | 1.320E-01 | 8.930E-07 |
| TH-230 | 0.000E+00 | 5.480E-04 | 3.260E-01 | 2.040E-06 |
| RA-226 | 0.000E+00 | 1.330E-03 | 8.600E-03 | 1.040E-02 |
| PB-210 | 0.000E+00 | 7.270E-03 | 2.320E-02 | 1.050E-05 |

Source: 2

Location:: Room : 1 x: 0.00 y: 2.22 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 1.824E+04 [day]
 Radon Release Fraction: 1.000E-01

Contamination::

| Nuclide Concentration | Dose Conversion Factor (Library: | | | |
|-----------------------|----------------------------------|------------|------------------------|-----------|
| | Ingestion | Inhalation | Submersion | |
| [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] | |
| PU-238 | 1.000E+00 | 3.200E-03 | 3.920E-01 | 5.710E-07 |

| | | | | |
|--------|-----------|-----------|-----------|-----------|
| U-234 | 0.000E+00 | 2.830E-04 | 1.320E-01 | 8.930E-07 |
| TH-230 | 0.000E+00 | 5.480E-04 | 3.260E-01 | 2.040E-06 |
| RA-226 | 0.000E+00 | 1.330E-03 | 8.600E-03 | 1.040E-02 |
| PB-210 | 0.000E+00 | 7.270E-03 | 2.320E-02 | 1.050E-05 |

Source: 3

Location:: Room : 1 x: 2.22 y: 4.44 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 1.824E+04 [day]
 Radon Release Fraction: 1.000E-01

Contamination::

| Nuclide Concentration | Dose Conversion Factor (Library: | | | |
|-----------------------|----------------------------------|------------|------------------------|-----------|
| | Ingestion | Inhalation | Submersion | |
| [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] | |
| PU-238 | 1.000E+00 | 3.200E-03 | 3.920E-01 | 5.710E-07 |
| U-234 | 0.000E+00 | 2.830E-04 | 1.320E-01 | 8.930E-07 |
| TH-230 | 0.000E+00 | 5.480E-04 | 3.260E-01 | 2.040E-06 |
| RA-226 | 0.000E+00 | 1.330E-03 | 8.600E-03 | 1.040E-02 |
| PB-210 | 0.000E+00 | 7.270E-03 | 2.320E-02 | 1.050E-05 |

Source: 4

Location:: Room : 1 x: 4.44 y: 2.22 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 1.824E+04 [day]
 Radon Release Fraction: 1.000E-01

Contamination::

| Nuclide Concentration | Dose Conversion Factor (Library: | | | |
|-----------------------|----------------------------------|------------|------------------------|-----------|
| | Ingestion | Inhalation | Submersion | |
| [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] | |
| PU-238 | 1.000E+00 | 3.200E-03 | 3.920E-01 | 5.710E-07 |
| U-234 | 0.000E+00 | 2.830E-04 | 1.320E-01 | 8.930E-07 |
| TH-230 | 0.000E+00 | 5.480E-04 | 3.260E-01 | 2.040E-06 |
| RA-226 | 0.000E+00 | 1.330E-03 | 8.600E-03 | 1.040E-02 |
| PB-210 | 0.000E+00 | 7.270E-03 | 2.320E-02 | 1.050E-05 |

| | | | | |
|--------|-----------|-----------|-----------|-----------|
| PU-238 | 1.000E+00 | 3.200E-03 | 3.920E-01 | 5.710E-07 |
| U-234 | 0.000E+00 | 2.830E-04 | 1.320E-01 | 8.930E-07 |
| TH-230 | 0.000E+00 | 5.480E-04 | 3.260E-01 | 2.040E-06 |
| RA-226 | 0.000E+00 | 1.330E-03 | 8.600E-03 | 1.040E-02 |
| PB-210 | 0.000E+00 | 7.270E-03 | 2.320E-02 | 1.050E-05 |

Source: 5

Location:: Room : 1 x: 2.22 y: 0.00 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
 Pathway ::

Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 1.824E+04 [day]

Radon Release Fraction: 1.000E-01

Contamination::

| Nuclide Concentration | Dose Conversion Factor (Library: | | |
|-----------------------|----------------------------------|------------|------------------------|
| | Ingestion | Inhalation | Submersion |
| [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| PU-238 | 1.000E+00 | 3.920E-01 | 5.710E-07 |
| U-234 | 0.000E+00 | 1.320E-01 | 8.930E-07 |
| TH-230 | 0.000E+00 | 3.260E-01 | 2.040E-06 |
| RA-226 | 0.000E+00 | 8.600E-03 | 1.040E-02 |
| PB-210 | 0.000E+00 | 2.320E-02 | 1.050E-05 |

```

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iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iii          RESRAD-BUILD Input Parameters          iii
iii          iii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
  
```

```

Number of Sources : 5
Number of Receptors: 1
Total Time : 3.652500E+02 days
Fraction Inside : 2.670000E-01
  
```

iiiiiiiiiii Receptor Information iiiiiiiiiii

| Receptor | Room | x [m] | y [m] | z [m] | FracTime | Inhalation [m3/day] | Ingestion (Dust) [m2/hr] |
|----------|------|----------|----------|----------|----------|------------------------|-----------------------------|
| 1 | 1 | 2.220 | 2.220 | 1.000 | 1.000 | 3.36E+01 | 0.00E+00 |

iii Receptor-Source Shielding Relationship iii

| 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 |

íííííííí Building Information íííííííí

Building Air Exchange Rate: 1.52E+00 1/hr

| Height[m] | Air Exchanges [m3/hr] | |
|-------------|-----------------------|------------------|
| Area [m2] | | |
| | ***** | |
| | * | * |
| | * | * |
| | * | <=Q01: 1.05E+02 |
| H1: 3.510 | * Room 1 | * Q10 : 1.05E+02 |
| | * LAMBDA: 1.52E+00 | * |
| Area 19.710 | * | * |
| | * | * |
| | ***** | |

Deposition velocity: 8.53E-05 [m/s] Resuspension Rate: 1.83E-08 [1/s]

íííííííí Source Information íííííííí

Source: 1

Location:: Room : 1 x: 2.22 y: 2.22 z: 0.00[m]
 Geometry:: Type: Area Area:1.97E+01 [m2] Direction: z
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 1.824E+04 [day]

Contamination::

| Nuclide Concentration | Dose Conversion Factor (Library: | | | |
|-----------------------|----------------------------------|------------|------------------------|-----------|
| | Ingestion | Inhalation | Submersion | |
| [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] | |
| PU-239 | 1.000E+00 | 3.540E-03 | 4.290E-01 | 4.960E-07 |
| U-235 | 0.000E+00 | 2.670E-04 | 1.230E-01 | 9.030E-04 |
| PA-231 | 0.000E+00 | 1.060E-02 | 1.280E+00 | 2.010E-04 |
| AC-227 | 0.000E+00 | 1.480E-02 | 6.720E+00 | 2.160E-03 |

Source: 2

Location:: Room : 1 x: 0.00 y: 2.22 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 1.824E+04 [day]

Contamination::

| Nuclide Concentration | Dose Conversion Factor (Library: | | | |
|-----------------------|----------------------------------|------------|------------------------|-----------|
| | Ingestion | Inhalation | Submersion | |
| [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] | |
| PU-239 | 1.000E+00 | 3.540E-03 | 4.290E-01 | 4.960E-07 |
| U-235 | 0.000E+00 | 2.670E-04 | 1.230E-01 | 9.030E-04 |

| | | | | |
|--------|-----------|-----------|-----------|-----------|
| PA-231 | 0.000E+00 | 1.060E-02 | 1.280E+00 | 2.010E-04 |
| AC-227 | 0.000E+00 | 1.480E-02 | 6.720E+00 | 2.160E-03 |

Source: 3

Location:: Room : 1 x: 2.22 y: 4.44 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 1.824E+04 [day]

Contamination::

| | Nuclide Concentration | Dose Conversion Factor (Library: | | |
|--------|-----------------------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| PU-239 | 1.000E+00 | 3.540E-03 | 4.290E-01 | 4.960E-07 |
| U-235 | 0.000E+00 | 2.670E-04 | 1.230E-01 | 9.030E-04 |
| PA-231 | 0.000E+00 | 1.060E-02 | 1.280E+00 | 2.010E-04 |
| AC-227 | 0.000E+00 | 1.480E-02 | 6.720E+00 | 2.160E-03 |

Source: 4

Location:: Room : 1 x: 4.44 y: 2.22 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 1.824E+04 [day]

Contamination::

| | Nuclide Concentration | Dose Conversion Factor (Library: | | |
|--------|-----------------------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| PU-239 | 1.000E+00 | 3.540E-03 | 4.290E-01 | 4.960E-07 |
| U-235 | 0.000E+00 | 2.670E-04 | 1.230E-01 | 9.030E-04 |
| PA-231 | 0.000E+00 | 1.060E-02 | 1.280E+00 | 2.010E-04 |

AC-227 0.000E+00 1.480E-02 6.720E+00 2.160E-03

Source: 5

Location:: Room : 1 x: 2.22 y: 0.00 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 1.824E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| PU-239 | 1.000E+00 | 3.540E-03 | 4.290E-01 | 4.960E-07 |
| U-235 | 0.000E+00 | 2.670E-04 | 1.230E-01 | 9.030E-04 |
| PA-231 | 0.000E+00 | 1.060E-02 | 1.280E+00 | 2.010E-04 |
| AC-227 | 0.000E+00 | 1.480E-02 | 6.720E+00 | 2.160E-03 |

```

iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iii          RESRAD-BUILD Input Parameters          iii
iii          iii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
  
```

```

Number of Sources : 5
Number of Receptors: 1
Total Time : 3.652500E+02 days
Fraction Inside : 2.670000E-01
  
```

iiiiiiiiiiii Receptor Information iiiiiiiiiiiii

| Receptor | Room | x [m] | y [m] | z [m] | FracTime | Inhalation [m3/day] | Ingestion (Dust) [m2/hr] |
|----------|------|----------|----------|----------|----------|------------------------|-----------------------------|
| 1 | 1 | 2.220 | 2.220 | 1.000 | 1.000 | 3.36E+01 | 0.00E+00 |

iii Receptor-Source Shielding Relationship iii

| 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 |

íííííííí Building Information íííííííí

Building Air Exchange Rate: 1.52E+00 1/hr

| Height[m] | Air Exchanges [m3/hr] | |
|-------------|-----------------------|------------------|
| Area [m2] | | |
| | ***** | |
| | * | * |
| | * | * |
| | * | <=Q01: 1.05E+02 |
| H1: 3.510 | * Room 1 | * Q10 : 1.05E+02 |
| | * LAMBDA: 1.52E+00 | * |
| Area 19.710 | * | * |
| | * | * |
| | ***** | |

Deposition velocity: 1.51E-05 [m/s] Resuspension Rate: 1.02E-06 [1/s]

iiiiiii Source Information iiiiii

Source: 1

Location:: Room : 1 x: 2.22 y: 2.22 z: 0.00[m]
 Geometry:: Type: Area Area:1.97E+01 [m2] Direction: z
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 1.824E+04 [day]

Contamination::

| Nuclide Concentration | Dose Conversion Factor (Library: | | | |
|-----------------------|----------------------------------|------------|------------------------|-----------|
| | Ingestion | Inhalation | Submersion | |
| [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] | |
| PU-241 | 1.000E+00 | 6.850E-05 | 8.250E-03 | 2.560E-08 |
| AM-241 | 0.000E+00 | 3.640E-03 | 4.440E-01 | 9.570E-05 |
| NP-237 | 0.000E+00 | 4.440E-03 | 5.400E-01 | 1.210E-03 |
| U-233 | 0.000E+00 | 2.890E-04 | 1.350E-01 | 1.910E-06 |
| TH-229 | 0.000E+00 | 4.030E-03 | 2.160E+00 | 1.720E-03 |

Source: 2

Location:: Room : 1 x: 0.00 y: 2.22 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 1.824E+04 [day]

Contamination::

| Nuclide Concentration | Dose Conversion Factor (Library: | | | |
|-----------------------|----------------------------------|------------|------------------------|-----------|
| | Ingestion | Inhalation | Submersion | |
| [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] | |
| PU-241 | 1.000E+00 | 6.850E-05 | 8.250E-03 | 2.560E-08 |

| | | | | |
|--------|-----------|-----------|-----------|-----------|
| AM-241 | 0.000E+00 | 3.640E-03 | 4.440E-01 | 9.570E-05 |
| NP-237 | 0.000E+00 | 4.440E-03 | 5.400E-01 | 1.210E-03 |
| U-233 | 0.000E+00 | 2.890E-04 | 1.350E-01 | 1.910E-06 |
| TH-229 | 0.000E+00 | 4.030E-03 | 2.160E+00 | 1.720E-03 |

Source: 3

Location:: Room : 1 x: 2.22 y: 4.44 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 1.824E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|------------|------------------------|
| | | | | |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| PU-241 | 1.000E+00 | 6.850E-05 | 8.250E-03 | 2.560E-08 |
| AM-241 | 0.000E+00 | 3.640E-03 | 4.440E-01 | 9.570E-05 |
| NP-237 | 0.000E+00 | 4.440E-03 | 5.400E-01 | 1.210E-03 |
| U-233 | 0.000E+00 | 2.890E-04 | 1.350E-01 | 1.910E-06 |
| TH-229 | 0.000E+00 | 4.030E-03 | 2.160E+00 | 1.720E-03 |

Source: 4

Location:: Room : 1 x: 4.44 y: 2.22 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 1.824E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|----------|----------------------------------|------------|------------------------|
| | | | | |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |

| | | | | |
|--------|-----------|-----------|-----------|-----------|
| PU-241 | 1.000E+00 | 6.850E-05 | 8.250E-03 | 2.560E-08 |
| AM-241 | 0.000E+00 | 3.640E-03 | 4.440E-01 | 9.570E-05 |
| NP-237 | 0.000E+00 | 4.440E-03 | 5.400E-01 | 1.210E-03 |
| U-233 | 0.000E+00 | 2.890E-04 | 1.350E-01 | 1.910E-06 |
| TH-229 | 0.000E+00 | 4.030E-03 | 2.160E+00 | 1.720E-03 |

Source: 5

Location:: Room : 1 x: 2.22 y: 0.00 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 1.824E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| PU-241 | 1.000E+00 | 6.850E-05 | 8.250E-03 | 2.560E-08 |
| AM-241 | 0.000E+00 | 3.640E-03 | 4.440E-01 | 9.570E-05 |
| NP-237 | 0.000E+00 | 4.440E-03 | 5.400E-01 | 1.210E-03 |
| U-233 | 0.000E+00 | 2.890E-04 | 1.350E-01 | 1.910E-06 |
| TH-229 | 0.000E+00 | 4.030E-03 | 2.160E+00 | 1.720E-03 |

Source: 3

Location:: Room : 1 x: 2.22 y: 4.44 z: 1.76 [m]
Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
Pathway ::
Direct Ingestion Rate: 1.340E-06 [1/hr]
Fraction released to air: 7.000E-02
Removable fraction: 1.000E-01
Time to Remove: 1.824E+04 [day]

| Contamination:: | Nuclide | Concentration |
|-----------------|---------|---------------|
| | | [pCi/m2] |
| | PU-241 | 1.000E+00 |
| | AM-241 | 0.000E+00 |
| | NP-237 | 0.000E+00 |
| | U-233 | 0.000E+00 |
| | TH-229 | 0.000E+00 |

Source: 4

Location:: Room : 1 x: 4.44 y: 2.22 z: 1.76 [m]
Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
Pathway ::
Direct Ingestion Rate: 1.340E-06 [1/hr]
Fraction released to air: 7.000E-02
Removable fraction: 1.000E-01
Time to Remove: 1.824E+04 [day]

| Contamination:: | Nuclide | Concentration |
|-----------------|---------|---------------|
| | | [pCi/m2] |
| | PU-241 | 1.000E+00 |
| | AM-241 | 0.000E+00 |
| | NP-237 | 0.000E+00 |
| | U-233 | 0.000E+00 |
| | TH-229 | 0.000E+00 |

** RESRAD-BUILD Program Output, Version 3.21 12/01/03 12:38:14 Page: 9 **
Title : Yankee Rowe DCGL Pu-241
Input File : C:\Program Files\RESRAD_Family\BUILD\Pu-241-DCGL_Build_nov28.bld
Evaluation Time: 0.00000000E+00 years

Source: 5

Location:: Room : 1 x: 2.22 y: 0.00 z: 1.76 [m]
Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
Pathway ::
Direct Ingestion Rate: 1.340E-06 [1/hr]
Fraction released to air: 7.000E-02
Removable fraction: 1.000E-01
Time to Remove: 1.824E+04 [day]

| Contamination:: | Nuclide | Concentration [pCi/m2] |
|-----------------|---------|---------------------------|
| | PU-241 | 1.000E+00 |
| | AM-241 | 0.000E+00 |
| | NP-237 | 0.000E+00 |
| | U-233 | 0.000E+00 |
| | TH-229 | 0.000E+00 |


```

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iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iii      Assessment for Time: 2      iii
iii      Time =9.00E+00 yr      iii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
  
```

iiiiiiii Source Information iiiiiiiii

Source: 1

```

Location:: Room : 1  x:  2.22 y:  2.22  z:  0.00 [m]
Geometry:: Type: Area      Area:1.97E+01 [m2]  Direction: z
Pathway ::
Direct Ingestion Rate:  1.340E-06 [1/hr]
Fraction released to air: 7.000E-02
Removable fraction:    8.348E-02
Time to Remove:       1.824E+04 [day]
  
```

| Contamination:: | Nuclide | Concentration [pCi/m2] |
|-----------------|---------|---------------------------|
| | PU-241 | 6.367E-01 |
| | AM-241 | 1.141E-02 |
| | NP-237 | 1.788E-08 |
| | U-233 | 2.432E-13 |
| | TH-229 | 6.258E-17 |

Source: 2

```

Location:: Room : 1  x:  0.00 y:  2.22  z:  1.76 [m]
Geometry:: Type: Area      Area:1.56E+01 [m2]  Direction: x
Pathway ::
Direct Ingestion Rate:  1.340E-06 [1/hr]
Fraction released to air: 7.000E-02
Removable fraction:    8.348E-02
Time to Remove:       1.824E+04 [day]
  
```

| Contamination:: | Nuclide | Concentration [pCi/m2] |
|-----------------|---------|---------------------------|
| | PU-241 | 6.367E-01 |
| | AM-241 | 1.141E-02 |
| | NP-237 | 1.788E-08 |
| | U-233 | 2.432E-13 |
| | TH-229 | 6.258E-17 |

Source: 3

Location:: Room : 1 x: 2.22 y: 4.44 z: 1.76 [m]
Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
Pathway ::
Direct Ingestion Rate: 1.340E-06 [1/hr]
Fraction released to air: 7.000E-02
Removable fraction: 8.348E-02
Time to Remove: 1.824E+04 [day]

| Contamination:: | Nuclide | Concentration [pCi/m2] |
|-----------------|---------|---------------------------|
| | PU-241 | 6.367E-01 |
| | AM-241 | 1.141E-02 |
| | NP-237 | 1.788E-08 |
| | U-233 | 2.432E-13 |
| | TH-229 | 6.258E-17 |

Source: 4

Location:: Room : 1 x: 4.44 y: 2.22 z: 1.76 [m]
Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
Pathway ::
Direct Ingestion Rate: 1.340E-06 [1/hr]
Fraction released to air: 7.000E-02
Removable fraction: 8.348E-02
Time to Remove: 1.824E+04 [day]

| Contamination:: | Nuclide | Concentration [pCi/m2] |
|-----------------|---------|---------------------------|
| | PU-241 | 6.367E-01 |
| | AM-241 | 1.141E-02 |
| | NP-237 | 1.788E-08 |
| | U-233 | 2.432E-13 |
| | TH-229 | 6.258E-17 |

** RESRAD-BUILD Program Output, Version 3.21 12/01/03 12:38:14 Page: 16 **
Title : Yankee Rowe DCGL Pu-241
Input File : C:\Program Files\RESRAD_Family\BUILD\Pu-241-DCGL_Build_nov28.bld
Evaluation Time: 9.00000000 years

Source: 5

Location:: Room : 1 x: 2.22 y: 0.00 z: 1.76 [m]
Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
Pathway ::
Direct Ingestion Rate: 1.340E-06 [1/hr]
Fraction released to air: 7.000E-02
Removable fraction: 8.348E-02
Time to Remove: 1.824E+04 [day]

| Contamination:: | Nuclide | Concentration [pCi/m2] |
|-----------------|---------|---------------------------|
| | PU-241 | 6.367E-01 |
| | AM-241 | 1.141E-02 |
| | NP-237 | 1.788E-08 |
| | U-233 | 2.432E-13 |
| | TH-229 | 6.258E-17 |


```

iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iii          RESRAD-BUILD Input Parameters          iii
iii          iii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
  
```

```

Number of Sources : 5
Number of Receptors: 1
Total Time : 3.652500E+02 days
Fraction Inside : 2.670000E-01
  
```

iiiiiiiiiii Receptor Information iiiiiiiiiii

| Receptor | Room | x [m] | y [m] | z [m] | FracTime | Inhalation [m3/day] | Ingestion (Dust) [m2/hr] |
|----------|------|----------|----------|----------|----------|------------------------|-----------------------------|
| 1 | 1 | 2.220 | 2.220 | 1.000 | 1.000 | 3.36E+01 | 0.00E+00 |

iii Receptor-Source Shielding Relationship iii

| 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 |

íííííííí Building Information íííííííí

Building Air Exchange Rate: 1.52E+00 1/hr

| Height[m] | Air Exchanges [m3/hr] | |
|-------------|-----------------------|------------------|
| Area [m2] | | |
| | ***** | |
| | * | * |
| | * | * |
| | * | <=Q01: 1.05E+02 |
| H1: 3.510 | * Room 1 | * Q10 : 1.05E+02 |
| | * LAMBDA: 1.52E+00 | * |
| Area 19.710 | * | * |
| | * | * |
| | ***** | |

Deposition velocity: 4.79E-04 [m/s] Resuspension Rate: 6.75E-10 [1/s]

iiiiiii Source Information iiiiii

Source: 1

Location:: Room : 1 x: 2.22 y: 2.22 z: 0.00[m]
 Geometry:: Type: Area Area:1.97E+01 [m2] Direction: z
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| SB-125 | 1.000E+00 | 3.650E-06 | 1.390E-05 | 2.360E-03 |

Source: 2

Location:: Room : 1 x: 0.00 y: 2.22 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| SB-125 | 1.000E+00 | 3.650E-06 | 1.390E-05 | 2.360E-03 |

Source: 3

Location:: Room : 1 x: 2.22 y: 4.44 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|--------------------------|--------------------------------------|
| | [pCi/m2] | Ingestion [mrem/pCi] | Inhalation [mrem/pCi] | Submersion [mrem/yr/ (pCi/m3)] |
| SB-125 | 1.000E+00 | 3.650E-06 | 1.390E-05 | 2.360E-03 |

Source: 4

Location:: Room : 1 x: 4.44 y: 2.22 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|--------------------------|--------------------------------------|
| | [pCi/m2] | Ingestion [mrem/pCi] | Inhalation [mrem/pCi] | Submersion [mrem/yr/ (pCi/m3)] |
| SB-125 | 1.000E+00 | 3.650E-06 | 1.390E-05 | 2.360E-03 |

Source: 5

Location:: Room : 1 x: 2.22 y: 0.00 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

Nuclide Concentration Dose Conversion Factor (Library:

| | | Dose Conversion Factor (Library: | | |
|--------|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| SB-125 | 1.000E+00 | 3.650E-06 | 1.390E-05 | 2.360E-03 |

Source: 3

Location:: Room : 1 x: 2.22 y: 4.44 z: 1.76 [m]
Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
Pathway ::
Direct Ingestion Rate: 1.340E-06 [1/hr]
Fraction released to air: 7.000E-02
Removable fraction: 1.000E-01
Time to Remove: 5.278E+04 [day]

| Contamination:: | Nuclide | Concentration |
|-----------------|---------|---------------|
| | | [pCi/m2] |
| | SB-125 | 1.000E+00 |

Source: 4

Location:: Room : 1 x: 4.44 y: 2.22 z: 1.76 [m]
Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
Pathway ::
Direct Ingestion Rate: 1.340E-06 [1/hr]
Fraction released to air: 7.000E-02
Removable fraction: 1.000E-01
Time to Remove: 5.278E+04 [day]

| Contamination:: | Nuclide | Concentration |
|-----------------|---------|---------------|
| | | [pCi/m2] |
| | SB-125 | 1.000E+00 |

Source: 5

Location:: Room : 1 x: 2.22 y: 0.00 z: 1.76 [m]
Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
Pathway ::
Direct Ingestion Rate: 1.340E-06 [1/hr]
Fraction released to air: 7.000E-02
Removable fraction: 1.000E-01
Time to Remove: 5.278E+04 [day]

| Contamination:: | Nuclide | Concentration |
|-----------------|---------|---------------|
| | | [pCi/m2] |
| | SB-125 | 1.000E+00 |


```

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iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iii          RESRAD-BUILD Input Parameters          iii
iii          iii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
  
```

```

Number of Sources : 5
Number of Receptors: 1
Total Time : 3.652500E+02 days
Fraction Inside : 2.670000E-01
  
```

iiiiiiiiiii Receptor Information iiiiiiiiiii

| Receptor | Room | x [m] | y [m] | z [m] | FracTime | Inhalation [m3/day] | Ingestion (Dust) [m2/hr] |
|----------|------|----------|----------|----------|----------|------------------------|-----------------------------|
| 1 | 1 | 2.220 | 2.220 | 1.000 | 1.000 | 3.36E+01 | 0.00E+00 |

iii Receptor-Source Shielding Relationship iii

| 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 |

íííííííí Building Information íííííííí

Building Air Exchange Rate: 1.52E+00 1/hr

| Height[m] | Air Exchanges [m3/hr] | |
|-------------|-----------------------|------------------|
| Area [m2] | | |
| | ***** | |
| | * | * |
| | * | * |
| | * | <=Q01: 1.05E+02 |
| H1: 3.510 | * Room 1 | * Q10 : 1.05E+02 |
| | * LAMBDA: 1.52E+00 | * |
| Area 19.710 | * | * |
| | * | * |
| | ***** | |

Deposition velocity: 1.51E-05 [m/s] Resuspension Rate: 1.02E-06 [1/s]

iiiiiii Source Information iiiiii

Source: 1

Location:: Room : 1 x: 2.22 y: 2.22 z: 0.00[m]
 Geometry:: Type: Area Area:1.97E+01 [m2] Direction: z
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 1.824E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| SR-90 | 1.000E+00 | 1.530E-04 | 1.310E-03 | 2.310E-05 |

Source: 2

Location:: Room : 1 x: 0.00 y: 2.22 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 1.824E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| SR-90 | 1.000E+00 | 1.530E-04 | 1.310E-03 | 2.310E-05 |

Source: 3

Location:: Room : 1 x: 2.22 y: 4.44 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 1.824E+04 [day]

Contamination::

| Nuclide Concentration | Dose Conversion Factor (Library: | | |
|-----------------------|----------------------------------|------------|------------------------|
| | Ingestion | Inhalation | Submersion |
| [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| SR-90 1.000E+00 | 1.530E-04 | 1.310E-03 | 2.310E-05 |

Source: 4

Location:: Room : 1 x: 4.44 y: 2.22 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 1.824E+04 [day]

Contamination::

| Nuclide Concentration | Dose Conversion Factor (Library: | | |
|-----------------------|----------------------------------|------------|------------------------|
| | Ingestion | Inhalation | Submersion |
| [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| SR-90 1.000E+00 | 1.530E-04 | 1.310E-03 | 2.310E-05 |

Source: 5

Location:: Room : 1 x: 2.22 y: 0.00 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 1.824E+04 [day]

Contamination::

Nuclide Concentration Dose Conversion Factor (Library:

| | | Dose Conversion Factor (Library: | | |
|-------|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| SR-90 | 1.000E+00 | 1.530E-04 | 1.310E-03 | 2.310E-05 |

```

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

iiiiiiii Source Information iiiiiiiii

Source: 1
 Location:: Room : 1 x: 2.22 y: 2.22 z: 0.00 [m]
 Geometry:: Type: Area Area:1.97E+01 [m2] Direction: z
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 1.824E+04 [day]

| Contamination:: | Nuclide | Concentration [pCi/m2] |
|-----------------|---------|---------------------------|
| | SR-90 | 1.000E+00 |

Source: 2
 Location:: Room : 1 x: 0.00 y: 2.22 z: 1.76 [m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 1.824E+04 [day]

| Contamination:: | Nuclide | Concentration [pCi/m2] |
|-----------------|---------|---------------------------|
| | SR-90 | 1.000E+00 |

Source: 3

Location:: Room : 1 x: 2.22 y: 4.44 z: 1.76 [m]
Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
Pathway ::
Direct Ingestion Rate: 1.340E-06 [1/hr]
Fraction released to air: 7.000E-02
Removable fraction: 1.000E-01
Time to Remove: 1.824E+04 [day]

| Contamination:: | Nuclide | Concentration |
|-----------------|---------|---------------|
| | | [pCi/m2] |
| | SR-90 | 1.000E+00 |

Source: 4

Location:: Room : 1 x: 4.44 y: 2.22 z: 1.76 [m]
Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
Pathway ::
Direct Ingestion Rate: 1.340E-06 [1/hr]
Fraction released to air: 7.000E-02
Removable fraction: 1.000E-01
Time to Remove: 1.824E+04 [day]

| Contamination:: | Nuclide | Concentration |
|-----------------|---------|---------------|
| | | [pCi/m2] |
| | SR-90 | 1.000E+00 |

Source: 5

Location:: Room : 1 x: 2.22 y: 0.00 z: 1.76 [m]
Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
Pathway ::
Direct Ingestion Rate: 1.340E-06 [1/hr]
Fraction released to air: 7.000E-02
Removable fraction: 1.000E-01
Time to Remove: 1.824E+04 [day]

| Contamination:: | Nuclide | Concentration |
|-----------------|---------|---------------|
| | | [pCi/m2] |
| | SR-90 | 1.000E+00 |


```

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iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iii                      iii
iii    RESRAD-BUILD Input Parameters    iii
iii                      iii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
  
```

```

Number of Sources : 5
Number of Receptors: 1
Total Time : 3.652500E+02 days
Fraction Inside : 2.670000E-01
  
```

iiiiiiiiiiii Receptor Information iiiiiiiiiiiii

| Receptor | Room | x [m] | y [m] | z [m] | FracTime | Inhalation [m3/day] | Ingestion (Dust) [m2/hr] |
|----------|------|----------|----------|----------|----------|------------------------|-----------------------------|
| 1 | 1 | 2.220 | 2.220 | 1.000 | 1.000 | 3.36E+01 | 0.00E+00 |

iii Receptor-Source Shielding Relationship iii

| 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 |

íííííííííí Building Information íííííííííí

Building Air Exchange Rate: 1.52E+00 1/hr

| Height[m] | Air Exchanges [m3/hr] | |
|-------------|-----------------------|------------------|
| Area [m2] | | |
| | ***** | |
| | * | * |
| | * | * |
| | * | <=Q01: 1.05E+02 |
| H1: 3.510 | * Room 1 | * Q10 : 1.05E+02 |
| | * LAMBDA: 1.52E+00 | * |
| Area 19.710 | * | * |
| | * | * |
| | ***** | |

Deposition velocity: 8.53E-05 [m/s] Resuspension Rate: 1.83E-08 [1/s]

iiiiiii Source Information iiiiii

Source: 1

Location:: Room : 1 x: 2.22 y: 2.22 z: 0.00[m]
 Geometry:: Type: Area Area:1.97E+01 [m2] Direction: z
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| TC-99 | 1.000E+00 | 1.460E-06 | 8.330E-06 | 1.900E-07 |

Source: 2

Location:: Room : 1 x: 0.00 y: 2.22 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| TC-99 | 1.000E+00 | 1.460E-06 | 8.330E-06 | 1.900E-07 |

Source: 3

Location:: Room : 1 x: 2.22 y: 4.44 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|--------------------------|--------------------------------------|
| | [pCi/m2] | Ingestion [mrem/pCi] | Inhalation [mrem/pCi] | Submersion [mrem/yr/ (pCi/m3)] |
| TC-99 | 1.000E+00 | 1.460E-06 | 8.330E-06 | 1.900E-07 |

Source: 4

Location:: Room : 1 x: 4.44 y: 2.22 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: x
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

| Nuclide Concentration | | Dose Conversion Factor (Library: | | |
|-----------------------|-----------|----------------------------------|--------------------------|--------------------------------------|
| | [pCi/m2] | Ingestion [mrem/pCi] | Inhalation [mrem/pCi] | Submersion [mrem/yr/ (pCi/m3)] |
| TC-99 | 1.000E+00 | 1.460E-06 | 8.330E-06 | 1.900E-07 |

Source: 5

Location:: Room : 1 x: 2.22 y: 0.00 z: 1.76[m]
 Geometry:: Type: Area Area:1.56E+01 [m2] Direction: y
 Pathway ::
 Direct Ingestion Rate: 1.340E-06 [1/hr]
 Fraction released to air: 7.000E-02
 Removable fraction: 1.000E-01
 Time to Remove: 5.278E+04 [day]

Contamination::

Nuclide Concentration Dose Conversion Factor (Library:

| | | Dose Conversion Factor (Library: | | |
|-------|-----------|----------------------------------|------------|------------------------|
| | | Ingestion | Inhalation | Submersion |
| | [pCi/m2] | [mrem/pCi] | [mrem/pCi] | [mrem/yr/ (pCi/m3)] |
| TC-99 | 1.000E+00 | 1.460E-06 | 8.330E-06 | 1.900E-07 |