

Appendix A. Errata

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The following corrections are to *Oak Ridge Reservation Annual Site Environmental Report for 2005*, DOE/ORO/2218, U.S. Department of Energy, Oak Ridge Office, Oak Ridge, Tennessee, September 2006.

Chap. 2, Sect. 2.2.13.3, third paragraph, the DOE document reference citation should be DOE 2005. The corresponding reference is as follows.

DOE. 2005. *Compliance Plan, National Emission Standards for Hazardous Air Pollutants for Radionuclides on the Oak Ridge Reservation, Oak Ridge, Tennessee*. DOE/ORO/2196. U.S. Department of Energy, Washington, D.C.

Chap. 2, abstract, the fourth paragraph should read as follows.

On July 14, 2005, there was a reportable release of asbestos at the ETTP K-1400 building. Approximately 2 lb of asbestos insulation fell from utility steam lines.

Chap. 5, Sect. 5.11.4, p. 5-35, the following sentence should appear at the end of the last paragraph.

Well 4529 is a shallow well located up-gradient of the tritium release sites used to monitor the shallow portion of the aquifer for tritium originating north of the HFIR complex.

Chap. 5, Sect. 5.11.6.7, page 5-38, the following statement should appear between the first and second sentence in the first paragraph.

Consequently, trend analyses were performed on historical data for Wells 658, 892, and 661. The reference value for tritium (20,000 pCi/L) was used solely as a basis of comparison. Exceedance of the tritium reference value does not result in a regulatory compliance issue.

Chap. 5, Sect. 5.11.6.8, page 5-38, the second sentence should read as follows.

Statistically significant downward trends were observed in tritium concentrations at Wells 658 and 892 during 2005.

Chap. 7, Table 7.2, the data for Station 39 are as follows.

Table 7.2. Average radionuclide concentrations at ORR perimeter air monitoring stations, 2005 (pCi/mL)^a

Parameter	No. detected/ no. total	Average	Minimum	Maximum
Station 39				
⁷ Be	4/4	3.95E-08	3.60E-08	4.34E-08
⁴⁰ K	0/4	1.56E-10	-5.10E-11	4.06E-10
Tritium	1/4	3.80E-06	2.80E-07	5.76E-06
²³⁴ U	4/4	4.46E-12	3.28E-12	5.40E-12
²³⁵ U	1/4	5.60E-13	1.87E-13	1.19E-12
²³⁸ U	4/4	4.32E-12	3.42E-12	5.37E-12

1 pCi = 3.7×10^{-2} Bq.

Chap. 7, Sect. 7.8.2, the first sentence in the second paragraph should read as follows:

Since 1997, 419 turkeys have been harvested.

Chap. 8, Sect. 8.1.2.3, “the Food Crops” section should read as follows. (The passages in italics differ from those in the original).

Food Crops

The food-crop sampling program is described in Sect. 7.5. Samples of tomatoes, lettuce, and turnips were obtained from six local gardens. These vegetable types are representative of fruit-bearing, leafy, and root vegetables. All radionuclides found in the food crops are found in the natural environment and in commercial fertilizers, and all but ^7Be and ^{40}K also are emitted from the ORR.

Dose estimates are based on hypothetical consumption rates of vegetables that contain statistically significant amounts of certain radionuclides that could have come from the ORR. Based on a nationwide food consumption survey (EPA 1997), a hypothetical home gardener was assumed to have eaten 32 kg of homegrown tomatoes, 10 kg of homegrown lettuce, and 37 kg of homegrown turnips. The hypothetical gardener could have received a 50-year committed EDE of *between 0.09 and 0.3 mrem*, depending on garden location. Of this total, *between 0.05 and 0.2 mrem* could have come from eating tomatoes, between 0.04 and 0.06 mrem from eating lettuce, and between $5\text{E-}8$ and $7\text{E-}8$ mrem from eating turnips. The highest dose to a gardener could have been about *0.3 mrem* from consuming all three types of homegrown vegetables.

An example of a naturally occurring and fertilizer-introduced radionuclide is ^{40}K , which is specifically identified in the samples and accounts for most of the beta activity found in them. (Potassium-40 actually accounts for all the beta activity found in leafy-vegetable samples.) The presence of ^{40}K in the samples adds, on average, around *2 mrem* to the hypothetical home gardener’s EDE.

Many of the samples contained detected activities of unidentified beta- and alpha-emitting radionuclides. By subtracting identified activities of beta- and alpha-emitting radionuclides from the unidentified beta and alpha activities, excess beta and alpha activities were estimated. If the excess unidentified beta and alpha activities were ^{90}Sr and ^{210}Po , respectively, a hypothetical home gardener could have received an additional EDE of *between 0.5 and 4 mrem*. Of this total, between *2 and 4 mrem* could have come from eating tomatoes, between *0.5 and 2 mrem* from eating lettuce, and about *$8\text{E-}7$ mrem* from eating turnips. It is believed that most of the excess unidentified beta and alpha activities are due to naturally occurring or fertilizer-introduced radionuclides, not radionuclides discharged from the ORR.

The following correction is to *Oak Ridge Reservation Annual Site Environmental Report Summary, 2005*, DOE/ORO/2219, U.S. Department of Energy, Oak Ridge Office, Oak Ridge, Tennessee, February 2007

On page 10, in the “Maximum potential radiation dose equivalents” table, the conversion note should be corrected as follows:

“1 mrem = 100 mSv” should read “1 mSv = 100 mrem.”