

CAP88-PC Version 4.1.1 Testing Report Draft Revision 0

Submitted to:

**Radiation Protection Division
Office of Radiation and Indoor Air
U.S. Environmental Protection Agency
1200 Pennsylvania Ave., NW (6608J)
Washington, D.C. 20460**

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CAP88-PC Version 4.1.1



Testing Report
Draft Revision 0
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1 INTRODUCTION AND OVERALL CONCLUSION

This report documents the results of the testing performed to verify proper implementation of the updates made to CAP88-PC Version 4.1 to create Version 4.1.1. Note that this report is intended as an adjunct to the CAP88-PC Version 4.1 Testing Report, and as such is not a stand-alone report verifying the calculations in CAP88-PC V4.1.

The modifications made to Version 4.1 to create Version 4.1.1 were:

1. Allow CAP88-PC to access user data files (datasets, population, wind) stored on network remote locations;
2. Fix a bug in the automatic update of Version 4.0 input datasets to the Version 4.1 format whereby datasets that included isotopes having no internal dose coefficient in Version 4.0 now have an internal dose coefficient in the newer database used in Version 4.1 (Version 4.1.1 uses the Version 4.1 dataset format);
3. Fix an inconsistency discovered in the isotope information that caused the code to crash when Te-129m was included either as a released isotope or in the progeny chain of one of the released isotopes.

No changes were made to the transport and dose models or to the reporting functions in CAP88-PC as part of the Version 4.1.1 update. The testing performed on Version 4.1.1 verified the following requirements for this update:

1. Show that Version 4.1.1 can read/write data from remote file locations using the Universal Naming Convention format for those locations (e.g., \\Server\folder);
2. Generate valid Version 4.1 input datasets from Version 4.0 input datasets that include isotopes having no internal dose coefficient in the Version 4.0 database. To be valid, the generated Version 4.1 datasets should replace the 'b' in the Chemical Form and Type fields with the default Chemical Form and Type for the isotope, and also replace the 0.000 in the Size field with 1.000.
3. Read the Te-129m data and run the case using as input the dataset containing Te-129m without crashing.
4. Run the seven existing Version 4.1 test cases used in the Version 4.1 test report with the calculated dose results matching within 1%.

Nine test cases were run to verify successful implementation of the modifications. The first was a test case to verify the successful read of the Te-129m data, and successfully to complete running Version 4.1.1 using the input dataset having Te-129m as a release isotope (requirement 3 above). The second was loading a Version 4.0 dataset having isotopes without internal dose coefficients (as designated by the 'b' in the Chemical Form and Type fields), convert that dataset to a Version 4.1 dataset, and complete without crashing running the case with that Version 4.1 dataset (requirement 2 above). The other seven cases loaded the Version 4.1 test input datasets and associated population, and wind files by reading from a remote server location, ran the cases in Version 4.1.1 locally, and generated results written and stored on the remote server that were identical to dose results produced by the tests run for Version 4.1.

All tests were successful.

2 RESULTS

This report builds on the Version 4.1 test report and is not intended to regenerate the information in that report in the event the results from the seven test runs documented in the Version 4.1 test report show differences less than 1% from that report (in fact there were no differences). The following sections document these results by showing:



- Input file used for the Te-129m case. The highlighted fields show the values for ingestion dose coefficients for the 26 target organs. These values are identical to the values in the dose coefficient database, verifying that the Te129m data is being read correctly.
- Files for the Version 4.0 and converted Version 4.1 datasets highlighting the proper updating of the isotopes;
- Compare files for the V4.1 and V4.1.1 Synopsis reports from the seven test cases showing no differences other than informational and header information.



2.1 Input Dataset Showing Te-129m Fix:

4.1

Te129mtestrun.

Jun 23, 2021 02:26 PM

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TheTester

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a stack

2021

test remote pop/wind location for new cases

after updating location in tools>options

1

\\DEV\Share\CAP88\Population Files\PORTS2000.pop

Adult

100

10

0

0

800	2400	4000	5600	7200	12000	24000	40000	56000	72000	0
-----	------	------	------	------	-------	-------	-------	-------	-------	---

0

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\\DEV\Share\CAP88\Wind Files\93814.WND

100.00

10.00

1000.00

8.00

0

1

1.000e+01

1.000e+00

0

1.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00

1



0.7000 0.3000 0.0000
 0.4000 0.6000 0.0000
 0.4400 0.5600 0.0000
 OH
 2.030e-01
 4.560e-02
 1.700e-02

1
 29
 F
 4

1	Sb-129	Particulate			M	1.0000	1.000e+00
1	Te-129m	Particulate			M	1.0000	1.000e+00
1	Te-129	Particulate			M	1.0000	1.000e+00
1	I-129	Particulate			F	1.0000	1.000e+00

84	93	53	84	493	5263				
Adrenals	UB_Wall	Bone_Sur	Brain	Breasts	St_Wall	SI_Wall	ULI_Wall	LLI_Wall	Kidneys
Liver	Muscle	Ovaries	Pancreas	R_Marrow	Skin	Spleen	Testes	Thymus	Thyroid
GB_Wall	Ht_Wall	Uterus	ET_Reg	Lung	E_50				
esophagus	stomach	colon	liver	lung	bone	skin	breast	ovary	bladder
kidney	thyroid	leukemia	residual	Total					

4	Sb-129	Particulate			M	1.0000	1.584e+04	1.800e-03	1.000e-07
5.480e-05	1.000e-02	1.000e-01	1.000e-03	1.000e-04	1.000e-02	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
2.706e-11	6.024e-11	2.937e-11	3.359e-12	8.262e-12	7.172e-10	1.303e-09	2.897e-09	1.842e-09	4.582e-11
3.530e-11	2.726e-11	1.638e-10	6.248e-11	4.402e-11	1.216e-11	4.248e-11	1.375e-11	7.174e-12	4.171e-12
9.449e-11	1.657e-11	1.021e-10	4.171e-12	1.119e-11	4.272e-10				
1.169e-11	1.351e-11	1.302e-11	5.458e-12	9.971e-12	1.128e-10	2.038e-10	4.436e-10	2.818e-10	1.012e-11
1.247e-11	1.050e-11	2.595e-11	1.498e-11	1.445e-11	5.304e-12	1.198e-11	2.860e-12	1.408e-11	7.842e-12
1.747e-11	1.622e-11	1.659e-11	1.447e-09	7.101e-10	1.901e-10				
5.940e-14	5.920e-14	1.080e-13	7.630e-14	8.040e-14	6.360e-14	5.810e-14	5.980e-14	5.920e-14	6.390e-14
6.450e-14	6.930e-14	5.920e-14	5.730e-14	6.980e-14	1.060e-13	6.470e-14	7.090e-14	6.670e-14	7.280e-14
5.930e-14	6.330e-14	5.660e-14	6.060e-14	7.100e-14	6.830e-14				



1.210e-15	1.300e-15	1.900e-15	1.270e-15	1.390e-15	1.280e-15	1.270e-15	1.280e-15	1.310e-15	1.300e-15
1.290e-15	1.450e-15	1.240e-15	1.190e-15	1.370e-15	5.000e-15	1.290e-15	1.460e-15	1.250e-15	1.360e-15
1.210e-15	1.270e-15	1.250e-15	1.160e-15	1.340e-15	1.390e-15				
1.060e-14	4.100e-12	4.390e-11	7.550e-14	1.720e-13	3.530e-15	1.730e-15	6.370e-14	2.640e-13	1.890e-13
3.060e-14	2.320e-15	3.050e-13	8.310e-13	5.000e-11					
2.300e-14	7.770e-13	8.170e-12	2.680e-14	9.220e-12	1.640e-15	7.630e-16	6.750e-14	5.520e-14	4.690e-14
7.660e-15	3.260e-15	1.090e-13	2.800e-13	1.880e-11					
6.970e-17	2.570e-16	6.150e-16	9.780e-17	6.940e-16	1.030e-17	1.060e-17	3.880e-16	8.420e-17	1.430e-16
3.320e-17	2.320e-17	3.920e-16	9.230e-16	3.740e-15					
1.330e-18	5.170e-18	1.330e-17	1.960e-18	1.310e-17	1.800e-19	4.990e-19	6.720e-18	1.760e-18	3.140e-18
6.760e-19	4.330e-19	7.690e-18	1.910e-17	7.510e-17					
Te-129m	Particulate				M	1.0000	2.903e+06	1.800e-03	1.000e-07
5.480e-05	1.000e-01	3.000e-01	7.000e-03	5.000e-04	1.000e-01	1.300e+00			
2.262e-01	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
2.523e-10	6.991e-10	1.225e-08	2.305e-10	2.188e-10	7.021e-10	1.370e-09	8.045e-09	2.289e-08	3.458e-09
2.314e-10	2.340e-10	3.106e-10	2.409e-10	5.292e-09	2.202e-10	2.342e-10	2.235e-10	2.246e-10	4.589e-09
2.456e-10	2.274e-10	2.560e-10	2.259e-10	2.294e-10	2.981e-09				
8.919e-11	1.346e-10	2.363e-09	4.694e-11	8.587e-11	1.578e-10	3.145e-10	1.784e-09	5.055e-09	6.726e-10
8.110e-11	6.487e-11	6.323e-11	7.425e-11	1.033e-09	5.061e-11	7.418e-11	4.308e-11	9.179e-11	8.923e-10
5.965e-11	1.229e-10	5.103e-11	2.812e-09	4.081e-08	5.528e-09				
1.210e-15	1.210e-15	2.600e-15	1.560e-15	1.810e-15	1.300e-15	1.160e-15	1.200e-15	1.180e-15	1.330e-15
1.320e-15	1.480e-15	1.140e-15	1.130e-15	1.420e-15	1.570e-14	1.320e-15	1.560e-15	1.370e-15	1.560e-15
1.180e-15	1.280e-15	1.120e-15	1.200e-15	1.470e-15	1.570e-15				
2.760e-17	3.040e-17	6.420e-17	2.840e-17	4.280e-17	3.010e-17	2.780e-17	2.860e-17	2.880e-17	3.210e-17
3.010e-17	3.930e-17	2.820e-17	2.570e-17	3.180e-17	2.420e-15	3.010e-17	4.290e-17	3.100e-17	3.650e-17
2.690e-17	2.910e-17	2.740e-17	2.490e-17	3.220e-17	5.830e-17				
3.360e-13	4.130e-12	2.670e-10	4.840e-13	3.450e-12	1.450e-12	3.350e-14	1.600e-12	5.340e-13	2.100e-12
2.340e-12	3.080e-12	4.630e-11	5.600e-12	3.390e-10					
1.300e-13	9.990e-13	6.750e-11	1.580e-13	4.980e-10	2.900e-13	7.200e-15	5.600e-13	1.240e-13	4.220e-13
4.610e-13	5.630e-13	8.870e-12	1.570e-12	5.790e-10					
1.380e-18	5.250e-18	1.230e-17	2.000e-18	1.440e-17	2.470e-19	1.570e-18	8.740e-18	1.620e-18	2.930e-18
6.920e-19	4.970e-19	7.970e-18	1.900e-17	7.850e-17					
2.860e-20	1.220e-19	2.960e-19	4.560e-20	3.150e-19	6.100e-21	2.410e-19	2.070e-19	4.010e-20	7.350e-20
1.670e-20	1.160e-20	1.780e-19	4.590e-19	2.040e-18					
Te-129	Particulate				M	1.0000	4.176e+03	1.800e-03	1.000e-07
5.480e-05	1.000e-01	3.000e-01	7.000e-03	5.000e-04	1.000e-01	1.300e+00			



7.738e-01	6.300e-01	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
9.330e-13	2.778e-12	8.592e-13	5.347e-13	6.138e-13	3.986e-10	2.600e-10	1.782e-10	3.495e-11	1.230e-12	
8.736e-13	8.109e-13	1.979e-12	1.990e-12	9.625e-13	6.241e-13	1.420e-12	5.950e-13	5.973e-13	7.491e-13	
1.537e-12	8.092e-13	1.591e-12	5.459e-13	6.756e-13	6.299e-11					
3.016e-13	8.074e-13	3.165e-13	2.217e-13	2.713e-13	5.073e-11	3.609e-11	2.483e-11	4.945e-12	3.110e-13	
2.842e-13	2.852e-13	3.696e-13	4.137e-13	3.091e-13	2.109e-13	3.396e-13	1.743e-13	3.236e-13	3.120e-13	
3.289e-13	3.666e-13	3.157e-13	2.829e-10	1.143e-10	2.907e-11					
2.290e-15	2.300e-15	5.110e-15	2.930e-15	3.270e-15	2.450e-15	2.180e-15	2.270e-15	2.220e-15	2.480e-15	
2.480e-15	2.730e-15	2.090e-15	2.150e-15	2.660e-15	3.580e-14	2.500e-15	2.840e-15	2.580e-15	2.880e-15	
2.240e-15	2.420e-15	2.120e-15	2.260e-15	2.770e-15	2.990e-15					
5.040e-17	5.530e-17	1.010e-16	5.300e-17	6.660e-17	5.420e-17	5.160e-17	5.300e-17	5.350e-17	5.570e-17	
5.430e-17	6.520e-17	5.500e-17	4.860e-17	5.780e-17	5.730e-15	5.440e-17	6.820e-17	5.550e-17	6.180e-17	
5.040e-17	5.300e-17	5.140e-17	4.740e-17	5.780e-17	1.160e-16					
9.110e-16	2.330e-12	2.150e-12	1.910e-15	1.050e-14	1.090e-16	9.620e-17	4.680e-15	3.330e-15	8.440e-15	
8.570e-16	4.310e-16	7.290e-15	2.750e-14	4.550e-12						
5.500e-16	3.590e-13	3.640e-13	6.220e-16	1.520e-12	4.190e-17	3.200e-17	2.020e-15	7.720e-16	2.600e-15	
2.330e-16	1.610e-16	2.450e-15	7.750e-15	2.260e-12						
2.600e-18	9.890e-18	2.320e-17	3.760e-18	2.710e-17	4.850e-19	3.570e-18	1.580e-17	2.970e-18	5.560e-18	
1.290e-18	9.170e-19	1.490e-17	3.560e-17	1.480e-16						
5.450e-20	2.190e-19	5.490e-19	8.230e-20	5.650e-19	9.590e-21	5.720e-19	3.220e-19	7.820e-20	1.340e-19	
2.900e-20	1.970e-20	3.240e-19	8.150e-19	3.770e-18						
I-129	Particulate				F	1.0000	4.955e+14	3.500e-02	1.000e-07	
5.480e-05	1.000e+00	1.000e+00	4.000e-02	1.000e-02	2.000e-02	1.000e-01				
0.000e+00	3.700e-01	1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
1.259e-10	4.395e-10	4.053e-10	1.455e-10	1.165e-10	2.037e-10	1.289e-10	2.302e-10	4.405e-10	1.235e-10	
1.250e-10	3.059e-10	1.309e-10	1.275e-10	1.431e-10	1.444e-10	1.257e-10	1.188e-10	1.750e-10	2.159e-06	
1.218e-10	1.214e-10	1.285e-10	1.454e-10	1.567e-10	1.081e-07					
3.669e-11	1.281e-10	1.188e-10	4.247e-11	3.398e-11	4.110e-11	3.701e-11	6.433e-11	1.206e-10	3.599e-11	
3.644e-11	8.966e-11	3.801e-11	3.682e-11	4.180e-11	4.219e-11	3.651e-11	3.464e-11	5.118e-11	6.296e-07	
3.546e-11	3.540e-11	3.743e-11	5.911e-10	5.275e-11	3.153e-08					
1.130e-16	1.600e-16	1.110e-15	1.590e-16	6.750e-16	1.670e-16	7.910e-17	1.030e-16	7.820e-17	2.340e-16	
1.660e-16	3.550e-16	5.180e-17	5.720e-17	1.660e-16	1.150e-15	1.550e-16	4.890e-16	2.430e-16	3.910e-16	
9.320e-17	1.340e-16	6.590e-17	5.580e-17	2.160e-16	2.860e-16					



8.850e-18 1.290e-17 8.020e-17 7.330e-18 3.900e-17 1.250e-17 6.460e-18 8.240e-18 6.630e-18 1.750e-17
 1.240e-17 2.690e-17 4.850e-18 4.710e-18 1.080e-17 5.900e-17 1.200e-17 3.600e-17 1.610e-17 2.310e-17
 7.110e-18 9.830e-18 5.780e-18 3.220e-18 1.500e-17 1.990e-17
 2.590e-13 9.440e-13 4.570e-12 1.940e-13 1.500e-12 3.810e-14 1.350e-14 4.720e-13 1.640e-13 1.210e-12
 6.580e-14 5.300e-10 8.120e-13 2.770e-12 5.430e-10
 8.470e-14 1.880e-13 1.290e-12 6.220e-14 5.900e-13 1.260e-14 4.290e-15 1.580e-13 5.770e-14 3.870e-13
 2.100e-14 1.670e-10 2.650e-13 8.570e-13 1.710e-10
 6.420e-20 6.740e-19 9.530e-19 2.520e-19 2.110e-18 1.050e-19 1.150e-19 3.260e-18 7.370e-20 3.870e-19
 1.220e-19 1.240e-19 9.320e-19 2.610e-18 1.180e-17
 3.700e-21 5.050e-20 7.790e-20 1.880e-20 1.470e-19 7.620e-21 5.890e-21 1.880e-19 6.900e-21 3.120e-20
 9.100e-21 7.360e-21 6.060e-20 2.010e-19 8.150e-19

3

Te-129m	Particulate				M	1.0000	2.903e+06	1.800e-03	1.000e-07
5.480e-05	1.000e-01	3.000e-01	7.000e-03	5.000e-04	1.000e-01	1.300e+00			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
2.523e-10	6.991e-10	1.225e-08	2.305e-10	2.188e-10	7.021e-10	1.370e-09	8.045e-09	2.289e-08	3.458e-09
2.314e-10	2.340e-10	3.106e-10	2.409e-10	5.292e-09	2.202e-10	2.342e-10	2.235e-10	2.246e-10	4.589e-09
2.456e-10	2.274e-10	2.560e-10	2.259e-10	2.294e-10	2.981e-09				
8.919e-11	1.346e-10	2.363e-09	4.694e-11	8.587e-11	1.578e-10	3.145e-10	1.784e-09	5.055e-09	6.726e-10
8.110e-11	6.487e-11	6.323e-11	7.425e-11	1.033e-09	5.061e-11	7.418e-11	4.308e-11	9.179e-11	8.923e-10
5.965e-11	1.229e-10	5.103e-11	2.812e-09	4.081e-08	5.528e-09				
1.210e-15	1.210e-15	2.600e-15	1.560e-15	1.810e-15	1.300e-15	1.160e-15	1.200e-15	1.180e-15	1.330e-15
1.320e-15	1.480e-15	1.140e-15	1.130e-15	1.420e-15	1.570e-14	1.320e-15	1.560e-15	1.370e-15	1.560e-15
1.180e-15	1.280e-15	1.120e-15	1.200e-15	1.470e-15	1.570e-15				
2.760e-17	3.040e-17	6.420e-17	2.840e-17	4.280e-17	3.010e-17	2.780e-17	2.860e-17	2.880e-17	3.210e-17
3.010e-17	3.930e-17	2.820e-17	2.570e-17	3.180e-17	2.420e-15	3.010e-17	4.290e-17	3.100e-17	3.650e-17
2.690e-17	2.910e-17	2.740e-17	2.490e-17	3.220e-17	5.830e-17				
3.360e-13	4.130e-12	2.670e-10	4.840e-13	3.450e-12	1.450e-12	3.350e-14	1.600e-12	5.340e-13	2.100e-12
2.340e-12	3.080e-12	4.630e-11	5.600e-12	3.390e-10					
1.300e-13	9.990e-13	6.750e-11	1.580e-13	4.980e-10	2.900e-13	7.200e-15	5.600e-13	1.240e-13	4.220e-13
4.610e-13	5.630e-13	8.870e-12	1.570e-12	5.790e-10					
1.380e-18	5.250e-18	1.230e-17	2.000e-18	1.440e-17	2.470e-19	1.570e-18	8.740e-18	1.620e-18	2.930e-18
6.920e-19	4.970e-19	7.970e-18	1.900e-17	7.850e-17					
2.860e-20	1.220e-19	2.960e-19	4.560e-20	3.150e-19	6.100e-21	2.410e-19	2.070e-19	4.010e-20	7.350e-20
1.670e-20	1.160e-20	1.780e-19	4.590e-19	2.040e-18					



Te-129	Particulate					M	1.0000	4.176e+03	1.800e-03	1.000e-07
5.480e-05	1.000e-01	3.000e-01	7.000e-03	5.000e-04	1.000e-01	1.300e+00				
6.300e-01	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
9.330e-13	2.778e-12	8.592e-13	5.347e-13	6.138e-13	3.986e-10	2.600e-10	1.782e-10	3.495e-11	1.230e-12	
8.736e-13	8.109e-13	1.979e-12	1.990e-12	9.625e-13	6.241e-13	1.420e-12	5.950e-13	5.973e-13	7.491e-13	
1.537e-12	8.092e-13	1.591e-12	5.459e-13	6.756e-13	6.299e-11					
3.016e-13	8.074e-13	3.165e-13	2.217e-13	2.713e-13	5.073e-11	3.609e-11	2.483e-11	4.945e-12	3.110e-13	
2.842e-13	2.852e-13	3.696e-13	4.137e-13	3.091e-13	2.109e-13	3.396e-13	1.743e-13	3.236e-13	3.120e-13	
3.289e-13	3.666e-13	3.157e-13	2.829e-10	1.143e-10	2.907e-11					
2.290e-15	2.300e-15	5.110e-15	2.930e-15	3.270e-15	2.450e-15	2.180e-15	2.270e-15	2.220e-15	2.480e-15	
2.480e-15	2.730e-15	2.090e-15	2.150e-15	2.660e-15	3.580e-14	2.500e-15	2.840e-15	2.580e-15	2.880e-15	
2.240e-15	2.420e-15	2.120e-15	2.260e-15	2.770e-15	2.990e-15					
5.040e-17	5.530e-17	1.010e-16	5.300e-17	6.660e-17	5.420e-17	5.160e-17	5.300e-17	5.350e-17	5.570e-17	
5.430e-17	6.520e-17	5.500e-17	4.860e-17	5.780e-17	5.730e-15	5.440e-17	6.820e-17	5.550e-17	6.180e-17	
5.040e-17	5.300e-17	5.140e-17	4.740e-17	5.780e-17	1.160e-16					
9.110e-16	2.330e-12	2.150e-12	1.910e-15	1.050e-14	1.090e-16	9.620e-17	4.680e-15	3.330e-15	8.440e-15	
8.570e-16	4.310e-16	7.290e-15	2.750e-14	4.550e-12						
5.500e-16	3.590e-13	3.640e-13	6.220e-16	1.520e-12	4.190e-17	3.200e-17	2.020e-15	7.720e-16	2.600e-15	
2.330e-16	1.610e-16	2.450e-15	7.750e-15	2.260e-12						
2.600e-18	9.890e-18	2.320e-17	3.760e-18	2.710e-17	4.850e-19	3.570e-18	1.580e-17	2.970e-18	5.560e-18	
1.290e-18	9.170e-19	1.490e-17	3.560e-17	1.480e-16						
5.450e-20	2.190e-19	5.490e-19	8.230e-20	5.650e-19	9.590e-21	5.720e-19	3.220e-19	7.820e-20	1.340e-19	
2.900e-20	1.970e-20	3.240e-19	8.150e-19	3.770e-18						
I-129	Particulate					F	1.0000	4.955e+14	3.500e-02	1.000e-07
5.480e-05	1.000e+00	1.000e+00	4.000e-02	1.000e-02	2.000e-02	1.000e-01				
3.700e-01	1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
1.259e-10	4.395e-10	4.053e-10	1.455e-10	1.165e-10	2.037e-10	1.289e-10	2.302e-10	4.405e-10	1.235e-10	
1.250e-10	3.059e-10	1.309e-10	1.275e-10	1.431e-10	1.444e-10	1.257e-10	1.188e-10	1.750e-10	2.159e-06	
1.218e-10	1.214e-10	1.285e-10	1.454e-10	1.567e-10	1.081e-07					
3.669e-11	1.281e-10	1.188e-10	4.247e-11	3.398e-11	4.110e-11	3.701e-11	6.433e-11	1.206e-10	3.599e-11	
3.644e-11	8.966e-11	3.801e-11	3.682e-11	4.180e-11	4.219e-11	3.651e-11	3.464e-11	5.118e-11	6.296e-07	
3.546e-11	3.540e-11	3.743e-11	5.911e-10	5.275e-11	3.153e-08					



1.130e-16 1.600e-16 1.110e-15 1.590e-16 6.750e-16 1.670e-16 7.910e-17 1.030e-16 7.820e-17 2.340e-16
 1.660e-16 3.550e-16 5.180e-17 5.720e-17 1.660e-16 1.150e-15 1.550e-16 4.890e-16 2.430e-16 3.910e-16
 9.320e-17 1.340e-16 6.590e-17 5.580e-17 2.160e-16 2.860e-16
 8.850e-18 1.290e-17 8.020e-17 7.330e-18 3.900e-17 1.250e-17 6.460e-18 8.240e-18 6.630e-18 1.750e-17
 1.240e-17 2.690e-17 4.850e-18 4.710e-18 1.080e-17 5.900e-17 1.200e-17 3.600e-17 1.610e-17 2.310e-17
 7.110e-18 9.830e-18 5.780e-18 3.220e-18 1.500e-17 1.990e-17
 2.590e-13 9.440e-13 4.570e-12 1.940e-13 1.500e-12 3.810e-14 1.350e-14 4.720e-13 1.640e-13 1.210e-12
 6.580e-14 5.300e-10 8.120e-13 2.770e-12 5.430e-10
 8.470e-14 1.880e-13 1.290e-12 6.220e-14 5.900e-13 1.260e-14 4.290e-15 1.580e-13 5.770e-14 3.870e-13
 2.100e-14 1.670e-10 2.650e-13 8.570e-13 1.710e-10
 6.420e-20 6.740e-19 9.530e-19 2.520e-19 2.110e-18 1.050e-19 1.150e-19 3.260e-18 7.370e-20 3.870e-19
 1.220e-19 1.240e-19 9.320e-19 2.610e-18 1.180e-17
 3.700e-21 5.050e-20 7.790e-20 1.880e-20 1.470e-19 7.620e-21 5.890e-21 1.880e-19 6.900e-21 3.120e-20
 9.100e-21 7.360e-21 6.060e-20 2.010e-19 8.150e-19

2

Te-129	Particulate				M	1.0000	4.176e+03	1.800e-03	1.000e-07
5.480e-05	1.000e-01	3.000e-01	7.000e-03	5.000e-04	1.000e-01	1.300e+00			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
9.330e-13	2.778e-12	8.592e-13	5.347e-13	6.138e-13	3.986e-10	2.600e-10	1.782e-10	3.495e-11	1.230e-12
8.736e-13	8.109e-13	1.979e-12	1.990e-12	9.625e-13	6.241e-13	1.420e-12	5.950e-13	5.973e-13	7.491e-13
1.537e-12	8.092e-13	1.591e-12	5.459e-13	6.756e-13	6.299e-11				
3.016e-13	8.074e-13	3.165e-13	2.217e-13	2.713e-13	5.073e-11	3.609e-11	2.483e-11	4.945e-12	3.110e-13
2.842e-13	2.852e-13	3.696e-13	4.137e-13	3.091e-13	2.109e-13	3.396e-13	1.743e-13	3.236e-13	3.120e-13
3.289e-13	3.666e-13	3.157e-13	2.829e-10	1.143e-10	2.907e-11				
2.290e-15	2.300e-15	5.110e-15	2.930e-15	3.270e-15	2.450e-15	2.180e-15	2.270e-15	2.220e-15	2.480e-15
2.480e-15	2.730e-15	2.090e-15	2.150e-15	2.660e-15	3.580e-14	2.500e-15	2.840e-15	2.580e-15	2.880e-15
2.240e-15	2.420e-15	2.120e-15	2.260e-15	2.770e-15	2.990e-15				
5.040e-17	5.530e-17	1.010e-16	5.300e-17	6.660e-17	5.420e-17	5.160e-17	5.300e-17	5.350e-17	5.570e-17
5.430e-17	6.520e-17	5.500e-17	4.860e-17	5.780e-17	5.730e-15	5.440e-17	6.820e-17	5.550e-17	6.180e-17
5.040e-17	5.300e-17	5.140e-17	4.740e-17	5.780e-17	1.160e-16				
9.110e-16	2.330e-12	2.150e-12	1.910e-15	1.050e-14	1.090e-16	9.620e-17	4.680e-15	3.330e-15	8.440e-15
8.570e-16	4.310e-16	7.290e-15	2.750e-14	4.550e-12					
5.500e-16	3.590e-13	3.640e-13	6.220e-16	1.520e-12	4.190e-17	3.200e-17	2.020e-15	7.720e-16	2.600e-15
2.330e-16	1.610e-16	2.450e-15	7.750e-15	2.260e-12					
2.600e-18	9.890e-18	2.320e-17	3.760e-18	2.710e-17	4.850e-19	3.570e-18	1.580e-17	2.970e-18	5.560e-18
1.290e-18	9.170e-19	1.490e-17	3.560e-17	1.480e-16					



5.450e-20	2.190e-19	5.490e-19	8.230e-20	5.650e-19	9.590e-21	5.720e-19	3.220e-19	7.820e-20	1.340e-19
2.900e-20	1.970e-20	3.240e-19	8.150e-19	3.770e-18					
I-129	Particulate				F	1.0000	4.955e+14	3.500e-02	1.000e-07
5.480e-05	1.000e+00	1.000e+00	4.000e-02	1.000e-02	2.000e-02	1.000e-01			
1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
1.259e-10	4.395e-10	4.053e-10	1.455e-10	1.165e-10	2.037e-10	1.289e-10	2.302e-10	4.405e-10	1.235e-10
1.250e-10	3.059e-10	1.309e-10	1.275e-10	1.431e-10	1.444e-10	1.257e-10	1.188e-10	1.750e-10	2.159e-06
1.218e-10	1.214e-10	1.285e-10	1.454e-10	1.567e-10	1.081e-07				
3.669e-11	1.281e-10	1.188e-10	4.247e-11	3.398e-11	4.110e-11	3.701e-11	6.433e-11	1.206e-10	3.599e-11
3.644e-11	8.966e-11	3.801e-11	3.682e-11	4.180e-11	4.219e-11	3.651e-11	3.464e-11	5.118e-11	6.296e-07
3.546e-11	3.540e-11	3.743e-11	5.911e-10	5.275e-11	3.153e-08				
1.130e-16	1.600e-16	1.110e-15	1.590e-16	6.750e-16	1.670e-16	7.910e-17	1.030e-16	7.820e-17	2.340e-16
1.660e-16	3.550e-16	5.180e-17	5.720e-17	1.660e-16	1.150e-15	1.550e-16	4.890e-16	2.430e-16	3.910e-16
9.320e-17	1.340e-16	6.590e-17	5.580e-17	2.160e-16	2.860e-16				
8.850e-18	1.290e-17	8.020e-17	7.330e-18	3.900e-17	1.250e-17	6.460e-18	8.240e-18	6.630e-18	1.750e-17
1.240e-17	2.690e-17	4.850e-18	4.710e-18	1.080e-17	5.900e-17	1.200e-17	3.600e-17	1.610e-17	2.310e-17
7.110e-18	9.830e-18	5.780e-18	3.220e-18	1.500e-17	1.990e-17				
2.590e-13	9.440e-13	4.570e-12	1.940e-13	1.500e-12	3.810e-14	1.350e-14	4.720e-13	1.640e-13	1.210e-12
6.580e-14	5.300e-10	8.120e-13	2.770e-12	5.430e-10					
8.470e-14	1.880e-13	1.290e-12	6.220e-14	5.900e-13	1.260e-14	4.290e-15	1.580e-13	5.770e-14	3.870e-13
2.100e-14	1.670e-10	2.650e-13	8.570e-13	1.710e-10					
6.420e-20	6.740e-19	9.530e-19	2.520e-19	2.110e-18	1.050e-19	1.150e-19	3.260e-18	7.370e-20	3.870e-19
1.220e-19	1.240e-19	9.320e-19	2.610e-18	1.180e-17					
3.700e-21	5.050e-20	7.790e-20	1.880e-20	1.470e-19	7.620e-21	5.890e-21	1.880e-19	6.900e-21	3.120e-20
9.100e-21	7.360e-21	6.060e-20	2.010e-19	8.150e-19					
1									
I-129	Particulate				F	1.0000	4.955e+14	3.500e-02	1.000e-07
5.480e-05	1.000e+00	1.000e+00	4.000e-02	1.000e-02	2.000e-02	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
1.259e-10	4.395e-10	4.053e-10	1.455e-10	1.165e-10	2.037e-10	1.289e-10	2.302e-10	4.405e-10	1.235e-10
1.250e-10	3.059e-10	1.309e-10	1.275e-10	1.431e-10	1.444e-10	1.257e-10	1.188e-10	1.750e-10	2.159e-06
1.218e-10	1.214e-10	1.285e-10	1.454e-10	1.567e-10	1.081e-07				



3.669e-11	1.281e-10	1.188e-10	4.247e-11	3.398e-11	4.110e-11	3.701e-11	6.433e-11	1.206e-10	3.599e-11
3.644e-11	8.966e-11	3.801e-11	3.682e-11	4.180e-11	4.219e-11	3.651e-11	3.464e-11	5.118e-11	6.296e-07
3.546e-11	3.540e-11	3.743e-11	5.911e-10	5.275e-11	3.153e-08				
1.130e-16	1.600e-16	1.110e-15	1.590e-16	6.750e-16	1.670e-16	7.910e-17	1.030e-16	7.820e-17	2.340e-16
1.660e-16	3.550e-16	5.180e-17	5.720e-17	1.660e-16	1.150e-15	1.550e-16	4.890e-16	2.430e-16	3.910e-16
9.320e-17	1.340e-16	6.590e-17	5.580e-17	2.160e-16	2.860e-16				
8.850e-18	1.290e-17	8.020e-17	7.330e-18	3.900e-17	1.250e-17	6.460e-18	8.240e-18	6.630e-18	1.750e-17
1.240e-17	2.690e-17	4.850e-18	4.710e-18	1.080e-17	5.900e-17	1.200e-17	3.600e-17	1.610e-17	2.310e-17
7.110e-18	9.830e-18	5.780e-18	3.220e-18	1.500e-17	1.990e-17				
2.590e-13	9.440e-13	4.570e-12	1.940e-13	1.500e-12	3.810e-14	1.350e-14	4.720e-13	1.640e-13	1.210e-12
6.580e-14	5.300e-10	8.120e-13	2.770e-12	5.430e-10					
8.470e-14	1.880e-13	1.290e-12	6.220e-14	5.900e-13	1.260e-14	4.290e-15	1.580e-13	5.770e-14	3.870e-13
2.100e-14	1.670e-10	2.650e-13	8.570e-13	1.710e-10					
6.420e-20	6.740e-19	9.530e-19	2.520e-19	2.110e-18	1.050e-19	1.150e-19	3.260e-18	7.370e-20	3.870e-19
1.220e-19	1.240e-19	9.320e-19	2.610e-18	1.180e-17					
3.700e-21	5.050e-20	7.790e-20	1.880e-20	1.470e-19	7.620e-21	5.890e-21	1.880e-19	6.900e-21	3.120e-20
9.100e-21	7.360e-21	6.060e-20	2.010e-19	8.150e-19					



2.2 Input Dataset Files Showing Proper Conversion of Version 4.0 Datasets

2.2.1 Version 4.0 Dataset with 'b' fields for isotopes with no internal dose coefficient

```

4.0
XXXXXXXX.
Jan 15, 2021 02:21 PM
Jan 15, 2021 02:21 PM
XXXXXX
XXXXXX

XXXXXX
XXXXXX
Test
2021
Test Conversion
Test Conversion
0

Adult
100
11
0
0
100      150      200      250      300      350      400      450      500      600
1000     0         0         0         0         0         0         0         0         0
T        T         T         T
C:\Users\rwood\Documents\CAP88\Wind Files\24229.wnd
23.60
11.33
1000.00
8.00
0
1
1.500e+01
9.600e-01
3
0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
2

```



1.0000 0.0000 0.0000
 1.0000 0.0000 0.0000
 1.0000 0.0000 0.0000

WA
 5.620e-02
 1.500e-02
 5.200e-02

1
 29
 F
 27

0	Cf-251	Particulate	M	1.0000	1.000e-05
0	Es-255	B	B	0.0000	1.000e-05
0	Eu-150	Particulate	M	1.0000	1.000e-05
0	Ir-193m	B	B	0.0000	1.000e-05
0	Nb-91	B	B	0.0000	1.000e-05
0	Nb-91m	B	B	0.0000	1.000e-05
0	Nb-92	B	B	0.0000	1.000e-05
0	Nb-92m	B	B	0.0000	1.000e-05
0	Os-186	B	B	0.0000	1.000e-05
0	Po-209	B	B	0.0000	1.000e-05
0	Re-183	B	B	0.0000	1.000e-05
0	Sb-126	Particulate	M	1.0000	1.000e-05
0	Ti-44	Particulate	M	1.0000	1.000e-05
0	Tm-170	Particulate	M	1.0000	1.000e-05
0	Tm-171	Particulate	M	1.0000	1.000e-05
0	Bi-205	Particulate	M	1.0000	1.000e-05
0	Hf-175	Particulate	M	1.0000	1.000e-05
0	Nd-144	B	B	0.0000	1.000e-05
0	Os-194	Particulate	M	1.0000	1.000e-05
0	Po-208	B	B	0.0000	1.000e-05
0	Rh-102	Particulate	M	1.0000	1.000e-05
0	Sm-145	Particulate	M	1.0000	1.000e-05
0	Sm-148	B	B	0.0000	1.000e-05
0	Tb-158	Particulate	M	1.0000	1.000e-05
0	Gd-148	Particulate	M	1.0000	1.000e-05
0	Lu-177m	Particulate	M	1.0000	1.000e-05
0	Rh-102m	Particulate	M	1.0000	1.000e-05



84	93	53	84	493	5263					
Adrenal	UB_Wall	Bone_Sur	Brain	Breasts	St_Wall	SI_Wall	ULI_Wall	LLI_Wall	Kidneys	
Liver	Muscle	Ovaries	Pancreas	R_Marrow	Skin	Spleen	Testes	Thymus	Thyroid	
GB_Wall	Ht_Wall	Uterus	ET_Reg	Lung_66	Effectiv					
esophagus	stomach	colon	liver	lung	bone	skin	breast	ovary	bladder	
kidney	thyroid	leukemia	residual	Total						
22										
Cf-251	Particulate				M	1.0000	2.840e+10	1.800e-03	1.000e-07	
5.480e-05	5.000e-04	5.000e-04	6.000e-05	2.000e-06	1.000e-03	1.000e-01				
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
1.130e-10	8.090e-11	1.400e-05	4.060e-11	2.600e-11	1.650e-09	4.120e-09	2.400e-08	7.000e-08	9.000e-11	
9.680e-07	5.830e-11	1.460e-07	9.220e-11	1.120e-06	2.880e-11	4.910e-11	1.460e-07	3.350e-11	3.160e-11	
1.610e-10	5.680e-11	1.140e-10	3.160e-11	5.600e-11	3.580e-07					
1.980e-08	5.404e-09	2.601e-03	7.523e-09	4.939e-09	7.559e-09	1.135e-08	1.595e-08	2.587e-08	1.319e-08	
1.796e-04	7.703e-09	2.697e-05	1.402e-08	2.083e-04	4.473e-09	6.707e-09	2.697e-05	6.430e-09	5.940e-09	
2.111e-08	1.052e-08	7.796e-09	5.354e-06	2.915e-05	6.888e-05					
3.870e-15	4.070e-15	1.460e-14	5.020e-15	6.120e-15	4.310e-15	3.680e-15	3.900e-15	3.720e-15	4.400e-15	
4.400e-15	4.900e-15	3.550e-15	3.650e-15	4.470e-15	1.100e-14	4.400e-15	5.270e-15	4.720e-15	5.240e-15	
3.770e-15	4.240e-15	3.600e-15	3.650e-15	4.990e-15	4.840e-15					
9.000e-17	9.850e-17	2.680e-16	9.340e-17	1.200e-16	9.790e-17	9.090e-17	9.440e-17	9.420e-17	9.850e-17	
9.790e-17	1.160e-16	9.090e-17	8.780e-17	1.010e-16	1.710e-16	9.890e-17	1.210e-16	9.480e-17	1.070e-16	
9.230e-17	9.490e-17	9.200e-17	8.780e-17	1.040e-16	1.070e-16					
1.880e-16	5.760e-13	8.160e-11	7.350e-12	2.040e-15	4.080e-12	2.000e-17	5.090e-16	6.410e-13	5.560e-16	
1.020e-16	6.730e-17	1.320e-12	3.320e-15	9.560e-11						
3.101e-12	4.867e-12	3.031e-11	1.157e-07	1.276e-07	9.159e-08	1.194e-13	3.413e-12	1.090e-08	6.221e-12	
2.755e-12	3.633e-13	2.487e-08	2.529e-11	3.707e-07						
4.260e-18	1.740e-17	3.950e-17	6.670e-18	4.880e-17	1.390e-18	1.100e-18	2.960e-17	5.050e-18	9.840e-18	
2.290e-18	1.670e-18	2.510e-17	6.160e-17	2.540e-16						
9.610e-20	3.950e-19	9.740e-19	1.480e-19	1.020e-18	2.540e-20	1.710e-20	5.800e-19	1.290e-19	2.380e-19	
5.120e-20	3.410e-20	5.670e-19	1.460e-18	5.730e-18						
Cm-247	Particulate				M	1.0000	4.923e+14	1.800e-03	1.000e-07	
5.480e-05	5.000e-04	5.000e-04	2.000e-05	2.000e-06	1.000e-03	1.000e-01				
1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00



1.470e-08	1.470e-08	8.460e-06	1.460e-08	1.450e-08	1.580e-08	1.800e-08	3.520e-08	7.580e-08	4.290e-08
5.110e-07	1.460e-08	1.640e-07	1.470e-08	2.850e-07	1.450e-08	1.460e-08	1.620e-07	1.450e-08	1.450e-08
1.480e-08	1.460e-08	1.470e-08	1.450e-08	1.460e-08	1.910e-07				
2.708e-06	2.682e-06	1.567e-03	2.692e-06	2.681e-06	2.685e-06	2.691e-06	2.694e-06	2.703e-06	7.945e-06
9.485e-05	2.688e-06	3.037e-05	2.697e-06	5.287e-05	2.682e-06	2.685e-06	3.009e-05	2.685e-06	2.686e-06
2.705e-06	2.692e-06	2.686e-06	7.511e-06	2.478e-05	3.715e-05				
1.200e-14	1.200e-14	2.830e-14	1.530e-14	1.680e-14	1.280e-14	1.130e-14	1.180e-14	1.150e-14	1.290e-14
1.290e-14	1.410e-14	1.070e-14	1.120e-14	1.380e-14	1.790e-14	1.300e-14	1.460e-14	1.340e-14	1.490e-14
1.160e-14	1.260e-14	1.100e-14	1.120e-14	1.440e-14	1.380e-14				
2.600e-16	2.830e-16	4.830e-16	2.760e-16	3.130e-16	2.770e-16	2.680e-16	2.740e-16	2.770e-16	2.780e-16
2.780e-16	3.190e-16	2.930e-16	2.550e-16	2.970e-16	3.710e-16	2.790e-16	3.240e-16	2.820e-16	3.060e-16
2.620e-16	2.730e-16	2.690e-16	2.550e-16	2.950e-16	2.980e-16				
4.810e-11	1.920e-10	3.920e-09	2.680e-09	3.480e-10	2.030e-09	3.360e-12	6.200e-11	6.480e-10	1.450e-10
9.300e-11	9.040e-12	3.410e-10	4.940e-10	1.100e-08					
8.218e-10	9.086e-10	1.520e-09	7.333e-08	1.019e-07	5.582e-08	3.947e-11	5.452e-10	1.466e-08	2.179e-09
2.052e-09	1.032e-10	8.124e-09	2.675e-09	2.647e-07					
1.350e-17	5.170e-17	1.200e-16	1.960e-17	1.410e-16	2.690e-18	1.790e-18	8.120e-17	1.520e-17	2.900e-17
6.710e-18	4.740e-18	7.750e-17	1.850e-16	7.500e-16					
2.850e-19	1.120e-18	2.840e-18	4.210e-19	2.880e-18	4.590e-20	3.700e-20	1.510e-18	4.170e-19	6.840e-19
1.450e-19	9.740e-20	1.670e-18	4.140e-18	1.630e-17					
Pu-243	Particulate				M	1.0000	1.784e+04	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	1.000e-04	1.000e-06	1.000e-03	1.000e-01			
0.000e+00	1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
4.430e-13	1.050e-12	1.550e-12	4.140e-15	5.660e-14	1.790e-10	2.870e-10	6.050e-10	4.050e-10	9.380e-13
7.790e-13	5.760e-13	4.700e-12	1.440e-12	7.700e-13	1.500e-13	9.130e-13	1.830e-13	3.480e-14	6.670e-15
2.530e-12	2.250e-13	2.750e-12	6.670e-15	1.220e-13	8.520e-11				
6.390e-13	6.097e-13	1.227e-10	4.802e-13	5.830e-13	2.606e-11	4.129e-11	8.675e-11	5.826e-11	9.676e-13
2.594e-11	6.397e-13	2.455e-12	7.425e-13	6.334e-12	4.782e-13	6.606e-13	1.830e-12	6.886e-13	5.298e-13
8.323e-13	7.757e-13	8.143e-13	4.098e-10	3.054e-10	6.290e-11				
6.880e-16	7.450e-16	3.230e-15	9.080e-16	1.210e-15	7.910e-16	6.470e-16	6.940e-16	6.540e-16	8.200e-16
8.060e-16	9.260e-16	6.040e-16	6.290e-16	7.860e-16	8.110e-15	8.060e-16	1.020e-15	8.820e-16	9.930e-16
6.760e-16	7.640e-16	6.270e-16	6.290e-16	9.300e-16	9.650e-16				
1.740e-17	1.980e-17	7.230e-17	1.820e-17	2.530e-17	1.960e-17	1.780e-17	1.870e-17	1.850e-17	1.990e-17
1.980e-17	2.370e-17	1.810e-17	1.710e-17	1.950e-17	1.150e-16	1.990e-17	2.510e-17	2.020e-17	2.180e-17
1.800e-17	1.900e-17	1.780e-17	1.710e-17	2.130e-17	2.270e-17				



2.700e-15	3.100e-12	9.450e-11	4.040e-14	6.320e-14	1.700e-15	8.340e-16	2.110e-14	2.150e-13	1.170e-13
1.740e-14	3.470e-16	1.670e-13	4.280e-13	9.870e-11					
4.725e-16	3.954e-14	1.675e-13	1.481e-14	1.326e-12	4.345e-15	1.797e-17	6.682e-16	1.584e-15	9.463e-16
3.015e-16	4.805e-17	3.532e-15	2.852e-15	1.562e-12					
7.250e-19	3.190e-18	6.990e-18	1.220e-18	9.090e-18	3.070e-19	8.090e-19	5.850e-18	8.590e-19	1.800e-18
4.270e-19	3.160e-19	4.410e-18	1.110e-17	4.710e-17					
1.820e-20	7.910e-20	1.920e-19	3.000e-20	2.080e-19	6.870e-21	1.150e-20	1.220e-19	2.570e-20	4.790e-20
1.040e-20	6.940e-21	1.090e-19	2.890e-19	1.160e-18					
Am-243	Particulate				M	1.0000	2.326e+11	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	5.000e-05	2.000e-06	1.000e-03	1.000e-01			
0.000e+00	0.000e+00	1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
1.550e-08	1.550e-08	8.990e-06	1.550e-08	1.540e-08	1.670e-08	1.870e-08	3.530e-08	7.600e-08	4.550e-08
5.440e-07	1.550e-08	1.740e-07	1.550e-08	3.030e-07	1.540e-08	1.540e-08	1.730e-07	1.540e-08	1.540e-08
1.560e-08	1.550e-08	1.550e-08	1.540e-08	1.550e-08	2.030e-07				
2.867e-06	2.850e-06	1.666e-03	2.856e-06	2.849e-06	2.852e-06	2.856e-06	2.859e-06	2.868e-06	8.451e-06
1.010e-04	2.854e-06	3.233e-05	2.861e-06	5.624e-05	2.849e-06	2.852e-06	3.202e-05	2.851e-06	2.853e-06
2.867e-06	2.857e-06	2.853e-06	7.859e-06	2.731e-05	3.963e-05				
1.410e-15	1.560e-15	7.730e-15	1.890e-15	2.700e-15	1.670e-15	1.310e-15	1.420e-15	1.320e-15	1.750e-15
1.690e-15	2.000e-15	1.210e-15	1.260e-15	1.600e-15	2.840e-15	1.690e-15	2.270e-15	1.890e-15	2.160e-15
1.390e-15	1.580e-15	1.260e-15	1.260e-15	1.990e-15	1.920e-15				
3.870e-17	4.470e-17	1.930e-16	4.060e-17	5.720e-17	4.490e-17	3.960e-17	4.190e-17	4.110e-17	4.540e-17
4.540e-17	5.350e-17	4.030e-17	3.810e-17	4.260e-17	7.850e-17	4.570e-17	5.670e-17	4.750e-17	4.940e-17
3.870e-17	4.290e-17	3.930e-17	3.810e-17	4.920e-17	4.960e-17				
1.710e-17	1.340e-12	2.350e-13	1.600e-15	1.350e-16	9.570e-16	1.350e-18	2.790e-17	3.000e-16	4.200e-17
5.350e-17	3.820e-18	1.870e-16	3.120e-16	1.580e-12					
8.729e-10	9.645e-10	1.616e-09	7.807e-08	1.125e-07	5.929e-08	4.198e-11	5.781e-10	1.562e-08	2.314e-09
2.178e-09	1.100e-10	8.740e-09	2.830e-09	2.857e-07					
1.430e-18	6.740e-18	1.420e-17	2.560e-18	1.950e-17	7.340e-19	2.830e-19	1.300e-17	1.720e-18	3.770e-18
9.100e-19	6.880e-19	8.980e-18	2.320e-17	9.770e-17					
3.890e-20	1.810e-19	4.290e-19	6.880e-20	4.810e-19	1.830e-20	7.830e-21	2.760e-19	5.730e-20	1.080e-19
2.360e-20	1.570e-20	2.390e-19	6.460e-19	2.590e-18					
Np-239	Particulate				M	1.0000	2.036e+05	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	1.000e-03	1.000e-05	2.000e-02	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00



9.000e-12	4.690e-11	2.570e-11	5.130e-14	1.090e-12	3.450e-10	8.520e-10	3.930e-09	8.700e-09	2.100e-11
1.370e-11	1.660e-11	1.490e-10	1.980e-11	2.590e-11	4.930e-12	1.500e-11	1.160e-11	7.980e-13	1.430e-13
5.090e-11	3.450e-12	7.040e-11	1.430e-13	2.080e-12	7.980e-10				
1.460e-11	1.725e-11	4.866e-10	4.213e-12	1.252e-11	6.047e-11	1.339e-10	6.067e-10	1.339e-09	2.222e-11
3.068e-11	1.054e-11	3.069e-11	1.330e-11	4.123e-11	5.106e-12	1.187e-11	8.985e-12	1.659e-11	7.608e-12
1.404e-11	2.242e-11	1.361e-11	2.074e-09	4.685e-09	7.012e-10				
5.950e-15	6.220e-15	2.120e-14	7.700e-15	9.220e-15	6.570e-15	5.640e-15	5.970e-15	5.710e-15	6.710e-15
6.710e-15	7.440e-15	5.410e-15	5.590e-15	6.860e-15	1.630e-14	6.710e-15	7.960e-15	7.170e-15	7.940e-15
5.790e-15	6.470e-15	5.520e-15	5.590e-15	7.590e-15	7.350e-15				
1.370e-16	1.500e-16	3.880e-16	1.430e-16	1.780e-16	1.490e-16	1.390e-16	1.440e-16	1.440e-16	1.490e-16
1.490e-16	1.740e-16	1.410e-16	1.340e-16	1.540e-16	2.640e-16	1.500e-16	1.800e-16	1.450e-16	1.620e-16
1.400e-16	1.450e-16	1.400e-16	1.340e-16	1.580e-16	1.620e-16				
2.550e-15	6.950e-13	1.750e-11	6.540e-14	4.310e-14	2.190e-14	6.750e-16	1.350e-14	1.540e-13	9.250e-14
1.270e-14	6.290e-16	1.150e-13	2.250e-13	1.900e-11					
1.352e-14	9.150e-14	2.078e-12	3.343e-14	2.032e-11	2.476e-14	2.546e-16	2.002e-14	2.840e-14	3.193e-14
8.504e-15	8.781e-16	1.317e-13	6.915e-14	2.285e-11					
6.550e-18	2.650e-17	6.050e-17	1.020e-17	7.420e-17	2.010e-18	1.630e-18	4.450e-17	7.700e-18	1.500e-17
3.490e-18	2.530e-18	3.850e-17	9.420e-17	3.880e-16					
1.470e-19	6.020e-19	1.490e-18	2.260e-19	1.540e-18	3.680e-20	2.630e-20	8.600e-19	2.010e-19	3.630e-19
7.750e-20	5.160e-20	8.640e-19	2.210e-18	8.690e-18					
Pu-239	Particulate				M	1.0000	7.609e+11	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	1.000e-04	1.000e-06	1.000e-03	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
1.450e-08	1.450e-08	8.230e-06	1.450e-08	1.450e-08	1.570e-08	1.750e-08	3.260e-08	6.760e-08	3.380e-08
1.730e-06	1.450e-08	1.080e-07	1.450e-08	3.910e-07	1.450e-08	1.450e-08	1.100e-07	1.450e-08	1.450e-08
1.450e-08	1.450e-08	1.450e-08	1.450e-08	1.450e-08	2.510e-07				
2.683e-06	2.683e-06	1.524e-03	2.683e-06	2.683e-06	2.683e-06	2.684e-06	2.687e-06	2.694e-06	6.266e-06
3.201e-04	2.683e-06	1.999e-05	2.683e-06	7.260e-05	2.683e-06	2.683e-06	2.035e-05	2.683e-06	2.683e-06
2.683e-06	2.683e-06	2.683e-06	7.604e-06	2.611e-05	4.850e-05				
2.160e-18	2.370e-18	1.060e-17	2.790e-18	8.150e-18	2.490e-18	2.000e-18	2.140e-18	2.020e-18	2.710e-18
2.510e-18	4.560e-18	1.870e-18	1.940e-18	2.870e-18	2.030e-17	2.470e-18	5.230e-18	2.900e-18	4.190e-18
2.080e-18	2.410e-18	1.930e-18	1.940e-18	2.890e-18	3.770e-18				
6.560e-20	8.610e-20	6.340e-19	5.770e-20	8.310e-19	8.160e-20	5.640e-20	6.050e-20	6.000e-20	1.120e-19
7.780e-20	5.210e-19	8.480e-20	5.150e-20	1.290e-19	4.040e-18	6.980e-20	6.540e-19	1.040e-19	1.910e-19
5.950e-20	7.400e-20	5.570e-20	5.150e-20	8.660e-20	3.060e-19				



2.570e-08	2.580e-08	7.410e-07	2.560e-08	2.560e-08	2.670e-08	2.850e-08	4.280e-08	7.790e-08	2.660e-07
9.960e-08	2.560e-08	2.580e-08	2.570e-08	7.590e-08	2.560e-08	2.560e-08	2.560e-08	2.560e-08	2.560e-08
2.570e-08	2.560e-08	2.570e-08	2.560e-08	2.560e-08	4.670e-08				
1.241e-07	1.239e-07	3.582e-06	1.236e-07	1.237e-07	1.238e-07	1.241e-07	1.270e-07	1.340e-07	1.287e-06
4.824e-07	1.237e-07	1.236e-07	1.238e-07	3.669e-07	1.234e-07	1.237e-07	1.233e-07	1.239e-07	1.236e-07
1.236e-07	1.242e-07	1.235e-07	4.419e-06	1.845e-05	2.406e-06				
5.650e-15	5.880e-15	1.940e-14	7.300e-15	8.600e-15	6.210e-15	5.380e-15	5.670e-15	5.430e-15	6.320e-15
6.350e-15	7.000e-15	5.230e-15	5.350e-15	6.530e-15	9.150e-15	6.350e-15	7.480e-15	6.780e-15	7.480e-15
5.500e-15	6.140e-15	5.270e-15	5.350e-15	7.160e-15	6.870e-15				
1.300e-16	1.380e-16	3.320e-16	1.340e-16	1.600e-16	1.390e-16	1.300e-16	1.350e-16	1.350e-16	1.380e-16
1.390e-16	1.590e-16	1.310e-16	1.260e-16	1.440e-16	2.060e-16	1.400e-16	1.620e-16	1.330e-16	1.470e-16
1.280e-16	1.340e-16	1.310e-16	1.260e-16	1.470e-16	1.490e-16				
2.520e-15	1.610e-12	1.040e-10	3.550e-14	5.250e-14	1.760e-14	8.120e-16	1.660e-14	2.800e-13	2.020e-13
8.920e-14	6.060e-16	2.670e-13	3.730e-13	1.070e-10					
4.807e-11	5.681e-11	1.103e-10	3.763e-10	8.104e-08	1.791e-10	2.452e-12	3.521e-11	5.562e-11	1.225e-10
4.419e-10	6.166e-12	7.702e-11	1.805e-10	8.273e-08					
6.270e-18	2.510e-17	5.750e-17	9.620e-18	7.000e-17	1.840e-18	9.130e-19	4.150e-17	7.440e-18	1.420e-17
3.290e-18	2.380e-18	3.670e-17	8.930e-17	3.660e-16					
1.370e-19	5.610e-19	1.390e-18	2.110e-19	1.440e-18	3.150e-20	2.060e-20	7.730e-19	1.860e-19	3.340e-19
7.180e-20	4.680e-20	8.080e-19	2.060e-18	8.070e-18					
Th-231	Particulate				S	1.0000	9.187e+04	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	1.000e-04	5.000e-06	1.000e-03	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	1.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
4.840e-13	2.860e-12	5.820e-12	1.790e-14	6.000e-14	1.950e-10	4.400e-10	1.930e-09	3.400e-09	1.360e-12
9.860e-13	1.370e-12	1.870e-11	1.530e-12	1.850e-12	2.890e-13	9.610e-13	5.650e-13	4.320e-14	1.990e-14
4.550e-12	1.990e-13	4.860e-12	1.990e-14	1.240e-13	3.360e-10				
7.100e-13	5.858e-13	5.646e-11	2.085e-13	6.779e-13	3.132e-11	7.003e-11	3.067e-10	5.398e-10	1.164e-12
2.281e-12	9.737e-13	3.449e-12	6.967e-13	2.756e-12	2.802e-13	6.814e-13	5.699e-13	7.950e-13	3.396e-13
9.613e-13	1.389e-12	8.998e-13	8.839e-10	1.590e-09	2.454e-10				
3.200e-16	3.530e-16	1.650e-15	4.220e-16	6.760e-16	3.730e-16	2.990e-16	3.220e-16	3.010e-16	3.950e-16
3.800e-16	4.770e-16	2.780e-16	2.880e-16	3.750e-16	2.490e-15	3.780e-16	5.400e-16	4.260e-16	5.040e-16
3.110e-16	3.580e-16	2.880e-16	2.880e-16	4.410e-16	4.630e-16				
8.690e-18	1.050e-17	4.700e-17	8.740e-18	2.590e-17	1.030e-17	8.550e-18	9.130e-18	8.870e-18	1.140e-17
1.030e-17	1.960e-17	8.920e-18	8.030e-18	1.070e-17	7.980e-17	1.020e-17	2.300e-17	1.120e-17	1.390e-17
8.760e-18	9.660e-18	8.460e-18	8.030e-18	1.120e-17	1.520e-17				



1.220e-15	5.910e-12	5.010e-10	1.570e-14	1.670e-14	6.310e-15	2.410e-16	6.850e-15	5.500e-14	3.160e-14
1.190e-14	3.470e-16	3.000e-13	7.450e-14	5.070e-10					
5.869e-16	4.751e-14	9.174e-13	1.453e-15	6.926e-12	1.575e-15	9.823e-18	9.365e-16	3.090e-15	9.591e-16
2.708e-16	2.996e-17	2.875e-15	3.820e-15	7.906e-12					
3.310e-19	1.510e-18	3.230e-18	5.760e-19	4.310e-18	1.570e-19	2.480e-19	3.270e-18	3.950e-19	8.540e-19
2.050e-19	1.600e-19	2.100e-18	5.380e-18	2.270e-17					
8.410e-21	4.160e-20	9.310e-20	1.560e-20	1.100e-19	4.460e-21	7.960e-21	1.250e-19	1.270e-20	2.540e-20
5.930e-21	4.430e-21	6.010e-20	1.800e-19	6.940e-19					
Pa-231	Particulate				M	1.0000	1.034e+12	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	5.000e-06	5.000e-06	1.000e-02	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	1.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
5.610e-08	5.610e-08	2.510e-05	5.600e-08	5.600e-08	5.720e-08	5.910e-08	8.360e-08	1.360e-07	3.400e-07
6.550e-07	5.600e-08	2.150e-07	5.600e-08	9.260e-07	5.600e-08	5.620e-08	2.180e-07	5.600e-08	5.600e-08
5.600e-08	5.600e-08	5.600e-08	5.600e-08	5.600e-08	4.790e-07				
1.040e-05	1.041e-05	4.665e-03	1.039e-05	1.039e-05	1.039e-05	1.040e-05	1.207e-05	1.513e-05	6.343e-05
1.223e-04	1.039e-05	3.999e-05	1.039e-05	1.726e-04	1.039e-05	1.043e-05	4.061e-05	1.039e-05	1.039e-05
1.039e-05	1.039e-05	1.039e-05	1.555e-05	3.319e-05	9.117e-05				
1.210e-15	1.240e-15	3.440e-15	1.550e-15	1.840e-15	1.310e-15	1.140e-15	1.200e-15	1.160e-15	1.330e-15
1.330e-15	1.490e-15	1.090e-15	1.140e-15	1.400e-15	2.410e-15	1.340e-15	1.580e-15	1.410e-15	1.570e-15
1.170e-15	1.290e-15	1.120e-15	1.140e-15	1.490e-15	1.450e-15				
2.760e-17	3.010e-17	6.830e-17	2.870e-17	4.330e-17	2.980e-17	2.770e-17	2.870e-17	2.870e-17	3.060e-17
2.980e-17	3.950e-17	2.950e-17	2.640e-17	3.180e-17	8.810e-17	2.990e-17	4.200e-17	3.020e-17	3.420e-17
2.710e-17	2.880e-17	2.780e-17	2.640e-17	3.180e-17	3.470e-17				
2.890e-15	1.700e-12	1.180e-10	4.650e-14	6.740e-14	1.130e-14	1.200e-15	2.220e-14	3.930e-13	2.400e-13
2.330e-14	4.760e-16	3.440e-13	5.170e-13	1.220e-10					
2.726e-09	3.047e-09	6.272e-09	5.314e-08	1.160e-07	1.386e-07	1.281e-10	1.763e-09	1.522e-08	7.425e-09
1.146e-08	3.419e-10	2.032e-08	8.619e-09	3.850e-07					
1.350e-18	5.290e-18	1.220e-17	2.020e-18	1.460e-17	3.270e-19	2.400e-19	8.890e-18	1.550e-18	3.000e-18
6.920e-19	5.000e-19	7.860e-18	1.910e-17	7.750e-17					
2.910e-20	1.200e-19	2.960e-19	4.520e-20	3.110e-19	6.490e-21	8.790e-21	2.090e-19	4.200e-20	7.280e-20
1.590e-20	1.090e-20	1.780e-19	4.640e-19	1.810e-18					
Ac-227	Particulate				M	1.0000	6.871e+08	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	2.000e-05	2.000e-06	1.000e-03	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	1.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00



4.730e-08	4.740e-08	9.350e-06	4.730e-08	4.730e-08	4.730e-08	4.740e-08	5.580e-08	7.510e-08	7.110e-08
2.020e-06	4.730e-08	1.870e-07	4.730e-08	4.920e-07	4.730e-08	4.750e-08	1.860e-07	4.730e-08	4.730e-08
4.740e-08	4.730e-08	4.730e-08	4.730e-08	4.730e-08	3.220e-07				
8.711e-06	8.712e-06	1.726e-03	8.699e-06	8.696e-06	8.700e-06	8.704e-06	1.003e-05	1.246e-05	1.337e-05
3.723e-04	8.699e-06	3.443e-05	8.707e-06	9.103e-05	8.696e-06	8.744e-06	3.417e-05	8.698e-06	8.697e-06
8.715e-06	8.702e-06	8.700e-06	2.999e-05	9.248e-05	6.942e-05				
2.270e-18	2.510e-18	1.160e-17	2.970e-18	7.020e-18	2.640e-18	2.100e-18	2.260e-18	2.120e-18	2.860e-18
2.680e-18	4.230e-18	1.960e-18	2.030e-18	2.860e-18	1.590e-17	2.650e-18	4.810e-18	3.070e-18	4.060e-18
2.180e-18	2.540e-18	2.030e-18	2.030e-18	3.110e-18	3.650e-18				
6.870e-20	8.510e-20	5.300e-19	6.340e-20	5.900e-19	8.230e-20	6.130e-20	6.640e-20	6.430e-20	1.030e-19
8.040e-20	3.860e-19	7.770e-20	5.640e-20	1.100e-19	3.190e-18	7.640e-20	4.590e-19	9.670e-20	1.550e-19
6.430e-20	7.530e-20	6.070e-20	5.640e-20	8.940e-20	2.370e-19				
2.560e-15	1.600e-11	3.970e-12	1.630e-14	2.960e-14	7.280e-15	2.820e-16	7.350e-15	3.280e-15	5.580e-15
9.760e-15	9.960e-16	4.100e-15	4.710e-14	2.020e-11					
3.627e-09	4.018e-09	9.659e-09	3.290e-07	3.884e-07	7.512e-08	1.844e-10	2.550e-09	1.968e-08	9.242e-09
3.604e-09	4.632e-10	1.504e-08	1.266e-08	8.733e-07					
2.350e-21	1.070e-20	2.270e-20	4.060e-21	3.040e-20	1.100e-21	1.590e-21	3.390e-20	2.790e-21	6.070e-21
1.490e-21	1.290e-21	1.610e-20	4.230e-20	1.770e-19					
5.880e-23	3.320e-22	6.760e-22	1.220e-22	8.740e-22	5.030e-23	3.180e-22	2.850e-21	1.110e-22	2.060e-22
5.360e-23	4.940e-23	6.170e-22	2.540e-21	8.860e-21					
Th-227	Particulate				S	1.0000	1.614e+06	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	1.000e-04	5.000e-06	1.000e-03	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
9.862e-01	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
3.210e-10	3.660e-10	8.810e-08	3.130e-10	3.140e-10	1.780e-09	4.130e-09	2.620e-08	9.030e-08	2.590e-09
4.950e-09	3.300e-10	6.860e-10	3.290e-10	7.870e-09	3.180e-10	3.270e-10	5.520e-10	3.140e-10	3.130e-10
3.550e-10	3.160e-10	3.810e-10	3.130e-10	3.150e-10	9.020e-09				
3.833e-10	2.264e-10	6.836e-08	2.211e-10	3.827e-10	6.681e-10	1.166e-09	6.494e-09	2.086e-08	3.018e-09
4.224e-09	2.869e-10	5.165e-10	3.376e-10	5.945e-09	2.453e-10	3.334e-10	4.879e-10	4.214e-10	2.768e-10
2.755e-10	5.273e-10	2.312e-10	4.930e-06	6.377e-05	7.656e-06				
4.360e-15	4.480e-15	1.320e-14	5.600e-15	6.510e-15	4.740e-15	4.120e-15	4.340e-15	4.180e-15	4.810e-15
4.830e-15	5.330e-15	3.970e-15	4.100e-15	5.030e-15	7.850e-15	4.830e-15	5.650e-15	5.110e-15	5.660e-15
4.240e-15	4.670e-15	4.030e-15	4.100e-15	5.420e-15	5.220e-15				
9.910e-17	1.060e-16	2.380e-16	1.030e-16	1.270e-16	1.060e-16	1.000e-16	1.030e-16	1.040e-16	1.060e-16
1.060e-16	1.250e-16	1.040e-16	9.610e-17	1.110e-16	1.870e-16	1.070e-16	1.280e-16	1.050e-16	1.150e-16
9.750e-17	1.030e-16	1.010e-16	9.610e-17	1.130e-16	1.150e-16				



5.830e-11	1.440e-10	9.660e-10	1.310e-09	3.970e-10	1.450e-09	3.990e-12	7.560e-11	1.880e-10	1.440e-10
1.360e-10	1.110e-11	2.900e-10	4.810e-10	5.650e-09					
3.468e-13	1.004e-12	2.849e-11	4.763e-12	2.777e-07	4.631e-12	1.280e-14	4.532e-13	5.011e-13	4.220e-13
1.164e-12	3.283e-14	1.693e-12	1.844e-12	2.777e-07					
4.840e-18	1.910e-17	4.410e-17	7.320e-18	5.300e-17	1.250e-18	7.830e-19	3.150e-17	5.650e-18	1.080e-17
2.500e-18	1.800e-18	2.820e-17	6.840e-17	2.790e-16					
1.050e-19	4.280e-19	1.070e-18	1.610e-19	1.100e-18	2.260e-20	1.870e-20	6.140e-19	1.480e-19	2.560e-19
5.510e-20	3.660e-20	6.230e-19	1.590e-18	6.230e-18					
Fr-223	Particulate				M	1.0000	1.320e+03	1.800e-03	1.000e-07
5.480e-05	1.000e+00	1.000e+00	3.000e-02	8.000e-03	3.000e-02	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
1.380e-02	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
2.340e-09	2.340e-09	2.340e-09	2.340e-09	2.340e-09	2.510e-09	2.340e-09	2.340e-09	2.340e-09	2.340e-09
2.340e-09	2.340e-09	2.340e-09	2.340e-09	2.340e-09	2.340e-09	2.340e-09	2.340e-09	2.340e-09	2.340e-09
2.340e-09	2.340e-09	2.340e-09	2.340e-09	2.340e-09	2.360e-09				
4.507e-10	4.506e-10	4.507e-10	4.505e-10	4.506e-10	4.680e-10	4.509e-10	4.510e-10	4.513e-10	4.507e-10
4.507e-10	4.507e-10	4.506e-10	4.507e-10	4.507e-10	4.505e-10	4.507e-10	4.505e-10	4.508e-10	4.507e-10
4.506e-10	4.509e-10	4.506e-10	6.376e-09	5.994e-08	7.592e-09				
1.510e-15	1.600e-15	6.080e-15	1.990e-15	2.650e-15	1.710e-15	1.410e-15	1.510e-15	1.430e-15	1.780e-15
1.740e-15	2.030e-15	1.350e-15	1.370e-15	1.740e-15	2.320e-14	1.740e-15	2.240e-15	1.900e-15	2.170e-15
1.470e-15	1.650e-15	1.360e-15	1.370e-15	2.000e-15	2.150e-15				
3.950e-17	4.460e-17	1.560e-16	4.150e-17	5.930e-17	4.500e-17	3.980e-17	4.180e-17	4.140e-17	4.610e-17
4.510e-17	5.520e-17	3.930e-17	3.760e-17	4.380e-17	2.800e-15	4.550e-17	5.900e-17	4.560e-17	5.050e-17
3.950e-17	4.280e-17	3.940e-17	3.760e-17	4.890e-17	7.730e-17				
1.740e-11	9.960e-11	2.470e-09	1.230e-10	1.920e-10	4.320e-10	1.870e-12	4.720e-11	2.160e-11	3.890e-11
4.050e-11	6.500e-12	9.610e-11	2.940e-10	3.880e-09					
3.746e-13	7.081e-13	1.012e-12	5.141e-13	2.612e-10	3.087e-14	2.374e-14	3.745e-13	4.415e-13	8.478e-13
1.759e-13	5.405e-14	1.025e-13	2.502e-12	2.683e-10					
1.600e-18	6.900e-18	1.520e-17	2.640e-18	1.960e-17	5.770e-19	2.310e-18	1.280e-17	1.920e-18	3.870e-18
9.260e-19	6.910e-19	9.770e-18	2.440e-17	1.030e-16					
3.980e-20	1.820e-19	4.300e-19	6.840e-20	4.780e-19	1.480e-20	2.790e-19	2.860e-19	5.590e-20	1.080e-19
2.400e-20	1.610e-20	2.460e-19	6.560e-19	2.880e-18					
Ra-223	Particulate				M	1.0000	9.876e+05	1.800e-03	1.000e-07
5.480e-05	2.000e-01	2.000e-01	2.000e-03	1.000e-03	4.000e-02	2.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	1.000e+00	1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00



1.280e-08	1.300e-08	2.940e-06	1.270e-08	1.270e-08	1.880e-08	2.620e-08	1.140e-07	2.940e-07	1.780e-08
1.460e-07	1.280e-08	1.300e-08	1.280e-08	2.830e-07	1.270e-08	1.280e-08	1.270e-08	1.270e-08	1.270e-08
1.280e-08	1.270e-08	1.290e-08	1.270e-08	1.270e-08	1.040e-07				
2.991e-09	2.974e-09	6.765e-07	2.920e-09	2.986e-09	3.998e-09	5.409e-09	2.228e-08	5.670e-08	3.984e-09
3.361e-08	2.952e-09	2.976e-09	2.973e-09	6.504e-08	2.930e-09	2.968e-09	2.919e-09	3.004e-09	2.944e-09
2.956e-09	3.047e-09	2.943e-09	4.559e-06	4.475e-05	5.392e-06				
4.710e-15	4.890e-15	1.610e-14	6.080e-15	7.230e-15	5.180e-15	4.450e-15	4.700e-15	4.510e-15	5.280e-15
5.280e-15	5.850e-15	4.240e-15	4.400e-15	5.410e-15	9.270e-15	5.290e-15	6.250e-15	5.620e-15	6.230e-15
4.590e-15	5.090e-15	4.340e-15	4.400e-15	5.970e-15	5.740e-15				
1.090e-16	1.190e-16	3.020e-16	1.140e-16	1.350e-16	1.180e-16	1.110e-16	1.150e-16	1.150e-16	1.180e-16
1.180e-16	1.350e-16	1.150e-16	1.060e-16	1.220e-16	1.750e-16	1.190e-16	1.380e-16	1.170e-16	1.280e-16
1.100e-16	1.150e-16	1.110e-16	1.060e-16	1.260e-16	1.270e-16				
1.830e-11	7.530e-11	5.680e-10	4.170e-10	1.940e-10	9.750e-10	1.920e-12	4.730e-11	2.610e-11	4.020e-11
2.940e-11	6.560e-12	2.290e-10	2.970e-10	2.920e-09					
2.490e-12	6.050e-12	8.343e-11	3.815e-11	1.947e-07	4.611e-11	1.538e-13	2.534e-12	2.901e-12	5.564e-12
1.544e-12	3.514e-13	1.520e-11	1.647e-11	1.949e-07					
5.180e-18	2.090e-17	4.770e-17	8.000e-18	5.840e-17	1.530e-18	9.250e-19	3.490e-17	6.030e-18	1.180e-17
2.750e-18	1.980e-18	3.040e-17	7.420e-17	3.050e-16					
1.160e-19	4.760e-19	1.190e-18	1.790e-19	1.230e-18	2.870e-20	1.750e-20	6.520e-19	1.640e-19	2.880e-19
6.140e-20	4.080e-20	6.850e-19	1.740e-18	6.860e-18					
Rn-219	B				B	0.0000	3.960e+00	0.000e+00	0.000e+00
5.480e-05	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
2.190e-15	2.220e-15	5.690e-15	2.800e-15	3.130e-15	2.360e-15	2.070e-15	2.170e-15	2.100e-15	2.380e-15
2.390e-15	2.610e-15	1.980e-15	2.070e-15	2.530e-15	3.530e-15	2.400e-15	2.730e-15	2.500e-15	2.760e-15
2.130e-15	2.330e-15	2.030e-15	2.070e-15	2.670e-15	2.560e-15				
4.830e-17	5.180e-17	9.590e-17	5.090e-17	5.800e-17	5.140e-17	4.930e-17	5.060e-17	5.100e-17	5.140e-17
5.150e-17	5.890e-17	5.280e-17	4.710e-17	5.470e-17	6.930e-17	5.170e-17	5.990e-17	5.140e-17	5.590e-17
4.790e-17	5.020e-17	4.950e-17	4.710e-17	5.460e-17	5.500e-17				



0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
9.770e-15	9.830e-15	2.280e-14	1.250e-14	1.370e-14	1.050e-14	9.390e-15	9.770e-15	9.550e-15	1.060e-14	
1.070e-14	1.160e-14	9.310e-15	9.300e-15	1.140e-14	5.580e-14	1.070e-14	1.210e-14	1.110e-14	1.220e-14	
9.610e-15	1.040e-14	9.160e-15	9.300e-15	1.190e-14	1.180e-14					
2.100e-16	2.250e-16	4.010e-16	2.200e-16	2.490e-16	2.240e-16	2.160e-16	2.200e-16	2.240e-16	2.250e-16	
2.240e-16	2.540e-16	2.200e-16	2.060e-16	2.370e-16	7.190e-15	2.250e-16	2.580e-16	2.200e-16	2.400e-16	
2.080e-16	2.190e-16	2.160e-16	2.060e-16	2.360e-16	3.070e-16					
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00						
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00						
1.120e-17	4.240e-17	9.990e-17	1.620e-17	1.160e-16	2.160e-18	5.570e-18	6.620e-17	1.320e-17	2.380e-17	
5.510e-18	3.880e-18	6.400e-17	1.520e-16	6.230e-16						
2.290e-19	9.040e-19	2.290e-18	3.390e-19	2.310e-18	3.810e-20	7.170e-19	1.200e-18	3.130e-19	5.440e-19	
1.170e-19	7.640e-20	1.330e-18	3.320e-18	1.370e-17						
Po-215	B				B	0.0000	1.781e-03	1.800e-03	1.000e-07	
5.480e-05	1.000e-01	1.000e-01	5.000e-03	4.000e-04	1.000e-03	1.000e-01				
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	1.000e+00	0.000e+00	1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
6.790e-18	6.800e-18	1.530e-17	8.640e-18	9.430e-18	7.230e-18	6.390e-18	6.690e-18	6.510e-18	7.270e-18	
7.310e-18	7.960e-18	6.030e-18	6.360e-18	7.810e-18	1.010e-17	7.360e-18	8.230e-18	7.560e-18	8.370e-18	
6.590e-18	7.140e-18	6.230e-18	6.360e-18	8.150e-18	7.800e-18					
1.470e-19	1.600e-19	2.650e-19	1.560e-19	1.760e-19	1.560e-19	1.510e-19	1.550e-19	1.570e-19	1.570e-19	
1.570e-19	1.800e-19	1.670e-19	1.440e-19	1.680e-19	2.150e-19	1.570e-19	1.830e-19	1.600e-19	1.740e-19	
1.490e-19	1.540e-19	1.520e-19	1.440e-19	1.670e-19	1.680e-19					



0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
7.630e-21	2.920e-20	6.830e-20	1.110e-20	7.970e-20	1.450e-21	1.010e-21	4.560e-20	8.580e-21	1.640e-20
3.780e-21	2.670e-21	4.380e-20	1.050e-19	4.240e-19					
1.620e-22	6.300e-22	1.610e-21	2.380e-22	1.630e-21	2.520e-23	2.150e-23	8.500e-22	2.380e-22	3.870e-22
8.170e-23	5.540e-23	9.430e-22	2.340e-21	9.210e-21					
Pb-211	Particulate				M	1.0000	2.166e+03	1.800e-03	1.000e-07
5.480e-05	2.000e-01	2.000e-01	8.000e-04	3.000e-04	4.000e-03	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	1.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
1.730e-11	1.910e-11	2.640e-10	1.690e-11	1.700e-11	1.160e-09	4.770e-10	2.230e-10	3.890e-11	1.730e-10
5.300e-11	1.710e-11	1.780e-11	1.840e-11	3.930e-11	1.700e-11	1.780e-11	1.690e-11	1.690e-11	1.690e-11
1.770e-11	1.720e-11	1.770e-11	1.690e-11	1.700e-11	1.780e-10				
1.550e-11	1.732e-11	2.467e-10	1.543e-11	1.547e-11	1.584e-10	6.911e-11	3.967e-11	1.797e-11	1.650e-10
4.906e-11	1.547e-11	1.549e-11	1.561e-11	3.616e-11	1.541e-11	1.554e-11	1.538e-11	1.552e-11	1.545e-11
1.550e-11	1.555e-11	1.547e-11	6.989e-08	6.225e-08	9.257e-09				
2.550e-15	2.530e-15	5.310e-15	3.280e-15	3.530e-15	2.730e-15	2.450e-15	2.540e-15	2.500e-15	2.750e-15
2.770e-15	3.000e-15	2.430e-15	2.420e-15	2.970e-15	3.120e-14	2.780e-15	3.100e-15	2.850e-15	3.160e-15
2.510e-15	2.710e-15	2.380e-15	2.420e-15	3.070e-15	3.220e-15				
5.500e-17	5.850e-17	9.530e-17	5.780e-17	6.480e-17	5.830e-17	5.680e-17	5.760e-17	5.900e-17	5.880e-17
5.840e-17	6.660e-17	5.840e-17	5.360e-17	6.230e-17	4.620e-15	5.870e-17	6.760e-17	5.760e-17	6.380e-17
5.470e-17	5.750e-17	5.650e-17	5.360e-17	6.140e-17	1.080e-16				
2.260e-14	5.110e-12	2.820e-12	1.180e-13	2.810e-13	5.190e-14	2.570e-15	7.290e-14	4.630e-14	7.280e-14
3.130e-13	8.850e-15	4.180e-14	5.400e-13	9.510e-12					
1.285e-14	2.418e-13	6.793e-14	5.572e-14	2.712e-10	1.681e-14	8.084e-16	1.304e-14	1.512e-14	3.237e-14
6.388e-14	1.848e-15	9.877e-15	8.602e-14	2.719e-10					
2.930e-18	1.100e-17	2.600e-17	4.200e-18	3.000e-17	5.040e-19	3.110e-18	1.710e-17	3.460e-18	6.120e-18
1.430e-18	1.010e-18	1.670e-17	3.950e-17	1.630e-16					
6.030e-20	2.350e-19	6.010e-19	8.850e-20	6.000e-19	9.050e-21	4.610e-19	3.130e-19	8.310e-20	1.410e-19
3.060e-20	2.030e-20	3.500e-19	8.690e-19	3.860e-18					
Bi-211	B				B	0.0000	1.284e+02	1.800e-03	1.000e-07
5.480e-05	5.000e-02	5.000e-02	2.000e-03	1.000e-03	1.000e-01	5.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	1.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00



0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
1.770e-15	1.790e-15	4.490e-15	2.260e-15	2.520e-15	1.900e-15	1.670e-15	1.750e-15	1.690e-15	1.910e-15	1.910e-15
1.930e-15	2.100e-15	1.580e-15	1.660e-15	2.040e-15	3.110e-15	1.930e-15	2.200e-15	2.010e-15	2.220e-15	2.220e-15
1.720e-15	1.870e-15	1.630e-15	1.660e-15	2.150e-15	2.070e-15					
3.900e-17	4.200e-17	7.730e-17	4.110e-17	4.700e-17	4.150e-17	3.980e-17	4.090e-17	4.120e-17	4.160e-17	4.160e-17
4.160e-17	4.760e-17	4.320e-17	3.800e-17	4.420e-17	5.610e-17	4.180e-17	4.850e-17	4.190e-17	4.540e-17	4.540e-17
3.880e-17	4.060e-17	4.000e-17	3.800e-17	4.420e-17	4.450e-17					
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
1.980e-18	7.670e-18	1.780e-17	2.930e-18	2.100e-17	4.260e-19	3.100e-19	1.220e-17	2.250e-18	4.330e-18	4.330e-18
9.940e-19	7.070e-19	1.150e-17	2.740e-17	1.110e-16						
4.230e-20	1.680e-19	4.240e-19	6.300e-20	4.320e-19	7.340e-21	5.600e-21	2.270e-19	6.150e-20	1.020e-19	1.020e-19
2.160e-20	1.450e-20	2.480e-19	6.180e-19	2.430e-18						
T1-207	B				B	0.0000	2.862e+02	1.800e-03	1.000e-07	1.000e-07
5.480e-05	1.000e+00	1.000e+00	2.000e-02	3.000e-03	2.000e-01	6.000e-01				
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	9.972e-01
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
1.320e-16	1.320e-16	3.140e-16	1.700e-16	1.920e-16	1.430e-16	1.270e-16	1.320e-16	1.300e-16	1.450e-16	1.450e-16
1.450e-16	1.600e-16	1.290e-16	1.250e-16	1.540e-16	3.070e-14	1.450e-16	1.670e-16	1.510e-16	1.690e-16	1.690e-16
1.300e-16	1.410e-16	1.230e-16	1.250e-16	1.620e-16	4.610e-16					
3.150e-18	3.380e-18	7.200e-18	3.270e-18	4.110e-18	3.390e-18	3.210e-18	3.290e-18	3.340e-18	3.470e-18	3.470e-18
3.390e-18	4.030e-18	3.160e-18	3.030e-18	3.550e-18	5.240e-15	3.420e-18	4.200e-18	3.330e-18	3.760e-18	3.760e-18
3.110e-18	3.300e-18	3.190e-18	3.030e-18	3.590e-18	5.610e-17					



0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00						
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00						
1.520e-19	5.770e-19	1.350e-18	2.200e-19	1.580e-18	2.980e-20	3.060e-18	9.280e-19	1.840e-19	3.190e-19	
7.540e-20	5.380e-20	8.640e-19	2.070e-18	1.150e-17						
3.350e-21	1.370e-20	3.420e-20	5.140e-21	3.510e-20	6.840e-22	5.230e-19	1.990e-20	4.500e-21	8.170e-21	
1.810e-21	1.200e-21	1.990e-20	5.070e-20	7.210e-19						
Po-211	B				B	0.0000	5.160e-01	1.800e-03	1.000e-07	
5.480e-05	1.000e-01	1.000e-01	5.000e-03	4.000e-04	1.000e-03	1.000e-01				
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	2.760e-03
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
3.250e-16	3.200e-16	6.250e-16	4.180e-16	4.440e-16	3.460e-16	3.140e-16	3.240e-16	3.210e-16	3.490e-16	
3.510e-16	3.800e-16	3.160e-16	3.090e-16	3.800e-16	4.680e-16	3.530e-16	3.910e-16	3.610e-16	4.000e-16	
3.200e-16	3.440e-16	3.040e-16	3.090e-16	3.890e-16	3.730e-16					
6.880e-18	7.280e-18	1.110e-17	7.230e-18	7.980e-18	7.270e-18	7.130e-18	7.210e-18	7.420e-18	7.340e-18	
7.280e-18	8.270e-18	7.200e-18	6.710e-18	7.790e-18	1.170e-17	7.330e-18	8.350e-18	7.110e-18	7.930e-18	
6.840e-18	7.190e-18	7.080e-18	6.710e-18	7.630e-18	7.760e-18					
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00						
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00						
3.770e-19	1.400e-18	3.330e-18	5.320e-19	3.800e-18	5.930e-20	4.670e-20	2.150e-18	4.500e-19	7.740e-19	
1.820e-19	1.270e-19	2.130e-18	5.030e-18	2.040e-17						
7.570e-21	2.940e-20	7.540e-20	1.100e-20	7.460e-20	1.050e-21	1.170e-21	3.860e-20	1.020e-20	1.760e-20	
3.820e-21	2.520e-21	4.370e-20	1.080e-19	4.250e-19						
25										
Es-255	B				B	0.0000	3.439e+06	1.800e-03	1.000e-07	
5.480e-05	5.000e-04	5.000e-04	2.000e-05	2.000e-06	1.000e-03	1.000e-01				



0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
2.950e-17	3.000e-17	5.380e-17	3.720e-17	3.960e-17	3.170e-17	2.910e-17	2.990e-17	2.950e-17	3.180e-17
3.200e-17	3.430e-17	2.930e-17	2.880e-17	3.450e-17	1.610e-15	3.210e-17	3.510e-17	3.340e-17	3.610e-17
2.990e-17	3.150e-17	2.850e-17	2.880e-17	3.500e-17	4.950e-17				
5.570e-19	6.320e-19	9.920e-19	5.900e-19	6.860e-19	6.020e-19	5.910e-19	5.990e-19	6.080e-19	6.150e-19
6.040e-19	6.930e-19	5.810e-19	5.630e-19	6.420e-19	4.510e-18	6.050e-19	7.100e-19	6.020e-19	6.310e-19
5.650e-19	5.910e-19	5.850e-19	5.630e-19	6.320e-19	6.830e-19				
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
3.450e-20	1.280e-19	3.070e-19	4.850e-20	3.420e-19	5.110e-21	1.610e-19	1.910e-19	4.170e-20	7.250e-20
1.650e-20	1.150e-20	1.940e-19	4.590e-19	2.010e-18					
6.200e-22	2.430e-21	6.220e-21	9.150e-22	6.180e-21	9.420e-23	4.500e-22	3.310e-21	8.270e-22	1.530e-21
3.200e-22	2.010e-22	3.600e-21	9.000e-21	3.570e-20					
Fm-255	Particulate				M	1.0000	7.225e+04	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	2.000e-04	8.000e-06	2.000e-03	1.000e-01			
9.200e-01	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
3.460e-12	4.050e-12	1.080e-09	3.390e-12	3.390e-12	1.680e-09	3.700e-09	1.530e-08	2.450e-08	3.580e-12
1.140e-10	3.840e-12	2.010e-11	3.790e-12	8.980e-11	3.440e-12	3.560e-12	1.160e-11	3.390e-12	3.390e-12
4.750e-12	3.420e-12	4.420e-12	3.390e-12	3.410e-12	2.560e-09				
1.758e-10	1.814e-10	6.069e-08	1.756e-10	1.757e-10	4.271e-10	7.277e-10	2.481e-09	3.870e-09	1.757e-10
6.250e-09	1.760e-10	6.500e-10	1.758e-10	5.017e-09	1.756e-10	1.757e-10	6.487e-10	1.757e-10	1.756e-10
1.759e-10	1.760e-10	1.758e-10	6.749e-07	1.559e-06	1.892e-07				
4.900e-17	5.760e-17	3.230e-16	6.430e-17	2.100e-16	6.070e-17	4.420e-17	4.850e-17	4.450e-17	6.980e-17
6.080e-17	1.150e-16	4.030e-17	4.170e-17	6.690e-17	4.280e-16	5.910e-17	1.400e-16	7.520e-17	1.130e-16
4.630e-17	5.640e-17	4.210e-17	4.170e-17	7.170e-17	9.470e-17				



1.740e-18	2.640e-18	1.880e-17	1.500e-18	1.840e-17	2.500e-18	1.500e-18	1.680e-18	1.550e-18	3.610e-18
2.380e-18	1.160e-17	2.010e-18	1.270e-18	3.300e-18	6.390e-17	2.110e-18	1.540e-17	3.340e-18	5.710e-18
1.520e-18	2.120e-18	1.390e-18	1.270e-18	2.700e-18	7.160e-18				
6.090e-16	1.030e-12	1.180e-11	1.710e-13	1.290e-14	9.210e-14	1.310e-16	3.660e-15	4.550e-14	1.590e-14
2.950e-15	1.300e-16	5.200e-14	8.020e-14	1.330e-11					
1.453e-13	6.479e-13	6.946e-12	6.853e-12	6.786e-09	3.910e-12	9.210e-15	1.450e-13	5.935e-13	3.392e-13
6.791e-14	2.093e-14	1.044e-12	9.724e-13	6.808e-09					
4.810e-20	2.450e-19	4.830e-19	9.210e-20	7.010e-19	3.070e-20	4.270e-20	1.010e-18	5.730e-20	1.390e-19
3.630e-20	3.600e-20	3.760e-19	1.020e-18	4.320e-18					
1.280e-21	1.010e-20	1.680e-20	3.610e-21	2.640e-20	1.790e-21	6.380e-21	8.890e-20	2.860e-21	6.380e-21
1.880e-21	1.820e-21	1.850e-20	7.250e-20	2.590e-19					
Bk-251	B				B	0.0000	3.336e+03	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	2.000e-05	2.000e-06	1.000e-03	1.000e-01			
8.000e-02	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
2.700e-15	2.870e-15	1.100e-14	3.510e-15	4.380e-15	3.030e-15	2.570e-15	2.730e-15	2.590e-15	3.110e-15
3.100e-15	3.470e-15	2.460e-15	2.530e-15	3.110e-15	2.140e-14	3.090e-15	3.750e-15	3.340e-15	3.720e-15
2.630e-15	2.970e-15	2.510e-15	2.530e-15	3.530e-15	3.560e-15				
6.340e-17	7.060e-17	2.090e-16	6.580e-17	8.860e-17	6.960e-17	6.420e-17	6.690e-17	6.670e-17	7.050e-17
6.960e-17	8.400e-17	6.340e-17	6.210e-17	7.170e-17	1.780e-15	7.040e-17	8.880e-17	6.750e-17	7.710e-17
6.680e-17	6.770e-17	6.520e-17	6.210e-17	7.430e-17	9.390e-17				
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
2.930e-18	1.220e-17	2.760e-17	4.700e-18	3.450e-17	1.040e-18	2.140e-18	2.120e-17	3.500e-18	6.940e-18
1.620e-18	1.180e-18	1.750e-17	4.320e-17	1.800e-16					
6.790e-20	2.810e-19	6.900e-19	1.050e-19	7.260e-19	1.980e-20	1.780e-19	4.280e-19	9.020e-20	1.710e-19
3.670e-20	2.450e-20	4.020e-19	1.040e-18	4.260e-18					
Cf-251	Particulate				M	1.0000	2.840e+10	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	6.000e-05	2.000e-06	1.000e-03	1.000e-01			



0.000e+00	1.000e+00	1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
1.130e-10	8.090e-11	1.400e-05	4.060e-11	2.600e-11	1.650e-09	4.120e-09	2.400e-08	7.000e-08	9.000e-11	
9.680e-07	5.830e-11	1.460e-07	9.220e-11	1.120e-06	2.880e-11	4.910e-11	1.460e-07	3.350e-11	3.160e-11	
1.610e-10	5.680e-11	1.140e-10	3.160e-11	5.600e-11	3.580e-07					
1.980e-08	5.404e-09	2.601e-03	7.523e-09	4.939e-09	7.559e-09	1.135e-08	1.595e-08	2.587e-08	1.319e-08	
1.796e-04	7.703e-09	2.697e-05	1.402e-08	2.083e-04	4.473e-09	6.707e-09	2.697e-05	6.430e-09	5.940e-09	
2.111e-08	1.052e-08	7.796e-09	5.354e-06	2.915e-05	6.888e-05					
3.870e-15	4.070e-15	1.460e-14	5.020e-15	6.120e-15	4.310e-15	3.680e-15	3.900e-15	3.720e-15	4.400e-15	
4.400e-15	4.900e-15	3.550e-15	3.650e-15	4.470e-15	1.100e-14	4.400e-15	5.270e-15	4.720e-15	5.240e-15	
3.770e-15	4.240e-15	3.600e-15	3.650e-15	4.990e-15	4.840e-15					
9.000e-17	9.850e-17	2.680e-16	9.340e-17	1.200e-16	9.790e-17	9.090e-17	9.440e-17	9.420e-17	9.850e-17	
9.790e-17	1.160e-16	9.090e-17	8.780e-17	1.010e-16	1.710e-16	9.890e-17	1.210e-16	9.480e-17	1.070e-16	
9.230e-17	9.490e-17	9.200e-17	8.780e-17	1.040e-16	1.070e-16					
1.880e-16	5.760e-13	8.160e-11	7.350e-12	2.040e-15	4.080e-12	2.000e-17	5.090e-16	6.410e-13	5.560e-16	
1.020e-16	6.730e-17	1.320e-12	3.320e-15	9.560e-11						
3.101e-12	4.867e-12	3.031e-11	1.157e-07	1.276e-07	9.159e-08	1.194e-13	3.413e-12	1.090e-08	6.221e-12	
2.755e-12	3.633e-13	2.487e-08	2.529e-11	3.707e-07						
4.260e-18	1.740e-17	3.950e-17	6.670e-18	4.880e-17	1.390e-18	1.100e-18	2.960e-17	5.050e-18	9.840e-18	
2.290e-18	1.670e-18	2.510e-17	6.160e-17	2.540e-16						
9.610e-20	3.950e-19	9.740e-19	1.480e-19	1.020e-18	2.540e-20	1.710e-20	5.800e-19	1.290e-19	2.380e-19	
5.120e-20	3.410e-20	5.670e-19	1.460e-18	5.730e-18						
Cm-247	Particulate				M	1.0000	4.923e+14	1.800e-03	1.000e-07	
5.480e-05	5.000e-04	5.000e-04	2.000e-05	2.000e-06	1.000e-03	1.000e-01				
0.000e+00	0.000e+00	0.000e+00	1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
1.470e-08	1.470e-08	8.460e-06	1.460e-08	1.450e-08	1.580e-08	1.800e-08	3.520e-08	7.580e-08	4.290e-08	
5.110e-07	1.460e-08	1.640e-07	1.470e-08	2.850e-07	1.450e-08	1.460e-08	1.620e-07	1.450e-08	1.450e-08	
1.480e-08	1.460e-08	1.470e-08	1.450e-08	1.460e-08	1.910e-07					
2.708e-06	2.682e-06	1.567e-03	2.692e-06	2.681e-06	2.685e-06	2.691e-06	2.694e-06	2.703e-06	7.945e-06	
9.485e-05	2.688e-06	3.037e-05	2.697e-06	5.287e-05	2.682e-06	2.685e-06	3.009e-05	2.685e-06	2.686e-06	
2.705e-06	2.692e-06	2.686e-06	7.511e-06	2.478e-05	3.715e-05					
1.200e-14	1.200e-14	2.830e-14	1.530e-14	1.680e-14	1.280e-14	1.130e-14	1.180e-14	1.150e-14	1.290e-14	
1.290e-14	1.410e-14	1.070e-14	1.120e-14	1.380e-14	1.790e-14	1.300e-14	1.460e-14	1.340e-14	1.490e-14	
1.160e-14	1.260e-14	1.100e-14	1.120e-14	1.440e-14	1.380e-14					



2.600e-16	2.830e-16	4.830e-16	2.760e-16	3.130e-16	2.770e-16	2.680e-16	2.740e-16	2.770e-16	2.780e-16
2.780e-16	3.190e-16	2.930e-16	2.550e-16	2.970e-16	3.710e-16	2.790e-16	3.240e-16	2.820e-16	3.060e-16
2.620e-16	2.730e-16	2.690e-16	2.550e-16	2.950e-16	2.980e-16				
4.810e-11	1.920e-10	3.920e-09	2.680e-09	3.480e-10	2.030e-09	3.360e-12	6.200e-11	6.480e-10	1.450e-10
9.300e-11	9.040e-12	3.410e-10	4.940e-10	1.100e-08					
8.218e-10	9.086e-10	1.520e-09	7.333e-08	1.019e-07	5.582e-08	3.947e-11	5.452e-10	1.466e-08	2.179e-09
2.052e-09	1.032e-10	8.124e-09	2.675e-09	2.647e-07					
1.350e-17	5.170e-17	1.200e-16	1.960e-17	1.410e-16	2.690e-18	1.790e-18	8.120e-17	1.520e-17	2.900e-17
6.710e-18	4.740e-18	7.750e-17	1.850e-16	7.500e-16					
2.850e-19	1.120e-18	2.840e-18	4.210e-19	2.880e-18	4.590e-20	3.700e-20	1.510e-18	4.170e-19	6.840e-19
1.450e-19	9.740e-20	1.670e-18	4.140e-18	1.630e-17					
Pu-243	Particulate				M	1.0000	1.784e+04	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	1.000e-04	1.000e-06	1.000e-03	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
4.430e-13	1.050e-12	1.550e-12	4.140e-15	5.660e-14	1.790e-10	2.870e-10	6.050e-10	4.050e-10	9.380e-13
7.790e-13	5.760e-13	4.700e-12	1.440e-12	7.700e-13	1.500e-13	9.130e-13	1.830e-13	3.480e-14	6.670e-15
2.530e-12	2.250e-13	2.750e-12	6.670e-15	1.220e-13	8.520e-11				
6.390e-13	6.097e-13	1.227e-10	4.802e-13	5.830e-13	2.606e-11	4.129e-11	8.675e-11	5.826e-11	9.676e-13
2.594e-11	6.397e-13	2.455e-12	7.425e-13	6.334e-12	4.782e-13	6.606e-13	1.830e-12	6.886e-13	5.298e-13
8.323e-13	7.757e-13	8.143e-13	4.098e-10	3.054e-10	6.290e-11				
6.880e-16	7.450e-16	3.230e-15	9.080e-16	1.210e-15	7.910e-16	6.470e-16	6.940e-16	6.540e-16	8.200e-16
8.060e-16	9.260e-16	6.040e-16	6.290e-16	7.860e-16	8.110e-15	8.060e-16	1.020e-15	8.820e-16	9.930e-16
6.760e-16	7.640e-16	6.270e-16	6.290e-16	9.300e-16	9.650e-16				
1.740e-17	1.980e-17	7.230e-17	1.820e-17	2.530e-17	1.960e-17	1.780e-17	1.870e-17	1.850e-17	1.990e-17
1.980e-17	2.370e-17	1.810e-17	1.710e-17	1.950e-17	1.150e-16	1.990e-17	2.510e-17	2.020e-17	2.180e-17
1.800e-17	1.900e-17	1.780e-17	1.710e-17	2.130e-17	2.270e-17				
2.700e-15	3.100e-12	9.450e-11	4.040e-14	6.320e-14	1.700e-15	8.340e-16	2.110e-14	2.150e-13	1.170e-13
1.740e-14	3.470e-16	1.670e-13	4.280e-13	9.870e-11					
4.725e-16	3.954e-14	1.675e-13	1.481e-14	1.326e-12	4.345e-15	1.797e-17	6.682e-16	1.584e-15	9.463e-16
3.015e-16	4.805e-17	3.532e-15	2.852e-15	1.562e-12					
7.250e-19	3.190e-18	6.990e-18	1.220e-18	9.090e-18	3.070e-19	8.090e-19	5.850e-18	8.590e-19	1.800e-18
4.270e-19	3.160e-19	4.410e-18	1.110e-17	4.710e-17					
1.820e-20	7.910e-20	1.920e-19	3.000e-20	2.080e-19	6.870e-21	1.150e-20	1.220e-19	2.570e-20	4.790e-20
1.040e-20	6.940e-21	1.090e-19	2.890e-19	1.160e-18					
Am-243	Particulate				M	1.0000	2.326e+11	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	5.000e-05	2.000e-06	1.000e-03	1.000e-01			



0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
1.550e-08	1.550e-08	8.990e-06	1.550e-08	1.540e-08	1.670e-08	1.870e-08	3.530e-08	7.600e-08	4.550e-08
5.440e-07	1.550e-08	1.740e-07	1.550e-08	3.030e-07	1.540e-08	1.540e-08	1.730e-07	1.540e-08	1.540e-08
1.560e-08	1.550e-08	1.550e-08	1.540e-08	1.550e-08	2.030e-07				
2.867e-06	2.850e-06	1.666e-03	2.856e-06	2.849e-06	2.852e-06	2.856e-06	2.859e-06	2.868e-06	8.451e-06
1.010e-04	2.854e-06	3.233e-05	2.861e-06	5.624e-05	2.849e-06	2.852e-06	3.202e-05	2.851e-06	2.853e-06
2.867e-06	2.857e-06	2.853e-06	7.859e-06	2.731e-05	3.963e-05				
1.410e-15	1.560e-15	7.730e-15	1.890e-15	2.700e-15	1.670e-15	1.310e-15	1.420e-15	1.320e-15	1.750e-15
1.690e-15	2.000e-15	1.210e-15	1.260e-15	1.600e-15	2.840e-15	1.690e-15	2.270e-15	1.890e-15	2.160e-15
1.390e-15	1.580e-15	1.260e-15	1.260e-15	1.990e-15	1.920e-15				
3.870e-17	4.470e-17	1.930e-16	4.060e-17	5.720e-17	4.490e-17	3.960e-17	4.190e-17	4.110e-17	4.540e-17
4.540e-17	5.350e-17	4.030e-17	3.810e-17	4.260e-17	7.850e-17	4.570e-17	5.670e-17	4.750e-17	4.940e-17
3.870e-17	4.290e-17	3.930e-17	3.810e-17	4.920e-17	4.960e-17				
1.710e-17	1.340e-12	2.350e-13	1.600e-15	1.350e-16	9.570e-16	1.350e-18	2.790e-17	3.000e-16	4.200e-17
5.350e-17	3.820e-18	1.870e-16	3.120e-16	1.580e-12					
8.729e-10	9.645e-10	1.616e-09	7.807e-08	1.125e-07	5.929e-08	4.198e-11	5.781e-10	1.562e-08	2.314e-09
2.178e-09	1.100e-10	8.740e-09	2.830e-09	2.857e-07					
1.430e-18	6.740e-18	1.420e-17	2.560e-18	1.950e-17	7.340e-19	2.830e-19	1.300e-17	1.720e-18	3.770e-18
9.100e-19	6.880e-19	8.980e-18	2.320e-17	9.770e-17					
3.890e-20	1.810e-19	4.290e-19	6.880e-20	4.810e-19	1.830e-20	7.830e-21	2.760e-19	5.730e-20	1.080e-19
2.360e-20	1.570e-20	2.390e-19	6.460e-19	2.590e-18					
Np-239	Particulate				M	1.0000	2.036e+05	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	1.000e-03	1.000e-05	2.000e-02	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	1.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
9.000e-12	4.690e-11	2.570e-11	5.130e-14	1.090e-12	3.450e-10	8.520e-10	3.930e-09	8.700e-09	2.100e-11
1.370e-11	1.660e-11	1.490e-10	1.980e-11	2.590e-11	4.930e-12	1.500e-11	1.160e-11	7.980e-13	1.430e-13
5.090e-11	3.450e-12	7.040e-11	1.430e-13	2.080e-12	7.980e-10				
1.460e-11	1.725e-11	4.866e-10	4.213e-12	1.252e-11	6.047e-11	1.339e-10	6.067e-10	1.339e-09	2.222e-11
3.068e-11	1.054e-11	3.069e-11	1.330e-11	4.123e-11	5.106e-12	1.187e-11	8.985e-12	1.659e-11	7.608e-12
1.404e-11	2.242e-11	1.361e-11	2.074e-09	4.685e-09	7.012e-10				
5.950e-15	6.220e-15	2.120e-14	7.700e-15	9.220e-15	6.570e-15	5.640e-15	5.970e-15	5.710e-15	6.710e-15
6.710e-15	7.440e-15	5.410e-15	5.590e-15	6.860e-15	1.630e-14	6.710e-15	7.960e-15	7.170e-15	7.940e-15
5.790e-15	6.470e-15	5.520e-15	5.590e-15	7.590e-15	7.350e-15				



1.370e-16	1.500e-16	3.880e-16	1.430e-16	1.780e-16	1.490e-16	1.390e-16	1.440e-16	1.440e-16	1.490e-16
1.490e-16	1.740e-16	1.410e-16	1.340e-16	1.540e-16	2.640e-16	1.500e-16	1.800e-16	1.450e-16	1.620e-16
1.400e-16	1.450e-16	1.400e-16	1.340e-16	1.580e-16	1.620e-16				
2.550e-15	6.950e-13	1.750e-11	6.540e-14	4.310e-14	2.190e-14	6.750e-16	1.350e-14	1.540e-13	9.250e-14
1.270e-14	6.290e-16	1.150e-13	2.250e-13	1.900e-11					
1.352e-14	9.150e-14	2.078e-12	3.343e-14	2.032e-11	2.476e-14	2.546e-16	2.002e-14	2.840e-14	3.193e-14
8.504e-15	8.781e-16	1.317e-13	6.915e-14	2.285e-11					
6.550e-18	2.650e-17	6.050e-17	1.020e-17	7.420e-17	2.010e-18	1.630e-18	4.450e-17	7.700e-18	1.500e-17
3.490e-18	2.530e-18	3.850e-17	9.420e-17	3.880e-16					
1.470e-19	6.020e-19	1.490e-18	2.260e-19	1.540e-18	3.680e-20	2.630e-20	8.600e-19	2.010e-19	3.630e-19
7.750e-20	5.160e-20	8.640e-19	2.210e-18	8.690e-18					
Pu-239	Particulate				M	1.0000	7.609e+11	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	1.000e-04	1.000e-06	1.000e-03	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	1.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
1.450e-08	1.450e-08	8.230e-06	1.450e-08	1.450e-08	1.570e-08	1.750e-08	3.260e-08	6.760e-08	3.380e-08
1.730e-06	1.450e-08	1.080e-07	1.450e-08	3.910e-07	1.450e-08	1.450e-08	1.100e-07	1.450e-08	1.450e-08
1.450e-08	1.450e-08	1.450e-08	1.450e-08	1.450e-08	2.510e-07				
2.683e-06	2.683e-06	1.524e-03	2.683e-06	2.683e-06	2.683e-06	2.684e-06	2.687e-06	2.694e-06	6.266e-06
3.201e-04	2.683e-06	1.999e-05	2.683e-06	7.260e-05	2.683e-06	2.683e-06	2.035e-05	2.683e-06	2.683e-06
2.683e-06	2.683e-06	2.683e-06	7.604e-06	2.611e-05	4.850e-05				
2.160e-18	2.370e-18	1.060e-17	2.790e-18	8.150e-18	2.490e-18	2.000e-18	2.140e-18	2.020e-18	2.710e-18
2.510e-18	4.560e-18	1.870e-18	1.940e-18	2.870e-18	2.030e-17	2.470e-18	5.230e-18	2.900e-18	4.190e-18
2.080e-18	2.410e-18	1.930e-18	1.940e-18	2.890e-18	3.770e-18				
6.560e-20	8.610e-20	6.340e-19	5.770e-20	8.310e-19	8.160e-20	5.640e-20	6.050e-20	6.000e-20	1.120e-19
7.780e-20	5.210e-19	8.480e-20	5.150e-20	1.290e-19	4.040e-18	6.980e-20	6.540e-19	1.040e-19	1.910e-19
5.950e-20	7.400e-20	5.570e-20	5.150e-20	8.660e-20	3.060e-19				
2.120e-13	4.750e-13	3.970e-12	3.110e-11	1.370e-12	8.130e-12	1.340e-14	2.400e-13	1.650e-12	5.350e-13
1.750e-13	3.650e-14	1.290e-12	1.490e-12	5.070e-11					
9.835e-10	1.150e-09	1.999e-09	1.765e-07	1.086e-07	5.264e-08	5.036e-11	7.113e-10	9.103e-09	2.525e-09
1.493e-09	1.273e-10	9.831e-09	3.662e-09	3.694e-07					
2.280e-21	1.010e-20	2.160e-20	3.800e-21	2.830e-20	1.010e-21	2.030e-21	3.940e-20	2.660e-21	5.730e-21
1.410e-21	1.330e-21	1.610e-20	4.300e-20	1.790e-19					
5.490e-23	3.290e-22	6.220e-22	1.180e-22	8.470e-22	6.020e-23	4.030e-22	4.010e-21	1.210e-22	2.080e-22
5.830e-23	6.080e-23	7.240e-22	3.170e-21	1.080e-20					
U-235m	B				B	0.0000	1.560e+03	1.800e-03	1.000e-07
5.480e-05	2.000e-02	2.000e-02	8.000e-04	4.000e-04	2.000e-03	1.000e-01			



1.300e-16	1.380e-16	3.320e-16	1.340e-16	1.600e-16	1.390e-16	1.300e-16	1.350e-16	1.350e-16	1.380e-16
1.390e-16	1.590e-16	1.310e-16	1.260e-16	1.440e-16	2.060e-16	1.400e-16	1.620e-16	1.330e-16	1.470e-16
1.280e-16	1.340e-16	1.310e-16	1.260e-16	1.470e-16	1.490e-16				
2.520e-15	1.610e-12	1.040e-10	3.550e-14	5.250e-14	1.760e-14	8.120e-16	1.660e-14	2.800e-13	2.020e-13
8.920e-14	6.060e-16	2.670e-13	3.730e-13	1.070e-10					
4.807e-11	5.681e-11	1.103e-10	3.763e-10	8.104e-08	1.791e-10	2.452e-12	3.521e-11	5.562e-11	1.225e-10
4.419e-10	6.166e-12	7.702e-11	1.805e-10	8.273e-08					
6.270e-18	2.510e-17	5.750e-17	9.620e-18	7.000e-17	1.840e-18	9.130e-19	4.150e-17	7.440e-18	1.420e-17
3.290e-18	2.380e-18	3.670e-17	8.930e-17	3.660e-16					
1.370e-19	5.610e-19	1.390e-18	2.110e-19	1.440e-18	3.150e-20	2.060e-20	7.730e-19	1.860e-19	3.340e-19
7.180e-20	4.680e-20	8.080e-19	2.060e-18	8.070e-18					
Th-231	Particulate				S	1.0000	9.187e+04	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	1.000e-04	5.000e-06	1.000e-03	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
4.840e-13	2.860e-12	5.820e-12	1.790e-14	6.000e-14	1.950e-10	4.400e-10	1.930e-09	3.400e-09	1.360e-12
9.860e-13	1.370e-12	1.870e-11	1.530e-12	1.850e-12	2.890e-13	9.610e-13	5.650e-13	4.320e-14	1.990e-14
4.550e-12	1.990e-13	4.860e-12	1.990e-14	1.240e-13	3.360e-10				
7.100e-13	5.858e-13	5.646e-11	2.085e-13	6.779e-13	3.132e-11	7.003e-11	3.067e-10	5.398e-10	1.164e-12
2.281e-12	9.737e-13	3.449e-12	6.967e-13	2.756e-12	2.802e-13	6.814e-13	5.699e-13	7.950e-13	3.396e-13
9.613e-13	1.389e-12	8.998e-13	8.839e-10	1.590e-09	2.454e-10				
3.200e-16	3.530e-16	1.650e-15	4.220e-16	6.760e-16	3.730e-16	2.990e-16	3.220e-16	3.010e-16	3.950e-16
3.800e-16	4.770e-16	2.780e-16	2.880e-16	3.750e-16	2.490e-15	3.780e-16	5.400e-16	4.260e-16	5.040e-16
3.110e-16	3.580e-16	2.880e-16	2.880e-16	4.410e-16	4.630e-16				
8.690e-18	1.050e-17	4.700e-17	8.740e-18	2.590e-17	1.030e-17	8.550e-18	9.130e-18	8.870e-18	1.140e-17
1.030e-17	1.960e-17	8.920e-18	8.030e-18	1.070e-17	7.980e-17	1.020e-17	2.300e-17	1.120e-17	1.390e-17
8.760e-18	9.660e-18	8.460e-18	8.030e-18	1.120e-17	1.520e-17				
1.220e-15	5.910e-12	5.010e-10	1.570e-14	1.670e-14	6.310e-15	2.410e-16	6.850e-15	5.500e-14	3.160e-14
1.190e-14	3.470e-16	3.000e-13	7.450e-14	5.070e-10					
5.869e-16	4.751e-14	9.174e-13	1.453e-15	6.926e-12	1.575e-15	9.823e-18	9.365e-16	3.090e-15	9.591e-16
2.708e-16	2.996e-17	2.875e-15	3.820e-15	7.906e-12					
3.310e-19	1.510e-18	3.230e-18	5.760e-19	4.310e-18	1.570e-19	2.480e-19	3.270e-18	3.950e-19	8.540e-19
2.050e-19	1.600e-19	2.100e-18	5.380e-18	2.270e-17					
8.410e-21	4.160e-20	9.310e-20	1.560e-20	1.100e-19	4.460e-21	7.960e-21	1.250e-19	1.270e-20	2.540e-20
5.930e-21	4.430e-21	6.010e-20	1.800e-19	6.940e-19					
Pa-231	Particulate				M	1.0000	1.034e+12	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	5.000e-06	5.000e-06	1.000e-02	1.000e-01			



0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
5.610e-08	5.610e-08	2.510e-05	5.600e-08	5.600e-08	5.720e-08	5.910e-08	8.360e-08	1.360e-07	3.400e-07	
6.550e-07	5.600e-08	2.150e-07	5.600e-08	9.260e-07	5.600e-08	5.620e-08	2.180e-07	5.600e-08	5.600e-08	
5.600e-08	5.600e-08	5.600e-08	5.600e-08	5.600e-08	4.790e-07					
1.040e-05	1.041e-05	4.665e-03	1.039e-05	1.039e-05	1.039e-05	1.040e-05	1.207e-05	1.513e-05	6.343e-05	
1.223e-04	1.039e-05	3.999e-05	1.039e-05	1.726e-04	1.039e-05	1.043e-05	4.061e-05	1.039e-05	1.039e-05	
1.039e-05	1.039e-05	1.039e-05	1.555e-05	3.319e-05	9.117e-05					
1.210e-15	1.240e-15	3.440e-15	1.550e-15	1.840e-15	1.310e-15	1.140e-15	1.200e-15	1.160e-15	1.330e-15	
1.330e-15	1.490e-15	1.090e-15	1.140e-15	1.400e-15	2.410e-15	1.340e-15	1.580e-15	1.410e-15	1.570e-15	
1.170e-15	1.290e-15	1.120e-15	1.140e-15	1.490e-15	1.450e-15					
2.760e-17	3.010e-17	6.830e-17	2.870e-17	4.330e-17	2.980e-17	2.770e-17	2.870e-17	2.870e-17	3.060e-17	
2.980e-17	3.950e-17	2.950e-17	2.640e-17	3.180e-17	8.810e-17	2.990e-17	4.200e-17	3.020e-17	3.420e-17	
2.710e-17	2.880e-17	2.780e-17	2.640e-17	3.180e-17	3.470e-17					
2.890e-15	1.700e-12	1.180e-10	4.650e-14	6.740e-14	1.130e-14	1.200e-15	2.220e-14	3.930e-13	2.400e-13	
2.330e-14	4.760e-16	3.440e-13	5.170e-13	1.220e-10						
2.726e-09	3.047e-09	6.272e-09	5.314e-08	1.160e-07	1.386e-07	1.281e-10	1.763e-09	1.522e-08	7.425e-09	
1.146e-08	3.419e-10	2.032e-08	8.619e-09	3.850e-07						
1.350e-18	5.290e-18	1.220e-17	2.020e-18	1.460e-17	3.270e-19	2.400e-19	8.890e-18	1.550e-18	3.000e-18	
6.920e-19	5.000e-19	7.860e-18	1.910e-17	7.750e-17						
2.910e-20	1.200e-19	2.960e-19	4.520e-20	3.110e-19	6.490e-21	8.790e-21	2.090e-19	4.200e-20	7.280e-20	
1.590e-20	1.090e-20	1.780e-19	4.640e-19	1.810e-18						
Ac-227	Particulate				M	1.0000	6.871e+08	1.800e-03	1.000e-07	
5.480e-05	5.000e-04	5.000e-04	2.000e-05	2.000e-06	1.000e-03	1.000e-01				
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
0.000e+00	0.000e+00	1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
4.730e-08	4.740e-08	9.350e-06	4.730e-08	4.730e-08	4.730e-08	4.740e-08	5.580e-08	7.510e-08	7.110e-08	
2.020e-06	4.730e-08	1.870e-07	4.730e-08	4.920e-07	4.730e-08	4.750e-08	1.860e-07	4.730e-08	4.730e-08	
4.740e-08	4.730e-08	4.730e-08	4.730e-08	4.730e-08	3.220e-07					
8.711e-06	8.712e-06	1.726e-03	8.699e-06	8.696e-06	8.700e-06	8.704e-06	1.003e-05	1.246e-05	1.337e-05	
3.723e-04	8.699e-06	3.443e-05	8.707e-06	9.103e-05	8.696e-06	8.744e-06	3.417e-05	8.698e-06	8.697e-06	
8.715e-06	8.702e-06	8.700e-06	2.999e-05	9.248e-05	6.942e-05					
2.270e-18	2.510e-18	1.160e-17	2.970e-18	7.020e-18	2.640e-18	2.100e-18	2.260e-18	2.120e-18	2.860e-18	
2.680e-18	4.230e-18	1.960e-18	2.030e-18	2.860e-18	1.590e-17	2.650e-18	4.810e-18	3.070e-18	4.060e-18	
2.180e-18	2.540e-18	2.030e-18	2.030e-18	3.110e-18	3.650e-18					



6.870e-20	8.510e-20	5.300e-19	6.340e-20	5.900e-19	8.230e-20	6.130e-20	6.640e-20	6.430e-20	1.030e-19
8.040e-20	3.860e-19	7.770e-20	5.640e-20	1.100e-19	3.190e-18	7.640e-20	4.590e-19	9.670e-20	1.550e-19
6.430e-20	7.530e-20	6.070e-20	5.640e-20	8.940e-20	2.370e-19				
2.560e-15	1.600e-11	3.970e-12	1.630e-14	2.960e-14	7.280e-15	2.820e-16	7.350e-15	3.280e-15	5.580e-15
9.760e-15	9.960e-16	4.100e-15	4.710e-14	2.020e-11					
3.627e-09	4.018e-09	9.659e-09	3.290e-07	3.884e-07	7.512e-08	1.844e-10	2.550e-09	1.968e-08	9.242e-09
3.604e-09	4.632e-10	1.504e-08	1.266e-08	8.733e-07					
2.350e-21	1.070e-20	2.270e-20	4.060e-21	3.040e-20	1.100e-21	1.590e-21	3.390e-20	2.790e-21	6.070e-21
1.490e-21	1.290e-21	1.610e-20	4.230e-20	1.770e-19					
5.880e-23	3.320e-22	6.760e-22	1.220e-22	8.740e-22	5.030e-23	3.180e-22	2.850e-21	1.110e-22	2.060e-22
5.360e-23	4.940e-23	6.170e-22	2.540e-21	8.860e-21					
Th-227	Particulate				S	1.0000	1.614e+06	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	1.000e-04	5.000e-06	1.000e-03	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	9.862e-01	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
3.210e-10	3.660e-10	8.810e-08	3.130e-10	3.140e-10	1.780e-09	4.130e-09	2.620e-08	9.030e-08	2.590e-09
4.950e-09	3.300e-10	6.860e-10	3.290e-10	7.870e-09	3.180e-10	3.270e-10	5.520e-10	3.140e-10	3.130e-10
3.550e-10	3.160e-10	3.810e-10	3.130e-10	3.150e-10	9.020e-09				
3.833e-10	2.264e-10	6.836e-08	2.211e-10	3.827e-10	6.681e-10	1.166e-09	6.494e-09	2.086e-08	3.018e-09
4.224e-09	2.869e-10	5.165e-10	3.376e-10	5.945e-09	2.453e-10	3.334e-10	4.879e-10	4.214e-10	2.768e-10
2.755e-10	5.273e-10	2.312e-10	4.930e-06	6.377e-05	7.656e-06				
4.360e-15	4.480e-15	1.320e-14	5.600e-15	6.510e-15	4.740e-15	4.120e-15	4.340e-15	4.180e-15	4.810e-15
4.830e-15	5.330e-15	3.970e-15	4.100e-15	5.030e-15	7.850e-15	4.830e-15	5.650e-15	5.110e-15	5.660e-15
4.240e-15	4.670e-15	4.030e-15	4.100e-15	5.420e-15	5.220e-15				
9.910e-17	1.060e-16	2.380e-16	1.030e-16	1.270e-16	1.060e-16	1.000e-16	1.030e-16	1.040e-16	1.060e-16
1.060e-16	1.250e-16	1.040e-16	9.610e-17	1.110e-16	1.870e-16	1.070e-16	1.280e-16	1.050e-16	1.150e-16
9.750e-17	1.030e-16	1.010e-16	9.610e-17	1.130e-16	1.150e-16				
5.830e-11	1.440e-10	9.660e-10	1.310e-09	3.970e-10	1.450e-09	3.990e-12	7.560e-11	1.880e-10	1.440e-10
1.360e-10	1.110e-11	2.900e-10	4.810e-10	5.650e-09					
3.468e-13	1.004e-12	2.849e-11	4.763e-12	2.777e-07	4.631e-12	1.280e-14	4.532e-13	5.011e-13	4.220e-13
1.164e-12	3.283e-14	1.693e-12	1.844e-12	2.777e-07					
4.840e-18	1.910e-17	4.410e-17	7.320e-18	5.300e-17	1.250e-18	7.830e-19	3.150e-17	5.650e-18	1.080e-17
2.500e-18	1.800e-18	2.820e-17	6.840e-17	2.790e-16					
1.050e-19	4.280e-19	1.070e-18	1.610e-19	1.100e-18	2.260e-20	1.870e-20	6.140e-19	1.480e-19	2.560e-19
5.510e-20	3.660e-20	6.230e-19	1.590e-18	6.230e-18					
Fr-223	Particulate				M	1.0000	1.320e+03	1.800e-03	1.000e-07
5.480e-05	1.000e+00	1.000e+00	3.000e-02	8.000e-03	3.000e-02	1.000e-01			



0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	1.380e-02	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
2.340e-09	2.340e-09	2.340e-09	2.340e-09	2.340e-09	2.510e-09	2.340e-09	2.340e-09	2.340e-09	2.340e-09	2.340e-09
2.340e-09	2.340e-09	2.340e-09	2.340e-09	2.340e-09	2.340e-09	2.340e-09	2.340e-09	2.340e-09	2.340e-09	2.340e-09
2.340e-09	2.340e-09	2.340e-09	2.340e-09	2.340e-09	2.360e-09					
4.507e-10	4.506e-10	4.507e-10	4.505e-10	4.506e-10	4.680e-10	4.509e-10	4.510e-10	4.513e-10	4.507e-10	
4.507e-10	4.507e-10	4.506e-10	4.507e-10	4.507e-10	4.505e-10	4.507e-10	4.505e-10	4.508e-10	4.507e-10	
4.506e-10	4.509e-10	4.506e-10	6.376e-09	5.994e-08	7.592e-09					
1.510e-15	1.600e-15	6.080e-15	1.990e-15	2.650e-15	1.710e-15	1.410e-15	1.510e-15	1.430e-15	1.780e-15	
1.740e-15	2.030e-15	1.350e-15	1.370e-15	1.740e-15	2.320e-14	1.740e-15	2.240e-15	1.900e-15	2.170e-15	
1.470e-15	1.650e-15	1.360e-15	1.370e-15	2.000e-15	2.150e-15					
3.950e-17	4.460e-17	1.560e-16	4.150e-17	5.930e-17	4.500e-17	3.980e-17	4.180e-17	4.140e-17	4.610e-17	
4.510e-17	5.520e-17	3.930e-17	3.760e-17	4.380e-17	2.800e-15	4.550e-17	5.900e-17	4.560e-17	5.050e-17	
3.950e-17	4.280e-17	3.940e-17	3.760e-17	4.890e-17	7.730e-17					
1.740e-11	9.960e-11	2.470e-09	1.230e-10	1.920e-10	4.320e-10	1.870e-12	4.720e-11	2.160e-11	3.890e-11	
4.050e-11	6.500e-12	9.610e-11	2.940e-10	3.880e-09						
3.746e-13	7.081e-13	1.012e-12	5.141e-13	2.612e-10	3.087e-14	2.374e-14	3.745e-13	4.415e-13	8.478e-13	
1.759e-13	5.405e-14	1.025e-13	2.502e-12	2.683e-10						
1.600e-18	6.900e-18	1.520e-17	2.640e-18	1.960e-17	5.770e-19	2.310e-18	1.280e-17	1.920e-18	3.870e-18	
9.260e-19	6.910e-19	9.770e-18	2.440e-17	1.030e-16						
3.980e-20	1.820e-19	4.300e-19	6.840e-20	4.780e-19	1.480e-20	2.790e-19	2.860e-19	5.590e-20	1.080e-19	
2.400e-20	1.610e-20	2.460e-19	6.560e-19	2.880e-18						
Ra-223	Particulate				M	1.0000	9.876e+05	1.800e-03	1.000e-07	
5.480e-05	2.000e-01	2.000e-01	2.000e-03	1.000e-03	4.000e-02	2.000e-01				
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	1.000e+00	1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
1.280e-08	1.300e-08	2.940e-06	1.270e-08	1.270e-08	1.880e-08	2.620e-08	1.140e-07	2.940e-07	1.780e-08	
1.460e-07	1.280e-08	1.300e-08	1.280e-08	2.830e-07	1.270e-08	1.280e-08	1.270e-08	1.270e-08	1.270e-08	
1.280e-08	1.270e-08	1.290e-08	1.270e-08	1.270e-08	1.040e-07					
2.991e-09	2.974e-09	6.765e-07	2.920e-09	2.986e-09	3.998e-09	5.409e-09	2.228e-08	5.670e-08	3.984e-09	
3.361e-08	2.952e-09	2.976e-09	2.973e-09	6.504e-08	2.930e-09	2.968e-09	2.919e-09	3.004e-09	2.944e-09	
2.956e-09	3.047e-09	2.943e-09	4.559e-06	4.475e-05	5.392e-06					
4.710e-15	4.890e-15	1.610e-14	6.080e-15	7.230e-15	5.180e-15	4.450e-15	4.700e-15	4.510e-15	5.280e-15	
5.280e-15	5.850e-15	4.240e-15	4.400e-15	5.410e-15	9.270e-15	5.290e-15	6.250e-15	5.620e-15	6.230e-15	
4.590e-15	5.090e-15	4.340e-15	4.400e-15	5.970e-15	5.740e-15					



1.090e-16	1.190e-16	3.020e-16	1.140e-16	1.350e-16	1.180e-16	1.110e-16	1.150e-16	1.150e-16	1.180e-16
1.180e-16	1.350e-16	1.150e-16	1.060e-16	1.220e-16	1.750e-16	1.190e-16	1.380e-16	1.170e-16	1.280e-16
1.100e-16	1.150e-16	1.110e-16	1.060e-16	1.260e-16	1.270e-16				
1.830e-11	7.530e-11	5.680e-10	4.170e-10	1.940e-10	9.750e-10	1.920e-12	4.730e-11	2.610e-11	4.020e-11
2.940e-11	6.560e-12	2.290e-10	2.970e-10	2.920e-09					
2.490e-12	6.050e-12	8.343e-11	3.815e-11	1.947e-07	4.611e-11	1.538e-13	2.534e-12	2.901e-12	5.564e-12
1.544e-12	3.514e-13	1.520e-11	1.647e-11	1.949e-07					
5.180e-18	2.090e-17	4.770e-17	8.000e-18	5.840e-17	1.530e-18	9.250e-19	3.490e-17	6.030e-18	1.180e-17
2.750e-18	1.980e-18	3.040e-17	7.420e-17	3.050e-16					
1.160e-19	4.760e-19	1.190e-18	1.790e-19	1.230e-18	2.870e-20	1.750e-20	6.520e-19	1.640e-19	2.880e-19
6.140e-20	4.080e-20	6.850e-19	1.740e-18	6.860e-18					
Rn-219	B				B	0.0000	3.960e+00	0.000e+00	0.000e+00
5.480e-05	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	1.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
2.190e-15	2.220e-15	5.690e-15	2.800e-15	3.130e-15	2.360e-15	2.070e-15	2.170e-15	2.100e-15	2.380e-15
2.390e-15	2.610e-15	1.980e-15	2.070e-15	2.530e-15	3.530e-15	2.400e-15	2.730e-15	2.500e-15	2.760e-15
2.130e-15	2.330e-15	2.030e-15	2.070e-15	2.670e-15	2.560e-15				
4.830e-17	5.180e-17	9.590e-17	5.090e-17	5.800e-17	5.140e-17	4.930e-17	5.060e-17	5.100e-17	5.140e-17
5.150e-17	5.890e-17	5.280e-17	4.710e-17	5.470e-17	6.930e-17	5.170e-17	5.990e-17	5.140e-17	5.590e-17
4.790e-17	5.020e-17	4.950e-17	4.710e-17	5.460e-17	5.500e-17				
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
2.460e-18	9.530e-18	2.210e-17	3.620e-18	2.610e-17	5.400e-19	3.520e-19	1.510e-17	2.820e-18	5.370e-18
1.240e-18	8.790e-19	1.420e-17	3.410e-17	1.380e-16					
5.230e-20	2.080e-19	5.240e-19	7.810e-20	5.340e-19	9.110e-21	6.910e-21	2.800e-19	7.510e-20	1.250e-19
2.670e-20	1.780e-20	3.070e-19	7.660e-19	3.010e-18					
At-219	B				B	0.0000	5.600e+01	1.800e-03	1.000e-07
5.480e-05	1.000e+00	1.000e+00	1.000e-02	1.000e-02	2.000e-01	9.000e-01			



2.100e-16	2.250e-16	4.010e-16	2.200e-16	2.490e-16	2.240e-16	2.160e-16	2.200e-16	2.240e-16	2.250e-16
2.240e-16	2.540e-16	2.200e-16	2.060e-16	2.370e-16	7.190e-15	2.250e-16	2.580e-16	2.200e-16	2.400e-16
2.080e-16	2.190e-16	2.160e-16	2.060e-16	2.360e-16	3.070e-16				
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
1.120e-17	4.240e-17	9.990e-17	1.620e-17	1.160e-16	2.160e-18	5.570e-18	6.620e-17	1.320e-17	2.380e-17
5.510e-18	3.880e-18	6.400e-17	1.520e-16	6.230e-16					
2.290e-19	9.040e-19	2.290e-18	3.390e-19	2.310e-18	3.810e-20	7.170e-19	1.200e-18	3.130e-19	5.440e-19
1.170e-19	7.640e-20	1.330e-18	3.320e-18	1.370e-17					
Po-215	B				B	0.0000	1.781e-03	1.800e-03	1.000e-07
5.480e-05	1.000e-01	1.000e-01	5.000e-03	4.000e-04	1.000e-03	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	1.000e+00	0.000e+00	1.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
6.790e-18	6.800e-18	1.530e-17	8.640e-18	9.430e-18	7.230e-18	6.390e-18	6.690e-18	6.510e-18	7.270e-18
7.310e-18	7.960e-18	6.030e-18	6.360e-18	7.810e-18	1.010e-17	7.360e-18	8.230e-18	7.560e-18	8.370e-18
6.590e-18	7.140e-18	6.230e-18	6.360e-18	8.150e-18	7.800e-18				
1.470e-19	1.600e-19	2.650e-19	1.560e-19	1.760e-19	1.560e-19	1.510e-19	1.550e-19	1.570e-19	1.570e-19
1.570e-19	1.800e-19	1.670e-19	1.440e-19	1.680e-19	2.150e-19	1.570e-19	1.830e-19	1.600e-19	1.740e-19
1.490e-19	1.540e-19	1.520e-19	1.440e-19	1.670e-19	1.680e-19				
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
7.630e-21	2.920e-20	6.830e-20	1.110e-20	7.970e-20	1.450e-21	1.010e-21	4.560e-20	8.580e-21	1.640e-20
3.780e-21	2.670e-21	4.380e-20	1.050e-19	4.240e-19					
1.620e-22	6.300e-22	1.610e-21	2.380e-22	1.630e-21	2.520e-23	2.150e-23	8.500e-22	2.380e-22	3.870e-22
8.170e-23	5.540e-23	9.430e-22	2.340e-21	9.210e-21					
Pb-211	Particulate				M	1.0000	2.166e+03	1.800e-03	1.000e-07
5.480e-05	2.000e-01	2.000e-01	8.000e-04	3.000e-04	4.000e-03	1.000e-01			



0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
1.730e-11	1.910e-11	2.640e-10	1.690e-11	1.700e-11	1.160e-09	4.770e-10	2.230e-10	3.890e-11	1.730e-10	
5.300e-11	1.710e-11	1.780e-11	1.840e-11	3.930e-11	1.700e-11	1.780e-11	1.690e-11	1.690e-11	1.690e-11	
1.770e-11	1.720e-11	1.770e-11	1.690e-11	1.700e-11	1.780e-10					
1.550e-11	1.732e-11	2.467e-10	1.543e-11	1.547e-11	1.584e-10	6.911e-11	3.967e-11	1.797e-11	1.650e-10	
4.906e-11	1.547e-11	1.549e-11	1.561e-11	3.616e-11	1.541e-11	1.554e-11	1.538e-11	1.552e-11	1.545e-11	
1.550e-11	1.555e-11	1.547e-11	6.989e-08	6.225e-08	9.257e-09					
2.550e-15	2.530e-15	5.310e-15	3.280e-15	3.530e-15	2.730e-15	2.450e-15	2.540e-15	2.500e-15	2.750e-15	
2.770e-15	3.000e-15	2.430e-15	2.420e-15	2.970e-15	3.120e-14	2.780e-15	3.100e-15	2.850e-15	3.160e-15	
2.510e-15	2.710e-15	2.380e-15	2.420e-15	3.070e-15	3.220e-15					
5.500e-17	5.850e-17	9.530e-17	5.780e-17	6.480e-17	5.830e-17	5.680e-17	5.760e-17	5.900e-17	5.880e-17	
5.840e-17	6.660e-17	5.840e-17	5.360e-17	6.230e-17	4.620e-15	5.870e-17	6.760e-17	5.760e-17	6.380e-17	
5.470e-17	5.750e-17	5.650e-17	5.360e-17	6.140e-17	1.080e-16					
2.260e-14	5.110e-12	2.820e-12	1.180e-13	2.810e-13	5.190e-14	2.570e-15	7.290e-14	4.630e-14	7.280e-14	
3.130e-13	8.850e-15	4.180e-14	5.400e-13	9.510e-12						
1.285e-14	2.418e-13	6.793e-14	5.572e-14	2.712e-10	1.681e-14	8.084e-16	1.304e-14	1.512e-14	3.237e-14	
6.388e-14	1.848e-15	9.877e-15	8.602e-14	2.719e-10						
2.930e-18	1.100e-17	2.600e-17	4.200e-18	3.000e-17	5.040e-19	3.110e-18	1.710e-17	3.460e-18	6.120e-18	
1.430e-18	1.010e-18	1.670e-17	3.950e-17	1.630e-16						
6.030e-20	2.350e-19	6.010e-19	8.850e-20	6.000e-19	9.050e-21	4.610e-19	3.130e-19	8.310e-20	1.410e-19	
3.060e-20	2.030e-20	3.500e-19	8.690e-19	3.860e-18						
Bi-211	B				B	0.0000	1.284e+02	1.800e-03	1.000e-07	
5.480e-05	5.000e-02	5.000e-02	2.000e-03	1.000e-03	1.000e-01	5.000e-01				
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
0.000e+00	1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
1.770e-15	1.790e-15	4.490e-15	2.260e-15	2.520e-15	1.900e-15	1.670e-15	1.750e-15	1.690e-15	1.910e-15	
1.930e-15	2.100e-15	1.580e-15	1.660e-15	2.040e-15	3.110e-15	1.930e-15	2.200e-15	2.010e-15	2.220e-15	
1.720e-15	1.870e-15	1.630e-15	1.660e-15	2.150e-15	2.070e-15					



3.900e-17	4.200e-17	7.730e-17	4.110e-17	4.700e-17	4.150e-17	3.980e-17	4.090e-17	4.120e-17	4.160e-17
4.160e-17	4.760e-17	4.320e-17	3.800e-17	4.420e-17	5.610e-17	4.180e-17	4.850e-17	4.190e-17	4.540e-17
3.880e-17	4.060e-17	4.000e-17	3.800e-17	4.420e-17	4.450e-17				
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
1.980e-18	7.670e-18	1.780e-17	2.930e-18	2.100e-17	4.260e-19	3.100e-19	1.220e-17	2.250e-18	4.330e-18
9.940e-19	7.070e-19	1.150e-17	2.740e-17	1.110e-16					
4.230e-20	1.680e-19	4.240e-19	6.300e-20	4.320e-19	7.340e-21	5.600e-21	2.270e-19	6.150e-20	1.020e-19
2.160e-20	1.450e-20	2.480e-19	6.180e-19	2.430e-18					
Tl-207	B				B	0.0000	2.862e+02	1.800e-03	1.000e-07
5.480e-05	1.000e+00	1.000e+00	2.000e-02	3.000e-03	2.000e-01	6.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	9.972e-01	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
1.320e-16	1.320e-16	3.140e-16	1.700e-16	1.920e-16	1.430e-16	1.270e-16	1.320e-16	1.300e-16	1.450e-16
1.450e-16	1.600e-16	1.290e-16	1.250e-16	1.540e-16	3.070e-14	1.450e-16	1.670e-16	1.510e-16	1.690e-16
1.300e-16	1.410e-16	1.230e-16	1.250e-16	1.620e-16	4.610e-16				
3.150e-18	3.380e-18	7.200e-18	3.270e-18	4.110e-18	3.390e-18	3.210e-18	3.290e-18	3.340e-18	3.470e-18
3.390e-18	4.030e-18	3.160e-18	3.030e-18	3.550e-18	5.240e-15	3.420e-18	4.200e-18	3.330e-18	3.760e-18
3.110e-18	3.300e-18	3.190e-18	3.030e-18	3.590e-18	5.610e-17				
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
1.520e-19	5.770e-19	1.350e-18	2.200e-19	1.580e-18	2.980e-20	3.060e-18	9.280e-19	1.840e-19	3.190e-19
7.540e-20	5.380e-20	8.640e-19	2.070e-18	1.150e-17					
3.350e-21	1.370e-20	3.420e-20	5.140e-21	3.510e-20	6.840e-22	5.230e-19	1.990e-20	4.500e-21	8.170e-21
1.810e-21	1.200e-21	1.990e-20	5.070e-20	7.210e-19					
Po-211	B				B	0.0000	5.160e-01	1.800e-03	1.000e-07
5.480e-05	1.000e-01	1.000e-01	5.000e-03	4.000e-04	1.000e-03	1.000e-01			



0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	2.760e-03	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
3.250e-16	3.200e-16	6.250e-16	4.180e-16	4.440e-16	3.460e-16	3.140e-16	3.240e-16	3.210e-16	3.490e-16
3.510e-16	3.800e-16	3.160e-16	3.090e-16	3.800e-16	4.680e-16	3.530e-16	3.910e-16	3.610e-16	4.000e-16
3.200e-16	3.440e-16	3.040e-16	3.090e-16	3.890e-16	3.730e-16				
6.880e-18	7.280e-18	1.110e-17	7.230e-18	7.980e-18	7.270e-18	7.130e-18	7.210e-18	7.420e-18	7.340e-18
7.280e-18	8.270e-18	7.200e-18	6.710e-18	7.790e-18	1.170e-17	7.330e-18	8.350e-18	7.110e-18	7.930e-18
6.840e-18	7.190e-18	7.080e-18	6.710e-18	7.630e-18	7.760e-18				
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
3.770e-19	1.400e-18	3.330e-18	5.320e-19	3.800e-18	5.930e-20	4.670e-20	2.150e-18	4.500e-19	7.740e-19
1.820e-19	1.270e-19	2.130e-18	5.030e-18	2.040e-17					
7.570e-21	2.940e-20	7.540e-20	1.100e-20	7.460e-20	1.050e-21	1.170e-21	3.860e-20	1.020e-20	1.760e-20
3.820e-21	2.520e-21	4.370e-20	1.080e-19	4.250e-19					
1									
Eu-150	Particulate				M	1.0000	1.164e+09	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	2.000e-03	6.000e-05	2.000e-03	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
5.440e-10	5.950e-10	7.050e-10	8.620e-11	1.150e-10	6.620e-10	1.770e-09	3.200e-09	6.350e-09	5.240e-10
1.940e-09	3.170e-10	1.840e-09	5.340e-10	7.240e-10	1.430e-10	2.650e-10	1.990e-10	1.140e-10	7.390e-11
1.150e-09	2.710e-10	8.500e-10	7.390e-11	2.410e-10	1.280e-09				
8.723e-08	1.174e-08	1.055e-07	1.629e-08	2.133e-08	3.102e-08	3.307e-08	4.042e-08	2.372e-08	5.767e-08
3.395e-07	2.456e-08	2.550e-08	6.597e-08	7.947e-08	1.485e-08	2.314e-08	6.420e-09	2.265e-08	1.453e-08
1.261e-07	4.874e-08	1.882e-08	1.992e-08	6.230e-08	5.275e-08				
6.000e-14	6.000e-14	1.290e-13	7.680e-14	8.340e-14	6.410e-14	5.730e-14	5.970e-14	5.840e-14	6.460e-14
6.500e-14	7.070e-14	5.590e-14	5.680e-14	6.970e-14	8.730e-14	6.530e-14	7.300e-14	6.730e-14	7.440e-14
5.880e-14	6.350e-14	5.580e-14	5.680e-14	7.220e-14	6.920e-14				



1.280e-15 1.390e-15 2.310e-15 1.360e-15 1.540e-15 1.370e-15 1.330e-15 1.350e-15 1.380e-15 1.380e-15
 1.370e-15 1.570e-15 1.390e-15 1.260e-15 1.460e-15 1.860e-15 1.380e-15 1.600e-15 1.370e-15 1.500e-15
 1.290e-15 1.350e-15 1.320e-15 1.260e-15 1.450e-15 1.470e-15
 8.250e-14 3.160e-12 1.150e-10 2.560e-12 1.480e-12 1.130e-13 1.180e-14 3.970e-13 2.140e-12 1.310e-12
 2.010e-13 1.360e-14 3.700e-12 5.040e-12 1.350e-10
 1.461e-11 2.384e-11 4.647e-11 2.861e-10 2.411e-10 5.489e-12 5.145e-13 2.296e-11 1.838e-11 1.731e-11
 1.655e-11 1.221e-12 2.666e-10 1.593e-10 1.120e-09
 6.860e-17 2.590e-16 6.110e-16 9.850e-17 7.060e-16 1.220e-17 8.710e-18 4.030e-16 7.950e-17 1.450e-16
 3.360e-17 2.370e-17 3.910e-16 9.300e-16 3.770e-15
 1.400e-18 5.530e-18 1.410e-17 2.080e-18 1.420e-17 2.190e-19 1.860e-19 7.440e-18 1.980e-18 3.360e-18
 7.180e-19 4.780e-19 8.200e-18 2.040e-17 8.020e-17

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 Ir-193m B B 0.0000 9.098e+05 1.800e-03 1.000e-07
 5.480e-05 1.000e-02 1.000e-02 2.000e-03 2.000e-06 3.000e-02 2.000e-01
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
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 7.120e-18 7.970e-18 4.150e-17 9.650e-18 1.480e-17 8.520e-18 6.540e-18 7.150e-18 6.630e-18 9.040e-18
 8.660e-18 1.060e-17 6.010e-18 6.240e-18 8.070e-18 5.870e-17 8.660e-18 1.200e-17 9.780e-18 1.130e-17
 7.050e-18 8.030e-18 6.260e-18 6.240e-18 1.020e-17 1.040e-17
 2.080e-19 2.410e-19 1.130e-18 2.190e-19 4.180e-19 2.440e-19 2.120e-19 2.250e-19 2.200e-19 2.480e-19
 2.470e-19 3.720e-19 2.240e-19 2.020e-19 2.290e-19 3.450e-18 2.490e-19 3.520e-19 2.610e-19 2.750e-19
 2.050e-19 2.320e-19 2.080e-19 2.020e-19 2.690e-19 3.180e-19
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
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 7.040e-21 3.440e-20 7.150e-20 1.310e-20 9.970e-20 3.940e-21 5.860e-21 7.150e-20 8.550e-21 1.930e-20
 4.700e-21 3.600e-21 4.530e-20 1.190e-19 5.070e-19
 2.040e-22 9.850e-22 2.300e-21 3.740e-22 2.630e-21 1.070e-22 3.440e-22 2.020e-21 3.190e-22 5.830e-22
 1.290e-22 8.760e-23 1.290e-21 3.880e-21 1.520e-20

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Nb-91	B				B	0.0000	2.146e+10	1.800e-03	1.000e-07
5.480e-05	1.000e-02	1.000e-02	3.000e-07	2.000e-06	1.000e-02	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
6.260e-17	6.320e-17	1.600e-16	7.960e-17	1.440e-16	6.710e-17	5.900e-17	6.170e-17	6.020e-17	6.840e-17
6.770e-17	9.500e-17	5.580e-17	5.860e-17	7.670e-17	3.120e-16	6.780e-17	1.010e-16	7.120e-17	8.940e-17
6.090e-17	6.640e-17	5.750e-17	5.860e-17	7.540e-17	8.450e-17				
1.470e-18	1.650e-18	7.740e-18	1.430e-18	1.210e-17	1.580e-18	1.400e-18	1.430e-18	1.470e-18	1.850e-18
1.550e-18	7.880e-18	1.920e-18	1.320e-18	2.400e-18	5.720e-17	1.480e-18	9.510e-18	1.810e-18	2.850e-18
1.410e-18	1.550e-18	1.410e-18	1.320e-18	1.670e-18	4.740e-18				
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
7.060e-20	2.710e-19	6.300e-19	1.030e-19	7.370e-19	1.520e-20	3.110e-20	6.960e-19	7.940e-20	1.530e-19
3.560e-20	2.850e-20	4.310e-19	1.070e-18	4.350e-18					
1.480e-21	6.380e-21	1.490e-20	2.350e-21	1.630e-20	7.350e-22	5.710e-21	5.850e-20	2.730e-21	3.990e-21
9.620e-22	9.070e-22	1.350e-20	5.290e-20	1.810e-19					
2									
Nb-91m	B				B	0.0000	5.258e+06	1.800e-03	1.000e-07
5.480e-05	1.000e-02	1.000e-02	3.000e-07	2.000e-06	1.000e-02	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00



1.020e-15	1.020e-15	1.850e-15	1.320e-15	1.440e-15	1.100e-15	1.010e-15	1.040e-15	1.030e-15	1.110e-15
1.120e-15	1.220e-15	1.050e-15	9.950e-16	1.220e-15	2.240e-15	1.120e-15	1.250e-15	1.160e-15	1.270e-15
1.030e-15	1.100e-15	9.840e-16	9.950e-16	1.230e-15	1.200e-15				
2.060e-17	2.230e-17	3.810e-17	2.150e-17	3.380e-17	2.200e-17	2.160e-17	2.170e-17	2.240e-17	2.270e-17
2.200e-17	3.060e-17	2.070e-17	2.040e-17	2.420e-17	7.410e-17	2.200e-17	3.260e-17	2.140e-17	2.420e-17
2.050e-17	2.170e-17	2.130e-17	2.040e-17	2.290e-17	2.620e-17				
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
1.220e-18	4.440e-18	1.070e-17	1.700e-18	1.200e-17	1.760e-19	2.230e-19	6.960e-18	1.490e-18	2.470e-18
5.770e-19	4.040e-19	6.850e-18	1.610e-17	6.530e-17					
2.270e-20	8.880e-20	2.270e-19	3.330e-20	2.240e-19	3.620e-21	7.390e-21	1.630e-19	2.940e-20	5.390e-20
1.180e-20	7.710e-21	1.360e-19	3.550e-19	1.360e-18					
Nb-91	B				B	0.0000	2.146e+10	1.800e-03	1.000e-07
5.480e-05	1.000e-02	1.000e-02	3.000e-07	2.000e-06	1.000e-02	1.000e-01			
9.660e-01	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
6.260e-17	6.320e-17	1.600e-16	7.960e-17	1.440e-16	6.710e-17	5.900e-17	6.170e-17	6.020e-17	6.840e-17
6.770e-17	9.500e-17	5.580e-17	5.860e-17	7.670e-17	3.120e-16	6.780e-17	1.010e-16	7.120e-17	8.940e-17
6.090e-17	6.640e-17	5.750e-17	5.860e-17	7.540e-17	8.450e-17				
1.470e-18	1.650e-18	7.740e-18	1.430e-18	1.210e-17	1.580e-18	1.400e-18	1.430e-18	1.470e-18	1.850e-18
1.550e-18	7.880e-18	1.920e-18	1.320e-18	2.400e-18	5.720e-17	1.480e-18	9.510e-18	1.810e-18	2.850e-18
1.410e-18	1.550e-18	1.410e-18	1.320e-18	1.670e-18	4.740e-18				
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
7.060e-20	2.710e-19	6.300e-19	1.030e-19	7.370e-19	1.520e-20	3.110e-20	6.960e-19	7.940e-20	1.530e-19
3.560e-20	2.850e-20	4.310e-19	1.070e-18	4.350e-18					



1.480e-21	6.380e-21	1.490e-20	2.350e-21	1.630e-20	7.350e-22	5.710e-21	5.850e-20	2.730e-21	3.990e-21
9.620e-22	9.070e-22	1.350e-20	5.290e-20	1.810e-19					
1									
Nb-92	B				B	0.0000	1.095e+15	1.800e-03	1.000e-07
5.480e-05	1.000e-02	1.000e-02	3.000e-07	2.000e-06	1.000e-02	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
5.960e-14	5.870e-14	1.140e-13	7.660e-14	8.150e-14	6.350e-14	5.760e-14	5.960e-14	5.890e-14	6.400e-14
6.440e-14	6.970e-14	5.820e-14	5.670e-14	6.970e-14	8.400e-14	6.480e-14	7.160e-14	6.620e-14	7.330e-14
5.870e-14	6.320e-14	5.590e-14	5.670e-14	7.130e-14	6.830e-14				
1.260e-15	1.330e-15	2.020e-15	1.320e-15	1.470e-15	1.330e-15	1.300e-15	1.320e-15	1.360e-15	1.340e-15
1.330e-15	1.520e-15	1.310e-15	1.230e-15	1.430e-15	1.810e-15	1.340e-15	1.530e-15	1.300e-15	1.450e-15
1.250e-15	1.310e-15	1.300e-15	1.230e-15	1.390e-15	1.420e-15				
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
6.940e-17	2.560e-16	6.120e-16	9.760e-17	6.970e-16	1.080e-17	8.380e-18	3.940e-16	8.280e-17	1.420e-16
3.330e-17	2.330e-17	3.910e-16	9.230e-16	3.740e-15					
1.380e-18	5.370e-18	1.380e-17	2.020e-18	1.360e-17	1.920e-19	1.810e-19	7.100e-18	1.860e-18	3.220e-18
6.970e-19	4.620e-19	8.030e-18	1.990e-17	7.780e-17					
1									
Nb-92m	B				B	0.0000	8.770e+05	1.800e-03	1.000e-07
5.480e-05	1.000e-02	1.000e-02	3.000e-07	2.000e-06	1.000e-02	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00



0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
2									
Po-209	B				B	0.0000	3.219e+09	1.800e-03	1.000e-07
5.480e-05	1.000e-01	1.000e-01	5.000e-03	4.000e-04	1.000e-03	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
2.360e-16	2.350e-16	5.310e-16	3.050e-16	3.330e-16	2.540e-16	2.290e-16	2.370e-16	2.330e-16	2.570e-16
2.580e-16	2.810e-16	2.320e-16	2.250e-16	2.760e-16	3.750e-16	2.590e-16	2.920e-16	2.680e-16	2.970e-16
2.330e-16	2.530e-16	2.220e-16	2.250e-16	2.870e-16	2.760e-16				
5.110e-18	5.380e-18	9.600e-18	5.340e-18	5.980e-18	5.430e-18	5.260e-18	5.340e-18	5.470e-18	5.460e-18
5.430e-18	6.150e-18	5.200e-18	4.980e-18	5.740e-18	8.420e-18	5.470e-18	6.220e-18	5.240e-18	5.830e-18
5.020e-18	5.320e-18	5.230e-18	4.980e-18	5.680e-18	5.770e-18				
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
2.740e-19	1.030e-18	2.430e-18	3.910e-19	2.810e-18	5.040e-20	3.740e-20	1.610e-18	3.300e-19	5.680e-19
1.340e-19	9.460e-20	1.550e-18	3.680e-18	1.500e-17					
5.550e-21	2.190e-20	5.570e-20	8.230e-21	5.550e-20	9.120e-22	8.400e-22	2.890e-20	7.400e-21	1.300e-20
2.840e-21	1.860e-21	3.220e-20	8.060e-20	3.150e-19					
Pb-205	Particulate				M	1.0000	4.828e+14	1.800e-03	1.000e-07
5.480e-05	2.000e-01	2.000e-01	8.000e-04	3.000e-04	4.000e-03	1.000e-01			
9.952e-01	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00



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3.600e-11 3.760e-11 3.760e-09 4.090e-11 3.530e-11 4.270e-11 5.310e-11 1.440e-10 3.520e-10 3.290e-10
6.070e-10 3.820e-11 3.540e-11 3.520e-11 1.300e-09 3.620e-11 3.520e-11 3.510e-11 3.540e-11 3.520e-11
3.410e-11 3.460e-11 3.510e-11 3.520e-11 3.560e-11 2.780e-10
1.975e-11 2.056e-11 2.054e-09 2.235e-11 1.934e-11 2.054e-11 2.382e-11 4.613e-11 9.867e-11 1.801e-10
3.323e-10 2.194e-11 1.929e-11 1.924e-11 7.099e-10 1.980e-11 1.937e-11 1.919e-11 1.935e-11 1.924e-11
1.867e-11 1.920e-11 1.922e-11 1.942e-10 8.063e-10 2.390e-10
2.890e-22 5.060e-21 4.700e-19 2.960e-23 1.850e-18 3.150e-21 5.310e-23 8.360e-23 1.190e-21 9.030e-21
1.990e-21 7.120e-19 5.160e-23 3.870e-23 8.680e-20 2.730e-17 3.350e-22 3.730e-19 1.190e-20 6.350e-20
5.500e-22 2.270e-21 5.170e-22 3.870e-23 2.670e-21 4.920e-19
3.810e-21 1.340e-21 9.620e-20 2.680e-24 4.060e-19 9.220e-22 1.440e-23 1.620e-23 3.500e-22 3.570e-21
6.170e-22 3.080e-19 3.390e-20 2.800e-23 1.600e-20 1.150e-17 7.310e-23 1.810e-19 3.040e-21 2.690e-20
9.400e-22 1.520e-21 2.220e-22 2.800e-23 8.400e-22 1.900e-19
1.850e-10 8.410e-10 2.640e-09 5.430e-09 2.030e-09 2.700e-09 1.960e-11 5.140e-10 2.180e-10 3.990e-10
3.530e-09 6.830e-11 1.330e-09 3.210e-09 2.310e-08
1.355e-14 2.145e-14 1.424e-13 3.459e-13 3.563e-12 9.191e-14 7.946e-16 2.402e-14 1.585e-14 3.402e-14
6.461e-14 1.851e-15 2.520e-12 7.403e-14 6.914e-12
1.140e-25 1.270e-23 5.800e-24 3.020e-24 2.610e-23 4.460e-23 2.720e-21 8.940e-21 7.340e-26 1.220e-23
4.700e-24 2.020e-23 4.870e-22 3.530e-21 1.580e-20
4.300e-27 3.720e-24 1.660e-24 9.350e-25 8.210e-24 9.130e-24 1.150e-21 1.960e-21 4.820e-23 3.240e-24
1.860e-24 8.570e-24 8.980e-23 1.550e-21 4.830e-21
1
Re-183      B                                B            0.0000      6.048e+06  1.800e-03  1.000e-07
5.480e-05  8.000e-01  8.000e-01  1.000e-02  2.000e-03  2.000e-01  1.000e+00
0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00
0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00
0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00
0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00
0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00
0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00
0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00
0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00
0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00
0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00
0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00
4.250e-15  4.560e-15  1.900e-14  5.610e-15  7.500e-15  4.860e-15  3.960e-15  4.250e-15  4.010e-15  5.060e-15
4.950e-15  5.730e-15  3.760e-15  3.860e-15  4.860e-15  8.500e-15  4.940e-15  6.360e-15  5.440e-15  6.170e-15
4.150e-15  4.680e-15  3.830e-15  3.860e-15  5.710e-15  5.530e-15
1.110e-16  1.250e-16  4.530e-16  1.170e-16  1.530e-16  1.260e-16  1.120e-16  1.180e-16  1.170e-16  1.280e-16
1.270e-16  1.470e-16  1.120e-16  1.070e-16  1.220e-16  1.800e-16  1.280e-16  1.540e-16  1.280e-16  1.380e-16
1.110e-16  1.200e-16  1.120e-16  1.070e-16  1.370e-16  1.370e-16

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0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
 4.450e-18 1.960e-17 4.280e-17 7.500e-18 5.580e-17 1.800e-18 8.480e-19 3.620e-17 5.350e-18 1.100e-17
 2.630e-18 1.960e-18 2.730e-17 6.870e-17 2.860e-16
 1.130e-19 5.090e-19 1.210e-18 1.920e-19 1.340e-18 4.300e-20 1.800e-20 7.390e-19 1.590e-19 3.020e-19
 6.660e-20 4.390e-20 6.850e-19 1.810e-18 7.240e-18

1

Sb-126 Particulate M 1.0000 1.067e+06 1.800e-03 1.000e-07
 5.480e-05 1.000e-01 1.000e-01 1.000e-03 1.000e-04 1.000e-02 1.000e-01
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
 3.560e-10 1.070e-09 1.060e-09 1.170e-10 1.200e-10 1.200e-09 3.180e-09 8.020e-09 1.820e-08 5.160e-10
 5.080e-10 4.260e-10 2.810e-09 4.880e-10 9.160e-10 1.940e-10 3.760e-10 3.600e-10 1.370e-10 1.230e-10
 9.400e-10 2.000e-10 1.330e-09 1.230e-10 1.750e-10 2.460e-09
 7.804e-10 2.397e-10 6.086e-10 1.133e-10 7.665e-10 5.708e-10 6.593e-10 1.550e-09 3.356e-09 3.393e-10
 7.028e-10 4.037e-10 5.660e-10 6.103e-10 6.065e-10 2.046e-10 5.685e-10 8.384e-11 9.183e-10 3.468e-10
 4.258e-10 1.301e-09 2.886e-10 9.355e-09 1.440e-08 2.439e-09
 1.090e-13 1.070e-13 2.160e-13 1.390e-13 1.490e-13 1.160e-13 1.040e-13 1.080e-13 1.060e-13 1.170e-13
 1.170e-13 1.270e-13 1.030e-13 1.030e-13 1.270e-13 1.740e-13 1.180e-13 1.310e-13 1.210e-13 1.340e-13
 1.070e-13 1.150e-13 1.010e-13 1.030e-13 1.300e-13 1.250e-13
 2.320e-15 2.470e-15 3.820e-15 2.450e-15 2.710e-15 2.450e-15 2.400e-15 2.430e-15 2.500e-15 2.480e-15
 2.460e-15 2.800e-15 2.480e-15 2.260e-15 2.630e-15 6.040e-15 2.470e-15 2.840e-15 2.430e-15 2.700e-15
 2.320e-15 2.430e-15 2.390e-15 2.260e-15 2.590e-15 2.650e-15
 4.850e-14 3.310e-12 2.110e-10 2.950e-13 6.010e-13 3.530e-14 6.790e-15 2.350e-13 9.690e-13 8.920e-13
 7.600e-14 1.460e-14 2.330e-12 2.020e-12 2.220e-10
 7.554e-13 8.593e-13 5.237e-12 7.930e-13 6.295e-11 4.132e-14 1.068e-14 1.258e-12 5.551e-13 4.494e-13
 1.310e-13 4.116e-14 2.611e-12 3.296e-12 7.899e-11
 1.250e-16 4.680e-16 1.110e-15 1.770e-16 1.270e-15 2.050e-17 1.740e-17 7.200e-16 1.470e-16 2.590e-16
 6.090e-17 4.270e-17 7.130e-16 1.680e-15 6.810e-15
 2.550e-18 9.890e-18 2.540e-17 3.730e-18 2.530e-17 3.630e-19 6.030e-19 1.310e-17 3.530e-18 5.970e-18
 1.290e-18 8.600e-19 1.480e-17 3.660e-17 1.440e-16

2

Ti-44 Particulate M 1.0000 1.893e+09 1.800e-03 1.000e-07
 5.480e-05 1.000e-02 1.000e-02 2.000e-02 1.000e-02 1.000e-03 1.000e-01



0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
2.820e-09	3.270e-09	3.010e-09	2.180e-09	2.050e-09	3.020e-09	5.410e-09	1.440e-08	3.840e-08	2.840e-09	
2.770e-09	2.600e-09	5.030e-09	2.990e-09	2.860e-09	2.000e-09	2.740e-09	2.570e-09	2.500e-09	2.480e-09	
3.230e-09	2.700e-09	3.750e-09	2.480e-09	2.430e-09	5.810e-09					
3.007e-08	2.435e-08	2.870e-08	2.088e-08	2.397e-08	2.575e-08	2.639e-08	2.759e-08	3.387e-08	2.583e-08	
2.834e-08	2.411e-08	2.665e-08	2.965e-08	2.565e-08	1.905e-08	2.755e-08	2.225e-08	2.909e-08	2.526e-08	
2.677e-08	3.333e-08	2.669e-08	3.527e-08	1.520e-07	4.160e-08					
3.590e-15	3.980e-15	1.980e-14	4.820e-15	6.820e-15	4.250e-15	3.340e-15	3.620e-15	3.380e-15	4.460e-15	
4.320e-15	5.080e-15	3.080e-15	3.210e-15	4.070e-15	7.040e-15	4.320e-15	5.750e-15	4.820e-15	5.480e-15	
3.550e-15	4.040e-15	3.210e-15	3.210e-15	5.070e-15	4.880e-15					
9.830e-17	1.130e-16	4.860e-16	1.040e-16	1.350e-16	1.140e-16	1.010e-16	1.070e-16	1.050e-16	1.150e-16	
1.150e-16	1.300e-16	1.030e-16	9.730e-17	1.080e-16	1.540e-16	1.160e-16	1.360e-16	1.200e-16	1.240e-16	
9.870e-17	1.090e-16	1.000e-16	9.730e-17	1.250e-16	1.230e-16					
9.710e-16	2.630e-12	8.230e-13	6.240e-15	2.160e-14	1.500e-16	1.210e-16	7.340e-15	1.360e-14	6.980e-15	
3.070e-15	8.570e-17	1.710e-14	1.380e-13	3.670e-12						
2.282e-11	3.000e-11	6.218e-11	3.040e-11	6.689e-10	1.855e-12	8.983e-13	3.554e-11	2.433e-11	4.347e-11	
9.383e-12	2.756e-12	1.057e-10	1.237e-10	1.162e-09						
3.650e-18	1.720e-17	3.630e-17	6.550e-18	4.960e-17	1.880e-18	7.020e-19	3.290e-17	4.380e-18	9.620e-18	
2.320e-18	1.740e-18	2.280e-17	5.890e-17	2.490e-16						
9.930e-20	4.600e-19	1.100e-18	1.740e-19	1.220e-18	4.610e-20	1.540e-20	6.520e-19	1.470e-19	2.730e-19	
5.980e-20	3.950e-20	6.060e-19	1.620e-18	6.510e-18						
Sc-44	Particulate				M	1.0000	1.429e+04	1.800e-03	1.000e-07	
5.480e-05	1.000e-04	1.000e-04	2.000e-03	6.000e-05	2.000e-03	1.000e-01				
1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
3.250e-11	5.480e-11	2.000e-11	2.080e-13	7.180e-12	8.190e-10	1.150e-09	2.050e-09	1.100e-09	5.860e-11	
4.060e-11	3.270e-11	2.160e-10	8.400e-11	4.690e-11	1.240e-11	5.560e-11	1.360e-11	5.140e-12	1.000e-12	
1.260e-10	1.820e-11	1.360e-10	1.000e-12	1.080e-11	3.540e-10					
1.502e-11	9.016e-12	1.211e-11	6.595e-12	1.231e-11	1.215e-10	1.639e-10	2.919e-10	1.565e-10	1.285e-11	
1.836e-11	1.310e-11	3.220e-11	2.007e-11	1.637e-11	6.277e-12	2.661e-11	2.962e-12	1.766e-11	9.660e-12	
2.262e-11	2.063e-11	2.078e-11	1.591e-09	3.993e-10	1.426e-10					
8.570e-14	8.520e-14	1.640e-13	1.100e-13	1.170e-13	9.160e-14	8.310e-14	8.590e-14	8.470e-14	9.210e-14	
9.280e-14	1.000e-13	8.340e-14	8.200e-14	1.000e-13	1.580e-13	9.330e-14	1.030e-13	9.580e-14	1.050e-13	
8.490e-14	9.100e-14	8.080e-14	8.200e-14	1.030e-13	9.870e-14					



1.770e-15 1.910e-15 2.870e-15 1.880e-15 2.070e-15 1.890e-15 1.850e-15 1.880e-15 1.920e-15 1.910e-15
 1.890e-15 2.140e-15 1.870e-15 1.750e-15 2.020e-15 9.460e-15 1.900e-15 2.160e-15 1.860e-15 2.030e-15
 1.780e-15 1.860e-15 1.840e-15 1.750e-15 1.980e-15 2.080e-15
 3.590e-14 3.900e-12 1.180e-10 4.360e-13 7.400e-13 2.000e-14 1.320e-14 2.670e-13 3.380e-12 2.030e-12
 1.910e-13 5.300e-15 2.520e-12 4.670e-12 1.360e-10
 1.463e-14 1.847e-13 5.262e-13 2.086e-14 1.746e-12 8.292e-16 3.305e-16 2.026e-14 3.167e-14 1.696e-14
 5.000e-15 1.157e-15 7.092e-14 8.921e-14 2.729e-12
 9.970e-17 3.700e-16 8.820e-16 1.410e-16 1.010e-15 1.560e-17 1.580e-17 5.650e-16 1.190e-16 2.060e-16
 4.790e-17 3.340e-17 5.610e-16 1.330e-15 5.390e-15
 1.970e-18 7.630e-18 1.960e-17 2.860e-18 1.940e-17 2.730e-19 9.440e-19 1.000e-17 2.660e-18 4.620e-18
 9.940e-19 6.460e-19 1.130e-17 2.810e-17 1.110e-16

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 Tm-170 Particulate M 1.0000 1.111e+07 1.800e-03 1.000e-07
 5.480e-05 5.000e-04 5.000e-04 2.000e-03 6.000e-05 2.000e-03 1.000e-01
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
 1.010e-12 3.500e-12 7.030e-11 7.070e-13 7.140e-13 3.850e-10 9.640e-10 5.780e-09 1.690e-08 1.530e-12
 9.720e-12 1.570e-12 9.870e-12 1.540e-12 4.640e-11 8.970e-13 1.300e-12 1.260e-12 7.100e-13 7.000e-13
 3.190e-12 7.990e-13 4.650e-12 7.000e-13 7.630e-13 1.320e-09
 9.675e-11 9.712e-11 8.398e-09 8.668e-11 9.249e-11 1.604e-10 2.660e-10 1.202e-09 3.340e-09 8.899e-11
 1.129e-09 8.930e-11 8.937e-11 9.279e-11 5.526e-09 8.571e-11 9.123e-11 8.424e-11 9.554e-11 8.808e-11
 8.960e-11 1.024e-10 8.686e-11 2.983e-09 4.141e-08 6.090e-09
 1.070e-16 1.180e-16 5.800e-16 1.430e-16 2.100e-16 1.260e-16 9.820e-17 1.070e-16 9.940e-17 1.340e-16
 1.280e-16 1.540e-16 9.120e-17 9.410e-17 1.220e-16 1.800e-14 1.280e-16 1.750e-16 1.440e-16 1.670e-16
 1.040e-16 1.190e-16 9.430e-17 9.410e-17 1.510e-16 3.250e-16
 3.150e-18 3.680e-18 1.590e-17 3.320e-18 4.800e-18 3.700e-18 3.180e-18 3.380e-18 3.310e-18 3.800e-18
 3.720e-18 4.440e-18 3.110e-18 3.010e-18 3.450e-18 2.080e-15 3.760e-18 4.800e-18 3.840e-18 4.170e-18
 3.210e-18 3.500e-18 3.150e-18 3.010e-18 4.080e-18 2.490e-17
 6.750e-15 4.150e-12 2.300e-10 7.860e-14 1.380e-13 3.950e-15 2.320e-15 4.990e-14 5.510e-13 3.300e-13
 3.480e-14 9.770e-16 4.250e-13 8.360e-13 2.360e-10
 7.781e-14 2.337e-13 4.761e-12 1.258e-12 1.810e-10 5.634e-13 4.370e-15 1.484e-13 8.568e-14 1.794e-13
 3.387e-14 1.025e-14 2.354e-11 4.856e-13 2.124e-10
 1.070e-19 5.090e-19 1.070e-18 1.940e-19 1.480e-18 5.510e-20 1.800e-18 1.010e-18 1.300e-19 2.850e-19
 6.970e-20 5.320e-20 6.850e-19 1.760e-18 9.210e-18
 3.090e-21 1.490e-20 3.460e-20 5.640e-21 3.990e-20 1.510e-21 2.080e-19 2.320e-20 4.420e-21 8.900e-21
 1.980e-21 1.330e-21 1.940e-20 5.260e-20 4.190e-19

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Tm-171	Particulate					M	1.0000	6.059e+07	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	2.000e-03	6.000e-05	2.000e-03	1.000e-01				
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
3.030e-13	6.110e-13	2.030e-10	2.620e-13	2.540e-13	3.010e-11	7.510e-11	4.490e-10	1.310e-09	3.600e-13	
3.420e-12	3.680e-13	1.510e-12	3.640e-13	1.660e-11	2.760e-13	3.250e-13	3.200e-13	2.560e-13	2.560e-13	
5.830e-13	2.680e-13	7.690e-13	2.560e-13	2.670e-13	1.070e-10					
4.716e-11	4.403e-11	3.385e-08	4.372e-11	4.361e-11	4.889e-11	5.833e-11	1.368e-10	3.175e-10	4.428e-11	
5.611e-10	4.366e-11	4.462e-11	4.491e-11	2.751e-09	4.213e-11	4.377e-11	4.158e-11	4.461e-11	4.320e-11	
4.440e-11	4.644e-11	4.314e-11	6.925e-10	3.986e-09	1.227e-09					
1.140e-17	1.300e-17	7.340e-17	1.580e-17	2.640e-17	1.400e-17	1.010e-17	1.130e-17	1.030e-17	1.530e-17	
1.430e-17	1.820e-17	9.300e-18	9.470e-18	1.300e-17	3.020e-17	1.410e-17	2.150e-17	1.660e-17	1.990e-17	
1.120e-17	1.290e-17	9.580e-18	9.470e-18	1.720e-17	1.700e-17					
3.860e-19	4.640e-19	2.380e-18	4.140e-19	6.440e-19	4.760e-19	3.860e-19	4.170e-19	4.040e-19	4.950e-19	
4.790e-19	5.810e-19	3.670e-19	3.600e-19	4.150e-19	7.530e-19	4.840e-19	6.420e-19	5.050e-19	5.450e-19	
3.850e-19	4.400e-19	3.760e-19	3.600e-19	5.350e-19	5.310e-19					
1.990e-15	2.310e-12	3.540e-11	3.020e-14	4.800e-14	1.120e-15	5.900e-16	1.580e-14	1.500e-13	8.240e-14	
1.330e-14	2.410e-16	1.220e-13	3.320e-13	3.850e-11						
3.471e-14	5.832e-14	4.715e-13	5.982e-13	1.753e-11	2.180e-12	1.985e-15	6.368e-14	4.076e-14	7.879e-14	
1.603e-14	4.699e-15	1.125e-11	1.975e-13	3.252e-11						
1.050e-20	5.650e-20	1.120e-19	2.170e-20	1.680e-19	6.970e-21	3.010e-21	1.280e-19	1.320e-20	3.140e-20	
7.960e-21	6.340e-21	7.300e-20	1.940e-19	8.320e-19						
3.560e-22	1.920e-21	4.250e-21	7.260e-22	5.230e-21	2.260e-22	7.510e-23	3.110e-21	5.220e-22	1.120e-21	
2.580e-22	1.740e-22	2.330e-21	6.580e-21	2.690e-20						
2										
Bi-205	Particulate					M	1.0000	1.323e+06	1.800e-03	1.000e-07
5.480e-05	5.000e-02	5.000e-02	2.000e-03	1.000e-03	1.000e-01	5.000e-01				
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
1.400e-10	5.090e-10	1.450e-10	5.240e-12	2.860e-11	4.950e-10	1.450e-09	2.680e-09	5.110e-09	5.730e-10	
1.650e-10	1.950e-10	1.570e-09	2.220e-10	2.970e-10	7.800e-11	1.910e-10	1.580e-10	2.370e-11	1.040e-11	
4.820e-10	5.690e-11	6.920e-10	1.040e-11	4.120e-11	9.100e-10					
4.879e-10	1.177e-10	2.389e-10	5.686e-11	4.909e-10	3.342e-10	3.154e-10	5.427e-10	9.455e-10	4.822e-10	
4.208e-10	2.431e-10	3.121e-10	3.748e-10	3.062e-10	1.278e-10	3.807e-10	3.717e-11	5.793e-10	2.116e-10	
2.588e-10	8.182e-10	1.517e-10	4.920e-09	3.346e-09	8.505e-10					



6.960e-14	7.080e-14	1.260e-13	8.900e-14	9.360e-14	7.490e-14	6.870e-14	7.060e-14	6.960e-14	7.520e-14
7.590e-14	8.120e-14	6.960e-14	6.800e-14	8.200e-14	9.710e-14	7.610e-14	8.260e-14	7.940e-14	8.500e-14
7.040e-14	7.440e-14	6.730e-14	6.800e-14	8.320e-14	7.990e-14				
1.340e-15	1.510e-15	2.210e-15	1.430e-15	1.570e-15	1.450e-15	1.440e-15	1.450e-15	1.480e-15	1.470e-15
1.460e-15	1.630e-15	1.390e-15	1.360e-15	1.550e-15	2.030e-15	1.450e-15	1.640e-15	1.440e-15	1.490e-15
1.370e-15	1.430e-15	1.410e-15	1.360e-15	1.520e-15	1.530e-15				
3.710e-14	3.340e-12	1.090e-10	3.630e-13	6.900e-13	1.830e-14	1.090e-14	2.380e-13	2.670e-12	1.700e-12
6.040e-13	7.190e-15	2.060e-12	4.290e-12	1.250e-10					
4.769e-13	5.028e-13	1.613e-12	4.749e-13	1.477e-11	1.622e-14	6.668e-15	8.042e-13	3.057e-13	2.205e-13
1.863e-13	2.512e-14	1.321e-12	2.024e-12	2.275e-11					
8.190e-17	3.020e-16	7.240e-16	1.150e-16	8.140e-16	1.200e-17	9.690e-18	4.520e-16	9.900e-17	1.710e-16
3.910e-17	2.710e-17	4.600e-16	1.090e-15	4.390e-15					
1.510e-18	5.850e-18	1.510e-17	2.210e-18	1.490e-17	2.100e-19	2.030e-19	7.580e-18	1.980e-18	3.650e-18
7.650e-19	4.740e-19	8.700e-18	2.150e-17	8.460e-17					
Pb-205	Particulate				M	1.0000	4.828e+14	1.800e-03	1.000e-07
5.480e-05	2.000e-01	2.000e-01	8.000e-04	3.000e-04	4.000e-03	1.000e-01			
1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
3.600e-11	3.760e-11	3.760e-09	4.090e-11	3.530e-11	4.270e-11	5.310e-11	1.440e-10	3.520e-10	3.290e-10
6.070e-10	3.820e-11	3.540e-11	3.520e-11	1.300e-09	3.620e-11	3.520e-11	3.510e-11	3.540e-11	3.520e-11
3.410e-11	3.460e-11	3.510e-11	3.520e-11	3.560e-11	2.780e-10				
1.975e-11	2.056e-11	2.054e-09	2.235e-11	1.934e-11	2.054e-11	2.382e-11	4.613e-11	9.867e-11	1.801e-10
3.323e-10	2.194e-11	1.929e-11	1.924e-11	7.099e-10	1.980e-11	1.937e-11	1.919e-11	1.935e-11	1.924e-11
1.867e-11	1.920e-11	1.922e-11	1.942e-10	8.063e-10	2.390e-10				
2.890e-22	5.060e-21	4.700e-19	2.960e-23	1.850e-18	3.150e-21	5.310e-23	8.360e-23	1.190e-21	9.030e-21
1.990e-21	7.120e-19	5.160e-23	3.870e-23	8.680e-20	2.730e-17	3.350e-22	3.730e-19	1.190e-20	6.350e-20
5.500e-22	2.270e-21	5.170e-22	3.870e-23	2.670e-21	4.920e-19				
3.810e-21	1.340e-21	9.620e-20	2.680e-24	4.060e-19	9.220e-22	1.440e-23	1.620e-23	3.500e-22	3.570e-21
6.170e-22	3.080e-19	3.390e-20	2.800e-23	1.600e-20	1.150e-17	7.310e-23	1.810e-19	3.040e-21	2.690e-20
9.400e-22	1.520e-21	2.220e-22	2.800e-23	8.400e-22	1.900e-19				
1.850e-10	8.410e-10	2.640e-09	5.430e-09	2.030e-09	2.700e-09	1.960e-11	5.140e-10	2.180e-10	3.990e-10
3.530e-09	6.830e-11	1.330e-09	3.210e-09	2.310e-08					
1.355e-14	2.145e-14	1.424e-13	3.459e-13	3.563e-12	9.191e-14	7.946e-16	2.402e-14	1.585e-14	3.402e-14
6.461e-14	1.851e-15	2.520e-12	7.403e-14	6.914e-12					
1.140e-25	1.270e-23	5.800e-24	3.020e-24	2.610e-23	4.460e-23	2.720e-21	8.940e-21	7.340e-26	1.220e-23
4.700e-24	2.020e-23	4.870e-22	3.530e-21	1.580e-20					



4.300e-27 3.720e-24 1.660e-24 9.350e-25 8.210e-24 9.130e-24 1.150e-21 1.960e-21 4.820e-23 3.240e-24
1.860e-24 8.570e-24 8.980e-23 1.550e-21 4.830e-21

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Hf-175	Particulate				M	1.0000	6.048e+06	1.800e-03	1.000e-07
5.480e-05	2.000e-03	2.000e-03	4.000e-04	2.000e-05	3.000e-03	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
2.820e-11	1.490e-10	1.220e-10	3.070e-12	4.920e-12	1.770e-10	5.440e-10	1.410e-09	3.420e-09	6.000e-11
3.820e-11	5.260e-11	4.610e-10	5.360e-11	9.910e-11	1.700e-11	4.140e-11	4.200e-11	4.640e-12	2.780e-12
1.360e-10	1.160e-11	2.100e-10	2.780e-12	8.550e-12	4.140e-10				
4.707e-10	8.636e-11	1.945e-09	9.593e-11	3.836e-10	2.482e-10	2.097e-10	3.724e-10	7.631e-10	1.927e-10
3.497e-10	2.156e-10	1.973e-10	3.328e-10	6.932e-10	1.069e-10	2.996e-10	4.207e-11	4.761e-10	1.887e-10
1.924e-10	7.037e-10	1.214e-10	1.703e-09	5.998e-09	1.042e-09				
1.240e-14	1.260e-14	3.460e-14	1.590e-14	1.830e-14	1.340e-14	1.160e-14	1.220e-14	1.180e-14	1.360e-14
1.360e-14	1.500e-14	1.100e-14	1.150e-14	1.420e-14	2.060e-14	1.360e-14	1.590e-14	1.430e-14	1.590e-14
1.200e-14	1.310e-14	1.130e-14	1.150e-14	1.530e-14	1.470e-14				
2.820e-16	3.080e-16	6.800e-16	2.990e-16	3.540e-16	3.060e-16	2.880e-16	2.970e-16	2.980e-16	3.080e-16
3.070e-16	3.540e-16	3.070e-16	2.740e-16	3.180e-16	4.170e-16	3.080e-16	3.640e-16	3.100e-16	3.360e-16
2.810e-16	2.970e-16	2.880e-16	2.740e-16	3.270e-16	3.290e-16				
6.650e-13	7.790e-12	2.530e-10	1.440e-12	7.060e-12	3.640e-12	5.550e-14	1.740e-12	5.920e-12	4.200e-12
7.830e-13	1.610e-13	4.330e-11	1.820e-11	3.480e-10					
3.911e-13	3.678e-13	1.211e-12	3.935e-13	2.628e-11	1.308e-13	5.538e-15	6.253e-13	1.915e-13	1.607e-13
7.391e-14	2.224e-14	2.969e-12	1.841e-12	3.467e-11					
1.370e-17	5.410e-17	1.240e-16	2.060e-17	1.500e-16	3.290e-18	2.060e-18	8.840e-17	1.560e-17	3.050e-17
7.080e-18	5.060e-18	7.970e-17	1.930e-16	7.870e-16					
3.010e-19	1.240e-18	3.070e-18	4.650e-19	3.200e-18	6.460e-20	4.160e-20	1.710e-18	4.370e-19	7.450e-19
1.600e-19	1.070e-19	1.780e-18	4.520e-18	1.780e-17					

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Nd-144	B				B	0.0000	7.227e+22	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	2.000e-03	6.000e-05	2.000e-03	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00



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Os-194	Particulate				M	1.0000	1.893e+08	1.800e-03	1.000e-07
5.480e-05	1.000e-02	1.000e-02	2.000e-03	1.000e-04	3.000e-02	2.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
2.300e-10	2.510e-10	2.230e-10	2.110e-10	2.120e-10	3.000e-10	7.220e-10	6.980e-09	3.090e-08	3.270e-09
2.840e-09	2.210e-10	2.770e-10	2.320e-10	2.260e-10	2.130e-10	2.820e-09	2.190e-10	2.140e-10	2.130e-10
2.470e-10	2.190e-10	2.410e-10	2.130e-10	2.180e-10	2.430e-09				
2.273e-09	2.144e-09	2.079e-09	1.951e-09	2.132e-09	2.159e-09	2.210e-09	4.337e-09	1.039e-08	3.001e-08
2.612e-08	2.046e-09	2.008e-09	2.219e-09	2.077e-09	1.973e-09	2.592e-08	1.951e-09	2.184e-09	2.028e-09
2.218e-09	2.330e-09	1.998e-09	6.172e-09	1.424e-07	2.073e-08				
2.950e-17	3.570e-17	2.210e-16	4.170e-17	9.260e-17	3.840e-17	2.430e-17	2.850e-17	2.460e-17	4.510e-17
3.890e-17	5.780e-17	2.080e-17	2.130e-17	3.510e-17	1.140e-16	3.790e-17	7.210e-17	4.860e-17	6.330e-17
2.770e-17	3.360e-17	2.210e-17	2.130e-17	4.820e-17	5.090e-17				
1.340e-18	1.710e-18	9.860e-18	1.380e-18	3.230e-18	1.750e-18	1.230e-18	1.400e-18	1.300e-18	1.970e-18
1.750e-18	2.630e-18	1.040e-18	1.080e-18	1.460e-18	8.930e-18	1.760e-18	3.040e-18	1.920e-18	2.300e-18
1.290e-18	1.530e-18	1.180e-18	1.080e-18	2.020e-18	2.210e-18				
5.860e-15	2.530e-12	1.090e-11	6.230e-14	1.290e-13	1.940e-15	1.200e-15	4.380e-14	2.310e-13	1.170e-13
2.810e-14	6.830e-16	2.040e-13	7.960e-13	1.500e-11					



1.765e-12	2.922e-12	1.531e-11	2.890e-11	6.284e-10	1.381e-13	9.916e-14	3.355e-12	1.907e-12	3.933e-12
1.132e-11	2.332e-13	8.775e-12	1.097e-11	7.181e-10					
2.320e-20	1.550e-19	2.770e-19	5.900e-20	4.710e-19	2.100e-20	1.140e-20	4.470e-19	2.960e-20	8.630e-20
2.350e-20	2.020e-20	1.970e-19	5.390e-19	2.360e-18					
1.010e-21	7.070e-21	1.400e-20	2.650e-21	1.980e-20	9.360e-22	8.910e-22	1.560e-20	1.480e-21	4.130e-21
1.020e-21	7.320e-22	8.200e-21	2.510e-20	1.030e-19					
Ir-194	Particulate				M	1.0000	6.941e+04	1.800e-03	1.000e-07
5.480e-05	1.000e-02	1.000e-02	2.000e-03	2.000e-06	3.000e-02	2.000e-01			
1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
4.490e-12	1.580e-11	5.010e-12	1.090e-12	1.700e-12	9.230e-10	2.000e-09	8.080e-09	1.260e-08	1.830e-11
1.460e-11	6.180e-12	4.170e-11	8.470e-12	8.930e-12	2.860e-12	1.480e-11	4.450e-12	1.540e-12	1.180e-12
1.810e-11	2.660e-12	2.170e-11	1.180e-12	2.070e-12	1.330e-09				
5.433e-12	1.191e-11	4.857e-12	3.644e-12	5.015e-12	1.417e-10	3.021e-10	1.228e-09	1.919e-09	3.199e-11
2.869e-11	4.942e-12	9.252e-12	5.530e-12	5.421e-12	3.783e-12	2.831e-11	3.502e-12	5.831e-12	4.268e-12
6.356e-12	6.627e-12	6.214e-12	7.741e-10	1.866e-09	4.301e-10				
3.650e-15	3.670e-15	8.250e-15	4.680e-15	5.100e-15	3.920e-15	3.500e-15	3.650e-15	3.560e-15	3.950e-15
3.980e-15	4.310e-15	3.450e-15	3.480e-15	4.250e-15	5.840e-14	3.990e-15	4.470e-15	4.140e-15	4.550e-15
3.590e-15	3.880e-15	3.420e-15	3.480e-15	4.420e-15	4.770e-15				
7.840e-17	8.430e-17	1.440e-16	8.260e-17	9.330e-17	8.350e-17	8.090e-17	8.250e-17	8.380e-17	8.400e-17
8.370e-17	9.540e-17	8.350e-17	7.690e-17	8.900e-17	9.310e-15	8.400e-17	9.680e-17	8.270e-17	8.990e-17
7.800e-17	8.190e-17	8.070e-17	7.690e-17	8.810e-17	1.810e-16				
1.490e-16	2.060e-12	7.250e-12	2.200e-15	4.210e-15	1.460e-16	3.220e-17	1.180e-15	8.240e-15	4.160e-15
9.750e-16	2.840e-17	5.900e-15	2.940e-14	9.370e-12					
4.820e-15	2.163e-13	3.437e-12	3.254e-14	8.185e-12	3.308e-16	1.987e-16	8.254e-15	9.068e-15	2.228e-14
1.239e-14	5.088e-16	2.343e-14	2.939e-14	1.198e-11					
4.180e-18	1.580e-17	3.730e-17	6.030e-18	4.320e-17	7.830e-19	5.830e-18	2.460e-17	4.910e-18	8.870e-18
2.050e-18	1.450e-18	2.390e-17	5.680e-17	2.360e-16					
8.570e-20	3.370e-19	8.580e-19	1.270e-19	8.610e-19	1.370e-20	9.290e-19	4.510e-19	1.190e-19	2.040e-19
4.370e-20	2.860e-20	5.000e-19	1.240e-18	5.800e-18					
2									
Po-208	B				B	0.0000	9.145e+07	1.800e-03	1.000e-07
5.480e-05	1.000e-01	1.000e-01	5.000e-03	4.000e-04	1.000e-03	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00



0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
8.050e-19	8.050e-19	1.850e-18	1.030e-18	1.130e-18	8.640e-19	7.690e-19	8.010e-19	7.840e-19	8.720e-19
8.760e-19	9.550e-19	7.530e-19	7.600e-19	9.340e-19	1.290e-18	8.800e-19	9.920e-19	9.080e-19	1.010e-18
7.890e-19	8.550e-19	7.480e-19	7.600e-19	9.760e-19	9.360e-19				
1.750e-20	1.880e-20	3.360e-20	1.840e-20	2.090e-20	1.860e-20	1.810e-20	1.840e-20	1.870e-20	1.880e-20
1.870e-20	2.130e-20	1.870e-20	1.710e-20	1.980e-20	3.290e-20	1.880e-20	2.170e-20	1.860e-20	2.040e-20
1.750e-20	1.830e-20	1.800e-20	1.710e-20	1.970e-20	2.000e-20				
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
9.180e-22	3.490e-21	8.190e-21	1.330e-21	9.540e-21	1.760e-22	1.290e-22	5.460e-21	1.070e-21	1.950e-21
4.540e-22	3.220e-22	5.240e-21	1.250e-20	5.080e-20					
1.910e-23	7.510e-23	1.910e-22	2.830e-23	1.930e-22	3.190e-24	3.280e-24	1.010e-22	2.660e-23	4.550e-23
9.780e-24	6.500e-24	1.110e-22	2.770e-22	1.090e-21					
Bi-208	B				B	0.0000	1.161e+13	1.800e-03	1.000e-07
5.480e-05	5.000e-02	5.000e-02	2.000e-03	1.000e-03	1.000e-01	5.000e-01			
2.230e-05	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
1.200e-13	1.250e-13	1.850e-13	1.490e-13	1.530e-13	1.290e-13	1.200e-13	1.230e-13	1.210e-13	1.290e-13
1.300e-13	1.360e-13	1.210e-13	1.200e-13	1.410e-13	1.560e-13	1.300e-13	1.370e-13	1.370e-13	1.430e-13
1.250e-13	1.290e-13	1.200e-13	1.200e-13	1.400e-13	1.350e-13				
1.910e-15	2.340e-15	2.920e-15	2.060e-15	2.220e-15	2.100e-15	2.120e-15	2.130e-15	2.150e-15	2.140e-15
2.110e-15	2.310e-15	2.040e-15	2.050e-15	2.260e-15	2.600e-15	2.100e-15	2.330e-15	2.140e-15	2.020e-15
2.010e-15	2.070e-15	2.090e-15	2.050e-15	2.190e-15	2.210e-15				



0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
 1.430e-16 5.210e-16 1.260e-15 1.970e-16 1.370e-15 1.760e-17 1.560e-17 7.390e-16 1.720e-16 3.020e-16
 6.710e-17 4.550e-17 7.910e-16 1.870e-15 7.510e-15
 2.220e-18 8.480e-18 2.210e-17 3.200e-18 2.140e-17 2.770e-19 2.590e-19 1.070e-17 2.900e-18 5.660e-18
 1.110e-18 6.430e-19 1.270e-17 3.110e-17 1.230e-16

1

Rh-102 Particulate M 1.0000 1.788e+07 1.800e-03 1.000e-07
 5.480e-05 5.000e-02 5.000e-02 2.000e-03 5.000e-04 3.000e-02 2.000e-01
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
 1.720e-09 2.150e-09 1.710e-09 1.080e-09 9.880e-10 2.000e-09 3.530e-09 4.660e-09 7.510e-09 1.760e-09
 1.680e-09 1.520e-09 3.900e-09 1.930e-09 1.780e-09 9.410e-10 1.670e-09 1.480e-09 1.400e-09 1.380e-09
 2.180e-09 1.600e-09 2.660e-09 1.380e-09 1.320e-09 2.580e-09
 6.929e-09 3.011e-09 4.555e-09 2.364e-09 5.949e-09 4.712e-09 3.815e-09 3.926e-09 4.456e-09 4.151e-09
 6.128e-09 4.110e-09 3.825e-09 6.042e-09 4.777e-09 2.490e-09 5.586e-09 2.501e-09 7.427e-09 4.222e-09
 4.409e-09 9.943e-09 3.573e-09 1.150e-08 2.389e-08 6.879e-09
 1.950e-14 1.940e-14 4.080e-14 2.480e-14 2.690e-14 2.070e-14 1.850e-14 1.930e-14 1.880e-14 2.090e-14
 2.100e-14 2.280e-14 1.780e-14 1.830e-14 2.250e-14 3.810e-14 2.110e-14 2.350e-14 2.160e-14 2.390e-14
 1.900e-14 2.050e-14 1.800e-14 1.830e-14 2.330e-14 2.240e-14
 4.150e-16 4.520e-16 7.220e-16 4.410e-16 5.060e-16 4.420e-16 4.310e-16 4.390e-16 4.460e-16 4.470e-16
 4.440e-16 5.140e-16 4.630e-16 4.070e-16 4.760e-16 2.230e-15 4.440e-16 5.250e-16 4.500e-16 4.910e-16
 4.200e-16 4.370e-16 4.300e-16 4.070e-16 4.700e-16 4.940e-16
 5.080e-18 1.510e-13 1.060e-13 1.370e-17 7.110e-17 9.460e-19 5.830e-19 2.560e-17 9.580e-17 2.950e-17
 3.710e-18 1.730e-18 3.990e-17 4.050e-16 2.570e-13
 5.986e-12 6.193e-12 8.800e-12 6.751e-12 1.057e-10 3.004e-13 1.229e-13 9.349e-12 3.575e-12 5.448e-12
 1.549e-12 4.773e-13 2.007e-11 2.805e-11 2.024e-10
 2.210e-17 8.360e-17 1.970e-16 3.180e-17 2.280e-16 3.870e-18 3.800e-18 1.300e-16 2.530e-17 4.690e-17
 1.090e-17 7.610e-18 1.260e-16 3.010e-16 1.220e-15
 4.590e-19 1.780e-18 4.560e-18 6.730e-19 4.600e-18 6.860e-20 2.220e-19 2.440e-18 6.590e-19 1.090e-18
 2.330e-19 1.560e-19 2.670e-18 6.630e-18 2.630e-17

2

Sm-145 Particulate M 1.0000 2.938e+07 1.800e-03 1.000e-07
 5.480e-05 5.000e-04 5.000e-04 2.000e-03 6.000e-05 2.000e-03 1.000e-01



0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
5.850e-12	3.140e-11	1.440e-10	6.850e-13	6.460e-13	7.270e-11	2.310e-10	8.110e-10	2.130e-09	9.490e-12	
5.830e-11	1.220e-11	1.630e-10	1.120e-11	2.610e-11	2.460e-12	5.910e-12	5.530e-12	5.430e-13	3.300e-13	
4.120e-11	2.390e-12	4.430e-11	3.300e-13	2.590e-12	2.170e-10					
7.493e-10	3.661e-11	1.911e-08	1.091e-10	2.325e-10	2.110e-10	1.976e-10	3.848e-10	5.508e-10	3.697e-10	
8.411e-09	2.227e-10	1.465e-10	5.167e-10	1.880e-09	8.759e-11	1.771e-10	1.299e-11	2.340e-10	8.128e-11	
1.247e-09	5.880e-10	6.449e-11	9.902e-10	4.810e-09	1.565e-09					
6.980e-16	8.540e-16	5.260e-15	9.840e-16	2.290e-15	9.130e-16	5.680e-16	6.720e-16	5.740e-16	1.090e-15	
9.240e-16	1.410e-15	4.740e-16	4.940e-16	8.410e-16	2.580e-15	9.000e-16	1.790e-15	1.170e-15	1.550e-15	
6.500e-16	7.930e-16	5.150e-16	4.940e-16	1.150e-15	1.230e-15					
3.340e-17	4.310e-17	2.470e-16	3.320e-17	8.220e-17	4.360e-17	2.970e-17	3.430e-17	3.100e-17	5.070e-17	
4.350e-17	6.550e-17	2.420e-17	2.560e-17	3.640e-17	1.070e-16	4.380e-17	7.930e-17	4.920e-17	6.000e-17	
3.120e-17	3.760e-17	2.820e-17	2.560e-17	5.070e-17	5.460e-17					
2.800e-15	3.050e-12	2.630e-10	5.670e-10	2.990e-14	1.230e-10	2.970e-16	7.330e-15	3.290e-15	7.290e-15	
1.340e-15	1.030e-15	3.280e-11	4.570e-14	9.890e-10						
1.880e-13	2.726e-13	9.783e-13	8.879e-12	2.116e-11	1.223e-12	4.203e-15	3.628e-13	1.352e-13	6.561e-14	
1.337e-13	9.069e-15	7.644e-12	2.294e-12	4.335e-11						
5.400e-19	3.690e-18	6.500e-18	1.400e-18	1.120e-17	4.990e-19	2.570e-19	1.110e-17	6.740e-19	2.060e-18	
5.670e-19	4.940e-19	4.720e-18	1.290e-17	5.660e-17						
2.350e-20	1.760e-19	3.390e-19	6.590e-20	4.960e-19	2.350e-20	1.070e-20	3.970e-19	3.440e-20	1.040e-19	
2.640e-20	1.910e-20	2.040e-19	6.180e-19	2.540e-18						
Pm-145	Particulate				M	1.0000	5.586e+08	1.800e-03	1.000e-07	
5.480e-05	5.000e-04	5.000e-04	2.000e-03	6.000e-05	2.000e-03	1.000e-01				
1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
1.240e-11	1.480e-11	3.530e-10	2.030e-12	1.490e-12	3.580e-11	1.120e-10	3.790e-10	9.800e-10	9.620e-12	
1.580e-10	8.050e-12	8.230e-11	1.180e-11	4.000e-11	2.160e-12	3.680e-12	2.600e-12	1.390e-12	9.190e-13	
3.920e-11	5.160e-12	2.090e-11	9.190e-13	6.680e-12	1.160e-10					
2.210e-09	9.587e-11	6.281e-08	3.736e-10	3.564e-10	4.891e-10	5.211e-10	8.258e-10	6.592e-10	1.191e-09	
2.857e-08	5.474e-10	3.952e-10	1.512e-09	6.143e-09	2.398e-10	2.942e-10	3.674e-11	3.432e-10	1.852e-10	
4.289e-09	1.089e-09	1.796e-10	7.261e-10	4.012e-09	3.582e-09					
2.960e-16	3.700e-16	2.310e-15	4.180e-16	1.070e-15	3.940e-16	2.350e-16	2.830e-16	2.370e-16	4.850e-16	
3.980e-16	6.380e-16	1.890e-16	1.990e-16	3.650e-16	1.230e-15	3.860e-16	8.230e-16	5.140e-16	7.060e-16	
2.710e-16	3.370e-16	2.100e-16	1.990e-16	5.000e-16	5.500e-16					



3.100e-14 3.070e-14 6.150e-14 4.020e-14 4.340e-14 3.340e-14 3.030e-14 3.130e-14 3.100e-14 3.370e-14
 3.390e-14 3.680e-14 3.130e-14 2.970e-14 3.660e-14 4.710e-14 3.400e-14 3.810e-14 3.500e-14 3.890e-14
 3.080e-14 3.320e-14 2.930e-14 2.970e-14 3.760e-14 3.610e-14
 6.640e-16 7.000e-16 1.190e-15 6.930e-16 7.830e-16 7.070e-16 6.860e-16 6.940e-16 7.150e-16 7.170e-16
 7.060e-16 8.050e-16 6.600e-16 6.450e-16 7.460e-16 1.150e-15 7.130e-16 8.170e-16 6.780e-16 7.630e-16
 6.530e-16 6.940e-16 6.790e-16 6.450e-16 7.390e-16 7.530e-16
 1.560e-16 1.430e-12 1.030e-10 1.190e-14 7.520e-15 3.050e-15 1.690e-16 1.800e-15 1.070e-13 4.910e-14
 3.990e-15 2.190e-17 5.760e-14 9.240e-14 1.050e-10
 8.183e-12 1.116e-11 2.683e-11 1.715e-10 2.170e-10 2.476e-11 3.014e-13 1.195e-11 1.151e-11 1.087e-11
 7.888e-12 8.057e-13 3.284e-10 7.430e-11 9.055e-10
 3.640e-17 1.350e-16 3.220e-16 5.140e-17 3.680e-16 5.840e-18 4.700e-18 2.100e-16 4.450e-17 7.420e-17
 1.750e-17 1.240e-17 2.050e-16 4.840e-16 1.970e-15
 7.200e-19 2.850e-18 7.260e-18 1.070e-18 7.230e-18 1.130e-19 1.150e-19 3.780e-18 9.390e-19 1.690e-18
 3.730e-19 2.430e-19 4.190e-18 1.050e-17 4.110e-17

1

Gd-148	Particulate				M	1.0000	2.354e+09	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	2.000e-03	6.000e-05	2.000e-03	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
2.370e-12	3.070e-12	1.860e-06	2.370e-12	2.370e-12	7.370e-10	1.840e-09	1.110e-08	3.260e-08	6.350e-10
3.390e-07	2.370e-12	2.370e-12	2.370e-12	1.480e-07	2.370e-12	2.370e-12	2.370e-12	2.370e-12	2.370e-12
2.370e-12	2.370e-12	2.370e-12	2.370e-12	2.370e-12	5.600e-08				
4.408e-10	5.710e-10	3.442e-04	4.408e-10	4.408e-10	5.849e-10	8.011e-10	3.099e-09	8.239e-09	1.178e-07
6.290e-05	4.408e-10	4.408e-10	4.408e-10	2.755e-05	4.408e-10	4.408e-10	4.408e-10	4.408e-10	4.408e-10
4.408e-10	4.408e-10	4.408e-10	1.947e-06	9.316e-06	1.101e-05				
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00				
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00				
6.530e-16	3.950e-13	2.380e-11	3.600e-14	2.210e-14	7.090e-15	3.710e-16	5.420e-15	1.990e-13	9.620e-14
6.830e-15	1.070e-16	1.290e-13	1.900e-13	2.490e-11					
3.604e-13	8.591e-13	1.131e-11	5.090e-08	4.129e-08	1.725e-08	2.275e-14	3.568e-13	4.248e-13	1.021e-12
4.500e-11	5.177e-14	4.443e-09	2.358e-12	1.139e-07					
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					



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0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
2
Lu-177m    Particulate                                     M          1.0000      1.386e+07  1.800e-03  1.000e-07
5.480e-05 5.000e-04 5.000e-04 2.000e-03 6.000e-05 2.000e-03 1.000e-01
0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
7.390e-11 4.090e-10 6.980e-10 4.890e-12 1.120e-11 6.430e-10 1.890e-09 6.390e-09 1.700e-08 1.640e-10
1.100e-10 1.410e-10 1.230e-09 1.450e-10 2.790e-10 4.450e-11 1.130e-10 1.120e-10 9.920e-12 4.640e-12
3.710e-10 2.940e-11 5.720e-10 4.640e-12 2.020e-11 1.720e-09
2.534e-09 5.000e-10 7.265e-08 6.890e-10 1.661e-09 1.194e-09 1.182e-09 2.049e-09 4.293e-09 1.254e-09
2.653e-09 1.106e-09 1.105e-09 1.716e-09 8.855e-09 5.644e-10 1.408e-09 2.492e-10 2.110e-09 9.800e-10
1.141e-09 3.098e-09 7.344e-10 1.058e-08 6.673e-08 1.098e-08
3.550e-14 3.640e-14 1.050e-13 4.560e-14 5.260e-14 3.850e-14 3.350e-14 3.530e-14 3.400e-14 3.910e-14
3.920e-14 4.320e-14 3.210e-14 3.330e-14 4.090e-14 5.870e-14 3.930e-14 4.570e-14 4.140e-14 4.590e-14
3.450e-14 3.800e-14 3.270e-14 3.330e-14 4.410e-14 4.230e-14
8.050e-16 8.690e-16 1.910e-15 8.450e-16 9.870e-16 8.660e-16 8.170e-16 8.430e-16 8.460e-16 8.680e-16
8.670e-16 9.900e-16 8.550e-16 7.830e-16 9.040e-16 1.160e-15 8.730e-16 1.010e-15 8.590e-16 9.390e-16
8.010e-16 8.410e-16 8.210e-16 7.830e-16 9.220e-16 9.270e-16
7.590e-16 1.640e-12 3.220e-13 5.090e-15 1.870e-14 1.650e-16 8.790e-17 5.950e-15 9.440e-15 4.860e-15
2.570e-15 6.140e-17 1.240e-14 1.250e-13 2.140e-12
1.725e-12 1.726e-12 6.709e-12 2.967e-12 2.910e-10 4.856e-12 2.886e-14 2.686e-12 1.062e-12 9.242e-13
4.776e-13 1.147e-13 3.762e-11 9.438e-12 3.614e-10
3.930e-17 1.550e-16 3.590e-16 5.940e-17 4.310e-16 9.970e-18 5.860e-18 2.540e-16 4.570e-17 8.800e-17
2.030e-17 1.460e-17 2.300e-16 5.560e-16 2.270e-15
8.620e-19 3.500e-18 8.720e-18 1.310e-18 9.020e-18 1.810e-19 1.160e-19 4.770e-18 1.220e-18 2.100e-18
4.520e-19 2.990e-19 5.070e-18 1.280e-17 5.040e-17
Lu-177     Particulate                                     M          1.0000      5.743e+05  1.800e-03  1.000e-07
5.480e-05 5.000e-04 5.000e-04 2.000e-03 6.000e-05 2.000e-03 1.000e-01
2.170e-01 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
2.120e-12 1.290e-11 1.700e-11 1.430e-14 2.600e-13 1.810e-10 4.530e-10 2.440e-09 6.440e-09 5.200e-12
3.330e-12 4.310e-12 3.840e-11 4.670e-12 7.640e-12 1.280e-12 3.600e-12 3.220e-12 1.940e-13 3.490e-14
1.240e-11 8.100e-13 1.840e-11 3.490e-14 4.840e-13 5.320e-10

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7.004e-12 6.139e-12 6.382e-10 1.221e-12 6.145e-12 3.208e-11 7.314e-11 4.012e-10 1.056e-09 8.134e-12
 1.176e-11 3.886e-12 7.220e-12 5.550e-12 5.602e-11 1.776e-12 5.096e-12 9.648e-13 7.956e-12 2.983e-12
 4.468e-12 1.149e-11 3.782e-12 1.068e-09 5.900e-09 8.106e-10
 1.180e-15 1.230e-15 4.170e-15 1.530e-15 1.830e-15 1.300e-15 1.120e-15 1.180e-15 1.130e-15 1.330e-15
 1.330e-15 1.480e-15 1.090e-15 1.110e-15 1.360e-15 7.140e-15 1.330e-15 1.590e-15 1.430e-15 1.580e-15
 1.150e-15 1.280e-15 1.100e-15 1.110e-15 1.510e-15 1.500e-15
 2.770e-17 2.970e-17 7.690e-17 2.870e-17 3.420e-17 3.000e-17 2.780e-17 2.880e-17 2.880e-17 2.990e-17
 2.990e-17 3.400e-17 2.800e-17 2.680e-17 3.070e-17 5.680e-17 3.030e-17 3.500e-17 2.900e-17 3.200e-17
 2.740e-17 2.890e-17 2.800e-17 2.680e-17 3.180e-17 3.210e-17
 1.260e-16 2.150e-12 4.560e-13 7.120e-16 2.640e-15 1.980e-17 1.430e-17 9.270e-16 1.430e-15 7.510e-16
 3.480e-16 1.120e-17 1.780e-15 1.560e-14 2.630e-12
 6.551e-15 4.882e-14 1.541e-12 1.331e-14 2.556e-11 4.346e-14 9.292e-17 1.010e-14 7.095e-15 1.150e-14
 3.144e-15 3.547e-16 2.415e-13 3.018e-14 2.752e-11
 1.300e-18 5.250e-18 1.200e-17 2.020e-18 1.480e-17 3.960e-19 7.120e-19 8.840e-18 1.550e-18 2.970e-18
 6.920e-19 5.030e-19 7.630e-18 1.870e-17 7.730e-17
 2.910e-20 1.210e-19 2.970e-19 4.530e-20 3.110e-19 7.300e-21 5.670e-21 1.650e-19 3.980e-20 7.180e-20
 1.560e-20 1.020e-20 1.720e-19 4.390e-19 1.730e-18

2

Rh-102m	Particulate				M	1.0000	1.181e+08	1.800e-03	1.000e-07
5.480e-05	5.000e-02	5.000e-02	2.000e-03	5.000e-04	3.000e-02	2.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
7.920e-10	9.010e-10	8.000e-10	6.220e-10	5.880e-10	1.040e-09	1.680e-09	4.310e-09	1.050e-08	7.950e-10
7.770e-10	7.260e-10	1.310e-09	8.450e-10	7.940e-10	5.700e-10	7.750e-10	7.200e-10	7.070e-10	7.020e-10
8.970e-10	7.630e-10	1.020e-09	7.020e-10	6.870e-10	1.640e-09				
2.440e-09	1.499e-09	1.882e-09	1.280e-09	2.122e-09	1.901e-09	1.753e-09	2.348e-09	3.781e-09	1.732e-09
2.229e-09	1.719e-09	1.681e-09	2.233e-09	1.888e-09	1.276e-09	2.087e-09	1.327e-09	2.527e-09	1.754e-09
1.811e-09	3.173e-09	1.625e-09	4.889e-09	3.432e-08	5.889e-09				
8.490e-14	8.400e-14	1.660e-13	1.090e-13	1.160e-13	9.060e-14	8.180e-14	8.470e-14	8.350e-14	9.110e-14
9.180e-14	9.930e-14	8.150e-14	8.070e-14	9.910e-14	1.200e-13	9.230e-14	1.020e-13	9.440e-14	1.040e-13
8.360e-14	8.990e-14	7.940e-14	8.070e-14	1.020e-13	9.740e-14				
1.790e-15	1.920e-15	2.940e-15	1.890e-15	2.110e-15	1.900e-15	1.860e-15	1.890e-15	1.930e-15	1.920e-15
1.900e-15	2.180e-15	1.910e-15	1.750e-15	2.040e-15	2.590e-15	1.910e-15	2.210e-15	1.880e-15	2.080e-15
1.790e-15	1.880e-15	1.850e-15	1.750e-15	2.000e-15	2.030e-15				
5.080e-15	1.130e-12	4.990e-11	1.780e-14	6.070e-14	9.820e-16	6.900e-16	2.580e-14	8.630e-14	6.780e-14
7.480e-15	1.590e-15	8.440e-14	1.970e-13	5.160e-11					



2.015e-12	2.366e-12	6.340e-12	2.420e-12	1.514e-10	1.226e-13	6.130e-14	3.255e-12	1.555e-12	2.694e-12
6.362e-13	1.947e-13	7.842e-12	1.004e-11	1.910e-10					
9.830e-17	3.660e-16	8.690e-16	1.390e-16	9.970e-16	1.580e-17	1.200e-17	5.600e-16	1.160e-16	2.030e-16
4.740e-17	3.310e-17	5.560e-16	1.310e-15	5.330e-15					
1.980e-18	7.670e-18	1.970e-17	2.880e-18	1.960e-17	2.790e-19	2.580e-19	1.020e-17	2.720e-18	4.640e-18
9.990e-19	6.620e-19	1.150e-17	2.840e-17	1.110e-16					
Rh-102	Particulate				M	1.0000	1.788e+07	1.800e-03	1.000e-07
5.480e-05	5.000e-02	5.000e-02	2.000e-03	5.000e-04	3.000e-02	2.000e-01			
2.330e-03	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
1.720e-09	2.150e-09	1.710e-09	1.080e-09	9.880e-10	2.000e-09	3.530e-09	4.660e-09	7.510e-09	1.760e-09
1.680e-09	1.520e-09	3.900e-09	1.930e-09	1.780e-09	9.410e-10	1.670e-09	1.480e-09	1.400e-09	1.380e-09
2.180e-09	1.600e-09	2.660e-09	1.380e-09	1.320e-09	2.580e-09				
6.929e-09	3.011e-09	4.555e-09	2.364e-09	5.949e-09	4.712e-09	3.815e-09	3.926e-09	4.456e-09	4.151e-09
6.128e-09	4.110e-09	3.825e-09	6.042e-09	4.777e-09	2.490e-09	5.586e-09	2.501e-09	7.427e-09	4.222e-09
4.409e-09	9.943e-09	3.573e-09	1.150e-08	2.389e-08	6.879e-09				
1.950e-14	1.940e-14	4.080e-14	2.480e-14	2.690e-14	2.070e-14	1.850e-14	1.930e-14	1.880e-14	2.090e-14
2.100e-14	2.280e-14	1.780e-14	1.830e-14	2.250e-14	3.810e-14	2.110e-14	2.350e-14	2.160e-14	2.390e-14
1.900e-14	2.050e-14	1.800e-14	1.830e-14	2.330e-14	2.240e-14				
4.150e-16	4.520e-16	7.220e-16	4.410e-16	5.060e-16	4.420e-16	4.310e-16	4.390e-16	4.460e-16	4.470e-16
4.440e-16	5.140e-16	4.630e-16	4.070e-16	4.760e-16	2.230e-15	4.440e-16	5.250e-16	4.500e-16	4.910e-16
4.200e-16	4.370e-16	4.300e-16	4.070e-16	4.700e-16	4.940e-16				
5.080e-18	1.510e-13	1.060e-13	1.370e-17	7.110e-17	9.460e-19	5.830e-19	2.560e-17	9.580e-17	2.950e-17
3.710e-18	1.730e-18	3.990e-17	4.050e-16	2.570e-13					
5.986e-12	6.193e-12	8.800e-12	6.751e-12	1.057e-10	3.004e-13	1.229e-13	9.349e-12	3.575e-12	5.448e-12
1.549e-12	4.773e-13	2.007e-11	2.805e-11	2.024e-10					
2.210e-17	8.360e-17	1.970e-16	3.180e-17	2.280e-16	3.870e-18	3.800e-18	1.300e-16	2.530e-17	4.690e-17
1.090e-17	7.610e-18	1.260e-16	3.010e-16	1.220e-15					
4.590e-19	1.780e-18	4.560e-18	6.730e-19	4.600e-18	6.860e-20	2.220e-19	2.440e-18	6.590e-19	1.090e-18
2.330e-19	1.560e-19	2.670e-18	6.630e-18	2.630e-17					



2.2.2 Version 4.1 Dataset with Replaced 'b' Fields and size of 1.0000 (also tests use of remote data location in green)

4.1

XXXXXXX_411Beta5.

Jun 29, 2021 08:31 PM

Jun 29, 2021 08:31 PM

XXXXXXX

XXXXXXX

XXXXXXX

XXXXXX

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2021

V4.1.1 datase

Checking conversion

0

Adult

100

11

0

0

100	150	200	250	300	350	400	450	500	600
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1000	0	0	0	0	0	0	0	0	0
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T	T	T	T						
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\\DEV\Share\CAP88\Wind Files\24229.WND

23.60

11.33

1000.00

8.00

0

1

1.500e+01

9.600e-01

3

0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00

2

1.0000 0.0000 0.0000

1.0000 0.0000 0.0000



1.0000 0.0000 0.0000

WA

5.620e-02

1.500e-02

5.200e-02

1

29

F

27

0	Cf-251	Particulate	M	1.0000	1.000e-05
0	Es-255	Particulate	M	1.0000	1.000e-05
0	Eu-150	Particulate	M	1.0000	1.000e-05
0	Ir-193m	Particulate	M	1.0000	1.000e-05
0	Nb-91	Particulate	M	1.0000	1.000e-05
0	Nb-91m	Particulate	M	1.0000	1.000e-05
0	Nb-92	Particulate	M	1.0000	1.000e-05
0	Nb-92m	Particulate	M	1.0000	1.000e-05
0	Os-186	Particulate	M	1.0000	1.000e-05
0	Po-209	Inorganic	M	1.0000	1.000e-05
0	Re-183	Particulate	M	1.0000	1.000e-05
0	Sb-126	Particulate	M	1.0000	1.000e-05
0	Ti-44	Particulate	M	1.0000	1.000e-05
0	Tm-170	Particulate	M	1.0000	1.000e-05
0	Tm-171	Particulate	M	1.0000	1.000e-05
0	Bi-205	Particulate	M	1.0000	1.000e-05
0	Hf-175	Particulate	M	1.0000	1.000e-05
0	Nd-144	Particulate	M	1.0000	1.000e-05
0	Os-194	Particulate	M	1.0000	1.000e-05
0	Po-208	Inorganic	M	1.0000	1.000e-05
0	Rh-102	Particulate	M	1.0000	1.000e-05
0	Sm-145	Particulate	M	1.0000	1.000e-05
0	Sm-148	Particulate	M	1.0000	1.000e-05
0	Tb-158	Particulate	M	1.0000	1.000e-05
0	Gd-148	Particulate	M	1.0000	1.000e-05
0	Lu-177m	Particulate	M	1.0000	1.000e-05
0	Rh-102m	Particulate	M	1.0000	1.000e-05
84	93	53	84	493	5263



Adrenals	UB_Wall	Bone_Sur	Brain	Breasts	St_Wall	SI_Wall	ULI_Wall	LLI_Wall	Kidneys
Liver	Muscle	Ovaries	Pancreas	R_Marrow	Skin	Spleen	Testes	Thymus	Thyroid
GB_Wall	Ht_Wall	Uterus	ET_Reg	Lung	E_50				
esophagus	stomach	colon	liver	lung	bone	skin	breast	ovary	bladder
kidney	thyroid	leukemia	residual	Total					
22									
Cf-251	Particulate				M	1.0000	2.840e+10	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	6.000e-05	2.000e-06	1.000e-03	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
1.085e-10	7.806e-11	1.405e-05	3.855e-11	2.504e-11	1.612e-09	4.028e-09	2.351e-08	6.862e-08	8.667e-11
9.678e-07	5.555e-11	1.461e-07	8.885e-11	1.125e-06	2.758e-11	4.747e-11	1.460e-07	3.225e-11	3.055e-11
1.523e-10	5.469e-11	1.101e-10	3.055e-11	5.347e-11	3.585e-07				
1.893e-08	5.245e-09	2.602e-03	7.152e-09	4.750e-09	7.311e-09	1.095e-08	1.544e-08	2.509e-08	1.270e-08
1.796e-04	7.349e-09	2.699e-05	1.351e-08	2.083e-04	4.281e-09	6.482e-09	2.698e-05	6.196e-09	5.748e-09
2.000e-08	1.013e-08	7.550e-09	5.353e-06	2.917e-05	6.890e-05				
3.870e-15	4.070e-15	1.460e-14	5.020e-15	6.120e-15	4.310e-15	3.680e-15	3.900e-15	3.720e-15	4.400e-15
4.400e-15	4.900e-15	3.550e-15	3.650e-15	4.470e-15	1.100e-14	4.400e-15	5.270e-15	4.720e-15	5.240e-15
3.770e-15	4.240e-15	3.600e-15	3.700e-15	4.990e-15	4.840e-15				
9.000e-17	9.850e-17	2.680e-16	9.340e-17	1.200e-16	9.790e-17	9.090e-17	9.440e-17	9.420e-17	9.850e-17
9.790e-17	1.160e-16	9.090e-17	8.780e-17	1.010e-16	1.710e-16	9.890e-17	1.210e-16	9.480e-17	1.070e-16
9.230e-17	9.490e-17	9.200e-17	8.350e-17	1.040e-16	1.070e-16				
3.010e-14	9.330e-12	7.840e-10	1.210e-09	3.850e-13	9.720e-10	2.550e-15	7.690e-14	1.340e-10	2.170e-13
4.120e-14	6.730e-15	2.650e-10	9.410e-13	3.380e-09					
5.080e-12	1.760e-11	2.210e-10	1.920e-07	3.970e-07	1.570e-07	2.710e-13	1.090e-11	2.190e-08	9.810e-12
4.540e-12	9.620e-13	4.170e-08	9.150e-11	8.100e-07					
4.260e-18	1.740e-17	3.950e-17	6.670e-18	4.880e-17	1.390e-18	1.100e-18	2.960e-17	5.050e-18	9.840e-18
2.290e-18	1.670e-18	2.510e-17	6.160e-17	2.540e-16					
9.610e-20	3.950e-19	9.740e-19	1.480e-19	1.020e-18	2.540e-20	1.710e-20	5.800e-19	1.290e-19	2.380e-19
5.120e-20	3.410e-20	5.670e-19	1.460e-18	5.730e-18					
Cm-247	Particulate				M	1.0000	4.923e+14	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	2.000e-05	2.000e-06	1.000e-03	1.000e-01			
1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00



1.468e-08	1.466e-08	8.456e-06	1.458e-08	1.452e-08	1.582e-08	1.801e-08	3.500e-08	7.528e-08	4.285e-08
5.108e-07	1.460e-08	1.642e-07	1.465e-08	2.848e-07	1.454e-08	1.458e-08	1.624e-07	1.454e-08	1.455e-08
1.476e-08	1.458e-08	1.472e-08	1.455e-08	1.458e-08	1.909e-07				
2.705e-06	2.680e-06	1.565e-03	2.689e-06	2.678e-06	2.683e-06	2.688e-06	2.691e-06	2.700e-06	7.945e-06
9.484e-05	2.685e-06	3.034e-05	2.695e-06	5.285e-05	2.680e-06	2.682e-06	3.008e-05	2.682e-06	2.684e-06
2.703e-06	2.689e-06	2.684e-06	7.508e-06	2.476e-05	3.712e-05				
1.200e-14	1.200e-14	2.830e-14	1.530e-14	1.680e-14	1.280e-14	1.130e-14	1.180e-14	1.150e-14	1.290e-14
1.290e-14	1.410e-14	1.070e-14	1.120e-14	1.380e-14	1.790e-14	1.300e-14	1.460e-14	1.340e-14	1.490e-14
1.160e-14	1.260e-14	1.100e-14	1.170e-14	1.440e-14	1.380e-14				
2.600e-16	2.830e-16	4.830e-16	2.760e-16	3.130e-16	2.770e-16	2.680e-16	2.740e-16	2.770e-16	2.780e-16
2.780e-16	3.190e-16	2.930e-16	2.550e-16	2.970e-16	3.710e-16	2.790e-16	3.240e-16	2.820e-16	3.060e-16
2.620e-16	2.730e-16	2.690e-16	2.480e-16	2.950e-16	2.980e-16				
1.110e-11	3.320e-11	7.460e-10	6.700e-10	7.500e-11	5.110e-10	7.510e-13	1.420e-11	1.490e-10	2.780e-11
2.200e-11	2.080e-12	8.420e-11	9.050e-11	2.440e-09					
1.730e-09	3.540e-09	6.890e-09	1.090e-07	3.150e-07	8.580e-08	1.070e-10	1.990e-09	2.600e-08	4.150e-09
3.400e-09	2.920e-10	1.290e-08	1.200e-08	5.830e-07					
1.350e-17	5.170e-17	1.200e-16	1.960e-17	1.410e-16	2.690e-18	1.790e-18	8.120e-17	1.520e-17	2.900e-17
6.710e-18	4.740e-18	7.750e-17	1.850e-16	7.500e-16					
2.850e-19	1.120e-18	2.840e-18	4.210e-19	2.880e-18	4.590e-20	3.700e-20	1.510e-18	4.170e-19	6.840e-19
1.450e-19	9.740e-20	1.670e-18	4.140e-18	1.630e-17					
Pu-243	Particulate				M	1.0000	1.784e+04	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	1.000e-04	1.000e-06	1.000e-03	1.000e-01			
0.000e+00	1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
4.437e-13	1.054e-12	1.552e-12	4.156e-15	5.674e-14	1.800e-10	2.877e-10	6.071e-10	4.067e-10	9.396e-13
7.800e-13	5.744e-13	4.673e-12	1.436e-12	7.702e-13	1.504e-13	9.139e-13	1.832e-13	3.491e-14	6.693e-15
2.530e-12	2.257e-13	2.747e-12	6.693e-15	1.223e-13	8.554e-11				
6.400e-13	6.108e-13	1.228e-10	4.811e-13	5.837e-13	2.617e-11	4.146e-11	8.710e-11	5.847e-11	9.699e-13
2.597e-11	6.391e-13	2.453e-12	7.433e-13	6.342e-12	4.791e-13	6.613e-13	1.833e-12	6.897e-13	5.309e-13
8.329e-13	7.758e-13	8.149e-13	4.080e-10	3.055e-10	6.291e-11				
6.880e-16	7.450e-16	3.230e-15	9.080e-16	1.210e-15	7.910e-16	6.470e-16	6.940e-16	6.540e-16	8.200e-16
8.060e-16	9.260e-16	6.040e-16	6.290e-16	7.860e-16	8.110e-15	8.060e-16	1.020e-15	8.820e-16	9.930e-16
6.760e-16	7.640e-16	6.270e-16	6.300e-16	9.300e-16	9.650e-16				
1.740e-17	1.980e-17	7.230e-17	1.820e-17	2.530e-17	1.960e-17	1.780e-17	1.870e-17	1.850e-17	1.990e-17
1.980e-17	2.370e-17	1.810e-17	1.710e-17	1.950e-17	1.150e-16	1.990e-17	2.510e-17	2.020e-17	2.180e-17
1.800e-17	1.900e-17	1.780e-17	1.580e-17	2.130e-17	2.270e-17				



6.540e-17	1.060e-12	9.630e-12	1.650e-15	2.270e-15	1.520e-16	2.210e-17	5.990e-16	7.740e-15	3.540e-15
6.430e-16	7.700e-18	4.990e-15	1.840e-14	1.070e-11					
9.460e-16	1.860e-13	1.680e-12	2.510e-14	4.400e-12	6.820e-15	5.070e-17	2.890e-15	3.230e-15	1.810e-15
5.620e-16	1.830e-16	6.400e-15	1.210e-14	6.320e-12					
7.250e-19	3.190e-18	6.990e-18	1.220e-18	9.090e-18	3.070e-19	8.090e-19	5.850e-18	8.590e-19	1.800e-18
4.270e-19	3.160e-19	4.410e-18	1.110e-17	4.710e-17					
1.820e-20	7.910e-20	1.920e-19	3.000e-20	2.080e-19	6.870e-21	1.150e-20	1.220e-19	2.570e-20	4.790e-20
1.040e-20	6.940e-21	1.090e-19	2.890e-19	1.160e-18					
Am-243	Particulate				M	1.0000	2.326e+11	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	5.000e-05	2.000e-06	1.000e-03	1.000e-01			
0.000e+00	0.000e+00	1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
1.553e-08	1.548e-08	8.995e-06	1.546e-08	1.542e-08	1.672e-08	1.874e-08	3.537e-08	7.624e-08	4.554e-08
5.439e-07	1.546e-08	1.745e-07	1.550e-08	3.032e-07	1.542e-08	1.545e-08	1.727e-07	1.543e-08	1.544e-08
1.556e-08	1.546e-08	1.551e-08	1.544e-08	1.546e-08	2.027e-07				
2.864e-06	2.845e-06	1.665e-03	2.852e-06	2.844e-06	2.848e-06	2.852e-06	2.855e-06	2.864e-06	8.452e-06
1.010e-04	2.849e-06	3.230e-05	2.857e-06	5.625e-05	2.844e-06	2.848e-06	3.202e-05	2.847e-06	2.848e-06
2.864e-06	2.852e-06	2.848e-06	7.852e-06	2.731e-05	3.961e-05				
1.410e-15	1.560e-15	7.730e-15	1.890e-15	2.700e-15	1.670e-15	1.310e-15	1.420e-15	1.320e-15	1.750e-15
1.690e-15	2.000e-15	1.210e-15	1.260e-15	1.600e-15	2.840e-15	1.690e-15	2.270e-15	1.890e-15	2.160e-15
1.390e-15	1.580e-15	1.260e-15	1.240e-15	1.990e-15	1.920e-15				
3.870e-17	4.470e-17	1.930e-16	4.060e-17	5.720e-17	4.490e-17	3.960e-17	4.190e-17	4.110e-17	4.540e-17
4.540e-17	5.350e-17	4.030e-17	3.810e-17	4.260e-17	7.850e-17	4.570e-17	5.670e-17	4.750e-17	4.940e-17
3.870e-17	4.290e-17	3.930e-17	3.380e-17	4.920e-17	4.960e-17				
1.180e-11	3.480e-11	7.460e-10	7.140e-10	7.950e-11	5.440e-10	7.970e-13	1.500e-11	1.590e-10	2.920e-11
2.340e-11	2.210e-12	9.070e-11	9.540e-11	2.550e-09					
1.840e-09	3.760e-09	7.310e-09	1.160e-07	3.480e-07	9.130e-08	1.140e-10	2.110e-09	2.760e-08	4.410e-09
3.620e-09	3.100e-10	1.390e-08	1.270e-08	6.330e-07					
1.430e-18	6.740e-18	1.420e-17	2.560e-18	1.950e-17	7.340e-19	2.830e-19	1.300e-17	1.720e-18	3.770e-18
9.100e-19	6.880e-19	8.980e-18	2.320e-17	9.770e-17					
3.890e-20	1.810e-19	4.290e-19	6.880e-20	4.810e-19	1.830e-20	7.830e-21	2.760e-19	5.730e-20	1.080e-19
2.360e-20	1.570e-20	2.390e-19	6.460e-19	2.590e-18					
Np-239	Particulate				M	1.0000	2.036e+05	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	1.000e-03	1.000e-05	2.000e-02	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00



9.532e-12	4.972e-11	2.715e-11	5.280e-14	1.148e-12	3.522e-10	8.706e-10	3.999e-09	8.852e-09	2.218e-11
1.451e-11	1.760e-11	1.572e-10	2.099e-11	2.740e-11	5.212e-12	1.595e-11	1.228e-11	8.377e-13	1.483e-13
5.393e-11	3.647e-12	7.463e-11	1.483e-13	2.194e-12	8.141e-10				
1.537e-11	1.788e-11	4.934e-10	4.375e-12	1.317e-11	6.195e-11	1.370e-10	6.177e-10	1.362e-09	2.290e-11
3.163e-11	1.105e-11	3.205e-11	1.402e-11	4.219e-11	5.320e-12	1.249e-11	9.153e-12	1.751e-11	7.974e-12
1.479e-11	2.365e-11	1.434e-11	2.116e-09	4.772e-09	7.144e-10				
5.950e-15	6.220e-15	2.120e-14	7.700e-15	9.220e-15	6.570e-15	5.640e-15	5.970e-15	5.710e-15	6.710e-15
6.710e-15	7.440e-15	5.410e-15	5.590e-15	6.860e-15	1.630e-14	6.710e-15	7.960e-15	7.170e-15	7.940e-15
5.790e-15	6.470e-15	5.520e-15	5.690e-15	7.590e-15	7.350e-15				
1.370e-16	1.500e-16	3.880e-16	1.430e-16	1.780e-16	1.490e-16	1.390e-16	1.440e-16	1.440e-16	1.490e-16
1.490e-16	1.740e-16	1.410e-16	1.340e-16	1.540e-16	2.640e-16	1.500e-16	1.800e-16	1.450e-16	1.620e-16
1.400e-16	1.450e-16	1.400e-16	1.280e-16	1.580e-16	1.620e-16				
1.570e-15	2.070e-12	1.110e-10	3.270e-14	4.430e-14	3.250e-15	7.450e-16	1.360e-14	2.610e-13	1.550e-13
1.500e-14	2.100e-16	1.820e-13	3.680e-13	1.150e-10					
2.450e-14	4.250e-13	2.080e-11	5.390e-14	6.710e-11	4.450e-14	7.040e-16	7.830e-14	6.450e-14	5.800e-14
1.580e-14	3.330e-15	2.580e-13	2.750e-13	8.920e-11					
6.550e-18	2.650e-17	6.050e-17	1.020e-17	7.420e-17	2.010e-18	1.630e-18	4.450e-17	7.700e-18	1.500e-17
3.490e-18	2.530e-18	3.850e-17	9.420e-17	3.880e-16					
1.470e-19	6.020e-19	1.490e-18	2.260e-19	1.540e-18	3.680e-20	2.630e-20	8.600e-19	2.010e-19	3.630e-19
7.750e-20	5.160e-20	8.640e-19	2.210e-18	8.690e-18					
Pu-239	Particulate				M	1.0000	7.609e+11	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	1.000e-04	1.000e-06	1.000e-03	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
1.451e-08	1.451e-08	8.236e-06	1.451e-08	1.451e-08	1.571e-08	1.750e-08	3.264e-08	6.769e-08	3.378e-08
1.727e-06	1.451e-08	1.079e-07	1.451e-08	3.915e-07	1.451e-08	1.451e-08	1.099e-07	1.451e-08	1.451e-08
1.451e-08	1.451e-08	1.451e-08	1.451e-08	1.451e-08	2.508e-07				
2.682e-06	2.682e-06	1.524e-03	2.682e-06	2.682e-06	2.682e-06	2.682e-06	2.686e-06	2.693e-06	6.269e-06
3.198e-04	2.682e-06	1.998e-05	2.682e-06	7.259e-05	2.682e-06	2.682e-06	2.034e-05	2.682e-06	2.682e-06
2.682e-06	2.682e-06	2.682e-06	7.603e-06	2.611e-05	4.849e-05				
2.160e-18	2.370e-18	1.060e-17	2.790e-18	8.150e-18	2.490e-18	2.000e-18	2.140e-18	2.020e-18	2.710e-18
2.510e-18	4.560e-18	1.870e-18	1.940e-18	2.870e-18	2.030e-17	2.470e-18	5.230e-18	2.900e-18	4.190e-18
2.080e-18	2.410e-18	1.930e-18	1.980e-18	2.890e-18	3.770e-18				
6.560e-20	8.610e-20	6.340e-19	5.770e-20	8.310e-19	8.160e-20	5.640e-20	6.050e-20	6.000e-20	1.120e-19
7.780e-20	5.210e-19	8.480e-20	5.150e-20	1.290e-19	4.040e-18	6.980e-20	6.540e-19	1.040e-19	1.910e-19
5.950e-20	7.400e-20	5.570e-20	4.770e-20	8.660e-20	3.060e-19				



1.300e-11	4.370e-11	7.000e-10	1.890e-09	9.980e-11	4.870e-10	9.970e-13	2.100e-11	9.960e-11	3.110e-11
1.730e-11	2.980e-12	9.460e-11	1.330e-10	3.630e-09					
2.010e-09	5.000e-09	1.090e-08	2.980e-07	3.360e-07	8.170e-08	1.390e-10	2.850e-09	1.720e-08	4.690e-09
2.630e-09	4.000e-10	1.500e-08	1.740e-08	7.940e-07					
2.280e-21	1.010e-20	2.160e-20	3.800e-21	2.830e-20	1.010e-21	2.030e-21	3.940e-20	2.660e-21	5.730e-21
1.410e-21	1.330e-21	1.610e-20	4.300e-20	1.790e-19					
5.490e-23	3.290e-22	6.220e-22	1.180e-22	8.470e-22	6.020e-23	4.030e-22	4.010e-21	1.210e-22	2.080e-22
5.830e-23	6.080e-23	7.240e-22	3.170e-21	1.080e-20					
U-235m	Particulate				M	1.0000	1.560e+03	1.800e-03	1.000e-07
5.480e-05	2.000e-02	2.000e-02	8.000e-04	4.000e-04	2.000e-03	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	9.994e-01	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
2.998e-19	2.030e-17	3.494e-18	2.998e-19	2.998e-19	3.395e-14	1.144e-14	3.106e-15	2.315e-16	4.125e-18
3.192e-19	2.998e-19	2.998e-19	2.998e-19	5.804e-19	2.998e-19	2.998e-19	2.998e-19	2.998e-19	2.998e-19
2.998e-19	2.998e-19	2.998e-19	2.998e-19	2.998e-19	4.310e-15				
4.653e-18	3.161e-16	5.386e-17	4.653e-18	4.653e-18	3.560e-15	1.202e-15	3.312e-16	2.898e-17	6.405e-17
4.896e-18	4.653e-18	4.651e-18	4.653e-18	8.981e-18	4.653e-18	4.653e-18	4.653e-18	4.653e-18	4.653e-18
4.653e-18	4.653e-18	4.653e-18	4.953e-18	9.193e-16	5.824e-16				
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
4.550e-22	2.010e-16	3.480e-17	6.550e-22	4.610e-21	6.000e-22	4.620e-23	2.230e-21	5.290e-22	5.510e-20
2.570e-21	1.550e-22	4.680e-21	7.130e-21	2.360e-16					
7.440e-21	2.540e-17	4.520e-18	1.030e-20	1.120e-17	9.370e-21	7.010e-22	3.510e-20	9.030e-21	9.100e-19
4.110e-20	2.350e-21	7.360e-20	1.070e-19	4.230e-17					
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
U-235	Particulate				M	1.0000	2.222e+16	1.800e-03	1.000e-07
5.480e-05	2.000e-02	2.000e-02	8.000e-04	4.000e-04	2.000e-03	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	6.000e-04	1.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00



2.567e-08	2.576e-08	7.405e-07	2.562e-08	2.558e-08	2.674e-08	2.850e-08	4.290e-08	7.816e-08	2.655e-07
9.959e-08	2.563e-08	2.584e-08	2.565e-08	7.585e-08	2.559e-08	2.563e-08	2.560e-08	2.560e-08	2.561e-08
2.568e-08	2.561e-08	2.571e-08	2.561e-08	2.562e-08	4.670e-08				
1.240e-07	1.238e-07	3.580e-06	1.235e-07	1.237e-07	1.238e-07	1.240e-07	1.269e-07	1.340e-07	1.286e-06
4.824e-07	1.236e-07	1.235e-07	1.238e-07	3.668e-07	1.234e-07	1.237e-07	1.233e-07	1.239e-07	1.236e-07
1.236e-07	1.242e-07	1.235e-07	4.419e-06	1.843e-05	2.404e-06				
5.650e-15	5.880e-15	1.940e-14	7.300e-15	8.600e-15	6.210e-15	5.380e-15	5.670e-15	5.430e-15	6.320e-15
6.350e-15	7.000e-15	5.230e-15	5.350e-15	6.530e-15	9.150e-15	6.350e-15	7.480e-15	6.780e-15	7.480e-15
5.500e-15	6.140e-15	5.270e-15	5.450e-15	7.160e-15	6.870e-15				
1.300e-16	1.380e-16	3.320e-16	1.340e-16	1.600e-16	1.390e-16	1.300e-16	1.350e-16	1.350e-16	1.380e-16
1.390e-16	1.590e-16	1.310e-16	1.260e-16	1.440e-16	2.060e-16	1.400e-16	1.620e-16	1.330e-16	1.470e-16
1.280e-16	1.340e-16	1.310e-16	1.190e-16	1.470e-16	1.490e-16				
2.000e-11	5.750e-11	7.080e-10	1.390e-10	1.410e-10	8.740e-11	1.440e-12	2.790e-11	2.330e-11	4.910e-11
1.590e-10	4.060e-12	2.790e-11	1.820e-10	1.630e-09					
8.850e-11	2.070e-10	5.560e-10	5.960e-10	2.530e-07	3.830e-10	5.900e-12	1.180e-10	1.060e-10	2.080e-10
6.850e-10	1.660e-11	1.220e-10	7.180e-10	2.570e-07					
6.270e-18	2.510e-17	5.750e-17	9.620e-18	7.000e-17	1.840e-18	9.130e-19	4.150e-17	7.440e-18	1.420e-17
3.290e-18	2.380e-18	3.670e-17	8.930e-17	3.660e-16					
1.370e-19	5.610e-19	1.390e-18	2.110e-19	1.440e-18	3.150e-20	2.060e-20	7.730e-19	1.860e-19	3.340e-19
7.180e-20	4.680e-20	8.080e-19	2.060e-18	8.070e-18					
Th-231	Particulate				S	1.0000	9.187e+04	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	1.000e-04	5.000e-06	1.000e-03	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	1.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
4.912e-13	2.863e-12	5.785e-12	1.780e-14	6.054e-14	1.936e-10	4.374e-10	1.918e-09	3.378e-09	1.376e-12
9.872e-13	1.343e-12	1.778e-11	1.524e-12	1.833e-12	2.888e-13	9.686e-13	5.707e-13	4.358e-14	1.983e-14
4.473e-12	2.013e-13	4.864e-12	1.983e-14	1.253e-13	3.337e-10				
7.058e-13	5.860e-13	5.641e-11	2.098e-13	6.716e-13	3.112e-11	6.958e-11	3.048e-10	5.366e-10	1.167e-12
2.261e-12	9.335e-13	3.302e-12	6.972e-13	2.753e-12	2.796e-13	6.751e-13	5.705e-13	7.987e-13	3.425e-13
9.508e-13	1.358e-12	9.000e-13	8.519e-10	1.570e-09	2.426e-10				
3.200e-16	3.530e-16	1.650e-15	4.220e-16	6.760e-16	3.730e-16	2.990e-16	3.220e-16	3.010e-16	3.950e-16
3.800e-16	4.770e-16	2.780e-16	2.880e-16	3.750e-16	2.490e-15	3.780e-16	5.400e-16	4.260e-16	5.040e-16
3.110e-16	3.580e-16	2.880e-16	2.880e-16	4.410e-16	4.630e-16				
8.690e-18	1.050e-17	4.700e-17	8.740e-18	2.590e-17	1.030e-17	8.550e-18	9.130e-18	8.870e-18	1.140e-17
1.030e-17	1.960e-17	8.920e-18	8.030e-18	1.070e-17	7.980e-17	1.020e-17	2.300e-17	1.120e-17	1.390e-17
8.760e-18	9.660e-18	8.460e-18	7.310e-18	1.120e-17	1.520e-17				



8.060e-17	1.150e-12	4.700e-11	2.470e-15	2.640e-15	6.020e-16	4.500e-17	6.960e-16	3.470e-14	9.910e-15
9.650e-16	1.410e-17	1.300e-14	2.810e-14	4.830e-11					
1.180e-15	2.230e-13	9.070e-12	2.750e-15	2.260e-11	2.810e-15	2.750e-17	3.990e-15	7.620e-15	2.120e-15
5.230e-16	1.130e-16	5.250e-15	1.650e-14	3.190e-11					
3.310e-19	1.510e-18	3.230e-18	5.760e-19	4.310e-18	1.570e-19	2.480e-19	3.270e-18	3.950e-19	8.540e-19
2.050e-19	1.600e-19	2.100e-18	5.380e-18	2.270e-17					
8.410e-21	4.160e-20	9.310e-20	1.560e-20	1.100e-19	4.460e-21	7.960e-21	1.250e-19	1.270e-20	2.540e-20
5.930e-21	4.430e-21	6.010e-20	1.800e-19	6.940e-19					
Pa-231	Particulate				M	1.0000	1.034e+12	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	5.000e-06	5.000e-06	1.000e-02	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	1.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
5.606e-08	5.611e-08	2.511e-05	5.602e-08	5.597e-08	5.722e-08	5.911e-08	8.342e-08	1.354e-07	3.406e-07
6.554e-07	5.601e-08	2.153e-07	5.602e-08	9.261e-07	5.598e-08	5.622e-08	2.184e-07	5.599e-08	5.600e-08
5.604e-08	5.600e-08	5.603e-08	5.600e-08	5.601e-08	4.793e-07				
1.039e-05	1.040e-05	4.665e-03	1.039e-05	1.038e-05	1.038e-05	1.039e-05	1.206e-05	1.513e-05	6.341e-05
1.222e-04	1.039e-05	3.999e-05	1.039e-05	1.728e-04	1.038e-05	1.042e-05	4.058e-05	1.038e-05	1.038e-05
1.039e-05	1.038e-05	1.039e-05	1.555e-05	3.321e-05	9.117e-05				
1.210e-15	1.240e-15	3.440e-15	1.550e-15	1.840e-15	1.310e-15	1.140e-15	1.200e-15	1.160e-15	1.330e-15
1.330e-15	1.490e-15	1.090e-15	1.140e-15	1.400e-15	2.410e-15	1.340e-15	1.580e-15	1.410e-15	1.570e-15
1.170e-15	1.290e-15	1.120e-15	1.170e-15	1.490e-15	1.450e-15				
2.760e-17	3.010e-17	6.830e-17	2.870e-17	4.330e-17	2.980e-17	2.770e-17	2.870e-17	2.870e-17	3.060e-17
2.980e-17	3.950e-17	2.950e-17	2.640e-17	3.180e-17	8.810e-17	2.990e-17	4.200e-17	3.020e-17	3.420e-17
2.710e-17	2.880e-17	2.780e-17	2.530e-17	3.180e-17	3.470e-17				
3.970e-11	8.910e-11	8.100e-10	6.830e-10	2.580e-10	1.420e-09	2.510e-12	4.490e-11	1.980e-10	1.010e-10
1.370e-10	6.880e-12	2.200e-10	2.790e-10	4.290e-09					
6.170e-09	1.140e-08	2.510e-08	1.050e-07	3.510e-07	2.350e-07	3.620e-10	6.420e-09	3.310e-08	1.520e-08
2.110e-08	9.820e-10	3.480e-08	3.770e-08	8.840e-07					
1.350e-18	5.290e-18	1.220e-17	2.020e-18	1.460e-17	3.270e-19	2.400e-19	8.890e-18	1.550e-18	3.000e-18
6.920e-19	5.000e-19	7.860e-18	1.910e-17	7.750e-17					
2.910e-20	1.200e-19	2.960e-19	4.520e-20	3.110e-19	6.490e-21	8.790e-21	2.090e-19	4.200e-20	7.280e-20
1.590e-20	1.090e-20	1.780e-19	4.640e-19	1.810e-18					
Ac-227	Particulate				M	1.0000	6.871e+08	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	2.000e-05	2.000e-06	1.000e-03	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	1.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00



4.735e-08	4.737e-08	9.354e-06	4.728e-08	4.726e-08	4.732e-08	4.744e-08	5.584e-08	7.513e-08	7.116e-08
2.022e-06	4.728e-08	1.871e-07	4.732e-08	4.921e-07	4.726e-08	4.754e-08	1.858e-07	4.727e-08	4.727e-08
4.737e-08	4.729e-08	4.729e-08	4.727e-08	4.729e-08	3.225e-07				
8.711e-06	8.713e-06	1.726e-03	8.697e-06	8.695e-06	8.699e-06	8.707e-06	1.003e-05	1.247e-05	1.337e-05
3.726e-04	8.698e-06	3.443e-05	8.706e-06	9.110e-05	8.693e-06	8.743e-06	3.419e-05	8.696e-06	8.696e-06
8.715e-06	8.701e-06	8.699e-06	2.999e-05	9.251e-05	6.945e-05				
2.270e-18	2.510e-18	1.160e-17	2.970e-18	7.020e-18	2.640e-18	2.100e-18	2.260e-18	2.120e-18	2.860e-18
2.680e-18	4.230e-18	1.960e-18	2.030e-18	2.860e-18	1.590e-17	2.650e-18	4.810e-18	3.070e-18	4.060e-18
2.180e-18	2.540e-18	2.030e-18	2.040e-18	3.110e-18	3.650e-18				
6.870e-20	8.510e-20	5.300e-19	6.340e-20	5.900e-19	8.230e-20	6.130e-20	6.640e-20	6.430e-20	1.030e-19
8.040e-20	3.860e-19	7.770e-20	5.640e-20	1.100e-19	3.190e-18	7.640e-20	4.590e-19	9.670e-20	1.550e-19
6.430e-20	7.530e-20	6.070e-20	5.110e-20	8.940e-20	2.370e-19				
4.070e-11	1.110e-10	3.770e-10	2.880e-09	2.930e-10	6.890e-10	3.050e-12	6.120e-11	1.910e-10	9.700e-11
3.740e-11	8.650e-12	1.540e-10	3.990e-10	5.340e-09					
6.470e-09	1.540e-08	3.900e-08	4.660e-07	1.140e-06	1.140e-07	4.390e-10	8.640e-09	3.300e-08	1.500e-08
5.860e-09	1.210e-09	2.370e-08	5.380e-08	1.920e-06					
2.350e-21	1.070e-20	2.270e-20	4.060e-21	3.040e-20	1.100e-21	1.590e-21	3.390e-20	2.790e-21	6.070e-21
1.490e-21	1.290e-21	1.610e-20	4.230e-20	1.770e-19					
5.880e-23	3.320e-22	6.760e-22	1.220e-22	8.740e-22	5.030e-23	3.180e-22	2.850e-21	1.110e-22	2.060e-22
5.360e-23	4.940e-23	6.170e-22	2.540e-21	8.860e-21					
Th-227	Particulate				S	1.0000	1.614e+06	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	1.000e-04	5.000e-06	1.000e-03	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
9.862e-01	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
3.219e-10	3.736e-10	8.795e-08	3.129e-10	3.139e-10	1.817e-09	4.215e-09	2.659e-08	9.149e-08	2.594e-09
4.947e-09	3.320e-10	7.097e-10	3.315e-10	7.865e-09	3.186e-10	3.291e-10	5.533e-10	3.137e-10	3.129e-10
3.619e-10	3.162e-10	3.914e-10	3.129e-10	3.150e-10	9.115e-09				
4.005e-10	2.276e-10	6.816e-08	2.217e-10	4.000e-10	6.823e-10	1.183e-09	6.573e-09	2.107e-08	3.018e-09
4.227e-09	2.945e-10	5.205e-10	3.501e-10	5.937e-09	2.483e-10	3.455e-10	4.870e-10	4.424e-10	2.832e-10
2.819e-10	5.591e-10	2.333e-10	4.921e-06	6.373e-05	7.651e-06				
4.360e-15	4.480e-15	1.320e-14	5.600e-15	6.510e-15	4.740e-15	4.120e-15	4.340e-15	4.180e-15	4.810e-15
4.830e-15	5.330e-15	3.970e-15	4.100e-15	5.030e-15	7.850e-15	4.830e-15	5.650e-15	5.110e-15	5.660e-15
4.240e-15	4.670e-15	4.030e-15	4.210e-15	5.420e-15	5.220e-15				
9.910e-17	1.060e-16	2.380e-16	1.030e-16	1.270e-16	1.060e-16	1.000e-16	1.030e-16	1.040e-16	1.060e-16
1.060e-16	1.250e-16	1.040e-16	9.610e-17	1.110e-16	1.870e-16	1.070e-16	1.280e-16	1.050e-16	1.150e-16
9.750e-17	1.030e-16	1.010e-16	9.160e-17	1.130e-16	1.150e-16				



5.030e-13	1.090e-11	1.000e-09	9.730e-12	5.280e-12	1.740e-11	5.300e-14	1.290e-12	1.220e-12	1.280e-12
1.650e-12	1.780e-13	4.860e-12	8.420e-12	1.060e-09					
5.730e-13	3.950e-12	2.570e-10	7.320e-12	8.980e-07	9.380e-12	3.010e-14	1.650e-12	8.810e-13	6.810e-13
1.760e-12	1.130e-13	3.290e-12	6.290e-12	8.980e-07					
4.840e-18	1.910e-17	4.410e-17	7.320e-18	5.300e-17	1.250e-18	7.830e-19	3.150e-17	5.650e-18	1.080e-17
2.500e-18	1.800e-18	2.820e-17	6.840e-17	2.790e-16					
1.050e-19	4.280e-19	1.070e-18	1.610e-19	1.100e-18	2.260e-20	1.870e-20	6.140e-19	1.480e-19	2.560e-19
5.510e-20	3.660e-20	6.230e-19	1.590e-18	6.230e-18					
Fr-223	Particulate				M	1.0000	1.320e+03	1.800e-03	1.000e-07
5.480e-05	1.000e+00	1.000e+00	3.000e-02	8.000e-03	3.000e-02	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
1.380e-02	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
2.360e-09	2.360e-09	2.360e-09	2.359e-09	2.359e-09	2.521e-09	2.363e-09	2.362e-09	2.364e-09	2.360e-09
2.360e-09	2.360e-09	2.360e-09	2.360e-09	2.360e-09	2.359e-09	2.360e-09	2.359e-09	2.360e-09	2.359e-09
2.360e-09	2.360e-09	2.360e-09	2.359e-09	2.360e-09	2.379e-09				
4.553e-10	4.552e-10	4.553e-10	4.552e-10	4.552e-10	4.719e-10	4.555e-10	4.557e-10	4.559e-10	4.552e-10
4.553e-10	4.552e-10	4.552e-10	4.553e-10	4.553e-10	4.551e-10	4.553e-10	4.552e-10	4.554e-10	4.552e-10
4.552e-10	4.554e-10	4.552e-10	6.421e-09	6.055e-08	7.669e-09				
1.510e-15	1.600e-15	6.080e-15	1.990e-15	2.650e-15	1.710e-15	1.410e-15	1.510e-15	1.430e-15	1.780e-15
1.740e-15	2.030e-15	1.350e-15	1.370e-15	1.740e-15	2.320e-14	1.740e-15	2.240e-15	1.900e-15	2.170e-15
1.470e-15	1.650e-15	1.360e-15	1.390e-15	2.000e-15	2.150e-15				
3.950e-17	4.460e-17	1.560e-16	4.150e-17	5.930e-17	4.500e-17	3.980e-17	4.180e-17	4.140e-17	4.610e-17
4.510e-17	5.520e-17	3.930e-17	3.760e-17	4.380e-17	2.800e-15	4.550e-17	5.900e-17	4.560e-17	5.050e-17
3.950e-17	4.280e-17	3.940e-17	3.460e-17	4.890e-17	7.730e-17				
3.550e-12	1.510e-11	4.170e-11	4.960e-12	3.580e-11	3.020e-13	3.590e-13	8.660e-12	4.120e-12	7.810e-12
1.710e-12	1.200e-12	9.690e-13	5.540e-11	1.820e-10					
8.290e-13	3.290e-12	9.230e-12	1.110e-12	8.560e-10	6.920e-14	7.960e-14	2.030e-12	1.010e-12	1.760e-12
3.830e-13	2.700e-13	2.190e-13	1.220e-11	8.880e-10					
1.600e-18	6.900e-18	1.520e-17	2.640e-18	1.960e-17	5.770e-19	2.310e-18	1.280e-17	1.920e-18	3.870e-18
9.260e-19	6.910e-19	9.770e-18	2.440e-17	1.030e-16					
3.980e-20	1.820e-19	4.300e-19	6.840e-20	4.780e-19	1.480e-20	2.790e-19	2.860e-19	5.590e-20	1.080e-19
2.400e-20	1.610e-20	2.460e-19	6.560e-19	2.880e-18					
Ra-223	Particulate				M	1.0000	9.876e+05	1.800e-03	1.000e-07
5.480e-05	1.000e-01	2.000e-01	2.000e-03	1.000e-03	4.000e-02	2.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	1.000e+00	1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00



1.275e-08	1.301e-08	2.943e-06	1.272e-08	1.272e-08	1.878e-08	2.616e-08	1.142e-07	2.947e-07	1.777e-08
1.460e-07	1.276e-08	1.305e-08	1.276e-08	2.829e-07	1.273e-08	1.275e-08	1.275e-08	1.272e-08	1.272e-08
1.282e-08	1.273e-08	1.287e-08	1.272e-08	1.273e-08	1.035e-07				
3.000e-09	2.978e-09	6.768e-07	2.924e-09	2.994e-09	4.005e-09	5.416e-09	2.229e-08	5.674e-08	3.991e-09
3.364e-08	2.957e-09	2.983e-09	2.981e-09	6.511e-08	2.933e-09	2.974e-09	2.921e-09	3.014e-09	2.949e-09
2.962e-09	3.061e-09	2.948e-09	4.558e-06	4.479e-05	5.397e-06				
4.710e-15	4.890e-15	1.610e-14	6.080e-15	7.230e-15	5.180e-15	4.450e-15	4.700e-15	4.510e-15	5.280e-15
5.280e-15	5.850e-15	4.240e-15	4.400e-15	5.410e-15	9.270e-15	5.290e-15	6.250e-15	5.620e-15	6.230e-15
4.590e-15	5.090e-15	4.340e-15	4.500e-15	5.970e-15	5.740e-15				
1.090e-16	1.190e-16	3.020e-16	1.140e-16	1.350e-16	1.180e-16	1.110e-16	1.150e-16	1.150e-16	1.180e-16
1.180e-16	1.350e-16	1.150e-16	1.060e-16	1.220e-16	1.750e-16	1.190e-16	1.380e-16	1.170e-16	1.280e-16
1.100e-16	1.150e-16	1.110e-16	1.010e-16	1.260e-16	1.270e-16				
2.230e-11	1.290e-10	3.400e-09	3.120e-10	2.430e-10	8.040e-10	2.370e-12	5.960e-11	2.660e-11	4.910e-11
1.570e-11	8.230e-12	1.790e-10	3.720e-10	5.620e-09					
4.660e-12	2.410e-11	7.470e-10	6.400e-11	6.400e-07	1.440e-10	4.230e-13	1.090e-11	5.630e-12	9.910e-12
2.970e-12	1.410e-12	3.380e-11	6.430e-11	6.410e-07					
5.180e-18	2.090e-17	4.770e-17	8.000e-18	5.840e-17	1.530e-18	9.250e-19	3.490e-17	6.030e-18	1.180e-17
2.750e-18	1.980e-18	3.040e-17	7.420e-17	3.050e-16					
1.160e-19	4.760e-19	1.190e-18	1.790e-19	1.230e-18	2.870e-20	1.750e-20	6.520e-19	1.640e-19	2.880e-19
6.140e-20	4.080e-20	6.850e-19	1.740e-18	6.860e-18					
Rn-219	B				B	0.0000	3.960e+00	0.000e+00	0.000e+00
5.480e-05	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
2.190e-15	2.220e-15	5.690e-15	2.800e-15	3.130e-15	2.360e-15	2.070e-15	2.170e-15	2.100e-15	2.380e-15
2.390e-15	2.610e-15	1.980e-15	2.070e-15	2.530e-15	3.530e-15	2.400e-15	2.730e-15	2.500e-15	2.760e-15
2.130e-15	2.330e-15	2.030e-15	2.140e-15	2.670e-15	2.560e-15				
4.830e-17	5.180e-17	9.590e-17	5.090e-17	5.800e-17	5.140e-17	4.930e-17	5.060e-17	5.100e-17	5.140e-17
5.150e-17	5.890e-17	5.280e-17	4.710e-17	5.470e-17	6.930e-17	5.170e-17	5.990e-17	5.140e-17	5.590e-17
4.790e-17	5.020e-17	4.950e-17	4.550e-17	5.460e-17	5.500e-17				



0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
9.770e-15	9.830e-15	2.280e-14	1.250e-14	1.370e-14	1.050e-14	9.390e-15	9.770e-15	9.550e-15	1.060e-14	
1.070e-14	1.160e-14	9.310e-15	9.300e-15	1.140e-14	5.580e-14	1.070e-14	1.210e-14	1.110e-14	1.220e-14	
9.610e-15	1.040e-14	9.160e-15	9.730e-15	1.190e-14	1.180e-14					
2.100e-16	2.250e-16	4.010e-16	2.200e-16	2.490e-16	2.240e-16	2.160e-16	2.200e-16	2.240e-16	2.250e-16	
2.240e-16	2.540e-16	2.200e-16	2.060e-16	2.370e-16	7.190e-15	2.250e-16	2.580e-16	2.200e-16	2.400e-16	
2.080e-16	2.190e-16	2.160e-16	1.990e-16	2.360e-16	3.070e-16					
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00						
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00						
1.120e-17	4.240e-17	9.990e-17	1.620e-17	1.160e-16	2.160e-18	5.570e-18	6.620e-17	1.320e-17	2.380e-17	
5.510e-18	3.880e-18	6.400e-17	1.520e-16	6.230e-16						
2.290e-19	9.040e-19	2.290e-18	3.390e-19	2.310e-18	3.810e-20	7.170e-19	1.200e-18	3.130e-19	5.440e-19	
1.170e-19	7.640e-20	1.330e-18	3.320e-18	1.370e-17						
Po-215	B				B	0.0000	1.781e-03	1.800e-03	1.000e-07	
5.480e-05	1.000e-01	1.000e-01	5.000e-03	4.000e-04	1.000e-03	1.000e-01				
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	1.000e+00	0.000e+00	1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
6.790e-18	6.800e-18	1.530e-17	8.640e-18	9.430e-18	7.230e-18	6.390e-18	6.690e-18	6.510e-18	7.270e-18	
7.310e-18	7.960e-18	6.030e-18	6.360e-18	7.810e-18	1.010e-17	7.360e-18	8.230e-18	7.560e-18	8.370e-18	
6.590e-18	7.140e-18	6.230e-18	6.630e-18	8.150e-18	7.800e-18					
1.470e-19	1.600e-19	2.650e-19	1.560e-19	1.760e-19	1.560e-19	1.510e-19	1.550e-19	1.570e-19	1.570e-19	
1.570e-19	1.800e-19	1.670e-19	1.440e-19	1.680e-19	2.150e-19	1.570e-19	1.830e-19	1.600e-19	1.740e-19	
1.490e-19	1.540e-19	1.520e-19	1.410e-19	1.670e-19	1.680e-19					



0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
7.630e-21	2.920e-20	6.830e-20	1.110e-20	7.970e-20	1.450e-21	1.010e-21	4.560e-20	8.580e-21	1.640e-20
3.780e-21	2.670e-21	4.380e-20	1.050e-19	4.240e-19					
1.620e-22	6.300e-22	1.610e-21	2.380e-22	1.630e-21	2.520e-23	2.150e-23	8.500e-22	2.380e-22	3.870e-22
8.170e-23	5.540e-23	9.430e-22	2.340e-21	9.210e-21					
Pb-211	Particulate				M	1.0000	2.166e+03	1.800e-03	1.000e-07
5.480e-05	1.000e-01	2.000e-01	8.000e-04	3.000e-04	4.000e-03	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	1.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
1.737e-11	1.912e-11	2.644e-10	1.688e-11	1.699e-11	1.165e-09	4.768e-10	2.228e-10	3.898e-11	1.728e-10
5.304e-11	1.715e-11	1.798e-11	1.862e-11	3.934e-11	1.698e-11	1.798e-11	1.693e-11	1.696e-11	1.689e-11
1.781e-11	1.723e-11	1.778e-11	1.689e-11	1.705e-11	1.777e-10				
1.552e-11	1.732e-11	2.467e-10	1.544e-11	1.548e-11	1.585e-10	6.909e-11	3.970e-11	1.798e-11	1.650e-10
4.907e-11	1.548e-11	1.551e-11	1.564e-11	3.619e-11	1.542e-11	1.556e-11	1.538e-11	1.554e-11	1.546e-11
1.551e-11	1.557e-11	1.548e-11	6.978e-08	6.224e-08	9.253e-09				
2.550e-15	2.530e-15	5.310e-15	3.280e-15	3.530e-15	2.730e-15	2.450e-15	2.540e-15	2.500e-15	2.750e-15
2.770e-15	3.000e-15	2.430e-15	2.420e-15	2.970e-15	3.120e-14	2.780e-15	3.100e-15	2.850e-15	3.160e-15
2.510e-15	2.710e-15	2.380e-15	2.550e-15	3.070e-15	3.220e-15				
5.500e-17	5.850e-17	9.530e-17	5.780e-17	6.480e-17	5.830e-17	5.680e-17	5.760e-17	5.900e-17	5.880e-17
5.840e-17	6.660e-17	5.840e-17	5.360e-17	6.230e-17	4.620e-15	5.870e-17	6.760e-17	5.760e-17	6.380e-17
5.470e-17	5.750e-17	5.650e-17	5.240e-17	6.140e-17	1.080e-16				
3.890e-14	6.960e-12	2.820e-12	1.600e-13	4.710e-13	8.580e-14	4.430e-15	1.220e-13	4.780e-14	9.080e-14
1.720e-13	1.600e-14	3.970e-14	7.210e-13	1.170e-11					
2.410e-14	1.110e-12	5.810e-13	9.840e-14	9.480e-10	4.320e-14	2.220e-15	5.650e-14	2.920e-14	5.700e-14
1.110e-13	7.370e-15	1.890e-14	3.380e-13	9.510e-10					
2.930e-18	1.100e-17	2.600e-17	4.200e-18	3.000e-17	5.040e-19	3.110e-18	1.710e-17	3.460e-18	6.120e-18
1.430e-18	1.010e-18	1.670e-17	3.950e-17	1.630e-16					
6.030e-20	2.350e-19	6.010e-19	8.850e-20	6.000e-19	9.050e-21	4.610e-19	3.130e-19	8.310e-20	1.410e-19
3.060e-20	2.030e-20	3.500e-19	8.690e-19	3.860e-18					
Bi-211	B				B	0.0000	1.284e+02	1.800e-03	1.000e-07
5.480e-05	5.000e-02	5.000e-02	2.000e-03	1.000e-03	1.000e-01	5.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	1.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00



0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
1.770e-15	1.790e-15	4.490e-15	2.260e-15	2.520e-15	1.900e-15	1.670e-15	1.750e-15	1.690e-15	1.910e-15
1.930e-15	2.100e-15	1.580e-15	1.660e-15	2.040e-15	3.110e-15	1.930e-15	2.200e-15	2.010e-15	2.220e-15
1.720e-15	1.870e-15	1.630e-15	1.720e-15	2.150e-15	2.070e-15				
3.900e-17	4.200e-17	7.730e-17	4.110e-17	4.700e-17	4.150e-17	3.980e-17	4.090e-17	4.120e-17	4.160e-17
4.160e-17	4.760e-17	4.320e-17	3.800e-17	4.420e-17	5.610e-17	4.180e-17	4.850e-17	4.190e-17	4.540e-17
3.880e-17	4.060e-17	4.000e-17	3.680e-17	4.420e-17	4.450e-17				
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
1.980e-18	7.670e-18	1.780e-17	2.930e-18	2.100e-17	4.260e-19	3.100e-19	1.220e-17	2.250e-18	4.330e-18
9.940e-19	7.070e-19	1.150e-17	2.740e-17	1.110e-16					
4.230e-20	1.680e-19	4.240e-19	6.300e-20	4.320e-19	7.340e-21	5.600e-21	2.270e-19	6.150e-20	1.020e-19
2.160e-20	1.450e-20	2.480e-19	6.180e-19	2.430e-18					
T1-207	B				B	0.0000	2.862e+02	1.800e-03	1.000e-07
5.480e-05	1.000e+00	1.000e+00	2.000e-02	3.000e-03	2.000e-01	6.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	9.972e-01
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
1.320e-16	1.320e-16	3.140e-16	1.700e-16	1.920e-16	1.430e-16	1.270e-16	1.320e-16	1.300e-16	1.450e-16
1.450e-16	1.600e-16	1.290e-16	1.250e-16	1.540e-16	3.070e-14	1.450e-16	1.670e-16	1.510e-16	1.690e-16
1.300e-16	1.410e-16	1.230e-16	1.320e-16	1.620e-16	4.610e-16				
3.150e-18	3.380e-18	7.200e-18	3.270e-18	4.110e-18	3.390e-18	3.210e-18	3.290e-18	3.340e-18	3.470e-18
3.390e-18	4.030e-18	3.160e-18	3.030e-18	3.550e-18	5.240e-15	3.420e-18	4.200e-18	3.330e-18	3.760e-18
3.110e-18	3.300e-18	3.190e-18	2.910e-18	3.590e-18	5.610e-17				



0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00						
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00						
1.520e-19	5.770e-19	1.350e-18	2.200e-19	1.580e-18	2.980e-20	3.060e-18	9.280e-19	1.840e-19	3.190e-19	
7.540e-20	5.380e-20	8.640e-19	2.070e-18	1.150e-17						
3.350e-21	1.370e-20	3.420e-20	5.140e-21	3.510e-20	6.840e-22	5.230e-19	1.990e-20	4.500e-21	8.170e-21	
1.810e-21	1.200e-21	1.990e-20	5.070e-20	7.210e-19						
Po-211	B				B	0.0000	5.160e-01	1.800e-03	1.000e-07	
5.480e-05	1.000e-01	1.000e-01	5.000e-03	4.000e-04	1.000e-03	1.000e-01				
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	2.760e-03
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
3.250e-16	3.200e-16	6.250e-16	4.180e-16	4.440e-16	3.460e-16	3.140e-16	3.240e-16	3.210e-16	3.490e-16	
3.510e-16	3.800e-16	3.160e-16	3.090e-16	3.800e-16	4.680e-16	3.530e-16	3.910e-16	3.610e-16	4.000e-16	
3.200e-16	3.440e-16	3.040e-16	3.280e-16	3.890e-16	3.730e-16					
6.880e-18	7.280e-18	1.110e-17	7.230e-18	7.980e-18	7.270e-18	7.130e-18	7.210e-18	7.420e-18	7.340e-18	
7.280e-18	8.270e-18	7.200e-18	6.710e-18	7.790e-18	1.170e-17	7.330e-18	8.350e-18	7.110e-18	7.930e-18	
6.840e-18	7.190e-18	7.080e-18	6.580e-18	7.630e-18	7.760e-18					
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00						
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00						
3.770e-19	1.400e-18	3.330e-18	5.320e-19	3.800e-18	5.930e-20	4.670e-20	2.150e-18	4.500e-19	7.740e-19	
1.820e-19	1.270e-19	2.130e-18	5.030e-18	2.040e-17						
7.570e-21	2.940e-20	7.540e-20	1.100e-20	7.460e-20	1.050e-21	1.170e-21	3.860e-20	1.020e-20	1.760e-20	
3.820e-21	2.520e-21	4.370e-20	1.080e-19	4.250e-19						
25										
Es-255	Particulate				M	1.0000	3.439e+06	1.800e-03	1.000e-07	
5.480e-05	5.000e-04	5.000e-04	2.000e-05	2.000e-06	1.000e-03	1.000e-01				



0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
3.054e-12	9.014e-12	7.640e-08	2.056e-12	2.187e-12	2.782e-10	1.206e-09	1.359e-08	5.754e-08	4.358e-12	
7.880e-09	4.663e-12	6.154e-10	4.086e-12	6.119e-09	2.763e-12	3.634e-12	5.831e-10	2.150e-12	2.062e-12	
8.566e-12	2.434e-12	1.111e-11	2.062e-12	2.316e-12	5.961e-09					
3.061e-10	2.908e-10	6.678e-06	2.809e-10	2.971e-10	3.785e-10	5.832e-10	3.077e-09	1.109e-08	2.885e-10	
6.831e-07	2.925e-10	5.139e-08	2.958e-10	5.346e-07	2.814e-10	2.928e-10	5.141e-08	2.994e-10	2.843e-10	
2.987e-10	3.201e-10	2.815e-10	1.825e-06	2.252e-05	2.878e-06					
2.950e-17	3.000e-17	5.380e-17	3.720e-17	3.960e-17	3.170e-17	2.910e-17	2.990e-17	2.950e-17	3.180e-17	
3.200e-17	3.430e-17	2.930e-17	2.880e-17	3.450e-17	1.610e-15	3.210e-17	3.510e-17	3.340e-17	3.610e-17	
2.990e-17	3.150e-17	2.850e-17	3.000e-17	3.500e-17	4.950e-17					
5.570e-19	6.320e-19	9.920e-19	5.900e-19	6.860e-19	6.020e-19	5.910e-19	5.990e-19	6.080e-19	6.150e-19	
6.040e-19	6.930e-19	5.810e-19	5.630e-19	6.420e-19	4.510e-18	6.050e-19	7.100e-19	6.020e-19	6.310e-19	
5.650e-19	5.910e-19	5.850e-19	5.390e-19	6.320e-19	6.830e-19					
3.720e-15	1.650e-12	5.950e-10	1.700e-11	4.460e-14	9.400e-12	5.200e-16	1.060e-14	1.560e-12	3.960e-14	
4.010e-15	1.290e-15	3.090e-12	1.210e-13	6.280e-10						
4.120e-13	2.040e-12	1.340e-10	1.280e-09	3.130e-07	7.400e-10	3.590e-14	9.690e-13	1.060e-10	8.620e-13	
1.840e-13	1.190e-13	2.120e-10	5.740e-12	3.160e-07						
3.450e-20	1.280e-19	3.070e-19	4.850e-20	3.420e-19	5.110e-21	1.610e-19	1.910e-19	4.170e-20	7.250e-20	
1.650e-20	1.150e-20	1.940e-19	4.590e-19	2.010e-18						
6.200e-22	2.430e-21	6.220e-21	9.150e-22	6.180e-21	9.420e-23	4.500e-22	3.310e-21	8.270e-22	1.530e-21	
3.200e-22	2.010e-22	3.600e-21	9.000e-21	3.570e-20						
Fm-255	Particulate				M	1.0000	7.225e+04	1.800e-03	1.000e-07	
5.480e-05	5.000e-04	5.000e-04	2.000e-04	8.000e-06	2.000e-03	1.000e-01				
9.200e-01	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
3.456e-12	4.145e-12	1.078e-09	3.384e-12	3.391e-12	1.684e-09	3.692e-09	1.531e-08	2.453e-08	3.600e-12	
1.143e-10	3.914e-12	2.169e-11	3.851e-12	8.981e-11	3.450e-12	3.577e-12	1.163e-11	3.388e-12	3.385e-12	
5.035e-12	3.418e-12	4.596e-12	3.385e-12	3.406e-12	2.554e-09					
1.757e-10	1.813e-10	6.065e-08	1.755e-10	1.757e-10	4.269e-10	7.273e-10	2.480e-09	3.869e-09	1.756e-10	
6.245e-09	1.760e-10	6.497e-10	1.757e-10	5.014e-09	1.756e-10	1.757e-10	6.483e-10	1.756e-10	1.756e-10	
1.759e-10	1.760e-10	1.757e-10	6.740e-07	1.558e-06	1.891e-07					
4.900e-17	5.760e-17	3.230e-16	6.430e-17	2.100e-16	6.070e-17	4.420e-17	4.850e-17	4.450e-17	6.980e-17	
6.080e-17	1.150e-16	4.030e-17	4.170e-17	6.690e-17	4.280e-16	5.910e-17	1.400e-16	7.520e-17	1.130e-16	
4.630e-17	5.640e-17	4.210e-17	4.180e-17	7.170e-17	9.470e-17					



1.740e-18	2.640e-18	1.880e-17	1.500e-18	1.840e-17	2.500e-18	1.500e-18	1.680e-18	1.550e-18	3.610e-18
2.380e-18	1.160e-17	2.010e-18	1.270e-18	3.300e-18	6.390e-17	2.110e-18	1.540e-17	3.340e-18	5.710e-18
1.520e-18	2.120e-18	1.390e-18	1.110e-18	2.700e-18	7.160e-18				
5.660e-15	9.880e-12	3.540e-10	2.510e-13	6.090e-14	1.330e-13	6.120e-16	1.490e-14	5.000e-14	1.530e-14
2.880e-15	2.070e-15	4.910e-14	1.030e-13	3.640e-10					
2.770e-13	2.830e-12	6.760e-11	1.250e-11	2.250e-08	7.050e-12	2.610e-14	6.540e-13	1.360e-12	6.100e-13
1.280e-13	8.720e-14	2.080e-12	3.970e-12	2.260e-08					
4.810e-20	2.450e-19	4.830e-19	9.210e-20	7.010e-19	3.070e-20	4.270e-20	1.010e-18	5.730e-20	1.390e-19
3.630e-20	3.600e-20	3.760e-19	1.020e-18	4.320e-18					
1.280e-21	1.010e-20	1.680e-20	3.610e-21	2.640e-20	1.790e-21	6.380e-21	8.890e-20	2.860e-21	6.380e-21
1.880e-21	1.820e-21	1.850e-20	7.250e-20	2.590e-19					
Bk-251	Particulate				M	1.0000	3.336e+03	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	2.000e-05	2.000e-06	1.000e-03	1.000e-01			
8.000e-02	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
5.144e-13	4.068e-13	2.084e-12	8.028e-16	8.909e-14	2.523e-10	1.565e-10	8.924e-11	1.453e-11	7.500e-13
5.525e-13	3.522e-13	1.859e-12	2.019e-12	5.448e-13	1.016e-13	1.272e-12	6.965e-14	5.610e-14	4.401e-15
1.343e-12	3.637e-13	1.446e-12	4.401e-15	1.772e-13	3.783e-11				
2.418e-13	2.178e-13	3.063e-10	1.374e-13	1.904e-13	3.115e-11	1.931e-11	1.113e-11	1.878e-12	1.975e-13
2.143e-11	2.209e-13	3.483e-12	4.014e-13	2.474e-11	1.199e-13	3.036e-13	3.257e-12	2.736e-13	1.709e-13
2.760e-13	3.254e-13	2.574e-13	3.806e-10	1.142e-10	3.568e-11				
2.700e-15	2.870e-15	1.100e-14	3.510e-15	4.380e-15	3.030e-15	2.570e-15	2.730e-15	2.590e-15	3.110e-15
3.100e-15	3.470e-15	2.460e-15	2.530e-15	3.110e-15	2.140e-14	3.090e-15	3.750e-15	3.340e-15	3.720e-15
2.630e-15	2.970e-15	2.510e-15	2.550e-15	3.530e-15	3.560e-15				
6.340e-17	7.060e-17	2.090e-16	6.580e-17	8.860e-17	6.960e-17	6.420e-17	6.690e-17	6.670e-17	7.050e-17
6.960e-17	8.400e-17	6.340e-17	6.210e-17	7.170e-17	1.780e-15	7.040e-17	8.880e-17	6.750e-17	7.710e-17
6.680e-17	6.770e-17	6.520e-17	5.900e-17	7.430e-17	9.390e-17				
9.300e-17	1.480e-12	1.050e-12	1.130e-15	2.760e-15	1.660e-16	1.440e-17	7.590e-16	3.060e-15	1.370e-15
4.890e-16	7.370e-18	2.750e-15	1.960e-14	2.550e-12					
4.620e-16	2.200e-13	1.590e-13	2.330e-14	1.630e-12	1.850e-14	1.760e-17	1.370e-15	3.240e-15	7.410e-16
1.480e-16	7.690e-17	7.140e-15	6.560e-15	2.070e-12					
2.930e-18	1.220e-17	2.760e-17	4.700e-18	3.450e-17	1.040e-18	2.140e-18	2.120e-17	3.500e-18	6.940e-18
1.620e-18	1.180e-18	1.750e-17	4.320e-17	1.800e-16					
6.790e-20	2.810e-19	6.900e-19	1.050e-19	7.260e-19	1.980e-20	1.780e-19	4.280e-19	9.020e-20	1.710e-19
3.670e-20	2.450e-20	4.020e-19	1.040e-18	4.260e-18					
Cf-251	Particulate				M	1.0000	2.840e+10	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	6.000e-05	2.000e-06	1.000e-03	1.000e-01			



0.000e+00	1.000e+00	1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
1.085e-10	7.806e-11	1.405e-05	3.855e-11	2.504e-11	1.612e-09	4.028e-09	2.351e-08	6.862e-08	8.667e-11	
9.678e-07	5.555e-11	1.461e-07	8.885e-11	1.125e-06	2.758e-11	4.747e-11	1.460e-07	3.225e-11	3.055e-11	
1.523e-10	5.469e-11	1.101e-10	3.055e-11	5.347e-11	3.585e-07					
1.893e-08	5.245e-09	2.602e-03	7.152e-09	4.750e-09	7.311e-09	1.095e-08	1.544e-08	2.509e-08	1.270e-08	
1.796e-04	7.349e-09	2.699e-05	1.351e-08	2.083e-04	4.281e-09	6.482e-09	2.698e-05	6.196e-09	5.748e-09	
2.000e-08	1.013e-08	7.550e-09	5.353e-06	2.917e-05	6.890e-05					
3.870e-15	4.070e-15	1.460e-14	5.020e-15	6.120e-15	4.310e-15	3.680e-15	3.900e-15	3.720e-15	4.400e-15	
4.400e-15	4.900e-15	3.550e-15	3.650e-15	4.470e-15	1.100e-14	4.400e-15	5.270e-15	4.720e-15	5.240e-15	
3.770e-15	4.240e-15	3.600e-15	3.700e-15	4.990e-15	4.840e-15					
9.000e-17	9.850e-17	2.680e-16	9.340e-17	1.200e-16	9.790e-17	9.090e-17	9.440e-17	9.420e-17	9.850e-17	
9.790e-17	1.160e-16	9.090e-17	8.780e-17	1.010e-16	1.710e-16	9.890e-17	1.210e-16	9.480e-17	1.070e-16	
9.230e-17	9.490e-17	9.200e-17	8.350e-17	1.040e-16	1.070e-16					
3.010e-14	9.330e-12	7.840e-10	1.210e-09	3.850e-13	9.720e-10	2.550e-15	7.690e-14	1.340e-10	2.170e-13	
4.120e-14	6.730e-15	2.650e-10	9.410e-13	3.380e-09						
5.080e-12	1.760e-11	2.210e-10	1.920e-07	3.970e-07	1.570e-07	2.710e-13	1.090e-11	2.190e-08	9.810e-12	
4.540e-12	9.620e-13	4.170e-08	9.150e-11	8.100e-07						
4.260e-18	1.740e-17	3.950e-17	6.670e-18	4.880e-17	1.390e-18	1.100e-18	2.960e-17	5.050e-18	9.840e-18	
2.290e-18	1.670e-18	2.510e-17	6.160e-17	2.540e-16						
9.610e-20	3.950e-19	9.740e-19	1.480e-19	1.020e-18	2.540e-20	1.710e-20	5.800e-19	1.290e-19	2.380e-19	
5.120e-20	3.410e-20	5.670e-19	1.460e-18	5.730e-18						
Cm-247	Particulate				M	1.0000	4.923e+14	1.800e-03	1.000e-07	
5.480e-05	5.000e-04	5.000e-04	2.000e-05	2.000e-06	1.000e-03	1.000e-01				
0.000e+00	0.000e+00	0.000e+00	1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
1.468e-08	1.466e-08	8.456e-06	1.458e-08	1.452e-08	1.582e-08	1.801e-08	3.500e-08	7.528e-08	4.285e-08	
5.108e-07	1.460e-08	1.642e-07	1.465e-08	2.848e-07	1.454e-08	1.458e-08	1.624e-07	1.454e-08	1.455e-08	
1.476e-08	1.458e-08	1.472e-08	1.455e-08	1.458e-08	1.909e-07					
2.705e-06	2.680e-06	1.565e-03	2.689e-06	2.678e-06	2.683e-06	2.688e-06	2.691e-06	2.700e-06	7.945e-06	
9.484e-05	2.685e-06	3.034e-05	2.695e-06	5.285e-05	2.680e-06	2.682e-06	3.008e-05	2.682e-06	2.684e-06	
2.703e-06	2.689e-06	2.684e-06	7.508e-06	2.476e-05	3.712e-05					
1.200e-14	1.200e-14	2.830e-14	1.530e-14	1.680e-14	1.280e-14	1.130e-14	1.180e-14	1.150e-14	1.290e-14	
1.290e-14	1.410e-14	1.070e-14	1.120e-14	1.380e-14	1.790e-14	1.300e-14	1.460e-14	1.340e-14	1.490e-14	
1.160e-14	1.260e-14	1.100e-14	1.170e-14	1.440e-14	1.380e-14					



2.600e-16	2.830e-16	4.830e-16	2.760e-16	3.130e-16	2.770e-16	2.680e-16	2.740e-16	2.770e-16	2.780e-16
2.780e-16	3.190e-16	2.930e-16	2.550e-16	2.970e-16	3.710e-16	2.790e-16	3.240e-16	2.820e-16	3.060e-16
2.620e-16	2.730e-16	2.690e-16	2.480e-16	2.950e-16	2.980e-16				
1.110e-11	3.320e-11	7.460e-10	6.700e-10	7.500e-11	5.110e-10	7.510e-13	1.420e-11	1.490e-10	2.780e-11
2.200e-11	2.080e-12	8.420e-11	9.050e-11	2.440e-09					
1.730e-09	3.540e-09	6.890e-09	1.090e-07	3.150e-07	8.580e-08	1.070e-10	1.990e-09	2.600e-08	4.150e-09
3.400e-09	2.920e-10	1.290e-08	1.200e-08	5.830e-07					
1.350e-17	5.170e-17	1.200e-16	1.960e-17	1.410e-16	2.690e-18	1.790e-18	8.120e-17	1.520e-17	2.900e-17
6.710e-18	4.740e-18	7.750e-17	1.850e-16	7.500e-16					
2.850e-19	1.120e-18	2.840e-18	4.210e-19	2.880e-18	4.590e-20	3.700e-20	1.510e-18	4.170e-19	6.840e-19
1.450e-19	9.740e-20	1.670e-18	4.140e-18	1.630e-17					
Pu-243	Particulate				M	1.0000	1.784e+04	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	1.000e-04	1.000e-06	1.000e-03	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
4.437e-13	1.054e-12	1.552e-12	4.156e-15	5.674e-14	1.800e-10	2.877e-10	6.071e-10	4.067e-10	9.396e-13
7.800e-13	5.744e-13	4.673e-12	1.436e-12	7.702e-13	1.504e-13	9.139e-13	1.832e-13	3.491e-14	6.693e-15
2.530e-12	2.257e-13	2.747e-12	6.693e-15	1.223e-13	8.554e-11				
6.400e-13	6.108e-13	1.228e-10	4.811e-13	5.837e-13	2.617e-11	4.146e-11	8.710e-11	5.847e-11	9.699e-13
2.597e-11	6.391e-13	2.453e-12	7.433e-13	6.342e-12	4.791e-13	6.613e-13	1.833e-12	6.897e-13	5.309e-13
8.329e-13	7.758e-13	8.149e-13	4.080e-10	3.055e-10	6.291e-11				
6.880e-16	7.450e-16	3.230e-15	9.080e-16	1.210e-15	7.910e-16	6.470e-16	6.940e-16	6.540e-16	8.200e-16
8.060e-16	9.260e-16	6.040e-16	6.290e-16	7.860e-16	8.110e-15	8.060e-16	1.020e-15	8.820e-16	9.930e-16
6.760e-16	7.640e-16	6.270e-16	6.300e-16	9.300e-16	9.650e-16				
1.740e-17	1.980e-17	7.230e-17	1.820e-17	2.530e-17	1.960e-17	1.780e-17	1.870e-17	1.850e-17	1.990e-17
1.980e-17	2.370e-17	1.810e-17	1.710e-17	1.950e-17	1.150e-16	1.990e-17	2.510e-17	2.020e-17	2.180e-17
1.800e-17	1.900e-17	1.780e-17	1.580e-17	2.130e-17	2.270e-17				
6.540e-17	1.060e-12	9.630e-12	1.650e-15	2.270e-15	1.520e-16	2.210e-17	5.990e-16	7.740e-15	3.540e-15
6.430e-16	7.700e-18	4.990e-15	1.840e-14	1.070e-11					
9.460e-16	1.860e-13	1.680e-12	2.510e-14	4.400e-12	6.820e-15	5.070e-17	2.890e-15	3.230e-15	1.810e-15
5.620e-16	1.830e-16	6.400e-15	1.210e-14	6.320e-12					
7.250e-19	3.190e-18	6.990e-18	1.220e-18	9.090e-18	3.070e-19	8.090e-19	5.850e-18	8.590e-19	1.800e-18
4.270e-19	3.160e-19	4.410e-18	1.110e-17	4.710e-17					
1.820e-20	7.910e-20	1.920e-19	3.000e-20	2.080e-19	6.870e-21	1.150e-20	1.220e-19	2.570e-20	4.790e-20
1.040e-20	6.940e-21	1.090e-19	2.890e-19	1.160e-18					
Am-243	Particulate				M	1.0000	2.326e+11	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	5.000e-05	2.000e-06	1.000e-03	1.000e-01			



0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
1.553e-08	1.548e-08	8.995e-06	1.546e-08	1.542e-08	1.672e-08	1.874e-08	3.537e-08	7.624e-08	4.554e-08
5.439e-07	1.546e-08	1.745e-07	1.550e-08	3.032e-07	1.542e-08	1.545e-08	1.727e-07	1.543e-08	1.544e-08
1.556e-08	1.546e-08	1.551e-08	1.544e-08	1.546e-08	2.027e-07				
2.864e-06	2.845e-06	1.665e-03	2.852e-06	2.844e-06	2.848e-06	2.852e-06	2.855e-06	2.864e-06	8.452e-06
1.010e-04	2.849e-06	3.230e-05	2.857e-06	5.625e-05	2.844e-06	2.848e-06	3.202e-05	2.847e-06	2.848e-06
2.864e-06	2.852e-06	2.848e-06	7.852e-06	2.731e-05	3.961e-05				
1.410e-15	1.560e-15	7.730e-15	1.890e-15	2.700e-15	1.670e-15	1.310e-15	1.420e-15	1.320e-15	1.750e-15
1.690e-15	2.000e-15	1.210e-15	1.260e-15	1.600e-15	2.840e-15	1.690e-15	2.270e-15	1.890e-15	2.160e-15
1.390e-15	1.580e-15	1.260e-15	1.240e-15	1.990e-15	1.920e-15				
3.870e-17	4.470e-17	1.930e-16	4.060e-17	5.720e-17	4.490e-17	3.960e-17	4.190e-17	4.110e-17	4.540e-17
4.540e-17	5.350e-17	4.030e-17	3.810e-17	4.260e-17	7.850e-17	4.570e-17	5.670e-17	4.750e-17	4.940e-17
3.870e-17	4.290e-17	3.930e-17	3.380e-17	4.920e-17	4.960e-17				
1.180e-11	3.480e-11	7.460e-10	7.140e-10	7.950e-11	5.440e-10	7.970e-13	1.500e-11	1.590e-10	2.920e-11
2.340e-11	2.210e-12	9.070e-11	9.540e-11	2.550e-09					
1.840e-09	3.760e-09	7.310e-09	1.160e-07	3.480e-07	9.130e-08	1.140e-10	2.110e-09	2.760e-08	4.410e-09
3.620e-09	3.100e-10	1.390e-08	1.270e-08	6.330e-07					
1.430e-18	6.740e-18	1.420e-17	2.560e-18	1.950e-17	7.340e-19	2.830e-19	1.300e-17	1.720e-18	3.770e-18
9.100e-19	6.880e-19	8.980e-18	2.320e-17	9.770e-17					
3.890e-20	1.810e-19	4.290e-19	6.880e-20	4.810e-19	1.830e-20	7.830e-21	2.760e-19	5.730e-20	1.080e-19
2.360e-20	1.570e-20	2.390e-19	6.460e-19	2.590e-18					
Np-239	Particulate				M	1.0000	2.036e+05	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	1.000e-03	1.000e-05	2.000e-02	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	1.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
9.532e-12	4.972e-11	2.715e-11	5.280e-14	1.148e-12	3.522e-10	8.706e-10	3.999e-09	8.852e-09	2.218e-11
1.451e-11	1.760e-11	1.572e-10	2.099e-11	2.740e-11	5.212e-12	1.595e-11	1.228e-11	8.377e-13	1.483e-13
5.393e-11	3.647e-12	7.463e-11	1.483e-13	2.194e-12	8.141e-10				
1.537e-11	1.788e-11	4.934e-10	4.375e-12	1.317e-11	6.195e-11	1.370e-10	6.177e-10	1.362e-09	2.290e-11
3.163e-11	1.105e-11	3.205e-11	1.402e-11	4.219e-11	5.320e-12	1.249e-11	9.153e-12	1.751e-11	7.974e-12
1.479e-11	2.365e-11	1.434e-11	2.116e-09	4.772e-09	7.144e-10				
5.950e-15	6.220e-15	2.120e-14	7.700e-15	9.220e-15	6.570e-15	5.640e-15	5.970e-15	5.710e-15	6.710e-15
6.710e-15	7.440e-15	5.410e-15	5.590e-15	6.860e-15	1.630e-14	6.710e-15	7.960e-15	7.170e-15	7.940e-15
5.790e-15	6.470e-15	5.520e-15	5.690e-15	7.590e-15	7.350e-15				



1.370e-16	1.500e-16	3.880e-16	1.430e-16	1.780e-16	1.490e-16	1.390e-16	1.440e-16	1.440e-16	1.490e-16
1.490e-16	1.740e-16	1.410e-16	1.340e-16	1.540e-16	2.640e-16	1.500e-16	1.800e-16	1.450e-16	1.620e-16
1.400e-16	1.450e-16	1.400e-16	1.280e-16	1.580e-16	1.620e-16				
1.570e-15	2.070e-12	1.110e-10	3.270e-14	4.430e-14	3.250e-15	7.450e-16	1.360e-14	2.610e-13	1.550e-13
1.500e-14	2.100e-16	1.820e-13	3.680e-13	1.150e-10					
2.450e-14	4.250e-13	2.080e-11	5.390e-14	6.710e-11	4.450e-14	7.040e-16	7.830e-14	6.450e-14	5.800e-14
1.580e-14	3.330e-15	2.580e-13	2.750e-13	8.920e-11					
6.550e-18	2.650e-17	6.050e-17	1.020e-17	7.420e-17	2.010e-18	1.630e-18	4.450e-17	7.700e-18	1.500e-17
3.490e-18	2.530e-18	3.850e-17	9.420e-17	3.880e-16					
1.470e-19	6.020e-19	1.490e-18	2.260e-19	1.540e-18	3.680e-20	2.630e-20	8.600e-19	2.010e-19	3.630e-19
7.750e-20	5.160e-20	8.640e-19	2.210e-18	8.690e-18					
Pu-239	Particulate				M	1.0000	7.609e+11	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	1.000e-04	1.000e-06	1.000e-03	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	1.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
1.451e-08	1.451e-08	8.236e-06	1.451e-08	1.451e-08	1.571e-08	1.750e-08	3.264e-08	6.769e-08	3.378e-08
1.727e-06	1.451e-08	1.079e-07	1.451e-08	3.915e-07	1.451e-08	1.451e-08	1.099e-07	1.451e-08	1.451e-08
1.451e-08	1.451e-08	1.451e-08	1.451e-08	1.451e-08	2.508e-07				
2.682e-06	2.682e-06	1.524e-03	2.682e-06	2.682e-06	2.682e-06	2.682e-06	2.686e-06	2.693e-06	6.269e-06
3.198e-04	2.682e-06	1.998e-05	2.682e-06	7.259e-05	2.682e-06	2.682e-06	2.034e-05	2.682e-06	2.682e-06
2.682e-06	2.682e-06	2.682e-06	7.603e-06	2.611e-05	4.849e-05				
2.160e-18	2.370e-18	1.060e-17	2.790e-18	8.150e-18	2.490e-18	2.000e-18	2.140e-18	2.020e-18	2.710e-18
2.510e-18	4.560e-18	1.870e-18	1.940e-18	2.870e-18	2.030e-17	2.470e-18	5.230e-18	2.900e-18	4.190e-18
2.080e-18	2.410e-18	1.930e-18	1.980e-18	2.890e-18	3.770e-18				
6.560e-20	8.610e-20	6.340e-19	5.770e-20	8.310e-19	8.160e-20	5.640e-20	6.050e-20	6.000e-20	1.120e-19
7.780e-20	5.210e-19	8.480e-20	5.150e-20	1.290e-19	4.040e-18	6.980e-20	6.540e-19	1.040e-19	1.910e-19
5.950e-20	7.400e-20	5.570e-20	4.770e-20	8.660e-20	3.060e-19				
1.300e-11	4.370e-11	7.000e-10	1.890e-09	9.980e-11	4.870e-10	9.970e-13	2.100e-11	9.960e-11	3.110e-11
1.730e-11	2.980e-12	9.460e-11	1.330e-10	3.630e-09					
2.010e-09	5.000e-09	1.090e-08	2.980e-07	3.360e-07	8.170e-08	1.390e-10	2.850e-09	1.720e-08	4.690e-09
2.630e-09	4.000e-10	1.500e-08	1.740e-08	7.940e-07					
2.280e-21	1.010e-20	2.160e-20	3.800e-21	2.830e-20	1.010e-21	2.030e-21	3.940e-20	2.660e-21	5.730e-21
1.410e-21	1.330e-21	1.610e-20	4.300e-20	1.790e-19					
5.490e-23	3.290e-22	6.220e-22	1.180e-22	8.470e-22	6.020e-23	4.030e-22	4.010e-21	1.210e-22	2.080e-22
5.830e-23	6.080e-23	7.240e-22	3.170e-21	1.080e-20					
U-235m	Particulate				M	1.0000	1.560e+03	1.800e-03	1.000e-07
5.480e-05	2.000e-02	2.000e-02	8.000e-04	4.000e-04	2.000e-03	1.000e-01			



0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	9.994e-01	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
2.998e-19	2.030e-17	3.494e-18	2.998e-19	2.998e-19	3.395e-14	1.144e-14	3.106e-15	2.315e-16	4.125e-18
3.192e-19	2.998e-19	2.998e-19	2.998e-19	5.804e-19	2.998e-19	2.998e-19	2.998e-19	2.998e-19	2.998e-19
2.998e-19	2.998e-19	2.998e-19	2.998e-19	2.998e-19	4.310e-15				
4.653e-18	3.161e-16	5.386e-17	4.653e-18	4.653e-18	3.560e-15	1.202e-15	3.312e-16	2.898e-17	6.405e-17
4.896e-18	4.653e-18	4.651e-18	4.653e-18	8.981e-18	4.653e-18	4.653e-18	4.653e-18	4.653e-18	4.653e-18
4.653e-18	4.653e-18	4.653e-18	4.953e-18	9.193e-16	5.824e-16				
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00				
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
4.550e-22	2.010e-16	3.480e-17	6.550e-22	4.610e-21	6.000e-22	4.620e-23	2.230e-21	5.290e-22	5.510e-20
2.570e-21	1.550e-22	4.680e-21	7.130e-21	2.360e-16					
7.440e-21	2.540e-17	4.520e-18	1.030e-20	1.120e-17	9.370e-21	7.010e-22	3.510e-20	9.030e-21	9.100e-19
4.110e-20	2.350e-21	7.360e-20	1.070e-19	4.230e-17					
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
U-235	Particulate				M	1.0000	2.222e+16	1.800e-03	1.000e-07
5.480e-05	2.000e-02	2.000e-02	8.000e-04	4.000e-04	2.000e-03	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	6.000e-04	1.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
2.567e-08	2.576e-08	7.405e-07	2.562e-08	2.558e-08	2.674e-08	2.850e-08	4.290e-08	7.816e-08	2.655e-07
9.959e-08	2.563e-08	2.584e-08	2.565e-08	7.585e-08	2.559e-08	2.563e-08	2.560e-08	2.560e-08	2.561e-08
2.568e-08	2.561e-08	2.571e-08	2.561e-08	2.562e-08	4.670e-08				
1.240e-07	1.238e-07	3.580e-06	1.235e-07	1.237e-07	1.238e-07	1.240e-07	1.269e-07	1.340e-07	1.286e-06
4.824e-07	1.236e-07	1.235e-07	1.238e-07	3.668e-07	1.234e-07	1.237e-07	1.233e-07	1.239e-07	1.236e-07
1.236e-07	1.242e-07	1.235e-07	4.419e-06	1.843e-05	2.404e-06				
5.650e-15	5.880e-15	1.940e-14	7.300e-15	8.600e-15	6.210e-15	5.380e-15	5.670e-15	5.430e-15	6.320e-15
6.350e-15	7.000e-15	5.230e-15	5.350e-15	6.530e-15	9.150e-15	6.350e-15	7.480e-15	6.780e-15	7.480e-15
5.500e-15	6.140e-15	5.270e-15	5.450e-15	7.160e-15	6.870e-15				



1.300e-16	1.380e-16	3.320e-16	1.340e-16	1.600e-16	1.390e-16	1.300e-16	1.350e-16	1.350e-16	1.380e-16
1.390e-16	1.590e-16	1.310e-16	1.260e-16	1.440e-16	2.060e-16	1.400e-16	1.620e-16	1.330e-16	1.470e-16
1.280e-16	1.340e-16	1.310e-16	1.190e-16	1.470e-16	1.490e-16				
2.000e-11	5.750e-11	7.080e-10	1.390e-10	1.410e-10	8.740e-11	1.440e-12	2.790e-11	2.330e-11	4.910e-11
1.590e-10	4.060e-12	2.790e-11	1.820e-10	1.630e-09					
8.850e-11	2.070e-10	5.560e-10	5.960e-10	2.530e-07	3.830e-10	5.900e-12	1.180e-10	1.060e-10	2.080e-10
6.850e-10	1.660e-11	1.220e-10	7.180e-10	2.570e-07					
6.270e-18	2.510e-17	5.750e-17	9.620e-18	7.000e-17	1.840e-18	9.130e-19	4.150e-17	7.440e-18	1.420e-17
3.290e-18	2.380e-18	3.670e-17	8.930e-17	3.660e-16					
1.370e-19	5.610e-19	1.390e-18	2.110e-19	1.440e-18	3.150e-20	2.060e-20	7.730e-19	1.860e-19	3.340e-19
7.180e-20	4.680e-20	8.080e-19	2.060e-18	8.070e-18					
Th-231	Particulate				S	1.0000	9.187e+04	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	1.000e-04	5.000e-06	1.000e-03	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
4.912e-13	2.863e-12	5.785e-12	1.780e-14	6.054e-14	1.936e-10	4.374e-10	1.918e-09	3.378e-09	1.376e-12
9.872e-13	1.343e-12	1.778e-11	1.524e-12	1.833e-12	2.888e-13	9.686e-13	5.707e-13	4.358e-14	1.983e-14
4.473e-12	2.013e-13	4.864e-12	1.983e-14	1.253e-13	3.337e-10				
7.058e-13	5.860e-13	5.641e-11	2.098e-13	6.716e-13	3.112e-11	6.958e-11	3.048e-10	5.366e-10	1.167e-12
2.261e-12	9.335e-13	3.302e-12	6.972e-13	2.753e-12	2.796e-13	6.751e-13	5.705e-13	7.987e-13	3.425e-13
9.508e-13	1.358e-12	9.000e-13	8.519e-10	1.570e-09	2.426e-10				
3.200e-16	3.530e-16	1.650e-15	4.220e-16	6.760e-16	3.730e-16	2.990e-16	3.220e-16	3.010e-16	3.950e-16
3.800e-16	4.770e-16	2.780e-16	2.880e-16	3.750e-16	2.490e-15	3.780e-16	5.400e-16	4.260e-16	5.040e-16
3.110e-16	3.580e-16	2.880e-16	2.880e-16	4.410e-16	4.630e-16				
8.690e-18	1.050e-17	4.700e-17	8.740e-18	2.590e-17	1.030e-17	8.550e-18	9.130e-18	8.870e-18	1.140e-17
1.030e-17	1.960e-17	8.920e-18	8.030e-18	1.070e-17	7.980e-17	1.020e-17	2.300e-17	1.120e-17	1.390e-17
8.760e-18	9.660e-18	8.460e-18	7.310e-18	1.120e-17	1.520e-17				
8.060e-17	1.150e-12	4.700e-11	2.470e-15	2.640e-15	6.020e-16	4.500e-17	6.960e-16	3.470e-14	9.910e-15
9.650e-16	1.410e-17	1.300e-14	2.810e-14	4.830e-11					
1.180e-15	2.230e-13	9.070e-12	2.750e-15	2.260e-11	2.810e-15	2.750e-17	3.990e-15	7.620e-15	2.120e-15
5.230e-16	1.130e-16	5.250e-15	1.650e-14	3.190e-11					
3.310e-19	1.510e-18	3.230e-18	5.760e-19	4.310e-18	1.570e-19	2.480e-19	3.270e-18	3.950e-19	8.540e-19
2.050e-19	1.600e-19	2.100e-18	5.380e-18	2.270e-17					
8.410e-21	4.160e-20	9.310e-20	1.560e-20	1.100e-19	4.460e-21	7.960e-21	1.250e-19	1.270e-20	2.540e-20
5.930e-21	4.430e-21	6.010e-20	1.800e-19	6.940e-19					
Pa-231	Particulate				M	1.0000	1.034e+12	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	5.000e-06	5.000e-06	1.000e-02	1.000e-01			



0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
5.606e-08	5.611e-08	2.511e-05	5.602e-08	5.597e-08	5.722e-08	5.911e-08	8.342e-08	1.354e-07	3.406e-07	
6.554e-07	5.601e-08	2.153e-07	5.602e-08	9.261e-07	5.598e-08	5.622e-08	2.184e-07	5.599e-08	5.600e-08	
5.604e-08	5.600e-08	5.603e-08	5.600e-08	5.601e-08	4.793e-07					
1.039e-05	1.040e-05	4.665e-03	1.039e-05	1.038e-05	1.038e-05	1.039e-05	1.206e-05	1.513e-05	6.341e-05	
1.222e-04	1.039e-05	3.999e-05	1.039e-05	1.728e-04	1.038e-05	1.042e-05	4.058e-05	1.038e-05	1.038e-05	
1.039e-05	1.038e-05	1.039e-05	1.555e-05	3.321e-05	9.117e-05					
1.210e-15	1.240e-15	3.440e-15	1.550e-15	1.840e-15	1.310e-15	1.140e-15	1.200e-15	1.160e-15	1.330e-15	
1.330e-15	1.490e-15	1.090e-15	1.140e-15	1.400e-15	2.410e-15	1.340e-15	1.580e-15	1.410e-15	1.570e-15	
1.170e-15	1.290e-15	1.120e-15	1.170e-15	1.490e-15	1.450e-15					
2.760e-17	3.010e-17	6.830e-17	2.870e-17	4.330e-17	2.980e-17	2.770e-17	2.870e-17	2.870e-17	3.060e-17	
2.980e-17	3.950e-17	2.950e-17	2.640e-17	3.180e-17	8.810e-17	2.990e-17	4.200e-17	3.020e-17	3.420e-17	
2.710e-17	2.880e-17	2.780e-17	2.530e-17	3.180e-17	3.470e-17					
3.970e-11	8.910e-11	8.100e-10	6.830e-10	2.580e-10	1.420e-09	2.510e-12	4.490e-11	1.980e-10	1.010e-10	
1.370e-10	6.880e-12	2.200e-10	2.790e-10	4.290e-09						
6.170e-09	1.140e-08	2.510e-08	1.050e-07	3.510e-07	2.350e-07	3.620e-10	6.420e-09	3.310e-08	1.520e-08	
2.110e-08	9.820e-10	3.480e-08	3.770e-08	8.840e-07						
1.350e-18	5.290e-18	1.220e-17	2.020e-18	1.460e-17	3.270e-19	2.400e-19	8.890e-18	1.550e-18	3.000e-18	
6.920e-19	5.000e-19	7.860e-18	1.910e-17	7.750e-17						
2.910e-20	1.200e-19	2.960e-19	4.520e-20	3.110e-19	6.490e-21	8.790e-21	2.090e-19	4.200e-20	7.280e-20	
1.590e-20	1.090e-20	1.780e-19	4.640e-19	1.810e-18						
Ac-227	Particulate				M	1.0000	6.871e+08	1.800e-03	1.000e-07	
5.480e-05	5.000e-04	5.000e-04	2.000e-05	2.000e-06	1.000e-03	1.000e-01				
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
0.000e+00	0.000e+00	1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
4.735e-08	4.737e-08	9.354e-06	4.728e-08	4.726e-08	4.732e-08	4.744e-08	5.584e-08	7.513e-08	7.116e-08	
2.022e-06	4.728e-08	1.871e-07	4.732e-08	4.921e-07	4.726e-08	4.754e-08	1.858e-07	4.727e-08	4.727e-08	
4.737e-08	4.729e-08	4.729e-08	4.727e-08	4.729e-08	3.225e-07					
8.711e-06	8.713e-06	1.726e-03	8.697e-06	8.695e-06	8.699e-06	8.707e-06	1.003e-05	1.247e-05	1.337e-05	
3.726e-04	8.698e-06	3.443e-05	8.706e-06	9.110e-05	8.693e-06	8.743e-06	3.419e-05	8.696e-06	8.696e-06	
8.715e-06	8.701e-06	8.699e-06	2.999e-05	9.251e-05	6.945e-05					
2.270e-18	2.510e-18	1.160e-17	2.970e-18	7.020e-18	2.640e-18	2.100e-18	2.260e-18	2.120e-18	2.860e-18	
2.680e-18	4.230e-18	1.960e-18	2.030e-18	2.860e-18	1.590e-17	2.650e-18	4.810e-18	3.070e-18	4.060e-18	
2.180e-18	2.540e-18	2.030e-18	2.040e-18	3.110e-18	3.650e-18					



6.870e-20	8.510e-20	5.300e-19	6.340e-20	5.900e-19	8.230e-20	6.130e-20	6.640e-20	6.430e-20	1.030e-19
8.040e-20	3.860e-19	7.770e-20	5.640e-20	1.100e-19	3.190e-18	7.640e-20	4.590e-19	9.670e-20	1.550e-19
6.430e-20	7.530e-20	6.070e-20	5.110e-20	8.940e-20	2.370e-19				
4.070e-11	1.110e-10	3.770e-10	2.880e-09	2.930e-10	6.890e-10	3.050e-12	6.120e-11	1.910e-10	9.700e-11
3.740e-11	8.650e-12	1.540e-10	3.990e-10	5.340e-09					
6.470e-09	1.540e-08	3.900e-08	4.660e-07	1.140e-06	1.140e-07	4.390e-10	8.640e-09	3.300e-08	1.500e-08
5.860e-09	1.210e-09	2.370e-08	5.380e-08	1.920e-06					
2.350e-21	1.070e-20	2.270e-20	4.060e-21	3.040e-20	1.100e-21	1.590e-21	3.390e-20	2.790e-21	6.070e-21
1.490e-21	1.290e-21	1.610e-20	4.230e-20	1.770e-19					
5.880e-23	3.320e-22	6.760e-22	1.220e-22	8.740e-22	5.030e-23	3.180e-22	2.850e-21	1.110e-22	2.060e-22
5.360e-23	4.940e-23	6.170e-22	2.540e-21	8.860e-21					
Th-227	Particulate				S	1.0000	1.614e+06	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	1.000e-04	5.000e-06	1.000e-03	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	9.862e-01	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
3.219e-10	3.736e-10	8.795e-08	3.129e-10	3.139e-10	1.817e-09	4.215e-09	2.659e-08	9.149e-08	2.594e-09
4.947e-09	3.320e-10	7.097e-10	3.315e-10	7.865e-09	3.186e-10	3.291e-10	5.533e-10	3.137e-10	3.129e-10
3.619e-10	3.162e-10	3.914e-10	3.129e-10	3.150e-10	9.115e-09				
4.005e-10	2.276e-10	6.816e-08	2.217e-10	4.000e-10	6.823e-10	1.183e-09	6.573e-09	2.107e-08	3.018e-09
4.227e-09	2.945e-10	5.205e-10	3.501e-10	5.937e-09	2.483e-10	3.455e-10	4.870e-10	4.424e-10	2.832e-10
2.819e-10	5.591e-10	2.333e-10	4.921e-06	6.373e-05	7.651e-06				
4.360e-15	4.480e-15	1.320e-14	5.600e-15	6.510e-15	4.740e-15	4.120e-15	4.340e-15	4.180e-15	4.810e-15
4.830e-15	5.330e-15	3.970e-15	4.100e-15	5.030e-15	7.850e-15	4.830e-15	5.650e-15	5.110e-15	5.660e-15
4.240e-15	4.670e-15	4.030e-15	4.210e-15	5.420e-15	5.220e-15				
9.910e-17	1.060e-16	2.380e-16	1.030e-16	1.270e-16	1.060e-16	1.000e-16	1.030e-16	1.040e-16	1.060e-16
1.060e-16	1.250e-16	1.040e-16	9.610e-17	1.110e-16	1.870e-16	1.070e-16	1.280e-16	1.050e-16	1.150e-16
9.750e-17	1.030e-16	1.010e-16	9.160e-17	1.130e-16	1.150e-16				
5.030e-13	1.090e-11	1.000e-09	9.730e-12	5.280e-12	1.740e-11	5.300e-14	1.290e-12	1.220e-12	1.280e-12
1.650e-12	1.780e-13	4.860e-12	8.420e-12	1.060e-09					
5.730e-13	3.950e-12	2.570e-10	7.320e-12	8.980e-07	9.380e-12	3.010e-14	1.650e-12	8.810e-13	6.810e-13
1.760e-12	1.130e-13	3.290e-12	6.290e-12	8.980e-07					
4.840e-18	1.910e-17	4.410e-17	7.320e-18	5.300e-17	1.250e-18	7.830e-19	3.150e-17	5.650e-18	1.080e-17
2.500e-18	1.800e-18	2.820e-17	6.840e-17	2.790e-16					
1.050e-19	4.280e-19	1.070e-18	1.610e-19	1.100e-18	2.260e-20	1.870e-20	6.140e-19	1.480e-19	2.560e-19
5.510e-20	3.660e-20	6.230e-19	1.590e-18	6.230e-18					
Fr-223	Particulate				M	1.0000	1.320e+03	1.800e-03	1.000e-07
5.480e-05	1.000e+00	1.000e+00	3.000e-02	8.000e-03	3.000e-02	1.000e-01			



0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	1.380e-02	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
2.360e-09	2.360e-09	2.360e-09	2.359e-09	2.359e-09	2.521e-09	2.363e-09	2.362e-09	2.364e-09	2.360e-09	2.360e-09
2.360e-09	2.360e-09	2.360e-09	2.360e-09	2.360e-09	2.359e-09	2.360e-09	2.359e-09	2.360e-09	2.359e-09	2.359e-09
2.360e-09	2.360e-09	2.360e-09	2.359e-09	2.360e-09	2.379e-09					
4.553e-10	4.552e-10	4.553e-10	4.552e-10	4.552e-10	4.719e-10	4.555e-10	4.557e-10	4.559e-10	4.552e-10	4.552e-10
4.553e-10	4.552e-10	4.552e-10	4.553e-10	4.553e-10	4.551e-10	4.553e-10	4.552e-10	4.554e-10	4.552e-10	4.552e-10
4.552e-10	4.554e-10	4.552e-10	6.421e-09	6.055e-08	7.669e-09					
1.510e-15	1.600e-15	6.080e-15	1.990e-15	2.650e-15	1.710e-15	1.410e-15	1.510e-15	1.430e-15	1.780e-15	1.780e-15
1.740e-15	2.030e-15	1.350e-15	1.370e-15	1.740e-15	2.320e-14	1.740e-15	2.240e-15	1.900e-15	2.170e-15	2.170e-15
1.470e-15	1.650e-15	1.360e-15	1.390e-15	2.000e-15	2.150e-15					
3.950e-17	4.460e-17	1.560e-16	4.150e-17	5.930e-17	4.500e-17	3.980e-17	4.180e-17	4.140e-17	4.610e-17	4.610e-17
4.510e-17	5.520e-17	3.930e-17	3.760e-17	4.380e-17	2.800e-15	4.550e-17	5.900e-17	4.560e-17	5.050e-17	5.050e-17
3.950e-17	4.280e-17	3.940e-17	3.460e-17	4.890e-17	7.730e-17					
3.550e-12	1.510e-11	4.170e-11	4.960e-12	3.580e-11	3.020e-13	3.590e-13	8.660e-12	4.120e-12	7.810e-12	7.810e-12
1.710e-12	1.200e-12	9.690e-13	5.540e-11	1.820e-10						
8.290e-13	3.290e-12	9.230e-12	1.110e-12	8.560e-10	6.920e-14	7.960e-14	2.030e-12	1.010e-12	1.760e-12	1.760e-12
3.830e-13	2.700e-13	2.190e-13	1.220e-11	8.880e-10						
1.600e-18	6.900e-18	1.520e-17	2.640e-18	1.960e-17	5.770e-19	2.310e-18	1.280e-17	1.920e-18	3.870e-18	3.870e-18
9.260e-19	6.910e-19	9.770e-18	2.440e-17	1.030e-16						
3.980e-20	1.820e-19	4.300e-19	6.840e-20	4.780e-19	1.480e-20	2.790e-19	2.860e-19	5.590e-20	1.080e-19	1.080e-19
2.400e-20	1.610e-20	2.460e-19	6.560e-19	2.880e-18						
Ra-223	Particulate				M	1.0000	9.876e+05	1.800e-03	1.000e-07	1.000e-07
5.480e-05	1.000e-01	2.000e-01	2.000e-03	1.000e-03	4.000e-02	2.000e-01				
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	1.000e+00	1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
1.275e-08	1.301e-08	2.943e-06	1.272e-08	1.272e-08	1.878e-08	2.616e-08	1.142e-07	2.947e-07	1.777e-08	1.777e-08
1.460e-07	1.276e-08	1.305e-08	1.276e-08	2.829e-07	1.273e-08	1.275e-08	1.275e-08	1.272e-08	1.272e-08	1.272e-08
1.282e-08	1.273e-08	1.287e-08	1.272e-08	1.273e-08	1.035e-07					
3.000e-09	2.978e-09	6.768e-07	2.924e-09	2.994e-09	4.005e-09	5.416e-09	2.229e-08	5.674e-08	3.991e-09	3.991e-09
3.364e-08	2.957e-09	2.983e-09	2.981e-09	6.511e-08	2.933e-09	2.974e-09	2.921e-09	3.014e-09	2.949e-09	2.949e-09
2.962e-09	3.061e-09	2.948e-09	4.558e-06	4.479e-05	5.397e-06					
4.710e-15	4.890e-15	1.610e-14	6.080e-15	7.230e-15	5.180e-15	4.450e-15	4.700e-15	4.510e-15	5.280e-15	5.280e-15
5.280e-15	5.850e-15	4.240e-15	4.400e-15	5.410e-15	9.270e-15	5.290e-15	6.250e-15	5.620e-15	6.230e-15	6.230e-15
4.590e-15	5.090e-15	4.340e-15	4.500e-15	5.970e-15	5.740e-15					



1.090e-16	1.190e-16	3.020e-16	1.140e-16	1.350e-16	1.180e-16	1.110e-16	1.150e-16	1.150e-16	1.180e-16
1.180e-16	1.350e-16	1.150e-16	1.060e-16	1.220e-16	1.750e-16	1.190e-16	1.380e-16	1.170e-16	1.280e-16
1.100e-16	1.150e-16	1.110e-16	1.010e-16	1.260e-16	1.270e-16				
2.230e-11	1.290e-10	3.400e-09	3.120e-10	2.430e-10	8.040e-10	2.370e-12	5.960e-11	2.660e-11	4.910e-11
1.570e-11	8.230e-12	1.790e-10	3.720e-10	5.620e-09					
4.660e-12	2.410e-11	7.470e-10	6.400e-11	6.400e-07	1.440e-10	4.230e-13	1.090e-11	5.630e-12	9.910e-12
2.970e-12	1.410e-12	3.380e-11	6.430e-11	6.410e-07					
5.180e-18	2.090e-17	4.770e-17	8.000e-18	5.840e-17	1.530e-18	9.250e-19	3.490e-17	6.030e-18	1.180e-17
2.750e-18	1.980e-18	3.040e-17	7.420e-17	3.050e-16					
1.160e-19	4.760e-19	1.190e-18	1.790e-19	1.230e-18	2.870e-20	1.750e-20	6.520e-19	1.640e-19	2.880e-19
6.140e-20	4.080e-20	6.850e-19	1.740e-18	6.860e-18					
Rn-219	B				B	0.0000	3.960e+00	0.000e+00	0.000e+00
5.480e-05	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	1.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
2.190e-15	2.220e-15	5.690e-15	2.800e-15	3.130e-15	2.360e-15	2.070e-15	2.170e-15	2.100e-15	2.380e-15
2.390e-15	2.610e-15	1.980e-15	2.070e-15	2.530e-15	3.530e-15	2.400e-15	2.730e-15	2.500e-15	2.760e-15
2.130e-15	2.330e-15	2.030e-15	2.140e-15	2.670e-15	2.560e-15				
4.830e-17	5.180e-17	9.590e-17	5.090e-17	5.800e-17	5.140e-17	4.930e-17	5.060e-17	5.100e-17	5.140e-17
5.150e-17	5.890e-17	5.280e-17	4.710e-17	5.470e-17	6.930e-17	5.170e-17	5.990e-17	5.140e-17	5.590e-17
4.790e-17	5.020e-17	4.950e-17	4.550e-17	5.460e-17	5.500e-17				
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
2.460e-18	9.530e-18	2.210e-17	3.620e-18	2.610e-17	5.400e-19	3.520e-19	1.510e-17	2.820e-18	5.370e-18
1.240e-18	8.790e-19	1.420e-17	3.410e-17	1.380e-16					
5.230e-20	2.080e-19	5.240e-19	7.810e-20	5.340e-19	9.110e-21	6.910e-21	2.800e-19	7.510e-20	1.250e-19
2.670e-20	1.780e-20	3.070e-19	7.660e-19	3.010e-18					
At-219	B				B	0.0000	5.600e+01	1.800e-03	1.000e-07
5.480e-05	1.000e+00	1.000e+00	1.000e-02	1.000e-02	2.000e-01	9.000e-01			



2.100e-16	2.250e-16	4.010e-16	2.200e-16	2.490e-16	2.240e-16	2.160e-16	2.200e-16	2.240e-16	2.250e-16
2.240e-16	2.540e-16	2.200e-16	2.060e-16	2.370e-16	7.190e-15	2.250e-16	2.580e-16	2.200e-16	2.400e-16
2.080e-16	2.190e-16	2.160e-16	1.990e-16	2.360e-16	3.070e-16				
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
1.120e-17	4.240e-17	9.990e-17	1.620e-17	1.160e-16	2.160e-18	5.570e-18	6.620e-17	1.320e-17	2.380e-17
5.510e-18	3.880e-18	6.400e-17	1.520e-16	6.230e-16					
2.290e-19	9.040e-19	2.290e-18	3.390e-19	2.310e-18	3.810e-20	7.170e-19	1.200e-18	3.130e-19	5.440e-19
1.170e-19	7.640e-20	1.330e-18	3.320e-18	1.370e-17					
Po-215	B				B	0.0000	1.781e-03	1.800e-03	1.000e-07
5.480e-05	1.000e-01	1.000e-01	5.000e-03	4.000e-04	1.000e-03	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	1.000e+00	0.000e+00	1.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
6.790e-18	6.800e-18	1.530e-17	8.640e-18	9.430e-18	7.230e-18	6.390e-18	6.690e-18	6.510e-18	7.270e-18
7.310e-18	7.960e-18	6.030e-18	6.360e-18	7.810e-18	1.010e-17	7.360e-18	8.230e-18	7.560e-18	8.370e-18
6.590e-18	7.140e-18	6.230e-18	6.630e-18	8.150e-18	7.800e-18				
1.470e-19	1.600e-19	2.650e-19	1.560e-19	1.760e-19	1.560e-19	1.510e-19	1.550e-19	1.570e-19	1.570e-19
1.570e-19	1.800e-19	1.670e-19	1.440e-19	1.680e-19	2.150e-19	1.570e-19	1.830e-19	1.600e-19	1.740e-19
1.490e-19	1.540e-19	1.520e-19	1.410e-19	1.670e-19	1.680e-19				
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
7.630e-21	2.920e-20	6.830e-20	1.110e-20	7.970e-20	1.450e-21	1.010e-21	4.560e-20	8.580e-21	1.640e-20
3.780e-21	2.670e-21	4.380e-20	1.050e-19	4.240e-19					
1.620e-22	6.300e-22	1.610e-21	2.380e-22	1.630e-21	2.520e-23	2.150e-23	8.500e-22	2.380e-22	3.870e-22
8.170e-23	5.540e-23	9.430e-22	2.340e-21	9.210e-21					
Pb-211	Particulate				M	1.0000	2.166e+03	1.800e-03	1.000e-07
5.480e-05	1.000e-01	2.000e-01	8.000e-04	3.000e-04	4.000e-03	1.000e-01			



0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
1.737e-11	1.912e-11	2.644e-10	1.688e-11	1.699e-11	1.165e-09	4.768e-10	2.228e-10	3.898e-11	1.728e-10	
5.304e-11	1.715e-11	1.798e-11	1.862e-11	3.934e-11	1.698e-11	1.798e-11	1.693e-11	1.696e-11	1.689e-11	
1.781e-11	1.723e-11	1.778e-11	1.689e-11	1.705e-11	1.777e-10					
1.552e-11	1.732e-11	2.467e-10	1.544e-11	1.548e-11	1.585e-10	6.909e-11	3.970e-11	1.798e-11	1.650e-10	
4.907e-11	1.548e-11	1.551e-11	1.564e-11	3.619e-11	1.542e-11	1.556e-11	1.538e-11	1.554e-11	1.546e-11	
1.551e-11	1.557e-11	1.548e-11	6.978e-08	6.224e-08	9.253e-09					
2.550e-15	2.530e-15	5.310e-15	3.280e-15	3.530e-15	2.730e-15	2.450e-15	2.540e-15	2.500e-15	2.750e-15	
2.770e-15	3.000e-15	2.430e-15	2.420e-15	2.970e-15	3.120e-14	2.780e-15	3.100e-15	2.850e-15	3.160e-15	
2.510e-15	2.710e-15	2.380e-15	2.550e-15	3.070e-15	3.220e-15					
5.500e-17	5.850e-17	9.530e-17	5.780e-17	6.480e-17	5.830e-17	5.680e-17	5.760e-17	5.900e-17	5.880e-17	
5.840e-17	6.660e-17	5.840e-17	5.360e-17	6.230e-17	4.620e-15	5.870e-17	6.760e-17	5.760e-17	6.380e-17	
5.470e-17	5.750e-17	5.650e-17	5.240e-17	6.140e-17	1.080e-16					
3.890e-14	6.960e-12	2.820e-12	1.600e-13	4.710e-13	8.580e-14	4.430e-15	1.220e-13	4.780e-14	9.080e-14	
1.720e-13	1.600e-14	3.970e-14	7.210e-13	1.170e-11						
2.410e-14	1.110e-12	5.810e-13	9.840e-14	9.480e-10	4.320e-14	2.220e-15	5.650e-14	2.920e-14	5.700e-14	
1.110e-13	7.370e-15	1.890e-14	3.380e-13	9.510e-10						
2.930e-18	1.100e-17	2.600e-17	4.200e-18	3.000e-17	5.040e-19	3.110e-18	1.710e-17	3.460e-18	6.120e-18	
1.430e-18	1.010e-18	1.670e-17	3.950e-17	1.630e-16						
6.030e-20	2.350e-19	6.010e-19	8.850e-20	6.000e-19	9.050e-21	4.610e-19	3.130e-19	8.310e-20	1.410e-19	
3.060e-20	2.030e-20	3.500e-19	8.690e-19	3.860e-18						
Bi-211	B				B	0.0000	1.284e+02	1.800e-03	1.000e-07	
5.480e-05	5.000e-02	5.000e-02	2.000e-03	1.000e-03	1.000e-01	5.000e-01				
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
0.000e+00	1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
1.770e-15	1.790e-15	4.490e-15	2.260e-15	2.520e-15	1.900e-15	1.670e-15	1.750e-15	1.690e-15	1.910e-15	
1.930e-15	2.100e-15	1.580e-15	1.660e-15	2.040e-15	3.110e-15	1.930e-15	2.200e-15	2.010e-15	2.220e-15	
1.720e-15	1.870e-15	1.630e-15	1.720e-15	2.150e-15	2.070e-15					



3.900e-17	4.200e-17	7.730e-17	4.110e-17	4.700e-17	4.150e-17	3.980e-17	4.090e-17	4.120e-17	4.160e-17
4.160e-17	4.760e-17	4.320e-17	3.800e-17	4.420e-17	5.610e-17	4.180e-17	4.850e-17	4.190e-17	4.540e-17
3.880e-17	4.060e-17	4.000e-17	3.680e-17	4.420e-17	4.450e-17				
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
1.980e-18	7.670e-18	1.780e-17	2.930e-18	2.100e-17	4.260e-19	3.100e-19	1.220e-17	2.250e-18	4.330e-18
9.940e-19	7.070e-19	1.150e-17	2.740e-17	1.110e-16					
4.230e-20	1.680e-19	4.240e-19	6.300e-20	4.320e-19	7.340e-21	5.600e-21	2.270e-19	6.150e-20	1.020e-19
2.160e-20	1.450e-20	2.480e-19	6.180e-19	2.430e-18					
Tl-207	B				B	0.0000	2.862e+02	1.800e-03	1.000e-07
5.480e-05	1.000e+00	1.000e+00	2.000e-02	3.000e-03	2.000e-01	6.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	9.972e-01	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
1.320e-16	1.320e-16	3.140e-16	1.700e-16	1.920e-16	1.430e-16	1.270e-16	1.320e-16	1.300e-16	1.450e-16
1.450e-16	1.600e-16	1.290e-16	1.250e-16	1.540e-16	3.070e-14	1.450e-16	1.670e-16	1.510e-16	1.690e-16
1.300e-16	1.410e-16	1.230e-16	1.320e-16	1.620e-16	4.610e-16				
3.150e-18	3.380e-18	7.200e-18	3.270e-18	4.110e-18	3.390e-18	3.210e-18	3.290e-18	3.340e-18	3.470e-18
3.390e-18	4.030e-18	3.160e-18	3.030e-18	3.550e-18	5.240e-15	3.420e-18	4.200e-18	3.330e-18	3.760e-18
3.110e-18	3.300e-18	3.190e-18	2.910e-18	3.590e-18	5.610e-17				
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
1.520e-19	5.770e-19	1.350e-18	2.200e-19	1.580e-18	2.980e-20	3.060e-18	9.280e-19	1.840e-19	3.190e-19
7.540e-20	5.380e-20	8.640e-19	2.070e-18	1.150e-17					
3.350e-21	1.370e-20	3.420e-20	5.140e-21	3.510e-20	6.840e-22	5.230e-19	1.990e-20	4.500e-21	8.170e-21
1.810e-21	1.200e-21	1.990e-20	5.070e-20	7.210e-19					
Po-211	B				B	0.0000	5.160e-01	1.800e-03	1.000e-07
5.480e-05	1.000e-01	1.000e-01	5.000e-03	4.000e-04	1.000e-03	1.000e-01			



0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	2.760e-03	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
3.250e-16	3.200e-16	6.250e-16	4.180e-16	4.440e-16	3.460e-16	3.140e-16	3.240e-16	3.210e-16	3.490e-16
3.510e-16	3.800e-16	3.160e-16	3.090e-16	3.800e-16	4.680e-16	3.530e-16	3.910e-16	3.610e-16	4.000e-16
3.200e-16	3.440e-16	3.040e-16	3.280e-16	3.890e-16	3.730e-16				
6.880e-18	7.280e-18	1.110e-17	7.230e-18	7.980e-18	7.270e-18	7.130e-18	7.210e-18	7.420e-18	7.340e-18
7.280e-18	8.270e-18	7.200e-18	6.710e-18	7.790e-18	1.170e-17	7.330e-18	8.350e-18	7.110e-18	7.930e-18
6.840e-18	7.190e-18	7.080e-18	6.580e-18	7.630e-18	7.760e-18				
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
3.770e-19	1.400e-18	3.330e-18	5.320e-19	3.800e-18	5.930e-20	4.670e-20	2.150e-18	4.500e-19	7.740e-19
1.820e-19	1.270e-19	2.130e-18	5.030e-18	2.040e-17					
7.570e-21	2.940e-20	7.540e-20	1.100e-20	7.460e-20	1.050e-21	1.170e-21	3.860e-20	1.020e-20	1.760e-20
3.820e-21	2.520e-21	4.370e-20	1.080e-19	4.250e-19					
1									
Eu-150	Particulate				M	1.0000	1.164e+09	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	2.000e-03	6.000e-05	2.000e-03	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
5.727e-10	6.185e-10	6.980e-10	9.091e-11	1.210e-10	6.707e-10	1.792e-09	3.038e-09	5.739e-09	5.485e-10
1.939e-09	3.311e-10	1.911e-09	5.605e-10	7.285e-10	1.497e-10	2.771e-10	2.073e-10	1.204e-10	7.799e-11
1.206e-09	2.854e-10	8.846e-10	7.799e-11	2.535e-10	1.255e-09				
9.056e-08	1.220e-08	1.017e-07	1.692e-08	2.218e-08	3.224e-08	3.434e-08	4.193e-08	2.444e-08	5.986e-08
3.334e-07	2.551e-08	2.650e-08	6.850e-08	7.693e-08	1.544e-08	2.405e-08	6.679e-09	2.354e-08	1.512e-08
1.308e-07	5.062e-08	1.957e-08	2.059e-08	6.184e-08	5.273e-08				
6.000e-14	6.000e-14	1.290e-13	7.680e-14	8.340e-14	6.410e-14	5.730e-14	5.970e-14	5.840e-14	6.460e-14
6.500e-14	7.070e-14	5.590e-14	5.680e-14	6.970e-14	8.730e-14	6.530e-14	7.300e-14	6.730e-14	7.440e-14
5.880e-14	6.350e-14	5.580e-14	5.960e-14	7.220e-14	6.920e-14				



1.280e-15 1.390e-15 2.310e-15 1.360e-15 1.540e-15 1.370e-15 1.330e-15 1.350e-15 1.380e-15 1.380e-15
 1.370e-15 1.570e-15 1.390e-15 1.260e-15 1.460e-15 1.860e-15 1.380e-15 1.600e-15 1.370e-15 1.500e-15
 1.290e-15 1.350e-15 1.320e-15 1.220e-15 1.450e-15 1.470e-15
 1.340e-13 3.430e-12 6.430e-11 2.930e-12 2.380e-12 6.720e-14 1.700e-14 5.960e-13 3.080e-12 1.920e-12
 3.170e-13 2.170e-14 4.280e-12 7.780e-12 9.130e-11
 2.310e-11 9.630e-11 2.210e-10 4.230e-10 4.920e-10 8.090e-12 1.140e-12 7.720e-11 3.040e-11 2.650e-11
 2.640e-11 3.190e-12 3.660e-10 6.140e-10 2.410e-09
 6.860e-17 2.590e-16 6.110e-16 9.850e-17 7.060e-16 1.220e-17 8.710e-18 4.030e-16 7.950e-17 1.450e-16
 3.360e-17 2.370e-17 3.910e-16 9.300e-16 3.770e-15
 1.400e-18 5.530e-18 1.410e-17 2.080e-18 1.420e-17 2.190e-19 1.860e-19 7.440e-18 1.980e-18 3.360e-18
 7.180e-19 4.780e-19 8.200e-18 2.040e-17 8.020e-17

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Ir-193m	Particulate				M	1.0000	9.098e+05	1.800e-03	1.000e-07
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5.480e-05 1.000e-02 1.000e-02 2.000e-03 2.000e-06 3.000e-02 2.000e-01
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
 1.199e-12 1.914e-12 1.287e-12 1.179e-12 1.180e-12 9.278e-11 2.256e-10 1.313e-09 3.612e-09 1.780e-11
 1.534e-11 1.231e-12 1.769e-12 1.231e-12 1.241e-12 1.189e-12 1.533e-11 1.209e-12 1.180e-12 1.180e-12
 1.326e-12 1.186e-12 1.394e-12 1.180e-12 1.185e-12 2.899e-10
 3.744e-12 5.491e-12 3.802e-12 3.645e-12 3.730e-12 1.855e-11 4.004e-11 2.226e-10 6.062e-10 5.485e-11
 4.735e-11 3.724e-12 3.742e-12 3.727e-12 3.674e-12 3.651e-12 4.730e-11 3.646e-12 3.758e-12 3.672e-12
 3.704e-12 3.836e-12 3.680e-12 6.616e-10 6.053e-09 7.799e-10
 7.120e-18 7.970e-18 4.150e-17 9.650e-18 1.480e-17 8.520e-18 6.540e-18 7.150e-18 6.630e-18 9.040e-18
 8.660e-18 1.060e-17 6.010e-18 6.240e-18 8.070e-18 5.870e-17 8.660e-18 1.200e-17 9.780e-18 1.130e-17
 7.050e-18 8.030e-18 6.260e-18 6.120e-18 1.020e-17 1.040e-17
 2.080e-19 2.410e-19 1.130e-18 2.190e-19 4.180e-19 2.440e-19 2.120e-19 2.250e-19 2.200e-19 2.480e-19
 2.470e-19 3.720e-19 2.240e-19 2.020e-19 2.290e-19 3.450e-18 2.490e-19 3.520e-19 2.610e-19 2.750e-19
 2.050e-19 2.320e-19 2.080e-19 1.770e-19 2.690e-19 3.180e-19
 1.800e-15 5.440e-13 4.220e-11 3.150e-14 1.830e-14 1.660e-16 1.840e-16 8.820e-15 3.160e-15 6.100e-15
 1.200e-14 6.130e-16 9.790e-15 2.910e-14 4.280e-11
 5.760e-15 1.260e-13 8.410e-12 9.560e-14 8.530e-11 4.880e-16 5.260e-16 2.670e-14 7.040e-15 1.740e-14
 3.660e-14 1.770e-15 2.840e-14 8.170e-14 9.410e-11
 7.040e-21 3.440e-20 7.150e-20 1.310e-20 9.970e-20 3.940e-21 5.860e-21 7.150e-20 8.550e-21 1.930e-20
 4.700e-21 3.600e-21 4.530e-20 1.190e-19 5.070e-19
 2.040e-22 9.850e-22 2.300e-21 3.740e-22 2.630e-21 1.070e-22 3.440e-22 2.020e-21 3.190e-22 5.830e-22
 1.290e-22 8.760e-23 1.290e-21 3.880e-21 1.520e-20

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Nb-91	Particulate										M	1.0000	2.146e+10	1.800e-03	1.000e-07	
5.480e-05	1.000e-02	1.000e-02	3.000e-07	2.000e-06	1.000e-02	1.000e-01										
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
2.794e-12	2.963e-12	2.033e-11	2.312e-12	2.021e-12	1.381e-11	3.319e-11	1.713e-10	4.586e-10	2.785e-11							
3.471e-11	2.842e-12	1.544e-11	2.619e-12	6.521e-12	1.843e-12	2.414e-12	2.221e-12	2.141e-12	2.126e-12							
4.102e-12	2.007e-12	3.135e-12	2.126e-12	2.420e-12	4.387e-11											
3.149e-11	2.107e-11	1.920e-10	2.215e-11	2.504e-11	2.403e-11	2.643e-11	5.455e-11	1.161e-10	2.630e-10							
3.388e-10	3.410e-11	2.316e-11	2.480e-11	5.881e-11	1.740e-11	2.671e-11	1.931e-11	2.482e-11	2.151e-11							
2.943e-11	3.645e-11	2.056e-11	5.579e-10	1.772e-09	2.624e-10											
6.260e-17	6.320e-17	1.600e-16	7.960e-17	1.440e-16	6.710e-17	5.900e-17	6.170e-17	6.020e-17	6.840e-17							
6.770e-17	9.500e-17	5.580e-17	5.860e-17	7.670e-17	3.120e-16	6.780e-17	1.010e-16	7.120e-17	8.940e-17							
6.090e-17	6.640e-17	5.750e-17	6.140e-17	7.540e-17	8.450e-17											
1.470e-18	1.650e-18	7.740e-18	1.430e-18	1.210e-17	1.580e-18	1.400e-18	1.430e-18	1.470e-18	1.850e-18							
1.550e-18	7.880e-18	1.920e-18	1.320e-18	2.400e-18	5.720e-17	1.480e-18	9.510e-18	1.810e-18	2.850e-18							
1.410e-18	1.550e-18	1.410e-18	1.290e-18	1.670e-18	4.740e-18											
2.980e-15	8.270e-14	5.550e-12	6.690e-14	3.370e-14	2.620e-15	2.500e-16	1.230e-14	3.550e-14	9.780e-15							
1.720e-14	9.240e-16	5.300e-14	6.120e-14	5.930e-12												
3.230e-14	1.200e-13	1.510e-12	5.830e-13	2.000e-11	2.160e-14	1.970e-15	1.530e-13	3.940e-14	5.790e-14							
1.470e-13	7.780e-15	4.040e-13	5.600e-13	2.360e-11												
7.060e-20	2.710e-19	6.300e-19	1.030e-19	7.370e-19	1.520e-20	3.110e-20	6.960e-19	7.940e-20	1.530e-19							
3.560e-20	2.850e-20	4.310e-19	1.070e-18	4.350e-18												
1.480e-21	6.380e-21	1.490e-20	2.350e-21	1.630e-20	7.350e-22	5.710e-21	5.850e-20	2.730e-21	3.990e-21							
9.620e-22	9.070e-22	1.350e-20	5.290e-20	1.810e-19												
2																
Nb-91m	Particulate										M	1.0000	5.258e+06	1.800e-03	1.000e-07	
5.480e-05	1.000e-02	1.000e-02	3.000e-07	2.000e-06	1.000e-02	1.000e-01										
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
6.172e-12	1.401e-11	3.757e-11	3.908e-12	4.091e-12	1.261e-10	3.124e-10	1.750e-09	4.996e-09	5.656e-11							
6.474e-11	7.281e-12	4.086e-11	7.452e-12	1.879e-11	4.839e-12	6.383e-12	6.145e-12	4.114e-12	3.909e-12							
1.259e-11	4.724e-12	1.504e-11	3.909e-12	4.568e-12	4.100e-10											
4.209e-11	3.236e-11	1.858e-10	2.131e-11	3.921e-11	5.163e-11	7.750e-11	3.434e-10	9.385e-10	2.750e-10							
3.332e-10	3.225e-11	2.762e-11	3.492e-11	8.097e-11	2.293e-11	3.487e-11	1.935e-11	4.189e-11	2.703e-11							
3.196e-11	5.699e-11	2.250e-11	2.447e-09	2.013e-08	2.536e-09											



1.020e-15	1.020e-15	1.850e-15	1.320e-15	1.440e-15	1.100e-15	1.010e-15	1.040e-15	1.030e-15	1.110e-15
1.120e-15	1.220e-15	1.050e-15	9.950e-16	1.220e-15	2.240e-15	1.120e-15	1.250e-15	1.160e-15	1.270e-15
1.030e-15	1.100e-15	9.840e-16	1.060e-15	1.230e-15	1.200e-15				
2.060e-17	2.230e-17	3.810e-17	2.150e-17	3.380e-17	2.200e-17	2.160e-17	2.170e-17	2.240e-17	2.270e-17
2.200e-17	3.060e-17	2.070e-17	2.040e-17	2.420e-17	7.410e-17	2.200e-17	3.260e-17	2.140e-17	2.420e-17
2.050e-17	2.170e-17	2.130e-17	1.970e-17	2.290e-17	2.620e-17				
5.890e-15	7.380e-13	5.760e-11	1.290e-13	6.540e-14	4.720e-15	6.810e-16	2.790e-14	7.590e-14	4.430e-14
3.600e-14	1.820e-15	1.560e-13	1.540e-13	5.900e-11					
5.490e-14	2.980e-13	1.250e-11	6.190e-13	2.740e-10	2.180e-14	2.840e-15	2.370e-13	5.110e-14	9.540e-14
1.660e-13	1.080e-14	6.190e-13	6.900e-13	2.900e-10					
1.220e-18	4.440e-18	1.070e-17	1.700e-18	1.200e-17	1.760e-19	2.230e-19	6.960e-18	1.490e-18	2.470e-18
5.770e-19	4.040e-19	6.850e-18	1.610e-17	6.530e-17					
2.270e-20	8.880e-20	2.270e-19	3.330e-20	2.240e-19	3.620e-21	7.390e-21	1.630e-19	2.940e-20	5.390e-20
1.180e-20	7.710e-21	1.360e-19	3.550e-19	1.360e-18					
Nb-91	Particulate				M	1.0000	2.146e+10	1.800e-03	1.000e-07
5.480e-05	1.000e-02	1.000e-02	3.000e-07	2.000e-06	1.000e-02	1.000e-01			
9.660e-01	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
2.794e-12	2.963e-12	2.033e-11	2.312e-12	2.021e-12	1.381e-11	3.319e-11	1.713e-10	4.586e-10	2.785e-11
3.471e-11	2.842e-12	1.544e-11	2.619e-12	6.521e-12	1.843e-12	2.414e-12	2.221e-12	2.141e-12	2.126e-12
4.102e-12	2.007e-12	3.135e-12	2.126e-12	2.420e-12	4.387e-11				
3.149e-11	2.107e-11	1.920e-10	2.215e-11	2.504e-11	2.403e-11	2.643e-11	5.455e-11	1.161e-10	2.630e-10
3.388e-10	3.410e-11	2.316e-11	2.480e-11	5.881e-11	1.740e-11	2.671e-11	1.931e-11	2.482e-11	2.151e-11
2.943e-11	3.645e-11	2.056e-11	5.579e-10	1.772e-09	2.624e-10				
6.260e-17	6.320e-17	1.600e-16	7.960e-17	1.440e-16	6.710e-17	5.900e-17	6.170e-17	6.020e-17	6.840e-17
6.770e-17	9.500e-17	5.580e-17	5.860e-17	7.670e-17	3.120e-16	6.780e-17	1.010e-16	7.120e-17	8.940e-17
6.090e-17	6.640e-17	5.750e-17	6.140e-17	7.540e-17	8.450e-17				
1.470e-18	1.650e-18	7.740e-18	1.430e-18	1.210e-17	1.580e-18	1.400e-18	1.430e-18	1.470e-18	1.850e-18
1.550e-18	7.880e-18	1.920e-18	1.320e-18	2.400e-18	5.720e-17	1.480e-18	9.510e-18	1.810e-18	2.850e-18
1.410e-18	1.550e-18	1.410e-18	1.290e-18	1.670e-18	4.740e-18				
2.980e-15	8.270e-14	5.550e-12	6.690e-14	3.370e-14	2.620e-15	2.500e-16	1.230e-14	3.550e-14	9.780e-15
1.720e-14	9.240e-16	5.300e-14	6.120e-14	5.930e-12					
3.230e-14	1.200e-13	1.510e-12	5.830e-13	2.000e-11	2.160e-14	1.970e-15	1.530e-13	3.940e-14	5.790e-14
1.470e-13	7.780e-15	4.040e-13	5.600e-13	2.360e-11					
7.060e-20	2.710e-19	6.300e-19	1.030e-19	7.370e-19	1.520e-20	3.110e-20	6.960e-19	7.940e-20	1.530e-19
3.560e-20	2.850e-20	4.310e-19	1.070e-18	4.350e-18					



1.480e-21 6.380e-21 1.490e-20 2.350e-21 1.630e-20 7.350e-22 5.710e-21 5.850e-20 2.730e-21 3.990e-21
9.620e-22 9.070e-22 1.350e-20 5.290e-20 1.810e-19

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Nb-92	Particulate				M	1.0000	1.095e+15	1.800e-03	1.000e-07
5.480e-05	1.000e-02	1.000e-02	3.000e-07	2.000e-06	1.000e-02	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
3.863e-10	6.094e-10	3.939e-10	1.230e-10	1.163e-10	5.932e-10	1.562e-09	2.469e-09	4.397e-09	6.365e-10
8.030e-10	3.200e-10	1.775e-09	4.258e-10	5.455e-10	1.601e-10	3.016e-10	2.526e-10	1.338e-10	1.222e-10
7.807e-10	2.089e-10	8.457e-10	1.222e-10	1.889e-10	1.022e-09				
5.726e-09	1.225e-09	3.747e-09	1.383e-09	4.073e-09	2.974e-09	2.120e-09	2.402e-09	2.331e-09	5.050e-09
8.761e-09	2.564e-09	1.886e-09	4.401e-09	3.991e-09	1.534e-09	3.589e-09	9.239e-10	4.794e-09	2.347e-09
4.246e-09	6.910e-09	1.542e-09	7.670e-09	1.813e-08	4.913e-09				
5.960e-14	5.870e-14	1.140e-13	7.660e-14	8.150e-14	6.350e-14	5.760e-14	5.960e-14	5.890e-14	6.400e-14
6.440e-14	6.970e-14	5.820e-14	5.670e-14	6.970e-14	8.400e-14	6.480e-14	7.160e-14	6.620e-14	7.330e-14
5.870e-14	6.320e-14	5.590e-14	6.030e-14	7.130e-14	6.830e-14				
1.260e-15	1.330e-15	2.020e-15	1.320e-15	1.470e-15	1.330e-15	1.300e-15	1.320e-15	1.360e-15	1.340e-15
1.330e-15	1.520e-15	1.310e-15	1.230e-15	1.430e-15	1.810e-15	1.340e-15	1.530e-15	1.300e-15	1.450e-15
1.250e-15	1.310e-15	1.300e-15	1.200e-15	1.390e-15	1.420e-15				
1.820e-13	3.240e-12	5.000e-11	1.500e-12	2.500e-12	4.580e-14	2.140e-14	7.700e-13	2.890e-12	1.910e-12
4.050e-13	5.060e-14	3.610e-12	7.760e-12	7.490e-11					
5.780e-12	1.360e-11	3.080e-11	1.440e-11	1.880e-10	3.910e-13	1.670e-13	2.140e-11	3.030e-12	3.400e-12
2.850e-12	8.250e-13	2.380e-11	6.970e-11	3.780e-10					
6.940e-17	2.560e-16	6.120e-16	9.760e-17	6.970e-16	1.080e-17	8.380e-18	3.940e-16	8.280e-17	1.420e-16
3.330e-17	2.330e-17	3.910e-16	9.230e-16	3.740e-15					
1.380e-18	5.370e-18	1.380e-17	2.020e-18	1.360e-17	1.920e-19	1.810e-19	7.100e-18	1.860e-18	3.220e-18
6.970e-19	4.620e-19	8.030e-18	1.990e-17	7.780e-17					

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Nb-92m	Particulate				M	1.0000	8.770e+05	1.800e-03	1.000e-07
5.480e-05	1.000e-02	1.000e-02	3.000e-07	2.000e-06	1.000e-02	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
6.998e-11	2.851e-10	9.008e-11	5.231e-12	1.711e-11	2.778e-10	8.263e-10	1.429e-09	2.494e-09	1.440e-10
1.146e-10	1.136e-10	9.401e-10	1.245e-10	1.816e-10	4.479e-11	9.412e-11	9.334e-11	1.475e-11	7.352e-12
2.756e-10	3.398e-11	4.136e-10	7.352e-12	2.516e-11	5.024e-10				



2.341e-10	6.781e-11	1.451e-10	3.896e-11	2.190e-10	1.613e-10	1.769e-10	2.778e-10	4.342e-10	1.428e-10
2.564e-10	1.230e-10	1.839e-10	1.832e-10	1.706e-10	6.418e-11	1.706e-10	2.826e-11	2.600e-10	1.025e-10
1.494e-10	3.650e-10	9.399e-11	3.126e-09	1.139e-09	3.833e-10				
3.860e-14	3.790e-14	7.030e-14	4.990e-14	5.270e-14	4.130e-14	3.780e-14	3.890e-14	3.870e-14	4.160e-14
4.190e-14	4.520e-14	3.930e-14	3.710e-14	4.550e-14	5.410e-14	4.210e-14	4.640e-14	4.310e-14	4.770e-14
3.840e-14	4.120e-14	3.660e-14	3.960e-14	4.630e-14	4.440e-14				
8.080e-16	8.440e-16	1.260e-15	8.430e-16	9.330e-16	8.520e-16	8.380e-16	8.440e-16	8.730e-16	8.610e-16
8.520e-16	9.680e-16	8.070e-16	7.880e-16	9.100e-16	1.160e-15	8.590e-16	9.750e-16	8.120e-16	9.140e-16
7.940e-16	8.410e-16	8.290e-16	7.700e-16	8.860e-16	9.030e-16				
2.230e-14	1.540e-12	2.900e-11	2.380e-13	4.070e-13	1.080e-14	6.270e-15	1.420e-13	1.530e-12	9.060e-13
9.660e-14	4.240e-15	1.190e-12	2.270e-12	3.740e-11					
3.370e-13	8.670e-13	6.210e-12	4.670e-13	1.260e-11	1.700e-14	7.960e-15	1.260e-12	3.820e-13	2.440e-13
9.300e-14	4.050e-14	1.120e-12	3.410e-12	2.700e-11					
4.560e-17	1.670e-16	4.010e-16	6.350e-17	4.530e-16	6.680e-18	5.400e-18	2.550e-16	5.590e-17	9.160e-17
2.160e-17	1.520e-17	2.550e-16	6.000e-16	2.440e-15					
8.860e-19	3.440e-18	8.840e-18	1.290e-18	8.660e-18	1.200e-19	1.160e-19	4.510e-18	1.150e-18	2.040e-18
4.480e-19	2.910e-19	5.110e-18	1.270e-17	4.960e-17					
1									
Os-186	Particulate				M	1.0000	6.312e+22	1.800e-03	1.000e-07
5.480e-05	1.000e-02	1.000e-02	2.000e-03	1.000e-04	3.000e-02	2.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
1.493e-08	1.495e-08	1.493e-08	1.493e-08	1.493e-08	1.557e-08	1.651e-08	2.454e-08	4.311e-08	2.351e-07
2.024e-07	1.493e-08	1.493e-08	1.493e-08	1.493e-08	1.493e-08	2.024e-07	1.493e-08	1.493e-08	1.493e-08
1.493e-08	1.493e-08	1.493e-08	1.493e-08	1.493e-08	3.203e-08				
1.418e-07	1.419e-07	1.418e-07	1.418e-07	1.418e-07	1.419e-07	1.420e-07	1.441e-07	1.486e-07	2.230e-06
1.922e-06	1.418e-07	1.418e-07	1.418e-07	1.418e-07	1.418e-07	1.922e-06	1.418e-07	1.418e-07	1.418e-07
1.418e-07	1.418e-07	1.418e-07	1.201e-06	6.761e-06	1.027e-06				
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
2.170e-11	8.960e-11	5.690e-10	4.000e-10	2.140e-10	1.850e-12	2.160e-12	5.170e-11	2.520e-11	4.810e-11
1.540e-10	7.140e-12	5.650e-12	3.330e-10	1.920e-09					



1.860e-10 6.780e-10 1.870e-09 3.340e-09 9.010e-08 1.560e-11 1.670e-11 4.080e-10 2.250e-10 4.030e-10
 1.290e-09 5.420e-11 4.660e-11 2.530e-09 1.010e-07
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00

2

Po-209 Inorganic M 1.0000 3.219e+09 1.800e-03 1.000e-07
 5.480e-05 1.000e-01 1.000e-01 5.000e-03 4.000e-04 1.000e-03 1.000e-01
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
 6.961e-08 6.976e-08 3.989e-07 6.960e-08 6.960e-08 7.073e-08 7.214e-08 8.608e-08 1.179e-07 3.187e-06
 1.647e-06 6.960e-08 6.961e-08 6.961e-08 6.615e-07 6.960e-08 2.745e-06 6.960e-08 6.960e-08 6.960e-08
 6.961e-08 6.960e-08 6.960e-08 6.960e-08 6.960e-08 3.049e-07
 7.821e-08 7.836e-08 4.482e-07 7.818e-08 7.820e-08 7.843e-08 7.870e-08 8.247e-08 9.079e-08 3.582e-06
 1.851e-06 7.820e-08 7.818e-08 7.821e-08 7.433e-07 7.818e-08 3.084e-06 7.818e-08 7.821e-08 7.820e-08
 7.820e-08 7.821e-08 7.818e-08 4.831e-06 2.151e-05 2.826e-06
 2.360e-16 2.350e-16 5.310e-16 3.050e-16 3.330e-16 2.540e-16 2.290e-16 2.370e-16 2.330e-16 2.570e-16
 2.580e-16 2.810e-16 2.320e-16 2.250e-16 2.760e-16 3.750e-16 2.590e-16 2.920e-16 2.680e-16 2.970e-16
 2.330e-16 2.530e-16 2.220e-16 2.380e-16 2.870e-16 2.760e-16
 5.110e-18 5.380e-18 9.600e-18 5.340e-18 5.980e-18 5.430e-18 5.260e-18 5.340e-18 5.470e-18 5.460e-18
 5.430e-18 6.150e-18 5.200e-18 4.980e-18 5.740e-18 8.420e-18 5.470e-18 6.220e-18 5.240e-18 5.830e-18
 5.020e-18 5.320e-18 5.230e-18 4.820e-18 5.680e-18 5.770e-18
 1.050e-10 4.230e-10 1.780e-09 3.350e-09 1.050e-09 6.430e-11 1.060e-11 2.550e-10 1.210e-10 2.310e-10
 2.140e-09 3.530e-11 2.900e-10 1.630e-09 1.150e-08
 1.110e-10 4.120e-10 1.270e-09 3.460e-09 2.950e-07 6.380e-11 1.020e-11 2.520e-10 1.340e-10 2.390e-10
 2.220e-09 3.360e-11 2.890e-10 1.550e-09 3.050e-07
 2.740e-19 1.030e-18 2.430e-18 3.910e-19 2.810e-18 5.040e-20 3.740e-20 1.610e-18 3.300e-19 5.680e-19
 1.340e-19 9.460e-20 1.550e-18 3.680e-18 1.500e-17
 5.550e-21 2.190e-20 5.570e-20 8.230e-21 5.550e-20 9.120e-22 8.400e-22 2.890e-20 7.400e-21 1.300e-20
 2.840e-21 1.860e-21 3.220e-20 8.060e-20 3.150e-19

Pb-205 Particulate M 1.0000 4.828e+14 1.800e-03 1.000e-07
 5.480e-05 1.000e-01 2.000e-01 8.000e-04 3.000e-04 4.000e-03 1.000e-01
 9.952e-01 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00



3.487e-11 3.659e-11 3.658e-09 3.941e-11 3.427e-11 4.156e-11 5.164e-11 1.400e-10 3.438e-10 3.201e-10
5.903e-10 3.701e-11 3.439e-11 3.418e-11 1.265e-09 3.511e-11 3.423e-11 3.410e-11 3.435e-11 3.418e-11
3.312e-11 3.362e-11 3.414e-11 3.418e-11 3.457e-11 2.706e-10
1.913e-11 2.003e-11 1.998e-09 2.156e-11 1.878e-11 1.999e-11 2.315e-11 4.497e-11 9.620e-11 1.753e-10
3.233e-10 2.120e-11 1.875e-11 1.871e-11 6.919e-10 1.922e-11 1.881e-11 1.867e-11 1.880e-11 1.871e-11
1.812e-11 1.864e-11 1.868e-11 1.860e-10 7.796e-10 2.321e-10
2.890e-22 5.060e-21 4.700e-19 2.960e-23 1.850e-18 3.150e-21 5.310e-23 8.360e-23 1.190e-21 9.030e-21
1.990e-21 7.120e-19 5.160e-23 3.870e-23 8.680e-20 2.730e-17 3.350e-22 3.730e-19 1.190e-20 6.350e-20
5.500e-22 2.270e-21 5.170e-22 9.890e-23 2.670e-21 4.920e-19
3.810e-21 1.340e-21 9.620e-20 2.680e-24 4.060e-19 9.220e-22 1.440e-23 1.620e-23 3.500e-22 3.570e-21
6.170e-22 3.080e-19 3.390e-20 2.800e-23 1.600e-20 1.150e-17 7.310e-23 1.810e-19 3.040e-21 2.690e-20
9.400e-22 1.520e-21 2.220e-22 3.710e-24 8.400e-22 1.900e-19
6.270e-14 3.080e-13 3.840e-12 1.380e-12 6.600e-13 4.380e-13 6.380e-15 3.190e-13 7.400e-14 1.440e-13
2.720e-13 2.180e-14 8.290e-12 1.050e-12 1.690e-11
2.220e-14 8.350e-14 1.130e-12 5.170e-13 9.070e-12 1.570e-13 1.860e-15 8.680e-14 2.680e-14 5.180e-14
9.890e-14 5.790e-15 3.410e-12 2.860e-13 1.490e-11
1.140e-25 1.270e-23 5.800e-24 3.020e-24 2.610e-23 4.460e-23 2.720e-21 8.940e-21 7.340e-26 1.220e-23
4.700e-24 2.020e-23 4.870e-22 3.530e-21 1.580e-20
4.300e-27 3.720e-24 1.660e-24 9.350e-25 8.210e-24 9.130e-24 1.150e-21 1.960e-21 4.820e-23 3.240e-24
1.860e-24 8.570e-24 8.980e-23 1.550e-21 4.830e-21

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Re-183	Particulate				M	1.0000	6.048e+06	1.800e-03	1.000e-07
5.480e-05	8.000e-01	8.000e-01	1.000e-02	2.000e-03	2.000e-01	1.000e+00			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
1.234e-10	3.844e-10	1.889e-10	9.673e-11	8.790e-11	3.756e-09	2.908e-10	1.442e-09	3.795e-09	1.247e-10
1.435e-10	1.133e-10	2.431e-10	1.760e-10	1.172e-10	8.739e-11	1.441e-10	1.052e-10	1.004e-10	1.958e-09
1.545e-10	1.111e-10	1.700e-10	1.025e-10	1.085e-10	9.637e-10				
1.853e-10	9.355e-11	2.050e-10	2.899e-11	1.818e-10	9.846e-10	7.065e-11	3.320e-10	8.481e-10	6.890e-11
1.765e-10	9.536e-11	5.879e-11	1.569e-10	9.947e-11	4.788e-11	1.485e-10	2.564e-11	2.278e-10	5.320e-10
8.099e-11	3.472e-10	4.207e-11	2.214e-09	1.590e-08	2.184e-09				
4.250e-15	4.560e-15	1.900e-14	5.610e-15	7.500e-15	4.860e-15	3.960e-15	4.250e-15	4.010e-15	5.060e-15
4.950e-15	5.730e-15	3.760e-15	3.860e-15	4.860e-15	8.500e-15	4.940e-15	6.360e-15	5.440e-15	6.170e-15
4.150e-15	4.680e-15	3.830e-15	3.870e-15	5.710e-15	5.530e-15				
1.110e-16	1.250e-16	4.530e-16	1.170e-16	1.530e-16	1.260e-16	1.120e-16	1.180e-16	1.170e-16	1.280e-16
1.270e-16	1.470e-16	1.120e-16	1.070e-16	1.220e-16	1.800e-16	1.280e-16	1.540e-16	1.280e-16	1.380e-16
1.110e-16	1.200e-16	1.120e-16	9.790e-17	1.370e-16	1.370e-16				



1.470e-13 2.130e-11 4.410e-11 2.910e-13 1.570e-12 2.310e-14 1.290e-14 6.190e-13 4.000e-13 1.150e-12
 8.730e-14 1.290e-12 8.710e-13 3.020e-12 7.490e-11
 2.930e-13 6.030e-12 1.090e-11 3.180e-13 2.150e-10 2.370e-14 6.390e-15 1.030e-12 1.190e-13 3.160e-13
 4.830e-14 3.620e-13 6.590e-13 2.800e-12 2.380e-10
 4.450e-18 1.960e-17 4.280e-17 7.500e-18 5.580e-17 1.800e-18 8.480e-19 3.620e-17 5.350e-18 1.100e-17
 2.630e-18 1.960e-18 2.730e-17 6.870e-17 2.860e-16
 1.130e-19 5.090e-19 1.210e-18 1.920e-19 1.340e-18 4.300e-20 1.800e-20 7.390e-19 1.590e-19 3.020e-19
 6.660e-20 4.390e-20 6.850e-19 1.810e-18 7.240e-18

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Sb-126 Particulate M 1.0000 1.067e+06 1.800e-03 1.000e-07
 5.480e-05 1.000e-02 1.000e-01 1.000e-03 1.000e-04 1.000e-02 1.000e-01
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
 3.505e-10 1.061e-09 1.109e-09 1.185e-10 1.213e-10 1.267e-09 3.296e-09 9.018e-09 2.110e-08 5.062e-10
 5.140e-10 4.189e-10 2.739e-09 4.784e-10 9.424e-10 1.937e-10 3.698e-10 3.548e-10 1.380e-10 1.239e-10
 9.174e-10 1.984e-10 1.300e-09 1.239e-10 1.748e-10 2.677e-09
 7.577e-10 2.408e-10 6.158e-10 1.114e-10 7.441e-10 5.703e-10 6.789e-10 1.730e-09 3.879e-09 3.307e-10
 6.877e-10 3.929e-10 5.512e-10 5.928e-10 6.051e-10 1.998e-10 5.524e-10 8.288e-11 8.913e-10 3.376e-10
 4.143e-10 1.261e-09 2.817e-10 9.208e-09 1.586e-08 2.646e-09
 1.090e-13 1.070e-13 2.160e-13 1.390e-13 1.490e-13 1.160e-13 1.040e-13 1.080e-13 1.060e-13 1.170e-13
 1.170e-13 1.270e-13 1.030e-13 1.030e-13 1.270e-13 1.740e-13 1.180e-13 1.310e-13 1.210e-13 1.340e-13
 1.070e-13 1.150e-13 1.010e-13 1.090e-13 1.300e-13 1.250e-13
 2.320e-15 2.470e-15 3.820e-15 2.450e-15 2.710e-15 2.450e-15 2.400e-15 2.430e-15 2.500e-15 2.480e-15
 2.460e-15 2.800e-15 2.480e-15 2.260e-15 2.630e-15 6.040e-15 2.470e-15 2.840e-15 2.430e-15 2.700e-15
 2.320e-15 2.430e-15 2.390e-15 2.220e-15 2.590e-15 2.650e-15
 1.970e-13 7.100e-12 2.440e-10 1.050e-12 2.520e-12 1.310e-13 2.720e-14 8.730e-13 4.480e-12 3.310e-12
 3.400e-13 5.780e-14 6.700e-12 8.980e-12 2.800e-10
 1.150e-12 3.160e-12 5.360e-11 1.240e-12 1.930e-10 7.140e-14 2.470e-14 4.220e-12 1.150e-12 8.480e-13
 2.190e-13 1.340e-13 4.020e-12 1.080e-11 2.740e-10
 1.250e-16 4.680e-16 1.110e-15 1.770e-16 1.270e-15 2.050e-17 1.740e-17 7.200e-16 1.470e-16 2.590e-16
 6.090e-17 4.270e-17 7.130e-16 1.680e-15 6.810e-15
 2.550e-18 9.890e-18 2.540e-17 3.730e-18 2.530e-17 3.630e-19 6.030e-19 1.310e-17 3.530e-18 5.970e-18
 1.290e-18 8.600e-19 1.480e-17 3.660e-17 1.440e-16

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Ti-44 Particulate M 1.0000 1.893e+09 1.800e-03 1.000e-07
 5.480e-05 1.000e-02 1.000e-02 2.000e-02 1.000e-02 1.000e-03 1.000e-01



0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
2.816e-09	3.270e-09	3.023e-09	2.173e-09	2.047e-09	3.012e-09	5.400e-09	1.430e-08	3.826e-08	2.834e-09	
2.767e-09	2.595e-09	5.038e-09	2.992e-09	2.855e-09	1.997e-09	2.741e-09	2.572e-09	2.497e-09	2.480e-09	
3.234e-09	2.702e-09	3.749e-09	2.480e-09	2.425e-09	5.796e-09					
3.008e-08	2.434e-08	2.878e-08	2.085e-08	2.395e-08	2.574e-08	2.639e-08	2.757e-08	3.382e-08	2.581e-08	
2.834e-08	2.410e-08	2.665e-08	2.966e-08	2.563e-08	1.901e-08	2.755e-08	2.223e-08	2.909e-08	2.526e-08	
2.677e-08	3.335e-08	2.669e-08	3.516e-08	1.513e-07	4.151e-08					
3.590e-15	3.980e-15	1.980e-14	4.820e-15	6.820e-15	4.250e-15	3.340e-15	3.620e-15	3.380e-15	4.460e-15	
4.320e-15	5.080e-15	3.080e-15	3.210e-15	4.070e-15	7.040e-15	4.320e-15	5.750e-15	4.820e-15	5.480e-15	
3.550e-15	4.040e-15	3.210e-15	3.170e-15	5.070e-15	4.880e-15					
9.830e-17	1.130e-16	4.860e-16	1.040e-16	1.350e-16	1.140e-16	1.010e-16	1.070e-16	1.050e-16	1.150e-16	
1.150e-16	1.300e-16	1.030e-16	9.730e-17	1.080e-16	1.540e-16	1.160e-16	1.360e-16	1.200e-16	1.240e-16	
9.870e-17	1.090e-16	1.000e-16	8.630e-17	1.250e-16	1.230e-16					
3.240e-12	1.510e-11	4.210e-10	5.100e-12	2.880e-11	3.340e-13	2.450e-13	1.150e-11	7.810e-12	9.580e-12	
1.790e-12	9.830e-13	1.890e-11	5.240e-11	5.770e-10						
3.480e-11	1.070e-10	3.440e-10	4.600e-11	1.600e-09	2.880e-12	1.950e-12	1.160e-10	3.850e-11	6.300e-11	
1.440e-11	8.260e-12	1.520e-10	4.270e-10	2.960e-09						
3.650e-18	1.720e-17	3.630e-17	6.550e-18	4.960e-17	1.880e-18	7.020e-19	3.290e-17	4.380e-18	9.620e-18	
2.320e-18	1.740e-18	2.280e-17	5.890e-17	2.490e-16						
9.930e-20	4.600e-19	1.100e-18	1.740e-19	1.220e-18	4.610e-20	1.540e-20	6.520e-19	1.470e-19	2.730e-19	
5.980e-20	3.950e-20	6.060e-19	1.620e-18	6.510e-18						
Sc-44	Particulate				M	1.0000	1.429e+04	1.800e-03	1.000e-07	
5.480e-05	1.000e-04	1.000e-04	2.000e-03	6.000e-05	2.000e-03	1.000e-01				
1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
3.276e-11	5.551e-11	2.025e-11	2.095e-13	7.224e-12	8.207e-10	1.154e-09	2.080e-09	1.122e-09	5.913e-11	
4.094e-11	3.305e-11	2.191e-10	8.444e-11	4.743e-11	1.256e-11	5.587e-11	1.383e-11	5.171e-12	1.012e-12	
1.274e-10	1.830e-11	1.375e-10	1.012e-12	1.088e-11	3.578e-10					
1.517e-11	9.136e-12	1.224e-11	6.652e-12	1.243e-11	1.218e-10	1.650e-10	2.957e-10	1.598e-10	1.298e-11	
1.857e-11	1.323e-11	3.260e-11	2.022e-11	1.655e-11	6.339e-12	2.693e-11	3.001e-12	1.783e-11	9.748e-12	
2.287e-11	2.084e-11	2.100e-11	1.602e-09	4.031e-10	1.440e-10					
8.570e-14	8.520e-14	1.640e-13	1.100e-13	1.170e-13	9.160e-14	8.310e-14	8.590e-14	8.470e-14	9.210e-14	
9.280e-14	1.000e-13	8.340e-14	8.200e-14	1.000e-13	1.580e-13	9.330e-14	1.030e-13	9.580e-14	1.050e-13	
8.490e-14	9.100e-14	8.080e-14	8.670e-14	1.030e-13	9.870e-14					



1.770e-15 1.910e-15 2.870e-15 1.880e-15 2.070e-15 1.890e-15 1.850e-15 1.880e-15 1.920e-15 1.910e-15
 1.890e-15 2.140e-15 1.870e-15 1.750e-15 2.020e-15 9.460e-15 1.900e-15 2.160e-15 1.860e-15 2.030e-15
 1.780e-15 1.860e-15 1.840e-15 1.710e-15 1.980e-15 2.080e-15
 7.830e-15 4.660e-12 2.930e-11 8.870e-14 1.730e-13 2.440e-15 1.770e-15 5.920e-14 3.530e-13 1.810e-13
 3.940e-14 8.950e-16 3.090e-13 1.060e-12 3.630e-11
 2.940e-14 8.300e-13 5.070e-12 3.960e-14 5.100e-12 1.580e-15 9.120e-16 8.430e-14 6.950e-14 3.540e-14
 9.840e-15 4.000e-15 1.230e-13 3.660e-13 1.180e-11
 9.970e-17 3.700e-16 8.820e-16 1.410e-16 1.010e-15 1.560e-17 1.580e-17 5.650e-16 1.190e-16 2.060e-16
 4.790e-17 3.340e-17 5.610e-16 1.330e-15 5.390e-15
 1.970e-18 7.630e-18 1.960e-17 2.860e-18 1.940e-17 2.730e-19 9.440e-19 1.000e-17 2.660e-18 4.620e-18
 9.940e-19 6.460e-19 1.130e-17 2.810e-17 1.110e-16

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 Tm-170 Particulate M 1.0000 1.111e+07 1.800e-03 1.000e-07
 5.480e-05 5.000e-04 5.000e-04 2.000e-03 6.000e-05 2.000e-03 1.000e-01
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
 9.232e-13 2.806e-12 6.390e-11 6.925e-13 6.979e-13 3.807e-10 9.517e-10 5.723e-09 1.668e-08 1.308e-12
 9.476e-12 1.335e-12 7.545e-12 1.319e-12 4.558e-11 8.350e-13 1.140e-12 1.111e-12 6.949e-13 6.873e-13
 2.550e-12 7.615e-13 3.645e-12 6.873e-13 7.350e-13 1.310e-09
 9.242e-11 9.549e-11 7.668e-09 8.489e-11 8.924e-11 1.572e-10 2.619e-10 1.189e-09 3.302e-09 8.662e-11
 1.114e-09 8.685e-11 8.691e-11 8.947e-11 5.469e-09 8.417e-11 8.830e-11 8.305e-11 9.152e-11 8.594e-11
 8.708e-11 9.662e-11 8.503e-11 2.905e-09 4.073e-08 5.988e-09
 1.070e-16 1.180e-16 5.800e-16 1.430e-16 2.100e-16 1.260e-16 9.820e-17 1.070e-16 9.940e-17 1.340e-16
 1.280e-16 1.540e-16 9.120e-17 9.410e-17 1.220e-16 1.800e-14 1.280e-16 1.750e-16 1.440e-16 1.670e-16
 1.040e-16 1.190e-16 9.430e-17 9.280e-17 1.510e-16 3.250e-16
 3.150e-18 3.680e-18 1.590e-17 3.320e-18 4.800e-18 3.700e-18 3.180e-18 3.380e-18 3.310e-18 3.800e-18
 3.720e-18 4.440e-18 3.110e-18 3.010e-18 3.450e-18 2.080e-15 3.760e-18 4.800e-18 3.840e-18 4.170e-18
 3.210e-18 3.500e-18 3.150e-18 2.690e-18 4.080e-18 2.490e-17
 1.100e-15 2.230e-12 1.910e-10 2.020e-14 1.240e-14 7.810e-15 1.350e-16 5.710e-15 1.220e-14 9.220e-15
 9.690e-16 3.830e-16 4.290e-13 2.940e-14 1.940e-10
 1.240e-13 9.130e-13 4.290e-11 2.020e-12 4.910e-10 8.300e-13 1.040e-14 5.380e-13 1.440e-13 2.790e-13
 5.480e-14 3.480e-14 4.060e-11 1.670e-12 5.810e-10
 1.070e-19 5.090e-19 1.070e-18 1.940e-19 1.480e-18 5.510e-20 1.800e-18 1.010e-18 1.300e-19 2.850e-19
 6.970e-20 5.320e-20 6.850e-19 1.760e-18 9.210e-18
 3.090e-21 1.490e-20 3.460e-20 5.640e-21 3.990e-20 1.510e-21 2.080e-19 2.320e-20 4.420e-21 8.900e-21
 1.980e-21 1.330e-21 1.940e-20 5.260e-20 4.190e-19

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Tm-171	Particulate					M	1.0000	6.059e+07	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	2.000e-03	6.000e-05	2.000e-03	1.000e-01				
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
2.997e-13	5.936e-13	2.020e-10	2.598e-13	2.523e-13	2.995e-11	7.478e-11	4.470e-10	1.308e-09	3.532e-13	
3.401e-12	3.612e-13	1.446e-12	3.571e-13	1.655e-11	2.731e-13	3.207e-13	3.158e-13	2.544e-13	2.543e-13	
5.661e-13	2.659e-13	7.439e-13	2.543e-13	2.650e-13	1.065e-10					
4.670e-11	4.380e-11	3.371e-08	4.342e-11	4.331e-11	4.859e-11	5.796e-11	1.362e-10	3.159e-10	4.395e-11	
5.588e-10	4.336e-11	4.427e-11	4.455e-11	2.741e-09	4.190e-11	4.348e-11	4.139e-11	4.427e-11	4.292e-11	
4.406e-11	4.602e-11	4.287e-11	6.875e-10	3.958e-09	1.221e-09					
1.140e-17	1.300e-17	7.340e-17	1.580e-17	2.640e-17	1.400e-17	1.010e-17	1.130e-17	1.030e-17	1.530e-17	
1.430e-17	1.820e-17	9.300e-18	9.470e-18	1.300e-17	3.020e-17	1.410e-17	2.150e-17	1.660e-17	1.990e-17	
1.120e-17	1.290e-17	9.580e-18	9.140e-18	1.720e-17	1.700e-17					
3.860e-19	4.640e-19	2.380e-18	4.140e-19	6.440e-19	4.760e-19	3.860e-19	4.170e-19	4.040e-19	4.950e-19	
4.790e-19	5.810e-19	3.670e-19	3.600e-19	4.150e-19	7.530e-19	4.840e-19	6.420e-19	5.050e-19	5.450e-19	
3.850e-19	4.400e-19	3.760e-19	3.090e-19	5.350e-19	5.310e-19					
3.630e-16	1.750e-13	1.500e-11	6.640e-15	3.720e-15	2.290e-14	3.850e-17	1.700e-15	2.330e-15	1.920e-15	
2.470e-16	1.170e-16	1.360e-13	7.490e-15	1.530e-11						
5.450e-14	2.250e-13	3.900e-12	9.200e-13	5.340e-11	3.340e-12	4.470e-15	2.200e-13	6.570e-14	1.170e-13	
2.510e-14	1.440e-14	1.800e-11	7.140e-13	8.090e-11						
1.050e-20	5.650e-20	1.120e-19	2.170e-20	1.680e-19	6.970e-21	3.010e-21	1.280e-19	1.320e-20	3.140e-20	
7.960e-21	6.340e-21	7.300e-20	1.940e-19	8.320e-19						
3.560e-22	1.920e-21	4.250e-21	7.260e-22	5.230e-21	2.260e-22	7.510e-23	3.110e-21	5.220e-22	1.120e-21	
2.580e-22	1.740e-22	2.330e-21	6.580e-21	2.690e-20						
2										
Bi-205	Particulate					M	1.0000	1.323e+06	1.800e-03	1.000e-07
5.480e-05	5.000e-02	5.000e-02	2.000e-03	1.000e-03	1.000e-01	5.000e-01				
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
1.404e-10	5.090e-10	1.451e-10	5.261e-12	2.857e-11	4.973e-10	1.455e-09	2.704e-09	5.184e-09	5.769e-10	
1.653e-10	1.950e-10	1.566e-09	2.217e-10	2.973e-10	7.804e-11	1.908e-10	1.579e-10	2.374e-11	1.042e-11	
4.825e-10	5.689e-11	6.924e-10	1.042e-11	4.124e-11	9.164e-10					
4.880e-10	1.179e-10	2.389e-10	5.689e-11	4.909e-10	3.346e-10	3.163e-10	5.476e-10	9.595e-10	4.854e-10	
4.208e-10	2.431e-10	3.122e-10	3.748e-10	3.063e-10	1.278e-10	3.809e-10	3.720e-11	5.794e-10	2.117e-10	
2.590e-10	8.185e-10	1.517e-10	4.929e-09	3.400e-09	8.584e-10					



6.960e-14	7.080e-14	1.260e-13	8.900e-14	9.360e-14	7.490e-14	6.870e-14	7.060e-14	6.960e-14	7.520e-14
7.590e-14	8.120e-14	6.960e-14	6.800e-14	8.200e-14	9.710e-14	7.610e-14	8.260e-14	7.940e-14	8.500e-14
7.040e-14	7.440e-14	6.730e-14	7.120e-14	8.320e-14	7.990e-14				
1.340e-15	1.510e-15	2.210e-15	1.430e-15	1.570e-15	1.450e-15	1.440e-15	1.450e-15	1.480e-15	1.470e-15
1.460e-15	1.630e-15	1.390e-15	1.360e-15	1.550e-15	2.030e-15	1.450e-15	1.640e-15	1.440e-15	1.490e-15
1.370e-15	1.430e-15	1.410e-15	1.310e-15	1.520e-15	1.530e-15				
3.640e-14	2.760e-12	5.940e-11	3.550e-13	6.810e-13	1.740e-14	1.080e-14	2.380e-13	2.540e-12	1.600e-12
3.790e-13	6.560e-15	1.950e-12	4.110e-12	7.410e-11					
7.370e-13	1.740e-12	1.320e-11	7.480e-13	3.890e-11	2.710e-14	1.530e-14	2.750e-12	6.460e-13	4.240e-13
3.180e-13	8.310e-14	1.940e-12	6.880e-12	6.840e-11					
8.190e-17	3.020e-16	7.240e-16	1.150e-16	8.140e-16	1.200e-17	9.690e-18	4.520e-16	9.900e-17	1.710e-16
3.910e-17	2.710e-17	4.600e-16	1.090e-15	4.390e-15					
1.510e-18	5.850e-18	1.510e-17	2.210e-18	1.490e-17	2.100e-19	2.030e-19	7.580e-18	1.980e-18	3.650e-18
7.650e-19	4.740e-19	8.700e-18	2.150e-17	8.460e-17					
Pb-205	Particulate				M	1.0000	4.828e+14	1.800e-03	1.000e-07
5.480e-05	1.000e-01	2.000e-01	8.000e-04	3.000e-04	4.000e-03	1.000e-01			
1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
3.487e-11	3.659e-11	3.658e-09	3.941e-11	3.427e-11	4.156e-11	5.164e-11	1.400e-10	3.438e-10	3.201e-10
5.903e-10	3.701e-11	3.439e-11	3.418e-11	1.265e-09	3.511e-11	3.423e-11	3.410e-11	3.435e-11	3.418e-11
3.312e-11	3.362e-11	3.414e-11	3.418e-11	3.457e-11	2.706e-10				
1.913e-11	2.003e-11	1.998e-09	2.156e-11	1.878e-11	1.999e-11	2.315e-11	4.497e-11	9.620e-11	1.753e-10
3.233e-10	2.120e-11	1.875e-11	1.871e-11	6.919e-10	1.922e-11	1.881e-11	1.867e-11	1.880e-11	1.871e-11
1.812e-11	1.864e-11	1.868e-11	1.860e-10	7.796e-10	2.321e-10				
2.890e-22	5.060e-21	4.700e-19	2.960e-23	1.850e-18	3.150e-21	5.310e-23	8.360e-23	1.190e-21	9.030e-21
1.990e-21	7.120e-19	5.160e-23	3.870e-23	8.680e-20	2.730e-17	3.350e-22	3.730e-19	1.190e-20	6.350e-20
5.500e-22	2.270e-21	5.170e-22	9.890e-23	2.670e-21	4.920e-19				
3.810e-21	1.340e-21	9.620e-20	2.680e-24	4.060e-19	9.220e-22	1.440e-23	1.620e-23	3.500e-22	3.570e-21
6.170e-22	3.080e-19	3.390e-20	2.800e-23	1.600e-20	1.150e-17	7.310e-23	1.810e-19	3.040e-21	2.690e-20
9.400e-22	1.520e-21	2.220e-22	3.710e-24	8.400e-22	1.900e-19				
6.270e-14	3.080e-13	3.840e-12	1.380e-12	6.600e-13	4.380e-13	6.380e-15	3.190e-13	7.400e-14	1.440e-13
2.720e-13	2.180e-14	8.290e-12	1.050e-12	1.690e-11					
2.220e-14	8.350e-14	1.130e-12	5.170e-13	9.070e-12	1.570e-13	1.860e-15	8.680e-14	2.680e-14	5.180e-14
9.890e-14	5.790e-15	3.410e-12	2.860e-13	1.490e-11					
1.140e-25	1.270e-23	5.800e-24	3.020e-24	2.610e-23	4.460e-23	2.720e-21	8.940e-21	7.340e-26	1.220e-23
4.700e-24	2.020e-23	4.870e-22	3.530e-21	1.580e-20					



4.300e-27 3.720e-24 1.660e-24 9.350e-25 8.210e-24 9.130e-24 1.150e-21 1.960e-21 4.820e-23 3.240e-24
1.860e-24 8.570e-24 8.980e-23 1.550e-21 4.830e-21

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Hf-175	Particulate				M	1.0000	6.048e+06	1.800e-03	1.000e-07
5.480e-05	2.000e-03	2.000e-03	4.000e-04	2.000e-05	3.000e-03	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
2.687e-11	1.432e-10	1.212e-10	2.943e-12	4.681e-12	1.714e-10	5.269e-10	1.381e-09	3.362e-09	5.738e-11
3.653e-11	5.051e-11	4.439e-10	5.142e-11	9.524e-11	1.629e-11	3.960e-11	4.013e-11	4.413e-12	2.658e-12
1.311e-10	1.109e-11	2.022e-10	2.658e-12	8.146e-12	4.040e-10				
4.511e-10	8.284e-11	1.964e-09	9.183e-11	3.681e-10	2.384e-10	2.019e-10	3.623e-10	7.468e-10	1.843e-10
3.359e-10	2.069e-10	1.894e-10	3.190e-10	6.730e-10	1.022e-10	2.876e-10	4.020e-11	4.572e-10	1.806e-10
1.841e-10	6.766e-10	1.163e-10	1.644e-09	5.882e-09	1.019e-09				
1.240e-14	1.260e-14	3.460e-14	1.590e-14	1.830e-14	1.340e-14	1.160e-14	1.220e-14	1.180e-14	1.360e-14
1.360e-14	1.500e-14	1.100e-14	1.150e-14	1.420e-14	2.060e-14	1.360e-14	1.590e-14	1.430e-14	1.590e-14
1.200e-14	1.310e-14	1.130e-14	1.190e-14	1.530e-14	1.470e-14				
2.820e-16	3.080e-16	6.800e-16	2.990e-16	3.540e-16	3.060e-16	2.880e-16	2.970e-16	2.980e-16	3.080e-16
3.070e-16	3.540e-16	3.070e-16	2.740e-16	3.180e-16	4.170e-16	3.080e-16	3.640e-16	3.100e-16	3.360e-16
2.810e-16	2.970e-16	2.880e-16	2.620e-16	3.270e-16	3.290e-16				
7.050e-15	9.710e-13	3.820e-11	8.230e-14	1.440e-13	1.480e-14	2.350e-15	4.570e-14	7.260e-13	4.530e-13
3.910e-14	1.520e-15	6.620e-13	9.800e-13	4.230e-11					
5.650e-13	1.200e-12	9.620e-12	5.770e-13	7.120e-11	2.170e-13	1.200e-14	1.990e-12	3.410e-13	2.640e-13
1.150e-13	7.000e-14	4.550e-12	5.680e-12	9.640e-11					
1.370e-17	5.410e-17	1.240e-16	2.060e-17	1.500e-16	3.290e-18	2.060e-18	8.840e-17	1.560e-17	3.050e-17
7.080e-18	5.060e-18	7.970e-17	1.930e-16	7.870e-16					
3.010e-19	1.240e-18	3.070e-18	4.650e-19	3.200e-18	6.460e-20	4.160e-20	1.710e-18	4.370e-19	7.450e-19
1.600e-19	1.070e-19	1.780e-18	4.520e-18	1.780e-17					

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Nd-144	Particulate				M	1.0000	7.227e+22	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	2.000e-03	6.000e-05	2.000e-03	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
1.382e-12	1.816e-12	1.181e-06	1.382e-12	1.382e-12	4.287e-10	1.069e-09	6.476e-09	1.899e-08	1.382e-12
3.239e-07	1.382e-12	1.382e-12	1.382e-12	9.447e-08	1.382e-12	1.382e-12	1.382e-12	1.382e-12	1.382e-12
1.382e-12	1.382e-12	1.382e-12	1.382e-12	1.382e-12	4.082e-08				



2.572e-10	3.381e-10	2.196e-04	2.572e-10	2.572e-10	3.412e-10	4.672e-10	1.823e-09	4.850e-09	2.572e-10
6.025e-05	2.572e-10	2.572e-10	2.572e-10	1.757e-05	2.572e-10	2.572e-10	2.572e-10	2.572e-10	2.572e-10
2.572e-10	2.572e-10	2.572e-10	1.124e-07	2.817e-06	7.655e-06				
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
2.310e-15	2.510e-12	2.170e-10	4.680e-10	2.460e-14	1.010e-10	2.450e-16	6.050e-15	2.710e-15	6.010e-15
1.110e-15	8.470e-16	2.710e-11	3.770e-14	8.150e-10					
3.490e-13	1.840e-12	5.500e-11	7.440e-08	3.500e-08	1.660e-08	3.190e-14	7.850e-13	4.220e-13	9.160e-13
1.620e-13	1.050e-13	4.240e-09	4.830e-12	1.300e-07					
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00					
2									
Os-194	Particulate				M	1.0000	1.893e+08	1.800e-03	1.000e-07
5.480e-05	1.000e-02	1.000e-02	2.000e-03	1.000e-04	3.000e-02	2.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
2.341e-10	2.554e-10	2.273e-10	2.142e-10	2.155e-10	3.189e-10	7.619e-10	7.171e-09	3.147e-08	3.316e-09
2.875e-09	2.244e-10	2.842e-10	2.360e-10	2.299e-10	2.160e-10	2.854e-09	2.218e-10	2.176e-10	2.164e-10
2.519e-10	2.225e-10	2.456e-10	2.164e-10	2.212e-10	2.477e-09				
2.309e-09	2.173e-09	2.119e-09	1.978e-09	2.164e-09	2.192e-09	2.246e-09	4.411e-09	1.055e-08	3.042e-08
2.649e-08	2.076e-09	2.038e-09	2.255e-09	2.107e-09	2.001e-09	2.627e-08	1.980e-09	2.219e-09	2.058e-09
2.253e-09	2.369e-09	2.026e-09	6.272e-09	1.430e-07	2.085e-08				
2.950e-17	3.570e-17	2.210e-16	4.170e-17	9.260e-17	3.840e-17	2.430e-17	2.850e-17	2.460e-17	4.510e-17
3.890e-17	5.780e-17	2.080e-17	2.130e-17	3.510e-17	1.140e-16	3.790e-17	7.210e-17	4.860e-17	6.330e-17
2.770e-17	3.360e-17	2.210e-17	2.020e-17	4.820e-17	5.090e-17				
1.340e-18	1.710e-18	9.860e-18	1.380e-18	3.230e-18	1.750e-18	1.230e-18	1.400e-18	1.300e-18	1.970e-18
1.750e-18	2.630e-18	1.040e-18	1.080e-18	1.460e-18	8.930e-18	1.760e-18	3.040e-18	1.920e-18	2.300e-18
1.290e-18	1.530e-18	1.180e-18	8.790e-19	2.020e-18	2.210e-18				
3.170e-13	1.840e-12	3.210e-10	5.690e-12	3.170e-12	2.810e-14	3.120e-14	1.490e-12	4.770e-13	8.120e-13
2.170e-12	1.040e-13	1.720e-12	5.140e-12	3.440e-10					



2.900e-12	1.060e-11	1.180e-10	4.630e-11	1.530e-09	2.330e-13	2.370e-13	1.240e-11	3.250e-12	6.150e-12
1.770e-11	7.920e-13	1.380e-11	3.930e-11	1.800e-09					
2.320e-20	1.550e-19	2.770e-19	5.900e-20	4.710e-19	2.100e-20	1.140e-20	4.470e-19	2.960e-20	8.630e-20
2.350e-20	2.020e-20	1.970e-19	5.390e-19	2.360e-18					
1.010e-21	7.070e-21	1.400e-20	2.650e-21	1.980e-20	9.360e-22	8.910e-22	1.560e-20	1.480e-21	4.130e-21
1.020e-21	7.320e-22	8.200e-21	2.510e-20	1.030e-19					
Ir-194	Particulate				M	1.0000	6.941e+04	1.800e-03	1.000e-07
5.480e-05	1.000e-02	1.000e-02	2.000e-03	2.000e-06	3.000e-02	2.000e-01			
1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
4.537e-12	1.598e-11	5.065e-12	1.100e-12	1.712e-12	9.210e-10	1.999e-09	8.091e-09	1.270e-08	1.845e-11
1.473e-11	6.251e-12	4.224e-11	8.553e-12	9.032e-12	2.885e-12	1.494e-11	4.504e-12	1.555e-12	1.187e-12
1.826e-11	2.680e-12	2.198e-11	1.187e-12	2.082e-12	1.334e-09				
5.478e-12	1.195e-11	4.892e-12	3.665e-12	5.057e-12	1.415e-10	3.018e-10	1.229e-09	1.928e-09	3.220e-11
2.890e-11	4.981e-12	9.344e-12	5.575e-12	5.466e-12	3.805e-12	2.850e-11	3.524e-12	5.885e-12	4.299e-12
6.408e-12	6.690e-12	6.268e-12	7.772e-10	1.876e-09	4.319e-10				
3.650e-15	3.670e-15	8.250e-15	4.680e-15	5.100e-15	3.920e-15	3.500e-15	3.650e-15	3.560e-15	3.950e-15
3.980e-15	4.310e-15	3.450e-15	3.480e-15	4.250e-15	5.840e-14	3.990e-15	4.470e-15	4.140e-15	4.550e-15
3.590e-15	3.880e-15	3.420e-15	3.630e-15	4.420e-15	4.770e-15				
7.840e-17	8.430e-17	1.440e-16	8.260e-17	9.330e-17	8.350e-17	8.090e-17	8.250e-17	8.380e-17	8.400e-17
8.370e-17	9.540e-17	8.350e-17	7.690e-17	8.900e-17	9.310e-15	8.400e-17	9.680e-17	8.270e-17	8.990e-17
7.800e-17	8.190e-17	8.070e-17	7.450e-17	8.810e-17	1.810e-16				
2.410e-15	5.390e-12	1.850e-10	3.090e-14	3.410e-14	6.100e-16	4.210e-16	1.390e-14	6.880e-14	5.000e-14
1.240e-14	6.640e-16	6.050e-14	1.440e-13	1.900e-10					
9.160e-15	1.000e-12	3.400e-11	6.040e-14	2.260e-11	6.370e-16	5.630e-16	3.550e-14	1.950e-14	3.880e-14
2.240e-14	2.030e-15	4.190e-14	1.190e-13	5.790e-11					
4.180e-18	1.580e-17	3.730e-17	6.030e-18	4.320e-17	7.830e-19	5.830e-18	2.460e-17	4.910e-18	8.870e-18
2.050e-18	1.450e-18	2.390e-17	5.680e-17	2.360e-16					
8.570e-20	3.370e-19	8.580e-19	1.270e-19	8.610e-19	1.370e-20	9.290e-19	4.510e-19	1.190e-19	2.040e-19
4.370e-20	2.860e-20	5.000e-19	1.240e-18	5.800e-18					
2									
Po-208	Inorganic				M	1.0000	9.145e+07	1.800e-03	1.000e-07
5.480e-05	1.000e-01	1.000e-01	5.000e-03	4.000e-04	1.000e-03	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00



7.008e-08	7.023e-08	4.015e-07	7.008e-08	7.008e-08	7.126e-08	7.273e-08	8.730e-08	1.206e-07	3.208e-06
1.658e-06	7.008e-08	7.008e-08	7.008e-08	6.658e-07	7.008e-08	2.762e-06	7.008e-08	7.008e-08	7.008e-08
7.008e-08	7.008e-08	7.008e-08	7.008e-08	7.008e-08	3.070e-07				
7.415e-08	7.433e-08	4.249e-07	7.415e-08	7.415e-08	7.440e-08	7.469e-08	7.851e-08	8.689e-08	3.392e-06
1.753e-06	7.415e-08	7.415e-08	7.415e-08	7.044e-07	7.415e-08	2.922e-06	7.415e-08	7.415e-08	7.415e-08
7.415e-08	7.415e-08	7.415e-08	4.502e-06	2.232e-05	2.911e-06				
8.050e-19	8.050e-19	1.850e-18	1.030e-18	1.130e-18	8.640e-19	7.690e-19	8.010e-19	7.840e-19	8.720e-19
8.760e-19	9.550e-19	7.530e-19	7.600e-19	9.340e-19	1.290e-18	8.800e-19	9.920e-19	9.080e-19	1.010e-18
7.890e-19	8.550e-19	7.480e-19	7.980e-19	9.760e-19	9.360e-19				
1.750e-20	1.880e-20	3.360e-20	1.840e-20	2.090e-20	1.860e-20	1.810e-20	1.840e-20	1.870e-20	1.880e-20
1.870e-20	2.130e-20	1.870e-20	1.710e-20	1.980e-20	3.290e-20	1.880e-20	2.170e-20	1.860e-20	2.040e-20
1.750e-20	1.830e-20	1.800e-20	1.660e-20	1.970e-20	2.000e-20				
1.050e-10	4.270e-10	1.810e-09	3.370e-09	1.060e-09	6.480e-11	1.060e-11	2.570e-10	1.220e-10	2.320e-10
2.150e-09	3.560e-11	2.920e-10	1.640e-09	1.160e-08					
1.060e-10	3.940e-10	1.230e-09	3.310e-09	3.070e-07	6.110e-11	9.780e-12	2.420e-10	1.280e-10	2.280e-10
2.120e-09	3.230e-11	2.760e-10	1.480e-09	3.160e-07					
9.180e-22	3.490e-21	8.190e-21	1.330e-21	9.540e-21	1.760e-22	1.290e-22	5.460e-21	1.070e-21	1.950e-21
4.540e-22	3.220e-22	5.240e-21	1.250e-20	5.080e-20					
1.910e-23	7.510e-23	1.910e-22	2.830e-23	1.930e-22	3.190e-24	3.280e-24	1.010e-22	2.660e-23	4.550e-23
9.780e-24	6.500e-24	1.110e-22	2.770e-22	1.090e-21					
Bi-208	Particulate				M	1.0000	1.161e+13	1.800e-03	1.000e-07
5.480e-05	5.000e-02	5.000e-02	2.000e-03	1.000e-03	1.000e-01	5.000e-01			
2.230e-05	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
2.218e-10	7.180e-10	2.019e-10	1.021e-11	5.140e-11	6.636e-10	1.912e-09	3.154e-09	5.755e-09	8.356e-10
2.433e-10	2.855e-10	2.170e-09	3.226e-10	4.232e-10	1.239e-10	2.939e-10	2.381e-10	4.322e-11	1.991e-11
6.908e-10	9.615e-11	9.504e-10	1.991e-11	6.895e-11	1.159e-09				
4.285e-09	3.919e-10	1.838e-09	4.682e-10	4.476e-09	2.542e-09	9.982e-10	1.363e-09	1.675e-09	2.693e-09
3.658e-09	1.892e-09	8.462e-10	3.090e-09	2.391e-09	1.122e-09	3.272e-09	1.494e-10	5.181e-09	1.922e-09
1.840e-09	7.342e-09	5.220e-10	8.766e-09	2.198e-08	4.481e-09				
1.200e-13	1.250e-13	1.850e-13	1.490e-13	1.530e-13	1.290e-13	1.200e-13	1.230e-13	1.210e-13	1.290e-13
1.300e-13	1.360e-13	1.210e-13	1.200e-13	1.410e-13	1.560e-13	1.300e-13	1.370e-13	1.370e-13	1.430e-13
1.250e-13	1.290e-13	1.200e-13	1.240e-13	1.400e-13	1.350e-13				
1.910e-15	2.340e-15	2.920e-15	2.060e-15	2.220e-15	2.100e-15	2.120e-15	2.130e-15	2.150e-15	2.140e-15
2.110e-15	2.310e-15	2.040e-15	2.050e-15	2.260e-15	2.600e-15	2.100e-15	2.330e-15	2.140e-15	2.020e-15
2.010e-15	2.070e-15	2.090e-15	1.930e-15	2.190e-15	2.210e-15				



6.380e-14 3.660e-12 6.470e-11 5.190e-13 1.090e-12 2.420e-14 1.700e-14 3.990e-13 3.520e-12 2.250e-12
 5.420e-13 1.150e-14 2.790e-12 6.050e-12 8.560e-11
 6.190e-12 1.140e-11 2.290e-11 6.070e-12 2.280e-10 1.930e-13 1.200e-13 2.370e-11 1.560e-12 1.240e-12
 1.580e-12 7.090e-13 1.390e-11 5.200e-11 3.690e-10
 1.430e-16 5.210e-16 1.260e-15 1.970e-16 1.370e-15 1.760e-17 1.560e-17 7.390e-16 1.720e-16 3.020e-16
 6.710e-17 4.550e-17 7.910e-16 1.870e-15 7.510e-15
 2.220e-18 8.480e-18 2.210e-17 3.200e-18 2.140e-17 2.770e-19 2.590e-19 1.070e-17 2.900e-18 5.660e-18
 1.110e-18 6.430e-19 1.270e-17 3.110e-17 1.230e-16

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Rh-102	Particulate				M	1.0000	1.788e+07	1.800e-03	1.000e-07
5.480e-05	5.000e-02	5.000e-02	2.000e-03	5.000e-04	3.000e-02	2.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
2.989e-10	4.407e-10	3.105e-10	2.198e-10	2.121e-10	5.945e-10	1.212e-09	3.908e-09	1.013e-08	3.270e-10
3.041e-10	2.971e-10	8.251e-10	3.383e-10	3.466e-10	2.165e-10	3.054e-10	2.902e-10	2.519e-10	2.479e-10
4.183e-10	2.768e-10	5.152e-10	2.479e-10	2.482e-10	1.193e-09				
1.111e-09	4.728e-10	7.102e-10	3.912e-10	1.041e-09	7.917e-10	6.630e-10	1.255e-09	2.565e-09	6.279e-10
9.845e-10	6.740e-10	5.744e-10	9.423e-10	7.717e-10	4.542e-10	8.859e-10	3.849e-10	1.229e-09	6.648e-10
6.718e-10	1.657e-09	5.068e-10	3.641e-09	2.603e-08	3.909e-09				
1.950e-14	1.940e-14	4.080e-14	2.480e-14	2.690e-14	2.070e-14	1.850e-14	1.930e-14	1.880e-14	2.090e-14
2.100e-14	2.280e-14	1.780e-14	1.830e-14	2.250e-14	3.810e-14	2.110e-14	2.350e-14	2.160e-14	2.390e-14
1.900e-14	2.050e-14	1.800e-14	1.920e-14	2.330e-14	2.240e-14				
4.150e-16	4.520e-16	7.220e-16	4.410e-16	5.060e-16	4.420e-16	4.310e-16	4.390e-16	4.460e-16	4.470e-16
4.440e-16	5.140e-16	4.630e-16	4.070e-16	4.760e-16	2.230e-15	4.440e-16	5.250e-16	4.500e-16	4.910e-16
4.200e-16	4.370e-16	4.300e-16	3.990e-16	4.700e-16	4.940e-16				
3.550e-13	3.320e-12	1.160e-10	6.080e-13	3.420e-12	3.690e-14	3.010e-14	1.390e-12	1.360e-12	1.370e-12
2.210e-13	1.160e-13	2.430e-12	6.630e-12	1.380e-10					
1.540e-12	3.900e-12	3.250e-11	1.720e-12	2.940e-10	7.820e-14	5.400e-14	5.760e-12	9.890e-13	1.390e-12
3.910e-13	2.610e-13	4.850e-12	1.600e-11	3.630e-10					
2.210e-17	8.360e-17	1.970e-16	3.180e-17	2.280e-16	3.870e-18	3.800e-18	1.300e-16	2.530e-17	4.690e-17
1.090e-17	7.610e-18	1.260e-16	3.010e-16	1.220e-15					
4.590e-19	1.780e-18	4.560e-18	6.730e-19	4.600e-18	6.860e-20	2.220e-19	2.440e-18	6.590e-19	1.090e-18
2.330e-19	1.560e-19	2.670e-18	6.630e-18	2.630e-17					

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Sm-145	Particulate				M	1.0000	2.938e+07	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	2.000e-03	6.000e-05	2.000e-03	1.000e-01			



0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
5.740e-12	3.070e-11	1.402e-10	6.736e-13	6.328e-13	7.104e-11	2.259e-10	7.920e-10	2.076e-09	9.286e-12	
5.684e-11	1.194e-11	1.596e-10	1.098e-11	2.546e-11	2.407e-12	5.778e-12	5.404e-12	5.320e-13	3.232e-13	
4.038e-11	2.342e-12	4.331e-11	3.232e-13	2.545e-12	2.121e-10					
7.364e-10	3.583e-11	1.847e-08	1.073e-10	2.279e-10	2.068e-10	1.936e-10	3.769e-10	5.382e-10	3.633e-10	
8.197e-09	2.188e-10	1.437e-10	5.074e-10	1.823e-09	8.602e-11	1.735e-10	1.270e-11	2.292e-10	7.964e-11	
1.227e-09	5.767e-10	6.314e-11	9.712e-10	4.711e-09	1.526e-09					
6.980e-16	8.540e-16	5.260e-15	9.840e-16	2.290e-15	9.130e-16	5.680e-16	6.720e-16	5.740e-16	1.090e-15	
9.240e-16	1.410e-15	4.740e-16	4.940e-16	8.410e-16	2.580e-15	9.000e-16	1.790e-15	1.170e-15	1.550e-15	
6.500e-16	7.930e-16	5.150e-16	4.690e-16	1.150e-15	1.230e-15					
3.340e-17	4.310e-17	2.470e-16	3.320e-17	8.220e-17	4.360e-17	2.970e-17	3.430e-17	3.100e-17	5.070e-17	
4.350e-17	6.550e-17	2.420e-17	2.560e-17	3.640e-17	1.070e-16	4.380e-17	7.930e-17	4.920e-17	6.000e-17	
3.120e-17	3.760e-17	2.820e-17	2.040e-17	5.070e-17	5.460e-17					
8.690e-16	4.210e-13	2.370e-11	1.130e-13	4.190e-14	1.650e-14	4.000e-16	6.530e-15	2.720e-13	1.100e-13	
7.130e-15	1.570e-16	1.910e-13	2.420e-13	2.510e-11						
2.950e-13	1.180e-12	7.660e-12	1.330e-11	5.670e-11	1.850e-12	9.710e-15	1.330e-12	2.440e-13	1.150e-13	
2.130e-13	3.170e-14	1.180e-11	8.230e-12	1.030e-10						
5.400e-19	3.690e-18	6.500e-18	1.400e-18	1.120e-17	4.990e-19	2.570e-19	1.110e-17	6.740e-19	2.060e-18	
5.670e-19	4.940e-19	4.720e-18	1.290e-17	5.660e-17						
2.350e-20	1.760e-19	3.390e-19	6.590e-20	4.960e-19	2.350e-20	1.070e-20	3.970e-19	3.440e-20	1.040e-19	
2.640e-20	1.910e-20	2.040e-19	6.180e-19	2.540e-18						
Pm-145	Particulate				M	1.0000	5.586e+08	1.800e-03	1.000e-07	
5.480e-05	5.000e-04	5.000e-04	2.000e-03	6.000e-05	2.000e-03	1.000e-01				
1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	
1.249e-11	1.490e-11	3.267e-10	2.046e-12	1.493e-12	3.451e-11	1.085e-10	3.585e-10	9.188e-10	9.651e-12	
1.514e-10	8.104e-12	8.311e-11	1.184e-11	3.802e-11	2.165e-12	3.680e-12	2.602e-12	1.392e-12	9.202e-13	
3.948e-11	5.177e-12	2.095e-11	9.202e-13	6.731e-12	1.105e-10					
2.225e-09	9.510e-11	5.803e-08	3.764e-10	3.581e-10	4.898e-10	5.210e-10	8.236e-10	6.479e-10	1.196e-09	
2.742e-08	5.510e-10	3.960e-10	1.521e-09	5.768e-09	2.413e-10	2.943e-10	3.644e-11	3.440e-10	1.855e-10	
4.325e-09	1.094e-09	1.786e-10	6.950e-10	3.810e-09	3.408e-09					
2.960e-16	3.700e-16	2.310e-15	4.180e-16	1.070e-15	3.940e-16	2.350e-16	2.830e-16	2.370e-16	4.850e-16	
3.980e-16	6.380e-16	1.890e-16	1.990e-16	3.650e-16	1.230e-15	3.860e-16	8.230e-16	5.140e-16	7.060e-16	
2.710e-16	3.370e-16	2.100e-16	1.890e-16	5.000e-16	5.500e-16					



1.540e-17 2.030e-17 1.180e-16 1.500e-17 4.170e-17 2.040e-17 1.330e-17 1.560e-17 1.380e-17 2.450e-17
 2.030e-17 3.240e-17 1.040e-17 1.120e-17 1.700e-17 5.550e-17 2.040e-17 4.000e-17 2.350e-17 2.950e-17
 1.410e-17 1.730e-17 1.250e-17 8.680e-18 2.390e-17 2.640e-17
 1.640e-15 2.030e-13 1.050e-11 2.390e-13 6.860e-14 3.110e-14 2.890e-16 8.380e-15 1.420e-13 5.380e-14
 6.170e-15 2.690e-16 2.400e-13 2.010e-13 1.170e-11
 3.760e-13 1.940e-12 7.360e-12 3.690e-11 4.020e-11 4.800e-12 1.990e-14 1.550e-12 5.090e-13 2.360e-13
 5.670e-13 4.610e-14 3.000e-11 1.660e-11 1.410e-10
 2.170e-19 1.590e-18 2.720e-18 6.030e-19 4.890e-18 2.190e-19 1.230e-19 5.170e-18 2.690e-19 8.950e-19
 2.520e-19 2.250e-19 2.050e-18 5.620e-18 2.480e-17
 9.990e-21 8.240e-20 1.530e-19 3.080e-20 2.340e-19 1.120e-20 5.540e-21 2.010e-19 1.480e-20 4.910e-20
 1.270e-20 9.390e-21 9.540e-20 2.930e-19 1.200e-18

2
 Sm-148 Particulate M 1.0000 2.209e+23 1.800e-03 1.000e-07
 5.480e-05 5.000e-04 5.000e-04 2.000e-03 6.000e-05 2.000e-03 1.000e-01
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
 1.441e-12 1.894e-12 1.232e-06 1.441e-12 1.441e-12 4.472e-10 1.115e-09 6.754e-09 1.981e-08 1.441e-12
 3.377e-07 1.441e-12 1.441e-12 1.441e-12 9.857e-08 1.441e-12 1.441e-12 1.441e-12 1.441e-12 1.441e-12
 1.441e-12 1.441e-12 1.441e-12 1.441e-12 1.441e-12 4.258e-08
 2.682e-10 3.524e-10 2.291e-04 2.682e-10 2.682e-10 3.558e-10 4.869e-10 1.902e-09 5.057e-09 2.682e-10
 6.280e-05 2.682e-10 2.682e-10 2.682e-10 1.833e-05 2.682e-10 2.682e-10 2.682e-10 2.682e-10 2.682e-10
 2.682e-10 2.682e-10 2.682e-10 1.460e-07 3.053e-06 7.998e-06
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
 2.410e-15 2.620e-12 2.260e-10 4.870e-10 2.570e-14 1.050e-10 2.550e-16 6.300e-15 2.820e-15 6.270e-15
 1.150e-15 8.820e-16 2.820e-11 3.930e-14 8.500e-10
 3.630e-13 1.920e-12 5.730e-11 7.750e-08 3.830e-08 1.730e-08 3.330e-14 8.190e-13 4.390e-13 9.550e-13
 1.680e-13 1.090e-13 4.430e-09 5.040e-12 1.380e-07
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00



Nd-144	Particulate					M	1.0000	7.227e+22	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	2.000e-03	6.000e-05	2.000e-03	1.000e-01				
1.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
1.382e-12	1.816e-12	1.181e-06	1.382e-12	1.382e-12	4.287e-10	1.069e-09	6.476e-09	1.899e-08	1.382e-12	
3.239e-07	1.382e-12	1.382e-12	1.382e-12	9.447e-08	1.382e-12	1.382e-12	1.382e-12	1.382e-12	1.382e-12	1.382e-12
1.382e-12	1.382e-12	1.382e-12	1.382e-12	1.382e-12	4.082e-08					
2.572e-10	3.381e-10	2.196e-04	2.572e-10	2.572e-10	3.412e-10	4.672e-10	1.823e-09	4.850e-09	2.572e-10	
6.025e-05	2.572e-10	2.572e-10	2.572e-10	1.757e-05	2.572e-10	2.572e-10	2.572e-10	2.572e-10	2.572e-10	2.572e-10
2.572e-10	2.572e-10	2.572e-10	1.124e-07	2.817e-06	7.655e-06					
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
2.310e-15	2.510e-12	2.170e-10	4.680e-10	2.460e-14	1.010e-10	2.450e-16	6.050e-15	2.710e-15	6.010e-15	
1.110e-15	8.470e-16	2.710e-11	3.770e-14	8.150e-10						
3.490e-13	1.840e-12	5.500e-11	7.440e-08	3.500e-08	1.660e-08	3.190e-14	7.850e-13	4.220e-13	9.160e-13	
1.620e-13	1.050e-13	4.240e-09	4.830e-12	1.300e-07						
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00						
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00						
1										
Tb-158	Particulate					M	1.0000	5.680e+09	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	2.000e-03	6.000e-05	2.000e-03	1.000e-01				
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
2.809e-10	3.139e-10	2.791e-09	6.830e-11	6.612e-11	4.495e-10	1.197e-09	3.294e-09	7.998e-09	2.680e-10	
1.221e-09	1.772e-10	1.006e-09	2.636e-10	7.024e-10	8.563e-11	1.447e-10	1.094e-10	6.995e-11	5.416e-11	
5.288e-10	1.379e-10	4.538e-10	5.416e-11	1.274e-10	1.119e-09					
4.442e-08	7.819e-09	5.038e-07	1.274e-08	1.197e-08	1.551e-08	1.926e-08	2.202e-08	1.815e-08	2.923e-08	
2.137e-07	1.470e-08	1.713e-08	3.093e-08	1.018e-07	9.377e-09	1.334e-08	4.765e-09	1.348e-08	1.033e-08	
5.318e-08	2.425e-08	1.197e-08	1.599e-08	5.369e-08	4.513e-08					



3.100e-14 3.070e-14 6.150e-14 4.020e-14 4.340e-14 3.340e-14 3.030e-14 3.130e-14 3.100e-14 3.370e-14
 3.390e-14 3.680e-14 3.130e-14 2.970e-14 3.660e-14 4.710e-14 3.400e-14 3.810e-14 3.500e-14 3.890e-14
 3.080e-14 3.320e-14 2.930e-14 3.160e-14 3.760e-14 3.610e-14
 6.640e-16 7.000e-16 1.190e-15 6.930e-16 7.830e-16 7.070e-16 6.860e-16 6.940e-16 7.150e-16 7.170e-16
 7.060e-16 8.050e-16 6.600e-16 6.450e-16 7.460e-16 1.150e-15 7.130e-16 8.170e-16 6.780e-16 7.630e-16
 6.530e-16 6.940e-16 6.790e-16 6.260e-16 7.390e-16 7.530e-16
 7.440e-14 2.370e-12 9.070e-11 1.800e-12 1.150e-12 2.440e-13 9.330e-15 3.030e-13 1.590e-12 9.690e-13
 1.530e-13 1.360e-14 4.020e-12 3.720e-12 1.070e-10
 1.270e-11 4.310e-11 1.270e-10 2.640e-10 5.300e-10 3.840e-11 6.530e-13 3.900e-11 1.880e-11 1.620e-11
 1.240e-11 2.000e-12 4.830e-10 2.800e-10 1.870e-09
 3.640e-17 1.350e-16 3.220e-16 5.140e-17 3.680e-16 5.840e-18 4.700e-18 2.100e-16 4.450e-17 7.420e-17
 1.750e-17 1.240e-17 2.050e-16 4.840e-16 1.970e-15
 7.200e-19 2.850e-18 7.260e-18 1.070e-18 7.230e-18 1.130e-19 1.150e-19 3.780e-18 9.390e-19 1.690e-18
 3.730e-19 2.430e-19 4.190e-18 1.050e-17 4.110e-17

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Gd-148	Particulate				M	1.0000	2.354e+09	1.800e-03	1.000e-07
5.480e-05	5.000e-04	5.000e-04	2.000e-03	6.000e-05	2.000e-03	1.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
2.373e-12	3.064e-12	1.816e-06	2.373e-12	2.373e-12	7.368e-10	1.838e-09	1.113e-08	3.263e-08	6.344e-10
3.320e-07	2.373e-12	2.373e-12	2.373e-12	1.453e-07	2.373e-12	2.373e-12	2.373e-12	2.373e-12	2.373e-12
2.373e-12	2.373e-12	2.373e-12	2.373e-12	2.373e-12	5.474e-08				
4.403e-10	5.686e-10	3.367e-04	4.403e-10	4.403e-10	5.847e-10	8.009e-10	3.091e-09	8.214e-09	1.176e-07
6.154e-05	4.403e-10	4.403e-10	4.403e-10	2.696e-05	4.403e-10	4.403e-10	4.403e-10	4.403e-10	4.403e-10
4.403e-10	4.403e-10	4.403e-10	1.942e-06	9.312e-06	1.080e-05				
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
3.960e-15	4.320e-12	3.730e-10	4.920e-10	4.230e-14	1.590e-10	4.210e-16	1.040e-14	4.650e-15	1.030e-14
4.570e-13	1.450e-15	4.280e-11	6.470e-14	1.070e-09					
5.970e-13	3.160e-12	9.540e-11	7.810e-08	1.260e-07	2.610e-08	5.470e-14	1.340e-12	7.220e-13	1.570e-12
6.980e-11	1.790e-13	6.680e-09	8.280e-12	2.370e-07					
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00



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0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
0.000e+00 0.000e+00 0.000e+00 0.000e+00 0.000e+00
2
Lu-177m    Particulate                                M            1.0000      1.386e+07  1.800e-03  1.000e-07
5.480e-05  5.000e-04  5.000e-04  2.000e-03  6.000e-05  2.000e-03  1.000e-01
0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00
0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00
0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00
7.364e-11  4.067e-10  6.926e-10  4.869e-12  1.126e-11  6.393e-10  1.875e-09  6.343e-09  1.687e-08  1.628e-10
1.093e-10  1.400e-10  1.223e-09  1.441e-10  2.778e-10  4.435e-11  1.122e-10  1.117e-10  9.915e-12  4.622e-12
3.691e-10  2.933e-11  5.693e-10  4.622e-12  2.019e-11  1.707e-09
2.519e-09  4.966e-10  7.199e-08  6.851e-10  1.652e-09  1.187e-09  1.174e-09  2.035e-09  4.265e-09  1.247e-09
2.635e-09  1.099e-09  1.098e-09  1.707e-09  8.794e-09  5.620e-10  1.399e-09  2.480e-10  2.098e-09  9.749e-10
1.134e-09  3.079e-09  7.294e-10  1.051e-08  6.628e-08  1.090e-08
3.550e-14  3.640e-14  1.050e-13  4.560e-14  5.260e-14  3.850e-14  3.350e-14  3.530e-14  3.400e-14  3.910e-14
3.920e-14  4.320e-14  3.210e-14  3.330e-14  4.090e-14  5.870e-14  3.930e-14  4.570e-14  4.140e-14  4.590e-14
3.450e-14  3.800e-14  3.270e-14  3.420e-14  4.410e-14  4.230e-14
8.050e-16  8.690e-16  1.910e-15  8.450e-16  9.870e-16  8.660e-16  8.170e-16  8.430e-16  8.460e-16  8.680e-16
8.670e-16  9.900e-16  8.550e-16  7.830e-16  9.040e-16  1.160e-15  8.730e-16  1.010e-15  8.590e-16  9.390e-16
8.010e-16  8.410e-16  8.210e-16  7.490e-16  9.220e-16  9.270e-16
1.630e-14  3.650e-12  1.910e-10  2.440e-13  3.690e-13  8.360e-14  6.340e-15  1.170e-13  2.000e-12  1.270e-12
1.100e-13  2.970e-15  1.950e-12  2.710e-12  2.040e-10
2.550e-12  5.730e-12  5.260e-11  4.500e-12  8.620e-10  7.710e-12  6.460e-14  8.750e-12  1.780e-12  1.470e-12
7.460e-13  3.510e-13  6.070e-11  2.950e-11  1.040e-09
3.930e-17  1.550e-16  3.590e-16  5.940e-17  4.310e-16  9.970e-18  5.860e-18  2.540e-16  4.570e-17  8.800e-17
2.030e-17  1.460e-17  2.300e-16  5.560e-16  2.270e-15
8.620e-19  3.500e-18  8.720e-18  1.310e-18  9.020e-18  1.810e-19  1.160e-19  4.770e-18  1.220e-18  2.100e-18
4.520e-19  2.990e-19  5.070e-18  1.280e-17  5.040e-17
Lu-177    Particulate                                M            1.0000      5.743e+05  1.800e-03  1.000e-07
5.480e-05  5.000e-04  5.000e-04  2.000e-03  6.000e-05  2.000e-03  1.000e-01
2.170e-01  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00
0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00
0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00  0.000e+00
2.117e-12  1.285e-11  1.686e-11  1.424e-14  2.594e-13  1.809e-10  4.533e-10  2.446e-09  6.445e-09  5.186e-12
3.322e-12  4.298e-12  3.824e-11  4.657e-12  7.612e-12  1.273e-12  3.592e-12  3.216e-12  1.938e-13  3.479e-14
1.232e-11  8.089e-13  1.833e-11  3.479e-14  4.827e-13  5.328e-10

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6.938e-12 6.129e-12 6.322e-10 1.213e-12 6.087e-12 3.209e-11 7.321e-11 4.015e-10 1.056e-09 8.084e-12
 1.165e-11 3.855e-12 7.191e-12 5.502e-12 5.550e-11 1.763e-12 5.051e-12 9.613e-13 7.881e-12 2.960e-12
 4.440e-12 1.138e-11 3.765e-12 1.068e-09 5.868e-09 8.066e-10
 1.180e-15 1.230e-15 4.170e-15 1.530e-15 1.830e-15 1.300e-15 1.120e-15 1.180e-15 1.130e-15 1.330e-15
 1.330e-15 1.480e-15 1.090e-15 1.110e-15 1.360e-15 7.140e-15 1.330e-15 1.590e-15 1.430e-15 1.580e-15
 1.150e-15 1.280e-15 1.100e-15 1.130e-15 1.510e-15 1.500e-15
 2.770e-17 2.970e-17 7.690e-17 2.870e-17 3.420e-17 3.000e-17 2.780e-17 2.880e-17 2.880e-17 2.990e-17
 2.990e-17 3.400e-17 2.800e-17 2.680e-17 3.070e-17 5.680e-17 3.030e-17 3.500e-17 2.900e-17 3.200e-17
 2.740e-17 2.890e-17 2.800e-17 2.530e-17 3.180e-17 3.210e-17
 3.600e-16 1.060e-12 7.610e-11 7.520e-15 9.900e-15 2.080e-15 1.820e-16 3.110e-15 6.190e-14 3.990e-14
 3.520e-15 4.930e-17 5.340e-14 8.460e-14 7.740e-11
 1.040e-14 2.190e-13 1.490e-11 2.240e-14 8.000e-11 7.590e-14 2.280e-16 3.480e-14 1.500e-14 1.990e-14
 5.490e-15 1.250e-15 4.610e-13 1.050e-13 9.580e-11
 1.300e-18 5.250e-18 1.200e-17 2.020e-18 1.480e-17 3.960e-19 7.120e-19 8.840e-18 1.550e-18 2.970e-18
 6.920e-19 5.030e-19 7.630e-18 1.870e-17 7.730e-17
 2.910e-20 1.210e-19 2.970e-19 4.530e-20 3.110e-19 7.300e-21 5.670e-21 1.650e-19 3.980e-20 7.180e-20
 1.560e-20 1.020e-20 1.720e-19 4.390e-19 1.730e-18

2

Rh-102m	Particulate				M	1.0000	1.181e+08	1.800e-03	1.000e-07
5.480e-05	5.000e-02	5.000e-02	2.000e-03	5.000e-04	3.000e-02	2.000e-01			
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
1.908e-09	2.322e-09	1.893e-09	1.215e-09	1.104e-09	2.163e-09	3.736e-09	4.867e-09	7.781e-09	1.938e-09
1.860e-09	1.666e-09	4.113e-09	2.128e-09	1.945e-09	1.043e-09	1.847e-09	1.637e-09	1.566e-09	1.541e-09
2.363e-09	1.785e-09	2.865e-09	1.541e-09	1.478e-09	2.762e-09				
7.449e-09	3.388e-09	4.999e-09	2.655e-09	6.315e-09	5.124e-09	4.237e-09	4.326e-09	4.887e-09	4.570e-09
6.606e-09	4.485e-09	4.259e-09	6.553e-09	5.190e-09	2.736e-09	6.045e-09	2.830e-09	7.919e-09	4.625e-09
4.846e-09	1.054e-08	4.012e-09	1.201e-08	2.505e-08	7.385e-09				
8.490e-14	8.400e-14	1.660e-13	1.090e-13	1.160e-13	9.060e-14	8.180e-14	8.470e-14	8.350e-14	9.110e-14
9.180e-14	9.930e-14	8.150e-14	8.070e-14	9.910e-14	1.200e-13	9.230e-14	1.020e-13	9.440e-14	1.040e-13
8.360e-14	8.990e-14	7.940e-14	8.540e-14	1.020e-13	9.740e-14				
1.790e-15	1.920e-15	2.940e-15	1.890e-15	2.110e-15	1.900e-15	1.860e-15	1.890e-15	1.930e-15	1.920e-15
1.900e-15	2.180e-15	1.910e-15	1.750e-15	2.040e-15	2.590e-15	1.910e-15	2.210e-15	1.880e-15	2.080e-15
1.790e-15	1.880e-15	1.850e-15	1.720e-15	2.000e-15	2.030e-15				
2.000e-12	1.060e-11	8.720e-11	3.400e-12	1.710e-11	2.060e-13	1.230e-13	5.840e-12	6.410e-12	6.720e-12
1.210e-12	6.030e-13	1.250e-11	3.490e-11	1.890e-10					



9.550e-12	2.230e-11	5.270e-11	1.090e-11	2.590e-10	5.120e-13	2.860e-13	3.210e-11	6.530e-12	8.980e-12
2.630e-12	1.600e-12	3.060e-11	9.890e-11	5.370e-10					
9.830e-17	3.660e-16	8.690e-16	1.390e-16	9.970e-16	1.580e-17	1.200e-17	5.600e-16	1.160e-16	2.030e-16
4.740e-17	3.310e-17	5.560e-16	1.310e-15	5.330e-15					
1.980e-18	7.670e-18	1.970e-17	2.880e-18	1.960e-17	2.790e-19	2.580e-19	1.020e-17	2.720e-18	4.640e-18
9.990e-19	6.620e-19	1.150e-17	2.840e-17	1.110e-16					
Rh-102	Particulate				M	1.0000	1.788e+07	1.800e-03	1.000e-07
5.480e-05	5.000e-02	5.000e-02	2.000e-03	5.000e-04	3.000e-02	2.000e-01			
2.330e-03	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00
2.989e-10	4.407e-10	3.105e-10	2.198e-10	2.121e-10	5.945e-10	1.212e-09	3.908e-09	1.013e-08	3.270e-10
3.041e-10	2.971e-10	8.251e-10	3.383e-10	3.466e-10	2.165e-10	3.054e-10	2.902e-10	2.519e-10	2.479e-10
4.183e-10	2.768e-10	5.152e-10	2.479e-10	2.482e-10	1.193e-09				
1.111e-09	4.728e-10	7.102e-10	3.912e-10	1.041e-09	7.917e-10	6.630e-10	1.255e-09	2.565e-09	6.279e-10
9.845e-10	6.740e-10	5.744e-10	9.423e-10	7.717e-10	4.542e-10	8.859e-10	3.849e-10	1.229e-09	6.648e-10
6.718e-10	1.657e-09	5.068e-10	3.641e-09	2.603e-08	3.909e-09				
1.950e-14	1.940e-14	4.080e-14	2.480e-14	2.690e-14	2.070e-14	1.850e-14	1.930e-14	1.880e-14	2.090e-14
2.100e-14	2.280e-14	1.780e-14	1.830e-14	2.250e-14	3.810e-14	2.110e-14	2.350e-14	2.160e-14	2.390e-14
1.900e-14	2.050e-14	1.800e-14	1.920e-14	2.330e-14	2.240e-14				
4.150e-16	4.520e-16	7.220e-16	4.410e-16	5.060e-16	4.420e-16	4.310e-16	4.390e-16	4.460e-16	4.470e-16
4.440e-16	5.140e-16	4.630e-16	4.070e-16	4.760e-16	2.230e-15	4.440e-16	5.250e-16	4.500e-16	4.910e-16
4.200e-16	4.370e-16	4.300e-16	3.990e-16	4.700e-16	4.940e-16				
3.550e-13	3.320e-12	1.160e-10	6.080e-13	3.420e-12	3.690e-14	3.010e-14	1.390e-12	1.360e-12	1.370e-12
2.210e-13	1.160e-13	2.430e-12	6.630e-12	1.380e-10					
1.540e-12	3.900e-12	3.250e-11	1.720e-12	2.940e-10	7.820e-14	5.400e-14	5.760e-12	9.890e-13	1.390e-12
3.910e-13	2.610e-13	4.850e-12	1.600e-11	3.630e-10					
2.210e-17	8.360e-17	1.970e-16	3.180e-17	2.280e-16	3.870e-18	3.800e-18	1.300e-16	2.530e-17	4.690e-17
1.090e-17	7.610e-18	1.260e-16	3.010e-16	1.220e-15					
4.590e-19	1.780e-18	4.560e-18	6.730e-19	4.600e-18	6.860e-20	2.220e-19	2.440e-18	6.590e-19	1.090e-18
2.330e-19	1.560e-19	2.670e-18	6.630e-18	2.630e-17					



2.3 Compare Files for the Seven V4.1 Test Cases Showing No Calculation Changes When Using V4.1.1 with Remote Data Locations

Test Case 1

Comparing files Test_Case_1.SYN and TEST_CASE_1_411.SYN

***** Test_Case_1.SYN

C A P 8 8 - P C

Version 4.1

Clean Air Act Assessment Package - 1988

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

Non-Radon Individual Assessment

Thu Jun 27 10:59:09 2019

Facility: Springfield Nuclear Power Plant
Address: 100 Industrial Way
City: Springfield
State: IL Zip: 62701

Source Category:
Source Type: Stack
Emission Year: 2019
DOSE Age Group: Infant

Comments: Intended for Software Testing Purposes Only

***** TEST_CASE_1_411.SYN

C A P 8 8 - P C

Version 4.1

Clean Air Act Assessment Package - 1988



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

Non-Radon Individual Assessment

Tue Jun 29 14:51:07 2021

Facility: Springfield Nuclear Power Plant

Address: 100 Industrial Way

City: Springfield

State: IL Zip: 62701

Source Category:

Source Type: Stack

Emission Year: 2019

DOSE Age Group: Infant

Comments: Intended for Software Testing Purposes Only

***** Test_Case_1.SYN

At This Location: 1000 Meters North

Dataset Name: Test_Case_1.



Dataset Date: Jun 27, 2019 10:48 AM

Wind File: C:\Users\CAP88 User\Documents\CAP88\Wind Files\Test_Cas



Thu Jun 27 10:59:09 2019

SYNOPSIS
Page 1

***** TEST_CASE_1_411.SYN
At This Location: 1000 Meters North
Dataset Name: Test_Case_1_411.DAT

Dataset Date: Jun 23, 2021 02:35 PM

Wind File: \\DEV\Share\CAP88\Wind Files\Test_Case_1.wnd



Tue Jun 29 14:51:07 2021

SYNOPSIS
Page 1

***** Test_Case_1.SYN



Thu Jun 27 10:59:09 2019

SYNOPSIS
Page 2

***** TEST_CASE_1_411.SYN



Tue Jun 29 14:51:07 2021

SYNOPSIS
Page 2

***** Test_Case_1.SYN

AGRICULTURAL DATA

***** TEST_CASE_1_411.SYN

ADJUSTED AGRICULTURAL DATA



Test Case 2

Comparing files Test_Case_2.SYN and TEST_CASE_2_411.SYN

***** Test_Case_2.SYN

C A P 8 8 - P C

Version 4.1

Clean Air Act Assessment Package - 1988

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

Non-Radon Individual Assessment

Thu Jun 27 11:01:46 2019

Facility: Springfield Nuclear Power Plant
Address: 100 Industrial Way
City: Springfield
State: ID Zip: 83277

Source Category:
Source Type: Area
Emission Year:
DOSE Age Group: One

Comments: Intended for Software Testing Purposes Only

***** TEST_CASE_2_411.SYN

C A P 8 8 - P C

Version 4.1

Clean Air Act Assessment Package - 1988



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

Non-Radon Individual Assessment

Tue Jun 29 14:51:33 2021

Facility: Springfield Nuclear Power Plant

Address: 100 Industrial Way

City: Springfield

State: ID Zip: 83277

Source Category:

Source Type: Area

Emission Year: 2019

DOSE Age Group: One

Comments: Intended for Software Testing Purposes Only

***** Test_Case_2.SYN

At This Location: 500 Meters Southwest

Dataset Name: Test_Case_2.

Dataset Date: Jun 27, 2019 11:01 AM

Wind File: C:\Users\CAP88 User\Documents\CAP88\Wind Files\Test_Cas



Thu Jun 27 11:01:46 2019

SYNOPSIS
Page 1

***** TEST_CASE_2_411.SYN

At This Location: 500 Meters Southwest
Dataset Name: Test_Case_2_411.DAT

Dataset Date: Jun 29, 2021 02:51 PM

Wind File: \\DEV\Share\CAP88\Wind Files\Test_Case_2.wnd



Tue Jun 29 14:51:33 2021

SYNOPSIS
Page 1

***** Test_Case_2.SYN

RADIONUCLIDE EMISSIONS DURING THE YEAR

***** TEST_CASE_2_411.SYN

RADIONUCLIDE EMISSIONS DURING THE YEAR 2019

***** Test_Case_2.SYN

Mixing Height: 800.0 m



Thu Jun 27 11:01:46 2019

SYNOPSIS
Page 2

***** TEST_CASE_2_411.SYN

Mixing Height: 800.0 m



Tue Jun 29 14:51:33 2021

SYNOPSIS
Page 2

***** Test_Case_2.SYN

AGRICULTURAL DATA

***** TEST_CASE_2_411.SYN

ADJUSTED AGRICULTURAL DATA



Test Case 3

Comparing files Test_Case_3.SYN and TEST_CASE_3_411.SYN

***** Test_Case_3.SYN

C A P 8 8 - P C

Version 4.1

Clean Air Act Assessment Package - 1988

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

Non-Radon Individual Assessment

Thu Jun 27 11:04:03 2019

Facility: Springfield Nuclear Power Plant
Address: 1000 Industrial Way
City: Springfield
State: MI Zip: 49037

Source Category:
Source Type: Stack
Emission Year: 2019
DOSE Age Group: Five

Comments: Intended for Software Testing Purposes Only

***** TEST_CASE_3_411.SYN

C A P 8 8 - P C

Version 4.1

Clean Air Act Assessment Package - 1988



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

Non-Radon Individual Assessment

Tue Jun 29 14:52:15 2021

Facility: Springfield Nuclear Power Plant

Address: 1000 Industrial Way

City: Springfield

State: MI Zip: 49037

Source Category:

Source Type: Stack

Emission Year: 2019

DOSE Age Group: Five

Comments: Intended for Software Testing Purposes Only

***** Test_Case_3.SYN

At This Location: 500 Meters Northwest

Dataset Name: Test_Case_3.

Dataset Date: Jun 27, 2019 11:03 AM

Wind File: C:\Users\CAP88 User\Documents\CAP88\Wind Files\Test_Cas



Thu Jun 27 11:04:03 2019

SYNOPSIS
Page 1

***** TEST_CASE_3_411.SYN

At This Location: 500 Meters Northwest
Dataset Name: Test_Case_3_411.DAT

Dataset Date: Jun 29, 2021 02:52 PM

Wind File: \\DEV\Share\CAP88\Wind Files\Test_Case_3.wnd



Tue Jun 29 14:52:15 2021

SYNOPSIS
Page 1

***** Test_Case_3.SYN

Mixing Height: 1200.0 m



Thu Jun 27 11:04:03 2019

SYNOPSIS
Page 2

***** TEST_CASE_3_411.SYN

Mixing Height: 1200.0 m



Tue Jun 29 14:52:15 2021

SYNOPSIS
Page 2

***** Test_Case_3.SYN

AGRICULTURAL DATA

***** TEST_CASE_3_411.SYN

ADJUSTED AGRICULTURAL DATA



Test Case 4

Comparing files Test_Case_4.SYN and TEST_CASE_4_411.SYN

***** Test_Case_4.SYN

C A P 8 8 - P C

Version 4.1

Clean Air Act Assessment Package - 1988

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

Non-Radon Population Assessment

Thu Jun 27 14:29:59 2019

Facility: Springfield Nuclear Power Plant
Address: 100 Industrial Way
City: Springfield
State: KY Zip: 40069

Source Category:
Source Type: Area
Emission Year: 2019
DOSE Age Group: Ten

Comments: Intended for Software Testing Purposes Only

***** TEST_CASE_4_411.SYN

C A P 8 8 - P C

Version 4.1

Clean Air Act Assessment Package - 1988



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

Non-Radon Population Assessment

Tue Jun 29 14:52:38 2021

Facility: Springfield Nuclear Power Plant

Address: 100 Industrial Way

City: Springfield

State: KY Zip: 40069

Source Category:

Source Type: Area

Emission Year: 2019

DOSE Age Group: Ten

Comments: Intended for Software Testing Purposes Only

***** Test_Case_4.SYN

At This Location: 22500 Meters West

Dataset Name: Test_Case_4.

Dataset Date: Jun 27, 2019 02:29 PM

Wind File: C:\Users\CAP88 User\Documents\CAP88\Wind Files\Test_Cas
p File: C:\Users\CAP88 User\Documents\CAP88\Population Files\Test_Case



Thu Jun 27 14:29:59 2019

SYNOPSIS
Page 1

***** TEST_CASE_4_411.SYN

At This Location: 22500 Meters West

Dataset Name: Test_Case_4_411.DAT

Dataset Date: Jun 23, 2021 02:39 PM

Wind File: \\DEV\Share\CAP88\Wind Files\Test_Case_4.wnd

Pop File: \\DEV\Share\CAP88\Population Files\Test_Case_4.pop



Tue Jun 29 14:52:38 2021

SYNOPSIS
Page 1

***** Test_Case_4.SYN		
Effectiv	1.74E-01	1.74E-02



Thu Jun 27 14:29:59 2019

SYNOPSIS
Page 2

***** TEST_CASE_4_411.SYN
 Effectiv

1.74E-01

1.74E-02



Tue Jun 29 14:52:38 2021

SYNOPSIS
Page 2

***** Test_Case_4.SYN

Mixing Height: 1500.0 m



Thu Jun 27 14:29:59 2019

SYNOPSIS
Page 3

***** TEST_CASE_4_411.SYN

Mixing Height: 1500.0 m



Tue Jun 29 14:52:38 2021

SYNOPSIS
Page 3

***** Test_Case_4.SYN

AGRICULTURAL DATA

***** TEST_CASE_4_411.SYN

ADJUSTED AGRICULTURAL DATA

***** Test_Case_4.SYN

for Vegetable Crops: 3.98E-03



Thu Jun 27 14:29:59 2019

SYNOPSIS
Page 4

***** TEST_CASE_4_411.SYN
for Vegetable Crops: 3.98E-03



Tue Jun 29 14:52:38 2021

SYNOPSIS
Page 4



Test Case 5

Comparing files Test_Case_5.SYN and TEST_CASE_5_411.SYN

***** Test_Case_5.SYN

C A P 8 8 - P C

Version 4.1

Clean Air Act Assessment Package - 1988

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

Non-Radon Population Assessment

Thu Jun 27 14:36:59 2019

Facility: Springfield Nuclear Power Plant
Address: 100 Industrial Way
City: Springfield
State: OH Zip: 45501

Source Category:
Source Type: Stack
Emission Year: 2019
DOSE Age Group: Fifteen

Comments: Intended for Software Testing Purposes Only

***** TEST_CASE_5_411.SYN

C A P 8 8 - P C

Version 4.1

Clean Air Act Assessment Package - 1988



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

Non-Radon Population Assessment

Tue Jun 29 14:53:00 2021

Facility: Springfield Nuclear Power Plant

Address: 100 Industrial Way

City: Springfield

State: OH Zip: 45501

Source Category:

Source Type: Stack

Emission Year: 2019

DOSE Age Group: Fifteen

Comments: Intended for Software Testing Purposes Only

***** Test_Case_5.SYN

At This Location: 1200 Meters West

Dataset Name: Test_Case_5.

Dataset Date: Jun 27, 2019 02:36 PM

Wind File: C:\Users\CAP88 User\Documents\CAP88\Wind Files\Test_Cas
p File: C:\Users\CAP88 User\Documents\CAP88\Population Files\Test_Case



Thu Jun 27 14:36:59 2019

SYNOPSIS
Page 1

***** TEST_CASE_5_411.SYN

At This Location: 1200 Meters West

Dataset Name: Test_Case_5_411.DAT

Dataset Date: Jun 23, 2021 02:40 PM

Wind File: \\DEV\Share\CAP88\Wind Files\Test_Case_5.wnd

Pop File: \\DEV\Share\CAP88\Population Files\Test_Case_5.pop



Tue Jun 29 14:53:00 2021

SYNOPSIS
Page 1

***** Test_Case_5.SYN		
Effectiv	5.46E+00	5.46E-01



Thu Jun 27 14:36:59 2019

SYNOPSIS
Page 2

***** TEST_CASE_5_411.SYN
 Effectiv

5.46E+00

5.46E-01



Tue Jun 29 14:53:00 2021

SYNOPSIS
Page 2

***** Test_Case_5.SYN

Mixing Height: 900.0 m



Thu Jun 27 14:36:59 2019

SYNOPSIS
Page 3

***** TEST_CASE_5_411.SYN

Mixing Height: 900.0 m



Tue Jun 29 14:53:00 2021

SYNOPSIS
Page 3

***** Test_Case_5.SYN

AGRICULTURAL DATA

***** TEST_CASE_5_411.SYN

ADJUSTED AGRICULTURAL DATA

***** Test_Case_5.SYN

for Vegetable Crops: 1.70E-02



Thu Jun 27 14:36:59 2019

SYNOPSIS
Page 4

***** TEST_CASE_5_411.SYN
for Vegetable Crops: 1.70E-02



Tue Jun 29 14:53:00 2021

SYNOPSIS
Page 4



Test Case 6

Comparing files Test_Case_6.SYN and TEST_CASE_6_411.SYN

***** Test_Case_6.SYN

C A P 8 8 - P C

Version 4.1

Clean Air Act Assessment Package - 1988

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

Non-Radon Population Assessment

Thu Jun 27 17:03:32 2019

Facility: The Plants
Address:
City: Lancaster
State: WA Zip:

Source Category:
Source Type: Stack
Emission Year: 1990
DOSE Age Group: Adult

Comments: Intended for Software Training Puposes Only

***** TEST_CASE_6_411.SYN

C A P 8 8 - P C

Version 4.1

Clean Air Act Assessment Package - 1988



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

Non-Radon Population Assessment

Tue Jun 29 14:53:46 2021

Facility: The Plants

Address:

City: Lancaster

State: WA Zip:

Source Category:

Source Type: Stack

Emission Year: 1990

DOSE Age Group: Adult

Comments: Intended for Software Training Puposos Only

***** Test_Case_6.SYN

At This Location: 15000 Meters South

Dataset Name: Test_Case_6.

Dataset Date: Jun 27, 2019 05:03 PM

Wind File: C:\Users\CAP88 User\Documents\CAP88\Wind Files\Test_Cas
p File: C:\Users\CAP88 User\Documents\CAP88\Population Files\Test_Case



Thu Jun 27 17:03:32 2019

SYNOPSIS
Page 1

***** TEST_CASE_6_411.SYN

At This Location: 15000 Meters South

Dataset Name: Test_Case_6_411.DAT

Dataset Date: Jun 23, 2021 02:42 PM

Wind File: \\DEV\Share\CAP88\Wind Files\Test_Case_6.wnd

Pop File: \\DEV\Share\CAP88\Population Files\Test_Case_6.pop



Tue Jun 29 14:53:46 2021

SYNOPSIS
Page 1

***** Test_Case_6.SYN		
Effectiv	2.61E+00	6.08E+02



Thu Jun 27 17:03:32 2019

SYNOPSIS
Page 2

***** TEST_CASE_6_411.SYN
 Effectiv

2.61E+00

6.08E+02



Tue Jun 29 14:53:46 2021

SYNOPSIS
Page 2

***** Test_Case_6.SYN

Mixing Height: 1000.0 m



Thu Jun 27 17:03:32 2019

SYNOPSIS
Page 3

***** TEST_CASE_6_411.SYN

Mixing Height: 1000.0 m



Tue Jun 29 14:53:46 2021

SYNOPSIS
Page 3

***** Test_Case_6.SYN

AGRICULTURAL DATA

***** TEST_CASE_6_411.SYN

ADJUSTED AGRICULTURAL DATA

***** Test_Case_6.SYN

for Vegetable Crops: 5.20E-02



Thu Jun 27 17:03:32 2019

SYNOPSIS
Page 4

***** TEST_CASE_6_411.SYN
for Vegetable Crops: 5.20E-02



Tue Jun 29 14:53:46 2021

SYNOPSIS
Page 4



Test Case 7

Comparing files Test_Case_7.SYN and TEST_CASE_7_411.SYN

***** Test_Case_7.SYN

C A P 8 8 - P C

Version 4.1

Clean Air Act Assessment Package - 1988

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

Radon Individual Assessment

Fri Jun 28 10:20:21 2019

Facility: Tritium Radium Works
Address: 25 W. Fountain Ave.
City: Cincinnati
State: OH Zip: 45246

Source Category:
Source Type: Area
Emission Year:
DOSE Age Group: Adult

Comments: Intended for Software Testing Purposes Only

***** TEST_CASE_7_411.SYN

C A P 8 8 - P C

Version 4.1

Clean Air Act Assessment Package - 1988



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

Radon Individual Assessment

Tue Jun 29 14:54:10 2021

Facility: Tritium Radium Works
Address: 25 W. Fountain Ave.
City: Cincinnati
State: OH Zip: 45246

Source Category:
 Source Type: Area
Emission Year:
DOSE Age Group: Adult

Comments: Intended for Software Testing Purposes Only

***** Test_Case_7.SYN
 At This Location: 500 Meters North
Dataset Name: Test_Case_7.
Dataset Date: Jun 28, 2019 10:20 AM
Wind File: C:\Users\CAP88 User\Documents\CAP88\Wind Files\trinity.



Fri Jun 28 10:20:21 2019

SYNOPSIS
Page 1

***** TEST_CASE_7_411.SYN

At This Location: 500 Meters North
Dataset Name: Test_Case_7_411.DAT

Dataset Date: Jun 23, 2021 02:53 PM

Wind File: \\DEV\Share\CAP88\Wind Files\trinity.wnd



Tue Jun 29 14:54:10 2021

SYNOPSIS
Page 1

***** Test_Case_7.SYN
Lifetime Fatal Cancer Risk: 6.07E-03



Fri Jun 28 10:20:21 2019

SYNOPSIS
Page 2

***** TEST_CASE_7_411.SYN
Lifetime Fatal Cancer Risk: 6.07E-03



Tue Jun 29 14:54:10 2021

SYNOPSIS
Page 2

***** Test_Case_7.SYN

Mixing Height: 1000.0 m



Fri Jun 28 10:20:21 2019

SYNOPSIS
Page 3

***** TEST_CASE_7_411.SYN

Mixing Height: 1000.0 m



Tue Jun 29 14:54:10 2021

SYNOPSIS
Page 3



Appendix A: