

**Final Environmental Impact Statement for a Geologic Repository for the Disposal
of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye
County, Nevada**

DOE/EIS-0250

Errata Sheet

Since release of the Final EIS for Yucca Mountain on February 14, 2002 as part of the Site Recommendation documentation required under the Nuclear Waste Policy Act, as amended, the Department of Energy (DOE) has identified a variety of errors in the document. These errors were found to include:

- editing errors – errors in editorial style, rounding, and unit conversions
- data entry errors, errors in typing a number
- transcription errors – errors in transcribing information from one part of the document to another, failures to update the text from the most current analyses at the time of the FEIS issuance
- typographical errors – errors in spelling
- calculation error – incorrect deposition velocity value used in calculation of dose to the maximally exposed individual for a transportation sabotage event

The Department has considered each of these errata individually and collectively. No errors were identified that would cause a significant change to the environmental impacts, nor would they change the conclusions reached in the Final EIS. This errata sheet has been prepared to disclose known errors to stakeholders and the general public. The errata sheet does not provide corrections to typographical or editing errors unless a correction is necessary for the reader to comprehend the text (for example, missing periods at the end of a sentence, extra/missing spaces, etc. are not included).

Location	Errata	Comment
Readers Guide and Summary		
Section S.5.1.2; 7 th Paragraph (Page S-49)	For the link to potential human health impacts, change “Section S.4.1.7” to “Section S.5.1.8”	Editing error
Section S.5.1.2; 7 th Paragraph (Page S-49)	For the link to estimates of health impacts to noninvolved workers, change “Section S.4.1.8” to “Section S.5.1.8”	Editing error
Section S.5.1.3; Volcanism text box (Page S-51)	Delete the word in all capitals “DELETION”	Editing error
Section S.5.1.8; 1 st Paragraph (Page S-59)	For the link to the description of estimated doses, change “Section S.4.1.2” to “Section S.5.1.2”	Editing error

Location	Errata	Comment
Section S.5.2.1; 11 th Paragraph (Page S-70)	For the risk a maximally exposed individual could incur a fatal cancer, change "about 29 percent" to "about 37 percent"	Error in deposition velocity used in MEI analysis to estimate atmospheric dispersion of non-respirable Cs, Ru, and I. Made consistent with revised Section 6.2.4.2.3
Section S.12.3; 1 st Paragraph (Page S-88)	For the link to the summary of other issues raised by the public, change "Section S.4.2.4" to "Section S.4"	Editing error
Volume I: Impact Analyses, Chapters 1 through 15		
Section 3.1.3.1; 17 th Paragraph (Page 3-24)	Delete the partial paragraph "the further subdivision of these formations. Lithophysal cavities are voids resulting from vapors trapped in densely welded parts of the formations. Lithophysal zones contain fewer fractures compared to nonlithophysal zones."	Editing error, text incorrectly repeated from earlier in section
Section 3.1.7.1; 2 nd Paragraph (Page 3-86)	For the reference callout, change "DIRS 148157-LVCVA 1999" to "DIRS 155793-LVCVA 2001"	Editing error, correct DIRS number for reference
Section 3.1.8.2; 4 th Paragraph (Page 3-98)	On the last line, for the median dose to a subsurface worker, change "about 40 millirem per year" to "about 50 millirem per year"	Transcription error, error in value transferred from Section F.1.1.6
Section 4.1.2.2.1; Table 4-1 (Page 4-8)	For the pollutant nitrogen dioxide, the maximum concentration under the higher-temperature operating mode, change "0.40" to "0.41".	Editing error, error in rounding
Section 4.1.2.2.1; Last Paragraph (Page 4-9)	For the percent of benchmark exposure to cristobalite from construction activities, delete the parenthetical "(0.11)".	Editing error
Section 4.1.2.3.2; Table 4-5 (Page 4-16)	For Yucca Mountain noninvolved worker population the total dose under the lower-temperature operating mode, change "0.031" to "0.022".	Transcription error, error in value transferred from analysis
Section 4.1.2.4.2; Table 4-7 (Page 4-18)	For the maximum annual dose under both operating modes, replace with corrected Table 4-7 (attached)	Transcription error, updated analysis did not get reflected in this column of the table. Insignificant differences.
Section 4.1.6.2.2; Figure 4-4 (Page 4-46)	For Nye County in the year 2025, there is an erroneous decline in the Clark County regional population. The curve should show a smooth transition from the correct values in the years 2020 and 2030.	Editing error, transposition of numerals in values used for graphics. Correct values used for impact calculations.
Section 4.1.6.2.3; Table 4-20 (Page 4-47)	For Clark County, State and local government expenditures under the year 2030, change "13" to "18"	Typographical error
Section 4.1.7.3.1.2; 3 rd Paragraph (Page 4-55)	In the last line, for the number of latent cancer fatalities estimated in the exposed population, change "0.012" to "0.12"	Typographical error

Location	Errata	Comment
Section 4.1.7.4.1; 3 rd Paragraph (Page 4-59)	For the radiological health impacts to the worker during the closure phase, change “0.15 to 0.28” to “0.18 to 0.31”	Transcription error, updated to be consistent with Table 4-31
Section 4.1.7.4.2; Table 4-32 (Page 4-60)	For the exposed 80-km population collective dose under the maximum annual values, change “7.4” to “7.1” and change “10 – 16” to “11 – 17”	Transcription error, updated analysis did not get reflected in this column of the table. Insignificant differences
Section 4.1.7.5.2; 2 nd Paragraph (Page 4-62)	For the probability of a latent cancer fatality for the maximally exposed worker, change “0.0012” to “0.012”	Typographical error
Section 4.1.8; 2 nd Paragraph (Page 4-64)	For the dose to a maximally exposed noninvolved worker, change “up to 16 rem” to “up to 25 rem”	Transcription error, updated text to be consistent with Table 4-37
Section 4.1.11; Table 4-38 (Page 4-73)	For fossil fuel during operations and monitoring phase under the lower-temperature operating mode, change “370-500” to “360-500” For the total fossil fuel usage under the lower-temperature operating mode, change “380 – 510” to “370 – 510”	Editing error, error in rounding
Section 4.1.11; Table 4-39 (Page 4-74)	For copper use during construction phase under the lower-temperature operating mode, change “0.23” to “0.26 – 0.27”	Transcription error, error in values transferred from analysis
Section 4.1.11.2; 15 th Paragraph (Page 4-77)	For the range of fossil fuel usage, change “between 370 million and 500 million liters” to “between 360 million and 500 million liters”	Transcription error, update text to be consistent with Table 4-38
Section 4.1.11.2; 15 th Paragraph (Page 4-77)	For the percentage of 1996 capacity, change “less than 0.5 percent” to “less than 1 percent”	Transcription error, update text to be consistent with Table 4-38
Section 4.1.11.2; 18 th Paragraph (Page 4-77)	For copper use, change “200 to 230 metric tons (220 to 250 tons)” to “200 to 270 metric tons (220 to 300 tons)”	Transcription error, error in values transferred from analysis
Section 4.1.12.2; Table 4-40 (Page 4-80)	For sanitary and industrial solids under the lower-temperature operating mode, change “12,000” to “11,000 – 12,000”	Transcription error, update to show range of results from analysis.
Section 4.1.15.5.1; 4 th Paragraph (Page 4-96)	For the English values (tons) reported in this paragraph, change “1.5” to “1.7”, change “0.60” to “0.65”, change “0.91” to “0.98”, change “1.8” to “2.1”, change “0.79” to “0.84”, and change “1.2” to “1.3”	Editing error, incorrect metric-to-English conversion factor used
Section 4.1.15.5.3; 7 th , 8 th , and 9 th Paragraphs (Pages 4-99 and 4-100)	For the three links to socioeconomic impacts, change “Table 4-48” to “Table 4-49”	Editing error
Section 4.1.15.5.4; 5 th Paragraph (Page 4-102)	For the English value of maximum total requirement for chromium, change “65,000 tons” to “69,000 tons”	Editing error, incorrect metric-to-English conversion factor was used
Section 4.1.15.5.5; 4 th Paragraph (Page 4-103)	Change “water-containing glycerin” to “water containing glycerin”	Editing error

Location	Errata	Comment
Section 4.1.15.5.5; 5 th Paragraph (Page 4-103)	For the English value for the range of liquid waste generated change “4.2 to 6.5 tons” to “4.5 to 7.1”	Editing error, incorrect metric-to-English conversion factor was used
Section 4.2.1.2.2; Table 4-53 (Page 4-109)	For the maximum concentration and percent of regulatory limits, replace with corrected Table 4-53 (attached)	Transcription error, updated analysis did not get reflected in this table. Insignificant differences.
Section 6.1.2.6; Table 6-4 (Page 6-24)	For the public vehicle emission-related health effects under the Carlin branch rail line, change “0.25” to “0.23”, under the Jean branch rail line, change “0.23” to “0.24”, under the Caliente-Chalk Mountain heavy-haul truck route, change “0.32” to “0.33”, and under the Caliente/Las Vegas heavy-haul truck route, change “0.46” to “0.45”	Transcription error, error in values transferred from analysis
Section 6.2.4.2.3; 9 th and 11 th Paragraphs (Page 6-52)	<p>For the lifetime committed dose to the maximum exposed individual from a legal-weight truck cask sabotage event, change “110 rem” to “277 rem” and for the risk of a fatal cancer, change “about 29 percent” to “about 37 percent”</p> <p>For the lifetime committed dose to the maximum exposed individual from a rail cask sabotage event, change “40 rem” to “224 rem” and for the risk of a fatal cancer, change “about 25 percent” to “about 34 percent”</p>	<p>Corrected the deposition velocity for non-respirable particles of Cs, Ru, and I used in the conservative analysis to determine potential impacts from a sabotage event on a transportation cask.</p> <p>The analysis employs conservative assumptions such as: the MEI resides approximately 100 meters from the location of the event, stays there for one year, and takes no ordinary precautions (interdiction of food sources, shielding, etc.). If these assumptions were more realistic (the individual would probably leave the area in less than 24 hours) the MEI dose from these events would be significantly decreased. This correction does not result in a change to the reported dose estimate for the affected population.</p>

Location	Errata	Comment
<p>Section 6.3, Table 6-16 (Pages 6-56 & 6-57)</p>	<p>For the corridor length under Carlin, change “514” to “513”; under valley modified, change “159” to “157”</p> <p>For incident-free health and safety, industrial hazards, lost workday cases under Caliente/Chalk Mountain, change “90” to “95”; under Jean, change “80” to “76”, under valley modified, change “60” to “57”</p> <p>For incident-free health and safety, industrial hazards, fatalities under Caliente, change “0.43 to “0.5”</p> <p>For incident-free health and safety, collective dose to the public under Caliente, change “19[0.009]” to “19[0.01]”; under Carlin, change “38[0.019]” to “38[0.02]”; under Caliente/Chalk Mountain, change “50[0.025]” to “18[0.01]”; under Jean, change “130[0.06]” to “160[0.08]”; under valley modified, change “23[0.012]” to “26[0.01]”; under mostly legal-weight truck, change “340[0.17]” to “350[0.18]”</p> <p>For incident-free health and safety, fatalities from vehicle emissions under Caliente, change “0.25” to “0.24”; under Carlin, change “0.25” to “0.23”; under Jean, change “0.23” to “0.16”; under valley modified, change “0.13” to “0.12”; under mostly legal-weight truck, change “0.086” to 0.093”</p> <p>For the accident impacts radiological, accident risk in person-rem under Caliente, change “0.002” to “0.0017”; under Carlin, change “0.003” to “0.0026”; under Caliente/Chalk Mountain, change “0.002” to “0.0017”; under Jean, change “0.007” to “0.0071”; under valley modified, change “0.002” to “0.0021”</p> <p>For the accident impacts, maximum reasonable foreseeable accident, individual latent cancer fatality probability under all five mostly rail implementing alternatives, change “0.014” to “0.01”</p> <p>For the accident impacts, maximum reasonable foreseeable accident, latent cancer fatalities under all five mostly rail implementing alternatives, change “4.9” to “5.0”</p>	<p>Editing error, incorrect usage of significant figures and inaccurate transcribing of values from individual tables</p>

Location	Errata	Comment
Section 6.3.2.2.4.1; Table 6-59 (Page 6-133)	For private land ownership range, change “0.1 - 3.5” to “0.13 - 3.5” For land area (km ²) in 60-meter right-of-way, change “10.9” to “10.8”.	Editing error, error in rounding
Section 6.3.2.2.5.1; Table 6-70 (Page 6-145)	For BLM land ownership/corridor, change “34 (53%)” to “32 (50%)” For Fish and Wildlife Service land ownership/corridor, change “1.8 (3%)” to “1.7 (3%)” For disturbed land outside the 60-meter-wide right-of-way, change “0.6” to “0.7”	Transcription error, error in values transferred from analysis
Section 6.3.2.2.5.1; Table 6-71 (Page 6-146)	For the Sheep Mountain Alternate under land area variation, change “9.8” to “9.3”; under BLM land ownership, change “3.2 (33%)” to “2.8 (30%)”; under Fish and Wildlife Service land ownership change “3.4 (35%)” to “3.4 (37%)”; under Department of Defense land ownership, change “3.1 (32%)” to “3.1 (33%)” For the Valley Connection under land area variation, change from “2.7” to “8.4”; under BLM land ownership, change “2.5 (93%)” to “1.9 (23%)”; under Fish and Wildlife Service land ownership change “--“ to “3.4 (40%)”; under Department of Defense land ownership, change “0.01 (0.4%)” to “3.1 (37%)”; under private, change “0.2 (6.6%)” to “0.2 (2%)”	Transcription error, error in values transferred from analysis
Section 6.3.3.1.7; Table 6-88 (Page 6-171)	Delete last line of table and footnote “g”	Editing error, this data is only applicable to Nevada rail, the table is for heavy-haul truck.
Section 6.3.3.1.7; Table 6-89 (Page 6-171)	For radiological accident dose risk under the Caliente/Las Vegas route, change “0.056” to “0.0018”	Transcription error, error in value transferred from analysis
Section 7.3; 1 st Paragraph (Page 7-43)	Delete the last word from the paragraph	Editing error
Section 8.1.2.1; Table 8-2 (Page 8-8)	For the total number of shipments under Module 1/mostly legal weight truck, change “110,000” to “106,000”	Editing error, correctly rounding to two significant figures inaccurately portrays more shipments for Module 1 than for Module 2

Location	Errata	Comment
Section 8.2.2.1.1; Table 8-7 (Page 8-32)	<p>For the pollutant Nitrogen Dioxide under proposed action/maximum concentration/higher temperature, change “0.40” to “0.41”</p> <p>For the pollutant Nitrogen Dioxide under inventory modules/maximum concentration/higher temperature, change “0.40” to “0.41”</p> <p>For the pollutant Nitrogen Dioxide under inventory modules/percentage of regulatory limit/higher temperature, change “0.40” to “0.41”</p>	Editing error, error in rounding
Section 8.2.2.1.2; Table 8-12 (Page 8-36)	For Yucca Mountain noninvolved worker population the total dose under the proposed action/lower-temperature operating mode, change “0.0031” to “0.022”.	Transcription error, error in value transferred from analysis, also a typographical error
Section 8.2.2.1.2; Table 8-13 (Page 8-37)	<p>Under the proposed action</p> <p>For the exposed 80-km population collective dose under the maximum annual values, change “7.4” to “7.1” and change “10 – 16” to “11 – 17”</p> <p>For the maximally exposed noninvolved worker under maximum annual values, change “0.0018” to “0.0019” and change “0.0030 – 0.0063” to “0.0031 – 0.0065”</p> <p>For the Yucca Mountain noninvolved worker under maximum annual values, change “0.00052” to “0.00054”</p> <p>For the Nevada Test Site noninvolved worker maximum annual values, change “0.00041” to “0.00042” and change “0.00058 – 0.00089” to “0.00060 – 0.00092”</p>	Transcription error, updated analysis did not get reflected in this column of the table. Insignificant differences
Section 8.2.2.2.1; 1 st Paragraph (Page 8-37)	For the percentage of the regulatory limit for PM ₁₀ , change “6.5 percent” to “5.8 percent”	Transcription error, update text to be consistent with range of values between Tables 8-7 through 8-9
Section 8.2.7.4; Table 8-27 (Page 8-56)	Replace with correct Table 8-27 (attached)	Editing error, erroneously duplicated Table 8-26.
Section 8.2.11; Table 8-34 (Page 8-62)	For the total fossil fuel usage under the lower-temperature operating mode, change “380 – 510” to “370 – 510”	Editing error, error in addition
Section 8.2.11; Table 8-39 (Page 8-64)	Under the proposed action, for copper use during construction phase under the lower-temperature operating mode, change “0.23” to “0.26 – 0.27”	Transcription error, error in values transferred from analysis

Location	Errata	Comment
Section 8.2.13; 2 nd Paragraph (Page 8-67)	For the link to the discussion of Native American peoples' views and beliefs, change "Section 4.1.3.4" to "Section 4.1.13.4"	Typographical error
Volume II: Appendixes A through O		
Appendix A; Section A.2.1.5.2, Table A-11 Second page (Page A-19)	Page number should read " Page 2 of 2" instead of "Page 1 of 2".	Typographical error
Appendix A; Section A.2.1.5.5, Table A-18 (Page A-25)	The correct title for Table A-18 is "Reference characteristics for unirradiated typical fuel assemblies"	Editing error
Appendix A; Section A.2.2.5.2, Table A-21 First page (Page A-29)	For Pb-210 the entry under the last column should be " 7.5×10^{-10} "	Typographical error
Appendix A; References DIRS 156933 (Page A-67)	In line 2, "long" should be "log"	Typographical error
Appendix A; References DIRS 104476 (Page A-70)	In line 3, "Tayor" should be "Taylor"	Typographical error
Appendix F; Section F.2.2.1, Table F-3 (Page F-18)	For the Construction Phase, Aging Facilities under the Lower-temperature operating mode, uncanistered (UC) change "1,300" to "700," change "500" to "300," and change the total range from "7,300 – 8,800" to "7,300 – 8,000"	Transcription error, corrected text to reflect updated analysis. Correct values used for analysis of impacts.
Appendix F; Section F.2.2.2, 6 th Paragraph (Page F-21)	In line 2, "though" should be "through"	Typographical error
Appendix F; Section F.2.2.3, Table F-7, Page 2 of 2 (Page F-25)	In the last entry of column 2, "Radon-22" should be "Radon-222"	Typographical error
Appendix I; References, DIRS 157520 (Page I-93)	In line 6, the ACC number contains an extra "1". Should be MOL.20011114.0256; DI number ("RWA:cs") is incorrect – should be "PROJ.09/01.021;"	Typographical & Editing errors
Appendix J, Section J.1.2; Table J-1 (Page J-11)	For the Caliente rail corridor range with variations, change "512 to 853 kilometers" to "512 to 553 kilometers" For the Carlin rail corridor range with variations, change "414 to 544 kilometers" to "514 to 544 kilometers"	Editing error. Correct value used in analysis
Appendix J, Section J.1.3.2.3; 4 th Paragraph (Page J-46)	For the number of truck shipments in the Las Vegas air basin, change "(an average of five per day)" to "(an average of 12 one-way trips per day)"	Transcription error, corrected text to reflect updated analysis which considered 12 one-way truck trips (to or from the repository with loaded or unloaded shipping casks) as opposed to the 5 round trips
Appendix J, Section J.1.4.1.2; 6 th Paragraph (Page J-49)	For involved worker fatality incidence rate, change "1.8 fatalities among 100,000 workers" to "2.3 fatalities among 10,000 workers"	Transcription error, correct values used in analysis.

Location	Errata	Comment
Appendix J, Section J.1.4.2.3.3; 1 st Bullet/2 nd Paragraph (Page J-70)	For the range of radiological accident risk in Nevada for the mostly legal-weight truck scenario, change “0.0002 latent cancer fatality to about 0.0005 latent cancer fatality” to “0.000026 latent cancer fatality to about 0.000047 latent cancer fatality” For the likelihood of a latent cancer fatality, change “5 in 10,000” to “5 in 100,000”	Transcription error, corrected text to reflect updated analysis. Correct values used for analysis of impacts.
Appendix J, Section J.1.4.2.3.3, last paragraph (Page J-71)	For the increase in radiological accident risk, change “0.067 to 0.071” to “0.00023 to 0.00026”	Transcription error, corrected text to reflect updated analysis. Correct values used for analysis of impacts.
Appendix J, Section J.1.4.2.5; 7 th Paragraph (Page J-73)	For the amount of Cesium released in the maximum reasonably foreseeable accident, change “13 curies” to “24 curies”, change “100 times less” to “70 times less” and change “50 times less” to “25 times less”	Transcription error, corrected text to reflect updated analysis. Correct values used for analysis of impacts.
Appendix J; Section J.3.2, Table J-50 (Page J-118)	In the footnote, the word “country” should be “county	Typographical error
Appendix J, Section J.3.5.3; Table J-62 (Page J-126)	For the column header, change “Corridor” to “Candidate Route”	Editing error, table is for heavy-haul route, not rail corridor
Appendix J; Section J.3.5.3; Table J-62 (Page J-126)	For involved workers - fatalities, under Caliente and Caliente/Chalk Mountain change “1.0” to “0.97” under Caliente/Las Vegas change “0.9” to “0.87” and under Sloan/Jean and Apex/Dry Lake change “0.5” to “0.52” For All workers (totals) - fatalities; Caliente/Las Vegas change “0.99” to “0.89”	Editing error, error in rounding
Appendix J, Section J.3.6.1; last Paragraph (Page J-131)	For Noise, change number of vehicles passing through the Gate 100 entrance from “576” to “537”	Editing error. Correct value used in analysis.
Appendix J, Section J.3.6.2; 2 nd Paragraph (Page J-132)	For Occupational and Public Health and Safety, change the risk of a fatality from transportation of repository generated wastes from “0.01” to “0.001”	Typographical error
Appendix J, Section J.3.6.2; 3 rd Paragraph (Page J-132)	For the estimated traffic fatalities, change “0.0038 and 0.0053” to “0.0042 to 0.006”	Editing error. Correct value used in analysis
Appendix J; Section J.4, Table J-86 (Page J-171)	In the figure caption, “(page 1 of 2)” should be deleted from the caption	Typographical error
Appendix J; References, DIRS 152476 (Page J-198)	Tracking number is missing a digit; should be MOL.20001010.0217	Typographical error
Appendix K; Section K.3.1, Table K-11 (Page K-29)	For the totals, under the population dose for the proposed action change “6,590,000” to “6,600,000” and under the LCFs for the proposed action change “3,340” to “3,300”.	Editing error, error in rounding

Location	Errata	Comment
Volume III: Comment Response Document		
<p>Part 1, Key Agency comments, response to US EPA comment number 84 (Page CR-565) and Part 3, Section 7.5.7 comment response pair (6684) (Page CR7-652)</p>	<p>Replace response with; "DOE has revised these definitions in the Final EIS. Chapters 4, 6, and 7 now use the term "maximally exposed individual," and Chapter 5 and Appendix I use "reasonably maximally exposed individual" or "receptor." The receptor is equivalent to the reasonably maximally exposed individual" defined in the Environmental Protection Agency's regulations at 40 CFR Part 197. This change reflects the regulatory Definitions and requirements for long-term performance recently promulgated by both agencies."</p>	<p>Editing error</p>
<p>Part 2, Section 6, References (Page CR6-51)</p>	<p>For reference DIRS 152476 the correct MOL number is 20001010.0217</p>	<p>Typographical error</p>
<p>Part 4, Section 8.1; comment response pairs (170) Response, 15th paragraph (Page CR8-9); and (259) Response, 15th paragraph (Page CR8-13)</p>	<p>For the risk a maximally exposed individual could incur a fatal cancer, change "about 29 percent" to "about 37 percent"</p>	<p>Corrected the deposition velocity for non-respirable particles of Cs, Ru, and I used in the conservative analysis to determine potential impacts from a sabotage event on a transportation cask.</p> <p>The analysis employs conservative assumptions such as: the MEI resides approximately 100 meters from the location of the event, stays there for one year, and takes no ordinary precautions (interdiction of food sources, shielding, etc.). If these assumptions were more realistic (the individual would probably leave the area in less than 24 hours) the MEI dose from these events would be significantly decreased. This correction does not result in a change to the reported dose estimate for the affected population.</p>

Location	Errata	Comment
Part 4, Section 8.4; comment response pair (25) Response, 3 rd paragraph (Page CR8-153)	For the risk a maximally exposed individual could incur a fatal cancer, change "about 29 percent" to "about 37 percent"	<p>Corrected the deposition velocity for non-respirable particles of Cs, Ru, and I used in the conservative analysis to determine potential impacts from a sabotage event on a transportation cask.</p> <p>The analysis employs conservative assumptions such as: the MEI resides approximately 100 meters from the location of the event, stays there for one year, and takes no ordinary precautions (interdiction of food sources, shielding, etc.). If these assumptions were more realistic (the individual would probably leave the area in less than 24 hours) the MEI dose from these events would be significantly decreased. This correction does not result in a change to the reported dose estimate for the affected population.</p>

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Part 4, Section 8.10.1; comment response pairs (133) Response, 2 nd paragraph (Page CR8-458); (166) Response, 2 nd paragraph (Page CR8-459); (1773) Response, 1 st paragraph (Page CR8-462); (2718) Response, 1 st paragraph (Page CR8-463); (2732) Response, 1 st paragraph (Page CR8-463); (3251) Response, 1 st paragraph (Page CR8-464); (3645) Response, 1 st paragraph (Page CR8-464); (3700) Response, 2 nd paragraph (Page CR8-465); (4054) Response, 2 nd paragraph (Page CR8-466); (5293) Response, 2 nd paragraph (Page CR8-469); (5620) Response, 2 nd paragraph (Page CR8-482); (6127) Response, 3 rd paragraph (Page CR8-483); (7447) Response, 3 rd paragraph (Page CR8-485); (7548) Response, 1 st paragraph (Page CR8-486); (8503) Response, 2 nd paragraph (Page CR8-489); (9269) Response, 1 st paragraph (Page CR8-490); (9631) Response, 2 nd paragraph (Page CR8-492); (9633) Response, 2 nd paragraph (Page CR8-493); (9634) Response, 3 rd paragraph (Page CR8-495); (10032) Response, 1 st paragraph (Page CR8-498); (10033) Response, 2 nd paragraph (Page CR8-498); (10918) Response, 1 st paragraph (Page CR8-500); (11220) Response, 2 nd paragraph (Page CR8-501)	For the risk a maximally exposed individual could incur a fatal cancer, change "about 29 percent" to "about 37 percent"	Corrected the deposition velocity for non-respirable particles of Cs, Ru, and I used in the conservative analysis to determine potential impacts from a sabotage event on a transportation cask. The analysis employs conservative assumptions such as: the MEI resides approximately 100 meters from the location of the event, stays there for one year, and takes no ordinary precautions (interdiction of food sources, shielding, etc.). If these assumptions were more realistic (the individual would probably leave the area in less than 24 hours) the MEI dose from these events would be significantly decreased. This correction does not result in a change to the reported dose estimate for the affected population.

Location	Errata	Comment
<p>Part 4, Section 8.7; comment response pair (12658) Response 3rd Paragraph (Page CR8-260)</p>	<p>For the lifetime committed dose to the maximum exposed individual from a legal-weight truck cask sabotage event, change “110 rem” to “277 rem” (two spots) and for the risk of a fatal cancer, change “about 29 percent” to “about 37 percent”</p>	<p>Corrected the deposition velocity for non-respirable particles of Cs, Ru, and I used in the conservative analysis to determine potential impacts from a sabotage event on a transportation cask.</p> <p>The analysis employs conservative assumptions such as: the MEI resides approximately 100 meters from the location of the event, stays there for one year, and takes no ordinary precautions (interdiction of food sources, shielding, etc.). If these assumptions were more realistic (the individual would probably leave the area in less than 24 hours) the MEI dose from these events would be significantly decreased. This correction does not result in a change to the reported dose estimate for the affected population.</p>
<p>Part 4, Section 8.8.2; comment response pair (9671); Response 1st paragraph (Page 347 – 348)</p>	<p>For the lifetime committed dose to the maximum exposed individual from a legal-weight truck cask sabotage event, change “110 rem” to “277 rem” (two spots) and for the risk of a fatal cancer, change “about 28 percent” to “about 37 percent”</p>	<p>Corrected the deposition velocity for non-respirable particles of Cs, Ru, and I used in the conservative analysis to determine potential impacts from a sabotage event on a transportation cask.</p> <p>The analysis employs conservative assumptions such as: the MEI resides approximately 100 meters from the location of the event, stays there for one year, and takes no ordinary precautions (interdiction of food sources, shielding, etc.). If these assumptions were more realistic (the individual would probably leave the area in less than 24 hours) the MEI dose from these events would be significantly decreased. This correction does not result in a change to the reported dose estimate for the affected population.</p>

Table 4-7. Radiation doses to maximally exposed individuals and populations from radon-222 releases from the subsurface during closure phase.^{a,b}

Impact	Operating mode			
	Higher-temperature		Lower-temperature	
	Total	Maximum annual ^c	Total	Maximum annual ^c
<i>Dose to public</i>				
MEI ^c (millirem)	3	0.4	4.3 - 9.4	0.57 - 0.87
80-kilometer population ^d (person-rem)	57	7.47.7	83 - 180	10-1611 - 17
<i>Dose to noninvolved (surface) workers</i>				
Maximally exposed noninvolved worker ^e (millirem)	0.014	0.00180.0019	0.024 - 0.07	0.003-0.0063
Yucca Mountain noninvolved worker population (person-rem)	0.004	0.00052 0.00054	0.007 - 0.015	0.00088 - 0.0014
Nevada Test Site noninvolved worker population ^f (person-rem)	0.0031	0.00041 0.00042	0.0046 - 0.0099	0.00058-0.00089 0.00060 - 0.00092

- a. Numbers are rounded to two significant figures.
b. The closure phase would begin after the 76 to 300 years of monitoring and last 10 to 17 years.
c. MEI = maximally exposed individual located at the southern boundary of the land withdrawal area.
d. The population includes about 76,000 individuals within 80 kilometers (50 miles) of the repository (see Section 3.1.8).
e. Maximally exposed noninvolved worker location would be at the South Portal Development Area.
f. DOE workers at the Nevada Test Site [6,600 workers (DIRS 101811-DOE 1996, p. 5-14) 50 kilometers (30 miles) east-southeast near Mercury, Nevada].

Table 4-53. Criteria pollutant impacts to public maximally exposed individual from retrieval (micro-grams per cubic meter).^{a,b}

Pollutant	Averaging time	Regulatory limit ^c	Maximum concentration ^d	Percent of regulatory limit
Nitrogen dioxide	Annual	100	0.00230.027	0.0230.027
Sulfur dioxide	Annual	80	0.00220.0026	0.00280.0033
	24-hour	365	0.0180.020	0.00490.0055
	3-hour	1,300	0.140.16	0.0110.012
Carbon monoxide	8-hour	10,000	0.200.23	0.00200.0023
	1-hour	40,000	1.31.5	0.00330.0037
Particulates (PM ₁₀) (PM _{2.5})	Annual	50 (15)	0.23	0.450.46
	24-hour	150 (65)	2.8	1.9

- a. Appendix G, Section G.1, contains detailed information on the radiological air quality analysis.
b. All numbers except regulatory limits are rounded to two significant figures.
c. Regulatory limits from 40 CFR 50.4 through 50.11, and Nevada Administrative Code 445B.391 (see Chapter 3, Table 3-5).
d. Sum of the highest concentrations at the accessible site boundary regardless of direction.

Table 8-27. Summary of radiological health impacts to workers from all activities during closure phase^a

Worker group	Operating mode	
	Higher-temperature	Lower-temperature
	Proposed Action	
<i>Involved worker</i>		
Dose to maximally exposed worker (millirem)	6,700	7,900 - 13,000
Probability of latent cancer fatality	0.0027	0.0032 - 0.0052
Collective dose (person-rem)	430	480 - 740
Number of latent cancer fatalities	0.17	0.19 - 0.30
<i>Noninvolved worker</i>		
Dose to maximally exposed worker (millirem)	360	400 - 610
Probability of latent cancer fatality	0.00014	0.00016 - 0.00024
Collective dose (person-rem)	16	18 - 28
Number of latent cancer fatalities	0.0064	0.0072 - 0.011
<i>All workers</i>		
Collective dose (person-rem)	450	500 - 770
Number of latent cancer fatalities	0.18	0.20 - 0.31
	Inventory Module 1 or 2	
<i>Involved worker</i>		
Dose to maximally exposed worker (millirem)	8,000	11,000 - 18,000
Probability of latent cancer fatality	0.0032	0.0044 - 0.0072
Collective dose (person-rem)	520	660 - 1,100
Number of latent cancer fatalities	0.21	0.26 - 0.44
<i>Noninvolved worker</i>		
Dose to maximally exposed worker (millirem)	430	540 - 830
Probability of latent cancer fatality	0.00017	0.00022 - 0.00033
Collective dose (person-rem)	19	24 - 50
Number of latent cancer fatalities	0.0076	0.0096 - 0.02
<i>All workers</i>		
Collective dose (person-rem)	540	680 - 1,200
Number of latent cancer fatalities	0.22	0.27 - 0.48

a. Source: Appendix F, Tables F-39 and F-67