

Appendix A. Errata

Appendix A. Errata

ORR Annual Site Environmental Reports for 2000–2007

The following updated ^{212}Pb information should replace results provided in these reports. There was no effect to the ORR maximally exposed individual (MEI) dose as a result of these changes.

Year	Original ^{212}Pb ORNL Activity Ci/yr	New ^{212}Pb ORNL Activity Ci/yr ^a
2000	2.10	2.781
2001	2.38	3.061
2002	1.57	2.251
2003	2.15	2.831
2004	1.87	2.551
2005	1.88	2.561
2006	1.29	1.971
2007	1.61	2.291

^aA maximum value of 0.681 Ci/yr, measured from Stack 3020 in CY 1998, was used to conservatively adjust the original reported values. From 2000–2006, the facility was in a “standby” mode where all processes were shut down and radioactive material was solidified and stored. There were no plans to do any further processing, and the 3019 Radiochemical Development Facility became a radioactive material storage facility. In February 2007, Isotek, LLC, assumed operation of the 3019 Radiochemical Development Facility and the associated 3020 stack, and the facility status was upgraded to “Surveillance and Maintenance” with plans for future processing of the ^{233}U material stored in the facility. In each of these years, there was no processing; therefore, it is appropriate to assume a near steady-state release of ^{212}Pb .

ORR Annual Site Environmental Report for 2009

During 2010 the TWRA sent their annual *Fisheries Report, 10-05, Tennessee Reservoir Creek Survey 2009 Results*, dated May 2010. The data from this report were used to calculate radiation doses due to water use for the 2009 ASER. Subsequent to preparing the ASER, the TWRA revised the annual *Fisheries Report, 10-05, Tennessee Reservoir Creek Survey 2009 Results*, dated June 2010. The revised creel survey data were received after preparation of the 2009 ASER. The revised values based on the June 2010 creel survey results are as follows. Primary changes are to the population number and collective dose.

7.1.2.2.2 Eating Fish

Upper Melton Hill Lake above all possible ORR inputs. The collective ED to the 34 persons who could have eaten such fish could have been 0.005 person-rem. If naturally occurring radionuclides are included, the EDs could have been 4 mrem and 0.05 person-rem.

Melton Hill Lake. The collective ED to the 309 persons who could have eaten such fish could have been 0.00007 person-rem. If naturally occurring radionuclides are included, the EDs could have been 1 mrem and 0.1 person-rem.

Upper Clinch River. The collective ED to the 468 persons who could have eaten such fish could have been 0.2 person-rem.

Lower Clinch River. The collective ED to the 1,091 persons who could have eaten such fish could have been 0.3 person-rem.

Oak Ridge Reservation

Upper Watts Bar Lake. The collective ED to the 3,118 persons who could have eaten such fish could have been 0.2 person-rem.

Lower System. The collective ED to the 28,555 persons who could have eaten such fish could have been 2 person-rem.

Poplar Creek/Lower East Fork Poplar Creek. Assuming 100 people could have eaten fish from Lower East Fork Poplar Creek and 100 from Poplar Creek, the collective ED could have been about 0.05 person-rem.

7.1.2.2.3 Other Uses

Upper Clinch River. The collective ED to the 3,623 other users could have been about 0.03 person-rem.

Lower Clinch River. The collective ED to the 8,454 other users could have been about 0.4 person-rem.

Upper Watts Bar Lake. The collective ED to the 24,153 other users could have been about 0.4 person-rem.

Lower System. The collective ED to the 409,795 other users could have been about 4 person-rem.

Poplar Creek/Lower East Fork Poplar Creek. If naturally occurring radionuclides are included, the EDs could have been 0.03 mrem and 0.001 person-rem.

Summary of annual maximum individual (mrem) and collective (person-rem) effective doses (EDs) from waterborne radionuclides^{a,b}

	Drinking water	Eating fish	Other uses	Total ^c
Upstream of all Oak Ridge Reservation discharge locations (Clinch River kilometer [CRK] 66, City of Oak Ridge Water Plant)				
Individual ED	0.000000003	0.5	0.0004	0.5
Collective ED	0.00000005	0.005	0.0007	0.006
Melton Hill Lake (CRK 58, Knox County Water Plant)				
Individual ED	0.0005	0.0007	0.0004	0.002
Collective ED	0.01	0.00007	0.002	0.01
Upper Clinch River (CRK 23, Gallaher Water Plant, CRK 32)				
Individual ED	0.2	1.2	0.2	2
Collective ED	0.08	0.2	0.03	0.3
Lower Clinch River (CRK 16)				
Individual ED	NA ^d	0.8	0.1	0.9
Collective ED	NA ^d	0.3	0.4	0.6
Upper Watts Bar Lake, Kingston Municipal Water Plant				
Individual ED	0.03	0.2	0.05	0.3
Collective ED	0.4	0.2	0.4	1
Lower system (Lower Watts Bar Lake and Chickamauga Lake)				
Individual ED	0.03	0.2	0.05	0.3
Collective ED	4	2	4	9
Lower East Fork Poplar Creek and Poplar Creek				
Individual ED	NA ^d	1	0.03	1
Collective ED	NA ^d	0.05	0.001	0.05

^a1 mrem = 0.01 mSv.

^bDoses based on measured radionuclide concentrations in water or estimated from measured discharges and known or estimated stream flows.

^cTotal doses and apparent sums over individual pathway doses may differ due to rounding.

^dNot at or near drinking water supply locations.