Parent ROC
^{241}Am
^{60}Co
^{137}Cs
^{152}Eu
^{154}Eu
^{3}H
^{239}Pu
^{226}Ra
^{90}Sr
^{232}Th
^{235}U

Assumptions:
RESRAD BLD
entire floor, 4 walls and ceiling are sources
no removable/no dusts
no ingestion or inhalation pathways
time zero is max dose
receptor center of concrete room

Summary:
With the exception of SR/Y-90, when modeled the same (RESRAD adjusted to match EPA models) for external exposur
Notes:
With the exception of Sr/Y-90 all total calculations are within an order of magnitude in difference.
With the exception of Sr/Y-90, Eu-152, Eu-154, and Co-60 Dose all total calculations are roughly within a factor of 3 or les
For Co-60 BDCC and BPRG appear to differ in comparison to each other when compared to RESRAD BLD results.
The DCF differences are not the only differences in modeled doses.
While the DCF differences predict total dose differences fairly well for most nuclides there are a few which the expected

Contributing Progeny	Input Concentration (dpm/m^2)	Input Conversions pCi/m2	pCi/cm2
	10,000	4504.5	0.45045
	500,000	225225	22.5225
^{137m}Ba	500,000	225225	22.5225
	500,000	225225	22.5225
	500,000	225225	22.5225
	500,000	225225	22.5225
^{235m}U	10,000	4504.5	0.45045
^{222}Rn+D	10,000	4504.5	0.45045
^{210}Pb+D	10,000	4504.5	0.45045
^{210}Po+D	10,000	4504.5	0.45045
^{90}Y	100,000	45045	4.505
	3,650	1644	0.164
^{228}Ra+D	3,650	1644	0.164
^{228}Th+D	3,650	1644	0.164
^{231}Th	48,800	21982	2.198
			Totals

es the EPA and ANL models are within an order of magnitude difference.

s difference.

differences are significantly different.

Adult Worker				
RESRAD BLD Risk	RESRAD BLD Dose mrem	BPRG 3D Risk	BDCC Dose mrem	risk BPRG/RESRAD
3.62E-08	5.74E-02	4.04E-08	**5.63E-02**	**1.12E+00**
3.68E-05	4.81E+01	1.08E-04	**4.55E+02**	**2.93E+00**
2.22E-05	2.91E+01	4.34E-05	**55**	**1.95E+00**
3.33E-05	44.1	2.56E-04	**3.18E+02**	**7.69E+00**
2.80E-05	36.9	2.17E-04	**270**	**7.75E+00**
NA	NA	NA	**NA**	
6.34E-07	0.874	1.40E-06	**1.78**	**2.21E+00**
3.50E-06	2.82	3.57E-06	**4.65**	**1.02E+00**
4.77E-08	5.99E-02	4.09E-11	**1.26E-05**	**8.57E-04**
1.27E-05	5.75	3.97E-06	**3.45**	**3.13E-01**
3.09E-06	4.26	6.83E-06	**8.7**	**2.21E+00**
1.40E-04	1.72E+02	6.40E-04	**1.12E+03**	

BPRG/DCC
3D model (entire floor, entire walls, and ceiling are sources)
no removable/no dusts
no ingestion or inhalation pathways
BDCC = mrem/yr thus X 25 for 25 years exposure
receptor center of concrete room

BDCC/RESRAD	MISC	Slope factor difference BPRG/RESRADBLD	DCF difference BDCC/RESRADBLD	Daughters BDCC/RESRAD
9.80E-01	Excellent agreement; note: avg location = greater risk and dose	Waiting for answer from Charley Yu on how RESRADBLD converts mass to area source for Heast. For Dose it defaults to the FGR 12 groundplane DCF. Assume same done for risk but need to verify.	7.94E-01	
9.46E+00	insignificant difference but note BDCC and BPRG sig different %		9.80E-01	
1.89E+00	insignificant difference		1.10E+01	9.87E-01
7.20E+00	Somewhat significant differences		9.89E-01	
7.32E+00	Somewhat significant differences		9.86E-01	
2.04E+00	Insignificant difference		8.35E-01	1.01E+00
1.65E+00	Excellent agreement, note avg location is less risk but more dose?		1.03E+00	included +D
2.10E-04	Significant differences		5.79E+00	2.08E+01
6.00E-01	Insignificant difference		9.44E-01	included +D
2.04E+00	Insignificant difference		1.01E+00	8.24E-01

This suggest another assumption or factor drives differences or potential error in formulas?
Reviewing 1st answer from Charley Yu to complete analysis. Have second question regarding risk.